Digital Customer Interaction Strategy and Service Delivery by National Health Insurance Fund-Nakuru Branch, Kenya

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Abstract: The digital transformation within the public sector presents a spectrum of opportunities and benefits encompassing the operational efficiency, financial savings, and improved customer satisfaction. In particular, digital customer interaction improves customer satisfaction, streamlines communication, and harnesses digital channels and data-driven insights. However, the National Health Insurance Fund's members encounter challenges when trying to obtain adequate details regarding their coverage and benefits, which is a major service delivery concern. It is against this challenge that the researcher examined the influence of digital customer interaction strategy on Service Delivery by National Health Insurance Fund. The study was anchored by Technology Acceptance Model. A descriptive research design was employed. The target population was the 46 employees at the National Health Insurance Fund-Nakuru Branch. Data was collected using structured research questionnaires. Data analysis was done through descriptive and inferential methods and aided by Statistical Packages for Social Sciences (SPSS) version 25. The descriptive findings showed that digital customer interaction strategy influenced service delivery. Based on the correlation analysis results, the relationship between the digital customer interaction strategy and service delivery was significant ($r=0.304^*$; $p=0.047$). This result implies that the service delivery by NHIF was influenced by digital customer interaction strategy. In regression analysis, the coefficient of determination was $R^2=0.093$. As such, digital customer interaction strategy explained the 9.3% of variation in service delivery by NHIF. The study concluded that improve the efficiency and customer satisfaction. Therefore, embracing digital channels and optimizing customer engagement in healthcare services is a transformative approach for the National Health Insurance Fund. The researcher recommends that NHIF should intensify the real-time support, customer feedbacks, integration with healthcare providers, and multi-channel interaction. This will improve the customer assistance, incorporate member inputs, and streamline the healthcare processes thus improving the service delivery.

Keywords: Digital Customer Interaction Strategy, Service Delivery, National Health Insurance Fund

I. Introduction

The digitization strategy incorporates a comprehensive approach with the objective of modernizing and overhauling various facets of an organization by integrating digital technologies and data-driven solutions (Menvielle, Audrain-Pontevia, &Menvielle, 2017). This involves the adoption of digital tools such as online platforms and mobile applications to improve the accessibility and user-friendliness of services. These tools prioritizes the streamlining of administrative processes to boost efficiency and reduce operational expenses. In the same vein, Apostol (2021) noted that digitization strategy ensures data security, privacy, and transparency, enhancing accountability. Ultimately, the digitization strategy aims to harness the capabilities of technology to meet evolving demands, enhance overall operations, and attain organizational objectives. According to Odone, Buttigieg, Ricciardi, Azzopardi-Muscat, and Staines (2019) digital

customer interaction strategy utilizes digital channels and technologies to engage, assist, and offer value to customers. As an integral part of the overarching digital strategy, its emphasis is on harnessing data-driven insights, customization, and seamless multi-channel communication to elevate customer experiences. This approach extends beyond addressing customer inquiries and issues by proactively predicting customer needs and preferences. Additionally, it nurtures brand loyalty and promote organizational growth.

In the public sector, digital customer interaction strategy leverage digital platforms such as mobile applications and social media to deliver information, support, and services (Nyakina&Taher, 2023). This strategy aims to transparency and efficiency in interactions between the government agencies and citizens, allowing for streamlined processes and improved service delivery. In essence, it aligns with the digital transformation efforts to create a more citizen-centric, responsive, and technologically-driven services. By utilizing the digital customer interaction strategy, the National Health Insurance Fund aims to facilitate swifter and more efficient disbursements to healthcare providers (Gatehi, 2022). However, faces a service delivery challenge in terms of delays in disbursing funds to healthcare providers, potentially resulting in slower healthcare services for beneficiaries. This could be intricately be attributed to the inefficiency of the digital customer interaction strategy. The existing voluntary membership program for the informal economy experiences a high dropout rate, resulting in only 5 million principal members and 6.6 million dependents.

Despite the presence of e-government platforms in Kenya, 40% of the population have not utilized them. Nevertheless, the past studies have not addressed the issues pertaining to the digital customer interaction strategy and service delivery. For instance, Hussen (2017) conducted a research on the use of e-government in institutions providing public services in emerging markets. The results showed that adoption of e-government enhanced government policies, internal openness and accountability, collaboration, and public engagement. Mutinda (2017) examined the connection between e-government and service delivery. The findings showed that online transactions enables prompt revenue collection, and that it automates front- and back-office tasks. The current study examined the influence of digital customer interaction strategy on service delivery by National Health Insurance Fund-Nakuru branch, Kenya.

II. Objective of the study

The objective of the study was to determine the influence of digital customer interaction strategy on service delivery by National Health Insurance Fund-Nakuru branch, Kenya.

III. Literature Review

Digital customer interaction strategy is shaped by the growing prevalence and convenience of digital channels in today's world (Ozols&Meyerhoff-Nielsen, 2018). As technology continually advances and integrates into daily lives, there has been digital platforms for communication and engagement needs. This change in inclinations has prompted organizations to adjust their priorities and develop digital customer interaction that resonate with their evolving expectations. Through acknowledging and harnessing these digital channels, which encompass websites and online communication tools, organizations can not only meet customers on platforms they prefer but also deliver a more efficient and user-friendly means of engaging with their client base (Alvarenga, Matos, Godina, & Matias, 2020). This shift accommodates customer preferences and capitalizes on the wealth of data and insights offered by digital channels. The analysis of information related to customer behavior, requirements, and preferences, leads to informed decisions that elevate the overall customer experience. In the domain of a digital customer interaction strategy, the quantity of customer complaints or concerns reported via digital channels holds significant importance (Ylinen&Pekkola, 2019). This approach concentrates on diminishing the volume of complaints through the efficient resolution of issues and the provision of effective digital assistance.

Self-service resolutions gauge the effectiveness of self-help options available on digital platforms, measuring the proportion of problems or inquiries that customers resolve independently using online resources. Additionally, the count of digital interactions encompasses the overall volume of customer engagements across digital channels, including activities like live chat sessions, email correspondences, or interactions on social media (Nawafleh, 2018). An effective strategy should aim to augment the number of digital interactions, signifying active engagement with customers and a dedication to delivering accessible support and information. The Technology Acceptance Model (TAM) suggests that an individual's inclination to adopt a technology is primarily influenced by two factors: their perception of how user-friendly it is to interact with (perceived ease of use) and their judgment of how it can enhance their productivity or performance (perceived usefulness) (Ray, Bala, &Dasgupta, 2019). When a technology is perceived as both user-friendly and beneficial, TAM predicts a higher likelihood of adoption. This relationship between ease of use and usefulness is often depicted as a causal loop, with one factor influencing the other.

External factors like social influence, system-specific features, and facilitating conditions can also influence an individual's intention to use technology, though they are considered secondary to the core constructs of ease of use and

usefulness (Sobhanmanesh, Beheshti, Nouri, Chapparo, Raj, & George, 2023). TAM anticipates the manner in which customers will interact with and adopt digital platforms and services. Through the assessment of customer perceptions regarding the ease of using the technology and its capacity to meet their requirements, organizations can craft more efficient strategies for digitally integrating customers (Gebayew, Hardini, Panjaitan, &Kurniawan, 2018). This understanding empowers organizations to customize their digital solutions and elevate the user experience. In the end, it helps cultivate increased customer engagement and contentment by harmonizing their approaches with the factors influencing technology acceptance delineated in the technology acceptance model. Figure 1 illustrates the relationship between digital customer interaction strategy and service delivery.
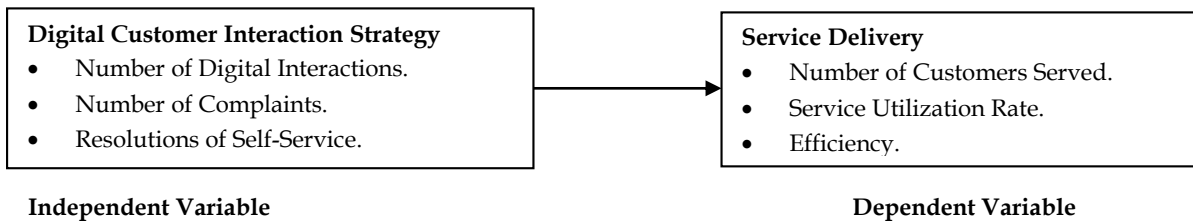
Digital Customer Interaction Strategy	Service Delivery
• Number of Digital Interactions. • Number of Complaints. • Resolutions of Self-Service.	• Number of Customers Served. • Service Utilization Rate. • Efficiency.
Independent Variable	**Dependent Variable**

Figure 1: Conceptual Framework

A review has been conducted on empirical studies pertaining to digital customer interaction strategy. Koech and Akuku (2021) examined the effect of biometric registration technique on service delivery at NHIF branches in UasinGishu County. The findings of the study indicated a positive linear impact of biometric registration techniques on service delivery (β=.094; p=0. 024). As a result, the study reached the conclusion that the utilization of biometric registration techniques at NHIF has improved the accessibility of data, enhanced the accuracy of personal detail identification, and has proven to be a convenient method for both clients and NHIF. Omerikwa (2022) assessed the effect of innovative practices on operational performance of the National Hospital Insurance Fund, Kenya. A moderate positive correlation was observed between product innovation and the operational performance of the National Hospital Insurance Fund in Kenya (p=0.031). Similarly, there was a significant positive relationship between process innovation and operational performance (p=0.001), as well as between market innovation and operational performance (p=0.013), and between technological innovation and operational performance (p=0.014). In their research conducted in 2023, Abdille and Waithaka explored the implementation of Universal Health Care Coverage within Kenya, focusing on the National Hospital Insurance Fund (NHIF). Their findings highlighted the substantial impact of both process innovation and technological innovation on the achievement of Universal Health Care coverage by NHIF. In the study conducted by Mutinda (2017), the relationship between e-government and service delivery was investigated. The research revealed that online transactions play a crucial role in expediting revenue collection processes and automating both front- and back-office tasks, emphasizing the transformative impact of e-government initiatives on public service provision and efficiency.

Research gaps were identified in the reviewed empirical studies. The study by Koech and Akuku (2021) focused on the specific aspect of biometric registration techniques but did not adequately address how this fits into NHIF's broader digital customer interaction strategy. They were short of delving into the overall digital customer experience beyond biometric registration. The current study examined how other digital interactions, such as online inquiries, mobile apps, and website accessibility, contribute to the overall customer experience. Omerikwa (2022) delved into the influence of innovations on service delivery, but did not link the same to customer satisfaction and overall experience. A research gap existed in understanding the link between digital customer interaction strategies and customer perceptions which has been addressed by the present study. In their research conducted in 2023, Abdille and Waithaka explored the implementation of Universal Health Care Coverage within Kenya, focusing on the National Hospital Insurance Fund (NHIF). They did do not extensively explore how organizations integrate multi-channel interactions within their strategies. The current research examined the integration of multi-channel interactions and influence of such integration for enhanced service delivery.

IV.   Research Methodology

A descriptive research was employed in this study. This design allowed the researcher to describe the issues under the study comprehensively and adequately. All 46 employees of Kenya's National Health Insurance Fund's Nakuru Branch made up the study's target population. The population in question comprised of the 40 staff members who participate in daily operations and service delivery to consumers, as well as the branch manager, five functional supervisors, and one. In this instance, the functional managers and branch employees served as the unit of observation, whereas NHIF served as the unit of analysis as shown on Table 1.

Table 1: Target Population

Population component	Population size	Percent (%)
Branch Manager	1	2.2
Functional Managers	5	10.8
Branch Employees	40	87.0
Total	**46**	**100**

A census technique was used where all the 46 respondents were involved in study. A questionnaire was employed in data collection. The data collected from the returned questionnaires was checked for completeness, coded and entered into the SPSS Version 25 for analysis which involved the use of frequencies, descriptive and inferential analysis techniques. Both regression and correlation analyses was conducted to establish the relationships between the study variables. The analysis results were presented in form of tables. The regression model, $Y = \beta_0 + \beta_1 X_1 + \varepsilon$, was used.

> Where;
>
> Y = Dependent variable (Service Delivery)
>
> β_0 =Constant
>
> β_1 = Beta Coefficient
>
> X_1 = Digital Customer Interaction Strategy,
>
> ε = error term

V.   Results

This section presents descriptive and inferential findings on the influence of the digital customer interaction strategy on the service delivery by the National Health Insurance Fund, Nakuru Branch. 46 questionnaires were prepared and distributed. 43 questionnaires were correctly completed and returned.

5.1 Descriptive Statistical Results

The study sought to determine the influence of the Digital Customer Interaction Strategy on the service delivery by the National Health Insurance Fund. The findings are presented in Tables 2 and 3.

Table 2: Influence of the Digital Customer Interaction Strategy on the Service Delivery by the National Health Insurance Fund

	N	SA 5	A 4	N 3	D 2	SD 1	Mean	Std. Dev
The number of customer walk-ins in the branches has reduced	43	55.8%	27.9%	2.3%	9.3%	4.7%	4.21	1.166
The number of complaints about NHIF products, and services has reduced	43	44.2%	30.2%	11.6%	9.3%	4.7%	4.00	1.175
Self-care has increased the rate of resolving customer issues	43	41.9%	32.6%	11.6%	9.3%	4.7%	3.977	1.165
Digital customer interactions have increased in number	43	48.8%	23.3%	9.3%	11.6%	7.0%	3.956	1.308

According to the findings, 84.7% of the respondents agreed that the number of customer walk-ins in the branches has reduced (Mean=4.21; Std.Dev=1.166). Digital customer interaction provide online access for inquiries and transactions, minimizing the need for physical visits. 74.4% of the respondents also agreed that the number of complaints about NHIF products, and services has reduced (Mean=4.00; Std.Dev=1.175). It means that digital customer interaction facilitate quicker issue resolution, enhanced accessibility to information, and personalized customer support. Additionally, 74.5% of the respondents also agreed that Self-care has increased the rate of resolving customer issues (Mean=3.977; Std.Dev=1.165). Moreover, 72.2% of the respondents agreed that digital customer interactions have increased in number (Mean=3.956; StdDev=1.308). Overall, digital customer interaction enhances service delivery through efficient channels for information access, assistance, and transactions.

Table 3: Service Delivery by National Health Insurance Fund

	N	SA 5	A 4	N 3	D 2	SD 1	Mean	Std. Dev
Services are delivered faster using the digitized strategy	43	51.2%	34.9%	0%	9.3%	4.7%	4.186	1.139
Service are utilized at a higher rate compared to the non-digitized era	43	39.5%	39.5	7%	7%	7%	3.977	1.185
The number of customers getting served in real-time has increased	43	48.8%	39.5%	4.7%	0%	7%	4.233	1.065
Higher number of customers provide positive feedback on NHIF services	43	55.8%	25.6%	7%	4.7%	7%	4.186	1.200

According to the findings, 86.1% of the respondents agreed (Mean=4.186; Std. Dev=1.139) that services are delivered faster using the digitized strategy. Digitized strategy streamlines processes, automates tasks, and enabling real-time access to information, which expedites service provision and enhances efficiency. 79% of respondents also agreed (Mean=3.977; Std.Dev=1.184) that services are utilized at a higher rate compared to the non-digitized era. Additionally, 88.3% of the respondents further agreed (Mean=4.233; Std.Dev=1.065) that the number of customers getting served in real-time has increased. Moreover, 81.4% of respondents agreed (Mean=4.186; Std.Dev=1.200) that a higher number of customers provide positive feedback on NHIF services.Base on the descriptive findings, digital customer interaction provide more efficient and accessible channels for customers to seek assistance and lead to faster response times and improved customer satisfaction and enhance overall service delivery.

5.2 Inferential Statistical Results
Inferential analysis was conducted to establish the relationship between study variables. It includes correlation analysis and regression analysis.

5.2.1 Correlation Analysis Results
The study examined the influence of the digital customer integration strategy on service delivery at NHIF Nakuru Kenya. The results of the correlation analysis are outlined in Table 4.

Table 4: Correlation between digital customer integration strategy and service delivery at NHIF Nakuru Kenya

		Service Delivery
Digital Customer Interaction Strategy	Pearson Correlation	.304*
	Sig. (2-tailed)	.047
	N	43

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

The results indicated that the relationship between the digital customer interaction strategy and service delivery was (p=.304*; p=0.047) at 5% significance level. The results of the correlation analysis indicated that enhancement in digital customer interaction strategy results leads to improvement in service delivery. Therefore, adoption and use of digital customer interaction influence the service delivery in terms of efficiency and service utilization rate at NHIF.

5.2.2 RegressionAnalysis
Inferential analysis was done to establish the relationship between digital customer integration strategy and service delivery. Results are presented in Tables 4, 5 and 6.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.304a	.093	.071	.67196

a. Predictors: (Constant), Digital Customer Interaction Strategy

The findings shows that the coefficient of determination was R^2=0.093. As such, digital customer integration strategy explained 9.3% of variation in service delivery. This implied that digital customer integration strategy influenced NHIF's service delivery.

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1.891	1	1.891	4.189	.047[b]
1	Residual	18.513	41	.452		
	Total	20.404	42			

a. Dependent Variable: Service Delivery

b. Predictors: (Constant), Digital Customer Interaction Strategy

The analysis of variance in this study was used to determine whether the model is a good fit for the data. From the findings, the p-value was 0.047 which is less than 0.05 and hence the model is good at predicting how digital customer interaction strategy influence servicedelivery at NHIF Nakuru Kenya.

Table 6: Regression Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.853	.640		4.462	.000
	Digital Customer Interaction Strategy	.320	.156	.304	2.047	.047

a. Dependent Variable: Service Delivery

The regression model, $Y = \beta_0 + \beta_1 X_1 + \varepsilon$ was interpreted as $Y = 2.853 + 0.320 X_1 + \varepsilon$. The results shows that one unit change in digital customer interaction strategy contributed to service delivery. The t-value was (t=2.047; p=0.047) was significant at 95% confidence level. Therefore, the service delivery at NHIF was influenced by the digital customer interaction strategy.

VI.   Conclusion

The study concluded that utilization of digital channels and strategies contribute to reduction in the number of customer complaints, indicating improved customer satisfaction. Moreover, the implementation of self-service options lead to more efficient issue resolution and streamlined processes, thus enhances service delivery. Moreover, the increased number of digital interactions demonstrate the organization's commitment to engaging with customers. This result in increased service utilization rates and a higher number of customers served. Therefore, the study highlighted the instrumental role of a well-executed digital customer interaction strategy in enhancing service delivery, ultimately benefiting both the organization and its customers

Recommendation

It is recommended that NHIF should elevate their commitment to real-time support by creating a more responsive environment for addressing member inquiries and concerns swiftly. Concurrently, a reinforced focus on gathering and acting upon customer feedback will enhance NHIF's understanding of member needs. By fostering deeper integration with healthcare providers can yield a seamless and collaborative healthcare ecosystem. Furthermore, expanding the scope of multi-channel interaction will ultimately lead to improved service delivery.

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