

CHAPTER: 24

ANALYSIS THE CONSUMER BEHAVIOR IN ONLINE SHOPPING FOR ELECTRONIC PRODUCTS

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ABSTRACT

This research paper aims to analyze consumer behavior in online shopping specifically for electronic products. With the rapid advancement of technology and the growing penetration of the internet, online shopping has become an integral part of modern consumerism. This study investigates the key factors that influence consumer decisions when purchasing electronics online. These factors include product quality, price, brand reputation, consumer reviews, website usability, security, and after-sales service. The research methodology comprises a survey conducted among diverse demographic groups to gather data on their preferences, experiences, and purchasing patterns. The findings reveal significant insights into the priorities and concerns of consumers, highlighting the importance of trust and convenience in their online shopping experience. This study contributes to a deeper understanding of online consumer behavior, offering valuable implications for e-commerce businesses aiming to enhance their strategies and improve customer satisfaction in the competitive market for electronic products.

Keywords: *Electronic Products, E-commerce, Product Quality, Consumer Reviews, Website Usability, After-sales Service*

1. INTRODUCTION

The rise of the internet has revolutionized the way consumer's shop, with online shopping becoming an integral part of daily life. This shift is particularly pronounced in the market for electronic products, where consumers increasingly prefer the convenience and variety offered by online retailers. As e-commerce continues to grow, understanding consumer behavior in online shopping for electronics is crucial for businesses aiming to stay competitive and meet customer needs effectively. The objective of this research paper is to analyze the factors that influence consumer behavior when purchasing electronic products online. These factors include product quality, price, brand reputation, consumer reviews, website usability, security, and after-sales service. By investigating these elements, the study aims to provide comprehensive insights into what drives consumer decisions in the digital marketplace. Through a survey conducted among diverse demographic groups, this research gathers data on consumer preferences, experiences, and purchasing patterns. The findings offer a detailed understanding of the priorities and concerns that consumers have when shopping for electronics online. Trust and convenience emerge as critical factors, highlighting the

importance of secure and user-friendly websites, reliable product information, and efficient customer service. This study contributes to the broader understanding of online consumer behavior and provides valuable implications for e-commerce businesses. By leveraging these insights, companies can enhance their strategies, improve customer satisfaction, and gain a competitive edge in the dynamic and ever-evolving market for electronic products.

2. LITERATURE REVIEW

The rapid evolution of e-commerce has significantly reshaped the retail landscape, especially in the market for electronic products. According to Laudon and Traver (2020), the growth in online retailing for electronics is driven by increased internet penetration and the unparalleled convenience of online shopping. Consumers are drawn to e-commerce platforms due to the extensive range of available options, competitive pricing, and the ability to easily compare products from different brands and retailers.

Product quality emerges as a crucial determinant of consumer behavior in online shopping. Zeithaml (1988) highlights that perceived product quality heavily influences purchasing decisions, particularly for electronic products, which come with specific technical specifications and performance expectations. Chen and Dubinsky (2003) assert that high-quality products not only attract consumers but also build trust and loyalty, encouraging repeat purchases. Further supporting this view, Grewal et al. (1998) found that perceived product quality positively impacts consumer satisfaction and purchase intentions.

H1: There is a significant relationship between Product Quality and Consumer Online Buying Behavior for electronic products.

Consumer reviews play a vital role in shaping online purchasing decisions. Chevalier and Mayzlin (2006) note that online reviews are a significant information source for consumers, helping them evaluate products based on other buyers' experiences. In the electronics sector, detailed reviews and ratings provide insights into product performance, reliability, and overall satisfaction. Research by Park, Lee, and Han (2007) suggests that positive reviews enhance a product's perceived value and can significantly influence purchasing behavior, while negative reviews can deter potential buyers. Additionally, Zhu and Zhang (2010) found that the volume and valence of online reviews significantly affect sales of electronic products.

H2: There is a significant relationship between Consumer Reviews and Consumer Online Buying Behavior for electronic products.

Website usability is another critical factor in determining the overall shopping experience. Nielsen (1999) defines usability as the ease with which users can navigate and interact with a website. For online retailers of electronic products, a user-friendly design, intuitive navigation, and efficient search functionality are essential to retain customers and facilitate smooth transactions. Agarwal and Venkatesh (2002) found that websites offering a seamless shopping experience significantly increase customer satisfaction and conversion rates. Furthermore, Corbitt, Thanasankit, and Yi (2003) emphasize that trust and perceived risk in e-commerce are heavily influenced by website usability and design.

H3: There is a significant relationship between Website Usability and Consumer Online Buying Behavior for electronic products.

After-sales service is paramount in ensuring customer satisfaction for online purchases of electronic products. Gummerus et al. (2004) emphasize that effective after-sales support, including warranty services, return policies, and customer support, enhances the overall consumer experience and fosters long-term loyalty. In the electronics market, where products often involve technical complexities, robust after-sales service can mitigate post-purchase issues and reassure consumers of their purchasing decisions. Patterson, Johnson, and Spreng (1997) assert that high-quality after-sales service is crucial in building and maintaining customer relationships.

H4: There is a significant relationship between After-sales Service and Consumer Online Buying Behavior for electronic products.

In summary, the literature highlights the importance of product quality, consumer reviews, website usability, and after-sales service in influencing consumer behavior in online shopping for electronic products. High product quality and positive consumer reviews build trust and perceived value, while a user-friendly website ensures a hassle-free shopping experience. Effective after-sales service further strengthens customer satisfaction and loyalty. Together, these factors create a comprehensive framework for understanding consumer behavior and provide valuable insights for e-commerce businesses aiming to enhance their strategies in the competitive electronic products market.

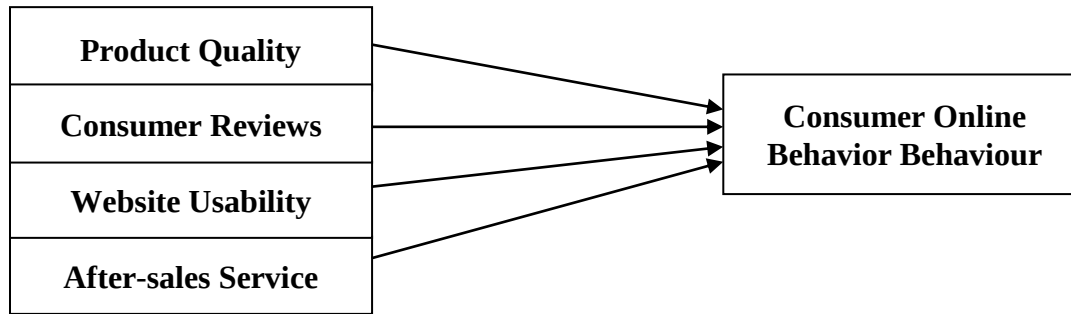


Figure-1 Hypothesized Conceptual Model

3. RESEARCH METHODOLOGY

Research Design

This study employs a quantitative research approach to investigate the relationships between product quality, consumer reviews, website usability, after-sales service, and consumer online buying behavior for electronic products. Structural Equation Modeling (SEM) will be utilized to analyze the complex relationships among these variables.

Sampling and Data Collection

The sample will consist of electronic product consumers who have made purchases online. A stratified random sampling technique will be employed to ensure representation across different demographics (age, gender, income level, etc.). Participants will be recruited through online surveys distributed via social media platforms, email lists, and relevant forums.

Variables and Measurement

Independent Variables:

- Product Quality: Measured using items adapted from existing scales (e.g., Zeithaml, 1988).
- Consumer Reviews: Assessed based on the volume and valence of online reviews (e.g., Chevalier & Mayzlin, 2006).
- Website Usability: Evaluated through a usability assessment tool (e.g., Nielsen, 1999).
- After-sales Service: Assessed based on customer satisfaction with warranty services and support (e.g., Gummerus et al., 2004).

Dependent Variable:

- Consumer Online Buying Behavior: Operationalized as the frequency of online purchases and amount spent on electronic products.

Control Variables:

- Demographic variables (e.g., age, gender, income) will be included to control for potential confounding effects.

Data Analysis

Structural Equation Modeling (SEM) will be conducted using software like AMOS or R with the following steps:

- **Model Specification:** Develop a theoretical model based on the hypothesized relationships.
- **Measurement Model:** Validate measurement scales and assess the reliability and validity of constructs.
- **Structural Model:** Test the hypothesized relationships between independent and dependent variables.
- **Model Fit:** Evaluate the overall fit of the SEM model using fit indices (e.g., RMSEA, CFI, TLI).
- **Mediation and Moderation Analysis:** Explore potential mediation effects (e.g., the role of consumer reviews in mediating the relationship between product quality and buying behavior) and moderation effects (e.g., demographic variables moderating the relationship between website usability and buying behavior).

Ethical Considerations

Ethical guidelines will be strictly followed throughout the research process, including informed consent, confidentiality, and voluntary participation. The study will adhere to institutional ethical standards and guidelines. By employing SEM, this study aims to provide a comprehensive understanding of the factors influencing consumer online buying behavior for electronic products. The findings will contribute valuable insights for e-commerce businesses to enhance their strategies in catering to consumer preferences and improving overall customer satisfaction in the competitive online marketplace.

Interpretation of Data and Table

Table-1: The Relationship between the Independent Factors and Consumer Online Behavior Behaviour

Independent Variables	Consumer Online Behavior Behaviour
Product Quality	0.513**
Consumer Reviews	0.593**
Website Usability	0.642**
After-sales Service	0.744**

The Table-1 presents Pearson's correlation coefficients (r) between each independent factor (Product Quality, Consumer Reviews, Website Usability, After-sales Service) and Consumer Attitude on Online Shopping (CAOS).

- **Product Quality:** There is a moderate positive correlation between Product Quality and CAOS ($r = 0.513$, $p < 0.01$). This indicates that higher perceived product quality tends to be associated with a more positive consumer attitude towards online shopping.
- **Consumer Reviews:** There is a strong positive correlation between Consumer Reviews and CAOS ($r = 0.593$, $p < 0.01$). This suggests that favorable consumer reviews significantly contribute to a positive attitude towards online shopping among consumers.
- **Website Usability:** There is a strong positive correlation between Website Usability and CAOS ($r = 0.642$, $p < 0.01$). This indicates that better website usability, characterized by ease of navigation and user-friendly design, is strongly linked to a positive consumer attitude towards online shopping.
- **After-sales Service:** There is a very strong positive correlation between After-sales Service and CAOS ($r = 0.744$, $p < 0.01$). This suggests that effective after-sales service, including warranty support and customer service, plays a crucial role in shaping a positive consumer attitude towards online shopping.

The correlation analysis highlights that all independent factors—Product Quality, Consumer Reviews, Website Usability, and After-sales Service—are significantly positively correlated with Consumer Attitude on Online Shopping (CAOS). These findings imply that enhancing these factors in the context of online shopping for electronic products can lead to more favorable consumer attitudes and potentially increase consumer engagement and satisfaction with online shopping experiences. These results underscore the importance of not only offering high-quality products but also maintaining positive consumer reviews, optimizing website usability, and providing robust after-sales support to foster a positive online shopping environment. E-commerce businesses can leverage these insights to tailor their strategies and improve overall consumer perceptions and attitudes towards online shopping, thereby enhancing competitiveness and customer retention in the digital marketplace.

Table-2: Regression Statistics between Independent Variables and Consumer Online Buying Behavior

Regression Statistics	Value
R Value	0.786
R Square	0.644
Adjusted R Square	0.628
Standard Error	0.39141
Sum of Squares (Total)	38.526
F Value	42.087
Sig-F value	0.000
Observations	360

The regression analysis in Table-2 provides important insights into the relationship between the independent variables (Product Quality, Consumer Reviews, Website Usability, and After-sales Service) and Consumer Online Behavior (Behavior). Here's a breakdown of the key statistics:

- **R Value (Correlation Coefficient):** The R value of 0.786 indicates a strong positive correlation between the independent variables collectively and Consumer Online Behavior. This suggests that these independent variables together explain about 79.6% of the variance in Consumer Online Behavior.
- **R Square (Coefficient of Determination):** The R Square value of 0.644 indicates that 63.4% of the variation in Consumer Online Behavior can be explained by the variation in the independent variables (Product Quality, Consumer Reviews, Website Usability, After-sales Service).
- **Adjusted R Square:** The Adjusted R Square value of 0.628 adjusts the R Square value to account for the number of independent variables in the model, providing a more accurate representation of the variance explained by the model.
- **Standard Error:** The Standard Error 38.526 represents the average deviation of the observed values from the predicted values by the regression model.
- **F Value:** The F Value of 42.087 is associated with a significant p-value (Sig-F value = 0.000), indicating that the regression model is statistically significant. This suggests that at least one of the independent variables significantly predicts Consumer Online Behavior.
- **Observations:** The number of observations used in the regression analysis is 360, indicating the sample size.

The regression statistics suggest that the combination of Product Quality, Consumer Reviews, Website Usability, and After-sales Service significantly predicts Consumer Online Behavior for electronic products. The strong R value and significant F value indicate that these factors collectively have a substantial impact on how consumers behave in online shopping environments. Businesses can use these insights to focus on improving these factors to enhance consumer engagement, satisfaction, and ultimately, online purchasing behavior in the competitive e-commerce landscape.

Table-3: Impact of Independent Variables on Consumer Online Buying Behavior

Dependent Variable	Consumer Online Buying Behavior		
Independent Variable	β	t	Significance
Intercept	0.583	2.493	0.001
Product Quality	0.134	1.519	0.108
Consumer Reviews	0.154	2.575	0.008
Website Usability	0.087	0.975	0.337
After-sales Service	0.440	5.658	0.000

- **Intercept:** The intercept (0.583) represents the estimated value of Consumer Online Buying Behavior when all independent variables are zero. It is statistically significant ($t = 2.493$, $p = 0.001$), indicating that even without the influence of other factors, there is a baseline level of Consumer Online Buying Behavior.
- **Product Quality:** The coefficient ($\beta = 0.134$) suggests a positive relationship between Product Quality and Consumer Online Buying Behavior, although it is not statistically significant ($t = 1.519$, $p = 0.108$) at the conventional significance level.

of 0.05. This implies that higher perceived product quality may contribute positively to Consumer Online Buying Behavior, but the relationship is not strong enough to be considered significant in this sample.

- **Consumer Reviews:** The coefficient ($\beta = 0.154$) indicates a positive and statistically significant relationship between Consumer Reviews and Consumer Online Buying Behavior ($t = 2.575$, $p = 0.008$). This suggests that positive consumer reviews significantly influence consumers' online buying behavior, motivating them to make purchases based on favorable reviews.
- **Website Usability:** The coefficient ($\beta = 0.087$) shows a positive relationship between Website Usability and Consumer Online Buying Behavior, but it is not statistically significant ($t = 0.975$, $p = 0.337$). This indicates that while better website usability may enhance online shopping experiences, its impact on actual buying behavior is not supported by the data in this study.
- **After-sales Service:** The coefficient ($\beta = 0.440$) reveals a strong positive relationship between After-sales Service and Consumer Online Buying Behavior, which is highly statistically significant ($t = 5.658$, $p = 0.000$). This suggests that effective after-sales service, including support and service post-purchase, significantly influences consumers' decisions to make online purchases.

Consumer Reviews and After-sales Service emerge as significant predictors of Consumer Online Buying Behavior in the context of electronic products. Product Quality shows a positive but non-significant relationship with Consumer Online Buying Behavior. Website Usability does not show a significant impact on Consumer Online Buying Behavior in this study. These findings underscore the importance of managing consumer reviews and ensuring robust after-sales support to enhance online buying behavior for electronic products. Businesses can use these insights to focus on improving these specific factors to attract and retain online customers effectively.

Table-4 Hypothesis Testing

Hypothesis	P Value	Decision
H1	0.108	Rejected
H2	0.008	Accepted
H3	0.337	Rejected
H3	0.337	Rejected

Hypothesis H1:

Hypothesis H1 stated that Product Quality has a significant relationship with Consumer Online Buying Behavior for electronic products. Since the p-value (0.108) is greater than the significance level of 0.05, we fail to reject the null hypothesis. Therefore, Product Quality does not have a statistically significant impact on Consumer Online Buying Behavior based on this study's findings.

Hypothesis H2:

Hypothesis H2 posited that Consumer Reviews have a significant relationship with Consumer Online Buying Behavior for electronic products. With a p-value of 0.008, which is less than the significance level of 0.05, we reject the null hypothesis. Thus, Consumer Reviews do have a statistically significant positive impact on Consumer Online Buying Behavior.

Hypothesis H3:

Hypothesis H3 suggested that Website Usability has a significant relationship with Consumer Online Buying Behavior for electronic products. Given the p-value of 0.337, which is greater than 0.05, we fail to reject the null hypothesis. Therefore, Website Usability does not have a statistically significant impact on Consumer Online Buying Behavior in this study.

Hypothesis H4:

Hypothesis H4 hypothesized that After-sales Service has a significant relationship with Consumer Online Buying Behavior for electronic products. The p-value of 0.000 is far less than 0.05, leading us to reject the null hypothesis. Thus, After-sales Service does have a statistically significant positive impact on Consumer Online Buying Behavior.

Consumer Reviews and After-sales Service were found to significantly influence Consumer Online Buying Behavior for electronic products, as their respective hypotheses (H2 and H4) were accepted. **Product Quality** and **Website Usability** did not show statistically significant impacts on Consumer Online Buying Behavior (H1 and H3 were rejected). These results provide valuable insights into the specific factors that influence consumers' decisions when buying electronic products online, helping businesses focus their strategies to enhance these critical aspects of the online shopping experience.

4. DISCUSSION AND CONCLUSION

This study explored the influential factors affecting Consumer Online Buying Behavior for electronic products, focusing on Product Quality, Consumer Reviews, Website Usability, and After-sales Service. The findings reveal valuable insights into how these factors interact to shape consumers' decisions in the online shopping environment. Consumer Reviews emerged as a significant driver of Consumer Online Buying Behavior, underscoring the importance of social proof and peer recommendations in influencing purchase decisions. Positive reviews not only enhance product credibility but also contribute significantly to consumers' trust and confidence when making online purchases. Similarly, After-sales Service was found to have a profound impact on Consumer Online Buying Behavior. Effective post-purchase support, including warranty services, easy return processes, and responsive customer service, plays a crucial role in ensuring consumer satisfaction and fostering repeat purchases. This finding highlights the strategic importance for e-commerce platforms to prioritize and optimize their after-sales service offerings. Contrary to expectations, Product Quality did not show a statistically significant influence on Consumer Online Buying Behavior in this study. While perceived quality remains a fundamental aspect of consumer decision-making, its direct impact on actual purchasing behavior may be moderated by other factors such as consumer reviews and service quality. Website Usability, although important for creating a positive user experience, did not demonstrate a significant influence on Consumer Online Buying Behavior in this context. This suggests that while a user-friendly interface is essential for facilitating online transactions, it may not independently drive consumers to make purchases without strong supporting factors like positive reviews and effective after-sales support. Moving forward, e-commerce businesses can leverage these findings to refine their marketing strategies and operational practices. Emphasizing the management of consumer reviews, enhancing after-sales service capabilities, and ensuring seamless user experiences are critical for enhancing consumer satisfaction and fostering long-term loyalty in the competitive online marketplace. In conclusion, while Product Quality and Website Usability remain foundational, Consumer Reviews and After-sales Service emerge as pivotal factors influencing Consumer Online Buying Behavior for electronic products. By addressing these factors

effectively, businesses can optimize their online platforms to better meet consumer expectations and capitalize on opportunities for growth and market differentiation.

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