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Self-Service Portals and the Performance of Insurance Companies in Kenya

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Abstract

Insurance penetration in Kenya has remained low despite substantial investment in digital technologies, raising questions about the extent to which specific digital capabilities contribute to organizational performance. This study examined the effect of self-service portals on firm performance among insurance companies in Kenya. Grounded in the Resource-Based View and the Information Systems Success Model, the study adopted an explanatory cross-sectional survey design. The target population comprised 321 managers drawn from the 55 insurance companies licensed by the Insurance Regulatory Authority and operating in Kenya. A proportionate stratified random sample of 175 managers was selected, of whom 169 returned completed questionnaires, yielding a response rate of 96.6%. Following data screening and the removal of four multivariate outliers, 165 valid questionnaires were retained for analysis. Data were collected using a structured questionnaire and analyzed using descriptive statistics, Pearson correlation, and simple linear regression. The findings indicate that managers generally perceived self-service portals to contribute positively to organizational performance ($M = 3.88$, $SD = 0.85$), particularly through faster claims and renewal processing, improved service delivery efficiency, and enhanced organizational scalability. Correlation analysis revealed a strong positive relationship between self-service portals and firm performance ($r = .702$, $p < .001$). Regression results further demonstrated that self-service portals had a positive and statistically significant effect on firm performance ($B = 0.311$, $\beta = .702$, $t = 12.567$, $p < .001$), explaining 49.2% of the variance in firm performance ($R^2 = .492$). The study therefore concludes that self-service portals significantly enhance firm performance among insurance companies in Kenya. The findings suggest that self-service portals constitute a valuable digital capability that improves operational efficiency, customer service delivery, and overall organizational effectiveness. The study contributes to the digital transformation literature by providing evidence from the Kenyan insurance industry and highlighting the strategic role of customer-facing digital platforms in enhancing firm performance.

Keywords: self-service portals; digital transformation; firm performance; insurance companies; Resource-Based View; Kenya.

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Introduction

Self-service portals are now the most visible element of insurers' digital strategies. Through websites and mobile applications, policyholders obtain quotations, buy and renew policies, pay premiums, download documents, and lodge and track claims without an agent or service counter. These portals belong to the wider class of self-service technologies, defined as technological interfaces that let customers produce a service independently of direct employee involvement (Meuter et al., 2000). Their promised benefits are lower transaction costs, faster turnaround and round-the-clock access (Wirtz, 2019).

Kenya offers a revealing setting for testing these promises. The market comprised 55 licensed insurers at the end of 2024: 15 life, 28 general and 12 composite companies, all headquartered in Nairobi (Insurance Regulatory Authority [IRA], 2024). Insurance penetration has nevertheless remained low at approximately 2.4% of GDP, below both the African average of about 3.5% and the global average of about 7% despite continued investment in digital technologies. Gross written premium growth also slowed from 6.3% in 2019 to 2.9% in 2021 (IRA, 2022). This weak performance coexists with near-universal mobile-phone ownership and one of Africa's most developed mobile-money ecosystems. The contrast suggests that returns on digital investment in insurance are neither automatic nor uniform. Insurance penetration is an industry-level indicator and does not by itself demonstrate how self-service portals influence firm performance; it is therefore cited only as contextual evidence for the firm-level question examined in this study.

Insurance is a distinctive setting for self-service technology. Insurance products are typically purchased infrequently, policy conditions are often complex, and the most critical service encounter commonly occurs when a claim is made following a loss. Customers therefore continue to rely heavily on agents and brokers for advice, product interpretation, trust building, and claims support. A self-service portal creates value only when it is effectively integrated with underwriting, policy-administration, customer relationship management, and claims-processing systems. Consequently, evidence from banking and mobile-money services, where transactions are generally more frequent, standardized, and routine, cannot be assumed to apply directly to insurance contexts (Meuter et al., 2000; DeLone & McLean, 2003; Wirtz, 2019). Recent evidence from the Kenyan insurance sector further indicates that insurers are increasingly investing in digital platforms and technology-enabled distribution channels, although intermediary channels, particularly

agents and brokers, continue to account for the majority of business acquisition and customer interactions. As a result, the effectiveness of self-service portals depends not only on their availability but also on customer adoption, system integration, service quality, and alignment with broader organisational digital capabilities.

Kenyan insurers have responded with web and mobile portals, USSD premium-payment channels and digital claims tracking. These initiatives have often been run as discrete projects rather than as an integrated strategy, producing fragmented systems and limited visibility of returns. Yet the empirical evidence on whether portals improve firm performance remains thin. Most studies come from developed economies or from manufacturing and SMEs (Chi et al., 2018; Verhoef et al., 2021). Within Africa, studies have commonly operationalised digital transformation as a composite construct encompassing multiple technologies and capabilities. For example, Muthinja and Chipeta (2018) examined digital financial innovation among Kenyan banks using aggregate measures of technological adoption; Kipyegon, Wanyoike and Kibet (2022) treated digital transformation among Kenyan financial institutions as a multidimensional construct incorporating digital channels, process automation and information systems; while Achieng and Kilika (2023) assessed digital business transformation among Kenyan service firms using a composite index of digital capabilities. Such approaches provide valuable insights into overall digital maturity but make it difficult to determine the unique contribution of specific technologies such as self-service portals. Consequently, managers are unable to judge the relative value of particular digital capabilities when making investment decisions. Three gaps follow. The contextual gap is the lack of evidence from Kenyan insurers. The empirical gap is that the independent association between portals and performance, net of other digital capabilities, has not been estimated. The theoretical gap is how a widely available digital resource translates into organisational value. The objective of this study was therefore to determine the association between self-service portals and the perceived performance of insurance companies in Kenya, controlling for digital customer engagement, data-driven decision-making and automation of internal processes. These three capabilities are included because they are deployed alongside portals and are correlated with them, so omitting them would overstate the portal coefficient.

The study contributes in three ways. It supplies industry-specific evidence from a regulated, intangible-product service sector in an emerging African economy. It estimates the portal association separately from other digital capabilities rather than measuring digital strategy as a composite. It also interprets that association through the Resource-Based View (RBV) and the Information Systems (IS) Success Model, explaining why a widely adopted technology may yield only modest performance gains.

Literature Review and Hypothesis Development

Theoretical Framing

The Resource-Based View holds that competitive advantage comes from resources that are valuable, rare, inimitable and non-substitutable (Barney, 1991). A self-service portal is clearly valuable: it lowers servicing costs and widens access. Whether it is rare or hard to imitate is less certain. Portal platforms are increasingly bought from the same vendors and copied quickly across a

market. RBV therefore predicts a positive effect of portals on performance, but one that weakens as adoption spreads and portals become a competitive necessity rather than a differentiator. A distinction is needed between the portal itself, which is a resource, and the complementary capabilities that make it productive, such as integration with core systems, customer data and staff digital skills. A portal can improve efficiency without producing performance superior to that of competitors. This study uses RBV to interpret its findings; it does not measure rarity, imitability or sustained competitive advantage.

The Information Systems Success Model explains how a portal turns into organizational benefit (DeLone & McLean, 2003). System quality (availability, speed, ease of navigation), information quality (accurate policy and claims data) and service quality (support when self-service fails) drive use and user satisfaction. Use and satisfaction in turn produce net benefits for the firm. The model implies that deploying a portal is not enough: benefits depend on whether customers actually use it and are satisfied by it. It also explains why two insurers with similar portal investments can record different results (Petter et al., 2013). The model comprises six dimensions: system quality, information quality, service quality, use, user satisfaction and net benefits. In this study actual portal use, customer satisfaction and system quality were not measured independently, so the model serves as an interpretive lens and not as a tested structure. The two theories are complementary: RBV explains why a capability may or may not create strategic value, while the IS Success Model explains how system characteristics and use translate into benefits. Together they lead to the expectation that the independent portal coefficient may be weak once complementary digital capabilities are controlled.

2.2 Self-service portals and firm performance

The literature identifies two mechanisms that link portals to performance. The cost mechanism substitutes digital self-service for manual servicing: it lowers cost per transaction, frees staff from routine enquiries and lets the firm serve more customers without proportionate growth in headcount. The experience mechanism works through 24-hour availability, transparent claim status and shorter turnaround, which raise perceived service quality and support renewal (Meuter et al., 2000; Wirtz, 2019).

Empirical work broadly supports a positive relationship. Among software firms in Pakistan, technology orientation predicted firm performance through firm innovativeness (Yousaf et al., 2020). Among online SMEs in Jordan, electronic marketing orientation was associated with better performance, with technological orientation as a moderator (Aljabari et al., 2024). Among Ethiopian manufacturing firms, technology and information technology capabilities mediated the link between technology orientation and performance (Melesse & Knatko, 2024). In African settings, customer-facing digital interfaces widen market reach and responsiveness, but the size of the gain depends on connectivity and customer familiarity with digital channels (Mbuyisa & Leonard, 2017).

Empirical evidence generally supports a positive association between digital technologies and organisational performance, although the magnitude of the effect varies across sectors and contexts. Among software firms in Pakistan, technology orientation improved firm performance indirectly through firm innovativeness (Yousaf et al.,

2020). Among online SMEs in Jordan, e-marketing orientation was positively associated with organisational performance, with technological orientation strengthening the relationship (Aljabari et al., 2024). Similarly, Melesse and Knatko (2024) found that technology capabilities and information technology competencies enhanced the performance of manufacturing enterprises in Ethiopia.

In financial services, digital transformation has been associated with improvements in operational efficiency, customer responsiveness and service accessibility, although such benefits depend on customer adoption, system integration and organisational readiness (Verhoef et al., 2021). However, evidence from banking, mobile money and manufacturing cannot automatically be generalised to insurance because insurance transactions are less frequent, more complex and often require substantial advisory support. The specific contribution of self-service portals to insurance-firm performance therefore remains insufficiently understood, particularly within emerging African markets such as Kenya.

The evidence also shows that the benefits are conditional. Portals that are poorly designed, unreliable or weakly integrated with core administration systems can push effort onto the customer and erode loyalty (Wirtz, 2019). Digital investment may also depress short-term accounting returns even when markets value it (Jardak & Ben Hamad, 2022). A cross-sectional assessment may therefore miss returns that emerge later. Portals also carry implementation, cybersecurity and support costs, and failed transactions can frustrate customers, so savings and added costs work in opposite directions. Adoption of a portal is distinct from its quality, intensity of use, integration and customer acceptance. Firm size, insurer category, market position and digital maturity may condition the relationship, and better-performing insurers may simply have more resources to invest in portals, so reverse causality cannot be excluded. Few studies have tested the portal–performance link in insurance, and fewer still in an emerging African market. What remains unresolved is whether portals retain an independent association with performance once related digital capabilities are taken into account. A single null hypothesis is tested because the study focuses on that unique contribution.

H_{01}: *Self-service portals have no statistically significant independent association with the perceived performance of insurance companies in Kenya when controlling for digital customer engagement, data-driven decision-making and automation of internal processes.*

The conceptual framework of the study is as shown in figure 1.

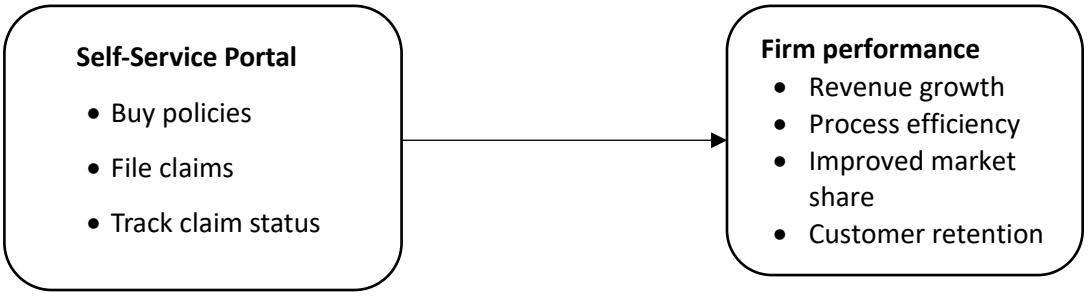


Figure 1: Conceptual Framework Diagram

Methodology

Design, population and sample

The target population comprised 321 senior managers drawn from the 55 insurance companies licensed by the Insurance Regulatory Authority (IRA) and operating in Kenya during the study period. The sampling frame was developed from the register of licensed insurers maintained by the Insurance Regulatory Authority (IRA) and supplemented with managerial staff lists obtained from the human resource departments of the respective insurance companies. The frame included chief executive officers/managing directors, chief managers and operations managers because these positions are directly involved in strategic decision-making, operational management and evaluation of organisational performance. A sample size of 175 respondents was determined using the Krejcie and Morgan (1970) sample size determination table for a population of 321 (Table 1). Proportionate stratified random sampling was used to allocate the sample across life, general and composite insurance companies according to their representation in the target population. Within each stratum, eligible managers were assigned identification numbers and selected using the lottery method. Each manager's identifier was placed in a selection pool from which respondents were randomly drawn, ensuring that all eligible managers had an equal probability of inclusion in the sample.

Table 1: Population and sample by insurer category

Insurer Category	Sample Distributed	Non-Returns	Returns	Response Rate (%)
Life Assurance	25	1	24	96.0
General Insurance	92	3	89	96.7
Composite Insurance	58	2	56	96.6
Total	**175**	**6**	**169**	**96.6**

Source: IRA (2024); authors' sampling.

Of the 175 questionnaires distributed, 169 were returned complete and suitable for analysis, producing a response rate of 96.6%. Six questionnaires were not included in the final analysis because they were either not returned despite follow-up requests or were returned incomplete and therefore could not be used for statistical analysis. The high response rate reduced the likelihood of substantial non-response bias; however, the possibility of systematic differences between respondents and non-respondents cannot be entirely ruled out. Where available, response rates were assessed across life, general and composite insurance company categories to evaluate the representativeness of the achieved sample. The overall response rate was considered adequate for statistical analysis and inference. Responses were analysed at the individual-manager level because the purpose of the study was to capture managerial perceptions regarding the contribution of self-service portals to firm performance. Organisational identifiers were not retained in the final analytical data set to preserve respondent confidentiality.

Data Collection and Variable Measurement

Data were collected using a structured, closed-ended questionnaire administered through the drop-and-pick method. All questionnaire items were measured on a five-point Likert scale

ranging from 1 (strongly disagree) to 5 (strongly agree). Construct scores were computed as the arithmetic mean of the constituent items. Consistent with commonly applied interpretation guidelines for five-point Likert scales, mean scores of 1.00-1.79 indicated strong disagreement, 1.80-2.59 disagreement, 2.60-3.39 neutrality, 3.40-4.19 agreement, and 4.20-5.00 strong agreement. These interpretation bands were established during instrument development and were used consistently throughout data analysis.

Self-service portals were measured using seven items assessing managers' perceptions of portal-related outcomes, namely customer satisfaction and retention, operational cost reduction, reduced staff time spent on routine enquiries, faster claims and renewal processing, access to real-time customer information, improved service-delivery efficiency, and support for organisational scalability and innovation. The items were adapted from prior studies on self-service technologies, digital service delivery, information systems success, and technology-enabled customer service, including Meuter et al. (2000), Petter, DeLone and McLean (2013), and related digital transformation literature already cited in the study. The scale achieved a Cronbach's alpha coefficient of 0.812, indicating good internal consistency. Because the items focused on managerial assessments of portal-related benefits, the construct was interpreted as perceived benefits of self-service portals rather than technical functionality, system quality, integration capability, or actual customer usage. The potential conceptual overlap between perceived portal benefits and perceived organisational performance is therefore acknowledged as a limitation of the study.

Firm performance was measured using seven perceptual indicators covering profitability, organisational growth during the preceding three years, market share, market value, customer base and customer loyalty, employee welfare, and customer satisfaction. These measures were adapted from established organisational performance literature and were intended to capture managers' overall assessment of firm performance during the recent operating period. The construct achieved a Cronbach's alpha coefficient of 0.821, suggesting satisfactory internal reliability. Because objective financial and operational records were not collected, the study relied exclusively on managerial perceptions of performance. The decision to model performance as a single composite construct was supported by the factor analysis results, which indicated that the items loaded satisfactorily on a common underlying performance dimension.

A pilot study involving 18 managers from insurance companies located in Nakuru City was conducted prior to the main survey. These participants were excluded from the final study sample. The pilot exercise was undertaken to assess item clarity, wording, sequence, comprehension and questionnaire administration procedures. Feedback obtained from the pilot participants resulted in minor modifications to item wording, clarification of selected insurance and digital-technology terms, improvement of questionnaire instructions, and refinement of the overall layout of the instrument to enhance respondent understanding and completion accuracy.

Content and face validity were established through expert review involving academic supervisors and two practicing insurance managers. The reviewers evaluated the questionnaire for relevance, clarity, comprehensiveness, wording, alignment with the study

objectives, adequacy of construct coverage, and appropriateness of the measurement items in representing self-service portals and firm performance within the insurance context. Recommendations arising from the review process were incorporated before administration of the final instrument. Ethical requirements were observed throughout the study. Data collection was conducted under authorization granted through a NACOSTI research permit. Participation was voluntary, informed consent was obtained from all respondents prior to questionnaire administration, and confidentiality of individual responses was assured.

Analysis

Data were analyzed in SPSS 21.0 using descriptive statistics, Pearson correlation and multiple regression. The diagnostic results in Table 2 demonstrated that the data were suitable for regression analysis.

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Table 2: Summary of Reliability, Validity, Data Screening, and Regression Diagnostic Tests

Diagnostic Test	Statistic	Result	Criterion	Decision
Internal consistency reliability	Cronbach's alpha	0.730-0.791	$\alpha \geq .70$	Supported
Sampling adequacy	KMO measure	0.528	KMO ≥ .50	Adequate
Factorability	Bartlett's test of sphericity	$\chi^2(528) = 3119.194$, $p < .001$	$p < .05$	Supported
Missing data assessment	Missing values	None	No missing values	Supported
Multivariate outlier assessment	Mahalanobis distance	Four cases removed	Cases exceeding critical value removed	Supported
Final analytical sample	Valid questionnaires	165	Adequate sample size	Retained
Normality	Histogram and normal P-P plot of residuals	Assumption satisfied	Approximately normal residuals	Supported
Linearity	Residual scatterplot	Assumption satisfied	Linear relationship evident	Supported
Homoscedasticity	Residual scatterplot	Assumption satisfied	Constant error variance	Supported
Multicollinearity	Tolerance	0.926	> .10	Supported
Multicollinearity	VIF	1.079	< 10.00	Supported
Independence of errors	Durbin-Watson statistic	1.343	1.00-2.50	Supported

The measurement scales exhibited acceptable internal consistency, with Cronbach's alpha coefficients ranging from 0.709 to 0.791. Sampling adequacy was confirmed by a Kaiser-Meyer-Olkin value of 0.528, while Bartlett's test of sphericity was statistically significant ($\chi^2 = 3119.194$, df =

528, p < .001), indicating that the correlation matrix was appropriate for factor analysis. Prior to analysis, the dataset was screened for data quality issues. No missing values were detected. Four multivariate outliers were identified through Mahalanobis distance and removed, leaving 165 valid questionnaires for subsequent analysis.

Assessment of the regression assumptions indicated that the residuals were approximately normally distributed based on the histogram and normal probability plot of standardized residuals. The scatterplot of standardized residuals against standardized predicted values revealed no discernible pattern, supporting the assumptions of linearity and homoscedasticity. Multicollinearity was not a concern as the tolerance value (0.926) exceeded the recommended threshold of 0.10 and the variance inflation factor (VIF = 1.079) was substantially below the threshold of 10. The Durbin-Watson statistic of 1.343 further suggested that the residuals were reasonably independent. Collectively, these results indicate that the data satisfied the assumptions required for estimating the regression model and testing the study hypothesis.

Model Specification

To test the effect of self-service portals on firm performance, a simple linear regression model was estimated. The model examined the extent to which variations in self-service portal adoption explain variations in firm performance among insurance companies in Kenya. The regression model was specified as follows:

$Y = \beta_0 + \beta_1 X_1 + \varepsilon$..... (1)

Where;

Y = performance

α = Constant

X1= Self-Service Portal

β1… = the slope representing the degree of change in the independent variable by one unit variable.

ε = error term

Results

Demographic profile of respondents

Respondents were drawn from the head offices of licensed insurance companies, where strategic decisions relating to digital transformation and organizational performance are typically formulated and monitored. The gender distribution was relatively balanced, with female respondents accounting for 53.8% of the sample and male respondents comprising 46.2%. In terms of age, the largest proportion of respondents (55.8%) were aged between 25 and 34 years, followed by those aged 45 years and above (20.6%), respondents below 25 years (15.8%), and those aged between 35 and 44 years (7.9%). This distribution suggests that the study predominantly captured the views of young and mid-career managers while maintaining representation from more experienced age groups. The respondents were generally well educated, with 65.7% holding bachelor's degrees and an additional 24.2% possessing postgraduate or doctoral qualifications. Furthermore, most respondents (86.4%) had more than five years of work experience, while 32.0% reported more than fifteen years of industry experience. The high levels of educational attainment and professional experience indicate that the respondents were adequately qualified to provide informed assessments regarding the implementation of self-service portals and their contribution to firm performance.

To ensure representation across organizational hierarchies, respondents were evenly distributed among senior management, middle-level management,

and supervisory positions, with each category contributing 33.3% of the valid responses. This balanced distribution enabled the study to capture strategic, managerial, and operational perspectives on the role of self-service portals within insurance companies. In addition, the respondents were drawn from all three categories of insurers operating in Kenya. General insurance companies accounted for the largest share of respondents (52.7%), followed by composite insurance companies (33.1%) and life insurance companies (14.2%). The inclusion of managers from different insurer categories enhanced the representativeness of the study by reflecting the diversity of operational contexts within the Kenyan insurance industry.

Table 3: Demographic profile of respondents (n = 165)

Characteristic	Category	Frequency	Percentage (%)
Gender	Female	91	53.8
	Male	78	46.2
Age	Below 25 years	26	15.8
	25–34 years	92	55.8
	35–44 years	13	7.9
	45 years and above	34	20.6
Highest education	Diploma	17	10.1
	Bachelor's degree	111	65.7
	Postgraduate	19	11.2
	Doctorate	22	13.0
Work experience	1–5 years	23	13.6
	5–10 years	62	36.7
	11–15 years	30	17.8
	Above 15 years	54	32.0
Position	Senior Management	55	33.3
	Middle-Level Management	55	33.3
	Supervisors	55	33.3
Insurer category	Life Assurance	24	14.2
	General Insurance	89	52.7
	Composite Insurance	56	33.1

Descriptive results

The descriptive results indicate that self-service portals were widely perceived as contributing positively to organizational effectiveness. The composite mean score for self-service portals was 3.88 (SD = 0.85), suggesting a generally high level of agreement among respondents regarding the contribution of portal technologies to organizational performance outcomes. The highest-rated aspect was the role of self-service portals in enabling faster processing of insurance claims and renewals (M = 4.03, SD = 0.81), followed by their contribution to service delivery efficiency and reduced employee time spent handling routine customer queries (both M = 3.96). Respondents also agreed that self-service portals enhanced access to real-time customer information (M = 3.91), supported scalability and innovation (M = 3.93), reduced operational costs through automation (M = 3.85), and improved customer satisfaction and retention (M = 3.52). Collectively, these findings suggest that self-service portals are perceived as enhancing both operational efficiency and customer service effectiveness within insurance firms.

Table 4: Descriptive Statistics for Self-Service Portal

Self Service Portal	Mean	SD	Skewness	Kurtosis
The self-service portal has improved customer satisfaction and retention.	3.52	0.78	-0.56	0.92
The portal has helped reduce operational costs through automation.	3.85	0.91	-0.61	0.39
Employees spend less time on routine queries due to the self-service functionalities.	3.96	0.80	-1.41	4.00
The portal has enabled faster processing of insurance claims and renewals.	4.03	0.81	-1.29	2.49
The self-service system has increased access to real-time customer data and insights.	3.91	0.82	-1.12	1.84
The portal has contributed to higher efficiency in service delivery.	3.96	0.99	-1.48	2.24
The self-service platform supports firm scalability and innovation.	3.93	0.86	-0.87	1.02
Composite Mean	**3.88**	**0.85**	**-1.05**	**1.84**

Similarly, respondents reported high levels of perceived firm performance, with a composite mean score of 4.20 (SD = 0.87). The highest-rated performance indicator was improvement in market share (M = 4.33, SD = 0.81), followed by employee welfare (M = 4.24, SD = 0.98), profitability (M = 4.23, SD = 0.85), customer satisfaction (M = 4.23, SD = 0.81), market value (M = 4.19, SD = 0.71), customer loyalty and growth of the customer base (M = 4.13, SD = 0.98), and overall firm growth (M = 4.06, SD = 0.92). These results indicate that the participating insurance firms generally perceived themselves as performing well across financial, market, employee, and customer-related dimensions.

Table 5: Descriptive Statistics for Firm Performance

Firm Performance	Mean	SD	Skewness	Kurtosis
Our firm has greatly improved its customer base and loyalty	4.13	0.98	-1.90	3.99
The employees' welfare in our organization is Satisfactory	4.24	0.98	-2.06	4.68
Our firm has experienced high profitability in the last three years.	4.23	0.85	-1.90	5.28
Our firm have experienced growth in the last three years	4.06	0.92	-1.28	2.40
Our firm has improved on market value	4.19	0.71	-0.91	2.03
Our firm has improved its market share	4.33	0.81	-1.80	5.09
Our customers are happy with our services	4.23	0.81	-1.57	4.24
Composite Mean	**4.20**	**0.87**	**-1.63**	**3.96**

The skewness and kurtosis statistics for both constructs fell within acceptable ranges for social science research, supporting the assumption of approximate normality. Overall, the descriptive findings provide preliminary evidence that the adoption of self-service portals is associated with positive organizational outcomes and favorable perceptions of firm performance among insurance managers in Kenya.

Correlation results

A Pearson product-moment correlation analysis was conducted to examine the relationship between self-service portals and firm performance. The results revealed a strong, positive, and statistically significant correlation between the two variables (r = .702, p < .05), indicating that higher levels of self-service portal adoption were associated with higher levels of perceived firm performance. The magnitude of the correlation coefficient suggests a substantial association between the constructs, implying that insurance companies that effectively deploy self-service portal technologies tend to report superior organizational outcomes. Specifically, enhanced self-service portal capabilities appear to be associated with improved operational efficiency, service accessibility, customer satisfaction, and overall organizational competitiveness, which collectively contribute to higher levels of perceived firm performance.

From a theoretical perspective, the finding supports arguments advanced by digital transformation and information systems literature that technology-enabled customer self-service platforms create value by reducing service delivery costs, increasing process efficiency, and improving customer engagement. The strength of the observed relationship suggests that self-service portals constitute an important strategic resource capable of enhancing organizational performance within the insurance sector. The finding also provides preliminary support for the study hypothesis that self-service portals positively influence firm performance among insurance companies in Kenya. However, while the correlation analysis establishes the existence, direction, and strength of the relationship, it does not provide evidence of causality. Consequently, regression analysis was undertaken to determine the extent to which self-service portals predict firm performance and to establish whether the observed relationship remains statistically significant when subjected to multivariate testing.

Table 6: Pearson correlation matrix of Self-Service Portal and Firm Performance

Variables	FP	SSP
Firm Performance	1	.702**
Self-Service Portal	.702**	1

**. Correlation is significant at the 0.05 level (2-tailed).

Regression results and hypothesis test

The regression results (Table 7) provide strong empirical evidence that self-service portals are an important determinant of firm performance among insurance companies in Kenya. The model summary statistics indicate a strong positive relationship between self-service portals and firm performance (R = .702). The coefficient of determination showed that self-service portals explained 49.2% of the variance in firm performance (R^2 = .492), while the adjusted coefficient of determination remained largely unchanged (*Adjusted* R^2 = .489), suggesting that the model was both stable and robust. An explanatory power of nearly 50% is substantial in organizational and behavioral research, indicating that self-service portals constitute an important predictor of performance outcomes within the insurance industry. The analysis of variance results further confirmed the adequacy of the regression model. The overall model was statistically significant, $F(1, 163) = 157.932$, p < .001, indicating that self-service portals significantly

improved the prediction of firm performance relative to a model with no predictor variables. The large F-statistic and associated probability value demonstrate that the observed relationship between self-service portals and firm performance was unlikely to have occurred by chance. These findings provide evidence that self-service portals contribute meaningfully to organizational performance and justify the use of the estimated regression model for hypothesis testing.

Table 7: Multiple regression of Self-Service Portal on Firm Performance

Model	Variables	B	Std. Error	Beta	t	Sig.
1	(Constant)	0.627	0.094		6.698	.000
	Self-Service Portals	0.311	0.025	0.702	12.567	.000
	Model Summary					
	R	0.702				
	R^2	0.492				
	Adjusted R^2	0.489				
	Std. Error of the Estimate	0.384				
	Model Fit					
	F(1, 163)	157.932				
	Sig.	.000				

The coefficient estimates provide further insight into the nature and magnitude of the relationship. The results show that self-service portals exerted a positive and statistically significant effect on firm performance (B = 0.311, SE = 0.025, β = .702, t = 12.567, p < .001). The positive standardized coefficient indicates that a one standard deviation increase in self-service portal adoption is associated with a 0.702 standard deviation increase in firm performance. Similarly, the unstandardized coefficient suggests that a one-unit improvement in self-service portal implementation would increase firm performance by approximately 0.311 units. The magnitude of the standardized coefficient signifies a strong practical effect, suggesting that self-service portals are not merely associated with firm performance but represent an important strategic capability capable of generating meaningful organizational benefits.

The findings suggest that insurance firms that invest in effective self-service portal technologies are likely to realize improvements in operational efficiency, service accessibility, customer responsiveness, and overall organizational effectiveness. Self-service portals enable customers to access services independently, submit claims, renew policies, and obtain information in real time, thereby reducing service bottlenecks and operational costs while enhancing customer experiences. These benefits are likely to translate into improved market performance, customer retention, profitability, and growth. Consequently, the results support the argument that digital customer-facing technologies constitute valuable organizational resources capable of creating competitive advantage and enhancing firm performance. Based on these findings, the null hypothesis that self-service portals have no significant effect on firm performance is rejected. The study concludes that self-service portals have a positive and statistically

significant effect on firm performance among insurance companies in Kenya

Discussion

The purpose of this study was to examine the effect of self-service portals on firm performance among insurance companies in Kenya. The findings revealed that self-service portals exert a positive and statistically significant effect on firm performance (β = .702, $p < .001$), with the model explaining 49.2% of the variation in firm performance ($R^2 = .492$). These results suggest that the adoption and effective utilization of self-service portals contribute substantially to organizational success within the insurance sector. The findings are consistent with prior empirical evidence demonstrating that digital technologies enhance organizational performance.

Mueni and Angima (2023) found that digital adoption significantly improved the performance of insurance companies in Kenya by increasing service efficiency and improving customer experiences. Similarly, Köhne and Köhne (2024) reported that digitalization positively influences insurance distribution performance through enhanced productivity, operational efficiency, and customer engagement. The present study extends this evidence by demonstrating that self-service portals, specifically, serve as an important digital capability that contributes directly to improved firm performance.

The findings further corroborate those of Masoud and Basahel (2023), who established that digital transformation capabilities positively affect firm performance through improved customer experience and technological innovation.

Likewise, Oloda and Pupre (2026) observed that digital transformation strategies significantly enhance organizational performance in the insurance industry by improving operational effectiveness and service delivery capabilities. These studies support the argument that digital technologies contribute to value creation by reducing operational costs, enhancing service accessibility, and strengthening customer relationships. The strong positive relationship observed in this study may be explained by the ability of self-service portals to automate routine transactions, facilitate claims processing, enable policy renewals, provide real-time customer information, and improve service convenience. Through these capabilities, insurance companies are able to reduce operational inefficiencies while simultaneously enhancing customer experience.

Consequently, self-service portals function not merely as technological tools but as strategic resources that improve competitiveness and organizational performance. However, not all studies report uniformly positive outcomes from digital service technologies. For example, studies on digital service platforms have shown that the benefits of self-service technologies depend on successful implementation, customer acceptance, system usability, and trust in digital channels. Research has indicated that poorly designed self-service systems can frustrate users, reduce customer satisfaction, and ultimately diminish performance gains. Likewise, concerns relating to cybersecurity, privacy risks, technological complexity, and resistance to change may hinder the realization of the anticipated benefits of digital transformation. These findings suggest that although self-service portals have substantial performance-enhancing potential, their effectiveness depends on organizational readiness, technological quality, customer adoption, and continuous system improvement. The findings provide strong empirical evidence that self-service portals

contribute positively to firm performance within the Kenyan insurance industry. The results reinforce the growing consensus that customer-facing digital technologies have become an essential component of organizational competitiveness and sustainable performance in contemporary service industries.

Conclusion

This study examined the effect of self-service portals on firm performance among insurance companies in Kenya. The findings established that self-service portal have a positive and statistically significant influence on firm performance. The results demonstrated that increased adoption and utilization of self-service portals are associated with improvements in organizational effectiveness, customer service delivery, operational efficiency, profitability, market performance, and overall business growth. The study concludes that self-service portals constitute a strategic organizational resource capable of generating substantial performance benefits within the insurance sector. The significant explanatory power of the model indicates that digital self-service technologies play a critical role in enhancing organizational outcomes and maintaining competitive advantage.

Accordingly, the null hypothesis that self-service portals have no significant effect on firm performance is rejected. The study therefore provides empirical evidence that investments in self-service portal technologies contribute significantly to improved firm performance among insurance companies in Kenya.

Implications for practice and policy

The findings of this study have important implications for insurance managers, industry practitioners, and policymakers. From a managerial perspective, insurance companies should prioritize investments in advanced self-service portal technologies that enable customers to access services conveniently, process transactions efficiently, submit claims electronically, and obtain real-time information. Such investments have the potential to enhance customer satisfaction while simultaneously improving operational efficiency and organizational performance.

The findings further suggest that self-service portals should be treated as strategic business assets rather than purely technological innovations. Insurance firms should continuously improve portal functionality, system reliability, customer support mechanisms, data security protocols, and user experience to maximize the value derived from digital service delivery platforms. In addition, organizations should invest in employee training and customer education initiatives to encourage greater utilization of self-service technologies.

From a policy perspective, regulators such as the Insurance Regulatory Authority (IRA) should continue promoting digital innovation within the insurance industry while strengthening regulatory frameworks related to consumer protection, cybersecurity, data privacy, and digital service quality. Policies that encourage secure digital transactions and promote interoperability across digital platforms can contribute to increased efficiency, broader financial inclusion, and enhanced competitiveness within the insurance sector.

Theoretical contribution

This study contributes to the growing body of literature on digital transformation and organizational performance by providing empirical evidence from the Kenyan insurance

industry, a context that remains relatively underrepresented in the existing literature. The findings provide support for the Resource-Based View (RBV), which posits that valuable, rare, and difficult-to-imitate organizational resources contribute to superior firm performance. The significant positive influence of self-service portals suggests that digital service delivery capabilities constitute valuable organizational resources that can enhance competitiveness and create performance advantages.

The study also contributes to technology adoption literature by demonstrating that the benefits of digital technologies extend beyond adoption outcomes to include measurable organizational performance improvements. While previous studies have primarily focused on technology acceptance, usage intentions, and customer satisfaction, the present study establishes a direct empirical link between self-service portal utilization and firm performance. Consequently, the study enriches theoretical understanding of how digital capabilities translate into tangible organizational outcomes within service-oriented industries.

Limitations and future research

Despite its contributions, the study is subject to several limitations. First, the study relied on perceptual measures of firm performance obtained from managerial respondents rather than objective organizational performance indicators. Although managerial assessments provide valuable insights, future studies should incorporate objective measures such as profitability, premium growth, market share, return on assets, and claims processing efficiency to validate the findings.

Second, the cross-sectional design limited the ability to establish causal relationships between self-service portals and firm performance. Future studies should employ longitudinal research designs to examine the long-term effects of digital technologies on organizational outcomes and to assess how performance improvements evolve over time. Third, the study focused exclusively on insurance companies operating in Kenya. Consequently, the findings may not be fully generalizable to other sectors or geographic contexts. Future research could replicate the study in banking, telecommunications, healthcare, and other service industries, as well as undertake comparative cross-country investigations to establish the consistency of the observed relationships across different institutional environments.

Finally, the model explained 49.2% of the variance in firm performance, implying that other factors also contribute to organizational performance. Future research should therefore examine additional dimensions of digital transformation, including artificial intelligence, mobile applications, customer analytics, digital ecosystems, cybersecurity capabilities, and organizational innovation. Further studies could also investigate mediating and moderating mechanisms such as customer experience, organizational agility, digital capability, and innovation culture to develop a more comprehensive understanding of how digital technologies influence firm performance.

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