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Subscribers' social factors and adoption of self-service platforms in Delta State

Peter Chiazor Ikpeazu

Department of Business Administration & Management, Federal Polytechnic Idah, Nigeria
Corresponding author: Peter Chiazor Ikpeazu, ikpeazupeterc@yahoo.com

Abstract. This study aims to examine the socio-economic factors influencing the use of digital service delivery touch-points among MTN and DStv subscribers in Delta State, Nigeria. Specifically, it investigates the effects of peer group influence, awareness, and demographic characteristics such as gender, age, educational qualification, and occupation on the usage of mobile self-service applications. A cross-sectional survey design was employed, and data were collected through structured questionnaires distributed to 381 MTN and DStv subscribers. The data were analysed using descriptive statistics and inferential statistics with the aid of SPSS. The findings of this research proved that peer group influence, awareness, and demographic characteristics have significant effects on the usage of self-service applications among MTN and DStv subscribers.
Keywords: adoption; self-service; social factor; subscribers

Introduction

The increasing reliance on digital platforms for service delivery has heightened the necessity for businesses to deploy and adopt electronic 'touch-points' to maintain operational efficiency and customer satisfaction, particularly in response to global disruptions such as the COVID-19 pandemic. The rapid advancements in communication and information technologies have expanded the scope and scale of customer engagement with self-service technologies (SSTs), necessitating continuous innovation to sustain competitive advantage (Kim, Yang, & Lee, 2018; Mukerjee, 2020). SSTs have been integrated into various industries, offering customers the autonomy to conduct transactions without direct employee interaction. Examples include automated teller machines (ATMs), online shopping, digital reservations, self-checkout kiosks, and mobile banking applications. These innovations have transformed customer interactions and service delivery models, making technology-based self-service (TBSS) an essential research domain in business and marketing (Kim, Yang, & Lee,, 2023; Ugwuanyi, Uduji, & Oraedu, 2021).

Furthermore, Ugwuanyi, Oraedu, Ifediora, Izogo, Asongu, and Attamah (2022) examined SSTs in Nigerian banks and found that perceived ease of use and perceived control strongly drive customer satisfaction, whereas perceived usefulness had no significant impact. Their findings suggest that socio-economic and infrastructural factors, such as trust and digital literacy, influence SST adoption. This underscores the need to investigate certain social elements that influence SST adoption in selected "internet-driven firms". MTN and DSTV are not only "internet-driven" firms; they also promote and or enable other firms' SSTs adoption through campaigns and advertisements. Being in the forefront of SST campaign their approaches may as well provide standard for several service providers within and out the telecommunications and pay-tv service sectors. DSTV and MultiChoice Group (2024) reported that DSTV has 4.4 million subscribers in Nigeria, while the Nigerian Communications Commission (NCC, 2024) stated that MTN holds a 51.39% market share in Nigeria's telecom sector.

In Nigeria, most empirical studies in this area have explored the customer perception and invariably the adoption of TBSS in terms of its usefulness, ease of use and credibility. Most focused on the banking sector and limited studies are directed towards understanding their adoption behaviours in the

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telecommunication and pay-TV service (Ikpeazu, 2022; Ofuonyebuzor & Auwal, 2016; Udeh, Ifekanandu, Idoko, Ugwuanyi, & Okeke, 2022). Conspicuously, service quality as it relates to customer satisfaction makes the subject of customer participation in service delivery an intriguing research area (Meuter, Ostrom, Roundtree, & Bitner, 2000). Filling the gap in understanding SST implementation in sectors whose services are internet focused would provide the needed insight for others to "toe the line". Notably, studies highlight the need to investigate SSTs beyond adoption behaviours to assess their effect on firm outcomes, especially in markets with unique economic and cultural dynamics (Oraedu, Izogo, Nnabuko, & Ogba, 2021). Despite the growing prevalence of SSTs, their performance measurement poses significant challenges.

.Researchers argue that evaluating service technologies is more complex than measuring inputs and outputs in manufacturing operations (Ofuonyebuzor & Auwal, 2016; Ikpeazu, 2022). Given these limitations, this study will adopt a quantitative approach to assess customer perspectives on SST adoption and its implications for service firm performance. The goal is to develop and validate a conceptual framework that effectively establishes factors affecting the adoption of SSTs within the Nigerian telecommunications and entertainment sectors, ensuring the alignment of technology deployment strategies with customer expectations and business objectives. Despite the growing deployment of online touch-points by service firms such as DSTV and MTN, little research has examined their effectiveness in the Nigerian socio-economic context. This research aims to analyze the socio-economic variables peculiar to Nigeria that may drive subscribers to use MTN's online self-service options and DSTV's MyDStv mobile applications. Addressing these gaps will contribute to a deeper understanding of the factors influencing technology-based service adoption in Nigeria.

Adoption and Diffusion of Self-Service Technologies

The adoption and diffusion of SSTs follow structured processes that involve awareness, trial, and regular use. Borah and Chaudhary (2024) examine how consumer innovativeness can positively impact digital banking adoption by reducing perceived risk. Ugwuanyi et al. (2022) argue that widespread adoption occurs when users find SSTs beneficial and easy to use. Understanding these dynamics helps service providers tailor their offerings to different consumer segments, ensuring a smoother diffusion of technology.

The shift from transactional marketing to relationship marketing has reshaped consumer engagement in telecommunications. Personalized recommendations in AI-driven systems strengthen the relationships among trust, satisfaction, and loyalty, highlighting the importance of personalization for long-term retention and user satisfaction (Hassan, Abdelraouf, & El-Shihy, 2025. According to Pereira, de Castro, Cordeiro, de Castro, Peixoto, Monteiro da Silva, and Gonçalves (2025), firms must focus on continuous engagement rather than one-time transactions to build customer loyalty in digital environments. Mobile marketing has emerged as a key driver of SST adoption. Ahmed & Omarein (2024) found that mobile platforms enhance customer engagement through personalized promotions and real-time interactions. Hsiao and Tang (2025) demonstrate that integrating mobile applications with self-service technologies enhances accessibility and convenience, leading to increased adoption rates among consumers. The growing reliance on mobile technology underscores the need for businesses to optimize digital touch-points for enhanced consumer experiences.

MTN and DSTV Self Service Platforms

MTN Nigeria and DSTV (MultiChoice Nigeria) offer a range of self-service options to improve customer experience and reduce reliance on physical service centers. MTN's self-service tools include the Zigi chatbot, accessible via WhatsApp, Facebook Messenger, Telegram, and the MTN website,

enabling users to buy airtime/data, check balances, manage tariff plans, and resolve basic issues. The MyMTN application and web portal provide similar functions, while USSD codes like *131# and *123# cater to users without smartphones or internet access (MTN Nigeria, 2025).

Similarly, DSTV offers its WhatsApp self-service bot (+234 908 236 8533), allowing customers to manage subscriptions, fix decoder errors, check balances, and update packages. The MyDStv application and web self-service portal offer full account control, including payments, error resolution, and package changes. For non-smartphone users, the **USSD code 288#* provides quick access to essential services. These tools are designed to offer 24/7 support, reduce wait times, and improve accessibility, especially in areas where digital services are becoming more essential (MultiChoice, 2025).

Peer and Reference Group Influence

Peer and reference groups significantly impact consumers' adoption of self-service technologies (SSTs) in telecommunications. Social networks influence consumer decisions through recommendations, shared experiences, and perceived social norms. According to Ugwuanyi et al. (2022), social influence plays a crucial role in SST adoption, as consumers are more likely to use a service if it is endorsed by their peers. Similarly, Vafaei-Zadeh, Nikbin, Wong, and Hanifah (2025) found that individuals who have peers or family members who utilize AI customer service are more likely to develop emotional trust, thereby increasing their likelihood of adopting AI-driven customer support systems.

Awareness and Consumer Behaviour

Consumer awareness is a key factor in the adoption of self-service technologies. Ugwuanyi et al. (2022) found that awareness of SST benefits significantly affects user adoption rates in Nigeria. Educational interventions and marketing strategies that enhance digital literacy are essential for increasing SST usage (Ahmed & Omarein, 2024). Moreover, Chiu, Nguyen, and Hofer (2023) stress that targeted awareness campaigns and effective recovery mechanisms influence consumer attitudes toward SST adoption, while Pereira et al. (2025) further highlight that continuous engagement, rather than one-time transactions, is critical for sustaining customer loyalty in digital environments.

Demographic and Social Factor Interplay in Consumer Behaviour

Demographic characteristics such as age, education, and income play a significant role in SST adoption. Ausserhofer, Piccoliori, Engl, Mahlknecht, Plagg, Barbieri, Colletti, Lombardo, Gärtner, Tappeiner, Wieser, and Wiedermann (2024), found younger consumers demonstrate higher adoption rates because of stronger digital literacy and confidence, whereas older users often encounter barriers arising from lower technological readiness. Rajagukguk et al. (2024) found that socioeconomic factors, including income levels, significantly influence access to digital self-service platforms, with higher-income individuals more likely to subscribe to premium digital services. Social factors, including cultural influences and reference groups, further shape consumer behaviour, are reinforcing the importance of targeted marketing strategies (Hsiao and Tang, 2025).

Service Delivery

Modern service delivery leverages integrated communication platforms and self-service technologies (SSTs) to enhance customer engagement. Digital tools like social media, chatbots, and mobile apps are now core to delivering real-time services. Omni-channel systems, i.e., commerce that integrates all methods of interaction, allow firms to meet users on preferred platforms for both support and feedback. Lu and Ahn (2023) found SSTs reduce wait times and boost demand, enhancing

operational efficiency. Their study showed that SST convenience and functionality shape user attitudes and adoption.

Anka and Shamim (2025) linked SST use in Nigeria to improved trust and reduced corruption perceptions. Kim and Chen (2023) emphasized how SSTs empower customers, increasing satisfaction and loyalty. Nagar (2023) found complex SSTs and voice assistant traits can influence user satisfaction. Design simplicity and personalization are key to effective SST implementation. Overall, SSTs and communication platforms are critical in shaping modern service delivery experiences.

Service quality remains a fundamental aspect of SST adoptionAccording to Ighomereho, Ojo, Omoyele, and Olabode (2022), key dimensions of e-service quality include reliability, ease of use, personalisation, responsiveness, and security, all of which are critical determinants of customer satisfaction. Chiu et al. (2023) show that when SSTs fail, firms that enable effective recovery (or support customer self-recovery) reduce churn, demonstrating that fast, reliable issue resolution is critical to retaining users. The quality of self-service experiences directly impacts customer loyalty and engagement, necessitating continuous improvement in digital service delivery (Ahmed & Omarein, 2024).

Theoretical Framework

To understand the behavioural drivers influencing the adoption of online self-service platforms among MTN and DSTV subscribers in Delta State, Nigeria, this study integrates the Technology Acceptance Model (TAM) and the Social Influence Theory. This integration provides a comprehensive perspective that captures both the individual cognitive evaluations and social contextual influences on user behaviour.

Complementing TAM is the Social Influence Theory, which emphasises the role of social networks, reference groups, and peer behaviour in shaping individual decisions. According to Venkatesh et al. (2003), individuals are more likely to adopt behaviours that are endorsed or normalised within their social circles. In the context of MTN and DSTV self-service technology adoption, peer influence can serve as a powerful motivator, particularly when subscribers observe friends and colleagues successfully engaging with digital touch-points. Shared experiences and word-of-mouth recommendations can foster trust and confidence in the platforms, thereby enhancing adoption rates.

Moreover, demographic variables such as age, gender, education, and occupation play a crucial moderating role in the adoption process. As noted by Evans and Berman (2010), younger, more educated individuals tend to adopt innovations more readily than older or less educated populations. Cultural dimensions, particularly individualism-collectivism, interact with demographic and social factors to shape technology usage. In a relatively communal setting like Delta State, peer conformity and demographic alignment may jointly determine the degree of engagement with self-service options.

Thus, the integration of TAM and Social Influence Theory offers a holistic framework for analysing the adoption of digital self-service platforms. While TAM explains how awareness and perceived usability shape behavioural intentions Social Influence Theory accounts for the peer-driven and socio-cultural dynamics that underpin user engagement. When combined with demographic insights, this theoretical blend enables a more nuanced understanding of the barriers and facilitators affecting the uptake of MTN and DSTV's online touch-points. This understanding is essential for crafting effective, evidence-based strategies to improve service delivery, reduce customer-care congestion, and enhance user satisfaction.

Empirical Review

Bernardino, Cesário, Costa, Aparicio, and Aparicio (2025), conducted a study to examine the factors influencing blockchain technology adoption in small and medium-sized enterprises (SMEs) using the Unified Theory of Acceptance and Use of Technology (UTAUT) model. The research involved a

quantitative survey of 412 employees across various organisations, analyzed using Structural Equation Modeling (SEM-PLS). The study identified Performance Expectancy, Social Influence, and Trust as positive influencers of blockchain adoption, while Environmental Concerns were found to hinder adoption. The findings emphasize the need to enhance trust, promote environmental sustainability, and leverage social influence to accelerate blockchain adoption among SMEs.

Ha (2020) investigated the impact of shoppers' motivation (hedonic and utilitarian) on self-service technology (SST) use intention in retail settings. The study collected data through an online survey involving 520 retail customers, analyzed using Structural Equation Modeling (SEM). The results showed that both hedonic and utilitarian motivations positively influence SST use intention, which in turn enhances retailer attitude. Additionally, the presence of employees moderated the relationship between SST use intention and retailer attitude, suggesting that while employee presence can improve customer experiences, it does not necessarily drive initial SST adoption.

Nam, Kim, and Jung, (2023) conducted a study to examines the emotional and behavioural responses of elderly users to self-service technology (SST) in fast-food restaurants in South Korea. The study aimed to understand how factors like perceived ease of use, SST reduction, and time pressure influence negative emotions such as social anxiety and helplessness. Utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM) with a sample of 300 elderly individuals, the research found that while these factors significantly impacted negative emotions, perceived physical condition and crowding did not. The study highlighted that elderly users often cope by seeking assistance, observing others, or disengaging from SST. These findings suggest a critical need for digital inclusion policies to enhance SST accessibility for elderly populations, addressing their emotional challenges in fast-food settings.

Kim, Yang, and Lee, (2023) investigated how self-service kiosks contribute to COVID-19 pandemic resilience in the restaurant industry. The study focused on identifying the kiosk attributes that create memorable experiences and promote revisit intention among customers. Using PLS-SEM, Multigroup Analysis (MGA), and Importance-Performance Map Analysis (IPMA) with a sample of 408 restaurant patrons in South Korea, the research found that assurance, customization, enjoyment, design, and functionality were critical to a positive customer experience. Additionally, the study revealed gender-based differences, with men valuing assurance and customization, while women prioritized design, enjoyment, and security. These findings imply that restaurants can enhance business resilience by strategically leveraging SST attributes to meet diverse customer needs.

Udeh, Ifekanandu, Idoko, Ugwuanyi, and Okeke, (2022), conducted a study to explore the relationship between product quality and customer satisfaction in Nigeria's Pay TV industry. The study aimed to evaluate how content quality, reception quality, and customer service influence satisfaction levels among Pay TV subscribers. The research used a survey research design with 397 respondents, of which 241 completed the survey, and employed multiple regression analysis to assess the data. The findings indicated that high content quality, stable reception, and excellent customer service significantly enhance customer satisfaction. The study suggests that Pay TV operators can maintain a competitive edge by improving service quality, offering engaging content, and maintaining competitive pricing to boost customer loyalty. The study explicitly underscores that customer service was found as a major driver of customer satisfaction in the pay TV service sector. Implying that customers are conscious of the way and manner their complaints are resolved, the time and reception giving at the customer service desk as well as the ease with which they can be attended to or reach a customer service platform of the service provider.

Ugwuanyi, Oraedu, Ifediora, Izogo, Asongu, and Attamah (2022), conducted a study to examine the factors influencing satisfaction with self-service technologies (SSTs) in Nigeria’s banking sector and

their impact on marketing outcomes. They focused on how perceived ease of use, perceived usefulness, and perceived control affect SST satisfaction and subsequent marketing metrics such as reuse intention, electronic word-of-mouth (eWOM), and trust. Conducted with a sample of 310 bank SST users in Eastern Nigeria using PLS-SEM, the research found that perceived ease of use and perceived control were strong drivers of SST satisfaction, whereas perceived usefulness did not significantly influence satisfaction. The study concluded that banks should prioritize enhancing ease of use and customer control over SSTs, rather than solely focusing on usefulness, to achieve better marketing outcomes

Conceptual Design

The simplicity and uniqueness of the Technology Acceptance Model (TAM) and the Social Influence Theory informed the researcher's proposed used of an extended TAM as a theoretical design to examine the effects of peer group, awareness and demographic characteristics on MTN subscribers' adoption of online self-service.

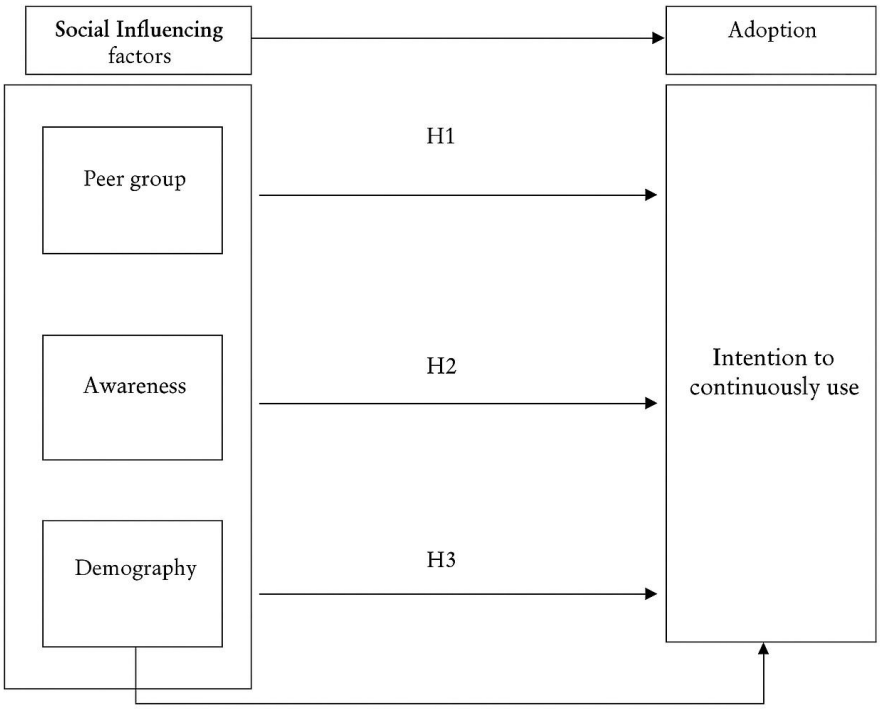

Figure 1. Research Conceptual Design

Aside perceived usefulness, perceived ease of use, perceived credibility which as be investigated by handful researchers (Ofuonyebuzor & Auwal, 2016; Ikpeazu, 2022), it is imperative that social factors are considered. Hence the proposed schematic model crisply depicted in diagram above (figure 2.1 above) attempts to depict the relationship between two major variables of the study, the dependent and the independent variables.

Research methodology

This serves as the research plan executed to meet the predetermined objectives set by the researcher. The cross-sectional survey method was employed in this study. This study investigates the

opinions of a group of people at a particular point in time, hence the choice of the cross-sectional survey design. The respondents in this study are customers of both MTN and DSTV in Delta State, Nigeria.

The study made use of both primary and secondary data. Primary data was collected through self-administered questionnaires, while secondary data was sourced from local and international journals, textbooks, magazines, newspapers, reports from the National Communications Commission (NCC), and MultiChoice Group financial statements. The researcher's personal experiences and observations also complemented these sources.

The total population of the study consists of individuals who are both MTN and DSTV subscribers in Delta State. The determination of this population is based on the following: (1) Total DSTV Subscribers in Nigeria: According to the MultiChoice Group FY24 Results, the estimated total DSTV subscribers in Nigeria are 4.4 million. (2) Worldometer (2024), recognized by American Library Associacition, puts Nigeria's population at 237,527,782. (3) Delta State's Population Based on the 2006 Census and Growth Rate - Using the official 2006 census figure of 4,112,445 for Delta State (NPC, 2006) and an estimated annual growth rate of 2.6%, Delta State's projected 2025 population was adopted.

Therefore, below is MTN & DSTV subscribers per senatorial district, population proportions based on the 2006 census data for Delta State:

Table 1. Estimation of MTN & DSTV Subscribers in Delta State by Senatorial Zones

Senatorial District	2006 Population	Estimated 2025 Population	Proportion of State Population	Estimated MTN & DSTV Subscribers
Delta North	1,250,720	2,064,653	30.45%	19,620
Delta Central	1,428,534	2,357,225	34.75%	22,380
Delta South	1,433,191	2,358,122	34.80%	22,400
Total	4,112,445	6,780,000	100%	64,400

Source: Researcher's Computation, 2025

Sample Size Determination

The sample size for subscribers of both MTN and DSTV services in Delta State was determined or computed using an equation known as Stat Trek's Sample formula. The formula is given by:

$$\mathbf{n} = \frac{z^2pq + e^2}{e^2 + (z^2\mathbf{pq}/\mathbf{N})}$$ (Bartlett, Kotrlik and Higgins, 2001)

Where,

n = sample size

z = desired confidence level 95% (1.96) from z-distribution table

p = proportion of the population likely to be included in the sample (50% or 0.5).

q = proportion of the population not likely to be included in the sample (50% or 0.5)

e = level of significance (assumed to be 5% or 0.05)

N = population size (established at 64,400).

In statistics alpha (α) is known as the level of significance or alternately, the level of error the decision maker is willing to tolerate in terms of rejecting a null hypothesis when it should not be rejected (Gujarati, 2006:109, Berenson and Levine, 1983: 284) cited in Ogbonna (2011:242).

Applying this formula to a population of 64**,**400 being the total of MTN & DSTV subscribers in Delta State at a 5% level of precision (level of tolerable error, 0.05) to get the sample size.

Substituting in the formula, we obtain:

$$
\begin{aligned}
n &= \frac{(1.96^2 \; x \; 0.5 \; x \; 0.5) + 0.05^2}{0.05^2 + (3.8416 \; x \; 0.5 x \; 0.5/64{,}400} \\
&= \frac{(3.8416 \; x \; 0.5 \; x \; 0.5) + 0.0025}{0.0025 + (3.8416 \; x \; 0.5 x \; 0.5/64{,}400} \\
&= \frac{0.9604 + 0.0025}{0.0025 + (0.9604/64{,}400} \\
&= \frac{0.9629}{0.0025 + 0.00001491} \\
&= \frac{0.9629}{0.00251491} \\
&\approx 382.88
\end{aligned}
$$

The study employed a stratified random sampling technique. The population was divided into three strata based on senatorial districts: Agbor (Delta North), Effurun (Delta Central), and Warri (Delta South). This stratification ensures fair representation based on actual population distribution. Succinctly put: "When a population is heterogeneous overall but within it are homogeneous subpopulation (or strata), it is usually desirable to divide this population into these strata (Ibrahim, 2009:290). And so a proportional allocation of the 383 respondents was done for each zone.

To ensure the validity of the research instrument, items were carefully designed to capture the constructs central to the study namely peer group influence, awareness, and demographic characteristics in relation to the adoption of MTN and DSTV online self-service platforms. The instrument underwent critical review by experts in measurement and evaluation, including the research supervisor, academic colleagues, and statisticians. Their feedback ensured that the questionnaire items aligned with the research objectives and accurately represented the variables under study.

Regarding reliability, which addresses the internal consistency and coherence of the instrument, a pilot study was conducted using 40 respondents randomly selected from the study population. The Cronbach's Alpha method was employed to evaluate the reliability of the scaled items (peer group and awareness). The results are summarized in Table 1. The peer group construct yielded a reliability coefficient of 0.762, while awareness recorded a coefficient of 0.744, both reflecting acceptable internal consistency.

Demographic characteristics, such as age, gender, education, and occupation, were measured using closed-ended factual questions rather than attitudinal scales. Therefore, internal consistency testing was not applicable to this category, as these items are not expected to show inter-item correlation.

Table 2. Reliability Coefficient

SS/N	Variable Construct	Number of Item	Number of Case	Cronbach's Alpha
1.1	Peer group (PG)	4	40	.762
2.2	Awareness (AWN)	4	40	.744

To enhance randomness and reduce response bias, the researcher implemented a systematic time-spacing technique by selecting every nth respondent at designated locations such as MTN and DSTV service centers. Additionally, data collection was staggered across different times of the day (morning, afternoon, and evening) to capture a diverse sample of users. Field researchers were trained on question standardization to maintain consistency, and supervisors conducted periodic spot-checks to ensure data

integrity. Ethical considerations such as informed consent, confidentiality, and voluntary participation were strictly upheld throughout the process.

The model is theoretically anchored in behavioral intention theory and the diffusion of innovations model, which propose that technology adoption decisions are shaped by factors such as social influence, awareness, and individual background characteristics (Rogers, 2003). This conceptual basis is empirically supported by the work of Akinnuwesi, Uzoka, Fashoto, Mbunge, Odumabo, Amusa, Okpeku, and Owolabi (2022), who found that performance expectancy, social influence, and facilitating conditions were significant predictors of digital technology adoption in Nigeria during the COVID-19 pandemic. Similarly, Mustofa, Kuncoro, Atmono, Hermawan, and Sukirman (2025) emphasized the role of subjective norms, ethics, and trust in shaping students' behavioral intention to adopt AI tools, reinforcing the importance of social context and ethical perception in technology uptake.

Furthermore, Qi, Santos, Pinheiro, McGuinness, and Bennett (2023) demonstrated that demographic and socioeconomic variables significantly affect healthcare access, illustrating how user characteristics influence service utilization across contexts. Hence, the proposed regression model is specified functionally as:

$$Y=a+b_1X_1+b_2X_2+b_3X_3+\varepsilon$$

Where:

Y = Frequency of adoption of MTN and DSTV self-service options

X_1 = Peer group influence (PG)

X_2 = Awareness of self-service platforms (AWN)

X_3= Demographic characteristics (DEM)

a = Intercept (constant term)

b_1,b,b_3 = Regression coefficients for each independent variable

ε = Error term capturing unobserved factors

This model assumes a linear and additive relationship between the predictor variables and the outcome variable, which is consistent with prior empirical studies on digital service adoption. The alignment with previous findings in similar domains (Akinnuwesi et al., 2022; Mustofa et al., 2025; Qi et al., 2023) strengthens the validity of this specification and highlights the influence of social, cognitive, and demographic factors on user engagement with self-service technologies.

Hypothesis testing was conducted at a 0.05 significance level. If the p-value was < 0.05, the null hypothesis was rejected.

Data collected were presented in tables. Descriptive and inferential statistics were used. A 5-point Likert scale was employed to measure responses to the questionnaire by respondents. The questions were aligned to the research questions and invariably the objective of the study.

This section is about the presentation, analyses and interpretation of data generated through a structured questionnaire instrument administered to the respondents in line with the set objectives and research questions. Descriptive statistical tool was used to produce tables, with simple percentages and parametric inferential statistical was used for analysis and interpretation. The section spans opinions of DSTV and MTN subscribers in Delta state about the online touch-points available to them; then the responses to measure how the three (3) constructs, identified in proposed model in the preceding section – research methodology, to predict usage or adoption behaviours of respondents.

Results & Discussion

Descriptive statistics describe the characteristics of each research sample that represents the population. The characteristics of the sample consist of the mean, maximum value, minimum value, standard deviation, and the amount of data observed for each research variable being measured. Table 3 presents the descriptive statistics for all variables used in the analysis.

Descriptive Statistics

Descriptive statistics summarize the characteristics of the research sample (N = 381). Table 3 presents the mean, maximum, minimum, and standard deviation of the variables.

Table 3. Descriptive Statistics

Variable	Mean	Max	Min	Std. Dev.	N
Peer Group (PG)	4.43	5.00	1.00	0.85	381
Awareness (AW)	4.50	5.00	1.00	0.78	381
Gender	0.56	1.00	0.00	0.49	381
Educational Background	2.72	4.00	1.00	0.92	381
Age Group	2.15	4.00	1.00	0.88	381
Occupation	2.63	5.00	1.00	1.04	381
Adoption of Self-Service	4.32	5.00	1.00	0.83	381

Peer group influence and awareness were measured using four Likert scale items each, rated from 1 (very low) to 5 (very high). Gender was coded as a dummy variable, with male as 1 and female as 0. Educational background was categorized into secondary, diploma, degree, and postgraduate levels, while age was grouped as 18–25, 26–35, 36–45, and 46 years and above. Occupation was categorized into student, employed, self-employed, unemployed, and others. The dependent variable, adoption of online self-service, was measured by averaging the responses of participants on questions related to their use of MTN and DSTV online self-service platforms.

Before the regression analysis, diagnostic tests were conducted to ensure the validity of the classical assumptions. The results showed that the Variance Inflation Factor (VIF) values for all independent variables were below 2, indicating that multicollinearity was not a concern. The Durbin–Watson statistic was 1.91, which is close to the ideal value of 2, confirming the absence of autocorrelation. Furthermore, the Breusch–Pagan test was insignificant ($p > 0.05$), suggesting that the data were homoscedastic. Therefore, the model satisfied all the assumptions of the classical linear regression model and was appropriate for interpretation.

A multiple regression model was estimated to determine the influence of peer group, awareness, gender, educational background, age, and occupation on the adoption of DSTV and MTN online self-service platforms. The F-test was used to determine the simultaneous effect of all independent variables, while the t-test examined the partial effect of each variable. The result of the regression is presented in Table 4.

Regression Results

The regression model simultaneously tested the effects of peer group, awareness, and demographic variables on the adoption of online self-service. The F-test showed overall model significance, while t-tests determined partial effects.

Table 4. Regression Test Result

Variable	Unstandardized Coeff. (B)	Std. Error	Standardized Coeff. (β)	t-value	95% Confidence Interval | p-value
Constant	0.544	0.249	—	2.183	[0.054, 1.034] | 0.030*
Peer Group (PG)	0.476	0.062	0.386	7.677	[0.353, 0.599] | 0.000**
Awareness (AW)	0.519	0.058	0.415	8.931	[0.405, 0.633] | 0.000**
Gender	0.028	0.071	0.014	0.394	[-0.111, 0.167] | 0.694
Educational Background	-0.021	0.039	-0.018	-0.539	[-0.097, 0.055] | 0.590
Age Group	0.196	0.032	0.278	6.125	[0.133, 0.259] | 0.000**
Occupation	0.117	0.034	0.154	3.441	[0.050, 0.184] | 0.001**

Model Statistics:

R^2: 0.512

Adjusted R^2: 0.503

Std. Error of Estimate: 0.601

F-statistic: 54.328

Prob (F-statistic): 0.000**

Durbin–Watson: 1.91

Note: *p* < 0.05 = significant; **p** < 0.01 = highly significant.

Discussion

The results show that peer group, awareness, age, and occupation have significant positive effects on the adoption of DSTV and MTN online self-service, while gender and educational background do not show significant influence. The R-squared value of 0.512 indicates that about 51.2 percent of the variation in the adoption of online self-service can be explained by the independent variables, while 48.8 percent is explained by other factors not captured in this model. The F-statistic (54.328) and its probability value (0.000) confirm that the overall regression model is statistically significant.

Peer group was found to have a significant and positive effect on the adoption of online self-service platforms. This implies that individuals are likely to adopt DSTV and MTN self-service platforms based on the influence of their peers and social circles. In the study area, where peer networks are strong and information flows freely through word-of-mouth and social media, peer recommendations play a crucial

role in shaping perceptions and behaviours. This finding agrees with Khalufi and Shah (2022), who demonstrated that social influence, particularly peer approval, is a key determinant of users' behavioural intention to adopt technology-based services. The result underscores the importance of social context in promoting digital service adoption in Nigeria.

Awareness was also found to be a significant determinant of adoption. Respondents who were more aware of the availability and benefits of self-service options were more likely to use them. Awareness facilitates users' understanding of the system, reduces uncertainty, and enhances perceived ease of use, which are critical determinants in the Technology Acceptance Model (TAM). This finding is consistent with the work of Mbazua, Oladokun, and Mohammed (2023), who found that awareness, effort expectancy, and performance expectancy jointly shape ICT adoption behaviour. Similarly, Fagbuyi, Adegbola, and Chukwuma (2024) observed that awareness campaigns play a vital role in influencing consumer attitudes toward digital channels in post-COVID-19 Nigeria. Therefore, sustained awareness drives by service providers can significantly improve user engagement.

Gender was found to be statistically insignificant in predicting the adoption of online self-service. This result suggests that both men and women are equally capable of engaging with DSTV and MTN digital platforms. The reason may be that gender-based differences in technology use have reduced as accessibility, education, and exposure to digital tools have increased. This aligns with findings by Fagbuyi, Adegbola, and Chukwuma (2024), who reported that gender is no longer a significant differentiator in digital service usage in Nigeria, as technological exposure has become widespread among both sexes.

The result also shows that educational background does not significantly affect the adoption of DSTV and MTN self-service platforms. This may be because the platforms are designed to be user-friendly, requiring minimal technical or educational knowledge to navigate. Regardless of educational attainment, users can easily follow prompts and instructions to complete transactions. This observation is in line with research on technology adoption in developing countries, which found that user interface design and platform simplicity often mitigate the effect of education on adoption. Hence, education alone does not determine the willingness to adopt self-service technology.

Age was found to have a significant positive relationship with the adoption of online self-service.

Younger respondents were more likely to use the digital platforms than older ones. This outcome reflects generational differences in digital familiarity and comfort with technology. Younger individuals are generally more active online, open to technological change, and capable of using digital platforms for daily transactions. This finding supports the report by GWI (2023), which emphasized that younger generations are driving digital transformation trends globally. Similarly, Fagbuyi et al. (2024) confirmed that age is a strong determinant of ICT adoption in Nigeria's post-pandemic environment.

Occupation was another variable that significantly influenced adoption. Employed and self-employed respondents reported higher usage levels of online self-service compared to unemployed or non-working individuals. The probable reason is that working individuals are more exposed to technology in their work environments and value the convenience and efficiency of self-service options. This result is consistent with Akinnuwesi et al. (2022), who found that occupational status influences the rate of digital technology adoption in Nigeria, as exposure and necessity drive technology use. Therefore, occupation-based differences in technological experience can significantly shape adoption behaviour.

The regression analysis and hypothesis testing reveal that peer group influence, awareness, age, and occupation are significant determinants of the adoption of DSTV and MTN online self-service platforms. Gender and educational background were not significant predictors. These results highlight the critical roles of social interaction, information exposure, and user demographics in shaping the diffusion of digital self-service technologies in Nigeria. Theoretically, the findings reinforce the Technology Acceptance Model and Social Influence Theory by showing that external factors such as

peer networks and awareness substantially impact behavioural intention. Practically, the results suggest that service providers should invest in peer-based marketing strategies, sustained awareness campaigns, and youth-focused engagement programs to enhance the use of online self-service platforms among subscribers in Delta State and Nigeria at large.

Conclusion

This study has examined the factors influencing the adoption of self-service technologies provided by DSTV and MTN among subscribers in Delta State, Nigeria. Guided by the Technology Acceptance Model (TAM) and Social Influence Theory, the research identified key determinants that shape users' adoption of these platforms.

The findings revealed that peer group influence, awareness, and demographic characteristics significantly affect users' decision to utilize these self-service options. The study found that peer group influence plays a crucial role in shaping users' attitudes and behaviours towards self-service technology adoption. Information shared among peers, whether positive or negative, significantly impacts users' willingness to adopt digital service platforms.

Furthermore, awareness was shown to be a strong predictor of self-service adoption, emphasising the importance of continuous information dissemination and marketing efforts by telecommunication and entertainment service providers. Additionally, demographic factors such as gender, age, educational qualification, and occupation were found to significantly influence the adoption and use of DSTV and MTN online self-service platforms.

The study suggests that younger, more educated, and working-class individuals are more likely to embrace digital self-service solutions due to their familiarity with technology. Despite the availability of online self-service options, congestion in customer-care centres remains an issue, indicating that many subscribers still prefer traditional customer service channels. This points to a need for enhanced user education and system improvements to increase user confidence and ease of access to self-service technologies.

References

Ahmed, O., & Omarein, M. (2024). Digital literacy and self-service technology adoption in Nigeria. *International Journal of Business and Systems Research, 16*(1), 101-120.

Akinnuwesi, B. A., Uzoka, F. E., Fashoto, S. G., Mbunge, E., Odumabo, A., Amusa, O. O., Okpeku, M., & Owolabi, O. (2022). A modified UTAUT model for the acceptance and use of digital technology for tackling COVID-19. *Sustainable Operations and Computers, 3*, 118–135. https://doi.org/10.1016/j.susoc.2021.12.001

Anka, R. B., & Shamim, A. (2025). The impact of self-service technologies on customer engagement in Nigerian fuel stations: Exploring the roles of corruption mitigation and trust. *African Journal of Economic and Management Studies*. Advance online publication. https://doi.org/10.1108/AJEMS-08-2023-0321Emerald

Ausserhofer, D., Piccoliori, G., Engl, A., Mahlknecht, A., Plagg, B., Barbieri, V., Colletti, N., Lombardo, S., Gärtner, T., Tappeiner, W., Wieser, H., & Wiedermann, C. (2024). Community-dwelling older adults' readiness for adopting digital health technologies: Cross-sectional survey study. *JMIR Formative Research, 8*(1), e54120. https://doi.org/10.2196/54120

Bernardino, C., Cesário, F., Costa, C. J., Aparicio, M., & Aparicio, J. T. (2025). Blockchain adoption factors. *International Journal of Information Systems and Project Management, 13*(1), e3. https://doi.org/10.12821/ijispm130103

Borah, S., & Chaudhary, M. L. (2024). A study on the impact of consumer risk perception and innovativeness on digital banking adoption in India. *Educational Administration: Theory and Practice, 30*(5), 11889–11896. https://doi.org/10.53555/kuey.v30i5.5044

Chiu, Y.-T. H., Nguyen, D. M., & Hofer, K. M. (2023). Self-recovery after self-service technology failures: Do motivations and self-efficacy matter? *International Journal of Retail & Distribution Management, 51*(9/10), 1195–1212. https://doi.org/10.1108/IJRDM-10-2022-0411

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008

Evan, J. R., & Berman, B. (2010). *Marketing in the 21st century* (4th ed.). Cincinnati, OH: Atomic Dog Publishing.

Fagbuyi, A. O., Adegbola, E. A., & Chukwuma, N. N. (2024). Navigating the digital terrain: Exploring post-Covid-19 technology adoption dynamics in Nigeria. *Gusau International Journal of Management and Social Sciences, 7*(1), 38-57. https://doi.org/10.57233/gijmss.v7i1.03

GWI. (2023). *Gen Z vs. Gen Alpha: Traits, trends, and insights* (GWI blog / report). GWI. Retrieved from https://www.gwi.com/reports/gen-z. GWI

Ha, Y. (2020). The effects of shoppers' motivation on self-service technology use intention: Moderating effects of the presence of employees. *Journal of Asian Finance, Economics and Business, 7*(9), 489-497. https://doi.org/10.13106/jafeb.2020.vol7.no9.489

Hsiao, C.-H., & Tang, K.-Y. (2025). Key factors in the continuance of self-service technology and its mobile app adoption—A case study of convenience stores in Taiwan. *Applied Sciences, 15*(7), 3804. https://doi.org/10.3390/app15073804

Ighomereho, S. O., Ojo, A. A., Omoyele, O. S., & Olabode, O. S. (2022). From service quality to e-service quality: Measurement, dimensions and model. Journal of Management Information and Decision Sciences, 25(1), 1-15. Retrieved from https://arxiv.org/abs/2205.00055

Ikpeazu, P. C. (2022). A survey of customer acceptability of MTN self-service delivery in Kogi State, Nigeria. *International Journal of Management and Economics Invention, 8*(10), 2642-2654. https://doi.org/10.47191/ijmei/v8i10.01

Khalufi, N. A. M., & Shah, K. A. M. (2022). Factors impacting user behavioural intention to adopt self-service technology: An empirical study. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies, 13*(7), 13A7J, 1-13. http://tuengr.com/V13/13A7J.pdf https://doi.org/10.14456/itjemast.2022.136

Kim, B., & Chen, Y. (2023). Empowering consumers through self-service technology: A comparative analysis. *Journal of Hospitality & Tourism Research*, 47(2), 123–145. https://doi.org/10.1177/10963480231182959SAGE Journals

Kim, J.-K., Yang, J.-J., & Lee, Y.-K. (2023). How do self-service kiosks improve COVID-19 pandemic resilience in the restaurant industry? *Sustainability, 15*, 10168. https://doi.org/10.3390/su151310168

Lu, S., & Ahn, J. (2023). An integrated model for understanding the role of self-service technology attributes and customers' demographic characteristics in the restaurant service context. *Journal of Foodservice Business Research*, 26(4), 289–310. https://doi.org/10.1080/15378020.2023.2279002Taylor & Francis Online

Mbazua, E. C., Oladokun, B. D., & Mohammed, J. D. (2023). Awareness, adoption and perception of lecturers toward the use of information and communication technology (ICT) in Nigeria. *Howard Journal of Communications, 35*(4), 412-428. https://doi.org/10.1080/10646175.2023.2291120

Meuter, M. L., Ostrom, A. L., Bitner, M. J., & Roundtree, R. (2003). The influence of technology anxiety on consumer use and experiences with self-service technologies. *Journal of Business Research, 56*(11), 899–906. https://doi.org/10.1016/S0148-2963(01)00276-4

MTN Nigeria. (n.d.). Welcome to MTN Nigeria. Retrieved April 5, 2025, from https://www.mtn.ng/

Mukerjee, K. (2020). Impact of self-service technologies in retail banking on cross-buying and word-of-mouth. *International Journal of Retail & Distribution Management, 48*(5), 485–500. https://doi.org/10.1108/IJRDM-08-2019-0261

MultiChoice Group. (2024). *FY24 results presentation*. Retrieved January 2, 2025, from https://investors.multichoice.com/pdf/integrated-annual-reports/FY23/fy23-annual-financial-statements.pdf

MultiChoice Nigeria. (n.d.). Welcome to DStv Nigeria. Retrieved April 5, 2025, from https://www.dstv.com/en-ng/

Mustofa, R. H., Kuncoro, T. G., Atmono, D., Hermawan, H. D., & Sukirman. (2025). Extending the technology acceptance model: The role of subjective norms, ethics, and trust in AI tool adoption among students. *Computers and Education: Artificial Intelligence, 8*, 100379. https://doi.org/10.1016/j.caeai.2025.100379

Nagar, K. (2023). Customer satisfaction with telephone-based self-service technology: Investigating the role of 'gender' of the voice assistant. *Journal of Marketing Communications*. Advance online publication. https://doi.org/10.1080/13527266.2023.2205417

Nam, J., Kim, S., & Jung, Y. (2023). Elderly users' emotional and behavioural responses to self-service technology in fast-food restaurants. *Behavioral Sciences, 13*(284), 1–17. https://doi.org/10.3390/bs13040284

National Population Commission. (2006). *2006 population and housing census of Nigeria*. Abuja: NPC. Retrieved January 2, 2025, from https://archive.gazettes.africa/archive/ng/2009/ng-government-gazette-dated-2009-02-02-no-

2.pdf

Nigerian Communications Commission (NCC). (2024). *Industry overview report*. Retrieved January 2, 2024, from https://www.ncc.gov.ng/statistics-reports/industry-overview

Ofuonyebuzor, D. C., & Auwal, Y. A. (2016). Self-service delivery and subscribers' usage in Glomobile, Zaria, Nigeria. *Journal of Good Governance and Sustainable Development in Africa, 3*(1). Retrieved from https://www.researchgate.net/publication/344654014_SELF-SERVICE_DELIVERY_AND_SUBSCRIBERS%27_USAGE_IN_GLOMOBILE_ZARIA_NIGERIA

Oraedu, C., Izogo, E. E., Nnabuko, J., & Ogba, I.-E. (2021). Understanding electronic and face-to-face word-of-mouth influencers: An emerging market perspective. *Management Research Review, 44*(1), 112-132. https://doi.org/10.1108/MRR-02-2020-0066

Pereira, M. de S., de Castro, B. S., Cordeiro, B. A., de Castro, B. S., Peixoto, M. G. M., Monteiro da Silva, E. C. M., & Gonçalves, M. C. (2025). Factors of customer loyalty and retention in the digital environment. *Journal of Theoretical and Applied Electronic Commerce Research, 20*(2), 71. https://doi.org/10.3390/jtaer20020071

Qi, M., Santos, H., Pinheiro, P., McGuinness, D. L., & Bennett, K. P. (2023). Demographic and socioeconomic determinants of access to care: A subgroup disparity analysis using new equity-focused measurements. *PLOS ONE, 18*(11), e0290692. https://doi.org/10.1371/journal.pone.0290692

Rajagukguk, W., Siregar, E. M., & Siahaan, L. (2024). Demographic and socioeconomic determinants affecting access to digital self-service platforms. Population and Economics, 8(1), 1–15. https://doi.org/10.3897/popecon.8.e108914

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.

Udeh, C., Ifekanandu, C., Idoko, E., Ugwuanyi, C., & Okeke, C. (2022). Pay TV product quality and customer satisfaction: An investigation. *International Journal of Information Systems and Informatics, 3*(1), 25–35. https://doi.org/10.47747/ijisi.v3i1.685

Ugwuanyi, C. C., Oraedu, C. O., Ifediora, C. O., Izogo, E. E., Asongu, S. A., & Attamah, I. J. (2022). Understanding drivers of self-service technologies (SSTs) satisfaction and marketing bottom lines: Evidence from Nigeria. *AGDI Working Paper* No. WP/22/025. African Governance and Development Institute. Retrieved from https://hdl.handle.net/10419/262088

Ugwuanyi, C. C., Uduji, J. I., & Oraedu, C. (2021). Customer experience with self-service technologies in the banking sector: Evidence from Nigeria. *International Journal of Business and Systems Research, 15*(4), 405–425. Retrieved from https://ideas.repec.org/a/ids/ijbsre/v15y2021i4p405-425.html

Vafaei-Zadeh, A., Nikbin, D., Wong, S. L., & Hanifah, H. (2025). Investigating factors influencing AI customer service adoption: An integrated model of stimulus–organism–response (SOR) and task-technology fit (TTF) theory. *Asia Pacific Journal of Marketing and Logistics, 37*(6), 1465–1502. https://doi.org/10.1108/APJML-05-2024-0570

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478. https://doi.org/10.2307/30036540

Worldometer. (2024). Nigeria population (2025 projection). Retrieved January 2, 2025, from https://www.worldometers.info/world-population/nigeria-population/