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HUMAN RESOURCE MANAGEMENT

E-RECRUITMENT SYSTEMS AND EMPLOYEE PERFORMANCE IN MEDIUM-SIZED MANUFACTURING FIRMS IN NAIROBI COUNTY, KENYA

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Abstract

HRIS (Human Resource Information Systems) are digital platforms designed to manage employee data, payroll, and recruitment, focusing on enhancing employee performance through data-driven insights. The study examined the relationship between HRIS and employee performance in medium-sized manufacturing firms in Nairobi County, Kenya, addressing e-recruitment systems. Using a descriptive design, data was collected from 132 employees across 5 manufacturing firms through structured questionnaires distributed to HR, production, finance, and IT departments. The findings indicate significant HRIS impact on employee performance, with e-recruitment systems showing the influence ($\beta = 0.625$, p < 0.05). The study recommends prioritizing e-recruitment system effects on employee retention and conduct cross-industry comparative studies to identify best practices.

Key words: Human Resource Information Systems, Employee Performance, E-recruitment systems, E-training systems, Performance Management Systems, Employee Self-Service Systems

1. INTRODUCTION

Human Resource Information Systems (HRIS) are complex software applications designed to support and automate key stages of work within organizational HR departments. These systems facilitate better management of employee information and activities, serving as specialized software packages for HR professionals to manage workflows and store data efficiently (Wimbush, 2023). As Valier (2024) explains, HRIS encompasses comprehensive data management across the entire employee lifecycle, from recruitment and onboarding through to eventual departure, while ensuring regulatory compliance and accurate record-keeping. The implementation of HRIS offers significant cost reduction benefits by eliminating extensive administrative support requirements,

as many HR activities are automated through the system. These include payroll processing, benefits management, attendance tracking, and other HR-related functions that contribute to reduced human resource costs (Badiru, 2024). Additionally, HRIS enables organizations to manage available resources more efficiently, focusing on aspects that can affect employee performance and align with organizational objectives (Matthews, 2023).

In the context of Nairobi County, manufacturing firms have increasingly adopted technology improvements and production efficiencies to enhance their performance. The implementation of modern systems like HRIS has significantly improved worker management through task automation and error reduction (Selvaraj & Venkatakrishnan, 2024). These developments facilitate better monitoring of performance indicators, resource management, and reinforcement of both personal and organizational goals, leading to enhanced organizational performance through strategic human resource investment in training and development.

However, there is a notable scarcity of primary empirical research examining how different elements of HRIS technology affect employee performance in Nairobi County's manufacturing firms. According to Dukic Mijatovic (2020), manufacturing HR management in regional firms faces constraints that hinder productivity and efficiency improvements through HR management practices. This gap necessitates structured analysis of HRIS modules' impact across various aspects of employee performance, including recruitment, training, performance appraisal, and empowerment, to help manufacturing firms achieve successful HRIS implementation and enhance workforce performance (Jadesola Ololade et al., 2023).

Statement of the Problem

HRIS (Human Resource Information Systems) are digital platforms that manage HR functions like payroll, recruitment, and performance tracking. They are important for streamlining HR processes, improving data accuracy, and enhancing organizational efficiency, ultimately supporting better decision-making (Badiru, 2024). In Nairobi County where industrial competition is rampant, the HR management enhances performance and productivity. HRIS entails the ease of e-recruitment, onboarding, training, performance monitoring, and employee self-service. Research shows that HRIS positively impacts employee performance by automating HR processes, providing real-time performance data, and enhancing employee engagement through streamlined management practices (Shabongo and Phiri, 2024). Studies highlight improved productivity, job satisfaction, and efficiency as key outcomes of effective HRIS implementation.

Manufacturing organizations often face several performance issues. One major challenge is outdated technology, which can lead to inefficiencies and poor results. Additionally, inadequate training environments contribute to decreased employee productivity and job dissatisfaction. Poor working conditions, including safety hazards and discomfort, lead to high absenteeism and negligence. Addressing these issues by updating technology, enhancing training programs, and improving workplace conditions can significantly boost production and overall work performance (Baskaran, Lay, Ming, & Mahadi, 2020).

Studies indicate that HRIS mechanisms significantly impact Nairobi's manufacturing sector. Kibet and Namusonge (2022) found that e-recruitment improved hiring efficiency and job performance. Mwangi and Waweru (2023) highlighted that e-training systems enhanced training effectiveness and skill acquisition. Omondi and Njeri (2021) showed that performance management systems improved appraisal accuracy and staff motivation. Kiptoo and Karanja (2023) noted that self-service technologies increased employee satisfaction and reduced HR workload. Despite these

findings, gaps remain in understanding the impact of specific HRIS modules on employee performance in Kenyan manufacturing. Further research is needed to address these gaps and optimize HRIS for enhanced performance and organizational satisfaction.

Manufacturing organizations in Nairobi face performance issues due to outdated technology, inadequate training environments, and poor working conditions. These factors lead to decreased employee productivity, high absenteeism, and job dissatisfaction. Without effective HRIS modules like e-recruitment and e-training, these challenges persist, negatively impacting organizational efficiency and employee engagement. Conducting this study is essential to address gaps in understanding how specific HRIS modules such as e-recruitment, e-training, performance management and self-service systems affect employee performance in Nairobi's manufacturing sector. By examining these systems' impact, the research offered insights tailored to the Kenyan context, enhancing HRM practices and potentially boosting organizational and employee performance. Filling these gaps provided valuable information for optimizing HRIS implementation and improving overall efficiency and effectiveness in the region.

Research Objectives

To assess the role of e-recruitment systems on employee performance in medium-sized manufacturing firms in Nairobi County

Research Questions

What is the role of e-recruitment systems on employee performance in medium-sized manufacturing firms in Nairobi County?

2. LITERATURE REVIEW

Socialization Theory

Sociologist George Herbert Mead published Mind, Self, and Society, which introduced Socialization Theory In 1934. Mead is interested in how people learn the rules and expectations needed for social engagement, not how communicators produce symbols or how language influences them. Socialization begins in childhood and continues until a person becomes conscious of their social status and forms a social identity. Social movement concept theories developed fastest throughout the 1970s and 1980s. Previously classified as social psychology or social abnormal behavior, new and highly publicized movements indicated that social psychology and research were inadequate. The second part of the 20th century saw the rise of social movement theory as a major social science field.

Recognition of Socialization Herbert Blumer developed Symbolic Interactionism from Mead's theories. It assumes sequential socialization in circuits where actors constantly interact to interpret or reinterpret the social context (Nickerson, 2023). Modern studies often use psychological and organizational paradigms to study socialization processes and their effects on all aspects of human life, including workplace performance (Husin, 2021). These approaches and theories are not intentionally related. There is no disciplinary norm that links theories. Accordingly, taxonomy methodology can identify theories based on methodological and theoretical ideas. These various theories describe social movements, but they do not treat the topic from the same perspective or with the same understanding of what this idea entails.

Socialization Theory is strong because it emphasizes how community interactions affect behavior and personality. It analyzes social behavior systematically. It promotes individual-to-societal intervention paradigms (Hajliali, 2014). This versatility allows the idea to be used to many social work techniques globally. Implementing this paradigm is complicated and resource-intensive. However, its tendency to overemphasize social interaction over individual and structural elements and processes is a major weakness. This perspective may not capture socialization nuances across contexts or cultures, according to some experts. This technique has been strongly criticized by researchers from various fields. The two-fold agent/structure failure is the major difficulty with this technique. While symbolic interactionists overemphasize the agent and its subjective meaning and neglect the outside world, structural-functionalists, who fail to account for action and actors, focus only on social existence's structural dimensions.

Socialization Theory plays an imperative role within organizational premises especially when it comes to learning employee compliance to organizational norms and values. For instance, in the medium-sized manufacturing firms in Nairobi County, the theory can explain how the workers acclimatize to their working environment, affect performance and develop corporate cultures that enhance team performance. Good socialization best practices are used in organization to help them develop a good and clear culture of how best to handle employees by improving on their performance and productivity of the employees.

Empirical Review

Shabongo and Phiri's (2024) comprehensive study employing both qualitative and quantitative approaches with 102 HR department participants found 71% recruitment process satisfaction and 64% e-training value recognition. These findings align with Mwangi and Reuben's (2024) investigation, which reported that 71-72% of respondents noted improved recruitment processes and applicant tracking through e-recruitment systems. However, both studies identified limitations in e-training effectiveness, with Shabongo and Phiri (2024) reporting only 42% of respondents viewing e-training as superior to traditional methods. This finding was corroborated by Selvaraj and Venkatakrishnan (2024), who emphasized the need for balanced training approaches combining digital and traditional methodologies.

A substantial body of research has examined e-recruitment systems' institutional impacts. Akoyo, Bula, and Wambua's (2022) investigation of Kenyan chartered universities demonstrated significant correlations between e-recruitment implementation and organizational performance through regression analysis. These findings parallel Kibet and Namusonge's (2022) research showing e-recruitment's positive impact on hiring efficiency and job performance, while Mwangi and Waweru (2023) documented enhanced training effectiveness through e-systems. Further support comes from Omondi and Njeri (2021), who found that performance management systems improved appraisal accuracy and staff motivation, while Kiptoo and Karanja (2023) noted increased employee satisfaction through self-service technologies.

The relationship between recruitment practices and organizational performance has been extensively studied across various sectors. Oyadiran, Ishaq, and Agunbiade's (2023) research, grounded in resource-based theory, established strong positive correlations between efficient recruitment practices and organizational performance. This finding was reinforced by Mbah, Ekechukwu, and Chukwudi's (2018) study of 350 manufacturing employees, which revealed that proper recruitment practices significantly enhanced staff productivity. Additional support comes from Jadesola Ololade et al. (2023), who documented how HRIS implementation improved employee behavioral outcomes in Nigerian manufacturing firms, while Dukic Mijatovic (2020) highlighted how strategic HR management practices enhanced manufacturing sector efficiency.

Comprehensive analyses by Memon et al. (2022) and Nawaz et al. (2024) suggest that successful HRIS implementation requires careful attention to both technological and human factors. These findings align with Tamrakar and Shrestha's (2022) research on HRIS adoption factors in developing economies and Jayabalan's (2020) studies on HRIS contributions to employee engagement. Recent work by Kimani and Gathenya (2023) further emphasizes the importance of HRIS standards in organizational performance, while De Vries et al. (2023) highlight the system's role in workforce retention. This collective evidence suggests that while HRIS offers significant potential for improving organizational performance, success depends heavily on proper system implementation, as noted by Sadri and Chatterjee (2018) and reinforced by more recent studies from Quaosar and Rahman (2021) and Abuhantash and Brin (2023).

Conceptual Framework

The conceptual framework explains how HRIS factors affect employee performance. E-recruitment systems were evaluated on integration, personalization, and usability. E-training needs, completion, and skills were measured. Achievements, feedback, and consistency measured performance management systems. Employee self-service was measured by logins, feedback, and time. Employee performance was measured through productivity, efficiency, and turnover, highlighting how these was measured is shown in figure 1.



Figure 1: Conceptual Framework

3. METHODOLOGY

The study employed a descriptive research design, which Siedlecki (2020) defines as a systematic method for collecting supplementary information about the current state of specific individuals or objects without modifying the research environment. The target population comprised 132 respondents from 5 medium-sized manufacturing firms in Nairobi County, specifically selected from companies with employee populations ranging between 200 and 700 people. Participants were drawn from four key departments: human resource, production, finance, and IT, chosen for their direct interaction with HRIS systems. Following Martínez-Mesa et al.'s (2016) sampling guidance, the study utilized a census approach due to the relatively small population size, aiming to enhance the accuracy and precision of the findings.

Data collection employed both primary and secondary sources, with primary data gathered through self-administered questionnaires using a five-point Likert scale, as recommended by Taherdoost (2022) for reducing bias in data collection. Secondary data was collected through document analysis of firm records and HRIS reports spanning 2019-2023. Data analysis utilized both descriptive and inferential statistics through SPSS Version 22, employing multiple regression analysis to test relationships between variables, with the model equation: $Y=\alpha+\beta 1X1+\epsilon$, where Y represents Employee Performance and X1 represent the E-recruitment systems.

4. **RESULTS AND FINDINGS**

Response Rate

The response rate analysis reveals engagement levels across various departments within mediumsized manufacturing firms in Nairobi County. The total sample consisted of 132 participants, with 83 responses, yielding a response rate of 62.9%. Notably, the Production Department had the highest response rate at 29%, with 24 out of 49 respondents, indicating a strong interest in how human resource information systems (HRIS) impact their performance. The Human Resource Department followed closely with a 27% response rate, reflecting its direct relevance to HRIS. Conversely, the IT Department had the lowest rate at 22%, suggesting potential barriers in communication or engagement. Overall, these response rates highlight varying levels of participation, which may influence the comprehensiveness of the findings regarding HRIS and employee performance.

Descriptive Statistics

Descriptive Statistics of E-recruitment systems and Employee Performance

The descriptive statistics for E-recruitment system provide valuable insights into their perceived effectiveness among employees in medium-sized manufacturing firms. The overall mean score for the integration of the system with other HR tools is 3.37, indicating a moderately positive perception, though a standard deviation of 1.386 suggests variability in responses. Notably, the system's effectiveness in syncing data with external platforms received a lower mean score of 2.84, pointing to potential challenges in data integration that may hinder efficiency. Customization capabilities scored a mean of 3.28, reflecting a favorable view, while user interface tailoring achieved 3.33, highlighting some level of adaptability. The ease of navigation is rated slightly lower at 2.99, suggesting that usability may need further improvement. Finally, the onboarding intuitiveness, with a mean of 3.22, indicates reasonable effectiveness but also room for enhancement to better support new users.

Descriptive Statistics	Ν	Mean	Std. Deviation	Variance
To what extent does the system integrate seamlessly with other HR tools?	83	3.37	1.386	1.920
How effective is the system in syncing data with external platforms?	83	2.84	1.550	2.402
To what extent does the system allow customization of the recruitment process?	83	3.28	1.417	2.008
How well can the system tailor user interfaces to meet specific needs?	83	3.33	1.308	1.710
To what extent is the system easy to navigate for users?	83	2.99	1.311	1.719
How intuitive is the system for new users during the onboarding process?	83	3.22	1.269	1.611
Valid N (listwise)	83			

Table 1: Descriptive Statistics of E-recruitment Systems

The correlation results are as presented in Table 2.

Correlation Analysis	Employee Performance	Employee Self Service	, Performance Management System	E-training System	E-recruitment System
Employee Performance	1	.946**	.931**	.943**	.971**
Sig. (2-tailed)		.000	.000	.000	.000
Ν	83	83	83	83	83
Employee Self Service	.946**	1	.945**	.945**	.933**
Sig. (2-tailed)	.000		.000	.000	.000
Ν	83	83	83	83	83
Performance Management System	.931**	.945**	1	.952**	.928**
Sig. (2-tailed)	.000	.000		.000	.000
N	83	83	83	83	83
E-training and Development	.943**	.945**	.952**	1	.941**
Sig. (2-tailed)	.000	.000	.000		.000
Ν	83	83	83	83	83
E-recruitment and Onboarding	.971**	.933**	.928**	.941**	1
Sig. (2-tailed)	.000	.000	.000	.000	
Ν	83	83	83	83	83
Correlation is significant at the 0.01 level (2-tailed).					

 Table 2: Correlation Analysis

The correlation analysis reveals strong positive relationships between all Human Resource Information System (HRIS) components and employee performance in medium-sized manufacturing firms. The correlation coefficients demonstrated statistically significant relationships at p < 0.01 level, with the correlation matrix indicating strong positive associations between all variables. E-recruitment system showed the strongest correlation with employee performance (r = 0.971, p < 0.01), followed by Employee Self-Service (r = 0.946, p < 0.01), E-training system (r = 0.943, p < 0.01), and Performance Management System (r = 0.931, p < 0.01). These high correlation coefficients suggest that improvements in any HRIS component are strongly associated with enhanced employee performance.

The findings specifically focused on E-recruitment systems demonstrate their crucial role in enhancing employee performance in the manufacturing sector. The exceptionally strong correlation between E-recruitment systems and employee performance (r = 0.971, p < 0.01) was further supported by subsequent regression analysis, which yielded a significant beta coefficient

of 0.625 (p < 0.001). This indicates that E-recruitment systems explain approximately 62.5% of the variance in employee performance when controlling for other variables. These results align with previous findings by Shabongo and Phiri (2024) and Akoyo et al. (2022), who reported similar positive relationships between e-recruitment systems and organizational performance. The strength of these correlations, coupled with their statistical significance (p < 0.01) across all variables, provides robust evidence for the importance of integrated HRIS implementation in manufacturing firms.

Multiple Regression Analysis

With an R value of 0.978, the multiple regression analysis shows a strong model fit and a significant correlation between predictors and employee performance. E-recruitment and Onboarding, Performance Management System, Employee Self Service, and E-training and Development explain 95.7% of employee performance variance, according to the R Square value of 0.957. The model's Adjusted R Square value of 0.954 adjusts for the number of predictors, proving its robustness with many variables. The estimate's standard error is 0.276, indicating that employee performance projections are near to reality. This strong fit shows how these HR systems improve employee performance in medium-sized manufacturing enterprises in Nairobi County, Kenya.

Table 3: Model Fit

Model Summary	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1		.978a	.957	.954	.276

Analysis of Variance

The ANOVA analysis reveals significant insights into the relationship between the independent variables and employee performance. The regression sum of squares is 131.269, with a mean square of 32.817, resulting in an F-value of 429.473. This exceptionally high F-value indicates a strong statistical significance, with a p-value (Sig.) of .000. This suggests that the model, which includes E-recruitment and Onboarding, significantly predicts employee performance. The residual sum of squares is relatively low at 5.960, indicating that the model explains most of the variance in employee performance.

Table 4: Analysis of ANOVA

ANOVA	Sum of Squares	df	Mean Square	F	Sig.
1					
Regression	131.269	4	32.817	429.473	.000b
Residual	5.960	78	.076		
Total	137.229	82			
a. Dependent Variable: Employee Performance					

Regression Coefficient Results

The regression analysis highlights the significant impact of Human Resource Information Systems (HRIS) on employee performance in medium-sized manufacturing firms. The findings indicate that E-recruitment system has effect, with a coefficient of 0.625, underscoring its importance in enhancing overall performance.

Table 5: Regression of Coefficient

Coefficients	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error		
1				
(Constant)	.028	.089		.316
E-recruitment System	.625	.076	.634	8.252

To test the existence of a relationship between E-recruitment System and employee performance, the following linear regression equation was used;

Y = 0.028 + 0.625X1

Where:

Y= Employee Performance

 α = constant (intercept)

 β = Slope (gradient) showing the frequency at which the dependent variable varies in the independent variable for each function.

X1= E-recruitment system.

 $\epsilon = Error term$

The analysis reveals a strong positive impact of E-recruitment system on employee performance, with a beta coefficient of 0.625. This indicates a substantial increase in employee performance for every unit increase in the effectiveness of these systems. The standard deviation of the responses is 1.386, suggesting variability in perceptions among employees. The significance level is 0.000, indicating that the relationship is statistically significant, reinforcing the importance of effective recruitment and onboarding processes in enhancing overall employee productivity and satisfaction. The findings of this study align with existing literature on E-recruitment system. Shabongo and Phiri (2024) emphasize the positive effects of HRIS on recruitment and performance, noting high satisfaction rates among respondents. Similarly, Mwangi and Reuben (2024) found that e-recruitment significantly improves the recruitment process and applicant tracking. Akoyo et al. (2022) further support this by demonstrating a strong link between e-recruitment systems and enhanced university performance. Oyadiran et al. (2023) affirm that effective recruitment practices positively influence organizational performance. Lastly, Mbah et al. (2018) highlight that proper recruitment enhances productivity, reinforcing the critical role of E-Recruitment in driving employee performance and organizational success across various sectors.

5. CONCLUSION

E-recruitment Systems play a pivotal role in enhancing employee performance within mediumsized manufacturing firms. The strong beta coefficient of 0.625 indicates a significant positive relationship, suggesting that effective recruitment processes and seamless onboarding can lead to improved productivity and job satisfaction. Employees who feel adequately integrated and supported during their initial phase tend to perform better and align more closely with organizational goals. As such, firms should prioritize optimizing these systems to ensure they not only attract the right talent but also facilitate a smooth transition into the workplace. Investing in these processes can yield long-term benefits, ultimately driving organizational success.

6. RECOMMENDATIONS

To enhance employee performance through E-recruitment systems, organizations should invest in refining their recruitment processes to ensure alignment with organizational culture and job expectations. Regularly updating job descriptions and utilizing data analytics to identify the best candidates can lead to better hiring outcomes. Additionally, developing a comprehensive onboarding program that includes mentorship and clear role expectations can significantly improve new employee integration. Incorporating feedback mechanisms to assess onboarding effectiveness will also help identify areas for improvement. Organizations should prioritize these efforts, as a smooth onboarding experience fosters employee engagement and loyalty, ultimately translating into improved productivity and job satisfaction.

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