DETERMINANTS OF CONSUMER PURCHASE BEHAVIOR TOWARDS FAIRLY-USED SMARTPHONES AMONG NIGERIAN UNIVERSITY STUDENTS

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ABSTRACT: *The study examined the determinants of consumer purchase behaviour towards fairly-used smartphones among Nigerian University students. It sought to determine the effects of product price, socio-economic status, product quality, brand attributes and sellers' credibility on students' purchase behaviour towards fairly-used smartphones. Cross-sectional survey research design was adopted to guide the collection of primary data from 357 undergraduates through a structured questionnaire. Descriptive statistics were applied for data analysis and interpretation, while the hypotheses developed for the study were tested using multiple linear regression. The findings of the study revealed that in order of relative importance, sellers' credibility, product quality, product price, brand attributes and consumers' socio-economic status had significant positive effects on students' purchase behaviour towards smartphones in a university context. On this basis, we recommended that marketers of fairly-used smartphones should align prices with product quality, consider socio-economic factors when targeting students, and prioritize consistent delivery of high-quality standards, including phone age, ease of repairability, and functionality, to enhance appeal and attract increased patronage. From the limitations of this study, we proposed theoretical directions for future research.*

KEYWORDS: Consumer buying behaviour, Price, Product quality, Consumer socio-economic status, Sellers' credibility, Brand attributes

INTRODUCTION

In recent years, the rapid advancement of technology has led to a constant stream of new smartphone models flooding the market. As a result, many consumers are drawn towards the allure of the latest and most advanced devices (Gandhi, 2019). However, an alternative option that is gaining popularity is the purchase of fairly-used smartphones (Ugwuoke & Eze, 2023). Fairly-used smartphones, also known as refurbished or pre-owned smartphones, are devices that have been previously owned but have undergone a rigorous reconditioning process to ensure their functionality and quality (Consumer Electronics Association, 2021). According to Asheolge (2022), the Nigerian smartphones market is dominated by fairly-used smartphones, popularly known as UK-used phones, which are bought by many consumers because of discounted prices. In a country with over 71 million people facing poverty (Eromosele, 2023), being able to afford brand-new mobile gadgets is a privilege. iPhones are popular in Nigeria for being a marker of wealth and class, two things that set one apart from the average Nigerian (Gbenga, 2023). Although there are about 170 million mobile subscriptions in the country, only about 10–20 percent of the population currently uses a smartphone (Taylor, 2023). Of this number, Android users make up the majority with 85 percent while only about 10.36 percent use iPhones, according to a recent report by Statista (Taylor, 2023). However, the bulk of smartphones such as iPhones used in Nigeria are pre-owned, as this is still what most people can afford (Asheolge, 2022). The brand-new iPhone 12 costs over ₦400,000 for the 64GB model, which is more than the average Nigeria's annual salary and 13 times the minimum wage. This is why Nigeria has witnessed a significant surge in the popularity of fairly-used smartphones across the country. This phenomenon can be attributed to a combination of economic factors, technological advancements, and the inherent benefits that these devices offer to a substantial portion of the population (Onyemachi, 2022). Fairly-used smartphones have become a symbol of accessibility and technological empowerment for Nigerians who cannot afford brand new phones, bridging the digital divide and enabling connectivity and productivity.

In the same vein, Gbenga (2023) maintained that fairly-used smartphones hold several key benefits for economically disadvantaged Nigerians who are unable to afford brand new phones. These devices provide a gateway to digital inclusion, which fosters social interactions, enabling people to communicate with family and friends both within Nigeria and internationally. Also, Adepetun (2022) observed that fairly-used smartphones contribute to increased productivity and economic participation. Many Nigerians rely on informal businesses and micro-enterprises to make a living. These smartphones offer tools for digital payment systems, online marketplaces, and communication channels that can bolster their business operations. That notwithstanding, in the Nigerian context, the factors influencing consumers' purchase behavior towards fairly-used smartphones in Nigeria have not received adequate research attention. Prior to this study, a preliminary scoping review of some extant relevant studies was carried out to understand the scope of existing studies in Nigeria. The review revealed that most Nigerian studies on factors affecting consumer purchase behavior were on objects other than fairly-used smartphones, signifying the existence of an evidence gap in extant literature. This implies that there is an acute shortage of relevant empirical evidence that definitively identifies the major factors capable of influencing consumers' purchase behavior towards fairly-used smartphones among Nigerian students. As a consequence, sellers of fairly-used smartphones in Nigeria may not have adequate reliable empirical information to enlighten them on the factors potentially affecting students' patronage of their products among university students.

Against this study gap, this study adopted variables from relevant extant studies from other geographical climes that explain the factors affecting consumer purchase behavior towards fairly-used phones in their contexts. These variables include: product price (Kwamboka & Kiiru, 2022; Agyekum & Boateng, 2019; Kendrick & Amara, 2023), consumers' socio-economic status (Kwamboka & Kiiru, 2022; Liu & Xu, 2017), product quality (Agyekum & Boateng, 2019; Liu & Xu, 2017; Kendrick & Amara, 2023), brand attributes (Kwamboka & Kiiru, 2022; Kendrick & Amara, 2023), and sellers' credibility (Agyekum & Boateng, 2019; Liu & Xu, 2017). This study is necessary to generate substantive empirical evidence to explain the key factors that consumers consider in their decision to whether or not purchase fairly-used smartphones in Nigerian educational institutions. With such empirical evidence, the existing literature gap identified can be bridged and sellers of fairly-used smartphones in Nigeria can design effective marketing strategies to better influence consumers to purchase their products amidst competition from brand-new phones. Therefore, this study was conducted to determine the effects of product price, consumers' socio-economic status, product quality, brand attributes and sellers' credibility on university students' purchase behavior towards fairly-used smartphones in Nigeria.

LITERATURE REVIEW

Consumer Purchase Behaviour

Consumers' buying behavior is a complex phenomenon that has been studied extensively by marketing researchers and practitioners. At its core, consumers' buying behavior refers to the actions and decisions that individuals make when purchasing goods or services (Wang et al., 2018). This includes the process of identifying a need or desire, evaluating options, making a decision, and ultimately, purchasing the chosen item. Understanding consumers' buying behavior is crucial for businesses looking to thrive in today's competitive market, as it provides insight into what motivates individuals to make purchasing decisions. Knowledge of consumers' buying behavior is crucial, because it enables businesses to develop targeted marketing campaigns that resonate with their target audience (Kromah et al., 2019). By understanding consumers' needs, preferences, and behaviors, businesses can tailor their messaging and offerings to meet the needs of their customers. This can result in increased sales and customer loyalty. Similarly, Osman et al. (2019) maintained that understanding consumers' buying behavior helps businesses to identify and address barriers to purchase. Moreover, analyzing consumers' buying behavior can help businesses to improve their products and services (Njoroge & Githunguri, 2021). By gathering feedback from customers, businesses can identify areas for improvement and make changes to ensure customer satisfaction.

In the views of Wu et al. (2022), consumers' buying behavior is influenced by key internal and external factors. Internal factors refer to the individual characteristics of the consumer, such as their personality, values, and lifestyle. For example, a consumer who values environmental sustainability may be more inclined to purchase products that are eco-friendly. External factors refer to the broader social and cultural context in which the consumer operates. These can include factors such as culture, social class, and reference groups. For example, a consumer may choose to purchase a certain brand of clothing because it is associated with a particular social group to which they belong. Other important external factors that can influence consumers' buying behavior include marketing and advertising, economic conditions, and technology (Kumar et al., 2017). Marketing and advertising campaigns can play a significant

role in shaping consumers' perceptions of products and services, as well as influencing their purchasing decisions. Economic conditions, such as inflation and unemployment, can affect consumers' disposable income, which in turn impacts their ability to purchase goods and services. Finally, technology can also have a significant impact on consumers' buying behavior. The rise of e-commerce and mobile devices has made it easier than ever for consumers to research, compare, and purchase products, which has major implications for businesses (Raza et al., 2023).

Product Price and Students' Buying Behaviour

Product price is the amount of money a consumer pays in exchange for a product or service (Kotler & Keller, 2016). It is the perceived value that consumers attach to a product based on their willingness to pay or what they feel the product is worth (Simonson et al., 2011). According to Burrow and Bosiljevac (2017) price refers to the monetary value that is assigned to it in exchange for goods, services, or other considerations. It represents the amount of money a buyer is required to pay in order to acquire the product. In the views of Namuleme and Ssewanyana (2023), product price is a crucial factor in influencing consumers' purchase behavior of fairly-used smartphones. This is because consumers pay close attention to the price of a product when deciding whether or not to purchase it. In many cases, the price of a used smartphone is significantly lower than that of a new one, making it an attractive option for budget-conscious consumers (Rizwan et al., 2020). Another way that price can influence purchasing behavior is through its impact on perceived value (Kashion et al., 2019). Consumers may be willing to pay more for a used smartphone if they perceive it to have a higher value. For example, if the used phone has been well-maintained and comes with additional accessories, such as a case or screen protector, consumers may be more willing to pay a higher price (Rizwan et al., 2020). The foregoing viewpoint suggests that product price is an important factor that has the capacity to significantly influence consumers' purchase behavior towards fairly-used smartphones. This viewpoint is backed by the study of Kwamboka and Kiiru (2022) which revealed that product price had a significant influence on consumer behavior towards second-hand smartphones in Kenya. Similarly, the viewpoint is corroborated by the study of Kendrick and Amara (2023), which revealed that product price had a significant relationship with consumer purchase behavior towards used smartphones in Liberia. On this basis, we propose the following hypothesis:

H_1: *Product price has a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.*

Socio-economic Status and Students' Buying Behaviour

Socioeconomic status (SES) refers to an individual or household's standing in society and includes factors such as income, education, and occupation (Grier & Deshpandé, 2019). It is a composite of factors that include income, education, and occupational prestige, and is used to represent an individual's relative standing in society (Shankar & Balasubramanian, 2015). According to Liu and Yang (2017), socioeconomic status refers to the social and economic characteristics of individuals or households, such as education, occupation, income, and wealth, that influence their social position in society. Consumers' socioeconomic status has been found to influence their purchase behavior of fairly-used smartphones. Consumers with a higher educational level may be more willing to invest in a new smartphone due to greater knowledge of the technology and desire for the latest features and functionalities. However, those with a lower educational level may prefer to purchase a fairly-used smartphone due to

limited knowledge of or access to new technology. Moreover, occupation plays a vital role in influencing consumers' purchase behavior of fairly-used smartphones (Liu & Yang, 2017). Occupations that require the use of a smartphone as a work tool, such as marketing or graphic design, may require a higher specification device which may be outside a lower-income salary range. Workers with lower-paid jobs may therefore be more likely to opt for a fairly-used smartphone. The foregoing viewpoint suggests that consumers' socio-economic status is an important factor that has the capacity to significantly influence consumers' purchase behavior towards fairly-used smartphones. This viewpoint is backed by the study of Kwamboka and Kiiru (2022), which revealed that consumers' socio-economic status had a significant influence on consumer behavior towards second-hand smartphones in Kenya. The viewpoint also corresponds with the study of Takele and Mezgebo (2021), which revealed that consumers' socio-economic status had a significant effect on consumer behavior towards second-hand smartphones in Ethiopia. On this basis, we propose the following hypothesis:

H_2: *Socio-economic status has a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.*

Product Quality and Students' Buying Behaviour

Product quality refers to the ability of a product to meet or exceed customer expectations and comply with industry standards (Adomako et al., 2021). It is the degree to which a product meets its intended purpose or specifications. Juran and Gryna (2017) define product quality as the totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs. According to Mwita et al. (2017), product quality refers to the overall characteristics, features, and attributes of a product that determine its ability to satisfy customer needs and expectations. It encompasses various aspects of a product's performance, durability, reliability, safety, aesthetics, and functionality. In the views of Wang et al. (2018), product quality plays a vital role in influencing consumers' purchase behavior, especially in the case of fairly-used smartphones. Fairly-used smartphones have become increasingly popular, especially in the African market, due to their affordability and accessibility (Girma, 2018). Consumers who opt for fairly-used smartphones expect to get a product that meets their basic needs, such as functionality, durability, reliability, and performance, at a lower cost than a new product. Therefore, the quality of the product is a critical factor that influences consumers' purchase behavior when buying fairly-used smartphones (Kromah et al., 2019). Similarly, Higgs (2020) argued that an important factor that consumers consider when purchasing a used smartphone is the condition of the product. The foregoing viewpoint suggests that product quality is an important factor that has the capacity to significantly influence consumers' purchase behavior towards fairly-used smartphones. This viewpoint is backed by the study of Agyekum and Boateng (2019), which revealed that product quality had a significant impact on consumer purchase behavior towards used smartphones in Ghana. The viewpoint is also in line with the study of Liu and Xu (2017), which revealed that phone quality had a significant impact on consumer purchasing behavior of second-hand smartphones in China. On this basis, we propose the following hypothesis:

H_3: *Product quality has a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.*

Brand Attributes and Students' Buying Behaviour

Brand attributes refer to the unique qualities and characteristics that identify and differentiate a brand from its competitors (Osman et al., 2019). It includes physical features, design elements, packaging, and visual identity that are associated with the brand. Brand attributes also include the emotional and psychological associations that consumers make with a brand. These associations include the brand's personality, values, and positioning in the market (Njoroge et al., 2021). Consumers evaluate various attributes of different brands before making a purchase decision. According to Motamedi et al. (2019), brand attributes can influence consumers' perceptions of product quality, value for money, and overall satisfaction with the product. One of the critical attributes that influences consumers' purchase behavior of fairly-used smartphones is brand reputation (Raza et al., 2023). A brand with a good reputation for producing quality smartphones is likely to be preferred by consumers over a brand that has a poor reputation for producing low-quality smartphones. According to Li and Chen (2019), consumers often rely on brand reputation as an indicator of product quality and reliability. Therefore, consumers are more willing to pay a premium price for a smartphone that has a good brand reputation even if it is a fairly-used phone. Another attribute that influences consumers' purchase behavior of fairly-used smartphones is brand loyalty (Nakabugo & Kasekende, 2020). Consumers who are loyal to a particular brand are more likely to purchase the brand's smartphones regardless of whether it is a new or fairly-used phone. According to Hong and Kim (2018), consumers who have a strong emotional attachment to a brand are willing to overlook minor defects in a product and purchase it because of their loyalty to the brand. Similarly, product features and design are also essential attributes that influence consumers' purchase behavior of fairly-used smartphones (Kumar et al., 2017). The foregoing viewpoint suggests that brand attributes are important factors that have the capacity to significantly influence consumers' purchase behavior towards fairly-used smartphones. This viewpoint is backed by the study of Kendrick and Amara (2023), which revealed that brand attributes had a significant relationship with consumer purchase behavior towards used smartphones in Liberia. The viewpoint also corresponds with the study of Takele and Mezgebo (2021), which revealed that brand attributes had a significant effect on consumer behavior towards second-hand smartphones in Ethiopia. On this basis, we propose the following hypothesis:

H4: Brand attributes have a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.

Sellers' Credibility and Students' Buying Behaviour

Seller's credibility refers to the level of trustworthiness and expertise that consumers associate with the seller based on their past experiences, feedback and reputation in the market (Lee et al., 2018). It is the perceptual construct by which consumers evaluate the reliability, sincerity, and competency of a seller. Fukukawa and Moon (2018) also defined a seller's credibility as the degree to which consumers perceive the seller to be knowledgeable, trustworthy, and responsible, based on the seller's behavior during the transaction. In the view of Choi and La (2013), sellers' credibility plays a crucial role in shaping consumers' purchase behavior, especially in the case of fairly-used smartphones. This is because when consumers purchase a second-hand smartphone from a seller, they are investing their money and trust in the seller. The credibility of the seller becomes a key element in the decision-making process, and consumers engage in a cognitive evaluation of the seller's reputation, expertise, and honesty before making a purchase decision. Also, research has established that consumers are more

likely to trust and purchase from sellers with a higher level of credibility (Lee et al., 2018). In the case of fairly-used smartphones, consumers look for sellers who have a good track record of selling quality and genuine products, offer a transparent pricing model, and have a reputable online presence (Ma et al., 2017). Additionally, sellers' credibility influences the perceived risk associated with the purchase of a fairly-used smartphone (Geref et al., 2015). Consumers perceive the risk of purchasing a second-hand smartphone to be higher than that of a new smartphone due to the possibility of hidden defects or a shorter lifespan (Solomon & Lennon, 2017). However, if the seller has a high level of credibility, consumers may perceive the risk to be lower and feel more confident about making the purchase (Ma et al., 2017). The foregoing viewpoint suggests that Sellers' credibility is an important factor that has the capacity to significantly influence consumers' purchase behavior towards fairly-used smartphones. This viewpoint is backed by the study of Agyekum and Boateng (2019), which revealed that Sellers' credibility had a significant impact on consumer purchase behavior towards used smartphones in Ghana. The viewpoint is also backed by the study of Liu and Xu (2017), which revealed that seller's reputation had a significant impact on consumer purchasing behavior of second-hand smartphones in China. On this basis, we propose the following hypothesis:

H_5: *Sellers' credibility has a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.*

Theoretical Framework

This study is hinged on the perceived value theory, developed by Zeithaml (1988) and later expanded by Woodruff (1997). The perceived value theory emerged within the realm of marketing and consumer behavior as an attempt to understand the factors that influence customers' decisions and evaluations. At its core, the theory posits that consumers form judgments about a product's value by comparing the benefits they expect to receive with the costs they anticipate, both monetary and non-monetary (Zeithaml, 1988). The theory emphasizes that perceived value is not solely based on objective attributes, but rather on the customer's subjective interpretation of those attributes. This means that the same product can hold different perceived values for different individuals based on their unique preferences, experiences, and situational factors. The relevance of the perceived value theory to this study is that it can play an immense role in explaining how individuals evaluate and make decisions regarding the products they intend to purchase. The theory suggests that consumers base their purchase decisions on the perceived benefits and costs associated with a product or service. In the context of this study, the perceived value theory becomes highly relevant as it provides a comprehensive framework to analyze the intricacies of consumers' purchase behavior towards fairly-used smartphones. It offers valuable insights into how students perceive and assess the value proposition of such fairly-used smartphones. Specifically, the theory identifies two main components that influence perceived value: perceived benefits and perceived costs. Perceived benefits encompass the functional, emotional, and social advantages that consumers believe a product offers. For students, the theory suggests that fairly-used smartphones might present cost savings, environmental consciousness, and access to trendy technology. Additionally, the theory suggests that students' assessment of the value they will receive from owning and using the smartphone will greatly impact their decision-making. If they perceive the benefits to outweigh the costs, the theory suggests that they are more likely to express a positive purchase intention, which could eventually translate into an actual purchase.

Empirical Review and Model Conceptualization

Ayodele and Ifeanyichukwu (2016) examined the determinants of smartphone purchase behavior among young adults in Anambra State, Nigeria. In the study, primary data were obtained from 437 respondents in Anambra State using a structured questionnaire. The hypotheses were tested using multiple regression methods. The findings revealed that brand name, product feature, aesthetic value, price, and social influence had significant influences on the smartphone purchase behavior of young adults in Anambra State. However, the limitation of the study is that it was limited to only brand-new smartphones, with no emphasis on fairly-used ones in Nigeria. Olise et al. (2015) examined the factors influencing customers' patronage of fast-food restaurants in Anambra State. The study obtained primary data from 240 customers of selected fast-food restaurants in Anambra State. The data obtained were analyzed using descriptive statistics and multiple regression analysis. The findings of the study revealed that service quality, atmospheric quality, perceived value, environment, consumer demographics and modernity were significant factors influencing the behavior of customers towards patronizing fast-food restaurants in Anambra State. However, the study was restricted to fast-food restaurants with no reference to fairly-used smartphones in Nigeria.

Alao et al. also (2020) examined the factors affecting customers' repeat patronage in Southwest Nigerian fast-food restaurants. Primary data were obtained from 600 customers of selected fast-food restaurants in Lagos State, Nigeria using a structured questionnaire. The data obtained from the questionnaire survey were analyzed using descriptive statistics. The findings of the study revealed that the factors enhancing customers' repeat patronage of fast-food restaurants in Southwest Nigeria were food quality, restaurant location, and convenience of reach as well as a secured environment. However, the limitation of this study is that it was restricted to fast-food restaurants with no reference to fairly-used smartphones in Nigeria. Abiola-oke's (2023) study was an assessment of factors influencing customers patronage in hotels with reference to Eko Hotels and Suites. The study used a structured questionnaire to obtain primary data from 100 customers of Eko Hotels and Suites in Lagos. The data obtained were analyzed and tested using Chi-square (X^2) statistics. The findings indicate that customer satisfaction, staff performance, and hotel recommendation had a significant impact on the patronage of hotels in Nigeria. However, the limitation of this study is that it was restricted to hotels with no reference to fairly-used smartphones in Nigeria.

A similar study by Agyekum and Boateng (2019) determined the impacts of product quality, sellers' credibility and product price on consumer purchase behavior towards used smartphones in Ghana. The study obtained primary data from 511 university undergraduates in Kumasi and Accra towns using a structured questionnaire. The data obtained were analyzed using descriptive statistics and simple regression. The findings revealed that product quality, sellers' credibility and product price had significant impacts on consumer purchase behavior towards used smartphones in Ghana. However, the limitation of the study is that it was restricted geographically to the Ghanaian context, with no emphasis on the factors affecting fairly-used smartphones in Nigeria. Also, Kwamboka and Kiiru (2022) explored the influences of consumers' socio-economic status, brand attributes and product price on consumer behavior towards second-hand smartphones in Kenya. The study used a 5-point Likert scale questionnaire to obtain primary data from 271 users of smartphones in Nairobi. The data were descriptively analyzed, while regression analysis was used for hypothesis testing. The findings indicate that consumers' socio-economic status, brand attributes and product price had significant influences on consumer behavior towards second-hand smartphones in Kenya.

However, the limitation of the study is that it was restricted geographically to the Kenyan context, with no emphasis on the factors affecting fairly-used smartphones in Nigeria.

In another study, Liu and Xu (2017) examined the impacts of phone quality, consumer socio-economic status, and seller's reputation on consumer purchasing behavior of second-hand smartphones in China. The study used an online questionnaire survey to obtain primary data from 458 mobile phone users in Shanghai, China. Descriptive statistics and regression analysis were adopted for data analysis and hypothesis testing respectively. Subsequently, the results indicate that phone quality, consumer socio-economic status, and seller's reputation had significant impacts on consumer purchasing behavior of second-hand smartphones in China. However, the limitation of the study is that it was restricted geographically to the Chinese context, with no emphasis on the factors affecting fairly-used smartphones in Nigeria. Furthermore, Kendrick and Amara (2023) examined the relationship between marketing factors (brand attributes, product price and product quality) and consumer purchase behavior towards used smartphones in Liberia. The study used a structured questionnaire to obtain primary data from 315 young smartphone users in Liberia. The data were descriptively analyzed and interpreted while hypothesis testing was done using Pearson's product moment correlation analysis. The findings revealed that brand attributes, product price and product quality had significant relationships with consumer purchase behavior towards used smartphones in Liberia. However, the limitation of the study is that it was restricted geographically to the Liberian context, with no emphasis on the factors affecting fairly-used smartphones in Nigeria.

In a similar study, Takele and Mezgebo (2021) determined the effects of consumers' socio-economic status and brand attributes on consumer behavior towards second-hand smartphones in Ethiopia. The study used an online questionnaire survey to obtain primary data from 482 smartphone users in Addis Ababa. The data were descriptively analyzed while the hypotheses of the study were tested using structural equation modeling. The results revealed that consumers' socio-economic status and brand attributes had significant effects on consumer behavior towards second-hand smartphones in Ethiopia. However, the limitation of the study is that it was restricted geographically to the Ethiopian context, with no emphasis on the factors affecting fairly-used smartphones in Nigeria. Informed by a review of existing relevant literature (Kwamboka & Kiiru, 2022; Agyekum & Boateng, 2019; Kendrick & Amara, 2023; Liu & Xu, 2017), this study adopted product price, consumers' socio-economic status, product quality, brand attributes and sellers' credibility as the independent variables. The dependent variable (consumers' purchase behavior) was measured through the following adapted proxies: consumers' attitude, consumers' preference, and consumers' patronage (Jain et al., 2017). In light of existing empirical evidence by previous researchers, this study hypothesized that these independent variables (product price, consumers' socio-economic status, product quality, brand attributes and sellers' credibility) have some sort of relationship with consumers' purchase behavior towards fairly-used smartphones among students in the University of Calabar, Nigeria. To demonstrate this hypothesized relationship, a conceptual model in FIG. 1 was adapted from existing studies to suit the context of the present study.
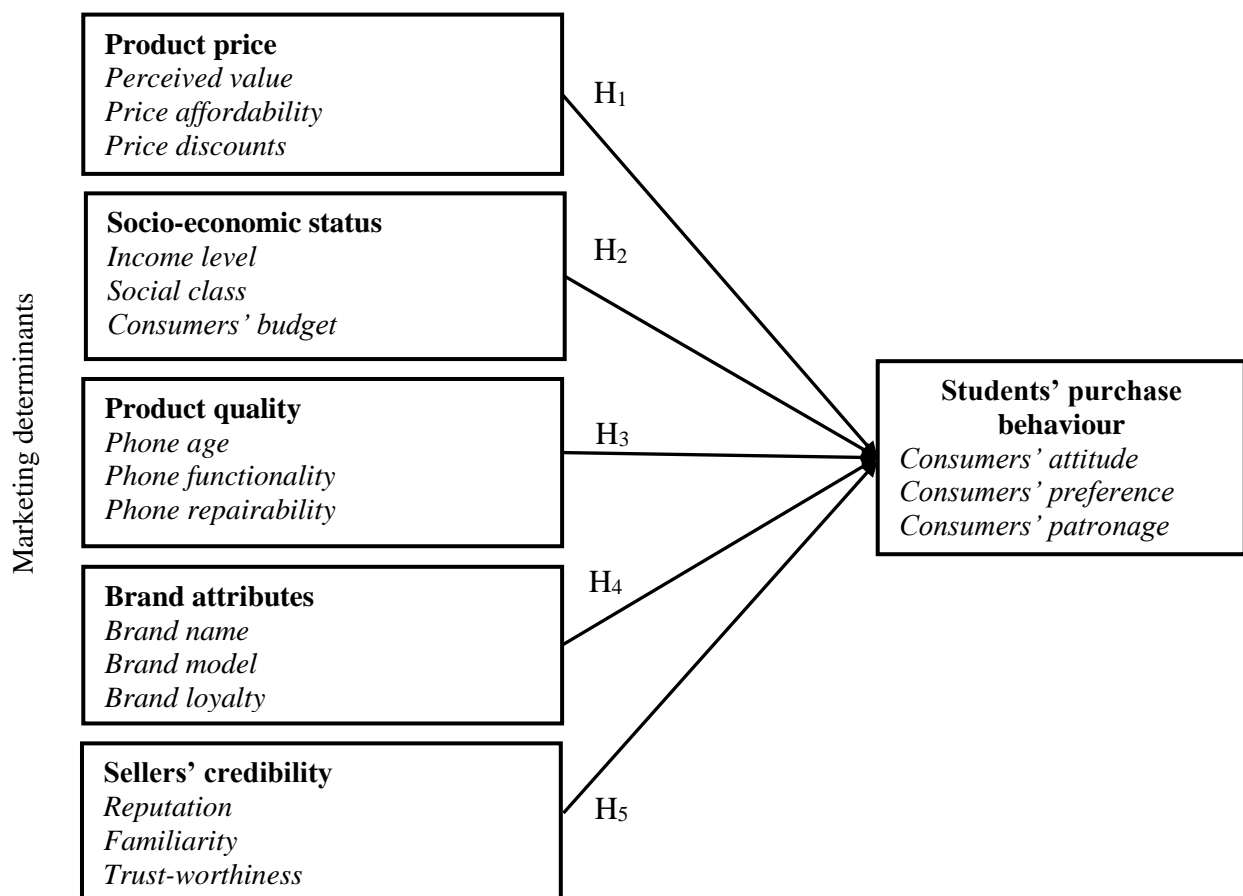
Fig. 1: Conceptual Model of the Study

Source: Parameters of independent variables adapted from Kwamboka and Kiiru (2022); Agyekum and Boateng (2019); Kendrick and Amara (2023); Liu and Xu (2017). Parameters of dependent variable adapted from Jain et al. (2017)

METHODOLOGY

Research Design

This study adopted cross sectional survey research design by using a structured questionnaire to obtain data from undergraduate students of the University of Calabar, Cross River State. In applying cross-sectional survey research design, the data-collection procedure was not repeated over an extended period of time. Instead, data were obtained from respondents on a one-time basis within a short period of time, thereby minimizing time and effort involved in data collection.

Study Population and Sample Size

The target population of this study comprised all undergraduate students of the University of Calabar, Nigeria. According to information from Independent Nigeria, the University of Calabar has 43,500 undergraduate students in the 2021/2022 academic year (Yusuf, 2023). The

study chose to target students of the University of Calabar because the purpose of the study was to determine the factors affecting consumers' purchase behavior towards fairly-used smartphones among students in the University of Calabar, Nigeria. The sample size adopted for the study was obtained by applying the Taro Yamane sample size determination method using the following formula:

$$n = \frac{N}{1+N(e)^2}$$

Where:

n   =   Sample size required

N   =   Finite population (43,500)

I   =   Constant

e   =   Margin of Error (5%)

By simple substitution,

$$n = \frac{43,500}{1+43,500(0.05)^2}$$

$$= \frac{43,500}{1+43,500(0.0025)}$$

$$= \frac{43,500}{1+108.75}$$

$$= \frac{43,500}{109.75}$$

$$= 396.35$$

∴ n = 396 students approximately

Sampling Procedure

This study adopted stratified random sampling and convenience sampling techniques to select students to participate in the survey. The population of the study (students of the University of Calabar) was divided into 5 major mutually exclusive strata comprising: Faculty of Management Sciences, Faculty of Law, Faculty of Arts, Faculty of Social Sciences and Faculty of Basic Medical Sciences. Using convenience sampling, the researcher selected 2 departments each from the 5 faculties from which undergraduate students were selected as shown in the table below:

Table 1: Sampling procedure

Faculties	Departments Selected	Students surveyed
Management Sciences	Marketing	66
	Banking & Finance	30
Arts	English	30
	History & International Studies	30
Law	Commercial & Industrial Law	30

	Public Law	30
Social Sciences	Economics	45
	Sociology	45
Basic Medical Sciences	Pharmacology	45
	Human Anatomy	45
		396

Sources and Method of Data Collection

This study was based on primary data obtained from students of the University of Calabar, Nigeria with the aid of a structured questionnaire. The data were obtained from respondents by a 5-member team of enumerators in order to ensure safe administration and retrieval of the questionnaire. This team accompanied the researcher to the selected faculties on campus of the university, where they assisted in questionnaire administration and retrieval. All potential respondents were briefed on the subject and aims of the study and asked to consent to the survey before being given questionnaire copies by the research enumerators. The questionnaire was administered to respondents in print form and respondents had the options of returning them on the spot or scanning them to send to the enumerators via email or WhatsApp. This was done to provide greater latitude of convenience to respondents and to provide the enough space to rationally respond to the questionnaire statements without undue pressure from enumerators.

To obtain primary data for the study, the researcher used a 5-point Likert scale questionnaire adapted from existing studies. The instrument comprised two sections, namely: Section A (which collected data on respondents' demographic characteristics such as age, gender, and faculties) and Section B (which contained statements adapted from existing studies to measure the variables of the study). On the questionnaire, the parameters measuring factors affecting consumers' purchase behavior (product price, consumers' socio-economic status, product quality, brand attributes and sellers' credibility) were adapted from Kwamboka and Kiiru (2022), Agyekum and Boateng (2019), Kendrick and Amara (2023), and Liu and Xu (2017). Similarly, the parameters measuring consumers' purchase behavior (consumers' attitude, consumers' preference and consumers' patronage) were adapted from Jain et al. (2017). Furthermore, the opinions of respondents were measured on the following 5-point Likert scale: Strongly Agree (SA = 5 points), Agree (A = 4 points), Undecided (U = 3 points), Disagree (D = 2 points) and Strongly Disagree (SD = 1 point).

Validity and Reliability Tests

The validity status of the research questionnaire was confirmed through authority vetting. The instrument was submitted to selected lecturers in the Department of Marketing, University of Calabar for perusal and adjustments, where necessary. Subsequently, the instrument was submitted to the project supervisor for perusal, amendment and approval. This was to ensure that the instrument was structured in a way that it would effectively measure the variables of the study. On the other hand, the instrument of the study was confirmed for reliability through the Cronbach alpha reliability procedure. A pilot survey was conducted by administering draft copies of the questionnaire to a random selection of 30 students from the department of Business Management, which was deliberately excluded from the actual survey. This was done to reduce the possibility of respondents' biases due to previous exposure to the questionnaire elements during the actual survey. The selected respondents were debriefed and guided on how to accurately respond to the questionnaire statements to minimize erroneous responses. Subsequently, the data obtained were coded and entered into the Statistical Package for the

Social Sciences (SPSS 23) for reliability analysis. The questionnaire was hence deemed reliable and adopted for the study, because all its measurement scales generated Cronbach's alpha coefficients not less than the benchmark of 0.7 as displayed in Table 2.

Table 2: Summary of Reliability Results

SN	Variables	No. of items	Alpha coefficients
1	Product price	3	.753
2	Socio-economic status	3	.730
3	Product quality	3	.828
4	Brand attributes	3	.804
5	Sellers' credibility	3	.761
6	Students' purchase behavior	3	.729
		18	

Source: Authors' analysis via SPSS 2024

Data Analytical Procedure

Descriptive statistics (simple percentages and frequency tables) were adopted to analyze and interpret the data collected for the study. The five (5) null hypotheses developed for the study were tested using multiple linear regression in the Statistical Package for the Social Sciences (SPSS 23). The regression model stated thus:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Where:

Y =   Dependent variable (students' purchase behavior)

a =   The intercept

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ =   Coefficients of the independent variable

X =   Independent variable (Marketing determinants)

e =   Error margin (5%)

Hence,

X_1 =   Product price

X_2 =   Socio-economic status

X_3 =   Product quality

X_4 =   Brand attributes

X_5 =   Sellers' credibility

ANALYSIS AND DISCUSSION

To obtain data for the study, a total of 396 questionnaire copies were administered to undergraduate students of the University of Calabar, Nigeria. Out of the 396 questionnaire copies administered, 357 copies (or 90.2 percent) were successfully retrieved, while 39 copies (or 9.8 percent) were not returned, therefore resulting in a total response rate of 90.2 percent. Following a multivariate analytical procedure, the null hypotheses developed for the study were tested as follows:

H_1:   Product price has a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.

H_2:   Socio-economic status has a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.

H_3:   Product quality has a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.

H_4:   Brand attributes have a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.

H_5:   Sellers' credibility has a significant effect on students' purchase behavior towards fairly-used smartphones in Nigeria.

Predictors: Product price, socio-economic status, product quality, brand attributes, and sellers' credibility

Outcome: Students' purchase behavior

Decision rule: The null hypothesis is rejected when the P-value is below 0.05 ($p < .05$). Conversely, if the P-value is above 0.05 ($p > .05$), the null hypothesis is accepted

Table 3: Model Summary of the Determinants of Consumer Purchase Behavior towards Fairly-used Smartphones among Nigerian University Students

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.622[a]	.386	.378	.45801

a. Predictors: (Constant), Product price, socio-economic status, product quality, brand attributes, and sellers' credibility

Source: *Authors' calculations via SPSS (2024)*

Table 4: ANOVA[a] of the Determinants of Consumer Purchase Behavior towards Fairly-used Smartphones among Nigerian University Students

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	46.341	5	9.268	44.182	.000[b]
	Residual	73.632	351	.210		
	Total	119.973	356			

a. Dependent Variable: Students' purchase behavior

b. Predictors: (Constant), Product price, socio-economic status, product quality, brand attributes, and sellers' credibility

Source: Authors' calculations via SPSS (2024)

Table 5: Coefficients of the Determinants of Consumer Purchase Behavior towards Fairly-used Smartphones among Nigerian University Students

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	1.485	.110		13.480	.000		
Product price	.109	.031	.369	3.508	.001	.754	1.327
Socio-economic status	.188	.039	.266	4.807	.000	.572	1.747
Product quality	.199	.037	.428	5.342	.000	.463	2.160
Brand attributes	.163	.032	.309	5.021	.000	.463	2.159
Sellers' credibility	.185	.043	.529	4.286	.000	.611	1.637

a. Dependent Variable: Students' purchase behavior

Source: *Authors' calculations via SPSS (2024)*

Interpretation

The results on Tables 3, 4 and 5 demonstrate the effect of marketing determinants on students' purchase behavior towards fairly-used smartphones in Nigeria. The correlation coefficient (R = 0.622) in Table 3 reveals that the relationship between marketing determinants and students' purchase behavior towards fairly-used smartphones in Nigeria is 62.2 percent. This indicates a very high degree of relationship between the variables in the context of the study. The coefficient of determination ($R^2 = 0.386$) indicates that marketing factors account for up to 38.6 percent of the variation in students' purchase behavior towards fairly-used smartphones. This implies that if other factors remain unchanged, marketing determinants will affect students' purchase behavior towards fairly-used smartphones in Nigeria by up to 38.6 percent. Given that F= 44.182 and p= 0.000, as shown in Table 4, it indicates that the effect of marketing determinants on students' purchase behavior towards fairly-used smartphones in Nigeria is statistically significant.

Furthermore, the collinearity statistics presented in Table 5 indicate that the variables were devoid of multicollinearity because the tolerance values generated exceeded 0.1 and the Variance Inflation Factors (VIF) generated were not greater than 5. This entails that the multicollinearity condition of regression analysis has been met under this circumstance (Ringle et al., 2015). Also, from the standardized coefficients column in Table 5, it has been revealed that with a beta coefficient of 0.529 or 52.9 percent, sellers' credibility had the highest contribution to the regression model. The second-highest contributor to the model is the product quality, with a beta coefficient of 0.428 or 42.8 percent. Also, with a beta coefficient of 0.369 or 36.9 percent, product price had the third-highest contribution to the regression model. Whereas, the least contributing variable to the model is socio-economic status, with a beta coefficient of 0.266 or 26.6 percent. In addition, Table 5 also shows that the p-values of all the dimensions tested were less than the error margin of 0.05 with positive t-test values [(product price: p-value = 0.001, t = 3.508); (socio-economic status: p-value = 0.000, t = 4.807); (product quality: p-value = 0.000, t = 5.342); (brand attributes: p-value = 0.000, t = 5.021); (sellers'

credibility: p-value = 0.000, t = 4.286)]. This implies that product price, socio-economic status, product quality, brand attributes, and sellers' credibility had significant positive effects on students' purchase behaviour towards fairly-used smartphones in Nigeria. Hence, all the null hypotheses tested in the study were rejected in favour of the alternative hypotheses.

DISCUSSION OF FINDINGS

From the test of hypothesis one, it was revealed that product price has a significant positive effect on students' purchase behavior towards fairly-used smartphones in Nigeria. This finding is backed by the study of Kwamboka and Kiiru (2022) which revealed that product price had a significant influence on consumer behavior towards second-hand smartphones in Kenya. Similarly, the finding is corroborated by the study of Kendrick and Amara (2023), which revealed that product price had a significant relationship with consumer purchase behavior towards used smartphones in Liberia. This finding implies that when the price of fairly-used smartphones increases, it leads to an observable and noteworthy rise in the likelihood of Nigerian university students choosing to purchase them. This finding suggests that pricing is a crucial factor influencing the buying behavior of this specific demographic, indicating that they may be sensitive to changes in product pricing. This insight is important for marketers aiming to target this particular group of consumers, because it highlights the need to consider pricing strategies carefully when marketing fairly-used smartphones to Nigerian students.

From the test of hypothesis two, it was revealed that consumers' socio-economic status has a significant positive effect on students' purchase behavior towards fairly-used smartphones in Nigeria. This finding is backed by the study of Kwamboka and Kiiru (2022), which revealed that consumers' socio-economic status had a significant influence on consumer behavior towards second-hand smartphones in Kenya. The finding also corresponds with the study of Takele and Mezgebo (2021), which revealed that consumers' socio-economic status had a significant effect on consumer behavior towards second-hand smartphones in Ethiopia. This finding implies that the socio-economic status of Nigerian university students is an important factor in understanding their preferences and decisions regarding fairly-used smartphones. It emphasizes the importance of considering socio-economic factors when studying consumer behavior in this specific context. This information could be significant for marketers, policymakers, and businesses targeting this demographic, as it provides a better understanding of how students' socio-economic status could influence their purchase behavior towards fairly-used smartphones.

Similarly, from the test of hypothesis three, it was revealed that product quality has a significant positive effect on students' purchase behavior towards fairly-used smartphones in Nigeria. This finding is backed by the study of Agyekum and Boateng (2019), which revealed that product quality had a significant impact on consumer purchase behavior towards used smartphones in Ghana. The finding is also in line with the study of Liu and Xu (2017), which revealed that phone quality had a significant impact on consumer purchasing behavior of second-hand smartphones in China. In the context of this study, this finding implies that when the quality of a fairly-used smartphone is perceived to be high, it tends to positively influence the likelihood of students choosing to buy it. This entails that students place a considerable emphasis on the quality of fairly-used smartphones when making their purchasing decisions. This information can be valuable for marketers of fairly-used smartphones in tailoring their products to meet the preferences and expectations of this specific demographic.

Furthermore, the test of hypothesis four revealed that brand attributes have a significant positive effect on students' purchase behavior towards fairly-used smartphones in Nigeria. This finding is backed by the study of Kendrick and Amara (2023), which revealed that brand attributes had a significant relationship with consumer purchase behavior towards used smartphones in Liberia. The finding also corresponds with the study of Takele and Mezgebo (2021), which revealed that brand attributes had a significant effect on consumer behavior towards second-hand smartphones in Ethiopia. In the context of this study, this finding implies that brand attributes can contribute positively to the likelihood of Nigerian students choosing fairly-used smartphones. This entails that Nigerian university students place a considerable emphasis on the brand when making decisions about purchasing second-hand smartphones. Overall, this result underscores the importance of brand attributes in influencing consumer choices in this particular market segment, which may have implications for marketing strategies and product positioning in the future.

Finally, from the test of hypothesis five, it was revealed that sellers' credibility has a significant positive effect on students' purchase behavior towards fairly-used smartphones in Nigeria. This finding is backed by the study of Agyekum and Boateng (2019), which revealed that Sellers' credibility had a significant impact on consumer purchase behavior towards used smartphones in Ghana. The finding is also backed by the study of Liu and Xu (2017), which revealed that seller's reputation had a significant impact on consumer purchasing behavior of second-hand smartphones in China. In the context of this study, the implication of this finding is that the perceived trustworthiness and reliability of sellers play a pivotal role in shaping the preferences and decisions of Nigerian university students when it comes to purchasing used smartphones. This suggests that consumers, particularly students in Nigerian universities, place a considerable emphasis on the trustworthiness of the individuals or entities they are transacting with. This trust factor likely influences their willingness to engage in transactions involving fairly-used smartphones.

CONCLUSION AND PRACTICAL IMPLICATIONS

As observed earlier at the outset of this study, fairly-used smartphones are increasingly popular among Nigerian users due to their affordability and ease of accessibility. Compared to brand-new smartphones, which are always out of the reach of the masses, fairly-used smartphones come in different prices depending on the quality state of the phones. This study was therefore carried out to comprehensively examine the major factors affecting students' purchase behavior towards fairly-used smartphones in Nigeria. Through a structured questionnaire survey, the study obtained primary data from undergraduate students of the University of Calabar. The data obtained were descriptively analyzed and interpreted, while the hypotheses of the study were tested using inferential statistics. The findings of the study identified 5 major factors capable of significantly and positively affecting students' purchase behavior towards fairly-used smartphones in Nigeria. In order of relative importance, these factors included the following: sellers' credibility, product quality, product price, brand attributes and socio-economic status. These findings imply that students' purchase behavior towards fairly-used smartphones in Nigeria is determined by a variety of factors. This is why the study concludes that it is essential for marketers of fairly-used smartphones targeting Nigerian university students to understand these major factors and adjust their strategies to appeal to students.

Specifically, we recommend that:

(1) Marketers of fairly-used smartphones must ensure that the prices of their products are a

reflection of the products' quality, so that customers will be willing to purchase them even though they are fairly used. By offering fairly-used smartphones at competitive prices, marketers can tap into students' need for affordability and stimulate increased customer patronage.

(2) Marketers of fairly-used smartphones targeting Nigerian university students must pay attention to their socio-economic characteristics, such as income, social class and budget in order to set prices that are both affordable and appealing to this demographic group. This is critical because students typically have limited financial resources, often relying on allowances or part-time jobs to meet their expenses. To students, therefore, affordability is a critical factor when it comes to purchasing a smartphone.

(3) To better appeal to students and gain increased patronage, it is essential for marketers of fairly-used smartphones to consistently sell phones that offer the best quality standards, in terms of phone age, ease of repairability and functionality. This means ensuring that the phones they sell are in good condition, and are free from significant damage or defects in order to build trust with students. By providing reliable and high-quality products, marketers can establish a reputation for offering value, which is crucial in attracting and retaining student customers.

(4) To better attract patronage from students, marketers of fairly-used smartphones should only purchase and sell phone brands that are very popular, valuable and have a strong base among students. This approach recognizes that students are more likely to gravitate towards well-known and trusted brands in the smartphone industry. Brands with a strong presence among students are likely to have features, functionalities, and designs that align with the preferences and needs of this demographic.

(5) It is essential for marketers of fairly-used smartphones to consistently maintain a reputation of integrity and trustworthiness among customers by only dealing in products that are legally acquired in order to inspire confidence in students and encourage patronage. This not only protects the interests of marketers, but also safeguards the interests of the students who purchase these devices. Knowing that they are buying a product that is legally obtained provides students with peace of mind, and they are more likely to return to the same seller in the future.

LIMITATIONS AND FUTURE RESEARCH

Due to time and logistical constraints, this study was restricted to a single tertiary institution in Nigeria – the University of Calabar, Calabar. This implies that the sampling frame only comprised students of this institution, thereby potentially limiting the generalizability of the findings. To bridge this major limitation, we suggest further studies to accommodate other tertiary institutions across the country, including private universities, to generate comprehensive insights that can be generalized for Nigerian university students in this context.

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