

Influence of Automated Compensation and Reward Strategies on Employee Retention in County Government Health Departments in Upper Eastern Kenya

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Abstract

This study aimed to determine how automated compensation and reward strategies influence employee retention in County Government Health Departments in Upper Eastern Kenya. Employee retention is a persistent human resource challenge in the health sector, as delays, inaccuracies, and limited transparency in compensation and reward administration can negatively impact employee satisfaction and willingness to remain with an organisation. The research was grounded in Expectancy Theory and adopted a positivist research philosophy. A mixed-methods cross-sectional survey design was implemented. The target population included 2,480 health workers from Meru, Tharaka-Nithi, Marsabit, Samburu, and Isiolo counties. A sample of 344 respondents was selected through a multistage procedure involving proportionate stratification by county and staff cadre, followed by selection within the strata. Data collection utilised structured closed-ended questionnaires and interview schedules, with a pilot test conducted among 34 respondents at Embu County Hospital. Quantitative data were analysed using descriptive statistics, Pearson correlation, and simple linear regression in SPSS, while qualitative interview data were analysed thematically. The regression model indicated that automated compensation and reward strategies had a positive and statistically significant influence on employee retention ($\beta = 0.725$, $R^2 = 0.526$, $F = 365.397$, $p < 0.001$). The study concluded that automated compensation and reward strategies significantly influence employee retention. These findings offer practical evidence for county human resource, treasury, and finance managers to strengthen accurate, timely, transparent, and technology-enabled compensation and reward systems for healthcare employees.

Key terms: Automated compensation, employee retention, health sector, reward strategies.

1.0 INTRODUCTION

Employee retention remains a major human resource challenge in county government health departments because losing experienced healthcare workers can increase workloads, disrupt continuity of care, and raise recruitment and training costs. Compensation and reward practices are particularly important because employees assess whether remuneration, incentives and benefits are timely, accurate, fair and linked to their contributions. Recent evidence among radiography professionals across 17 African countries indicates that poor salaries are a major factor associated with migration, while improved remuneration and working conditions are commonly identified as strategies for retaining health professionals (Ohene-Botwe et al., 2025).

Employee retention refers to an organisation's ability to retain competent employees and minimise voluntary exits (Hom et al., 2017). Automated compensation and reward strategies refer to the use of digital systems to administer salaries, benefits, overtime payments, incentives and other employee rewards. Such systems can improve processing accuracy, timeliness, transparency and access to compensation information. From an employee perspective, reliable compensation administration can strengthen perceptions of fairness and predictability, which are relevant to decisions about whether to remain with an organisation.

At the global level, health systems continue to experience workforce shortages and retention pressures. The World Health Organization emphasizes the importance of an adequate, accessible and appropriately supported health workforce for sustainable health-system performance (World Health Organisation, 2022). Although digital HR systems can improve administrative efficiency, technology does not independently resolve retention challenges where employees face inadequate remuneration, excessive workloads, limited career opportunities or poor working conditions. Automated compensation should therefore be understood as one component of a broader employee-retention system.

Across Africa, governments and health organisations are increasingly adopting digital systems to improve the administration of human resources and payments. Digital approaches can reduce manual processing, improve record accuracy and strengthen transparency. However, their effectiveness depends on system reliability, digital competence, organisational support and the extent to which employees understand how compensation and rewards are determined. Evidence from African health-workforce research also demonstrates that remuneration remains an important consideration in workforce migration and retention (Ohene-Botwe et al., 2025).

In Kenya, devolution transferred major health-service delivery responsibilities to county governments, making county-level human resource management central to workforce stability. County health departments manage employees under varied geographical, financial and institutional conditions. The Upper Eastern region, comprising Meru, Tharaka-Nithi, Isiolo, Marsabit and Samburu counties, presents an important context because counties differ in population, remoteness and health-system capacity. Digitalisation of payment and HR processes has created opportunities for more timely and transparent compensation administration, but evidence on its direct contribution to employee retention remains limited.

The specific empirical gap is that existing studies have largely examined conventional compensation factors such as salaries, allowances, benefits and incentives, or have considered electronic HR systems more broadly. Comparatively less attention has been given to automated compensation and reward strategies as a distinct construct comprising automated payroll systems, system-based overtime pay and incentives and transparency in reward allocation within devolved county health departments. The present study addresses this gap by examining the influence of these practices on employee retention among health workers in Upper Eastern Kenya.

The remainder of the article presents the relevant empirical and theoretical literature, methodology, findings and discussion, followed by conclusions and recommendations. Guided by this focus, the study sought to determine the influence of automated compensation and reward strategies on employee retention in County Government Health Departments in Upper Eastern, Kenya.

2.0 LITERATURE REVIEW

Empirical Literature Review

Shaw et al. (2023) examined automated compensation systems and employee retention using HR records and employee survey data from 40 hospitals in the United States. The study is useful because it combined administrative and employee-level evidence and directly considered compensation automation as a workforce-stability mechanism. Its findings associated digital payroll with timely payments, greater transparency of bonuses and fewer pay disputes. However, the study was conducted in a high-income healthcare environment and therefore provides limited evidence about settings with constrained digital infrastructure and decentralised public-sector payroll systems. It also highlighted concerns that highly rigid automated rules may reduce employees' sense of autonomy. The present study extends this evidence by examining county government health departments in Kenya and by focusing on automated payroll, overtime and incentives and transparency in reward allocation.

De Stefano and Weller (2024) examined algorithmic pay and reward systems in European hospitals using HR data and employee interviews. Their study reported that automated reward processes could improve perceptions of fairness, reduce managerial errors and strengthen employees' willingness to remain. A methodological strength was the use of mixed evidence, which allowed the researchers to examine both administrative outcomes and employee perceptions. Nevertheless, the European setting and variation in technological maturity limit direct transferability to Kenyan county health departments. The study also identified concerns about the transparency and explainability of automated decisions, demonstrating that automation can produce both efficiency and trust challenges. The current study addresses the contextual gap by examining automated compensation within devolved public health departments in Upper Eastern Kenya.

Mokhothu and Phago (2023) investigated electronic payroll systems and employee retention in South African public hospitals using employee survey data. The study reported that electronic payroll improved payment accuracy and clarity, which were associated with more positive employee outcomes. The study is relevant because South Africa, like Kenya, operates a public healthcare system in which payroll reliability can affect employee perceptions of organisational support. However, the study focused primarily on electronic payroll and did not sufficiently distinguish payroll automation from other reward mechanisms such as overtime and performance-based incentives. The present study addresses this conceptual

limitation by treating automated compensation and reward strategies as a broader construct incorporating automated payroll, system-based overtime and incentives and transparency in reward allocation.

Mugisha and Nabukeera (2024) examined digital reward systems and employee retention in Uganda's public health sector using employee surveys and interviews. The study reported improvements in transparency, reduced perceptions of preferential treatment and stronger motivation following adoption of digital reward platforms. Because the study used both quantitative and qualitative evidence, it provides useful insight into how employees and managers experience digital reward systems. However, technical problems, limited digital literacy and the absence of long-term evidence constrained the interpretation of sustained retention effects. The present study responds to the contextual and methodological gap by examining automated compensation and reward strategies in Kenyan county health departments and integrating survey findings with evidence from HR officers.

Mwangi and Kilonzo (2024) examined electronic human resource systems and employee commitment in Kenya's devolved governments using mixed methods. Their findings indicated that automated payroll and clearer reward systems were associated with greater trust, commitment and retention intentions. The Kenyan context strengthens the relevance of the evidence; however, the study considered county government employees generally rather than concentrating on health departments, where retention challenges may be influenced by shortages of specialised skills and demanding working conditions. In addition, employee commitment was the principal outcome rather than retention itself. The current study therefore provides more sector-specific evidence by focusing on health departments in Upper Eastern Kenya and using employee retention as the dependent variable.

Theoretical Review

Expectancy Theory was postulated by Victor Vroom (1964) and later extended through the work of Porter and Lawler. The theory explains motivation through three central relationships: expectancy, the belief that effort will lead to performance; instrumentality, the belief that performance will lead to rewards; and valence, the value attached to those rewards. Employees are therefore more likely to exert effort when they believe that effort can produce performance, performance will be recognised through valued rewards, and the rewards are desirable. Empirical applications have demonstrated the relevance of expectancy-based explanations of work motivation and effectiveness (Hackman & Porter, 1968; Chiang & Jang, 2008; Mathibe, 2008).

In this study, Expectancy Theory provides a direct framework for interpreting how automated compensation and reward strategies may influence employee retention. Automated payroll systems can strengthen instrumentality by making the relationship between employee performance and compensation more predictable and consistent. System-based overtime and incentive calculations can make reward decisions more timely and traceable, while transparent communication of reward criteria can improve employees' understanding of how performance is linked to valued outcomes. Where employees perceive that their effort and performance are accurately recognised and followed by reliable rewards, the expectancy, instrumentality and valence relationships proposed by the theory can support stronger willingness to remain in the organisation. The theory therefore helps interpret the positive association and regression effect observed in this study.

Expectancy Theory has limitations. It assumes a relatively rational decision-making process, yet employee behaviour can also be influenced by emotions, social relationships and external pressures. The theory also emphasises extrinsic outcomes and may therefore understate intrinsic motivation and non-financial reasons for staying. In addition, expectancy, instrumentality and valence can be difficult to measure because employees attach different meanings to rewards. The present study addresses these limitations by measuring employee perceptions across multiple indicators of compensation and reward automation and by complementing the quantitative findings with interviews with HR officers. The qualitative component provides contextual evidence on factors such as budget constraints, employee understanding and transparency that may shape how automated rewards are experienced.

Conceptual Framework

The conceptual framework illustrates the relationship between Automated Compensation and Reward Strategies (independent variable) and Employee Retention (dependent variable). Automated Compensation and Reward Strategies are operationalised through three dimensions: use of automated payroll systems; system-based overtime pay and incentives; and transparency in reward allocation. Employee Retention is operationalised through intention to remain in the county health service, willingness to recommend the county as an employer, perceived job security and stability and perceived opportunities for growth and advancement.

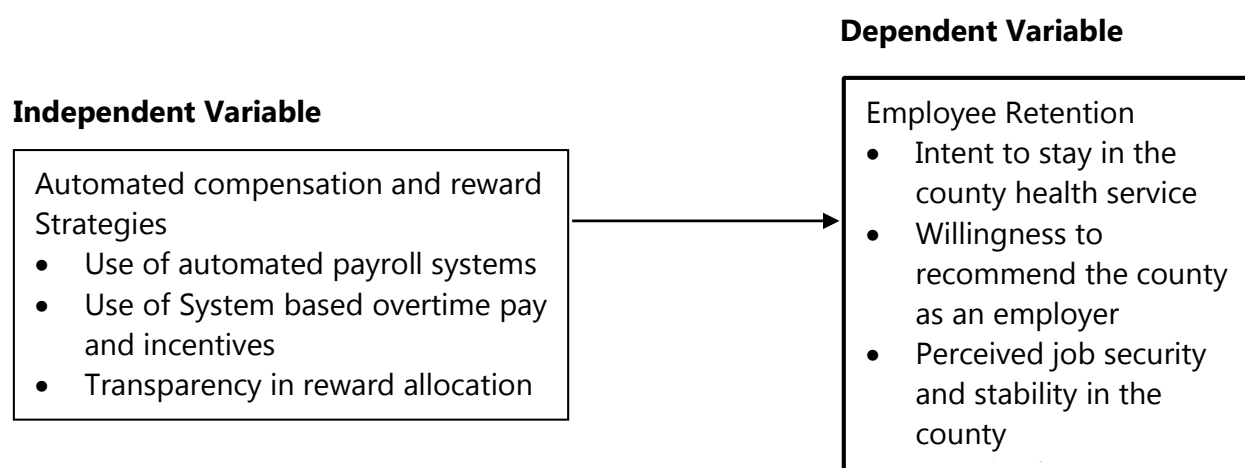


Figure 1: Conceptual Framework

Automated Compensation and Reward Strategies refer to technology-enabled processes used to administer salaries, overtime, incentives and other rewards accurately, consistently and transparently. In this study, the construct was measured through automated payroll systems, system-based overtime pay and incentives and transparency in reward allocation. Employee Retention refers to employees' willingness to remain with the county health service and was assessed using intention to stay, willingness to recommend the county as an employer, perceived job security and stability and perceived opportunities for growth and advancement.

3.0 METHODOLOGY

The study adopted a mixed-methods cross-sectional survey design. The quantitative component used a structured survey to measure employees' perceptions of automated compensation and reward strategies and employee retention at a single point in time, making the design appropriate for estimating the

strength and direction of the relationship between the variables across the five counties. The qualitative component involved interviews with HR officers to provide contextual explanations of how automated compensation and reward systems operate in practice. Integrating the two components enabled the study to combine measurable patterns from the survey with managerial explanations of payment accuracy, timeliness, transparency and implementation constraints.

The total study population was 2,480 health workers, drawn from the Ministry of Health human resource databases (2025). The population comprised 1,730 clinical staff and 750 non-clinical staff distributed across Meru, Tharaka-Nithi, Marsabit, Samburu and Isiolo counties. Meru County had 950 health workers, comprising 650 clinical and 300 non-clinical staff, while Tharaka-Nithi had 690, comprising 480 clinical and 210 non-clinical staff. Marsabit had 310 health workers, Samburu 280 and Isiolo 250. The sampling frame was based on the health-worker records contained in the 2025 human resource databases for the five counties.

The sample size was determined using Yamane's (1967) simplified formula for finite populations. A multistage proportionate stratified sampling procedure was then used. First, the five counties formed the primary strata. Second, employees were stratified into clinical and non-clinical cadres. Third, the required sample was proportionately allocated to the county and cadre strata, after which respondents were selected from the respective sampling frames. This procedure was appropriate because it ensured that employees from each county and both staff cadres were represented in the final sample.

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

Where:

n = required sample size; N = target population; e = margin of error (0.05).

The target population was 2,480 employees. At a 95 per cent confidence level and a 5 per cent margin of error, the sample size was calculated as:

$$n = N / [1 + N(e^2)] = 2,480 / [1 + 2,480(0.05^2)] = 344.44 \approx 344$$

$$n = 344.44$$

n = 344 respondents (approximately).

Therefore, the study targeted 344 respondents. The sample was proportionately distributed across the five counties and the clinical and non-clinical cadres as shown in Table 1. In addition, five HR officers, one from each county health department, were purposively selected as key informants for the qualitative interviews. The multistage approach ensured geographical and cadre representation, while the key-informant interviews provided contextual evidence to complement the survey results. Health workers included in the sampling frame were eligible if they were employees of the respective county health departments and were available to participate during the data-collection period. Participation was voluntary and based on informed consent.

Table 1: Sample Size Distribution

County	Clinical Staff	Non-clinical Staff	Total Sample
Isiolo County	25	10	35
Marsabit County	31	12	43
Samburu County	28	11	39
Meru County	90	42	132
Tharaka-Nithi County	67	28	95
Total	241	103	344

The study used structured closed-ended questionnaires for quantitative data and interview schedules for qualitative data. The questionnaire contained Likert scale items measuring the three dimensions. The interview schedule contained open-ended questions. These instruments suited the study because they captured standardised perceptions for statistical analysis while allowing HR managers to provide detailed explanations of implementation experiences.

Content validity was enhanced through review of the questionnaire and interview schedule by research supervisors and subject experts to ensure that the items adequately represented the study constructs and objective. A pilot test involving 34 respondents at Embu County Hospital was used to assess clarity, relevance, sequencing and consistency of the instruments before the main data collection. Internal consistency of the multi-item scales was assessed using Cronbach's alpha, with coefficients of 0.70 or higher considered acceptable for research purposes. Items found to be ambiguous or insufficiently aligned with the study constructs were revised before the final administration.

Data were collected using a structured closed-ended questionnaire and a semi-structured interview schedule. The questionnaire contained items measuring automated payroll systems, system-based overtime pay and incentives, transparency in reward allocation and employee-retention outcomes. Responses to the attitudinal items were measured on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The interview schedule contained open-ended questions for HR officers on the operation of automated compensation systems, payment accuracy and timeliness, reward transparency, implementation challenges and perceived implications for employee retention. The questionnaire provided standardised quantitative data across respondents, while the interview schedule provided contextual explanations that could be used to interpret and complement the statistical findings.

Data collected from the field were cleaned, coded and entered into SPSS Version 31. Quantitative data were summarised using frequencies, means and standard deviations. Pearson product-moment correlation was used to establish the direction and strength of the association between automated compensation and reward strategies and employee retention. Simple linear regression was used because the dependent variable, employee retention, was treated as a continuous composite measure. The regression model was assessed using R^2 , adjusted R^2 , the F-statistic, the

regression coefficient, t-statistic and p-value at the 5 per cent significance level. The ANOVA table reported in the regression output was interpreted as the overall F-test of the regression model; it was not used as a test of association between categorical variables. Qualitative interview data were transcribed, coded and analysed thematically. The resulting themes were compared with the quantitative findings to explain areas of convergence, qualification and contextual variation in how automated compensation and reward strategies were perceived to influence employee retention.

The study observed standard ethical principles governing research involving human participants. Participation was voluntary, and respondents were informed about the purpose of the study, the nature of their participation and their right to decline or withdraw without penalty. Informed consent was obtained before data collection. No personally identifying information was required in the questionnaire, and interview information was treated confidentially. Completed instruments and electronic data were handled securely and used only for academic purposes. Permission to conduct the study was obtained from the relevant institutional and county authorities, and the study complied with applicable ethical requirements.

4.0 FINDINGS AND DISCUSSION

The following were the results and discussions of the study:

Demographic Characteristics of the Respondents

The study achieved a very high response rate of 96.22 per cent, with 331 of the 344 distributed questionnaires returned and found suitable for analysis. The demographic findings showed a relatively balanced gender distribution, with females constituting 51.4 per cent and males 48.6 per cent of the respondents. Most respondents (50.8%) were aged 30-39 years, followed by those aged 40-49 years (21.8%), 20-29 years (19.9%) and 50 years and above (7.6%). Regarding years of service, the largest proportion (42.6%) had worked in the county government health departments for 6-10 years, followed by 30.2 per cent with 1-5 years and 27.2 per cent with 11 years or more. The respondents represented a relatively experienced workforce, providing an appropriate basis for assessing augmented human resource management practices and employee retention in county government health departments in Upper Eastern, Kenya.

Automated Compensation and Reward Strategies and Employee Retention

The study sought to determine the influence of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya. Automated compensation and reward strategies were examined in terms of the extent to which technology is used to facilitate the administration, processing, monitoring and allocation of employee compensation and rewards. The construct was assessed using three key indicators, namely automated payroll systems, system-based overtime pay and incentives and transparency in reward allocation.

Respondents indicated their level of agreement with statements about implementing automated compensation and reward strategies within their county government health departments. The items were measured using a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The

analysis sought to establish whether the use of automated systems in compensation and reward management enhances employees' perceptions of fairness, accuracy, transparency and timely payment and whether these aspects contribute to their willingness to remain within the county health service.

The findings under this objective are presented through descriptive, correlation and regression analyses. Descriptive statistics were used to establish respondents' perceptions of the extent to which automated compensation and reward strategies are implemented. Pearson correlation analysis was then used to determine the direction and strength of the relationship between automated compensation and reward strategies and employee retention. Regression analysis was subsequently undertaken to establish whether the observed relationship represents a statistically significant influence on employee retention. The findings are interpreted in relation to the third research hypothesis, H03, which states that there is no statistically significant influence of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya.

Descriptive Statistics on Automated Compensation and Reward Strategies and Employee Retention

The study sought to determine the influence of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya. Descriptive analysis was conducted to establish respondents' perceptions regarding the extent to which technology-enabled compensation and reward systems are utilised within the health departments. The construct was operationalised using three indicators, namely automated payroll systems, system-based overtime pay and incentives and transparency in reward allocation. Respondents were presented with statements reflecting the three indicators and were required to indicate their level of agreement using a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The responses were summarised using mean scores and standard deviations. The mean scores were used to establish the general tendency of respondents' views regarding the implementation of automated compensation and reward strategies, while the standard deviations indicated the extent to which responses varied around the respective mean. Table 2 presents the descriptive results.

Table 2: Descriptive Statistics on Automated Compensation and Reward Strategies

Descriptive Statistics	N	Mean	Std. Deviation
The County uses an automated payroll system.	331	4.0000	1.00905
The payroll system minimizes salary errors.	331	3.9215	1.13613
Overtime payments are calculated automatically through a digital system.	331	3.2991	1.38760
Incentives are allocated based on system recorded performance data.	331	3.4169	1.29856
The automated system ensures transparency in overtime compensation.	331	3.4713	1.37122
The digital system used in the department ensures that rewards are allocated fairly and transparently.	331	3.3625	1.22659
I understand how my performance determines the rewards or incentives I receive.	331	3.3837	1.29833
The criteria used to allocate rewards and incentives in my department are clearly communicated to employees	331	3.3595	1.35089
Average	331	3.5268	1.25980

Source: Survey Data, (2026)

The results in Table 2 show the level and existence of automated compensation and reward strategies in county government health departments in Upper Eastern, Kenya. The average item scores ranged from 3.30 to 4.00 (Range = 0.70). The perception that the county uses an automated payroll system had the highest rating (mean score = 4.00 and SD = 1.01), followed by the view that the payroll system minimises salary errors (mean score = 3.92 and SD = 1.14). The perception that the automated system ensures transparency in overtime compensation recorded a mean score of 3.47 and SD = 1.37, followed by the view that incentives are allocated based on system-recorded performance data (mean score = 3.42 and SD = 1.30).

The perception that employees understand how their performance determines the rewards or incentives they receive recorded a mean score of 3.38 and SD = 1.30, while the view that the digital system ensures rewards are allocated fairly and transparently recorded a mean score of 3.36 and SD = 1.23. Similarly, the perception that criteria for allocating rewards and incentives are clearly communicated to employees recorded a mean score of 3.36 and SD = 1.35. The lowest rated aspect was the perception that overtime payments are calculated automatically through a digital system, which recorded a mean score of 3.30 and SD = 1.39. The aggregate mean score of 3.5268 indicates that respondents generally agreed that automated compensation and reward strategies exist and are utilised within the county health departments. The aggregate standard deviation of 1.2598 indicates moderate variation in respondents' perceptions. The findings imply that automated payroll systems are relatively well established, particularly in minimising salary errors, while automation of overtime payments, transparent reward allocation and clear communication of reward criteria appear comparatively less developed. Strengthening these areas could enhance perceptions of fairness, transparency and predictability in compensation and rewards, which may in turn contribute to improved employee retention.

Correlation Analysis on Automated Compensation and Reward Strategies and Employee Retention

The study sought to determine the influence of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya. The study used correlation analysis to establish the direction and strength of the relationship between automated compensation and reward strategies and employee retention. As conceptualised in the study, automated compensation and reward strategies were assessed using three indicators, namely automated payroll systems, system-based overtime pay and incentives and transparency in reward allocation, while employee retention was measured using indicators relating to employees' intention to remain in the county health service, willingness to recommend the county as an employer, perceived job security and stability and opportunities for career growth and advancement.

The Pearson Product Moment correlation technique was used to determine the nature of the association between automated compensation and reward strategies as the independent variable and employee retention as the dependent variable. The correlation coefficient ranges from -1 to +1, where +1 represents a perfect positive linear relationship, and -1 represents a perfect negative linear relationship between the variables. A coefficient approaching zero indicates a weak or negligible linear association. The magnitude of the coefficient was considered in determining the strength of the relationship, while the associated significance value was used to establish whether the observed relationship was statistically significant at the 1 per cent level of significance. The findings were presented in Table 3.

Table 3: Correlation Analysis on Automated Compensation and Reward Strategies and Employee Retention

Correlations		ER	ACRS
ER	Pearson Correlation	1	.725**
	Sig. (2-tailed)		.000
	N	331	331
ACRS	Pearson Correlation	.725**	1
	Sig. (2-tailed)	.000	
	N	331	331

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

Source: Survey Data, (2026)

The results in Table 3 show the relationship between automated compensation and reward strategies (ACRS) and employee retention (ER) in county government health departments in Upper Eastern, Kenya. The findings indicate a strong positive relationship between automated compensation and reward strategies and employee retention, as demonstrated by a Pearson correlation coefficient of $r = 0.725$. This implies that increased adoption and effective implementation of automated compensation and reward strategies are associated with higher levels of employee retention. The relationship was statistically significant ($p=0.000<0.001$). The strength of the correlation suggests that automated compensation and reward strategies have a substantial association with employees' willingness to remain in the county health departments. Automated payroll systems, accurate salary processing, transparent overtime compensation, performance-based incentives, and clearly communicated reward criteria may enhance perceptions of fairness, accuracy and transparency in compensation. These conditions can strengthen employee satisfaction and organisational attachment, thereby encouraging employees to remain with the county health service.

Regression Analysis on Automated Compensation and Reward Strategies and Employee Retention

The study's objective sought to determine the influence of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya. Regression analysis was undertaken to establish whether automated compensation and reward strategies significantly predict employee retention and to determine the extent to which changes in the compensation and reward systems account for variations in employee retention. The analysis considered automated payroll systems, system-based overtime pay and incentives and transparency in reward allocation as the key dimensions of automated compensation and reward strategies, while employee retention constituted the dependent variable.

A simple linear regression model was employed, with automated compensation and reward strategies entered as the predictor and employee retention as the outcome variable. The regression results were assessed using the R , R^2 , adjusted R^2 , ANOVA F-statistic, regression coefficient (β), t-statistic and corresponding p-value. The coefficient of determination was used to establish the proportion of variation in employee retention explained by automated compensation and reward strategies, while the adjusted R^2 provided an estimate of the explanatory power of the model after accounting for the number of predictors. The ANOVA results were examined to determine whether the regression model as a whole was statistically significant.

The regression coefficient was further evaluated to establish the direction and magnitude of the effect of automated compensation and reward strategies on employee retention. A positive coefficient would indicate that improvements in automated compensation and reward practices are associated with increased employee retention, whereas a negative coefficient would suggest an inverse relationship. The statistical significance of the predictor was assessed using its t-statistic and p-value at the 0.05 significance level. A p-value below 0.05 would provide sufficient evidence to reject the null hypothesis, while a p-value above 0.05 would imply insufficient evidence to reject it.

The findings from the regression analysis were therefore used to test the third hypothesis H03, which states that there is no statistically significant influence of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya.

The model summary, ANOVA, and regression coefficients are presented in the following tables.

Table 4: Model Summary for Automated Compensation and Reward Strategies and Employee Retention

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725 ^a	.526	.525	.30735

a. Predictors: (Constant), Automated Compensation and Reward Strategies

Source: Survey Data, (2026)

The model in Table 4 assesses how automated compensation and reward strategies predict employee retention in county government health departments in Upper Eastern, Kenya. The R^2 value of 0.526 indicates that approximately 52.6 per cent of the variation in employee retention can be explained by automated compensation and reward strategies. This suggests that automated compensation and reward practices are important predictors of employee retention. The adjusted R^2 of 0.525 further indicates that the model retains substantial explanatory power after adjustment.

Table 5: ANOVA^a for Automated Compensation and Reward Strategies and Employee Retention

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.517	1	34.517	365.397	.000 ^b
	Residual	31.078	329	.094		
	Total	65.595	330			

a. Dependent Variable: Employee Retention

b. Predictors: (Constant), Automated Compensation and Reward Strategies

Source: Survey Data, (2026)

Table 5 presents the Analysis of Variance (ANOVA) results for the regression model examining the influence of automated compensation and reward strategies on employee retention. The findings indicate that the regression model was statistically significant ($F = 365.397$, $p = 0.000 < 0.05$), demonstrating that automated compensation and reward strategies significantly explain variations in employee retention in county government health departments in Upper Eastern, Kenya. This implies that automated

compensation and reward strategies are a significant predictor of employee retention and that the regression model provides a good fit for explaining the relationship between the two variables.

Table 6: Coefficients^a for Automated Compensation and Reward Strategies and Employee Retention

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.609	.056		10.890	.000
	ACRS	.640	.033	.725	19.115	.000

a. Dependent Variable: Employee Retention

Source: Survey Data, (2026)

Table 6 presents the regression coefficients for the effect of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya. The results reveal that automated compensation and reward strategies have a positive and statistically significant effect on employee retention ($p = 0.000 < 0.05$). The regression model can be expressed as $Y = 0.609 + 0.640X_3$, implying that a one-unit increase in automated compensation and reward strategies is associated with a 0.640-unit increase in employee retention, holding other factors constant. The standardised beta coefficient of 0.725 indicates a strong positive effect, demonstrating that automated compensation and reward strategies make a substantial contribution to employee retention. The constant of 0.609 ($p = 0.000 < 0.05$) represents the expected level of employee retention when automated compensation and reward strategies are held at zero. Both the constant and the regression coefficient were statistically significant, as evidenced by their respective p-values of 0.000, confirming that the observed relationship is statistically significant. Therefore, the third hypothesis H03, which stated that there is no statistically significant influence of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya, was rejected. The findings therefore confirm that automated compensation and reward strategies significantly influence employee retention in county government health departments in Upper Eastern, Kenya.

The regression equation is expressed as:

$$Y = 0.609 + 0.640X_3$$

Where:

Y = Employee retention

X_3 = Automated compensation and reward strategies

0.609 = Y-intercept (constant), representing the estimated level of employee retention when automated compensation and reward strategies are zero.

0.640 = Regression coefficient, representing the estimated increase in employee retention resulting from a one-unit increase in automated compensation and reward strategies, holding other factors constant.

The findings were supported by the Expectancy Theory, which explains that employees are more likely to be motivated and remain when they perceive a clear relationship between effort, performance and valued

rewards. Effective utilisation of these systems can strengthen employee trust and perceptions of organisational fairness, thereby encouraging employees to remain in the organisation. The findings are consistent with Shaw et al. (2023), who found that automated payroll systems improved workforce stability by ensuring timely payments, transparent bonuses and fewer disputes concerning compensation. Similarly, De Stefano and Weller (2024) established that algorithmic pay and reward systems improved perceived fairness, reduced managerial errors and increased employees' willingness to remain in European hospitals. The findings also agree with Mokhothu and Phago (2023), who found that electronic payroll systems, reduced payment errors and greater pay clarity enhanced employee retention in South African public hospitals. Further support is provided by Mugisha and Nabukeera (2024), who established that digital reward systems enhanced transparency, reduced favouritism and increased employee motivation and willingness to remain in public health institutions.

However, the findings contrast with evidence from some studies, particularly De Stefano and Weller (2024), who reported that concerns regarding the transparency and explainability of algorithmic pay systems reduced trust among some employees. Likewise, Shaw et al. (2023) found that highly rigid automated pay rules could reduce employees' perceived autonomy, potentially weakening the positive effects of automated compensation systems. These differences may be attributed to variations in technological infrastructure, organisational culture, transparency of automated decision-making, employee digital competence and differences between public and private healthcare settings. Therefore, the findings of the current study extend existing literature by demonstrating that automated compensation and reward strategies can significantly enhance employee retention in county government health departments in Upper Eastern Kenya, provided that such systems are transparent, fair, reliable and supported by an organisational environment that employees perceive as trustworthy.

Qualitative Findings

Qualitative data was also sought from the human resource managers regarding how automated compensation and reward strategies influence employee retention in county government health departments in Upper Eastern, Kenya.

In response, one of the HR managers (H3) observed that;

The County has adopted automated payroll and compensation systems that have improved the efficiency and accuracy of salary processing. The system helps minimise salary errors and ensures that employees receive their salaries and other eligible payments in a timely manner. Automated systems also make it easier to process overtime payments and maintain accurate compensation records. From our experience, employees are more satisfied and willing to remain in the County when they are confident that their salaries and other benefits will be processed accurately and consistently.

Another HR manager (H2) added;

Automated compensation and reward systems have improved transparency in how some rewards and incentives are administered. Performance information can be used to identify employees who qualify for certain incentives, while digital records provide a clear basis for making compensation-related decisions. However, financial constraints and budgetary

limitations sometimes affect the availability and frequency of rewards. There are also employees who may not fully understand how performance information is linked to incentives. Despite these challenges, reliable payroll systems, timely payments and transparent reward processes have contributed to employee satisfaction, commitment and the willingness of employees to continue working for the County.

The qualitative findings imply that automated compensation and reward strategies contribute positively to employee retention by improving the accuracy, timeliness and transparency of compensation processes in county government health departments in Upper Eastern, Kenya. The HR managers indicated that automated payroll systems minimise salary errors, facilitate timely payment of salaries and eligible benefits and improve the processing of overtime payments, thereby increasing employees' confidence in the reliability of the compensation system. The findings further imply that the use of digital performance records in administering incentives can enhance transparency and fairness by providing a clear basis for reward decisions, which can strengthen employee satisfaction, commitment and willingness to remain in the County. However, the effectiveness of automated compensation and reward strategies is constrained by financial and budgetary limitations and inadequate employee understanding of how performance is linked to incentives. In general, the qualitative evidence suggests that reliable payroll systems and transparent reward processes can support employee retention, particularly when employees perceive compensation and rewards as accurate, consistent and fairly administered.

Summary of Findings

The study sought to establish the influence of automated compensation and reward strategies on employee retention in county government health departments in Upper Eastern, Kenya. The descriptive findings indicated that automated compensation and reward practices were generally present, particularly through the use of automated payroll systems, salary error reduction mechanisms, digital processing of overtime payments and the use of performance information in allocating incentives. However, aspects relating to the transparency and communication of reward criteria received relatively lower perceptions, suggesting areas requiring further improvement. Correlation analysis revealed a strong, positive and statistically significant relationship between automated compensation and reward strategies and employee retention. The regression findings further confirmed that automated compensation and reward strategies had a positive and statistically significant influence on employee retention. Therefore, the null hypothesis stating that automated compensation and reward strategies do not significantly influence employee retention was rejected.

Discussion

Explore the practical or theoretical implications of your findings. Avoid extensive citations and discussion of published literature. Report whether the hypothesis was supported or rejected. Acknowledge limitations under a separate sub-heading.

5.0 CONCLUSION AND RECOMMENDATIONS

Conclusion: The study concluded that automated compensation and reward strategies significantly influence employee retention. Automated payroll systems, digital processing of compensation and the use of performance information in reward allocation can improve the efficiency, accuracy and transparency of compensation processes. Employees are more likely to remain in an organisation where they perceive compensation and rewards to be fairly administered and linked to their contributions. However, the study

also concluded that the benefits of automated reward systems depend on clear communication of reward criteria and employees' understanding of how their performance influences incentives and other benefits.

Recommendation: County Treasury and Finance Departments should work closely with human resource departments to improve automated compensation and reward systems. Automated payroll and overtime systems should be regularly reviewed to minimise payment errors and delays. The criteria for performance-based rewards and incentives should also be clearly communicated to employees to promote perceptions of fairness and transparency.

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