

# Innovations

## Effect of Online Shopping on Consumer Buying behaviour of Fast Moving Consumer Goods in Delta State, Nigeria

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### **Abstract**

*This study examined the effect of online shopping on consumer buying behaviour of fast moving consumer goods in Delta State, Nigeria. A cross sectional survey research design was adopted for the study. As structured questionnaire was used as the research instrument. To establish the reliability of the instrument, a test-retest method was employed. Convenient sampling method was adopted in this study to acquire data from respondents in Asaba, Warri, Sapele and Ughelli where about 50% e-commerce customers reside in Delta State. Therefore, the sample size of the study was 230 loyal customers of the selected online shopping stores. The statistical technique that was used includes descriptive statistics and multiple regression analysis. All analysis was done using the statistical package for social science (SPSS) software version 23. Findings showed that the dimensions of online shopping such as product online reviews, perceived risk and virtual value chain have positive significant effect on consumer buying behavior. Perceived risk has a higher positive effect on consumer buying behaviour. The study concluded that online shopping has positive effect on consumer buying behavior of fast moving consumer goods in Delta State. The study suggested that marketers should possess a comprehensive understanding of the various aspects that exert effect on consumer buying behaviour in the online environment. Such knowledge can significantly contribute to the improvement of explanatory and predictive capabilities within the realm of online shopping.*

**Keywords:** Online Shopping, Product Online Reviews, Perceived Risk, Virtual Value Chain

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## Introduction

In contemporary society, the convenience of online purchasing has emerged as a viable alternative for individuals leading hectic lives. Over the course of the last decade, a significant transformation has occurred in the manner in which customers engage in shopping activities. Despite the ongoing preference of consumers to make purchases from physical retail establishments, users or buyers express a strong inclination towards the convenience offered by online shopping. Online shopping is a time-saving practise that is increasingly valued by individuals in contemporary society who find themselves preoccupied with various commitments and are thus unable or disinclined to allocate substantial amounts of time to traditional shopping activities. In contrast to brick-and-mortar establishments, internet businesses present their merchandise through textual descriptions, accompanied by visual representations such as photographs and multimedia materials. Numerous e-commerce platforms include hyperlinks that provide more details about to their merchandise. However, it should be noted that certain individuals who engage in online purchasing exhibit characteristics of being adventurous explorers, seekers of entertainment, enthusiasts of shopping, or individuals who are impatient with the shipping process (Anisur, et al. 2018).

As a result, the study of online consumer behaviour, encompassing user actions during the processes of searching, purchasing, and product usage, has emerged as a prominent research domain attracting a growing number of scholars seeking to comprehend the distinct characteristics of online shopping. The major objective of a business is to provide products and services that effectively cater to the needs of their consumers (Anisur, et al., 2018). A business that effectively meets consumer needs and ensures high levels of satisfaction is more likely to achieve success compared to its competitors, as satisfied customers are more inclined to engage in repeat purchases.

The domain of electronic commerce (e-commerce) is currently experiencing substantial growth in both industrialised and developing nations. The phenomenon of online shopping is seeing substantial growth, with indications suggesting a promising future and scientific evidence pointing towards a large development in the realm of Internet-based purchase. Although online shopping has certain advantages, it is accompanied by unfavourable impressions due to perceived risks (Tran, 2020). Furthermore, there is an increasing dependence on the Internet for economic activity among individuals. Chang et al. (2016) asserted that internet shopping is facilitated by traditional methods of shopping. In contemporary society, the utilisation of websites and online exchanges for purchasing purposes has become commonplace, owing to the prevalence of technology.

The global COVID-19 pandemic has significantly impacted the lives of individuals across the globe. The use of lockdown measures and adherence to social distance protocols have significantly impacted consumer shopping behaviour. Sahana and MuniRaju (2021) stated that there is a growing need among consumers for a retail environment that offers both convenience and enhanced safety measures. The number of visitors to shopping malls has decreased following the implementation of lockdown measures, maybe attributed to customer reluctance to engage in purchasing activities within these establishments (Sahana & MuniRaju, 2021). Therefore, the importance of internet buying is increasing during the period of the epidemic. Nigerian e-commerce enterprises have seen this circumstance as a favourable occasion to cater to their current online client base and entice new customers who typically patronise brick-and-mortar retail establishments.

The advent of the 21st century has witnessed the integration of online shopping into the fabric of everyday existence. The Internet provides customers with the convenience of shopping at any time and from any location, offering the ability to easily compare products and prices with a few simple clicks. Additionally, consumers may access information on the experiences of other purchasers with both the desired product and the chosen online retailer (Balogh & Mészáros, 2020). The evolution of online purchasing has witnessed a gradual progression in its technical, legal, and security prerequisites during the last twenty years. The analysis of consumers' online shopping behaviours commenced in the early 1990s. There has been a growing

body of empirical research that has investigated the influence of perceived risk on shopping attitudes (Pelaez, et al. 2017; Iconaru, et al. 2012).

With the advancement of e-commerce and the widespread adoption of the internet, an increasing number of individuals have been accustomed to engaging in online shopping. Consequently, they opt to purchase the goods and services they require through online platforms. The prevalence of online purchase has emerged as the predominant mode of daily consumption. Within this particular setting, the examination of the purchasing behaviour of online customers has emerged as the primary domain within the area of consumer behaviour. The reviews provided by buyers have a significant impact on the buying intention and behaviour of potential consumers (Jinghuan, et al., 2020). Hence, internet reviews have the potential to be a valuable data resource for forecasting online purchasing behaviour. Furthermore, the purchase intention or decision of consumers is influenced by their risk perception about online purchases. When consumers are confronted with a buying situation, they develop a sense of the level of risk associated with selecting a specific brand and the method of purchasing it (Sun, et al. 2006). Hence, it can be argued that risk perception is a psychological factor that exerts an influence on consumer purchasing behaviour (Lawrence & O'Connor, 2000). Naturally, the influence of this information on consumers' purchasing intentions will vary, contingent upon the nature of the goods or services in question. The consumption of certain goods is prevalent among individuals, but others possess distinct personal attributes, hence resulting in varying influences of online reviews and perceived risk. Hence, the primary objective of this study is to investigate the effect of online shopping on consumer purchasing behaviour pertaining to fast moving consumer items within the region of Delta State, Nigeria.

### **Statement of the Problem**

The act of consumption is inherently constrained by both spatial and temporal factors. Sheth (2020) posited that individuals gradually form consumption patterns, including preferences for certain products, timing of consumption, and choice of consumption venues. Naturally, this extends beyond the realm of consumption. This observation holds true for several activities, including purchasing, information retrieval, and the management of post-consumption garbage. Consumer behaviour has a high degree of predictability, as evidenced by the availability of numerous reliable predictive models and consumer insights derived from historical data on recurring purchasing patterns at the individual level. Although consumption is often habitual, its patterns and behaviours are also influenced by the setting in which it occurs. The influence on consumer habits is contingent upon several contextual factors, with four primary contexts identified as key determinants or disruptors. One significant factor contributing to changes in the social milieu is the occurrence of life events, such as marriage, parenthood, and relocation to different cities. The social context encompasses various domains, such as the workplace, community, neighbours, and friends. The subsequent context pertains to technology. As new and innovative technologies emerge, they disrupt and replace established practises. In recent years, there have been notable advancements in technology, particularly in the areas of smart phones, internet connectivity, and electronic commerce.

The advent of online search and online ordering has significantly transformed the manner in which individuals engage in shopping and consume various items and services. One additional factor that influences consumption patterns is the presence of rules and regulations, particularly those pertaining to public and shared places, as well as the reduction of consumption of unhealthy goods. For instance, the consumption of tobacco, alcohol, and guns is subject to regulation based on the specific location. Indeed, public policy has the potential to incentivize the utilisation of socially beneficial commodities and services, including solar energy, electric vehicles, compulsory automobile and homeowners' insurance, as well as childhood vaccinations. The fourth setting, which is characterised by its unpredictability, pertains to ad hoc natural calamities, such as earthquakes, storms, and global pandemics, including the ongoing Covid-19 pandemic. Likewise, one can observe regional conflicts, civil wars, and significant global conflicts such as World War II, the Cold War, and

the Great Depression of the late 1920s, along with the Great Recession of 2008-2009. Each of these disruptions had a considerable impact on both consumption and output, as well as the supply chain.

### **Objectives of the Study**

The major objective of the study is to examine the effect of online shopping on consumer buying behaviour of fast moving consumer goods in Delta State, Nigeria. The specific objectives are to:

- i. ascertain the effect of product online reviews on consumer buying behaviour
- ii. determine the effect of perceived risk on consumer buying behaviour
- iii. examine the effect of virtual value chain on consumer buying behaviour

### **Statement of Hypotheses**

Ha<sub>1</sub>: Product online reviews has significant effect on consumer buying behaviour

Ha<sub>2</sub>: Perceived risk has significant effect consumer buying behaviour

Ha<sub>3</sub>: Virtual value chain has significant effect on consumer buying behaviour.

## **Literature Review**

### **Concept of online shopping**

Online shopping refers to the practise of engaging in electronic commerce by purchasing things or services directly from the seller via the Internet. The Internet-based or Click and Order business model has superseded the conventional Brick and Mortar company strategy. An increasing number of individuals are utilising the internet as a platform for purchasing a diverse range of products, including household items, footwear, and airline tickets. In the contemporary day, individuals are presented with a plethora of alternatives when selecting their desired goods and services via digital platforms (Anisur, et al., 2018). Online buying possesses distinct characteristics. Huseynov and Yildirim (2014) highlighted that the primary obstacle in online retail sales is the absence of physical interaction, which is closely followed by concerns regarding the protection of personal information and the security of financial transactions conducted over the Internet. According to the findings of Demangeot and Broderick (2010), it was seen that the behavioural pattern in this particular scenario is not driven by perceived ease of use, but rather by security and privacy concerns. According to Zuroni and Goh (2012), the existence of perceived online risk hinders the establishment of a relationship between the client and the online shop, regardless of the amount of time the customer spends on the Internet.

The taste, preference, and preferences of individuals are subject to constant change due to several circumstances, including the introduction of the Internet. However, further comprehension regarding consumer behaviour is necessary for this advancement. Consumer behaviour research has identified a comprehensive model of purchasing behaviour that illustrates the many processes employed by customers when making decisions regarding a purchase (Vrender, 2016). The aforementioned designs hold significant importance for marketers due to their ability to elucidate and forecast customer purchasing patterns. Jarvenpaa et al. (1997a) introduced a theoretical framework that outlines the relationship between attitude, behaviour, and intention to engage in online buying. The design incorporates a variety of metrics that are categorised into four overarching groups: product value, quality services provided via the website, the shopping experience, and the perception of risk associated with online buying. The study conducted by Chang et al. (2005) examined the many categories of variables that influence online shopping behaviour. The researchers in their study employed a categorization approach, wherein they classified the traits into three overarching groups. The perceived qualities of the web sales channel encompass various factors, namely risk, online purchasing experiences, advantage, service quality, and trust. The second category pertains to the website and product aspects that encompass risk reduction measures, site features, and product characteristics. The final group focuses on consumer attributes. Consumer characteristics are influenced by a

range of factors, including different types of features, demographic variables, consumer buying orientations, consumer innovativeness, and psychological variables. Additionally, factors such as computer and Internet expertise, as well as their usage, also play a role in shaping consumer characteristics.

Consumer attitudes towards online buying are typically influenced by two key factors: trust and perceived benefits (Hoque, et al. 2015). Hence, it can be argued that trust and perceived benefits are significant factors influencing customer behaviour in the context of online buying (Al-Debei, et al. 2015; Hajli, 2014). Furthermore, the satisfaction of online shopping is strongly influenced by various factors such as information quality, merchandise attributes, website design, transaction capability, payment methods, security and privacy measures, delivery services, consumer self-consciousness, state of mind, time perception, and customer service (Katawetawarakas & Wang, 2011; Liu, et al. 2008; Mudambi & Schuff, 2010).

The purchase intention of online items is substantially influenced by factors such as brand image, product quality, and the goodwill associated with the nation of origin (Haque et al., 2015). In addition, the acquisition of online data pertaining to items, services, and the history records of individual customers is a crucial factor in the selection of an online store or in making a decision to repurchase (Liao, et al. 2012). Koufaris (2002) asserted that there is a substantial correlation between shopping delight, perceived utility of a website, and the intention to re-purchase items online. Contrary to expectations, the study conducted by Lee and Lin (2005) revealed that while shopping enjoyment has a positive impact on the intention of new customers to make a purchase, it does not exert any influence on their likelihood of returning for future purchases. Indeed, the utilisation of value-added processes in the search engine by a web store, along with the provision of a difficult experience to clients, has the potential to enhance their purchasing enjoyment. Additionally, the frequency of customer return to the online store is likely to impact their purchasing satisfaction, which can be influenced by their level of engagement with the goods (Koufaris, et al. 2001).

Moreover, it is worth noting that demographic factors, including age, gender, and income level, have a significant impact on customer perception and behaviour, hence influencing their inclination towards engaging in online buying activities (Kim, et al. 2008; Laforet & Li, 2005; Rahman, 2012). The goal of online shopping in China is contingent upon various factors, including the age, income, education, and marital status of customers. However, the most significant determinant is their perceived utility, as highlighted by Gong, Stump, and Maddox (2013).

### **Product Online Reviews**

An online review refers to a comment made by a current, prospective, or past consumer regarding a product or company, which can be categorised as positive, neutral, or negative. These reviews are accessible to the general public via the internet. There is an increasing body of scholarly research that is directing attention towards examining the correlation between the quality of online reviews and consumers' purchase intention (Balogh & Mészáros, 2020). Previous research has indicated that the quantity of internet reviews has a positive correlation with consumers' purchasing intention (Lawrence & O'Connor, 2000). Consumers commonly take into account the ratio of favourable and negative online reviews. According to Zheng (2008), a higher number of good reviews is associated with a greater likelihood of purchase intention.

Nevertheless, while making purchasing decisions, customers tend to assign more significance to unfavourable information (Senecal & Nantel, 2004). Negative impulses have a greater propensity to capture attention and exert more potent stimulus compared to good impulses. The study demonstrates that there is a negative correlation between consumers' intention and the increasing number of unfavourable internet reviews pertaining to specific goods. According to Chen and Ma (2012), the exposure of a potential consumer to a substantial quantity of unfavourable internet reviews leads to the development of a pessimistic perception of the quality or desirability of the product.

There are numerous categorizations of commodities that are linked to internet reviews. A search commodity refers to a type of product or service that allows consumers to readily access information regarding its

qualities without the need to make a prior purchase (Hao, et al. 2009). Hence, the data acquired through a search for commodities tends to be impartial and readily comparable to other like commodities. Cameras, cell phones, and computers serve as typical illustrations (Li & Ren, 2017). Conversely, an experience commodity can be defined as a type of commodity that possesses traits that are challenging to acquire. It is common for consumers to desire a tactile and experiential encounter with a product before engaging in any evaluation. Therefore, the knowledge on these commodities is predominantly subjective, and the judgements carried out are grounded in prior experiences (Hao et al., 2009). Lim, et al. (2016) stated that hotels, airlines, restaurants, and other services are commonly cited as examples of experience commodities. Schlosser (2011) posited that there is a notable disparity in consumer behaviour when it comes to seeking information on two distinct categories of commodities. Specifically, consumers exhibit a tendency to prioritise the acquisition of further reviews pertaining to experience commodities, as opposed to search commodities. Nevertheless, it has been seen in certain research that customers exhibit a greater reliance on the information presented in online evaluations when making purchases of search items (Brodie, et al. 2013).

### **Perceived Risk**

The existing body of literature predominantly supports the notion of a negative association between the construct of perceived risk and the intention to make a purchase. Nevertheless, it is worth noting that several studies have failed to establish a statistically significant or even positive link in this regard (Pelaez et al., 2017). Zhang, et al. (2012) asserted that there are five distinct dimensions that have a substantial impact on online buying behaviour in China. These dimensions include perceived health, quality, time, delivery, and after-sales hazards. In their study, Zheng et al. (2012) conducted an analysis of ten distinct risk dimensions within the context of China. These dimensions encompassed performance, privacy, source, delivery, time, financial, payment, physical, social, and psychological aspects. The 10 components were categorised into two primary risk categories, namely personal and non-personal. According to a study conducted in Taiwan, Pi and Sangruang (2011) found that convenience, physical, performance, and social risk factors had the most significant influence on individuals' attitudes towards online purchasing.

According to Masoud's (2013) findings, there is evidence to suggest that financial risk, product risk, delivery risk, and information security risk have a detrimental impact on consumer behaviour in the context of online buying. The influence of additional dimensions, such as temporal and social risk, on online shopping is negligible. In their study conducted in 2014, Gerber, Ward, and Goedhals-Gerber examined six distinct categories of perceived risk in the context of Southern Africa. These risk types encompassed functional, physical, financial, social, psychological, and time-related threats. The authors indicated that the risks identified by their participants can be categorised into three distinct risk elements, namely personal, social, and performance concerns. There have been multiple research undertaken on the subject matter pertaining to the Indian internet market, which have identified a detrimental influence of hazards on the practise of online purchasing (Suresh & Shashikala, 2011; Dash, 2014; Sreya & Raveendran, 2016).

In their study, Suresh and Shashikala (2011) identified six distinct risk categories, including monetary, performance, time, source, social, and psychological hazards. The research revealed that each of the aforementioned criteria exerts a substantial influence on individuals' attitude towards internet shopping. Dash (2014) outlined six primary risk factors in India, albeit with some variations in the specific categories identified. In addition to the aforementioned risks such as product risk, psychological risk, and time risk, the researcher also discovered other risks including financial risk, performance risk, delivery capability risk, and website performance risk.

In their study, Durmus, et al. (2017) conducted an analysis to examine the impact of perceived risks on the desire to make online purchases in Turkey. Specifically, they investigated the role of word of mouth (WOM) and trust aspects in this relationship. The study demonstrated that trust in online purchases is influenced by various factors, including information risk, financial risk, product risk, and the intensity of word-of-mouth

communication. These factors collectively impact the individual's propensity to make online purchases. According to a study conducted in Malaysia, it was discovered that several types of risks, including perceived after-sales, financial, psychological, and social risks, had a notable impact on individuals' online purchasing behaviour (Nawi, et al. 2019). On the contrary, according to a study conducted in Hungary, it is argued that consumers encounter little risks when engaging in transactions within Hungarian online retail platforms, with the exception of certain concerns related to payment and delivery mechanisms (Szűcs, 2018).

An online purchase refers to the act of a consumer placing an order for a desired goods or service through a web shop owned by the seller, typically by clicking a mouse or sending an email (Nagy & Keller, 2017). According to the American Psychological Association, the concept of "perceived risk" refers to an individual's personal evaluation of the degree of danger linked to a certain hazard, such as a health threat. According to the APA Dictionary (2020), risk perceptions exhibit variability based on characteristics such as previous experiences, age, gender, and cultural background. The dangers associated with purchase are inherently subjective, as they are based on individual perceptions (Hofmeister-Toth, 2017). It is possible that the risk associated with a purchase decision may not actually exist or be objectively present, although the consumer perceives it as being genuine (Balogh & Mészáros, 2020).

When confronted with a purchasing scenario, consumers experience a perception of risk associated with selecting a specific brand and determining the method of purchase. The idea of perceived risk holds significant importance in the field of consumer behaviour, indicating that customers encounter a state of ambiguity prior to making a purchase, about the potential nature and extent of the anticipated negative consequences associated with the acquisition and use of a product (Ma, 2011). Based on the S-O-R theory, the act of shopping on the internet elicits external stimulation in customers, then influencing their psychological and perceptual states, ultimately impacting their purchasing behaviour (Jinghuan, et al., 2020). Among these factors, risk perception emerges as the most influential determinant. The attitude of consumers towards online purchases is influenced by their perception of risk, which in turn impacts their readiness to make a purchase and their actual purchasing behaviour (Zhao & Ji, 2010). Prior research has indicated a negative association between risk perception and purchase intention, as demonstrated by Zhao and Ji's (2010) findings. The conventional inventory utilised for assessing perceived risk is not suitable for evaluating the perceived risk of internet consumers. Research has indicated that the purchasing risk perception inside consumer networks pertains to the perception and evaluation of potential negative outcomes resulting from customers' shopping behaviours in online shopping environments (Jinghuan, et al., 2020). The perceived risks associated with online buying for consumers can be categorised into five categories, as identified by Yu (2016). These dimensions include the perceived risk of store-opportunism, commodity-performance, financial, delivery, and privacy. The concept of online risk perception in relation to consumer behaviour refers to the cognitive evaluation and assessment made by customers regarding the potential negative outcomes that may arise as a result of their online shopping activities.

### **Virtual Value Chain**

Pagani (2013) posited that the operations within a virtual value chain primarily revolve around the processing and dissemination of information. Consequently, it is of greater significance to execute these activities electronically rather than through physical means. According to Jianli (2013), the term "information" refers to the manner in which transactions between firms are exchanged. The virtual value chain commences with the content provider, encompassing the offerings provided. It then proceeds to the infrastructure responsible for facilitating distribution and transactional support, enabling the occurrence of transactions. Finally, it extends to the context provider, which pertains to the manner in which the offerings are presented. Furthermore, consumer interaction is also discussed by Jianli (2013). The information systems employed in a virtual value chain serve as a core nervous system within the organisation, effectively integrating several stages of the traditional value chain, including raw material acquisition, manufacture,

distribution, marketing, and sales (Liu & Wu, 2010). According to Zott and Amit (2017), e-commerce enterprises can obtain several benefits by engaging in virtual value chain activities.

In order to enhance effectiveness and efficiency, it is recommended that organisations integrate the various activities of the conventional value chain with virtual counterparts (Roosendaal et al., 2003). The creation of value in e-commerce is contingent upon the level of interconnectivity between a firm's various value chain operations and its suppliers, producers, and customers, facilitating the seamless flow of information along the value chain (Zott & Amit, 2017). One illustration of this phenomenon is the utilisation of digital payment options, which enables customers to promptly personalise their orders. Consequently, pertinent information is expeditiously transmitted to manufacturers and suppliers in real-time (Greis & Kasarda, 1997).

Real-time transactions engender heightened competitive intensity and impose a substantial requirement on enterprises to effectively handle consumer information for further utilisation. These companies possess the capability to monitor and gather customer data, enabling them to get insights into client preferences. Consequently, they can strategically tailor their efforts to match customer demands, giving them a competitive advantage over their rivals (Pagani, 2013). Zott and Amit (2017) stated that within the realm of e-commerce, information assumes a strategic function and is not merely perceived as a by-product of the strategic operations within the physical value chain. Bhatt and Emdad (2001) opined that strategic actions within the virtual value chain revolve around the management and use of information.

Rayport and Sviokla (1995) opined that the notion of the "virtual" value chain encompasses the activities of gathering, organising, choosing, synthesising, and distributing information. Although the majority of e-commerce transactions primarily involve the exchange of information, it is important to note that certain aspects of these transactions include physical acts. For instance, the assembly of finished products and provision of services often entail tangible activities (Bhatt & Emdad, 2001). Moreover, a number of backend operations necessitate physical execution due to their reliance on actual materials, tools, and technology, often requiring manual handling. According to Rayport and Sviokla (1995), the effectiveness of an e-commerce value chain is contingent upon the seamless integration of both physical and virtual value chain operations.

## **Theoretical Review**

### **Transaction Cost Theory (TCT)**

According to Williamson (1985), a transaction refers to the transfer of a product or service via a technologically distinct interface. Classical economic theory posits the assumption of symmetric information within the market. Given that both customers and marketers possess equal levels of knowledge, it is possible to carry out the transaction without incurring any costs. In actuality, markets frequently exhibit inefficiencies. To initiate a transaction, clients are required to engage in various actions, including information retrieval, term negotiation, and ongoing monitoring to assure a beneficial outcome. The expenses associated with activities linked to transactions are referred to as transaction costs (Liang & Huang, 1998).

The theoretical framework of Transaction Cost Theory (TCT) allows for an examination of the various obstacles faced by economic enterprises, as outlined by Rindfleisch and Heide (1997). The fundamental tenet of this concept posits that customers seek to engage in transactions with maximum efficiency (Williamson, 1985). In other words, when transaction costs are reduced, there is an increased likelihood of persons engaging in the transaction. Transaction costs are influenced by various factors, such as uncertainty and asset specificity. Due to the inherent asymmetry of information in the market, transactions can result in outcomes that deviate from or contradict initial expectations, so introducing an element of uncertainty. The encouragement of transactions is achieved by mitigating uncertainty, which serves as a means of reducing transaction costs. Asset specificity refers to the limited transferability of assets between different transactions. Rindfleisch and Heide (1997) posited that assets that possess a significant degree of specificity are considered sunk costs that hold limited value beyond a particular exchange relationship. Consequently, a



positive correlation exists between higher levels of asset specificity and reduced transaction costs within the associated exchange relationship, while other exchange relationships incur higher transaction costs.

Liang and Huang (1998) employed the Technology Acceptance Model (TCT) to investigate the factors influencing customers' inclination to engage in online shopping. Furthermore, it was postulated that the intention to engage in e-shopping is directly influenced by both uncertainty and asset specificity. According to Teo and Yu (2005), the frequency of purchasing might serve as an indicator of transaction costs, when trust assumes a role in lieu of asset specificity.

### **Methodology**

In order to get insights into the consumer buying behaviour of internet shopping in Nigeria, a descriptive study was conducted using a cross-sectional survey research approach. A structured questionnaire was developed to align with the research purpose. The researchers employed a Likert scale consisting of five points, ranging from "strongly agree" to "strongly disagree," in order to efficiently gather responses from the participants.

In order to establish the validity of the instrument used for data collection, both face and content validity were employed. The questionnaire was administered to a renowned expert in the field of Marketing. The purpose of this endeavour was to ascertain the validity of the instrument. As a result, modifications were made in order to elicit the intended information. In order to ascertain the instrument's reliability, a test-retest technique was applied. The assessment of model reliability was conducted using tests based on Cronbach's alpha. Cronbach's alpha is a statistical metric that estimates the intercorrelations across indicators. A commonly accepted threshold for Cronbach's alpha is 0.7 or higher, indicating satisfactory reliability. Conversely, a value below 0.7 suggests weak reliability (Seckaran, 2003). The Cronbach's alpha coefficients calculated for the variables are 0.761, 0.755, 0.759, and 0.760, respectively. These values exceed the required threshold of 0.7 for acceptable Cronbach's alpha, indicating that the model's dependability is deemed satisfactory.

The study sample consisted of 510 employees and 230 regular consumers from a specific set of online purchasing platforms in Nigeria. The aforementioned online shopping stores encompass Bubbles Online, Adibba, Mystore, Payport, Pinky Bolar, Regal Buyer, and Shop Direct. In this study, a convenient non-probability sampling method was employed to gather data from respondents residing in Asaba, Warri, Sapele, and Ughelli, which are areas in Delta State where about 50% of e-commerce customers are located. Convenience sampling, which is characterised by its ease of implementation and cost-effectiveness, is frequently employed in information systems (IS) research due to its ability to yield greater response rates (Eze, et al. 2011; Ritchie, et al. 2014). Hence, the study's sample size comprises 230 individuals who are committed customers of the chosen online purchasing firms.

The employed statistical approach encompasses descriptive statistics and multiple regression analysis. The research was conducted using the statistical package for social science (SPSS) software, namely version 23. The use of regression analysis in this study was deemed suitable as it aimed to elucidate the impact of internet shopping on consumer purchasing behaviour. Regression analysis is commonly employed for the purpose of outcome prediction. Its utility extends beyond only indicating the presence or absence of a positive or negative relationship; it also provides insight into the magnitude or strength of said relationship. The general form of the equation to predict CBB =  $\beta_0 + \beta_1POR + \beta_2PR + \beta_3VVC + \epsilon$

### **Results of Data Analyses**

The study revealed that 223 out of the initial 230 copies of the questionnaire distributed to the customers were successfully collected. Among these, 215 copies of the questionnaire were deemed appropriate for analysis, thus constituting the complete sample size.

**Table 1: Online shopping and consumer buying behaviour Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.192	.601		-5.313	.000
	Product online reviews	.240	.035	.249	6.836	.000
	Perceived risk	.677	.049	.582	13.717	.000
	Virtual value chain	.233	.044	.197	5.272	.000

a. Dependent Variable: Consumer buying behavior

Table 1 showed that product online reviews had a significant positive effect on consumer buying behaviour ( $\beta = 0.249, p < 0.05$ ). Perceived risk had significant positive effect on consumer buying behaviour ( $\beta = 0.582, p < 0.05$ ). Virtual value chain, exhibited significant positive effect on consumer buying behaviour ( $\beta = 0.197, p < 0.05$ ).

**Table 2: Fitness of the Model**

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	698.771	3	232.924	419.639	.000 <sup>b</sup>
	Residual	117.117	211	.555		
	Total	815.888	214			

a. Dependent Variable: Consumer buying behavior

b. Predictors: (Constant), Product online reviews, Perceived Risk, Virtual value chain

The F-ratio presented in Table 2 assessed the adequacy of the entire regression model in terms of its fit to the data. The results presented in the table indicated a significant relationship between online shopping and consumer buying behaviour ( $F = 419.639, p < 0.05$ ). This suggests that the regression model used is an appropriate fit for the data.

**Table 3: Model Summary**

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.925 <sup>a</sup>	.856	.854	.7450

a. Predictors: (Constant), Virtual value chain , Product online reviews , Perceived Risk

Table 3 presented the proportion of variability in consumer buying behaviour that is attributed to the various features of online shopping. The study demonstrated that the characteristics of online shopping accounted for 85% (.854) of the observed change in consumer buying behaviour, as indicated by the Adjusted R2 value.

**Discussion of Findings**

The findings of the study indicated the gender composition of the participants. In the sample, 72% of the participants were identified as men, whilst 38% were identified as females. The data regarding the age distribution of the respondents indicates that 24% of the participants were between the ages of 15 and 20.

The majority, comprising 56% of the respondents, fell within the age range of 21 to 30 years. Additionally, 10 respondents, accounting for 10% of the sample, were aged between 31 and 40. Lastly, there were 10 respondents who were 41 years of age or older.

The data on the marital status of the participants revealed that 57% of the sample was unmarried, and the remaining 43% were reported to be married. Regarding the educational background of the participants, it was discovered that 20% of the respondents possessed qualifications from WAEC/GCE/NECO, 35% held OND/NCE qualifications, 40% had HND/B.Sc qualifications, and the remaining 5% were those with postgraduate degrees.

Table 1 showed that product online reviews had significant positive effect on consumer buying behaviour ( $\beta = 0.249, p < 0.05$ ). The test of hypothesis one result showed that online product reviews exert a significant positive effect on consumer buying behaviour. The findings of this study align with the research conducted by Lawrence and O'Connor (2000), which suggested that the quantity of online reviews has a positive correlation with consumers' buy intention. According to Zheng (2008), a higher number of good reviews is associated with a greater likelihood of purchase intention. This suggests that consumers have a tendency to consider the ratio of good and negative online reviews prior to making a purchasing choice.

Perceived risk had a positive effect on consumer buying behaviour ( $\beta = 0.582, P < 0.05$ ). The result of hypotheses two test further support the notion that perceived risk had a significant positive effect on consumer buying behaviour. The findings of the study are consistent with the conclusions drawn by Masoud (2013), which indicated that financial risk, product risk, delivery risk, and information security risk have a detrimental impact on consumer behaviour in the context of online buying. In their study, Suresh and Shashikala (2011) delineated six distinct risk variables, including monetary, performance, time, source, social, and psychological hazards. The research revealed that each of the aforementioned criteria exerts a substantial influence on individuals' attitude towards internet shopping.

Virtual value chain exhibited significant positive effect on consumer buying behaviour ( $\beta = 0.197, p < 0.05$ ). The findings of hypotheses three test indicated that the virtual value chain had a positive effect on customer purchasing behaviour. The findings align with the argument made by Pagani (2013) that the operations of a virtual value chain primarily rely on information and are better suited to be carried out electronically rather than through physical means. According to Jianli (2013), the term "information" refers to the manner in which transactions between firms are exchanged.

The study demonstrated that the variables of online shopping accounted for 85% (0.854) of the observed change in consumer buying behaviour, as indicated by the Adjusted R<sup>2</sup> value. This suggests that the independent factors account for 85% of the variance seen in the dependent variable.

The general form of the equation to predict CBB=  $-3.192 + (0.240 \times \text{POR}) + (0.677 \times \text{PR}) + (0.233 \times \text{VVC})$

The research findings indicated that the use of online shopping platforms had a significant positive effect on consumer buying behaviour in Delta State, particularly in relation to fast moving consumer products. The effect of several factors related to online shopping, including product online reviews, perceived risk, and the virtual value chain, has been found to have a significant positive effect on consumer buying behaviour. The effect of perceived risk on consumer purchasing behaviour is predominantly positive. When confronted with a purchasing scenario, consumers experience a perception of risk associated with selecting a specific brand and determining the method of purchase. The idea of perceived risk holds significant importance in the field of consumer behaviour, as it suggests that customers encounter a sense of ambiguity prior to making a purchase, regarding the potential nature and extent of the anticipated negative outcomes associated with the acquisition and use of a product or service.

## Recommendations

### Conclusion

- Marketers should possess a comprehensive understanding of the various aspects that exert effect on consumer purchasing decisions in the online realm. Such knowledge can significantly contribute to the improvement of explanatory and predictive capabilities within the context of online shopping.
- Managers of online retail establishments should possess a comprehensive understanding of consumers' attitudes and behaviours in order to formulate effective policies that safeguard consumers' interests and exert control over the market.
- Online retailers should incorporate the necessary technological infrastructure to enable machine dialogue in their online shopping platforms, thereby allowing customers clear and unambiguous means to identify and compare various product options.

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