Process Innovation and Performance of General Insurance Companies in Kenya

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ABSTRACT

This study examined the effect of process innovation on the performance of general insurance companies in Kenya. Specifically, the study sought to determine the effect of process innovation on the performance of general insurance companies in Kenya. The study was guided by the Diffusion of Innovation Theory and Resource-Based Theory and adopted a positivist research philosophy and an explanatory cross-sectional research design. The target population comprised 451 top-level managers from 35 general insurance companies in Kenya. A sample of 302 managers was determined and selected using stratified and simple random sampling techniques. Primary data were collected using structured questionnaires measured on a five-point Likert scale. Of the 302 questionnaires distributed, 221 usable questionnaires were returned, representing a response rate of 73.17%. Data were analyzed using descriptive statistics, Pearson product-moment correlation, and simple linear regression analysis. The findings revealed a positive and statistically significant relationship between process innovation and organizational performance ($r = .655$, $p < .001$). Regression analysis showed that process innovation explained 42.9% of the variance in organizational performance ($R^2 = .429$; adjusted $R^2 = .426$). The regression model was statistically significant, $F(1, 219) = 164.273$, $p < .001$, while process innovation had a positive and statistically significant effect on organizational performance ($\beta = .655$, $p < .001$). The null hypothesis that process innovation has no statistically significant effect on the performance of general insurance companies in Kenya was therefore rejected. The study concludes that process innovation is a significant predictor of the performance of general insurance companies in Kenya. The study recommends that general insurance companies enhance process automation, customer self-service systems, digital claims processing, and process redesign to improve operational efficiency, service delivery, customer retention, and overall organizational performance.

Keywords: Process innovation, process, Insurance, general insurance, performance.

INTRODUCTION

Insurance is an important component of the financial system because it facilitates risk transfer, provides financial protection against unexpected losses, mobilizes funds, and supports economic activity. General insurance, in particular, protects individuals, households, and businesses against diverse risks, including motor, medical, property, marine and transit, engineering, liability, personal accident, aviation, and other non-life risks. The sustainability of the sector depends partly on the ability of insurance companies to achieve their organizational objectives while providing reliable protection and services to policyholders. In Kenya, general insurance business operates within a regulatory framework overseen by the Insurance Regulatory Authority (IRA), which is responsible for regulating, supervising, and promoting the development of the insurance industry (Insurance Act, Cap. 487, 2012).

Organizational performance refers to the extent to which an organization achieves its intended objectives through the effective utilization of its resources and capabilities. It is a multidimensional construct encompassing financial and non-financial outcomes, with appropriate measures varying according to the

organizational and industry context (Richard et al., 2009). In insurance, relevant outcomes include operational efficiency, customer retention, and business growth, reflecting the ability of firms to manage underwriting and claims activities, control costs, serve policyholders, and generate sustainable income. Accordingly, this study assesses the performance of general insurance companies in Kenya using operational efficiency, customer retention, premium growth, and revenue growth.

The Kenyan general insurance sector operates in an environment characterized by rising claims costs, changing customer expectations, technological developments, emerging risks, and increasing competition. The Insurance Regulatory Authority (2026) reported that general insurance premiums increased by 9.2% to KES 185.40 billion by September 2025, while claims incurred amounted to KES 83.01 billion and the claims loss ratio rose to 71.8%, compared with 69.2% in the corresponding period of 2024. These developments underscore the need for insurers to improve the efficiency of their operations and manage resources effectively. In addition, the 2024 FinAccess Household Survey reported that insurance access, excluding NHIF, declined from 6.9% in 2021 to 6.3% in 2024, while 70.5% of households remained uninsured. This environment creates pressure on insurers to improve service delivery, respond to customer needs, control operating costs, and identify more effective ways of conducting business.

One approach through which insurers can address these challenges is process innovation. OECD/Eurostat (2018) defines a business process innovation as a new or improved business process that differs significantly from an organization's previous processes and has been brought into use. In general insurance companies, such innovation may involve process automation, customer self-service systems, process redesign, and digital workflow integration. These changes can reduce manual activities, simplify procedures, improve coordination, shorten processing times, and enhance the delivery of services.

The application of these approaches is particularly relevant as insurers increasingly respond to technological developments and changing customer expectations. Automation can facilitate the execution of routine activities with reduced manual intervention, while self-service systems allow policyholders to access information and undertake selected transactions independently. Process redesign can eliminate duplication, unnecessary procedures, and delays, whereas digital workflow integration can improve information sharing and coordination across organizational functions. Such changes have the potential to enhance operational processes and contribute to improved customer and financial outcomes. However, innovation does not automatically translate into improved organizational results; its contribution depends on how effectively it is implemented and utilized within the organization (OECD/Eurostat, 2018).

The theoretical and empirical literature provides a basis for examining this relationship. From the perspective of the Diffusion of Innovation Theory, organizations adopt innovations when they perceive them as offering advantages over existing practices (Rogers, 2003). The Resource-Based View further suggests that organizational resources and capabilities determine the extent to which firms can deploy innovations and derive value from them (Barney, 1991). Empirical studies in the insurance sector have reported relationships between process-related innovation and organizational outcomes, although much of the existing evidence examines process innovation alongside other forms of innovation, digital adoption, business process reengineering, or broader strategic constructs. Consequently, the independent contribution of process innovation remains insufficiently established, particularly among general insurance companies operating across Kenya.

This creates a conceptual, contextual, and measurement gap. Conceptually, previous studies have frequently embedded process innovation within broader innovation strategies or strategic orientation constructs. Contextually, some studies have focused on individual firms, specific counties, insurance brokerage firms, or insurance markets outside Kenya, limiting the generalizability of their findings to general insurance companies across the country. From a measurement perspective, studies have used varied indicators of organizational outcomes, while limited attention has been given to the combined assessment of operational efficiency, customer retention, premium growth, and revenue growth. The present study addresses these gaps by examining process innovation as a distinct construct, operationalized through process automation, customer self-service systems, process redesign, and digital workflow integration, and its relationship with the performance of general insurance companies in Kenya.

LITERATURE REVIEW

Empirical studies increasingly provide evidence that innovation and process transformation are associated with organizational performance in the insurance sector. In Kenya, Tonui and Mangana (2024) examined strategic orientation and the performance of insurance companies in Nairobi City County and reported a statistically significant relationship between strategic orientation and organizational performance. Process innovation constituted one of the dimensions examined in their study. Although the findings provide contextual support for the relevance of process innovation, its inclusion within a broader strategic-orientation construct makes it difficult to establish its independent contribution to organizational performance. The study therefore provides contextual evidence for the present investigation while leaving the specific relationship between process innovation and performance insufficiently isolated.

Similarly, Wangai et al. (2025) investigated the effect of innovation strategy on the performance of the insurance industry in Kenya. The study incorporated product innovation, process innovation, and business-model innovation as dimensions of innovation strategy and reported a statistically significant positive effect of innovation strategy on insurance-industry performance. The findings demonstrate the broader importance of innovation to insurance performance. However, because process innovation was examined as one component of a composite innovation-strategy construct, the study does not establish the extent to which process innovation independently explains variations in organizational performance. This limitation provides a basis for examining process innovation as a distinct explanatory construct.

Mueni and Angima (2022) examined digital adoption and the performance of insurance companies in Kenya and reported a positive relationship between digital adoption and organizational performance. Their findings are relevant because digital technologies provide an important foundation for automation, electronic service delivery, information sharing, and process integration. Nevertheless, digital adoption is conceptually broader than process innovation because digital technologies can affect products, marketing, customer engagement, and other organizational activities in addition to operational processes. Consequently, evidence concerning digital adoption provides relevant contextual support but does not directly establish the relationship between process innovation and insurance-company performance.

Chitai et al. (2025) examined innovation strategies and financial performance using Sanlam Kenya PLC as a case and included process innovation among the explanatory dimensions. The study reported a statistically significant relationship between innovation strategies and financial performance. The findings provide evidence linking innovation-related practices with financial outcomes within the Kenyan insurance sector. However, the study's focus on a single insurance company limits the generalizability of its findings to the wider population of general insurance companies in Kenya. Furthermore, the treatment of process innovation within a broader innovation-strategy framework makes it difficult to determine its independent contribution to performance.

Abongo (2025) examined the application of artificial intelligence to internal processes within Kenya's insurance industry, including underwriting, risk profiling, premium determination, document processing, claims automation, and risk assessment. These applications demonstrate the potential of technology to transform conventional insurance processes and provide relevant evidence concerning process automation. However, artificial intelligence represents one mechanism through which organizational processes can be transformed and does not encompass other dimensions of process innovation, such as customer self-service systems, process redesign, and digital workflow integration. The study therefore provides evidence concerning a specific aspect of process transformation rather than the broader process innovation construct examined in the present study.

More direct evidence is provided by Mira et al. (2024), who examined insurance process innovation and organizational performance among insurance brokerage firms in Kenya. Using a census of 216 insurance brokerage firms, the study reported a statistically significant positive influence of process innovation on organizational performance. The study is particularly relevant because it examined process innovation as a distinct form of entrepreneurial innovation rather than subsuming it entirely within a broader innovation index. Nevertheless, the study focused on insurance brokerage firms, whose intermediary functions differ from those

of insurance underwriters. Its findings therefore provide relevant sectoral evidence but cannot be directly generalized to general insurance companies.

Mwangi and Waithaka (2023) similarly examined process innovation and performance among insurance companies in Nyeri County. Their findings indicated that process innovations were implemented to a considerable extent and that process innovation had a strong positive relationship with organizational perform-

ance. The study further reported a significant influence of process innovation on the performance of the sampled insurance companies. Despite its direct relevance, the study was geographically restricted to Nyeri County, which limits the generalizability of its findings to general insurance companies operating across Kenya. The study therefore provides important contextual evidence while leaving a need for broader sector-level investigation.

Omollo and Odollo (2023) investigated the influence of business process reengineering drivers on the performance of insurance firms in Kenya. Their findings indicate that technological developments and changing customer requirements necessitate modifications to organizational processes to enhance operational effectiveness and overall performance. The findings are relevant to process redesign because they demonstrate the potential performance implications of deliberate changes to organizational procedures. However, business process reengineering and process innovation are conceptually related but distinct constructs. Business process reengineering generally emphasizes fundamental restructuring of existing processes, whereas process innovation encompasses a wider range of new or significantly improved processes. Consequently, evidence from business process reengineering provides complementary rather than direct evidence of the process innovation–performance relationship.

Evidence from other African insurance markets further supports the relationship between innovation and organizational performance. Oyedele (2023) examined innovation and organizational performance among selected Nigerian insurance companies and reported significant relationships between innovation dimensions and organizational performance. Although Kenya and Nigeria operate under different regulatory, institutional, technological, and market environments, the findings provide comparative evidence that innovation-related organizational changes can be associated with improved performance in African insurance markets. However, contextual differences limit direct generalization from Nigeria to Kenya and reinforce the need for empirical investigation within the Kenyan insurance environment.

International evidence also supports the importance of process transformation in insurance. Oliveira e Sá et al. (2024) demonstrated that digital transformation in insurance companies extends beyond technology adoption to encompass organizational and process changes, including digitalization of organizational processes and integration of interactive digital channels to address customer needs. The findings suggest that digital transformation can alter both internal operations and customer-facing activities. This evidence provides conceptual support for examining digital workflow integration and customer self-service systems as manifestations of process innovation within insurance companies.

Synthesis of Empirical Literature and Knowledge Gaps

The reviewed empirical literature generally demonstrates that innovation, digital transformation, process-oriented practices, and organizational change are associated with performance in the insurance sector. Kenyan studies provide evidence of significant relationships between innovation strategies and insurance performance (Wangai et al., 2025), strategic orientation and insurance performance (Tonui & Mangana, 2024), digital adoption and performance (Mueni & Angima, 2022), process innovation and performance among brokerage firms (Mira et al., 2024), and process innovation and performance among insurance companies in Nyeri County (Mwangi & Waithaka, 2023). Studies on artificial intelligence and business process reengineering further demonstrate the increasing importance of technology-enabled process transformation within insurance organizations (Abongo, 2025; Omollo & Odollo, 2023). International and African evidence similarly suggests that innovation and digital transformation can influence organizational outcomes (Oliveira e Sá et al., 2024; Oyedele, 2023). Taken together, these findings provide a substantive basis for investigating process innovation as a potential determinant of organizational performance.

Despite this evidence, the literature reveals a conceptual gap. A substantial proportion of Kenyan studies examine process innovation alongside other innovation dimensions, including product innovation, technological innovation, business-model innovation, and market development (Tonui & Mangana, 2024; Wangai et al., 2025). Such composite approaches provide evidence regarding the overall contribution of innovation but make it difficult to determine whether observed performance outcomes are specifically attributable to process innovation. The present study addresses this gap by treating process innovation as a distinct independent construct.

An operational gap is also evident because previous studies have used different concepts to represent process transformation. These include digital adoption, artificial intelligence, business process reengineering, process improvement, and broader innovation strategies (Abongo, 2025; Mueni & Angima, 2022; Omollo & Odollo, 2023). Although these concepts overlap with process innovation, they do not necessarily capture the complete range of organizational process changes. The present study addresses this gap by operationalizing process innovation through process automation, customer self-service systems, process redesign, and digital workflow integration. This operationalization provides a more comprehensive representation of the ways in which insurance companies can transform internal and customer-facing processes.

The review further identifies a contextual gap. Existing empirical evidence has frequently been generated from insurance brokerage firms, individual insurance companies, or geographically restricted samples. For example, Mira et al. (2024) focused on insurance brokerage firms, Chitai et al. (2025) examined a single insurance company, and Mwangi and Waithaka (2023) concentrated on insurance companies in Nyeri County. Although these studies provide useful evidence, the institutional and operational characteristics of brokerage firms differ from those of insurance underwriters, while single-firm and county-specific studies may not adequately capture conditions across the Kenyan general insurance industry. There is therefore a need for evidence based specifically on the wider population of general insurance companies in Kenya.

A measurement gap is also apparent in the assessment of organizational performance. Previous studies have employed different performance indicators, with some emphasizing financial outcomes and others focusing on operational or broader organizational measures. The present study adopts a multidimensional conceptualization of organizational performance comprising operational efficiency, customer retention, premium growth, and revenue growth. This approach recognizes that the performance of general insurance companies encompasses both internal operational outcomes and market-related outcomes. It therefore provides a broader basis for assessing the relationship between process innovation and organizational performance.

The literature also presents a contextual and sectoral relevance gap arising from differences between Kenya and other insurance markets. Evidence from Nigeria and international insurance markets demonstrates the potential contribution of innovation and digital transformation to organizational performance (Oliveira e Sá et al., 2024; Oyedele, 2023). However, differences in regulatory arrangements, technological maturity, market structures, customer behavior, and levels of insurance uptake mean that findings from other jurisdictions cannot automatically be generalized to Kenyan general insurance companies. The Kenyan insurance industry therefore requires context-specific evidence that considers its distinctive regulatory and market environment.

Consequently, the reviewed literature establishes the relevance of innovation and process transformation to insurance performance but does not sufficiently explain the independent relationship between process innovation and organizational performance among general insurance companies in Kenya. The present study addresses this unresolved issue by examining process innovation as a distinct explanatory construct comprising process automation, customer self-service systems, process redesign, and digital workflow integration. Organizational performance is assessed through operational efficiency, customer retention, premium growth, and revenue growth. By focusing on the general insurance sector and moving beyond composite innovation measures, single-firm investigations, brokerage-firm studies, and geographically restricted evidence, the study seeks to provide sector-specific empirical evidence on the relationship between process innovation and organizational performance in Kenya.

The study is therefore anchored theoretically in Diffusion of Innovation Theory and the Resource-Based View. DOI explains the adoption and implementation of new or improved processes within organizations, while the

RBV explains how organizational resources and capabilities enable firms to implement process innovations and convert them into performance outcomes. Together, the theories provide complementary explanations of both the adoption of process innovation and the organizational capacity required to derive performance benefits from such innovation. The empirical gaps identified in the literature consequently provide justification for examining whether process innovation is significantly associated with the organizational performance of general insurance companies in Kenya.

THEORETICAL REVIEW

Diffusion of Innovation Theory

Diffusion of Innovation Theory (DOI), developed by Rogers (2003), explains how new ideas, practices, technologies, and other innovations are communicated through particular channels over time among members of a social system. The theory proposes that the adoption of an innovation is influenced by perceived characteristics including relative advantage, compatibility, complexity, trialability, and observability. Relative advantage refers to the extent to which an innovation is perceived as better than an existing practice, while compatibility concerns its consistency with existing values, needs, and practices. Complexity relates to the perceived difficulty of understanding and using an innovation, whereas trialability reflects the extent to which it can be experimented with before full adoption. Observability concerns the extent to which the results of an innovation are visible to others (Rogers, 2003). The theory is relevant to the present study because process innovation requires insurance companies to adopt and implement new or significantly improved methods of performing organizational activities. Process automation, customer self-service systems, process redesign, and digital workflow integration can be viewed as innovations whose adoption depends on their perceived operational advantages, compatibility with existing insurance processes, complexity, and observable benefits. The theory therefore provides a basis for explaining how the adoption of innovative processes can alter organizational activities and potentially improve performance through greater efficiency, responsiveness, convenience, and service delivery.

Resource-Based View

The Resource-Based View (RBV), advanced by Barney (1991), explains organizational performance differences in terms of the resources and capabilities controlled by an organization. The theory argues that resources can provide sustained competitive advantage when they are valuable, rare, difficult to imitate, and not easily substituted. Organizational resources may include tangible assets, human resources, technological infrastructure, organizational knowledge, routines, and capabilities that enable firms to formulate and implement strategies. In the context of process innovation, the availability and effective deployment of technological infrastructure, skilled employees, organizational knowledge, information systems, and managerial capabilities can influence an insurer's ability to implement and sustain innovative processes. Process automation, self-service systems, process redesign, and digital workflow integration are therefore not merely technological investments but organizational capabilities that may enable insurers to utilize resources more efficiently and respond more effectively to customer and market requirements. The RBV consequently provides a theoretical explanation for why insurers with appropriate resources and capabilities may be better positioned to convert process innovation into improved operational efficiency, customer retention, premium growth, and revenue growth (Barney, 1991).

Study Objective

To determine the effect of process innovation on the performance of general insurance companies in Kenya

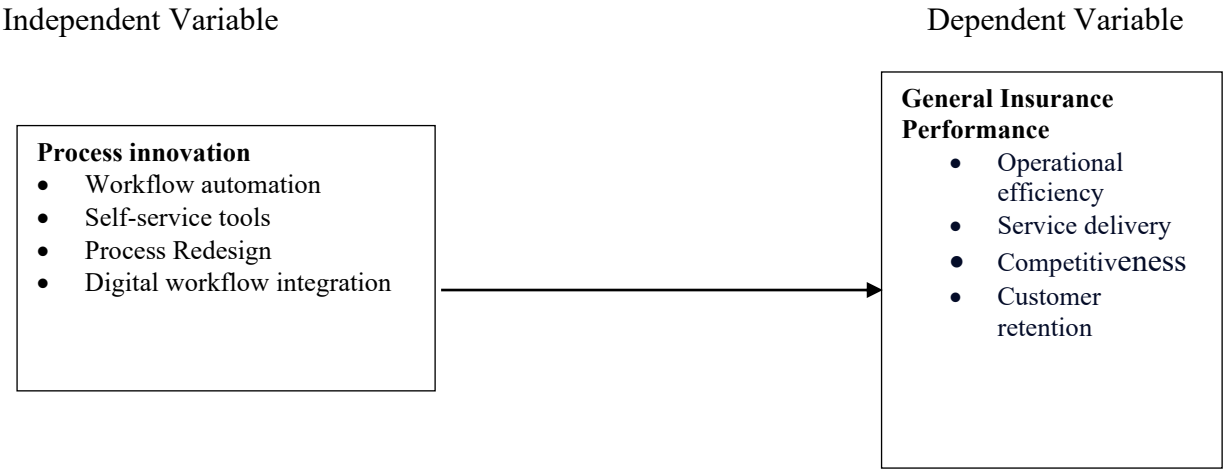
Hypothesis

H_0: Process innovation has no statistically significant effect on the performance of general insurance companies in Kenya

Conceptual Framework

Ager and Strang (2008) view a conceptual framework as an organized structure that identifies key domains and demonstrates the relationships among them within a specific area of study. In this study, the conceptual framework depicts the proposed relationship between process innovation and organizational performance.

Figure 1: Conceptual Framework



Source: Author (2026)

The framework proposes that process innovation is the independent variable, while general insurance performance is the dependent variable. Process innovation is operationalized through workflow automation, self-service tools, process redesign, and digital workflow integration. These dimensions represent changes in how insurance companies organize, execute, and deliver their business processes. General insurance performance is measured using operational efficiency, service delivery, competitiveness, and customer retention. The framework therefore assumes that differences in the extent to which general insurance companies adopt and implement process innovations are associated with differences in their organizational performance.

METHODOLOGY

Research Design

The study adopted a quantitative approach, guided by a positivist philosophy and an explanatory cross-sectional research design. The design was appropriate for examining the statistical relationship between process innovation and the performance of general insurance companies in Kenya. Data were collected at a single point in time using a structured questionnaire.

Study Area and Population

The study focused on general insurance companies operating in Kenya. The target population comprised 451 top-level managers from 35 general insurance companies. Top-level managers were selected because of their knowledge of organizational processes, innovation practices, and performance outcomes within their respective firms.

Sample and Sampling Technique

A sample of 302 managers was selected using stratified and simple random sampling techniques. Stratification was used to ensure representation of the relevant respondent categories, followed by simple random sampling to select individual respondents. The study obtained 221 usable questionnaires, representing a 73.17% response rate.

Questionnaire Development and Measurement

Primary data were collected using a structured questionnaire based on a five-point Likert scale, ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. Process innovation, the independent variable, was measured using four dimensions: process automation, customer self-service systems, process redesign, and digital workflow integration. Performance, the dependent variable, was measured using operational efficiency, customer retention, premium growth, and revenue growth. The questionnaire was pilot-tested among 31 respondents from four life insurance companies in Kiambu County, of whom 29 returned the questionnaires. The pilot study assessed the clarity, relevance, and reliability of the measurement instrument, and necessary refinements were made before the main survey.

Reliability

Cronbach's alpha (α) was used to assess the internal consistency reliability of the study construct.

Table 1: Reliability Statistics for Process Innovation and General Insurance Performance

Construct	Cronbach's α	Standardized α	Number of items
Process innovation	0.896	0.899	12
General insurance performance	0.839	0.84	10

Source: Research Data,2026

The reliability results in Table 1 demonstrate good internal consistency for both study constructs. Process innovation recorded a Cronbach's alpha of .896 based on 12 items, while general insurance performance recorded an alpha of .839 based on 10 items. Both coefficients exceeded the recommended minimum threshold of .70, indicating that the items consistently measured their respective constructs and were suitable for subsequent analysis. The standardized alpha coefficients (.899 and .840, respectively) were very close to the unstandardized coefficients, suggesting minimal variation in item variances.

Construct Validity

Table 2: KMO and Bartlett's Test for Process Innovation and General Insurance Performance

Construct	KMO Measure	Bartlett's Approx. Chi-Square	df	Sig.
Process innovation	0.907	1,119.69	66	<0.001
General insurance performance	0.845	649.384	45	<0.001

Source: Data, 2026

Table 2 presents the results of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity for process innovation and general insurance performance. The KMO value for process innovation was 0.907, while that for general insurance performance was 0.845, indicating adequate sampling suitability for factor analysis. Bartlett's test of sphericity was statistically significant for both process innovation, $\chi^2(66) = 1{,}119.690$, $p < .001$, and general insurance performance, $\chi^2(45) = 649.384$, $p < .001$, indicating that the correlation matrices were significantly different from identity matrices and that sufficient inter-item correlations existed among the respective measures. These findings demonstrate that the items measuring process innovation and general insurance performance were suitable for factor analysis and provided evidence of construct validity.

Principal Component Analysis

Principal Component Analysis (PCA) was conducted to assess the dimensionality of the study constructs and determine whether the measurement items could be represented by a smaller number of underlying

components. The suitability of the data for PCA was assessed using the KMO measure and Bartlett's test of sphericity, while components with eigenvalues greater than 1.00 were retained.

Table 3: Retained Component for Process Innovation

Component	Eigenvalue	Percentage of Variance Explained	Cumulative Percentage
1	5.714	47.615	47.615

Source: Data, 2026

Table 3 shows the component retained from the principal component analysis of the 12 process innovation items. Based on the Kaiser criterion, only one component was retained because it had an eigenvalue greater than 1.00 (eigenvalue = 5.714), whereas all the other components had eigenvalues below 1.00. The retained component explained 47.615% of the total variance in the process innovation items. This indicates that the items had substantial common variance and were adequately represented by a single underlying component. Therefore, the findings support the treatment of process innovation as a unidimensional construct in the subsequent analysis.

Table 4: Extracted Components for General Insurance Performance

Component	Eigenvalue	% of Variance	Cumulative %
1	4.121	41.21	41.21
2	1.09	10.902	52.112

Source: Data, 2026

Table 4 presents the total variance explained by the principal component analysis of the 10 items measuring general insurance performance. Two components were retained because they had eigenvalues greater than 1.00, with eigenvalues of 4.121 and 1.090. Before rotation, the two components jointly explained 52.112% of the total variance. After rotation, Component 1 explained 28.745% and Component 2 explained 23.367%, with the two components collectively accounting for 52.112% of the variance. These findings indicate that the general insurance performance items were adequately represented by two underlying components.

Content Validity

Content validity was established by ensuring that the questionnaire items adequately represented the key dimensions of process innovation and general insurance performance. The items were developed from relevant literature and reviewed to confirm their relevance, clarity, and coverage of the constructs under investigation. The questionnaire was also subjected to expert review before data collection to identify and correct any ambiguities and omissions.

Data Collection Methods

Data were collected using a structured questionnaire administered to managers of general insurance companies in Kenya. The questionnaire used a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) to measure the study variables. The questionnaires were distributed to the sampled respondents and collected after completion, with appropriate follow-ups made to enhance the response rate.

Data Analysis Methods

After data collection, the completed questionnaires were checked for completeness, coded, and entered into the Statistical Package for the Social Sciences (SPSS) for analysis. The data were cleaned and screened for errors before analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondent characteristics and the distribution of responses to the study variables. Principal component analysis was conducted to assess the dimensionality of the measurement constructs. Pearson's product-moment correlation coefficient was used to determine the direction and strength of the relationship between process innovation and general insurance performance. Simple linear regression analysis

was used to examine the predictive relationship between process innovation and general insurance performance and to test the study hypothesis. Statistical significance was assessed at the 5% level. The regression model was specified as:

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

Where:

Y = Performance of General Insurance Companies

X = Process innovation

β0 = Constant

β1 = Regression coefficient for process innovation

ε = Error term

Ethical Considerations

Ethical approval for the study was obtained from the Chuka University Ethics Committee. Permission to conduct the study was also obtained from the Postgraduate Directorate of Kisii University, and the necessary research authorization was obtained from the National Commission for Science, Technology and Innovation (NACOSTI). In addition, permission was sought from the participating general insurance companies before data collection. All respondents provided informed consent and were assured of voluntary participation, confidentiality, anonymity, and their right to withdraw from the study at any time without penalty. The data collected were used strictly for academic purposes and securely handled to protect the privacy of the respondents.

RESULTS

This section presents the empirical findings on the relationship between product innovation and the performance of general insurance companies in Kenya. The analysis begins with the response rate and descriptive characteristics of the study variables, followed by the assessment of the reliability and validity of the measurement scales. Diagnostic tests are then presented to establish the suitability of the data for inferential analysis. Pearson correlation analysis is used to examine the association between product innovation and organizational performance, while linear regression analysis is employed to determine the predictive effect of product innovation on performance and test the study hypothesis.

Response Rate

Table 5 presents the distribution of questionnaires administered to the sampled respondents and the corresponding response rate.

Category	Frequency	Percentage (%)
Questionnaires administered	302	100
Questionnaires returned	221	73.17
Questionnaires not returned	81	26.83
Total	302	100

Source: Research Data, 2026

Table 5 presents the distribution of questionnaires administered and returned. Of the 302 questionnaires administered, 221 were returned, representing a response rate of 73.17%, whereas 81 questionnaires (26.83%) were not returned. The 221 returned questionnaires constituted the final sample used for subsequent statistical analyses.

Table 6: Descriptive statistics Response for process innovation

Statements	N	M	SD	Skew.	Kurt.
A large percentage of our core business processes are fully automated.	221	3.86	0.94	-1.07	1.27
Multiple cross-departmental operational workflows have been seamlessly automated.	221	3.9	0.97	-1.09	1.06
Our firm uses Robotic Process Automation (RPA) to handle repetitive back-office tasks such as data entry and premium reconciliation.	221	3.55	1.11	-0.75	-0.13
A high percentage of our active customers regularly utilize our self-service digital tools or portals.	221	3.93	0.9	-1.02	1.31
Our customer-led self-service platform handles consistently high transaction volumes.	221	3.93	0.96	-0.77	0.17
Intermediaries (agents and brokers) utilize specialized self-service dashboards to manage their policy portfolios independently.	221	3.85	1.07	-0.83	0.02
Our organization has radically redesigned a significant number of its legacy operational processes.	221	3.94	0.86	-0.84	1.01
The redesign of our internal operations has structurally reduced total human labor hours.	221	3.83	0.86	-0.65	0.36
We have restructured our underwriting and claims evaluation workflows to integrate third-party digital data verification instantly.	221	3.81	1.01	-0.67	0.03
Our process cycle times have been significantly optimized across all core operations.	221	3.87	0.9	-0.67	0.67
The turnaround time (TAT) from policy onboarding to digital document delivery has been reduced to minutes.	221	4.01	0.85	-0.83	1.23
The optimization of our operational processes has noticeably lowered our company's overall expense-to-premium ratio.	221	3.88	0.88	-0.51	0.03
Average Scores	221	3.863	0.942	-0.803	0.583

Source: Research Data, 2026

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

Table 6 presents the descriptive statistics for process innovation based on 221 respondents. The overall mean score was 3.86 (SD = 0.94), indicating that respondents generally agreed that their organizations had adopted process innovation practices. The highest mean was recorded for reducing the turnaround time from policy onboarding to digital document delivery to minutes (M = 4.01, SD = 0.85), while the lowest was for the use of RPA in repetitive back-office tasks (M = 3.55, SD = 1.11). The negative skewness values indicate that responses were generally concentrated toward higher levels of agreement. Overall, the findings suggest that process innovation was relatively well implemented among the surveyed general insurance companies.

Table 7: Descriptive statistics Responses on performance of general insurance companies

Statements	N	M	SD	Skew.	Kurt.
Our organization has experienced a steady increase in the absolute number of customers renewing their policies.	221	3.97	0.81	-0.41	-0.15
Our organization has achieved measurable improvements in long-term customer loyalty.	221	4.07	0.76	-0.37	-0.48
Our organization has experienced a significant reduction in annual customer churn.	221	3.97	0.81	-0.61	0.62
Demand for our digital insurance products has increased.	221	4.01	0.81	-0.69	0.52

A significant portion of premiums is generated through digital channels.	221	4.01	0.86	-0.99	1.57
Our gross written premiums have grown faster than the industry average.	221	3.95	0.88	-0.61	0.32
Our organization's claims settlement time has reduced significantly for greater precision.	221	3.85	0.88	-0.62	0.37
Our company's underwriting processing time has reduced significantly.	221	4.03	0.74	-0.78	1.3
Operational costs have reduced relative to premiums earned.	221	4.04	0.81	-0.75	0.61
Our organization's market share has increased.	221	4.05	0.72	-0.51	0.33
Average Scores	221	3.995	0.817	-0.634	0.501

Source: Research Data, 2026

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

Table 7 presents the descriptive statistics on the performance of general insurance companies based on 221 respondents. The overall mean score was 3.995 (SD = 0.817), indicating that respondents generally agreed that their organizations had experienced positive performance outcomes. The highest-rated indicator was long-term customer loyalty (M = 4.07, SD = 0.76), while the lowest was reduction in claims settlement time (M = 3.85, SD = 0.88). The negative skewness (−0.634) indicates that responses were generally concentrated toward higher levels of agreement. Overall, the findings suggest that the surveyed general insurance companies reported relatively high levels of performance, particularly in customer loyalty, market share, operational cost reduction, and underwriting efficiency**.**

Correlation Analysis

Pearson correlation analysis was conducted to determine the strength and direction of the relationship between product innovation and the performance of general insurance companies in Kenya. The Pearson correlation coefficient (*r*) was used to establish whether the relationship between the two variables was statistically significant at the 5% significance level.

Table 8 Correlation Matrix of Insurance Innovation, Fraud Mitigation and Performance and General insurance Performance.

Variables	**Process**	**Performance**
Process	1	.655**
Performance	.655**	1
N	221	221

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

Table 8 presents the Pearson correlation results between process innovation and the performance of general insurance companies. The findings show a positive and statistically significant relationship between process innovation and performance (r = .655, p < .001, N = 221). This indicates that higher levels of process innovation are associated with higher organizational performance.

Table 9: Model Summary for the Effect of Insurance Process Innovation on the Performance of General Insurance Companies in Kenya

Model	***R***	***R²***	**Adjusted *R²***	**SE of Estimate**	**Durbin–Watson**
1	0.655	0.429	0.426	0.393	1.712

Source: Research Data, 2026

Table 9 shows that process innovation has a positive relationship with performance (R = .655). Process innovation explains 42.9% of the variation in performance (R^2 = .429), while the adjusted R^2 indicates that 42.6% is explained after adjustment. The Durbin–Watson value of 1.712 indicates acceptable independence of the residuals. Overall, the model demonstrates a substantial explanatory contribution of process innovation to organizational performance.

Table 10: ANOVA Results for the Regression Model Predicting Performance from Insurance Process Innovation

Model	Sum of Squares	Df	Mean Square	*F*	*p*
Regression	25.319	1	25.319	164.273	< .001
Residual	33.754	219	0.154	—	—
Total	59.073	220	—	—	—

Source: Research Data, 2026

Table 10 presents the ANOVA results for the regression model predicting performance from process innovation. The model was statistically significant, $F(1, 219) = 164.273$, $p < .001$. This indicates that the regression model provides a significantly better prediction of performance than a model without process innovation. Therefore, the model demonstrates good statistical fit, confirming that process innovation significantly predicts the performance of general insurance companies in Kenya.

Table 11: Regression Coefficients for the Effect of Insurance Process Innovation on the Performance of General Insurance Companies in Kenya

Predictor	B	Std. Error	Beta (β)	*t*	*p*
Constant	1.969	0.16	—	12.289	< .001
Insurance Process Innovation	0.524	0.041	0.655	12.817	< .001

Source: Research Data, 2026

Table 11 presents the regression coefficients for the effect of process innovation on the performance of general insurance companies in Kenya. The results show that process innovation has a positive and statistically significant effect on performance (β = .655, t = 12.817, p < .001). The unstandardized coefficient (B = 0.524) indicates that a one-unit increase in process innovation is associated with a 0.524-unit increase in performance. Therefore, the null hypothesis that process innovation has no statistically significant effect on performance is rejected.

Contributions of the Study

The study contributes to knowledge by providing empirical evidence on the relationship between process innovation and the performance of general insurance companies in Kenya. The findings support the application of Diffusion of Innovation Theory and Resource-Based Theory in explaining innovation and organizational performance. Practically, the study provides insights that can guide insurance managers in improving automation, digital self-service, process redesign, and operational efficiency. Methodologically, the study provides a framework for measuring process innovation and performance in the Kenyan insurance context.

RECOMMENDATIONS

The study recommends that general insurance companies in Kenya strengthen process innovation, based on the finding that process innovation had a positive and statistically significant relationship with organizational performance. Management should therefore prioritize process automation, customer self-service systems, process redesign, and digital workflow integration to improve operational efficiency and service delivery. These initiatives should be supported by continuous review of operational procedures and monitoring of

operational efficiency, customer retention, premium growth, and revenue growth to determine whether process improvements translate into sustained organizational performance.

SUGGESTIONS FOR FUTURE STUDIES

Future studies should examine other factors influencing insurance company performance, since process innovation explained 42.9% of the variation in performance. Longitudinal studies are recommended to examine changes in innovation and performance over time. Future researchers could also incorporate objective financial indicators, such as profitability, premium growth, and expense ratios, alongside perceptual measures. Comparative studies across different insurance sectors and countries could further enhance understanding of process innovation and organizational performance.

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