

# Role of Customer Perceived Value in Mediating Effects of Product Price on Customer Patronage of Global System for Mobile Telecommunication Services in Nigeria

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## Abstract

## Original Research Article

The aim of this study was to explore mediating effects of perceived customer value on the relationship between product price and customer patronage. In order to accomplish the objectives of the study, copies of research instrument (questionnaire) were distributed through systematic sampling technique to 500 customers of Global System of Mobile Telecommunication (GSM) companies in Kano, Nigeria. The data from the survey which yielded 64% valid response rate were analyzed with the help of Hayes Process Macro Model 4 analysis for simple mediation and the results showed that all four hypothesized relationship were supported by the data. Specifically, product price significantly predicted customer patronage of GSM services in Nigeria and that product price significantly influenced customer perceived value. Similarly, customer perceived value significantly predicted customer patronage of GSM services after controlling for product price. In other words, customer perceived value partially mediated the relationship between product price and customer patronage of GSM products. It is recommended that GSM service providers would have to deliver not only economic value, but also social, psychological epistemic and emotional values to their customers in order to enhance customer patronage of their offerings.

**Keywords:** Product price, Customer patronage, Mediator, Customer perceived value, GSM.

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## 1.0 INTRODUCTION

In the past two decades, Nigeria's telecommunications sector has continued to operate in an ever evolving economic landscape. Within this period, the industry witnessed exponential growth in the number of subscribers as calls and mobile data once considered as luxuries have now become indispensable tools for business, health, education and social connectivity. Recently, the sector faced operational challenges and industry stakeholders as well as experts argued that poor service quality being experienced by customers was associated with high cost of importing necessary equipment owing to the volatility of foreign exchange market as well as increase in operational costs occasioned by erratic electricity supply thereby casting doubts on the continuous viability of the sector. In response to these challenges, the regulatory agency known as Nigerian Communications Commission (NCC) approved, in January, 2025 a 50% hike in communication charges across all the services being provided by the operators of Global system of Mobile Telecommunication (GSM) in Nigeria. Although there was a

significant pushback from subscribers who have had to endure surging costs – of – living and dwindling communication services; promises were made to the effect that customer would witness rapid improvements in service delivery. Traditionally, product price is often used by customers as product/service cue (Teas & Agarwal, 2000), and therefore value is a one-dimensional construct reflecting difference between the attributes provided by a product and price paid. In order to fully appreciate the concept of product price, the term is not only monetary value of product, but also includes considerations of time, efforts and search involved in the sacrifice made by customers in the consumption of goods and services as well as costs associated with product disposal after use (Sanchez – Fernandez & Iniesta – Bonillo, 2007). However, several months after price increments across service categories, customers are yet to get value from mobile telecommunication service providers as the industry continues to be characterized by incessant dropped calls, bad network and poor connectivity. According to the Federal Competition and Consumer Protection Commission (2025) issues such as network congestion, dropped calls, inconsistent internet

speeds, unusual data depletion, and poor customer services have remained prevalent concerns among customers.

In the marketing literature, product price is seen as one of the most important marketing mix and it is regarded as either a monetary sacrifice for obtaining a product or a quality signal for a product and service. Usually, purchasing behaviors are influenced by price and Quareschi (2019) argued that price and value are two related concepts but fundamentally different. Product price measures only monetary sacrifice made by customers whereas customer perceived value reflects a judgment of what customers get from a product which may be economical, social, emotional and psychological benefits. In the contemporary times, creating customer value should be the reason for the existence and success of modern organization and therefore customer perceived value has become imperative to building customer patronage, loyalty, repeat patronage/purchase and profit. Previous studies have consistently emphasized influence of product price as reflected on the service quality and customer loyalty (Libent & Magasi, 2024); impact of benefits received from product consumption on price (Ko, 2016) and effects of perceived value on repeat purchase (Basrowi, Ali & Suryanto, 2023). However, the relationships between price and customer patronage cannot be so direct considering the fact that consumer behavior with respect to telecommunication services keeps changing rapidly due to constant innovation and therefore as suggested by Quareschi (2019) customer perceived value - a mediator variable could be incorporated into these complex relationships. According to Abdolvand and Norouzi (2012) customer perceived value represents customers' assessment of the value created for them by a supplier given the tradeoffs between all relevant benefits and sacrifices in a specific - use situation. Therefore, in order to fill this research gap and expand frontiers of knowledge on value creation process, this investigation, relying heavily on the value hierarchy model and consumption value theory, determined effects of product price through customer perceived value on customer patronage of mobile telecommunication service providers. Thus the study provided answers to the following research question: how has customer perceived value mediated the relationship between product price and customer patronage of mobile telecommunication companies in Nigeria?

In order to accomplish the objective of this research, this paper is structured as follows: In addition to this section 1, section 2 provides theoretical background to the study and hypotheses formulation. Research methodology was described in the section 3, while results of data analysis and hypotheses testing as well as implications of these results for theories and managerial applications were explained in section 4. Conclusions and future research directions were discussed in section 5.

## 2.0 LITERATURE REVIEW

### Meaning of Customer Perceived Value

Perceive value is the overall customer's assessment of utility of a service/product anchored on perception of what was received in relation to what was given (Zeithaml, 1988). The received component of this definition referred to the

benefits received from consuming or using product/service; while the given aspect represents what customer's sacrifice which could be monetary and non - monetary in nature but must be given up in the process of acquiring or enjoying products and services. For Zeithaml (1988), value could be low price or benefits from consumed products or quality customers get from price paid for goods. Rather than define customer perceived value as a uni - dimensional concept, Sanchez - Fernandez & Iniesta - Bonillo (2007) considered perceived value as multi - dimensional concept, wherein Anderson and Narus (1990) conceptualized customer perceived value as the worth in monetary terms of the economic, technical, service and social benefits a customer receives in exchange for a price paid for a product offering. Similarly, Sheth, Newman and Gross (1991) conceptualised customer perceived value as five dimensions, namely, functional, emotional, conditional, social and epistemic that could influence consumer purchasing behavior. Also, Aulia, Sukati and Sulaiman (2016) define customer perceived value as needs which could be product related needs (bundle of benefits), social related needs (acceptance by society), and personal related needs (individual values/enduring belief) that influenced consumption of goods and services. Though the proposed definitions vary a bit and reveal some diversity in the meaning of the concept "customer perceived value", there are points of convergence among the authors. First, customer perceived value is personal and idiosyncratic rather perceived by customer and not necessarily objectively determined by the seller. Second, customer perceived value is closely associated with customer's purchasing decisions and therefore fundamentally different from other kinds of value. Third, perceived value is customers' assessment of the utility of a product reflecting what they perceived to have been given up in relation to what was gotten. Therefore, Horovitz (2000) argues that customers receive value when benefits from a product/service exceed costs of acquiring and using it and various theories of value have been proposed to explain consumers' behavioural responses across product categories.

### Theoretical Foundation of Customer Perceived Value

#### Customer Value Hierarchy Model

Value hierarchy model conceptualizes perceived value into a three level hierarchy consisting desired product attributes, desired consequences and desired end - state or goals aimed at (Woodruff, 1997). In other words, customer perceived value is preference for an evaluation of product attributes and their (attributes) performances as well as consequences arising from product usage that facilitate or block the customer's goal or purpose. Thus, the model which demonstrates desired product attributes as the first level; desired consequences as the second level; and desired goals to be attained as third level; shows that moving up and down the hierarchy explains desired and received value. According to Woodruff (1997) moving up the hierarchy suggests that customers think about products as bundles of attributes and attribute performances. It is from this thinking process that customers form preferences for certain attributes based on their ability to achieve desired consequences, reflecting value



in use and possession value. Similarly, customers learn to prefer all consequences that enable them achieve their goals and purposes.

Alternatively, moving down the hierarchy, customers use goal and purpose to attach importance to consequences, which in turn guide customers when forming preferences for products attributes and attribute performances. Although this model successfully highlighted importance of weight attached to product attributes by customer while evaluating perceived value, nonetheless no mention of value dimensions was made. Besides, the crucial factor of tradeoff between sacrifice and benefits components of value assessment was totally omitted by the author. Perhaps, in order to overcome this problem, Holbrook and Hirschman (1982) had earlier dichotomized value into two, namely, utilitarian value and hedonic value and this has been considered as the basis for conceptualizing value as a multi-dimensional construct. In other words, value should not only be viewed from utilitarian perspective in which a product is valued based on its performance and functions, but should also include the experiential perspective in which product is valued based on the experience and feelings arising from consumption, including symbolic and hedonic aspects (Holbrook & Hirschman, 1982). However, Sweeney and Soutar (2001) argued that hedonic value is too generic and could be broken into several components especially as it relates to durable and non-durable products.

## Consumption Value Theory

As a follow up on utilitarian and hedonic theory of value Sheth, Newman and Gross (1991) proposed consumption value theory which is based on customer decisions or choice on whether to buy a brand or another and that such consumption decisions are guided by five dimensions of value, namely, functional value of product which is based on utilitarian features of products, social value which is related to the image obtained from the society, emotional value which is related to feeling derived from using a product, epistemic value which is related to novelty seeking, and conditional value which is derived from specific situation or circumstances faced by the customers. Drawing inspirations from consumption value, Holbrook (1996) listed eight interrelated value dimensions and they include efficiency value, play value, aesthetic value, excellence value, status value, ethics value, esteem value and spiritual value. Although this theory has helped to expand the meaning of value from a mere tradeoff between price and quality to a much more elaborate viewpoint of the construct as multi-dimensional in nature, operationalization of ethics value and spiritual value dimensions remains the major drawback of the theory.

## Hypothesis Development

This study develops a conceptual framework of how product price through customer perceived value impacted on the customer patronage of mobile telecommunication services in Nigeria. Therefore, this investigation draws from three strands of literature; first, effects of price on customer buying behaviour (Maghembe & Magasi, 2024) second, effects of customer perceived value on consumer satisfaction and brand

commitment (Misra, Pedada & Sinha, 2022; Furukawa, Matsumura & Harada, 2019) and influence of customer care on customer patronage behavior (Nwinkinaka & Poi, 2023).

## Relationship between Product Price and Customer Patronage

Price is the monetary sacrifice made by customers to obtain a product and seen as quality signal for a product. Usually, customers set price expectation before making purchases and this is known as reference price. According to Quareshi (2019) reference price is a standard against which price stimuli are compared and which eventually affect value perception by the customers. Similarly, business managers benefit from reference price because it enables a comparison of the existing selling price with the internal and external reference price (Niedrich, Sharma & Wedell, 2001). However, Han and Windsor (2011) argued that marketers could elicit patronage and repeat purchase from customers by shifting emphasis from reference price to price premium or willingness – to – pay (WTP). Thus, certain unique attributes of the products may be reinforced so as to raise positively, willingness – to – pay by customers, which ultimately helps a brand to command much higher price than competitors.

Better still; marketers may adopt bundle pricing to achieve repeat patronage. According to Nguyen and Buff (2007) bundle price which is prevalent in telecommunication industry allows firms to sell multiple products together as a combo packaged which leads to savings for customers as opposed to individual's product price. Expected price from bundle is usually lower than unbundle products thereby enhancing monetary value of products and ultimately driving patronage (Nguyen & Buff, 2007). Thus, it is hypothesized that product price significantly influenced customer patronage of services provided by operators of the Global System of Telecommunication in Nigeria (H1).

## Relationship between Product Price and Customer Perceived Value

Customer Perceive Value (CPV) is the difference between perceived benefits derived from consuming a product and sacrifices made in the course of obtaining the product. Perceived benefits could be in the physical attributes of the product, accompanying services and support obtaining in using a product; while sacrifices made in the course of obtaining a product could be time, energy, purchase costs, acquisition and transportation costs. Kotler and Keller (2005) argued that customer perceived value represents a tradeoff between benefits (product value, service value, employee value, and image value) and costs (Monetary costs, time cost, energy cost and psychic cost). Since assessment of value occurs in the mind of customers, it is highly personal, varying from customer to customer. For example, some customers who perceive monetary sacrifice as pivotal cost may consider anything that reduces this monetary sacrifice as an improvement in their assessment of a product's perceived value. However, less price conscious customers may derive more value from convenience of finding a product. In the marketing literature, relationship between product price and

customer perceived value has been investigated by scholars, for example, Ingenbleek, Frambach and Verhallen (2010) used structural equation model to show that value based pricing impacted customer perceived value. Similarly, Codini, Saccani and Sicco (2012) found strong correlation between product price and customer perceived value among a sample of washing machine owners in Italy. Also, Quareshi (2019) found strong relationship between product price and customer perceived value among Indian buyers of both durable and non-durable products. Therefore, it may be hypothesized that product price significantly influenced customer perceived value among customers of GSM service providers in Nigeria (H2).

## Relationship between Customer Perceived Value and Customer Patronage

Customer perceived value emanates from customers' pre purchase perception (expectation), evaluation during transaction (expectation versus received service) and post purchase assessment (Asgarpour, Hamid, Sulaiman & Asgari, 2015). In the recent time, customer perceived value has become an issue of interest to marketers as it is now a key determinant of consumer decision making with respect to patronage and repeat patronage. Chiguvi (2016) opines that customer patronage is the commitment to consistently purchase products and services from an organization as well as

sharing positive view about the brand to others. In other words, customer patronage is the degree to which a customer exhibits repeat purchase behavior from a service provider, possesses a positive, long lasting attitude and disposition towards a service provider (Gremler & Brown, 1996).

Customer patronage may be measured on two fronts – patronage intention and patronage behaviour. Patronage intention is the cognitive representation of a person's willingness to perform certain action or a subjective probability of performing a set of behaviors such as positive word of mouth, readiness to recommend a product or service to friends and actual intention to buy a product. Customer patronage behavior represents an affirmed tendency to engage in an economic behavior of actual and repeat purchase of a product or service at specified price which may include willingness to pay premium price. Uche, Eke and Otika (2021) opine that promotional tools enhanced perceived customer value which ultimately impacted positively on the patronage of mobile telecommunication services in Nigeria. Similarly, Lebari and Ledisi (2023) found customer care practices that improved perceived customer value could enhance customer patronage of services rendered by four major Nigerian GSM companies (MTN, Globacom, Airtel and 9 mobile). Thus, it hereby proposed that customer perceive value has significant effect on customer patronage of mobile telecommunication services in Nigeria (H3).

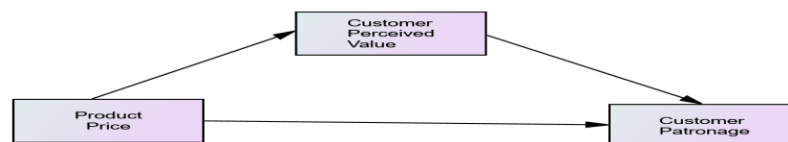


Figure 2.1 Conceptual Framework

## Customer Perceived Value as a Mediating Variable

Parasuraman and Grewal (2000) defined customer perceived value as a dynamic four dimensions construct consisting acquisition value, transaction value, in-use value and redemption value. Acquisition value represents benefit received for the price paid and transaction value is the

pleasure customers derive from getting a good deal. In-use value is the utility obtained from using a product/service; while redemption value is the benefits received at the end of the life span of a product. The value of customers to a business is customer loyalty which is behaviorally represented by patronage and repeat patronage. Hanzae and Yazd (2017) found that customer perceived value could increase likelihood



of purchase and repeat purchases and success in the market place. Also, Hinterhuber (2008) opines that product price is closely related to the actual value of assessment by customers. Besides, perceived customer value was identified as mediating variable between customer service price and customer trust as represented by patronage and repeat patronage (Nugraha & Mandala, 2020). It may be proposed that customer perceived value significantly mediated relationship between product price and customer patronage of mobile telecommunication services in Nigeria (H4).

### 3.0 RESEARCH METHODOLOGY

The study adopted a quantitative and cross sectional research strategy in which questionnaire was the research instrument for the collection of primary data from customers of the four major Global System of Mobile Telecommunication (GSM) operators, namely, Mobile Telecommunication Network (MTN), Globacom, Airtel and 9 Mobile. The population of the study consisted all individuals, residing in Kano metropolis, Nigeria who are at least 18 years of age and subscribers to the mobile phone services being rendered by Airtel, 9 mobile, Globacomm and Mobile Telecommunication Network. The research instrument which was a structured questionnaire was divided into four parts: part one tapped demographic data of the respondents and measured nominally; while ordinal measure was adopted for the remaining three sections that sought data on the three key variables of interest, namely, product price, customer perceived value and customer patronage. Items that formed the content of the research instrument were adapted from customer perceived value (Sweeney & Soutar, 2001), customer loyalty and repurchase intention (Eggert & Ulaga, 2002) and willingness to pay (Quareshi, 2019). In order to generate desired data from the respondents, five option - Likert rating scale was employed in which “strongly disagree” measured as 1, “disagree” measured as 2, “unsure” measured as 3, “agree” measured as 4 and “strongly agree” measured as 5.

In determining sample size, structural equation modeling expert, Tabachnick and Fidell (2014) cautioned that relational

coefficients would be less reliable when estimated from small sample size. In other words, sample size of 50 is very poor and also, sample size of 100 is poor; but sample size of 200 could be fair and 300 elements of population as sample size should be good; while 500 and 1000 sample sizes would be very good and excellent respectively (Comrey & Lee, 1992). In line with this suggestion, a sample size of 500 subscribers was chosen through a systematic sampling technique. With the help of four research assistants, every three subscriber who visited the kano main offices of all the four service providers were persuaded to participate. The field work was conducted at the weekends from May to July, 2025. Factor analysis using principal component method with varimax rotating was conducted on the data so that the unidimensionality assumption could be validated. The results showed that all items loaded onto a single component and the variances accounted for by these components ranged from 16.68% for customer perceived value, and 21.7% for product price to 16.09% for customer patronage. Since no single factor explained more than 50% variance as suggested by Podskaoff, Mackenzie, Lee and Podskaoff (2003), common method bias was a non-issue in this study. Similarly, KMO values were 0.66 and, Bartlett test was significance – a confirmation of the adequacy of the data for factor analysis.

Table 3.1 Mean, Standard Deviations, and Pearson Correlations among the study Variables

Construct	Mean	Standard Deviation	Customer patronage	Customer Perceive Value	Product Price
Customer patronage	3.260	0.6988	1.000		
Customer perceived value	2.502	0.9192	0.571	1.000	
Product Price	2.414	0.9228	.423	.337	1.000

In order to establish the main characteristics of the variable of interest, descriptive statistics and. Pearson correlations were determined using Statistical Package for Social Scientist

(SPSS) version 22. From the information on Table 3.1 the assumption of normality required for multivariate analysis was confirmed as customer patronage had an average value of



3.260 (standard deviation = 0.6988); while customer perceived value and product price had mean values of 2.502 (standard deviation = 0.9192) and 2.414 (standard deviation = 0.9228) respectively – all suggesting a low volatility. As if to further confirm the normality of the distribution of the validly collected data set, skewness coefficient for product price was

found to be -0.441, and skewness coefficient for customer perceived value was -0.276 while customer patronage had 0.224 skewness coefficient value. Since these values were close to zero, the distribution was within the range of normality and therefore the distribution could be considered.

Table 3.2: Results of Validity and Reliability Tests

Construct items	Factor loading	Cronbach's alpha	Composite reliability	Average variance extracted
Product Price				
Call rate reasonable	0.721	0.723	0.8426	0.517
Internet data price reasonable	0.729			
Price of bundle services adequate	0.752			
Willingness to pay extra for GSM services	0.725			
Subscription price reasonable	0.688			
Customer perceived value				
I received social value from my GSM operator	0.694	0.784	0.8496	0.531
I receive topnotch services from my GSM operator	0.696			
I value good image of my GSM service provider	0.760			
Transmission and coverage of my service provider is topnotch	0.732			
I receive emotional value from my GSM service provider.	0.758			
Customer patronage				
I purchase airtime frequently	0.713	0.824	0.8542	0.5396
I purchase internet data regularly	0.693			
I will recommend my GSM service provider to friends, colleague	0.765			
I will not switch to another GSM service provider	0.721			
I am a loyal customer of my GSM service provider	0.719			

Normal. Pearson's zero – order correlation matrix for the constructs as shown in Table 3.1 showed that customer perceived value ( $r = 0.571$ ,  $p < 0.001$ ), and product price ( $r = 0.423$ ,  $p < 0.001$ ) were significantly and positively interrelated with customer patronage. Similarly, customer perceived value strongly correlated with product price ( $r = 0.337$ ,  $p < 0.001$ ). All these have helped to establish the required initial relationships among variables of interest in a multivariate analysis. Besides, multicollinearity was not a pervasive issue in this study since none of the correlation values exceeded 0.7. Also, initial construct reliability was assessed using Cronbach's alpha coefficient and as reported in table 3.2 wherein reliabilities range from 0.723 (product price) to 0.784 (customer perceived value) and 0.824 (customer patronage), suggesting that all variables of study exceeded the threshold of 0.700 proposed by Hair (Hair, Black, Babin, Anderson & Tatham, 2009) and these results should not be a surprise because all items were adapted from the previous studies.

Also, confirmatory factor analysis using Analysis of Moment Structure (AMOS) software was undertaken on each of the constructs so as to further assess their reliability and measurement properties and the results as shown in table 3.2 indicated that all composite reliability measures were above

0.8 which exceeded both Bagozzi and Yi (1988) minimum values of 0.60 and the recommended threshold of 0.70 (Hair, Black, Babin, Anderson & Tatham, 2009). The high factor loading simply implied strong correlations on the underlying construct and that the scales actually measured what they intended to measure. Similarly, high values for Average Variance Extracted (AVE) confirmed convergent validity of the instrument because when Average Variance Extracted exceeded 0.5, it means the variance accounted for by each construct is greater than variance accounted for by the measurement error (Hair, Black, Babin, Anderson, & Tatham, 2009).

Fornell and Larcker (1981) argued that for two constructs to exhibit discriminant validity (measuring two different things), the average variance extracted scores for the two constructs should be greater than the squared score of correlation obtained between the two constructs. Thus, as can be deduced from Table 3.2 discriminant validity was substantiated by calculating the squared root values of Average Variance Extracted score for each construct, namely, product price (0.719), customer perceived value (0.729) and, customer patronage (0.735) which were greater than the correlation values in table 3.1.

## 4.0 RESULTS

### Features of the Respondents

Although a total of 500 copies of the research instrument were distributed to the customers of the four major GSM service providers, only 362 copies were returned. However, another 41 copies were found to be badly mutilated and unfit for further analysis thereby leaving only 321 copies which was 64% response rate as valid for data analysis. The respondents' characteristics showed that 167 were male respondents while 154 were female respondents. Around 284 respondents representing an overwhelming majority were within 18 and 55 years age bracket; while the remaining 37 were above 55 years of age. Also, 263 respondents earned less than N100, 000 (\$67) per month while the remaining 88 earned more than N100, 000 per month. Descriptive statistics showed that 183 were married; another 115 were unmarried while the remaining 23 were either divorcee or widow/widower. On their educational background, it was found that 142 respondents had National Certificate of Education, Diploma and university degree; 163 others hold secondary school certificate; while the remaining 16 had primary school certificate. Analysis of the validly returned responses showed that 203 customers have been using their current GSM service providers for more than 5 years; another 89 have enjoyed the services of their GSM operators for just 2 – 4 years and the remaining customers have just be with their GSM operators for less than one year. Interestingly, 197 respondents committed N1, 500 – N10, 000 monthly to purchasing GSM services/products; another 77 respondents spend N10, 100 – N50, 000 on telephone services monthly; while the remaining 48 respondents spend more than fifty thousand naira on GSM services every month.

### Hypothesis Testing

This investigation applied 4 – step method proposed by Baron and Kenny (1986) to assess simple mediating role of customer perceived value in the relationship between price

and customer patronage. In order to accomplish these four steps Hayes Process Macro Model 4 analysis for simple mediation was performed on the data and hypothesis one (H1) which stated that product price significantly influenced customer patronage of services provided by operators of the Global System of Telecommunication in Nigeria was tested and it was found that  $\beta = 0.7092$ ,  $t = 14.9933$ . Thus, the hypothesis was accepted as  $F(1, 319) = 224.7991$ ,  $p < 0.001$  while  $R^2 = 41.34\%$  and it means 41% of variations found in customer patronage of telephone services were significantly explained by product price or tariff imposed on calls and internet data by service providers in Nigeria. Also, hypothesis 2 (H2) which stated that product price significantly influenced customer perceived value among customers of GSM service providers in Nigeria was tested and result showed that the hypothesis was supported by the data as  $\beta = 0.4596$ ,  $t = 8.0595$ ,  $p < 0.001$  while  $R^2 = 0.169$  and it means 17% of variation found in customer perceived value has been significantly explained by product price/call tariff. Therefore, since  $F(1, 319) = 64.956$ ,  $p < 0.001$ , it may be concluded that product price significantly predicted customer perceived value.

Similarly, customer patronage was regressed on both product price and customer perceived value in a single model so as to test hypothesis three (H3) and hypothesis four (H4). Thus, hypothesis three (H3) which stated that customer perceive value (after controlling for product price) has significant effect on customer patronage of mobile telecommunication services in Nigeria was tested and results of data analysis revealed  $\beta = 0.3987$ ,  $t = 9.7750$ ,  $p < 0.001$ . Hypothesis four (H4) which stated that customer perceived value significantly mediated relationship between product price and customer patronage of mobile telecommunication services in Nigeria was tested and data analysis showed that  $\beta = 0.5260$ ,  $t = 11.5399$ ,  $p < 0.001$ . Thus, the two hypotheses were supported by the data since  $F(2, 318) = 193.4896$ ,  $p < 0.001$  while  $R^2 = 0.5489$  and it means the model explained 55% of variations found in customer patronage.

Table 4.1 Hypothesis Testing

Hypothesis	Beta	Standard Error	95%
Hypothesis one (H1): effects of product price on customer patronage (path C)			
$R^2 = 0.4134$ , $F(1, 319) = 224.7991$ , $p < 0.001$			
	0.7092	0.0473	0.6162 to 0.8023
Hypothesis two (H2): effects of product price on customer perceived value (path a)			
$R^2 = 0.1692$ , $F(1, 319) = 64.9556$ , $p < 0.001$			
	0.4596	0.0570	0.3474 to 0.5717
Hypothesis three (H3): effects of customer perceived value (after controlling for product price) on customer patronage (path b)			
$R^2 = 0.5489$ , $F(2, 318) = 193.4896$ , $p < 0.001$			
	0.3987	0.0408	0.3185 to 0.4790
Hypothesis four (H4): effects of product price (after controlling for customer perceived value) on customer patronage (path C')			
$R^2 = 0.5489$ , $F(2, 318) = 193.4896$ , $p < 0.001$			
	0.5260	0.0456	0.4363 to 0.6156

The process produced results for all the three paths and the final justification for mediation effect in bootstrapping technique depends on the beta coefficient and confidence interval. As indicated on the table 4.2 the indirect effect beta weight is 0.1832 and the corresponding 95% Lower Limit Confidence Interval is 0.1266 while 95% Upper Limit of Confidence Interval is 0.2511. Since zero did not fall between

these values, it may be concluded that customer perceived value mediated relationship between product price and customer patronage. However, since beta coefficient of direct effect (after controlling for mediating variable) did not fall to a non – significant effect; it then means customer perceived value partially mediated relationship between product price and customer patronage.

Table 4.2: Total, Direct and Indirect Effects Results Generated

	Beta	Standard Error	T- statistics	P- value	LLCI	ULCI
Total Effect	0.7092	0.0473	14.9933	0.0000	0.6162	0.8023
Direct Effect	0.5260	0.0456	11.5399	0.000	0.4363	0.6156
Indirect Effect	0.1832	0.0315	-	-	0.1266	0.2511

## DISCUSSION OF FINDINGS

The investigation established a strong relationship between product price and customer patronage of mobile telephone services in Nigeria. This finding aligned closely with the work of Quareshi (2019) found product perceived price as a strong predictor of patronage decision among users of durable goods in India. Similarly, Chen and Ni (2017) opined that when company provides attractive and appealing bundle package of complementary goods at lower prices; customer patronage and satisfaction could be enhanced. However, customers may not necessarily recall service as overpriced or underpriced at the point of purchases and therefore product price and customer patronage were negatively correlated (Boksberger & Melsen, 2011). The study also established significant relationship between product price and customer perceived value. This finding was corroborated by the work of Chua, Lee, Goh and Han (2015) who found that although reduced price could attract more customers of non-luxury products; an increment in the price of luxury products could enhance customer patronage and customer perceived value because intuitively price is synonymous to value. Also, Quareshi (2019) established positive impact of product price on customer perceived value in Indian automobile industry. However, Hapsari, Clems and Deans (2015) found service quality and not product price as the major predictor of customer perceived value in Indonesia.

Furthermore, data supported the fact that customer perceived value significantly predicted customer patronage. This is in line with the outcome of research conducted by Qureshi (2019) in which customer perceived value significantly predicted customer patronage and satisfaction among shoppers in Indian malls. Also, Hapsari, Clems and Dean (2017) found significant positive relationship between customer perceived value and customer patronage and loyalty. However, Uche, Eke and Otika (2020) found advertising and promotion as major drivers of customer patronage in telecommunication sector of the Nigerian economy. Interestingly, this research found customer perceived value as having partial mediating effects on the relationship between product price and customer patronage among subscribers of the mobile telephone

companies in Nigeria. Similarly, Hapsari, Clems and Dean (2015) established partial mediating effect of customer perceived value between price of quality services and customer patronage and loyalty among Indonesia airline passengers. However, Hussein, Hapsari and Yulianti (2018) found customer perceived value only mediated relationship between service experience (and not product price) and customer patronage and loyalty in hospitality industry.

## Theoretical Implications

The main thrust of this study was to propose a continuing mobile service value model within the Nigerian mobile phone market which established relationships among three constructs, namely, product price, customer perceived value and customer patronage. The proposed model was supported by the data in Nigeria where the liberalized telecommunication environment offers choices for customers and competitive landscape for service providers. The results obtained means that causal sequence suggested by Woodruff (1997) value hierarchy model can be applied across boundaries. Also, direct effect of product price on customer patronage of telephone services may have confirmed the relevance of Mental Accounting Theory for consumer choices not only in a retailing environment but in the telecommunication sector of the economy of a developing country like Nigeria. Mental Accounting Theory focuses on price – value – purchase satisfaction (Thaler, 1985). Thus, adoption of PERVAL scale in this study provided a more integrated framework for the relevant constructs and their presumed relationship (Sweeney and Soutar, 2001).

## Managerial Implications

In the contemporary time, marketing managers must recognize the importance of customer perceptions as they relate to value offerings of mobile phone service providers because they formed the basis of customer purchase decisions. Consumers are increasingly becoming value conscious, trying to buy products/services that provide more benefits than sacrifices they have made. In order to meet the expectations of value conscious buyers, managers must understand factors that defined value in their customers' minds. The results of this



study should help to expand value definition to mean not only service quality or economic value but also customers do seek epistemic, social, psychological and emotional values from every bundle of products mobile service providers put out for sale. Companies are increasingly offering comparable service quality, competitive pricing and sales promotion, smart mobile phone service providers, however, can differentiate themselves from the pack by developing and cultivating relationships (social value) with their customers so as to drive customer patronage and repeat patronage. Thus, incessant product price increase without accompanying customer perceived value may reduce customer patronage and loyalty.

## 5.0 CONCLUSIONS

In the Nigerian mobile telecommunication industry, Price has always been used by service providers as surrogate for value and a competitive tool to attract and retain customers. This is because various stakeholders including the regulatory body believed that streams of income from tariffs should drive the commercial success of the industry. However, over the past years customer patronage of these firms has stagnated owing to price war and insufficient customer perceived value across product lines. Thus, this study investigated mediation roles of customer perceived value in enhancing relationship between product price and customer patronage of mobile phone services in Nigeria. Consequently, four hypotheses were formulated and tested in line with the procedure proposed by marketing scholars. The results showed that product price through customer perceived value significantly predicted customer patronage of GSM services. In other words, while product price could translate into economic benefits for customers, the outcomes of this research showed that customers of the four major mobile telephone service providers required emotional, social, psychological and epistemic values from their purchases. Consequently, conventional thinking of equating price to customer value must give way to new perspectives which suggest that value is a multidimensional concept and therefore every offering must serve as an embodiment of these values in order to elicit robust customer patronage.

However, the tested model did not explain more than 40 to 50 percent variations in customer patronage; therefore future research may integrate cultural variables into the key antecedents of customer patronage and tests conducted across border lines such as individualistic cultures like United States of America and collective cultures like China.

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