

Short Paper*

Behavioral Analysis and Evaluation of Online Shoppers in the Philippines using the Proposed Online Shopping Website

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Abstract

Purpose – Online Shopping is proof that e-commerce is becoming more popular in the Philippines. There are so many online shopping sites and most of them were very popular not only here but also outside the country. The purpose of this study was to determine the behavioral analysis of consumers towards online shopping systems based on the online shopping practices and behavior of the customers.

Method – The descriptive quantitative research approach was used in this study, with the questionnaire serving as the primary data collection tool. One hundred (100) respondents were chosen from a pool of business process outsourcing employees at a well-known corporation.

Results – The many variables describing the respondents' online purchasing habit are classified into four categories: mall service availability, quality difficulties, and pricing concerns and interests. These practices may reflect respondents' attitudes toward internet buying. According to the findings, there is no significant association between the varied behaviors of the respondents and their demographic profile. This suggests that respondents' online buying behavior is unaffected by their age, gender, or financial level.

Conclusion – It may be said that the Online Shopping System satisfies customers with the services, quality of the product, and reliable price offered by the system.

Recommendations – This system contributes to the e-commerce popularity in the Philippines in line with the other common online websites.

Implications – The inference is that customers' perceptions of a good deal and a worthwhile product or service are likely to impact online customer happiness directly. Then they should think about building methods to keep online clients, which means that the management should create not just a high-quality e-commerce infrastructure, but also excellent items, dependable delivery, and fair pricing.

Keywords – Online Shopping, Business Process Outsourcing, E-commerce, E-payment system, Secure Sockets Layer

INTRODUCTION

E-commerce is becoming more popular because many companies are now engaged in online business and services. It is by the business-to-business or consumer-to-business transaction (Taher, 2021). When it comes to E-commerce, security is one significant factor to gain the trust of consumers online (Kuruwitaarachchi et al., 2019). It is also an attribute to all system users that a good User-Interface Design of a website is more appealing and user-friendly to their customers. It is also a factor of trust and others could serve as a marketing tool for the company. Customer trust is a process that includes business and Information technology combined to develop a concept that could secure the customers' personal and confidential information. In terms of website quality, one of the biggest threats to online businesses is not the security of online users' confidential information but the understanding of the consumers (Kuruwitaarachchi et al., 2019; Hasan, 2016). One solution which can incorporate objective trust is the good quality of a website. For e-commerce vendors and consumers to have a good relationship, they must alter their perception of the people with whom they transact because the propensity-to-trust of a customer is the genuine acknowledgment that is associated with one's personality (Pham, 2020).

The owner of Facebook, the TECH heavyweight Meta, released research on Filipinos' internet buying preferences. The survey found that while Filipino customers are returning to physical establishments, their internet buying behaviors developed during the epidemic remain important (The Manila Times, 2022). Customers may really choose their payment date and amount based on their preferences and convenience. At every point in the purchasing journey, online retailers guarantee that all the consumers' clicks are handled to properly understand their requirements, wants, and aspirations and give them a delightful experience while minimizing friction (Juyal, 2018). Product-Related Details, notably the Brand, Price, Quality, and Advertisement, are the most influencing factors in Filipino consumers' purchase behavior for electronic items (Dulay et al., 2022).

Purchases on online marketplaces were a trend due to the global lockdown, social seclusion, and other efforts to stop the COVID-19 epidemic from circulating, urging consumers to make more acquisitions on online shopping websites. As a result, the corporate environment underwent quick changes throughout the quarantine (Gu, 2021). The tremendous growth of e-commerce means shoppers no longer need to travel to shop. Commonly, a person at home will consume countless hours browsing the items available on the internet, even if they are not interested in making a purchase (Gull & Pervaiz, 2018). While still preferring cheap goods and services, customers' preferences have moved to include health and safety, thus shifting to online shopping.

The interaction between behavior and environmental factors is one of behavior analysis's primary research interests. As consumers learn to adapt to their economic environment, the field is founded on vast trials to uncover legal and behavioral processes pertinent to consumer research (Sigurdsson et al., 2015). Identifying clients and their

purchasing patterns are typically the focus of studies of customer behavior in online commerce. According to Nicoleta (2022), shopper behavior is the culmination of a person's actions and feelings when shopping. Many distinct factors affect consumer behavior, some of which the merchant may exploit. It is vital to consider consumer behavior to ascertain what generates the best outcomes within a particular store to learn how to maximize these characteristics, increase sales, and improve the customer experience.

Consumer shopping patterns are dramatically propelling the online retail sector to a much more lucrative position. Kelwig (2022) stated that analyzing consumer purchasing behavior is essential because it enables organizations to understand better the factors influencing customers. Unlike in-store consumers, online shoppers have easier access to information and pay less for searching. As a result, they are less devoted to specific online vendors and are more inclined to transfer to other service providers (Gao, 2015). Due to this behavior, business owners must establish their names to attract more customers as online commerce sets more competition than in-store.

The aim of this research is to analyze and evaluate the purchasing behavior of online shoppers in correlation to their demographic profile and determine whether there is no significant difference between existing e-commerce websites and the proposed online shopping site.

LITERATURE REVIEW

Aqeel and Othman (2022) investigated various aspects influencing customer internet purchasing behavior. According to the findings, financial risk and non-delivery risk have a negative impact on attitudes regarding online buying behavior. Clearly, internet firms must safeguard their websites and ensure that their items are delivered to customers. It has been discovered that having a user-friendly website that provides good service to better assist clients with their shopping and subjective norms has a beneficial impact on attitudes toward online purchasing. This means that the more individuals encourage e-commerce to one another, the more popular this purchasing technique will become (Pandey & Parmar, 2019).

Hou (2020) investigated whether socioeconomic factors such as age, gender, and income impact online buying behavior. The respondents are seasoned e-shoppers who often make online purchases. E-shoppers' perceptions and conduct were based on their personal experiences. The findings suggested that socioeconomic factors do not influence the behavior of a seasoned e-shopper. As a result, the internet has evolved into a marketplace acceptable for people of all ages, financial levels, and genders, and biases about the viability of selling specific items should be reconsidered. On the contrary, Utami et al., (2022) found that customers' demographic characteristics such as gender, age, wage, job description, and marital status might impact their views regarding online buying behavior. The findings reveal that all the variables have an impact on online

customers (Abir et al., 2020). Such findings lend credence to Fishbein's attitude theory, which holds that demographic profile is a key determinant in influencing positive or negative attitudes about an item. Thanh Hoa's (2022) attitude theories provide a foundation for understanding attitudes and predicting behavior.

METHODOLOGY

The descriptive quantitative research approach was used in this study, with the questionnaire serving as the primary data collection tool. The goal of this study was to identify the behavioral analysis of the online shopping system based on customers' online buying habits and behavior.

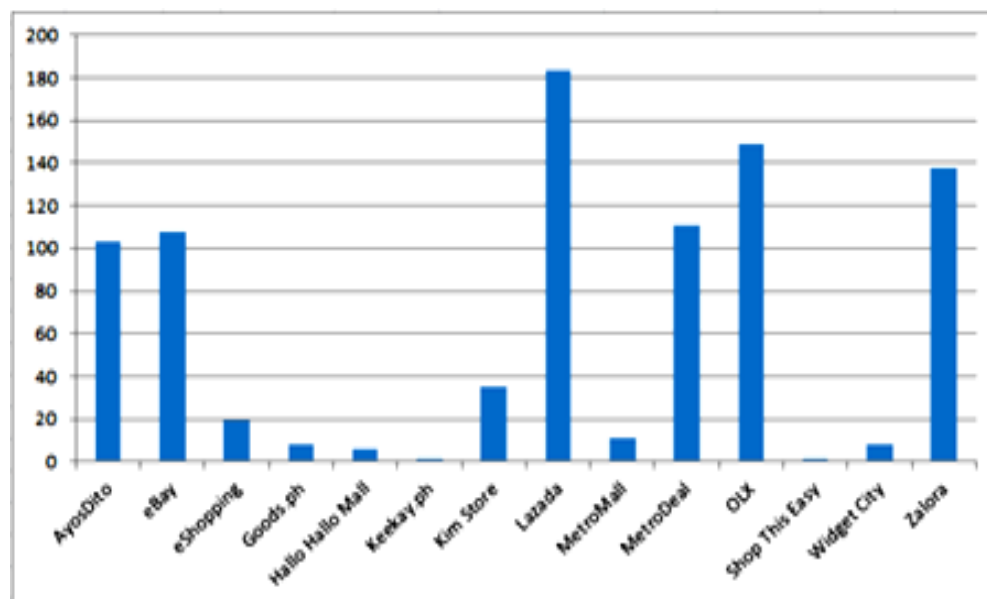


Figure 1. List of Online Shopping Websites and the Frequency of the Respondents that use the Website

Figure 1 shows the most known online shopping sites are LAZADA, Zalora, and OLX because of their features. The features of these online shopping sites help in the creation of the PROPOSED Online Shopping System.

One hundred (100) respondents were selected from a group of business process outsourcing employees in one reputable company. The selection of respondents was made based on systematic random sampling. Every third person who entered the hall of the company was given a questionnaire until reaches the desired participants. They both utilized the proposed online shopping system and the common online shopping websites as their basis for answering the questionnaire.

The researchers used questionnaires with two parts. The first part gathered demographic profiles such as gender, age, educational attainment, job position, monthly income, personal computer ownership, internet access at home, ATM, credit card and debit card ownership, familiarity with the online shopping websites, and description of the participants in terms of purchasing gadgets. Frequency counts, percentages, and means are computed to analyze the data. The second part of the questionnaire focused on the possible behavior of online shoppers. The possible behaviors were adapted to the studies of Bringula (2016a, 2016b). The participants belonging to the age bracket of 20-41 answered the instrument using a six-point Likert Scale ranging from 1 (strongly disagree) to 6 (strongly agree). The 30-item survey questionnaire was tested and validated through Cronbach alpha. It resulted in a 0.68 internal consistency and inter-relatedness of the items within the test. Out of the 30-item, it was reduced to a 24-item survey questionnaire.

The data was gathered through a questionnaire and some statistical techniques were applied. The researchers used a percentage formula to describe the profile of the respondents. The mean and standard deviation were also used to determine the average answers of the respondents to the possible reasons why the participants choose not to use online shopping in buying gadgets. For deeper statistical analysis, the researchers used a t-test to get the difference in the performance, and MANOVA or Multivariate Analysis of Variance to test the difference between independent groups on more than one dependent variable (Shi, 2019).

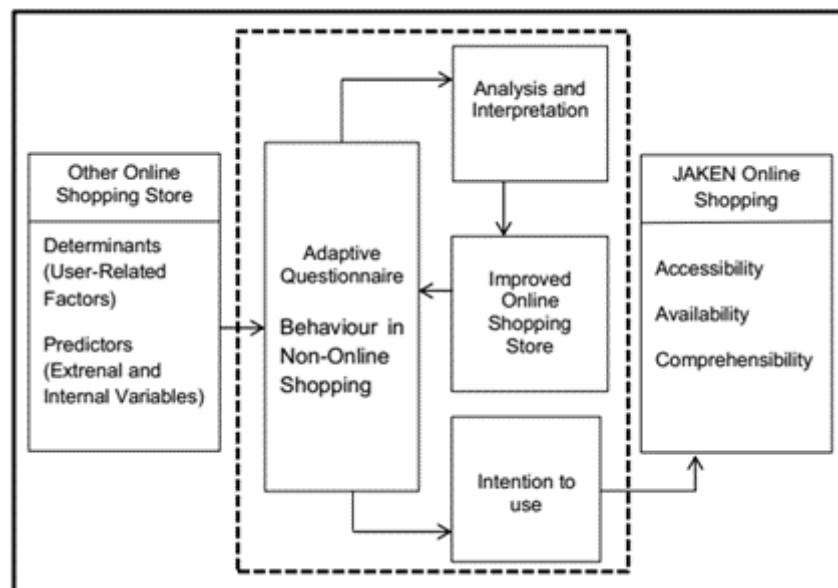


Figure 2. Conceptual Paradigm

Figure 2 depicts the determinants that deal with the user-related factors such as the demographic profile of the respondents, while predictors are the concern of online users and customers that affect customer satisfaction, their decision to trust, and confidence to buy products online. These are manifested in the adaptive questionnaire formulated by

the researchers to identify the behavior of shoppers and determine the reasons for not shopping online. After analyzing the results from the survey, a new and improved online shopping website will be developed based on the predictors and will then be evaluated afterward to measure users' intention to use in terms of accessibility, availability, and comprehensibility.

The different items explaining the behavior of the respondents to online shopping are divided into four reasons: availability of mall services, quality issues, and price concerns and interests. These behaviors can represent the attitude of the respondents in online shopping (Bringula, 2016).

For the validity of the items on the behavior in online shopping, the researchers used Cronbach's Alpha with a coefficient of 0.754 with acceptable remarks. This means that all items in the behavior in online shopping are distinct from one another. Confirmatory factor analysis reduced the number of items from 30 to 24 items and the constructs are in good fit. It also achieved the convergent validity of the construct.

The researchers want to find if the three main behaviors in using the proposed online shopping namely Mall services, Quality Issues, and Price Concerns and Interests have a significant relationship in terms of its demographic profile.

RESULTS

Table 1 shows the multivariate test table of the actual result of the Multivariate Analysis of Variance (MANOVA). To determine whether the result in the table is statistically significant, the result in Wilk's Lambda and the significant value will be observed.

Table 1. Multivariate Analysis of Variance (MANOVA) of the Demographic Profile of the Respondents and Its Behavior

Tool for MANOVA	Value	F	df	Error df	sig.
Wilks 'Lambda	0.469	0.820	36	101.18	0.747

In Table 1, the researchers focused on the values given by Wilks 'Lambda or the probability distribution used in multivariate hypothesis testing. The Wilks' Lambda value is 0.74. It means that there is no significant relationship between the different behavior of the respondents in terms of their demographic profile.

It means that age, gender, or even socioeconomic status has no effect on the behavior of the respondents in the proposed online shopping (Hou, 2020). It was also the result of the study of Kwarteng and Pilík, (2016) that the demographic profile, specifically

in age and gender, has no significant association towards behavior in online or internet shopping.

Table 2. Significant Differences in Respondent's Behavior in Online Shopping

Test of Difference	Mean Pre-Analysis	Mean Post-Analysis	Critical t-value	Computed t-value	Decision
Mail Services	4.6	4.4	1.68	0.10	Do not Reject
Quality Issues	4.7	4.6	1.68	0.17	Do not Reject
Price Concern and Interest	4.2	4.4	1.68	0.12	Do not Reject

Table 2 represents the significant differences in the customer's behaviors in the different online shopping and the proposed Online Shopping System. There is no significant difference when it comes to different mall services, quality issues, and price concerns and interests of the respondents with a computed t-value of 0.10, 0.17, and 0.12 respectively. It may say that the performance of the proposed Online Shopping can be comparable to the well-known Online Shopping by means of its performance, usability, security, and quality of services offered.

Since there are no significant differences in the customer's behavior assessment on Online Shopping using the different and common websites such as Lazada, Metrodeal, OLX, etc., the proposed Online Shopping System designed by the researchers is considered useful and functional same as the other online shopping systems.

DISCUSSION

The researchers gathered and analyzed the responses from the 100 respondents by means of identifying the relationship between the demographic profile of the respondents to their behavior in shopping online. After analyzing, the researchers came up with software known as proposed Online Shopping System that was patterned based on the concerning behavior - Mall Services, Quality Issues, and Price Concern and Interest. The researchers then allowed the respondents to use the system for evaluation and conducted post-assessment. It was gathered again and analyzed. The research focused also on identifying if the system created by them has no significant difference from the existing online shopping websites.

The result may say that the most known online shopping site was LAZADA, Zalora, and OLX because of their features. It may say also be that age has a big impact on the decision-making of consumers in buying online. They are more concerned about quality issues, their interest, and the price of the item.

The researchers collaborate and brainstorm on the company logo and decided to have a proposed Online Shopping System with the following features.

Figure 3 are the list of icons that were used in the system to cater to the needs of online shoppers. The icons created by the researchers were very teasing to online shoppers. It has different features that would really attract consumers to buy online using the system.

The researchers developed a proposed Online Shopping System and allowed the respondents used the system. The result of the evaluation is very remarkable since the behavior has no relationship with the demographic profile of the respondents. It may say that all consumers can use the proposed Online Shopping System and may be satisfied with the services, the trustworthiness of the system towards its product, the reliable price of each product, and boosting their interest to shop online.











Icon	Name	Description
	Payment Option	A feature of the system that the customer can pay their ordered products. This is in different payment options
	Safety and Security	Feature of the system that will provide security to both online buyer and seller. It also protect and secure the personal and customer information. Transaction is also secure and reliable.
	Product and Services	Feature that users and other customer can view different product and services. This is also a module to view product description and prices
	Product Cart	A feature of the system that all products that user want to buy is place inside of this section
	Order Tracking	When orders are being paid and/or place, the customer can track the status of its shipping.
	Search	A feature of the system that the online user, customer and buyer search a certain product they interested in.
	Best Deals	In this section the customers and online users can view what is best deals or most customer bought.
	Shipping Details	In this section, the customer may view the shipping details of their product and its estimated time arrival of their ordered products
	Customer Service	A customer service provided if there are concern and any inquiries of customer and buyers.
	Return and Exchange	A module that user may use for any return and exchange of their bought item or products.

Figure 3. Proposed Online Shopping Icons and their Descriptions

CONCLUSIONS AND RECOMMENDATIONS

It may say that the proposed Online Shopping System satisfies customers with the services, quality of the product, and reliable price offered by the system. It boosts their enthusiasm and interest to shop online just like using common online shopping websites. It gains the customers' trust manner of securing the customers' personal and confidential

information. This system contributes to the e-commerce popularity in the Philippines in line with the other common online websites.

According to Liu and Kao's (2022) results, the context of user e-commerce pleasure is related to six factors: information quality, system quality, service quality, product quality, delivery quality, and perceived pricing. As a result, e-commerce owners should establish not only strong information system characteristics like information quality, system quality, and service quality, but also marketing features like product quality, delivery quality, and perceived pricing, which may favorably affect customer happiness. According to research, people prioritize the goods and delivery. As a result, e-commerce owners should pay more attention to product sourcing and collaborate with delivery providers to ensure a higher level of delivery quality, such as the right order, punctuality, and safe packing.

In the future, the researchers would include more features such as payment to make it more appealing and user-friendly to the customers.

IMPLICATIONS

The inference is that customers' perceptions of a good deal and a worthwhile product or service are likely to impact online customer happiness directly. Then they should think about building methods to keep online clients, which means that the management should create not just a high-quality e-commerce infrastructure, but also excellent items, dependable delivery, and fair pricing.

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DECLARATIONS

Conflict of Interest

The authors hereby declare that have no personal or financial interest that could potentially influence or bias the author's actions or decisions in relation to the matter under consideration. Additionally, the authors confirm that they have disclosed all relevant information regarding any potential conflicts of interest.

Informed Consent

Although not applicable, the requirements for obtaining the datasets have been registered through FOI, and furthermore, the datasets are categorized as public data.

Ethics Approval

This study did not involve any human or animal subjects, therefore, the statement 'not applicable' applies.

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