

Technology Innovation and Performance of General Insurance Companies in Kenya

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DOI: <https://doi.org/10.47772/IJRISS.2026.100801182>

Received: 11 September 2026; Accepted: 16 September 2026; Published: 28 September 2026

ABSTRACT

The performance of general insurance companies is important to the development and stability of the insurance sector and the broader Kenyan economy. However, general insurers continue to operate in an environment characterized by changing customer expectations, technological developments, operational pressures, competition, and relatively low insurance uptake. Technology innovation has therefore become increasingly relevant to insurers seeking to improve service delivery and organizational performance. This study examined the relationship between technology innovation and the performance of general insurance companies in Kenya. The study was guided by Diffusion of Innovation Theory, Resource-Based Theory, and Risk Management Theory. A positivist research philosophy and quantitative correlational and explanatory research design within a cross-sectional framework were adopted. The target population comprised 451 top-level managers from 35 general insurance companies in Kenya, from whom a sample of 302 managers was selected using stratified and simple random sampling. Primary data were collected using structured questionnaires, with 221 usable responses obtained, representing a response rate of 73.17%. Data was analysed using descriptive statistics, Pearson correlation, and simple linear regression. The findings indicated a positive and statistically significant relationship between technology innovation and organizational performance ($r = .568$, $p < .001$). Regression analysis showed that technology innovation significantly predicted organizational performance, $R = .568$, $R^2 = .322$, adjusted $R^2 = .319$, $F(1, 219) = 104.128$, $p < .001$. The standardized regression coefficient was positive and statistically significant ($\beta = .568$, $p < .001$), indicating that technology innovation accounted for 32.2% of the observed variance in organizational performance. The study concludes that technology innovation is significantly associated with the performance of general insurance companies in Kenya. The study recommends strengthening digital platforms, digital claims management, operational digitization, and appropriate application of emerging technologies while ensuring adequate organizational capabilities and data protection.

Keywords: technology innovation, organizational performance, general insurance companies, insurance uptake, Kenya.

INTRODUCTION

Insurance is an important component of the financial system because it facilitates risk transfer, provides financial protection against unforeseen losses, supports business continuity, and contributes to economic stability. By reducing the financial consequences of adverse events, insurance enables households and businesses to undertake economic activities with greater confidence. The sector also contributes to savings mobilization, investment, and financial sector development. In Kenya, the insurance industry is therefore expected to play a significant role in supporting national economic development and the realization of the country's long-term development agenda under Kenya Vision 2030 (Government of Kenya, 2007).

The Kenyan insurance industry has experienced growth and transformation in response to changing economic conditions, regulatory developments, and technological advancements. Nevertheless, substantial opportunities for market development remain, particularly because insurance uptake is still relatively low. General insurance companies constitute an important segment of the industry because they provide protection against a broad range

of risks, including motor, medical, fire, marine, engineering, liability, and personal accident risks. Consequently, the performance of general insurers is important not only for the growth and sustainability of the insurance industry but also for the continuity and resilience of businesses and other economic activities that depend on effective risk protection (Insurance Regulatory Authority [IRA], 2024).

Despite their strategic importance, general insurance companies in Kenya operate in an increasingly complex and competitive environment. The sector continues to experience challenges associated with low insurance uptake, changing customer expectations, operational inefficiencies, rising costs, intense competition, and changing market conditions. Customers increasingly demand insurance services that are convenient, accessible, timely, and responsive to their needs. At the same time, insurers must efficiently manage information, assess risks, process claims, and maintain high standards of customer service. These challenges have increased the need for general insurance companies to adopt innovative approaches capable of improving operational effectiveness and organizational competitiveness.

Technology innovation refers to the adoption and application of new or improved technologies to support organizational processes, service delivery, information management, and decision-making. In the insurance industry, technological developments have transformed traditional activities such as product distribution, customer service, claims processing, and internal operations (Bohnert et al., 2019; Sosa & Montes, 2022).

In this study, technology innovation is conceptualized through operational digitization, digital platform integration, digital claims management, and artificial intelligence adoption. Operational digitization involves converting manual insurance activities into digital processes; digital platform integration entails the use of websites, mobile applications, online portals, and electronic payment channels; digital claims management involves the application of technology to claims reporting, processing, monitoring, and settlement; while artificial intelligence adoption involves the use of AI in areas such as customer service, claims classification, risk assessment, and decision-making (Gupta et al., 2022; Sosa & Montes, 2022).

Organizational performance refers to the extent to which an organization achieves its desired operational and business outcomes through the effective utilization of its resources and capabilities. In this study, organizational performance is assessed using customer retention, premium growth, operational efficiency, and revenue growth. Customer retention reflects the ability to maintain policyholders and encourage renewals; premium growth represents increases in premium income; operational efficiency reflects the effective utilization of resources and reduction in processing time and costs; while revenue growth reflects increases in income generated from insurance activities (Bohnert et al., 2019; Naggayi, 2023).

Technology innovation may be associated with organizational performance through improved service delivery, streamlined operations, enhanced claims management, and expanded digital distribution channels. Empirical evidence from Kenya indicates positive relationships between digitalization and operational performance and between artificial intelligence adoption and insurance-company performance (Abongo, 2025; Naggayi, 2023). From the Resource-Based View, the performance value of technology depends on the extent to which firms possess the organizational capabilities, human resources, and managerial competencies required to effectively deploy and integrate technological resources (Barney, 1991).

Technology innovation has emerged as an important strategic response to the changing insurance environment. It involves the adoption and application of new or significantly improved technological systems and digital solutions to enhance organizational processes, service delivery, and business outcomes. In the insurance industry, technology innovation may include digital distribution channels, mobile platforms, automated underwriting, electronic claims processing, artificial intelligence, data analytics, cloud computing, and other InsurTech-enabled solutions. These technologies have the potential to transform how insurers collect and analyze information, interact with customers, process transactions, manage risks, and deliver insurance services (Sosa, 2022).

The global expansion of InsurTech has accelerated the digital transformation of the insurance industry by creating opportunities for insurers to automate processes, utilize new sources of data, personalize services, and improve risk assessment and decision-making. Technological innovations can enhance operational efficiency

and organizational responsiveness; however, their performance outcomes may differ across firms and markets. The benefits derived from technology adoption are influenced by factors such as technological capabilities, organizational resources, employee competencies, managerial support, and the extent to which technology is effectively integrated into business processes (Lanfranchi & Grassi, 2021; Sosa, 2022).

In Kenya, the increasing adoption of digital and mobile technologies presents significant opportunities for the insurance sector. Technology can assist insurers in reducing transaction costs, automating repetitive activities, improving customer interactions, accelerating service delivery, and supporting more informed decision-making. Existing studies have also suggested a positive association between digital adoption and the performance of insurance companies in Kenya (Angima, 2022; Owuor, 2019). However, the adoption of technology does not necessarily guarantee improved organizational performance. Technology investments require complementary resources, appropriate skills, and the capacity to integrate technological systems effectively into organizational processes and strategy.

This relationship is supported by the Resource-Based Theory, which argues that superior organizational performance can arise from the possession and effective deployment of valuable resources and capabilities (Barney, 1991). Within the insurance industry, technological infrastructure, digital competencies, data capabilities, and innovation-related skills may become strategic resources when they enable firms to perform more effectively than their competitors. Similarly, the Diffusion of Innovation Theory explains how the adoption of innovations is influenced by their perceived relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). Together, these theoretical perspectives suggest that the successful adoption and utilization of technology innovation may contribute to improvements in efficiency, service delivery, customer satisfaction, competitiveness, and organizational performance.

LITERATURE REVIEW

Technology innovation has become increasingly important in the insurance industry through its application in operational processes, customer service, claims management, risk assessment, and organizational decision-making. Previous studies have examined different aspects of this relationship, including digitalization, artificial intelligence (AI), InsurTech, big-data applications, and broader innovation strategies. However, the findings vary according to the technological application, geographical setting, unit of analysis, and organizational outcomes examined.

Naggayi (2023) examined the relationship between digitalization and operational performance among insurance firms in Kenya using a cross-sectional descriptive research design. The study reported a positive association between digitalization and operational performance, particularly in policy administration and procurement. However, the findings differed across organizational functions, as digitalization of claims, underwriting, peer-to-peer activities, and customer onboarding did not demonstrate statistically significant associations with operational performance. These findings suggest that the performance implications of digitalization may vary according to the specific insurance function and the extent of technological integration.

Abongo (2025) examined the relationship between artificial intelligence adoption and insurance-company performance in Kenya. The study reported a statistically significant positive association between AI adoption and organizational performance, particularly in areas related to operational efficiency, risk management, and customer service. Although the findings provide relevant firm-level evidence from Kenya, the study focused specifically on AI adoption and did not incorporate other dimensions of technology innovation, such as operational digitization, digital platform integration, and digital claims management.

Wangai et al. (2025) examined the relationship between innovation strategy and performance in the Kenyan insurance industry. The study considered product, process, and business-model innovation and reported a significant positive relationship between innovation strategy and insurance-industry performance. However, technology innovation was not examined as a distinct construct, and the study considered the insurance industry broadly rather than focusing specifically on general insurance companies. Its findings therefore provide evidence on broader innovation strategy but do not directly address the multidimensional technology innovation construct examined in the present study.

Evidence from other African insurance markets provides additional insight into technology adoption. Moodley (2019) examined digital transformation in South Africa's short-term insurance sector, focusing on the adoption of Internet of Things (IoT) technologies and InsurTech by traditional insurers. The study identified substantial potential for these technologies to transform insurance operations and business models, but also highlighted organizational and industry-level constraints affecting adoption. While the study is relevant to general insurance, its primary focus was on digital transformation and adoption challenges rather than the statistical relationship between technology innovation and organizational performance.

At the continental level, Horvey and Odei-Mensah (2026) examined the relationship between innovation and insurance-market development across 30 African countries using panel data covering 2011–2022. The study reported significant positive associations between innovation and total, life, and non-life insurance-market development and identified variations across country income groups. Although the findings demonstrate the relevance of innovation to insurance development, the country-level analysis does not directly establish the relationship between technology innovation and organizational performance at the individual general-insurance-company level in Kenya.

International evidence also demonstrates the relevance of specific technological applications to insurance outcomes. Gupta et al. (2022) examined AI adoption in the Indian insurance industry using data from 358 employees and the Technology–Organization–Environment framework. The study found that relative advantage, complexity, market dynamics, regulatory support, competitive pressure, top-management support, and financial readiness were significantly associated with intentions to adopt AI. The study provides evidence on the organizational and environmental conditions surrounding technological adoption, but it did not directly examine the relationship between technology innovation and organizational performance.

Guo et al. (2025) examined the relationship between big-data technology application and the technical efficiency of 88 Chinese insurance companies using panel data covering 2012–2023. The study reported that big-data technology application was significantly associated with improved technical efficiency. It further identified InsurTech capability, risk-bearing capacity, and claims settlement as potential mechanisms through which big-data applications could enhance efficiency. Although the findings provide evidence of a technology-performance relationship, the study focused specifically on big-data technology and technical efficiency within the Chinese insurance market rather than the broader technology innovation construct and organizational performance of Kenyan general insurers.

Bohnert et al. (2019) examined the relationship between digital agendas and business performance among 41 publicly traded European insurance companies between 2007 and 2017. The study found a positive relationship between digital-agenda development and business performance, with stronger associations among insurers that adopted comprehensive digital strategies involving both internal organizational activities and external stakeholders. The findings suggest that the integration of digital technologies across organizational functions may be relevant to performance. However, the study was conducted in European insurance markets with institutional, technological, and regulatory conditions that differ from those of Kenya.

Bertoni and Croce (2011) examined productivity growth among 602 life insurance companies in France, Germany, Italy, Spain, and the United Kingdom between 1997 and 2004. Using data envelopment analysis and a generalized Malmquist productivity decomposition, the study reported annual productivity growth of approximately 6.71%, with technological change accounting for a substantial proportion of the improvement. The findings indicate that technological change can be an important component of productivity growth in insurance. However, the study focused on life insurers in developed European markets and measured productivity rather than the broader dimensions of organizational performance considered in the present study.

Synthesis of Empirical Literature and Knowledge Gaps

The empirical literature indicates that technology-related innovation is associated with several insurance outcomes, including operational performance, organizational performance, technical efficiency, productivity, and insurance-market development. However, previous studies have examined different technological constructs and organizational outcomes. Kenyan research has largely focused on digitalization, AI, and broader innovation

strategy, while international studies have examined digital agendas, big-data applications, AI adoption, and technological change (Abongo, 2025; Bohnert et al., 2019; Naggayi, 2023).

A conceptual gap is evident in the fragmented treatment of technology innovation. Previous studies have predominantly examined individual technologies, such as AI and big data, or broader forms of innovation rather than considering technology innovation as an integrated construct. The present study addresses this gap by conceptualizing technology innovation through four dimensions: operational digitization, digital platform integration, digital claims management, and AI adoption.

An empirical gap also exists in relation to the measurement of organizational performance. Previous studies have examined specific outcomes such as operational performance, technical efficiency, productivity, market development, or technology-adoption intentions. Limited evidence integrates customer retention, premium growth, operational efficiency, and revenue growth as dimensions of organizational performance in examining technology innovation. The present study therefore extends the empirical literature by assessing technology innovation in relation to multiple dimensions of organizational performance.

A sectoral gap is further evident because some studies have examined the insurance industry generally, while others have focused on life insurers or particular technological applications. Consequently, evidence specifically addressing general insurance companies remains limited. This distinction is important because general insurance operations involve particular processes, including claims management, underwriting, policy administration, and customer service, which may influence the relationship between technological innovation and organizational performance.

A contextual gap also remains because much of the available evidence originates from Europe, Asia, South Africa, or cross-country African studies. Differences in technological infrastructure, regulatory arrangements, organizational capabilities, market maturity, and customer behaviour may affect the implementation and outcomes of technology innovation (Bohnert et al., 2019; Gupta et al., 2022; Horvey & Odei-Mensah, 2026; Moodley, 2019). Evidence from these contexts therefore provides useful comparative insights but does not directly represent the organizational environment of Kenyan general insurance companies.

The present study addresses these conceptual, empirical, sectoral, and contextual gaps by examining technology innovation as a multidimensional construct comprising operational digitization, digital platform integration, digital claims management, and AI adoption, and relating these dimensions to organizational performance among general insurance companies in Kenya. Organizational performance is assessed through customer retention, premium growth, operational efficiency, and revenue growth. The study consequently provides firm-level evidence on the technology innovation–performance relationship within the Kenyan general insurance context.

Diffusion of Innovation Theory

The Diffusion of Innovation Theory, advanced by Rogers (2003), explains how new ideas, practices, and technologies are adopted and spread within a social system over time. According to the theory, the adoption of an innovation is influenced by its perceived relative advantage, compatibility, complexity, trialability, and observability. Innovations perceived to offer clear advantages and to be compatible with existing organizational systems are more likely to be adopted.

The theory is relevant to the present study because the adoption of technological innovations by general insurance companies depends on how managers and employees perceive the usefulness and suitability of new technologies. Digital platforms, automated systems, artificial intelligence, data analytics, and mobile technologies are more likely to be adopted when they are perceived to improve existing processes and produce observable benefits. The theory therefore provides a useful basis for explaining the adoption and diffusion of technology innovation within general insurance companies.

However, the theory primarily explains the process and determinants of innovation adoption rather than the extent to which adopted innovations generate superior organizational performance. Consequently, a complementary theory is necessary to explain how technological resources and capabilities may be transformed into performance advantages.

Resource-Based Theory

The Resource-Based Theory provides an explanation of how internal organizational resources and capabilities can contribute to superior performance. Barney (1991) argued that organizations can achieve sustained competitive advantage when they possess and effectively utilize resources that are valuable, rare, difficult to imitate, and supported by appropriate organizational arrangements.

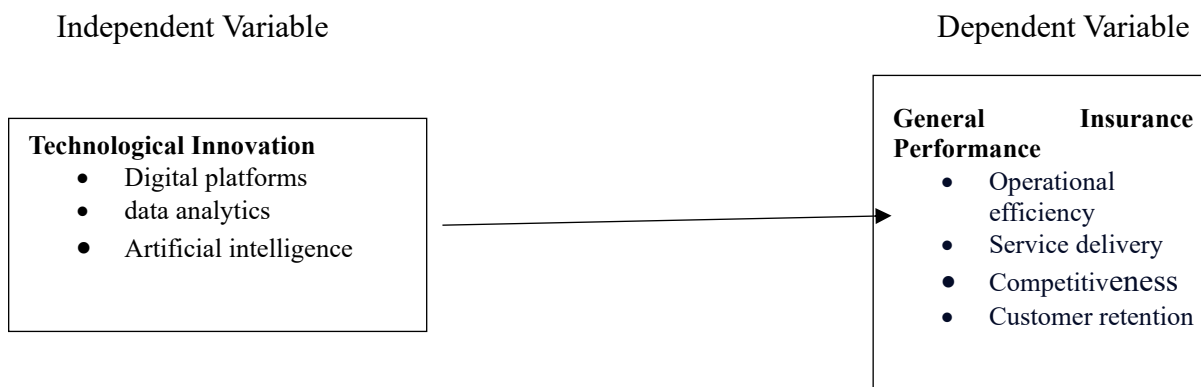
In the context of general insurance companies, technological infrastructure, digital platforms, data analytics capabilities, artificial intelligence systems, skilled employees, and managerial expertise may constitute strategic resources. However, access to technology alone may not improve performance. Organizations must possess the capacity to integrate technological resources into their processes, develop the necessary employee competencies, and align technology investments with their strategic objectives. The Resource-Based Theory is therefore relevant in explaining why insurance companies with different technological capabilities may achieve different performance outcomes.

The Diffusion of Innovation Theory and the Resource-Based Theory are complementary. The former explains the adoption and spread of technological innovations, whereas the latter explains how the effective deployment of technological resources and capabilities can generate improved organizational outcomes. Together, the theories provide an appropriate foundation for examining the effect of technology innovation on organizational performance.

CONCEPTUAL FRAMEWORK

The study conceptualizes technology innovation as the independent variable and organizational performance as the dependent variable. Technology innovation refers to the adoption and effective utilization of technological systems and digital solutions to improve insurance operations and service delivery. Organizational performance refers to the extent to which general insurance companies achieve improved operational and strategic outcomes.

Figure 1: Conceptual Framework



Source: Author (2026)

The framework proposes that effective adoption and utilization of technology innovation positively influence organizational performance. This relationship is supported by the Diffusion of Innovation Theory, which explains the adoption of new technologies, and the Resource-Based Theory, which explains how technological resources and organizational capabilities may generate performance advantages.

METHODOLOGY

Research Design

The study employed a quantitative research design incorporating descriptive, correlational, and explanatory elements within a cross-sectional framework and was guided by a positivist research philosophy. The positivist orientation was appropriate because the study sought to objectively measure technology innovation and

organizational performance and empirically examine the relationship between the two variables using quantitative data (Saunders et al., 2019). The descriptive element enabled the researcher to systematically summarize the prevailing characteristics and levels of technology innovation and organizational performance among general insurance companies in Kenya. The correlational element was used to establish the direction and strength of the association between technology innovation and organizational performance, while the explanatory element examined the extent to which variations in technology innovation statistically predicted variations in organizational performance (Creswell & Creswell, 2018). Data were collected at a single point in time, making the cross-sectional framework appropriate for examining relationships among the study variables within the prevailing organizational context. However, because the data were collected at one point in time, the findings are interpreted as statistical associations and predictive relationships rather than evidence of definitive temporal or causal effects (Saunders et al., 2019).

Study Area

The study was conducted in Kenya and focused on general insurance companies licensed to operate within the country. Kenya was considered an appropriate setting because its insurance industry has experienced increasing technological transformation through digital platforms, mobile technologies, automated systems, data analytics, and other technology-enabled insurance services. The study specifically focused on general insurance companies because they operate within a distinct business environment characterized by diverse underwriting, claims, risk management, and customer service activities. Examining these companies provided context-specific evidence on the effect of technology innovation on organizational performance.

Target Population

The target population comprised 451 top-level managers from 35 general insurance companies in Kenya. Top-level managers were selected as key informants because their responsibilities encompass strategic decision-making, resource allocation, technology adoption, operational oversight, and performance monitoring, giving them access to organization-wide information relevant to the study variables. The general insurance companies were the units of analysis, because the study sought to establish relationships between technology innovation and organizational performance at the company level, while the top-level managers were the units of observation, as they provided the data used to represent their respective organizations. Nevertheless, relying on a single respondent from each company may introduce single-respondent and perceptual bias, since an individual's knowledge, interpretation, recall, or tendency toward socially desirable responses may not fully reflect the organization's actual practices and performance. Although the selection of senior managers with broad organizational responsibilities provided a basis for obtaining informed organizational-level assessments, the possibility of perceptual and common-method bias could not be completely excluded; future studies could address this limitation through multiple respondents per organization and triangulation with objective performance data.

Sample Size and Sampling Technique

A sample of 302 respondents was selected from the target population of 451 top-level managers. The study employed a combination of stratified random sampling and simple random sampling techniques. Stratified sampling was used to group respondents according to their respective general insurance companies or relevant organizational categories to ensure adequate representation. Thereafter, simple random sampling was applied to select individual respondents from each stratum. The use of these probability sampling techniques enhanced the representativeness of the sample and minimized selection bias.

Before the main data collection, the research instrument was piloted to assess its reliability and suitability. A total of 31 questionnaires were randomly distributed to top managers drawn from four life insurance companies operating in Kiambu County, whose organizational structures and business environments closely resembled those of the general insurance companies included in the main study. Of the 31 questionnaires administered, 29 were successfully completed and returned, representing a response rate of 93.5%. The pilot study enabled the researcher to assess the clarity, adequacy, and reliability of the questionnaire before its administration in the main study.

Questionnaire Development and Measurement

Primary data were collected using a structured questionnaire consisting predominantly of closed-ended items. The questionnaire used a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Technology Innovation was measured using items covering operational digitization, digital platform integration, digital claims management, and artificial intelligence adoption. Organizational Performance was measured using indicators covering customer retention, premium growth, operational efficiency, and revenue growth.

Reliability

Internal consistency was assessed using Cronbach's alpha. The reported Cronbach's alpha for the Technology Innovation scale was .942, while the alpha for Organizational Performance was .783. These values indicate high internal consistency for Technology Innovation and acceptable-to-good internal consistency for Organizational Performance.

The Technology Innovation scale also had a standardized alpha of .932. Standardized alpha and composite reliability are distinct measures; therefore, standardized alpha should not be reported as composite reliability.

Table 1: Reliability Results

Construct	Cronbach's Alpha	Interpretation
Technology Innovation	.942	Excellent
Organizational Performance	.783	Good

Source: Research Data, 2026

Construct Validity

Construct validity was assessed using the KMO measure, Bartlett's Test of Sphericity, and Principal Component Analysis (PCA).

Table 2: KMO and Bartlett's Test Results

Construct	KMO Measure	Bartlett's χ^2	df	Sig.	Interpretation
Technology Innovation	.567	107.799	66	< .001	Acceptable
General Insurance Performance	.612	127.512	66	< .001	Acceptable

Source: Research Data, 2026

The KMO value for Technology Innovation was .567, while that for General Insurance Performance was .612. Both values were considered acceptable for factor analysis. Bartlett's Test of Sphericity was statistically significant for both constructs, indicating that the correlation matrices contained sufficient relationships among the items to justify principal component analysis.

Principal Component Analysis

PCA was conducted using the eigenvalue-greater-than-one criterion.

Table 3: Total Variance Explained for Technology Innovation

Component	Eigenvalue	% of Variance	Cumulative %
1	3.018	25.15	25.15

2	2.039	16.99	42.14
3	1.924	16.03	58.17
4	1.393	11.61	69.78

Source: Research Data, 2026

Four components were retained for Technology Innovation because they had eigenvalues greater than 1. Collectively, these components explained 69.78% of the total variance.

Table 4: Total Variance Explained for General Insurance Performance

Component	Eigenvalue	% of Variance	Cumulative %
1	3.794	31.62	31.62
2	2.126	17.71	49.33
3	1.401	11.68	61.01
4	1.314	10.95	71.96

Source: Research Data, 2026

Four components were retained for General Insurance Performance, accounting for 71.96% of the total variance.

Content Validity

Content validity was enhanced by developing questionnaire items from the study objectives, conceptual framework, theoretical framework, and empirical literature. The instrument was also subjected to expert review and pilot testing. Feedback from the pilot study was used to improve the clarity and logical sequencing of questionnaire items.

Data Collection Methods

The study utilized primary data, which were collected using structured questionnaires. The questionnaire consisted mainly of closed-ended items designed to obtain quantitative information regarding technology innovation and organizational performance. The use of structured questionnaires was appropriate because it enabled the collection of standardized data from a relatively large number of respondents and facilitated statistical analysis. The questionnaires were administered to the sampled top-level managers of general insurance companies.

Data Analysis Methods

The collected data were coded, cleaned, and analyzed using appropriate statistical procedures. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the characteristics of the respondents and describe the study variables. Pearson's product-moment correlation analysis was used to determine the direction and strength of the relationship between technology innovation and organizational performance.

The study further employed linear regression analysis to determine the effect of technology innovation on the performance of general insurance companies in Kenya and to test the study hypothesis. The regression model was specified as follows:

$$Y = \beta_0 + \beta_1 X + \epsilon$$

Where:

Y = Performance of General Insurance Companies

X = Technology innovation

β_0 = Constant

β_1 = Regression coefficient for technology innovation

ε = Error term

Ethical Considerations

The study observed appropriate ethical principles throughout the research process. Necessary authorization to conduct the study was obtained from the relevant institutions and authorities before data collection. Participation in the study was voluntary, and respondents were informed about the purpose of the research before completing the questionnaires. Informed consent was obtained from the participants, and they were assured that their responses would be treated with confidentiality.

The study further protected respondents' anonymity by avoiding the disclosure of personal identities in the presentation of the findings. Information obtained from participants was used strictly for academic purposes. Respondents were also informed of their right to decline participation or withdraw from the study without penalty. The collected data were securely handled and reported objectively to maintain research integrity and minimize the risk of bias.

RESULTS

The results are presented in tables and a figure using descriptive and inferential statistical analyses. The section focuses on reporting the findings.

Response Rate

Table 5 presents the questionnaire response rate for the main study.

Category	Frequency	Percentage
Questionnaires issued	302	100.0
Questionnaires returned	221	73.2
Questionnaires not returned	81	26.8
Total	302	100.0

Source: Research Data, 2026

The response rate was 73.2%, indicating that 221 out of the 302 questionnaires issued were successfully completed and returned for analysis. The remaining 26.8% were not returned.

Descriptive Statistics

Table 6: Responses on Technology innovation

Statements	N	<i>M</i>	<i>SD</i>	Skew.	Kurt
Our organization invests in innovative technology solutions.	221	4.16	0.85	-0.93	0.41
Our organization implements emerging technologies early.	221	4.28	0.81	-1.18	1.43
Our organization introduces new digital technologies.	221	4.21	0.77	-1.04	1.90
Our company experiments with new technologies.	221	4.38	0.69	-1.00	1.07
Our organization encourages technological innovation.	221	4.28	0.80	-1.13	1.31

We have deployed mobile applications specifically designed for customer claims.	221	3.32	1.34	-0.27	-1.14
Our organization uses real-time digital claim tracking systems.	221	3.86	0.99	-0.83	0.57
Our organization's digital claims systems improve the accuracy and consistency of claim processing.	221	3.94	0.93	-0.81	0.56
Our organization utilizes automated AI assistants to handle customer service queries.	221	3.52	1.17	-0.57	-0.48
We use Artificial Intelligence algorithms to triage or categorize claims upon submission.	221	3.36	1.28	-0.45	-0.89
Our organizational data are well protected through encryption both at rest and in transit.	221	3.92	1.00	-0.91	0.48
Average Scores	221	3.931	0.966	-0.813	0.475

Source: Research Data, 2026

Note. N = number of respondents; M = mean; SD = standard deviation; Skew. =Skewness; Kurt. =Kurtosis

Table 2 presents respondents' views on technology innovation in general insurance companies. The overall mean score of $M = 3.93$ ($SD = 0.97$) indicates a generally high level of technology innovation. The highest-rated statement was that organizations experiment with new technologies ($M = 4.38$, $SD = 0.69$), followed by the early implementation of emerging technologies and encouragement of technological innovation (both $M = 4.28$). This suggests that general insurance companies are increasingly committed to adopting and promoting new technological solutions.

However, the adoption of more advanced technologies was comparatively lower. Mobile applications specifically designed for customer claims recorded the lowest mean ($M = 3.32$, $SD = 1.34$), followed by the use of artificial intelligence algorithms to categorize claims ($M = 3.36$, $SD = 1.28$). Overall, the findings suggest that while technological innovation is widely embraced, the implementation of advanced AI-based and mobile claims technologies remains less extensive among general insurance companies.

The skewness values ranged from -1.18 to -0.27, indicating a slight to moderate negative skewness, with responses generally concentrated toward the higher end of the scale. Kurtosis values ranged from -1.14 to 1.90, indicating no substantial departure from normality. The average skewness (-0.813) and kurtosis (0.475) further suggest that the data were approximately normally distributed and suitable for parametric statistical analysis.

Correlation Analysis

A Pearson product moment correlation analysis was conducted to examine the relationship between technology innovation and organizational performance among general insurance companies in Kenya. The analysis was used to determine the direction and strength of the association between the two variables. As presented in Table 3, the correlation results provide the basis for assessing whether technology innovation is significantly associated with organizational performance. The correlation analysis was followed by regression analysis to further examine the extent to which technology innovation predicts organizational performance.

Table 7: Correlation Matrix between Technological Innovation and General insurance Performance

Variable	1	2
1. Technology	—	.568***
2. Performance	.568***	—

Source: Research Data, 2026

Note. N = 221. Values represent Pearson's correlation coefficients (r). ** $p < .001$, two-tailed

Table 3 presents the correlation between technological innovation and the performance of general insurance companies. The results show a moderate positive and statistically significant relationship between technological innovation and organizational performance ($r = .568$, $p < .001$). This indicates that increased adoption of technological innovations is associated with improved performance among general insurance companies.

Table 8: Regression results of Insurance Technology innovation and performance of General Insurance Companies

Model Summary

Model	R	R ²	Adjusted R ²	SE of Estimate	Durbin–Watson
1	.568	.322	.319	0.428	1.812

Source: Research Data, 2026

The model results indicated a moderate positive relationship between insurance technology innovation and organizational performance ($R = .568$). Insurance technology innovation explained 32.2% of the variation in organizational performance ($R^2 = .322$, adjusted $R^2 = .319$), while 67.8% was attributable to other factors. The standard error of .428 indicated acceptable prediction accuracy, and the Durbin–Watson statistic of 1.812 suggested no serious autocorrelation.

Table 9: ANOVA Results for the Effect of Insurance Technology Innovation on Organizational Performance

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	19.036	1	19.036	104.128	< .001
Residual	40.037	219	0.183	—	—
Total	59.073	220	—	—	—

Source: Research Data, 2026

The ANOVA results showed that the regression model was statistically significant, $F(1, 219) = 104.13$, $p < .001$, confirming that insurance technology innovation significantly predicted organizational performance among general insurance companies in Kenya.

Table 10: Regression Coefficients for the Effect of Insurance Technology Innovation on Organizational Performance

Predictor	B	Std. Error	Beta (β)	<i>t</i>	Sig
Constant	1.900	0.207	—	9.171	< .001
Insurance Technology Innovation	0.533	0.052	.568	10.204	< .001

Source: Research Data, 2026

Regression results further revealed a positive and significant effect of insurance technology innovation on organizational performance ($B = 0.533$, $SE = 0.052$, $\beta = .568$, $t(219) = 10.20$, $p < .001$). Thus, a one-unit increase in insurance technology innovation was associated with a 0.533-unit increase in performance. Consequently, the null hypothesis (H_{01}) was rejected, confirming that insurance technology innovation significantly enhances organizational performance.

SUMMARY OF THE FINDINGS

The study investigated the effect of insurance technology innovation on the organizational performance of general insurance companies in Kenya. The findings established that insurance technology innovation had a positive and statistically significant effect on organizational performance. Increased adoption of insurance technology innovations was associated with improved organizational performance among general insurance companies in Kenya. Therefore, the null hypothesis stating that insurance technology innovation has no statistically significant effect on organizational performance was rejected.

Contributions of the Study

The study contributes to the existing body of knowledge by providing empirical evidence on the relationship between insurance technology innovation and organizational performance within the Kenyan general insurance industry. The findings demonstrate the importance of technological innovation as a strategic resource for improving organizational outcomes. The study also contributes to the practical understanding of how investments in digital technologies can support operational efficiency, customer service delivery, claims processing, and organizational competitiveness.

RECOMMENDATIONS

Based on the findings, general insurance companies in Kenya should strengthen their investment in insurance technology innovation to improve organizational performance. Particular attention should be directed toward the adoption of emerging technologies, digital claims management systems, mobile applications, artificial intelligence, and automated customer service platforms. Insurance companies should also invest in employee training, technological infrastructure, cybersecurity, and data protection to facilitate the effective implementation and utilization of technological innovations.

Suggestions for Future Research

Future research should examine additional factors that influence organizational performance, as 67.8% of the variation in performance was not explained by insurance technology innovation. Further studies may also investigate the individual effects of specific technologies, including artificial intelligence, blockchain, big data analytics, and mobile insurance platforms. Comparative research involving life insurance companies, other financial institutions, and insurance markets in other African countries would provide additional evidence regarding the relationship between technological innovation and organizational performance.

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