Influencing Factors on Consumers Purchase Decision of Smartphones in Lagos State, Nigeria

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Abstract
Despite accounting for one-sixth of the global population, Africa's use of mobile technology applications is minimal compared to other rapidly expanding nations. Very few studies have examined the factors influencing smartphone purchase decisions, particularly those made by Lagos residents in Nigeria. The paper evaluates what influences consumers' smartphone purchases in Lagos State, Nigeria. A structured questionnaire was designed and distributed to 375 respondents sampled through multistage random sampling. The result of the analysis denoted that system quality was the most significant factor influencing smartphone purchases, followed by brand and price. However, social influence tends to be insignificant. These three factors can explain 16.2% of the purchase decision. Lagos people make their own decision regarding purchasing and will not be influenced by social pressure, such as their peers. This study can serve as a framework to enhance the telecommunication industry in Nigeria. The findings of this research can also help industry players to market their products and subsequently boost the Nigerian economy.
Keywords: Consumer Decision, System Quality, Brand, Social Influence, Price

Introduction
One of the most significant developments in communication technology is the appearance of mobile phones, a sign of how quickly technological advancements change (Tanveer et al., 2021). In the past few years, technology for mobile phones has permeated every facet of daily life. When comparing and purchasing goods and services from any location at any time, mobile e-commerce is regarded as a viable alternative (Tanveer et al., 2021). Making and receiving phone calls, taking and sending pictures, accessing the internet, playing games,

chatting, and downloading software are just a few of the many uses for mobile phones. Studies have shown that mobile phone positively affects various human life outcomes, including educational products, financial inclusion, poverty reduction, women's empowerment, and economic disparity (Nandrianina, 2020). The GSMA intelligence (2020) emphasized the significance of mobile phones in bringing about significant social, economic, and environmental benefits and achieving all 17 Sustainable Development Goals.

Nonetheless, for individuals of SSA (Sub-Saharan Africa), this extraordinary innovation is a deception, and an absence of ICT contributes impressively to outrageous neediness. Likewise, more work must be done to understand ICT and cell phone adoption. Others have connected outrageous destitution to an absence of ICT devices and administrations. The Nigerian smartphone market expanded by 2.0 % in unit terms quarter over quarter (QoQ) in the second quarter of 2021, according to the most recent estimates from the global technology and consulting services company, International Data Corporation (IDC, 2021). In the second quarter of 2021, vendors introduced various new models, increased their marketing budgets, and shifted their product portfolios toward smartphones in the entry-level and mid-range price ranges, all of which contributed to the expansion of the smartphone market.

In today's world, a company's survival and expansion depend on its ability to satisfy many customers' requirements with its products and services. Customers will be satisfied if a product meets expectations and the requirements to make an informed purchase decision. The components that oversee the customers' cell phone purchasing conduct and inclinations are the reason for the many kinds of decisions. According to the findings of the report IDC (2021), even though consumers' purchasing power has decreased due to the COVID-19 pandemic, they are willing to pay a reasonable price for smartphone brand system quality, including ease of use. According to a study by Adekunle et al (2019), some Nigerians are dissatisfied with smartphones and will go to great lengths to avoid them, even though they are inexpensive. Neediness in Nigeria is the beginning of destructive quality telephones at lower quality. According to Ayodele & Ifeanyichukwu (2016), buying cheap phones remains a good idea for some sections of the population.

Smartphones can be useful, according to some academics, provided they are properly supervised. According to Bilton (2017), some academics have argued that smartphones have impacted students' academic performance. Research by the London School of Financial Matters found that understudies' grades improved after cell phones were restricted in schools (Ritzau, 2018). Smartphones primarily assist students in their electronic learning (e-learning) and mobile learning (m-learning) experiences (Masiu & Chukwuere, 2018). Mobile smartphones perform many of the same functions as computers. Typically having a touchscreen, internet access, and an operating system that can, among other things, run downloaded apps. The use of mobile phones for communication is on the rise in Nigeria, especially since the telecommunications industry was deregulated. As a result, national productivity increased and communication greatly improved, reducing the gap between urban and rural dwellers. Most Nigerians utilise their GSM telephones to speak with each other regardless of time and distance on record of remote innovation. Given the enormous number of cell phone clients, it became basic to research and comprehend cell phone utilisation in Nigeria and its high and low points (Ahmed & Musa, 2016).

The result of this study will enable researchers in this field as a source of information and provides a deeper comprehension of mobile devices and an expanding. Very few studies have examined the factors that generally influence smartphone purchase decisions in Nigeria. As a result, this research aims to learn what influences consumers' purchase of smartphones. The studied factors are system quality, brand, price and social influence.

Literature Review

Purchase intention refers to a consumer's tendency to actually make a purchase. According to Shafa et al (2023), implementing purchase intention depends on an individual's financial capacity to purchase those goods and services. Purchase intention implies planning to purchase specific goods or services in the future. It reflects a person's willingness to purchase a product and their evaluation of options based on personal preferences, prior experience, and external factors.

Cell phones have given colossal advantages to society, including the capacity to summon and talk right, send short message administration (SMS), help financial specialists in planning work and gatherings, function as a route framework (GPS), give admittance to the web, diversion, download applications, store information, and even aid lawful matters, for example, following hoodlums by means of global positioning frameworks (Ling et al., 2001). The smartphone has become an essential component of everyone's daily lives thanks to its widespread adoption by most people worldwide. New information and communication technologies continue spreading throughout nations worldwide as more people connect. According to Jha & Nanda (2017), the modern consumer is technologically savvy and researches technical specifications and features before purchasing a mobile phone.

Cell phone advancement is predicated on shoppers' expected future requests; subsequently, associations with the best conjectures about future innovation and administrations will be the discipline's chiefs (Brown, 1991). Smartphones have significantly improved the comfort and ease of life for many people. Innovation is the primary factor in bringing comfort into a person's daily life. According to Frambach & Schillewaert (2002), even though the country's mobile phone market is expected to expand at a healthy rate during the forecast period, it is essential to comprehend customers and the factors influencing their purchasing decisions. In spite of the fact that mobile phones have emerged as an essential tool for personal communication worldwide in recent years, consumer research has paid scant attention to the factors that influence consumers' decisions to purchase mobile phones.

Consumers will go through the process of purchasing a product by recognising, acquiring information, evaluating, purchasing, and seeking feedback (Hendri et al., 2022). As a result, they will purchase a product after conducting preliminary testing to ensure that it meets their requirements and meets their expectations. Thus, exploring the factors that lead to consumers' purchasing decisions is essential. The Howard-Sheth model, one of the most complete consumer behaviour study models, provides many causes for this behaviour and the purchase decision-making phase and components (Farley & Ring, 1970). It is used as a didactic model to represent consumer behaviour while choosing a preferred brand from various options. The model inspired the actual selection of consumer behaviour factors provided in this paper. The factors such as product quality, brand and price are among the stimuli that affect consumers' reasoning in choosing each product.

System Quality

A few studies have examined the factors that influence smartphone purchase decisions. The researchers used a different modelling approach to examine this factor. System quality is designed to be a metric for determining a system's desired attributes. Consumers use usability, availability, dependability, adaptability, and response time to evaluate the system's quality (Olaleye et al., 2019). System quality refers to how customers perceive a mobile commerce app's performance in retrieving and presenting information (Duy & Trang, 2018). They found four (4) dimensions used to assess system quality—ease of use, navigation, interactivity, and accessibility. The users care about the speed of their smartphone and tablet

from the input to the central processing unit (CPU), as well as memory, storage, and output. When deciding which smartphone or tablet to buy, a user should consider the device's system quality regarding response speed and usability (Olaleye et al., 2019). The second is navigation, which refers to evaluating links to needed information (Duy & Trang, 2018).

The dependability of information system operations is called reliability (Taha & Dahabiyeh, 2021). Reliability is among the top critical aspects that positively and significantly influence perceived system quality features (Cordella et al., 2021). Customer assessment of the information displayed on a mobile commerce application is known as information quality. Content usefulness is also one of the elements of information quality (informativeness and valuableness of information displayed) (Duy & Trang, 2018). The third is interactivity, which refers to access to the search engine and personal design, for example, the shopping cart feature. According to Collado-Borrell et al (2020), functionality raises the perceived value of e-services. IT functionality refers to tools and features designed to aid in the execution of a business process. All these indicators of service quality will lead to consumers' purchasing decisions (Shafa et al., 2023)

Brand

A brand is a name, term, image, or strategy used to distinguish one product from others or its company from rivals. Diputra & Yasa (2021) say that a brand gives a business a unique identity and connects it to its products or services. Most businesses strongly emphasise their brand name, which can be a valuable asset for their services and products. Additionally, it may provide the business with a competitive advantage. Rakib et al (2022) say that brands give customers confidence in the quality of their products and services, give them options, and make it easy to make buying decisions. Customers increasingly choose smartphones with unique features like the ability to view details quickly and a straightforward graphical user interface for touchscreen interactions. Similarly, Appiah et al (2019) found a strong positive correlation between brands and consumers' intentions to purchase smartphones.

Social Influence

The culture, social class, reference group, family, and household of society all greatly affect what people buy. Rahim and Rashotte (2007) defined social influence as "the intentional or unintentional influence of another person on one's feelings, thoughts, and actions." It occurs when someone interacts with familiar individuals, such as parents and peers. Wong (2019) referred to peer, parental, and media influences as social influences. Consumer behaviour is influenced by those around them (Chopdar & Prodanova, 2022). They would endeavour to obtain experiences, recommendations, and advice from individuals who had previously purchased and utilised smartphones (Shabrin et al., 2017). Mokhlis and Yaakop (2012) identified the most significant factor in smartphone purchase decisions in their research. Through social media platforms like Facebook, Twitter, and Instagram, customers can now access information about smartphones, product reviews, and feedback from other users who use the devices or have previously done so. Students, in particular, heavily rely on others to purchase smartphones (Wong, 2019). However, a study by Adekunle, Adewale, & Boyinbode (2019) found that young adults' smartphone purchase habits in Nigeria are unaffected by social pressure. This is supported by the findings of Nandrianina (2020), who also demonstrated that social influence has no effect on the purchase decision. The relapse coefficient demonstrates the adverse consequence of the social effect on a purchasing choice.

Price

According to Kumar et al (2021), the price of a good determines its accessibility, so mobile suppliers should consider price a key factor in customer retention. The price of a smartphone is a significant factor that consumers consider when planning to switch phones (Park & Ko, 2016). Phone customers believe that a high price indicates a high-quality product. For instance, despite China's lower cost, consumers are willing to pay more for a phone made in the United States than one made in China (Arjuna & Ilmi, 2020). Price is found to be the most influential factor in purchasing behaviour, along with other factors like the brand and features of mobile phone sets (Tanveer et al., 2021). According to Ayodele & Ifeanyichukwu (2016), the price was mentioned as a determining factor in shaping the future purchase patterns of young customers. The price is the most important factor when deciding whether to buy a new phone. When Adetunji and Adetunji (2019) looked into Nigerians' mobile phone purchasing habits in 2019, they found that, in addition to other factors like the phone's shape and brand, the price was the most important factor for students' communities.

Methodology

This research adopted and used quantitative research to meet the work objectives. The exploratory design was also adopted by the researcher to capture the paper's objectives. It provides an opportunity for in-depth exploration of the issue at hand through one-on-one interaction via the filling of questions and subsequent use of various data collected over a set period. This paper's choice of exploratory design enhances, supports, and provides an adequate understanding of the phenomenon (Onimisi, 2020). The study's focus is on Lekki, Lagos State, Nigeria. As of 2021, 14.8 million people live in Lagos, Africa's second-largest city after Kinshasa and Nigeria's most populous metropolis. Lekki is a city in Lagos State in Nigeria. Simple Random Sampling, in which the sample is drawn unit by unit with an equal chance for each unit, was used for this study. It is a method of sampling in which every possible combination of n units from a population of N units has the same chance of being selected. To determine the sample size of the population in this study, the researcher used the Taro-Yamane statistical technique to arrive at 375 respondents. About 375 questionnaires were received, and the samples were randomly selected. The questionnaire has been broken down into five sections: Section A deals with the participants' background information; Section B deals with system quality; Section C deals with the effect of a brand; Section D deals with the price of smartphones; Section E deals with social influence; and Section F deals with the dependent variable of purchase decision. A five-point Likert scale, where (1) Strongly Disagree to (5) Strongly Agree, measures independent variables. However, a five-point Likert scale where 1=no extent to 5= very great extent is used to identify the dependent variables. System quality items were adopted from Efosa & Mahesh (2014), price and social influence were from Engidaw (2020), the brand from Horvath & Birgelen (2015), and purchase decisions were from (Muhammad & Sameen, 2016). A pilot study with thirty randomly selected participants was conducted to determine the questionnaire's reliability. The questionnaire's items have an overall reliability of 0.77 or higher on the research instrument. The data was analysed using SPSS (Statistical Package for Social Science, 2022) utilising multiple regression analysis. From the above discussion, H_o1 was formulated.

H_o1: There is no significant relationship between self-efficacy, media of consumer education, safety priority, subjective norms, and self-protection practices

Finding and Discussion

Table 1 presents the background of the respondents. The descriptive analysis of the respondents regarding gender shows that amongst the total number of 375 respondents, 167, representing 44.5 %, were male, while 208, representing 55.5 %, were female. The findings show that in terms of ethnicity, Yoruba had 46 respondents, a percentage of 12.3, while Hausa had 196 and Igbo 100, with a percentage of 52.3 and 26.7, respectively. The Fulani had 31 respondents of 2%, while the other races had 0.5 %. The income level of the respondents shows that they are in the middle-class income group (34.7%). Half of the respondents have a bachelor's degree (49.6%), followed by high school (21.5%).

Table 1

Demographic background of respondents

Variable	Respondent Information	Frequency n=400	Percentage (%)
Gender	Male	167	44.5
	Female	208	55.5
Race	Yoruba	46	12.3
	Hausa	196	52.3
	Igbo	100	26.7
	Fulani	31	8.3
	Others	2	0.5
Education	High School	79	21.1
	Diploma	62	16.5
	Bachelor's Degree	186	49.6
	Masters/PHD	48	13.3
Income Level	Below N18800	12	3.2
	N18800- N28000	73	19.5
	N28001- N38000	130	34.7
	N38001- N47000	56	14.9
	Above N47001	83	22.1

The mean values of all the variables in this study, which range from 2.47 to 3.34, are shown in Table 2. Conversely, the price had the highest mean score (3.34) and the lowest standard deviation (0.51). System quality (M=3.33) with a standard deviation of 0.69 came next. The brand later produced the third score, with a mean of 2.92 points and a standard deviation of 0.59 points. The social impact got the minimal mean score (M=2.47) with a standard deviation 0.41. The reliant variable of the buy choice shows a mean score of 3.55. The results indicate a moderate purchase decision. This indicates that the mean values of all the variables in this study range from 2.47 to 3.34. Furthermore, the price yielded the highest mean score (3.34) with a standard deviation 0.51. This was followed by system quality (M=3.33) with a standard deviation of 0.69. Later, the brand generated the third score with a mean (2.92) and a standard deviation of 0.59. The social influence obtained the lowest mean score (M=2.47) with a standard deviation of 0.41. The dependent variable of the purchase decision shows a mean score of 3.55. The findings show that the purchase decision is moderate.

Table 2
Descriptive analysis of the variables

Variable	Mean Score	Standard Deviation
System quality	3.33	0.69
Brand	2.92	0.59
Social influence	2.47	0.41
Price	3.34	0.51

Note: Scale range 1-5

Results from multiple linear regression analysis are shown in Table 3, indicating the most important purchase decision predictor. Using multiple regression analysis, researchers evaluated the strength of the relationship between an outcome (the dependent variable) and several predictor variables and the significance of each predictor to the relationship. The first set of analyses examined the significant regression equation (F(71.961) = 22.096, *p* = .000) with an adjusted R^2 of .162. Only 16.2% of the model can explain the purchase decision. The model is also found to be significant (p<0.01); thus, the $H_0 1$ is rejected. Among the four variables, the system quality (β=0.351, p=0.000), the brand factor (β=0.149, p=0.005) and the price factor (β=0.285, p=0.000) were found to be significant predictors of purchase decision. This study's result is aligned with the previous study by Olaleye et al. (2019) and Duy & Trang (2018), which states that system quality influences consumers to purchase smartphones. It also supports the outcome of a previous study by Diputra & Yasa (2021); Rakib et al (2022); Appiah et al (2019) that brand influences the decision-making to buy smartphones. The finding of this study also implies that price positively influences the decision to purchase smartphones which supports the past literature such as (Nilagiri & Govindaraj, 2021; Tanveer et al., 2021). However, social influence (β=-.064, p=0.404) did not influence the purchase decision. The result is consistent with a study by Adekunle, Adewale, & Boyinbode (2019), stating that social influence does not influence the purchase decision to buy smartphones. However, the result was inconsistent with studies by Chopdar & Prodanova (2022); Shabrin et al (2017) stated that social influence the decision to purchase smartphones.

Table 3
Purchase Decision Factors

Variables	Unstandardized Coefficients (B)	Standardized Coefficients Beta	t	Sig.
(Constant)	2.382		16.936	0.000
System quality	.351	.402	8.483	0.000*
Brand	.149	.144	2.816	0.005*
Social influence	-.064	-.043	-.835	0.404
Price	.285	.241	4.801	0.000*

R=0.426; R^2=0.524; Adjusted R^2= 0.162; F=71.961; Sig. F=.000; *p<0.01

Implication of Study
The findings from this study have theoretical and methodological contributions and implications. This includes supporting the Howard-Sheth model by indicating a significant relationship between the chosen stimuli, such as quality, brand, and price and the consumers' purchasing decision. Nevertheless, social influence is not a predictor, which shows that in

Nigeria, regarding smartphone purchasing, peers, family and friends will not influence them. This may be because different people may have different needs for smartphones. Furthermore, the findings from this study will contribute to the body of knowledge as it will serve as reference material or guide for those that will embark on research in related fields of study. Since it is a quantitative method, the instruments can benefit other researchers who want to conduct consumer research.

Conclusion and Recommendation

This study found that the most critical factors in allowing Nigerians to select and purchase their preferred smartphone were system quality, brand image and price. The buyers of smartphones in Lagos are considerate individuals interested in purchasing smartphones of high quality and trending brands, not minding the price range. It is imperative to note that poor features and quality of smartphones discourage smartphone buyers, thus, necessitating a negative influence on the purchase. People have become aware of high-brand-image mobile phones with advanced features, extensive storage, a long battery life, and stylish looks. Consequently, it assists them in avoiding smartphones with poor features, quality, and dissonance after purchase. It is important to note that the results of this study will give mobile phone manufacturers and marketers a new set of marketing dynamics, especially for markets in South Asia like Nigeria, which will account for a significant portion of these businesses' revenue. Lagos people will also make their decision regarding purchasing and will not be influenced by social pressure, such as their peers. The findings may also provide indicators for supporting smartphone marketers' operations and strategic marketing plans while maximising resource utilisation. Additionally, this study's findings give academics and researchers a solid understanding they can apply to their current and future research.

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