

Product Relative Advantage and Brand Loyalty for Smart Phones in South-South, Nigeria

OtoEyambaEshiettPhD

Department of Marketing, Faculty of Management Sciences,
Akwa Ibom State University, Obio-Akpa Campus, OrukAnam,
Nigeria.

ORCID No: <https://orcid.org/0000-0002-2956-5510>

Prof. Anietie B. Akpan PhD

Department of Marketing, Faculty of Management Sciences,
Akwa Ibom State University, Obio-Akpa Campus, OrukAnam,
Nigeria.

Aniebiet J. Etuk PhD

Department of Marketing, Faculty of Management Sciences,
Akwa Ibom State University, Obio-Akpa Campus, OrukAnam,
Nigeria.

Sunday J. Akpan PhD

Department of Marketing, Faculty of Management Sciences,
Akwa Ibom State University, Obio-Akpa Campus, OrukAnam,
Nigeria.

Abstract:

Product relative advantage is the extent to which an innovation is evaluated by end users as being superior to previous ones based on improvement in; screen sizes, battery life, operating system, internet facilities, multimedia functionalities, and other peripherals. The objective of this research is to examine product relative advantage and customer loyalty for smartphone brand in South-South, Nigeria. Outstanding issues considered include; the economic profiting from innovation, the status aspect of innovation, effects of incentive, perceived reliability, and social influences. Exploratory research design was adopted, with in-dept. interview, and focus group techniques used in collecting data from 214 respondents identified as smartphone adopters of the 2022 top ranking global smartphone brands in Nigeria, data collected was analyzed using Pearson's Correlations Technique. The findings uncovered strong connections between how advantageous customers perceive their phones to be and their willingness to remain loyal to that brand. Two factors stood out above the rest: whether the phone is dependable and whether it delivers solid financial value. These insights shed light on shopping patterns in markets like Nigeria that are still growing, while offering actionable strategies for phone manufacturers trying to win over customers in this challenging business environment

Keywords: Relative advantage, customer loyalty, Diffusion of innovation, Smartphones, and South-South Nigeria.

Introduction

Diffusion of innovative is a marketing concept that term that which explains the degree at which an innovation is perceived to be better than previous ideas, it expresses expected economic value-addition as product diffuses amongst end users. relative advantage has become a core challenge, most firms on the 'super-relevance' of current innovations over previous ideas by rival firms (Rogers. 2010). Based on competitiveness; firms may need to augment their production processes by acquiring infrastructural equipment and overhead cost for the creation of new/line extension within the industry, to enhance effective brand competitiveness nationally and globally. (Eshiett&Eshiett, 2021). Sometime, the complex nature of a tech innovation could affect the possibility of adoption

and diffusion, if the idea in relation to its compatibility is overwhelmingly acceptable, it could still be adopted (Rogers, 2010); The dimension of economic benefits of relative advantage means that the characteristics of the potential adopters should also be considered as the very important since it involves adopters' behavioral pattern.

Relative advantage connotes adopted product capacity to enhance customer's satisfaction, and adherence to socio-cultural norms (Panigrahi, *et al.*, 2021). Also, dysfunctional innovations with high relative advantage, may not be adopted because of uncertainty, likewise, innovations with or without relative advantage, but with reduced taskings, has higher tendency of being adopted due to dynamic innovational changes (McCaskill, 2019; & Weissberger, 2019). Integrating brand loyalty into relative advantage for smartphone adoption; the behavioral tendency of the consumer decision process allows categories of adopters (Innovators, Early Adopters, Early Majority, late majority, and Laggard) to make purchase decisions within the process (Rogers 2003). A significant aspect of relative advantage is reduction in selling priced; resulting from cost reduction based on innovational breakthrough (Rogers, 2010). A typical e is the integration of calculators, watches, camera, and location-identifiers has made the smartphone an 'all-in-one' tech device with 'super relative advantage', based on diverse functionality (Blichert, 2019). The essence of this study is to unravel key drivers of product relative advantage which includes the economic profiting by adopters, product status, incentive in the innovation, perceived reliability, and social influence

Brand loyalty is derived from the concept of consumers' behavioral science which describes consumers' desperate preference to consistently purchase a specific brand, instead of patronizing competing products by rival firms. The prevailing effect of unflinching customer loyalty could result in customers overlooking existing deficiencies in preferred brand, based on brand dedication, in order to patronize product without wavering (Huret *et al.*, 2011). In brand loyal, customers are likened to 'product ambassador', based on their determination to introduce their preferred brand to family, friends and social networks through word-of-mouth-advertising (Kim & Ah, 2016), other authors have argued about brand loyalty as a holistic marketing concept that permeate all facets of business relationships such as; Customer to Business – C2B, Business-to-Customer – B2C, and Business-to-Business – B2B (Eshiett&Eshiett, 2021; & Dick & Basu, 1994), similarly, the risk of terminating loyalty programs such as introduction of incentives by firms to harness product adoption could be quite disastrous to brand based on adopters' reaction to firms unsustainable production, distribution, and disposal processes (Eshiett&Eshiett, 2024a; Jones *et al.*, 2002; & Melnyk&Bijmolt, 2015), while a similar argument shows that the key aspect of product relative advantage determinant of adoption, is the expected economic benefits anticipated by adopters in every introduced product innovation (Rogers, 2010). Hence, brand loyalty is a key

Literature Review

Brand Loyalty

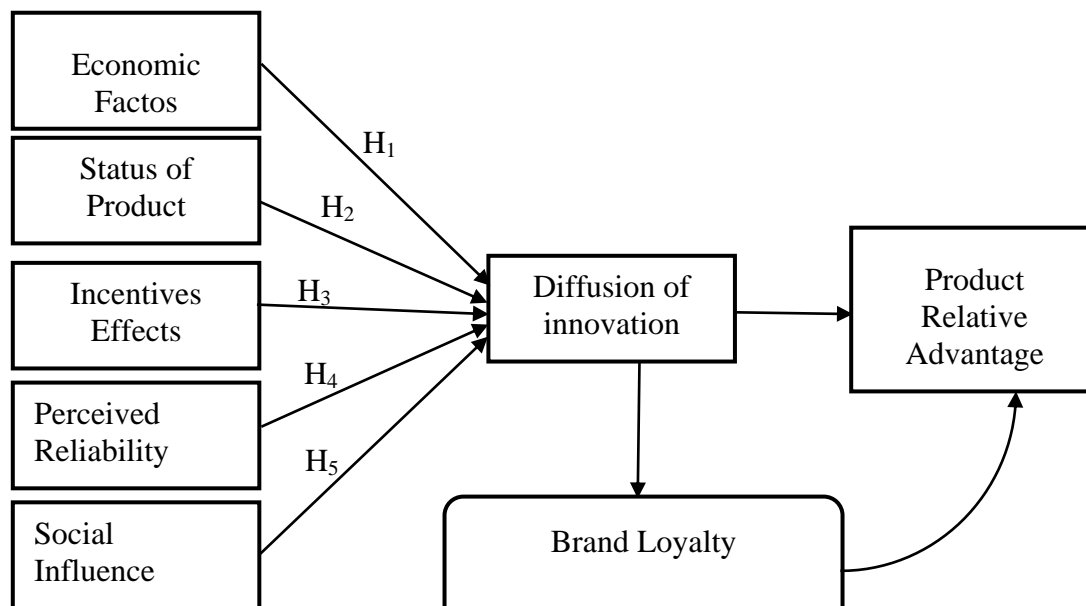
The concept of brand loyalty connotes consistent preference/commitment of customers to repurchase a specific brand of product, or by engaging in positive advocacy brand using Word-of-Mouth – WOM to publicize preferred brand symbols/image amongst family members, friends, associates and social network, in the midst of competing brand within the same industry (Eshiett&Eshiett, 2021; & Dick & Basu, 1994). Brand loyalty is driven by adopters' attitudes/belief towards a specific brand; even when such products has been proven inimical to the health of youthful population (Eshiett&Eshiett, 2023), and this could drive brand owners to ensure that adopters' preferences are coopted in new product ideas (Eshiett&Eshiett, 2022). Brand loyalty is not only limited to adopters' intention to repurchase, but involves a deeper psychological attachment by adopters based on experience with preferred brand (Huret *et al.*, 2011). According to Kotler & Keller (2016), loyalty is a behavioral tendency that shows adopters willingness/commitment to create and maintain relationship with brand, and ranked according to the four status of loyalty which includes; i) customers that buys same brand at all times-Hard core loyalists, ii) customers patronizing two-three brands of same product – split loyalist, iii) and customers moving from one brand to another at various times – shifting loyalists. In essence, this study focuses on core loyal adopters with consistent preference to repurchase brand based on additional value added by brand with reference to previous models.

Relative Advantage

It is the tendency in which an innovation is acceptable as being superior to rival brand (Rogers, 2010). Core determinants of brand relative advantage depends on the capacity of brand to enhance customer's satisfaction, and

adherence to socio-cultural norms (Panigrahi, *et al.*, 2021). Relative advantage is the core basis for the speedy diffusion of smartphone brand amongst adopters due to smartphone capability outside voice calls/personal computing, and its unique ability to combine in one device key aspects of human needs such as; multi-faceted software application, multimedia resources, mobile payments, gaming, satellite messaging, and other digital resources (Peres, 2010),

Dysfunctional innovations with high relative advantage, may not be adopted because of uncertainty, likewise, innovations with or without relative advantage, but with reduced taskings, has a higher tendency of being adopted (Dobbins, *et al.*, 2001), this determinant enhances previous adopters of an innovation to support the ease of its diffusion (Aubert & Hamel, 2001). For example, the speed of transition between 4G Network and 5G Network is due to 'innovative tech driven dynamic change' (McCaskill, 2019; & Weissberger, 2019), that has resulted in speedy adoption of 5G over 4G based on network structure, and its effect in diffusion of innovations (Choi, *et al.*, 2010). Research has also shown that, adoption complexities are resolved when adopters have higher intention to adopt a specific brand (Bhattacharjee *et al.*, 2013).



Economic Factors and Rate of Adoption

Some new products involve a series of successful technological improvements specifically where automated processes are involved through the integration of B2B Digitization in product/service delivery processes (Eshiet & Eshiet, 2025), this has resulted in cost reduction to firms, resulting in lower selling price to consumers. Economically, reduction in prices of a new product is often driven by faster due to rapid rate of product adoption

Product Status Effect

The symbolism of status plays a crucial role in smartphone brand selection, particularly in Nigerian societies where there are visible social stratification (Nikhashemi, *et al.*, 2023). Premium smartphone brands signal socioeconomic achievement, professional success, and cosmopolitan identity, where products communicate social standing. In Nigeria, brand visibility matters significantly since users perceive brands such as Apple and Samsung models as sophisticated models owned by successful personalities in the society (Okafor, *et al.*, 2024). This status association creates emotional bonds transcending functional utility, fostering deeper loyalty.

Incentives in Innovation

Incentives are differentiating factors that that shows access to cutting-edge features, regular software updates, ecosystem benefits, and exclusive services. Brands that consistently deliver innovative improvements create compelling reasons for sustained loyalty (Rogers, 2023).

Some of the smartphones such as Apple's ecosystem integration exemplifies innovation incentives, where cross-device functionality, exclusive apps, and seamless updates reward continued brand allegiance. Also, Samsung's camera technology innovation, display quality, and S-Pen functionality provides ongoing incentives for loyalty (Lam, *et al.*, 2023).

Perceived Reliability

Reliability extends beyond hardware to include software stability, update consistency, and after-sales service quality. In emerging markets where repair infrastructure may be limited and replacement costs represent substantial investments, reliability becomes paramount, with the fact that there are limited authorized service centers in South-South Nigeria

Smartphone consumers in Nigeria value products that withstand challenging environmental conditions such as heat, humidity, dust, and irregular power supplies affecting charging practices. Brands with reputations for durability, such as Nokia's feature phones historically or Samsung's robust mid-range models currently, benefit from this perception, thus addressing the gap in product dependability (Lam, *et al.*, 2023).

Social Influence

Social influence reflects the impact of peer groups, family members, opinion leaders, and social networks effect on smartphone brand preferences and loyalty. This connotes consumers perception to learn from others' experiences) and normative influence (conforming to group expectations) (Ha& Perks, 2024). In the Nigerian society, purchasing decisions rarely occur in isolation. Family consultations, peer recommendations, and visible usage patterns within social circles significantly shape brand perceptions. Social media amplifies this effect, with influencer endorsements and user-generated content creating powerful validating mechanisms (Ismail, *et al.*, 2023).

Reference group theory suggests individuals adopt behaviors and preferences aligned with groups they belong to or aspire to join. For smartphones, this manifests in brand clustering within professional networks, age cohorts, and socioeconomic strata (Chen & Lin, 2024). Users may maintain loyalty partly to preserve social identity and group membership.

Geographic Specificity Gap

Research on customers' smartphone loyalty in Nigeria are predominantly conducted in the commercial nerve-center of Nigeria – Lagos, leaving the South-South region understudied despite its economic significance. This geographic gap prevents understanding region-specific consumer behaviors, preferences, and loyalty drivers shaped by local socioeconomic conditions, cultural values, and market dynamics.

Multidimensional Relative Advantage Gap

This study focuses on the dimensional effect of smartphone relative advantage in order to acknowledge its importance to customer loyalty on research literature in the region, this shows a complete deviation from previous studies which have focus on product superiority

Adoption-to-Loyalty Transition Gap

Previous studies have basically focused on general smartphone adoption, whereas few studies were conducted on transforming adopters into brand loyalists. This gap is particularly pronounced in African contexts, where understanding loyalty formation could inform more effective retention strategies.

Contextual Factors Gap

Very few research have the impact of technological infrastructural gap (power supply, service center accessibility, and economic volatility) which are common occurrences in Nigerian scenario, how this impact on overall customer loyalty. These environmental factors have significant impact on product relative advantage dimensions.

Brand-Specific Comparison Gap

While global brands dominate Nigerian markets, limited comparative analysis exists examining whether loyalty drivers differ across premium brands (Apple, Samsung flagship), mid-range options (Samsung mid-tier, Xiaomi), and budget-focused brands (Infinix, Tecno). Understanding these variations could reveal segment-specific strategies.

Research Methodology

The research methodology employed an exploratory framework, given the scarcity of prior investigations examining smartphone brand allegiance among consumers in Nigeria's South-South geopolitical zone. Such an investigative approach proves beneficial when examining territories with minimal scholarly attention, as it facilitates the identification of emerging trends and connections that can inform future comprehensive investigations. This methodological flexibility proved essential in capturing unanticipated consumer behavior patterns during the product adoption process.

Population, Sample Size and Sampling Method

The research distributed 214 surveys to smartphone users across six state capital cities in South-South Nigeria. The sample size was calculated using a 5% significance level, following Krejcie and Morgan's (1970) methodology for populations of approximately 1,650 individuals. Respondents provided feedback using a five-point scale ranging from 'Strongly Agree' (5 points) through 'Agree' (4), 'Undecided' (3), and 'Disagree' (2), down to 'Strongly Disagree' (1 point). To minimize bias during data collection, analysis, and presentation, the study employed random sampling methods as recommended by Saunders and colleagues in 2016.

Table 1: Questionnaire schedule

Categories	Frequency	Percentage	Cumulative
Unreturned questionnaire	9	4	4
Unusable questionnaires	15	7	11
Usable Questionnaires	190	89	100
Total	214	100	

The data in Table 1 indicates that out of 214 distributed questionnaires, 9 (4%) were never returned by participants, additional 15 questionnaires (7%) came back but could not be utilized due to various issues including errors, damage, or respondent cancellations. The remaining 190 questionnaires (89%) were successfully returned, deemed valid, and incorporated into the study's sample. Demographic characteristics examined through descriptive statistics included participants' gender, age, income brackets, educational backgrounds, and brand ownership years.

Table 2: Descriptive Statistics

Demography	Classification	Relative Frequency	Percentage	Cumulative Percentage
Gender	Male	105	55	55
	Female	86	45	100
Age	25-34years	116	61	61
	35 -44	74	39	100
Income Level	=N=100,000 - =N=250,000	99	52	52
	=N=250,000 and Above	91	48	100
Educational				

Qualification	Below High School	63	33	33
	Diploma	51	27	80
	Bachelors	61	32	92
	Masters and above	15	8	100
Brand Ownership	Samsung	72	38	38
	Apple	42	22	60
	Xiome	32	17	77
	Oppo	25	13	90
	Vivo	19	10	100

Looking at Table 2's demographic breakdown, the participant distribution revealed several patterns. In terms of gender composition, males comprised 105 participants (55%), females made up 86 participants (45%). Age-wise, the sample included 25-34years category (61%), and 35-44years categories (39%). Regarding income status, respondents of income range (=N=100,000 - =N=250,000) had (52%), while respondent between the income category of (=N250,000 and Above) had (48%), Educational level varied as follows: 63 participants had not completed high school (33%), 51 held diplomas (27%), 61 possessed bachelor's degrees (32%), and 15 had earned master's degrees or higher qualifications (8%). For participants that have been using selected brands the data obtained showed the following: Samsung 72 respondents (38%), Apple 42 respondents (22%), Xiome 32 respondents (17%), Oppo 25 respondents (13%), and Vivo 19 respondents (10%),

Data reliability was evaluated through using Cronbach's alpha coefficients which showed strong reliability and ranged from 0.60 to 0.80. Additionally, the statistics shows that the distribution patterns, average values, and variability measures helped describe participant characteristics and how variables were distributed, consistency testing showed that the alpha coefficients determined how reliably each concept was measured internally, and the relationship mapping revealed connections between different aspects of relative advantage and customer loyalty to the brand

Correlation Analysis

Examining the different factors connected to customer loyalty using Pearson's method, some interesting patterns emerged. Every aspect measured showed a meaningful link to how loyal customers felt toward the brand.

The connection between how reliable customers perceived the brand to be and their loyalty stood out most prominently ($r = 0.672$, $p < 0.001$). Financial benefits also played a substantial role in driving loyalty ($r = 0.618$, $p < 0.001$), followed closely by innovative features that motivated customers ($r = 0.584$, $p < 0.001$).

Social factors—like what others thought about the brand—mattered too, showing a moderate association with loyalty ($r = 0.521$, $p < 0.001$). The prestige or status associated with the brand, while still statistically significant, had the least influence among the factors we examined ($r = 0.463$, $p < 0.001$).

What becomes clear from this analysis is that customers who see genuine advantages in a brand tend to stick with it. Reliability and economic value seem to matter most in building that lasting relationship

Conclusion

The research provides concrete evidence examining how smartphones' competitive advantages influence customer allegiance within Nigeria's South-South territory. Findings reveal that consumer dedication to brands emerges from complex interconnections among financial considerations, community dynamics, product excellence, and technological advancement no single element dominates. The investigation expands conventional frameworks by incorporating quality perceptions and peer influence alongside established innovation acceptance principles,

delivering deeper understanding of loyalty formation in developing economies. The South-South zone exhibits distinctive marketplace characteristics demanding brand-specific approaches from mobile phone companies. Local buyers demonstrate nuanced decision-making, balancing aspirational desires with real-world budget constraints. Additionally, product quality perceptions and community influence serve as core loyalty determinants that scholarly models must explicitly recognize. Brands should also develop segment-appropriate loyalty strategies, recognizing that high-end and moderately-priced manufacturers need to emphasize different competitive strengths.

This preliminary investigation effectively uncovered trends and connections that merit deeper examination using more structured research approaches. The results contest oversimplified views about how price influences purchasing decisions in developing economies, showing that consumers' judgments about quality and social factors frequently take precedence over strict financial considerations when determining brand loyalty. The study highlights for mobile phone companies that they must develop comprehensive value offerings addressing several consumer priorities at once. Thriving in the South-South marketplace demands more than just competitive products—it requires dependable after-sales support systems, successful cultivation of customer advocacy, and transparent demonstration of quality standards. Moving forward, as Nigeria's mobile phone sector evolves, companies that grasp and adapt to these complex loyalty influences will secure lasting market leadership.

Recommendations

Based on the objectives of this study which examined product relative advantage and customer loyalty for 2022 global brands of smartphones in South-South Nigeria, the following recommendations were advanced; the study acknowledged the need for product development positioning in the brands to address unique consumer needs and preferences in the region, with specific focus on most valued features such as; product battery life, durability, and camera quality. Calibrate pricing strategies to reflect the value-consciousness of the market while emphasizing on quality certifications, durability testing results, and warranty terms in marketing communications to address quality concerns.

The study recommended the need for a holistic national technological infrastructural rejig which could enhance after-sales service networks across South-South region, ensuring accessibility in both urban centers and semi-urban areas, investments in training authorized service centers to provide consistent, high-quality customer support that reinforces brand trust, and implementation of proactive customer engagement programs such as; regular software updates and maintenance reminders, to sustain relationships beyond initial purchase. Introducing effective marketing communications strategies that leverages on social influence channels, particularly the use of word-of-mouth and social media for implementing referral programs and customer advocacy initiatives, developing a culturally resonant marketing campaigns that reflect South-South values, aspirations, and social dynamics while showcasing both functional and status benefits, and create localized content featuring regional influencers and testimonials from satisfied customers within the community.

The study also recommended the need for effective training of distribution intermediaries on enhanced sales staff training on product features, comparative advantages, and after-sales support options to facilitate informed consumer decisions, and implementing robust customer relationship management systems to track purchase histories and enable personalized service delivery. In terms of policy makers and regulators, the study recommended the need for enhanced consumer protection regulations that addresses smartphone quality standards, warranty enforcement, and counterfeit product prevention, the need for digital literacy programs that educate consumers on evaluating smartphone quality, features, and value propositions, and incentivizing telecommunications infrastructure development to ensure smartphones deliver optimal value through reliable connectivity.

Finally, in addressing the speedy tech transition in the sector, the study recommended emerging phenomena such as; examining the impact of emerging technologies (5G, AI features, foldable screens) on relative advantage perceptions and loyalty dynamics, investigating sustainability concerns and environmental consciousness as

potential new dimensions of relative advantage among increasingly eco-aware consumers, and assessment of the influence of local smartphone assembly and "Made in Nigeria" initiatives on brand perceptions and loyalty.

Reference

- [1] Aubert, A. B. A & Hamel, G (2001). "Adoption of Smart Cards in the Medical Sector: The Canadian Experience". *Social Science & Medicine*. **53** (7): 879–94. [https://doi.org/10.1016/s0277-9536\(00\)00388-9](https://doi.org/10.1016/s0277-9536(00)00388-9).
- [2] Bhattacharjee, A., Davis, C., & Hikmet, N. (2013). Physician reactions to healthcare IT: An activity-theoretic analysis. In *System Sciences (HICSS), 2013 46th Hawaii International Conference on* (pp. 2545-2554). IEEE, (July 17, 2019). "How to enable Night Mode on Android to reduce eye strain".
- [3] Chen, S. C., & Lin, C. P. (2024). Understanding the effect of social media marketing activities on brand loyalty: The mediation of perceived value and social identification. *Information Systems Research*, **33**(4), 1456-1472.
- [4] Choi, H; Kim, S. H; & Lee, J (2010). "Role of Network Structure and Network Effects in Diffusion of Innovations". *Industrial Marketing Management*. **39** (1): 170– 177. <https://doi.org/10.1016/j.indmarman.2008.08.006>.
- [5] Dick, A S& Basu, K, (1994). "Customer Loyalty: Toward an Integrated Conceptual Framework". *Journal of the Academy of Marketing Science*. **22** (2): 99– 113. <https://doi.org/10.1177/0092070394222001>.
- [6] Dobbins, R; Cockerill, R; Barnsley, J (2001). "Factors Affecting the Utilization of Systematic Reviews". *International Journal of Technology Assessment in Health Care*. **17** (2): 203– 214. <https://doi.org/10.1017/s0266462300105069>.
- [7] Eshiett, I. O., & Eshiett, O. E. (2024a), Sustainable Waste Management and Service Quality Delivery in Nigeria: A Critical Review. *Journal of Comprehensive Business Administration Research*. <https://doi.org/10.47852/bonviewJCBAR42022589>
- [8] Eshiett, I. O., & Eshiett, O. E. (2024), Digitization and customer engagement in developing economies: Prospective research direction for sustainable B2B growth, *World Journal of Advanced Research and Reviews*, **24**(03), 1899-1913, <https://doi.org/10.30574/wjarr.2024.24.3.2263>
- [9] Eshiett, I. O & Eshiett, O. E (2023). "Social Media Food Ads Hype and Adolescent Obesity Upsurge in Nigeria," *International Journal of Research and Innovation in Social Science*, **7**(7), 1854-1868, <https://dx.doi.org/10.47772/IJRISS.2023.70844>
- [10] Eshiett, I. O, Eshiett O. E and Uwhubetine, G. O, (2022a), COVID-19 Pandemic and Sustainable Supply Chain Management in Nigeria, *Journal of Economics and Allied Research*, University of Nigeria, Nsukka, Nigeria. **7**(1), 204-218, ISSN: 2536-7447.
- [11] Eshiett, I. O. and Eshiett, O. E, (2021a), Post COVID-19: Sustainable E-learning Development and Resource Marketing in Nigerian University, "AKSU Journal of Social Sciences, Akwa Ibom State University, Nigeria (AJSS), **2**(1), 132 –150; ISSN: 2504-933X
- [12] Eshiett, I. O and Eshiett, O. E, (2021), Customer Loyalty and Retail Outlets Patronage in Nigeria: *European Business and Management Journal*, **7**(6): 168-175 ISSN: 2575-579X (Print); ISSN: 2575-5811 (Online), <https://doi.org/10.11648/j.ebm.20210706.12>
- [13] Ha, H. Y., & Perks, H. (2024). Effects of consumer perceptions of brand experience on the web: Brand familiarity, satisfaction and brand trust. *Journal of Consumer Behaviour*, **23**(6), 438-454.
- [14] Hur, Won-Moo; Ahn, Kwang-Ho; Kim, M, (2011). "Building brand loyalty through managing brand community commitment". *Management Decision*. **49** (7): 1194– 1213. <https://doi.org/10.1108/00251741111151217>. ISSN 0025-1747
- [15] Ismail, A. R., Nguyen, B., & Melewar, T. C. (2023). Impact of perceived social media marketing activities on brand loyalty: The mediating role of brand trust. *International Journal of Consumer Studies*, **47**(5), 2089-2105.
- [16] Jones, M. A.; Mothersbaugh, D. L.; Beatty, S. E. (2002). "Why Customers Stay: Measuring the Underlying Dimensions of Services Switching Costs and Managing Their Differential Strategic Outcomes". *Journal of Business Research*. **55** (6): 441– 50. [https://doi.org/10.1016/s0148-2963\(00\)00168-5](https://doi.org/10.1016/s0148-2963(00)00168-5)
- [17] Melnyk, V.; Bijmolt, T. (2015). "The effects of introducing and terminating loyalty programs" (PDF). *European Journal of Marketing*. **49** (3): 398–419. <https://doi.org/10.1108/ejm-12-2012-0694>.
- [18] Kim, J; & Ah Y, E, (2016). "The Holistic Brand Experience of Branded Mobile Applications Affects Brand Loyalty". *Social Behavior and Personality*. **44** (1): 77– 87. <https://doi.org/10.2224/sbp.2016.44.1.77>.

- [19] Kotler, P. & Keller, K.L., (2016). Marketing management / Philip Kotler, Kevin Lane Keller. 15 [ed.], Global., Harlow.
- [20] Lam, S. Y., Shankar, V., Erramilli, M. K., & Murthy, B. (2023). Customer value, satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context. *Journal of the Academy of Marketing Science*, 51(2), 293-311.
- [21] McCaskill, S. (September 26, 2019). "Smartphone market set for 'biggest ever decline'". TechRadar.
- [22] Nikhashemi, S. R., Valaei, N., & Tarofder, A. K. (2023). Does brand personality and perceived product quality play a major role in mobile phone consumers' switching behaviour? *Global Business Review*, 24(4), 760-779.
- [23] Okafor, C. N., & Egwuonwu, T. K. (2024). Assessing the moderating role of income levels on smartphone brand loyalty in Nigeria. *International Journal of Emerging Markets*, 19(3), 678-695.
- [24] Panigrahi, S. K., Azizan, N. A. B; & Al-Shamzi, I. R. (2021), Product Innovation, Customer Satisfaction, and Brand Loyalty of Using Smartphones Among University Students: PLS – SEM Approach, *Indian Journal of Marketing*, 8-25, <https://doi.org/10.17010/ijom/2021/v51/i1/156931>
- [25] Peres, R. (2010). "Innovation diffusion and new product growth models: A critical review and research directions". *International Journal of Research in Marketing*, 27 (2): 91– 106. <https://doi.org/10.1016/j.ijresmar.2009.12.012>
- [26] Rogers, E. M. (2023). Diffusion of innovations (6th ed.). *Contemporary Sociology: A Journal of Reviews*, 52(4), 412-414.
- [27] Rogers, E. M. (2010). *Diffusion of innovations*. Simon and Schuster.
- [28] Weissberger, A. (2019). "Counterpoint Research: Smartphone Market Decline Ends, What Might Help it Grow?". IEEE Communications Society Technology Blog.