RESEARCH ON CONSUMERS BEHAVIOR TOWARDS ONLINE SHOPPING

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ABSTRACT

The rapid growth of internet usage and advancements in Technology has made online shopping a prevalent method of purchasing goods and services globally. Consumers' behavior towards online shopping encompasses the attitudes, preference and decision-making processes that individuals exhibit when purchasing a product via internet. This study explored the demographic, economic, and behavioral factors influencing consumer loyalty and switching behaviors toward online brands. An online data collection through Google form on consumers' behavioral factors, demographic information, income levels and employment status were collected. The methods used in this study include factor analysis and multinomial regression. The result of the demographic analysis revealed that respondents were predominantly young (62.7% aged below 35 years), male (66.3%), and possess low to moderate income levels, with 47.6% earning less than ₦150,000. Brand loyalty patterns indicated that 34.5% of respondents were loyal to specific retailers, 38.1% exhibited no specific loyalty, and 27.4% frequently switched between retailers. Key findings showed that income and age significantly influenced brand loyalty. High-income earners were significantly more likely to be loyal, while younger respondents (below 55) exhibited lower loyalty levels. Behavioral factors like decision-making, attitudes, and motivations, although impactful for purchase decisions, did not significantly affect loyalty or switching behaviors. Similarly, gender, employment status, and income levels, apart from the high income earners category, lack significant association with loyalty or switching tendencies. Age emerged as a critical predictor, with older respondents (55 and above) being more likely to exhibit loyalty or switch retailers. The findings highlighted the importance of targeted strategies focusing on age and income to enhance consumer retention and satisfaction in online shopping contexts.

KEY WORDS

1.0 Introduction

According to Syedmeeran (2022), internet is changing the way consumers shop and buy goods and services and has rapidly evolved into a global phenomenon. Many companies have started using the internet to cut marketing costs, thereby reducing the price of their products and services to communicate and disseminate information, to sell the products, to take feedback, and also to conduct satisfaction surveys with consumers. Consumers use the internet not only to buy the product online but also to compare prices, product features, and after-sales service facilities they will receive.

Consumers refers to individual or groups who purchase goods and services for personal use while behavior refers to the attitude and decision making processes of consumers. Online shopping on the other hand refers to purchasing products or service rendered through internet or e-commence platforms. This shifts from traditional brick and mortar store to e-commerce platforms is controlled by several factors, including convenience, a wide range of products, price comparisons, and time-saving benefits. Understanding consumer's behavior in this context is very crucial for businesses as it helps them tailored their marketing strategies, enhance customer's experiences, and boost sales. The key element influencing online shopping behaviors include demographic factors (age, income and education), psychological factors (perception, motivational) and external factors (website quality, social media influence, and customer reviews).

Wu & Tsai (2017) was of the opinion that the consumer attitude towards online shopping is known as the main factors that affects e-shopping potential while on the other hand Diop (2012) argued that consumers behavior is an acquired attitude by individuals, A large body of research is available on the internet shopping in the world, however there is still a need for closer examination on the factors that affect online shopping by using segmentation.

American Marketing Association (2015) defined consumers' behavior as the dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives. Some other researchers viewed consumer behavior as the study of all the processes involved in the individuals or groups of individuals' activity which choose, buy, use or dispose of products, services or ideas that lead to satisfying the needs or wishes of consumers (Solomon et al, 2010; Hawkins, 2007).

Close (2012) opined that consumer behaviors has not changed greatly but has only been improved upon by the addition of the online environment. He asserted that the consumer buying behavior of product and services are related to stores that are online and offline.

Cătoiu and Teodorescu (2004) agreed on a clear definition of the consumer behavior concept that all the deliberate acts of the individual or of the group, directly linked to obtaining and using products and services, in order to satisfy present and future needs, including all the decision making processes that precede and determine these acts. From all of the above-mentioned definitions and also from many others (Rațiu, 2007, Yadin, 2002.), it can be clearly established a pattern has emerged in defining consumer behavior. This pattern contains the following characteristics: Consumer behavior relates to individuals as well as to groups or organizations which contains the concept of satisfying a certain need or wish, weather it is a personal or an organizational one.

Online shopping provides a good example of business revolution and E-commerce has made life simple and innovative for individual and groups (Tanvi, 2019). Consumer behavior on online shopping is different from physical market where individual has access to see the products online shopping sites are fast replacing traditional or physical shops.

Over, the years the trust of the customers for online shopping sites has increased considerably. The increase in the number of these sites on one hand has led to a fierce competition which means better and cheaper products for customers. However, at the same time customers have their privacy concerns when it comes to shopping online. Internet is changing the way consumers shop and buy goods and services and has rapidly evolved into a global phenomenon.

This research paper attempts to investigate the consumers' behavior towards online shopping, and the various factors influencing online behavior using logistic regression and factor analysis.

2.0 Literature Review

Dumitrescu et al (2015) examined how Romanian consumers make practical and effective use of the internet in shopping by utilizing both qualitative and quantitative approaches. to investigate several aspects of online consumer behavior, such as frequency and means of internet usage online shopping behavior and decision-making influences which help to identified factors like trust, price, and convenience that impact online purchase decisions.

The study by Dumitrescu et al (2015) applied a structured questionnaire with 37 questions which were divided into four main sections: internet usage, use of online social networks, perceptions of the internet as a business environment, and demographic data. The data were analyzed using SPSS, employing descriptive statistics to interpret the responses and their findings indicated a high frequency of internet use among the participants, primarily through mobile devices. Trust and convenience were highlighted as critical factors influencing online purchasing decisions. The study also noted an increasing inclination among consumers to explore online business opportunities, reflecting the growing impact of digital tools on traditional consumer behavior. The researchers used logistic regression to predict the likelihood of specific online behavior based on demographic and behavioral factors of the customers.

In their study of consumers' behavior towards online shopping, Pal & Kumari (2023) explored the factors influencing online shopping behaviors. The study made use of a descriptive survey design using a convenience sampling collected data from a sample of 50 respondents through a structured online questionnaire, focusing on various aspects such as demographics, online shopping frequency, preferred products and factors motivating online purchases. The key findings in demography and preferences revealed that a significant number of respondents came from the youth which showed that youths are mostly into online shopping and also 56 percent of the respondents shop online once a month. While a smaller group shops more frequently indicating a moderate engagement with online retail, other findings showed preferred products and payment method to be 40 percent while pay on delivery shows 20 percent. On motivational factors, all respondents expressed satisfaction with their online shopping experiences which reflects a positive perception of e commence.

Jain et al (2014) employed a pre-structured questionnaire with a 5-point Likert rating scale to measure the factors influencing the respondents' behaviors to shop online. The empirical results revealed that only one factor namely perceived risk significantly affected online shopping behavior of consumers in Delhi. The researchers conclusion based on findings was that perceived risk has a negative impact on consumers attitude towards online shopping while perceived usefulness, perceived ease of use and perceived enjoyment has no impact on consumers attitude towards online shopping.

Pandey & Parmar (2019) investigated the factors affecting consumers' online shopping behavior. The researchers adopted design methodology approach and used judgmental sampling for selecting the samples from online users of Kanpur city. They also collected data with the help of drafted questionnaire and perform factor analysis to identify the factors that affected online shopping. Their findings revealed that consumers' online shopping behaviors are being affected by several factors such as demographic factors, social factors, consumer online shopping experience, knowledge of using internet and computer, website design, social media, situational factors, facilitating conditions, product characteristics, sales promotional scheme and etc.

According to Nasse (2021), there have been some multiple understandings and considerations of the concept of consumer behavior. However, little is known about the concept in this contemporary area. In their study, they explored the concept of consumer behavior under different aspects of its interpretation. The approach used in their study was based on a sound documentary analysis, with some direct and indirect observations which consists of a sound search for relevant literature, evaluation of sources, an identification of themes, and gaps. The results of their study showed that there are some similarities but also some differences in the definition of the concept following the research context.

Syedmeeran (2022) considered consumer behavior towards online shopping. The method of sampling technique used was convenient sampling. Internet is changing the way consumers shop and buy goods and services and has rapidly evolved into a global phenomenon. Many companies have started using the internet to cut marketing costs, thereby reducing the price of their products and services to communicate and disseminate

information, to sell the products, to take feedback, and also to conduct satisfaction surveys with consumers. Consumers use the internet not only to buy the product online but also to compare prices, product features, and after-sales service facilities they will receive if they purchase the product from a particular store.

According Tranmer & Elliot (2008), binary logistic regression is a statistical method that deals with predicting binary outcomes whereby the dependent variable is categorized with only two possible outcomes often coded as 0 and 1. This technique allows us to understand the relationship between one or more independent variables and the probability of an event occurring and not occurring.

3.0 Methodology

3.1 Data Collection

The primary method for data collection in this study is an online survey chosen for its wide reach and convenience for respondents. The survey consists of a series of questionaires related to the demographic, economic and factors influencing consumer loyalty and switching behaviors of online shopping attributes, with responses measured on a Likert scale (1 to 5, ranging from "Strongly Disagree" to "Strongly Agree"). This scale enables the collection of quantifiable data on each attribute, allowing for analysis of how strongly respondents associate specific characteristics toward online shopping. The target sample from the population includes those who use online for their shopping to ensure relevance and accuracy of perceptions.

3.2 Binary Regression

Binary Logistic regression is a statistical method that is widely used for binary outcomes which forms the foundation for understanding logistic regression used for predicting binary outcomes in Binary logistic model is mostly use where the dependent variables are categorical (Tranmer & Elliot, 2008).

$$\text{Ln}(\frac{p}{1-p}) = B_o + B_1X_1 + B_2X_2 + \cdots B_kX_k + \in,$$

where p represents the probability of success B_0 is the intercept term and $B_1, B_2, ,, B_k$ are the coefficients.

Factor analysis model with k common (latent) factors for a p-vector X of manifest variables is defined as X=μ +Λf + ∈,

where μ (=E(X)) is a general mean vector, f is a random k-vector of common factors with E(f)=0 and V(f) =Φ , ∈ is the random p-vector of unique factors with with E(∈) = 0 and V(∈) =Ψ a diagonal matrix. Factor Analysis is used in this study to group the consumer behavior towards online shopping

3.3 Multinomial Logistic Regression

Multinomial logistic regression models estimate the association between a set of predictors and a multicategory nominal (unordered) outcome. Examples of such an outcome might include "yes," "no," and "don't know"; "Apple iPhone," "Android," and "Samsung Galaxy"; or "walk," "bike," "car," "public transit." The most common form of the model is a logistic model that is a generalization of the binary outcome of standard logistic regression involving comparisons of each category of the outcome to a referent category (Musa et al, 2023). The equation for the model is written in terms of the logit of the outcome, which is a comparison of a particular category to the referent category. The equation for the model is given as

$$\text{Ln} (\frac{\pi j}{1-\pi j}) = \alpha_i + \beta_j X$$

Ln is the natural log of the ratio of the two proportions which is the same as the logit in standard logistic regression, where $\ln[\pi/(1-\pi)]$ is sometimes referred to as the generalized logit. The binary logistic model is therefore a special case of the multinomial model. In generalized linear modeling terms, the link function is the generalized logit and the random component is the multinomial distribution. The j subscript on

both the intercept, αj, and slope, βj, indicates that there is an intercept and a slope for the comparison of each category.

Odds ratios (OR) for each coefficient (for predicting the difference of one category response from the reference) are computed as usual, with OR = exp ($β_j$), and represent the odds increase (or decrease) for category j compared with the reference category for each unit increase in X.

4.0 Data Analysis and Discussion of Results

Table 1: Demography of Respondents

Variable(s)	N	%
Age		
Below 25	31	36.0
25 – 34	23	26.7
35 – 44	15	17.4
45 – 54	13	15.1
55 and above	4	4.7
Gender		
Male	57	66.3
Female	29	33.3
Employment Status		
Employed	36	41.9
Self-employed	19	22.1
Student	31	36.0
Income		
Less than ₦150,000	40	47.6
₦150,000-₦299,000	27	32.1
₦300,000 -₦499,000	10	11.9
₦500,000 and above	7	8.3
Loyalty toward online brands		
Loyal to specific online retailers	29	34.5
No particular loyalty to any retailer	32	38.1
Switch loyalty	23	27.4

Table 1 provides demographic and general information about respondents. It revealed that most of the respondents are young; with 36.0% below 25 years old and 26.7% aged 25-34. Older age groups, particularly those 55 and above, make up only 4.7% of the sample. Gender distribution is skewed, with 66.3% males and 33.3% females. In terms of employment status, 41.9% are employed, 36.0% are students, and 22.1% are self-employed. Income levels show that nearly half of the respondents (47.6%) earn less than ₦150, 000, while 32.1% earn between ₦150,000 - ₦299, 000. Fewer individuals fall into higher income brackets, with 11.9% earning ₦300,000 - ₦499, 000 and 8.3% earning ₦500,000 and above. Regarding loyalty to online brands, 34.5% are loyal to specific retailers, 38.1% exhibit no particular loyalty, and 27.4% switch their loyalty between retailers. Overall, the respondents are predominantly young males with low to moderate incomes, and they show a mix of brand loyalty behaviors, with a significant portion being flexible in their preferences for online retailers.

Table 2: Rotated Factor Loading of the Extracted Three Factors

Factor	Component		
	1	2	3
Shipping speed	.871	.218	.146
Quality of product	.836	.101	.258
Price	.832	.019	.309
Return policy	.819	.148	.097
Customer_review	.797	.247	.271

Convinience	.596	.381	.414
Avoiding crowd	.437	.362	.396
Convenient than in-store	.108	.795	.244
I trust the security of my payment information	.105	.788	.085
I prefer online shopping over in-store shopping	-.076	.705	.406
I am likely to spend more when shopping online than in-store	.233	.644	.002
Product reviews are essential in my decision to purchase online	.423	.532	.131
Access to reviews and rating	.380	.513	.328
Price comparisons	.170	.229	.832
Discounts and promotions	.366	.101	.815
Product variety	.435	.302	.709

Table 2 presents the rotated factor loading of the three extracted factors from the sixteen customers' online behavior. Note that the factor loadings have been sorted for easy identification and interpretation. From the Table, the first seven (7) variables belong to Factor 1 and these variables capture the most significant influences on consumer decisions, as indicated by high factor loadings. Hence, factor 1 is known as Decision Influencing Factor.

The next six (6) variables are highly loaded in factor 2, and this group of extracted variables could be termed as Attitude of customers' factor. The last three (3) variables are highly loaded under factor 3 and hence the variables are measuring the Motivation of customers. Therefore, the three factors extracted are; Decision Influencing, Attitude and Motivation Factors

The results of multinomial logistic regression model using the three extracted factors and demographic variables as predictor variables are presented in Tables 3 and 4. Note that the response variable, loyalty towards brand, has three possible outcomes namely; Loyal to specific retailer, switch loyalty and not loyal to any specific retailer. Not loyal to specific retailer is chosen as reference category.

Table 3: Multinomial model of considered explanatory variables by consumer loyalty towards brand

Loyalty towards brand[s]		B	Std. Error	Wald	Df	Sig.
Loyal to specific retailer	Intercept	18.354	2.460	55.652	1	.000
	Decision Influencing Factor	-.677	.431	2.468	1	.116
	Attitude	.006	.360	.000	1	.988
	Motivation	.220	.433	.259	1	.611
	Below 25	-22.140	2.506	78.061	1	.000
	25 – 34	-21.154	2.289	85.444	1	.000
	35 – 44	-21.033	2.027	107.648	1	.000
	45 – 54	-21.987	2.335	88.699	1	.000
	55 and above	0[b]	.	.	0	.
	Male	1.087	.987	1.214	1	.271
	Female	0[b]	.	.	0	.
	Student	1.883	1.562	1.454	1	.228
	Self employed	2.052	1.315	2.434	1	.119
	Employed	0[b]	.	.	0	.
	Less than N150,000	1.054	1.499	.494	1	.482
	N150,000–N299,000	1.745	1.677	1.082	1	.298
	N300,000 -N499,000	22.695	1.767	165.001	1	.000
	N500,000 and above	0[b]	.	.	0	.

Table 3 shows results of relationship between explanatory variables and consumer loyalty toward online brands. The results revealed the significance of demographic, economic, and behavioral factors. Decision Influencing, Attitude, and Motivation factors do not show significant effects on loyalty, with p-values of .116, .988, and .611, respectively. Age Groups below 55 have strong negative coefficients with p-values < 0.001, indicating a lower likelihood of loyalty compared to the reference group (55 and above). Males are not significantly more likely to show loyalty than females (B=1.087, p-value = 0.271). Respondents earning ₦300,000 - ₦499,000 exhibit a highly significant positive relationship with loyalty (B = 22.695, p - value < 0.001), suggesting a strong association with brand loyalty. Other income groups do not show significant effects with p - value > 0.05. Overall, Consumer loyalty to online retailers is most significantly influenced by higher income levels (₦300, 000 - ₦499, 000). Age is a critical determinant, with younger age groups (below 55) being significantly less likely to exhibit loyalty. Behavioral factors, gender, and employment status do not show significant associations with brand loyalty.

Table 4: Multinomial model of considered explanatory variables by consumer loyalty towards brand

Loyalty towards brand[a]		B	Std. Error	Wald	df	Sig.
Switch loyalty	Intercept	18.770	2.169	74.915	1	.000
	Decision Influencing Factor	-.714	.472	2.292	1	.130
	Attitude	-.223	.433	.266	1	.606
	Motivation	.121	.481	.063	1	.802
	Below 25	-21.715	1.956	123.286	1	.000
	25 – 34	-20.971	1.501	195.122	1	.000
	35 – 44	-21.454	.000	.	1	.
	45 – 54	-42.985	.000	.	1	.
	55 and above	0[b]	.	.	0	.
	Male	.342	1.014	.114	1	.736
	Female	0[b]	.	.	0	.
	Student	1.748	1.685	1.076	1	.300
	Self employed	1.638	1.669	.963	1	.326
	Employed	0[b]	.	.	0	.
	Less than ₦150,000	.813	1.935	.176	1	.675
	₦150,000-₦299,000	1.624	2.117	.588	1	.443
	₦300,000 -₦499,000	24.273	.000	.	1	.
	₦500,000 and above	0[b]	.	.	0	.

Table 4 assesses the factors contributing to consumers' tendency to switch loyalty between online retailers. Age is a critical and highly significant predictor of loyalty switching. Respondents aged **below 55 years** are significantly less likely to switch loyalty compared to the reference group (55years and above), with large negative coefficients **(B < -20, p < 0.001).** Gender does not significantly impact loyalty switching. Male respondents show a slight but statistically insignificant tendency to switch loyalty **(B = 0.342, p = 0.736)**. Behavioral Factors (Decision Influencing Factor, Attitude and Motivation) do not significantly predict loyalty switching with p – values > 0.05. Also, employment status and income levels does not show significant effects on switching loyalty with p – values > 0.05. Overall, **Age** is the most significant predictor of loyalty switching, with older consumers (55years and above) being far more likely to exhibit this behavior compared to younger respondents. Behavioral factors, gender, employment status and income levels do not significantly influence loyalty switching.

5.0 Conclusion and Recommendation

The analysis of consumer behavior towards online shopping highlights the significant role of demographics, income, and motivations in shaping loyalty and switching behaviors. Younger consumers, particularly those below 55 years old, show lower tendencies toward brand loyalty compared to their older counterparts, while income plays a critical role, with higher earners (₦300,000 - ₦499,000) exhibiting

stronger loyalty. Behavioral factors like decision-making, attitudes, and motivations, though influential in driving purchase decisions, do not significantly impact loyalty or switching behaviors. Furthermore, a mixed pattern of brand loyalty was observed, with a substantial portion of consumers (38.1%) showing no specific loyalty to any retailer, and 27.4% switching brands frequently. Factors such as shipping speed, product quality, and price are critical to purchasing decisions, yet their influence does not extend to determining loyalty.

Based on these findings, online retailers should implement targeted strategies to foster loyalty and engagement. For older consumers, retailers can introduce loyalty programs tailored to their preferences, while younger demographics may respond better to promotions emphasizing discounts, product variety, and convenience. High-income earners, who are more likely to be loyal, should be incentivized with premium rewards and personalized offers. Improvements in factors such as shipping speed, return policies, and payment security can address decision-influencing concerns and strengthen consumer trust. Additionally, retailers should invest in flexible loyalty schemes to capture the interest of consumers without strong brand preferences. Future research should explore qualitative aspects of consumer behavior to uncover deeper insights into the interplay of attitudes, motivations, and loyalty dynamics in online shopping.(Pal & Kumari, 2023) (Jain et al., 2014)

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