

# Enhancing Online Customer Experience Through Chatbot Acceptance: Evidence from E-Retailing

Ngoc-Trung Nguyen<sup>1</sup>, Ngoc-Hong Duong<sup>1\*</sup>

<sup>1</sup> School of International Business and Marketing, University of Economics Ho Chi Minh City (UEH), Vietnam

\*Corresponding Author: [hongdn@ueh.edu.vn](mailto:hongdn@ueh.edu.vn)

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**Abstract:** *In the context of Industry 4.0, the rapid development of artificial intelligence (AI) has significantly transformed the way firms interact with customers and deliver digital service experiences. Among AI-based technologies, chatbots have become an increasingly important tool in electronic retailing by enabling instant, automated, and personalized communication with online shoppers. This study examines how chatbot acceptance enhances online customer experience and how such experience subsequently influences customer satisfaction and customer loyalty toward chatbot-based services. Grounded in the Technology Acceptance Model (TAM) and the Information Systems (IS) success framework, the study proposes a research model linking chatbot acceptance, online customer experience, customer satisfaction, and customer loyalty. A mixed-methods approach was adopted to ensure both theoretical relevance and empirical validity. In the first stage, qualitative in-depth interviews were conducted to validate and refine the proposed constructs and relationships. In the second stage, a quantitative survey was carried out with consumers who had prior experience using chatbots in online shopping contexts, yielding 386 valid responses for analysis. The findings reveal that usability and information quality are significant determinants of online customer experience with chatbots. Furthermore, online customer experience positively affects customer satisfaction, which in turn strongly contributes to customer loyalty. These results underscore the importance of developing chatbot systems that are easy to use and capable of providing accurate, relevant, and valuable information. By doing so, firms can improve customer experience, increase satisfaction, and strengthen long-term loyalty. This study contributes to the growing literature on AI-enabled services by clarifying the mechanism through which chatbot acceptance shapes customer outcomes in e-retailing.*

**Keywords:** Chatbot Acceptance; Customer Experience; Customer Satisfaction; Customer Loyalty; E-Commerce

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## 1. Introduction

The growth of e-commerce has transformed the way businesses communicate with customers, making online customer experience a key factor in determining customer satisfaction and long-term loyalty. In digital marketplaces, customers expect not only convenient access to products and services but also fast, accurate, and seamless support throughout their shopping journey. From product search to purchase decisions and post-purchase assistance, every interaction contributes to how customers evaluate an online retailer. As competition intensifies in the digital environment, firms are increasingly required to create service experiences that are efficient, personalized, and continuously available.

To meet these rising expectations, many online retailers have adopted AI-powered chatbots as a strategic customer service solution. Chatbots allow firms to provide immediate responses, reduce waiting time, and maintain customer interaction across different stages of the purchase process. Supported by recent developments in artificial intelligence and natural language processing, modern chatbots are now capable of going beyond simple scripted answers. They can understand customer needs more effectively, provide personalized product suggestions, answer detailed questions, and assist users in making informed decisions in real time. Consequently, chatbots have evolved from being a basic support tool into an important element of the broader digital service ecosystem.

Existing studies indicate that effective chatbot interactions can improve customers' perceptions of convenience, responsiveness, and service quality, thereby enriching the overall online shopping experience (Hollebeek et al., 2021; Kumar et al., 2024). In particular, when chatbots are easy to use, informative, and capable of solving customer problems quickly, they can create a more positive and satisfying service encounter. This improved experience is especially important in e-commerce, where the absence of face-to-face interaction makes digital support quality a critical source of customer evaluation.

A growing body of empirical research also suggests that chatbot-based services contribute significantly to customer satisfaction and loyalty. For instance, Hsu and Lin (2023) report that satisfaction with chatbot interactions positively influences customers' loyalty intentions in retail service settings. Likewise, recent studies in online commerce show that chatbot characteristics such as usability, responsiveness, and problem-solving ability can increase customer engagement, encourage repeated use, and strengthen relationships between customers and firms (Gao, 2025; Vebrianti et al., 2025). These findings imply that chatbot performance is closely linked not only to service efficiency but also to relational outcomes that are essential for business sustainability.

Nevertheless, important research gaps remain. Much of the existing literature emphasizes the technological functions of chatbots or their operational benefits for firms, while less attention has been devoted to explaining how customer acceptance of chatbots leads to better online customer experience and subsequent outcomes such as satisfaction and loyalty. In addition, the pathways through which specific chatbot attributes influence customer experience are still underexplored, especially in emerging e-commerce markets.

The present study examines how chatbot acceptance contributes to online customer experience and how this experience, in turn, affects customer satisfaction and customer loyalty in e-commerce. By clarifying these relationships, the study enriches the literature on AI-enabled services and offers practical implications for retailers seeking to use chatbot technology to cultivate stronger and more sustainable customer relationships.

## **2. Literature Review and Hypotheses Development**

### **2.1 Chatbot**

A chatbot is a computer program designed to simulate human conversation using natural language processing technologies and typically functions as a virtual assistant on digital platforms (Fryer et al., 2019). With the rapid advancement of artificial intelligence (AI), machine learning, and conversational interfaces, firms have increasingly integrated chatbots into their operational processes, particularly in online retail and e-commerce environments.

These technologies enable firms to automate customer interactions while maintaining a conversational and interactive service experience.

Recent industry evidence indicates that the adoption of AI-based chatbots is particularly prominent in online retail. According to Statistics (2022), approximately 34% of online retail customers accept and actively use AI-powered chatbots higher than in any other industry. This trend reflects the growing reliance on automated customer service tools that support real-time communication, data-driven interactions, and predictive service capabilities (Sans et al., 2021). In e-commerce contexts, chatbots assist customers in searching for products, comparing alternatives, tracking orders, and resolving service issues, thereby enhancing convenience and reducing response time.

Beyond operational efficiency, chatbots also play a strategic role in relationship building between firms and customers. By providing instant responses and personalized recommendations, chatbots help reduce customer effort and uncertainty during online shopping processes (Quintino, 2019). Prior studies have highlighted the importance of chatbots in service encounters and have examined their role in shaping customer perceptions of service quality and technological sophistication (Belanche et al., 2019; Sotolongo & Copulsky, 2018). However, much of this research has focused on the functional role of chatbots or their behavioral characteristics, rather than systematically investigating which specific chatbot attributes contribute most effectively to enhancing online customer experience.

Understanding customer motivations for adopting chatbot-based services is therefore essential for developing more effective e-commerce technologies. Chopra (2019) argues that firms must move beyond technological novelty and focus on how customers perceive and experience chatbot interactions in order to generate meaningful value. Accordingly, the present study examines the adoption of chatbots in online retailing and investigates how chatbot acceptance influences online customer experience, customer satisfaction, and ultimately customer loyalty.

## **2.2 Customer Experience**

In digitally mediated markets, online customer experience has emerged as a critical driver of firm performance and competitive advantage. As consumers increasingly interact with firms through websites, mobile applications, and social media platforms, the quality of these interactions plays a central role in shaping customer perceptions and behavioral outcomes. Davidson and Vaast (2010) emphasize that digital experiences are no longer peripheral but constitute a core component of organizational value creation in online business environments. The importance of customer experience in online shopping contexts has been widely acknowledged in prior research. Rose et al. (2012) conceptualize online customer experience as a holistic construct encompassing cognitive, emotional, and behavioral responses arising from interactions with digital interfaces. Similarly, Petre et al. (2006) argue that customer experience with an e-commerce website extends beyond mere interaction and significantly influences perceptions of value and service quality. These insights highlight the multifaceted nature of online experience and its relevance to long-term customer relationships.

Empirical studies have examined various outcomes associated with customer experience, including satisfaction, trust, and behavioral intentions (Tsaur et al., 2007; Mason & Paggiaro, 2012). However, much of the existing literature has focused on customers' initial impressions or short-term responses, with limited attention paid to the long-term consequences of online experience, such as customer loyalty. In technology-mediated service settings, customer

experience is dynamic and evolves over repeated interactions, particularly when customers engage with intelligent systems such as chatbots.

In this study, online customer experience is conceptualized as the outcome of customers' evaluations of their interactions with chatbots relative to their expectations. By comparing expected service performance with actual chatbot interactions, customers form experiential judgments that influence satisfaction and subsequent loyalty intentions. This perspective allows for a deeper understanding of how chatbot acceptance shapes experiential dimensions of online shopping and how these experiences translate into relational outcomes.

### **2.3 Technology Acceptance Model (TAM)**

To explain how customers perceive and adopt chatbot technologies, this study draws on the **Technology Acceptance Model (TAM)** proposed by Davis (1989). TAM is one of the most widely used theoretical frameworks in information systems research and has demonstrated strong explanatory power across various technological contexts. Rooted in the Theory of Reasoned Action, TAM posits that **perceived usefulness** and **perceived ease of use** are the primary determinants of users' attitudes toward technology adoption and their subsequent behavioral intentions.

TAM has been extensively applied in studies examining the adoption of information technologies, including e-commerce platforms, mobile applications, and AI-based systems (Chang et al., 2017). In chatbot research, perceived usefulness and perceived ease of use are often combined to capture the broader notion of **usability**, which reflects users' expectations regarding the efficiency, effectiveness, and effort required to interact with a technology (Flavián et al., 2006). Chen et al. (2021) further demonstrate that usability is a critical determinant of chatbot acceptance and significantly influences customers' evaluations of chatbot-based services.

Beyond predicting usage intention, TAM has also been extended to incorporate experiential outcomes. Quintino (2019) suggests that TAM can be adapted to examine customer experience in digital service contexts, where attitudes toward technology are shaped by repeated interactions rather than one-time adoption decisions. Accordingly, this study incorporates usability as a key acceptance-related construct derived from TAM and examines its influence on online customer experience in chatbot-mediated interactions.

### **2.4 Information Systems Success Model (IS)**

In addition to TAM, this study employs the Information Systems (IS) Success Model developed by DeLone and McLean (1992, 2003) to capture service-related attributes of chatbot interactions. The IS model provides a comprehensive framework for evaluating the success of information systems based on three core quality dimensions: information quality, system quality, and service quality. These dimensions' influence system uses and user satisfaction, which in turn determine individual and organizational benefits.

Recognizing the rapid evolution of digital technologies, DeLone and McLean (2003) updated the IS model to reflect changes in e-commerce and online service environments. In the context of chatbot-enabled services, information quality refers to the accuracy, relevance, and timeliness of information provided by the chatbot, while system and service quality are often reflected in responsiveness, reliability, and interaction speed. Prior research suggests that these qualities play a crucial role in shaping customer experience in technology-mediated service encounters (Van Dolen et al., 2007).

Recent studies have applied the IS success model to investigate chatbot adoption and its experiential outcomes. For instance, Chen et al. (2021) integrate system quality and service quality into a single construct representing chatbot responsiveness, highlighting its importance in customer service contexts. Similarly, Trivedi (2019) demonstrates that information quality is a key determinant of customer satisfaction in online service platforms. Drawing on these insights, the present study adopts responsiveness and information quality as core IS-related constructs to examine how chatbot service attributes influence online customer experience.

## **2.5 Hypotheses development**

Usability refers to the extent to which a system enables users to accomplish specific goals effectively, efficiently, and with satisfaction through a human–computer interface (Petre et al., 2006). In digital service environments, usability represents a core quality attribute that shapes users’ perceptions during interactions with technology-based systems. For chatbot-based services, usability reflects how easily customers can understand chatbot responses, navigate conversational flows, and complete tasks such as information search or problem resolution.

Prior research consistently emphasizes the importance of usability in interactive systems, particularly those designed to support customer-facing services. Within online shopping contexts, a highly usable system reduces customers’ cognitive and physical effort, enabling smoother interactions and lowering perceived complexity. When customers find a chatbot easy to use and helpful, they are more likely to feel comfortable and confident during the interaction, which enhances their overall online experience. Chen et al. (2021) demonstrate that perceived usability is a critical determinant of chatbot acceptance and significantly influences customers’ evaluations of chatbot-based service encounters.

### **H1: Chatbot usability has a positive effect on online customer experience.**

Responsiveness refers to the ability and willingness of a service system to provide prompt and timely responses to customer requests. In chatbot-mediated interactions, responsiveness is reflected in response speed, availability, and the system’s capacity to deliver immediate assistance. From an information systems perspective, responsiveness is closely associated with system quality and service quality, both of which are key determinants of user satisfaction and experiential outcomes (DeLone & McLean, 2003).

Empirical studies indicate that fast and reliable responses play a critical role in shaping customers’ online experiences. Responsive service systems not only improve functional performance but also generate positive emotional reactions, such as reassurance and satisfaction. Therefore, chatbot responsiveness is expected to enhance online customer experience. Accordingly, the following hypothesis is proposed:

### **H2: Chatbot responsiveness has a positive effect on online customer experience.**

Information quality refers to the extent to which information provided by a system is accurate, relevant, reliable, complete, and presented in a clear and understandable manner (DeLone & McLean, 2003). In online service settings, information quality constitutes a fundamental communication channel between customers and firms and plays a central role in shaping trust and experiential perceptions.

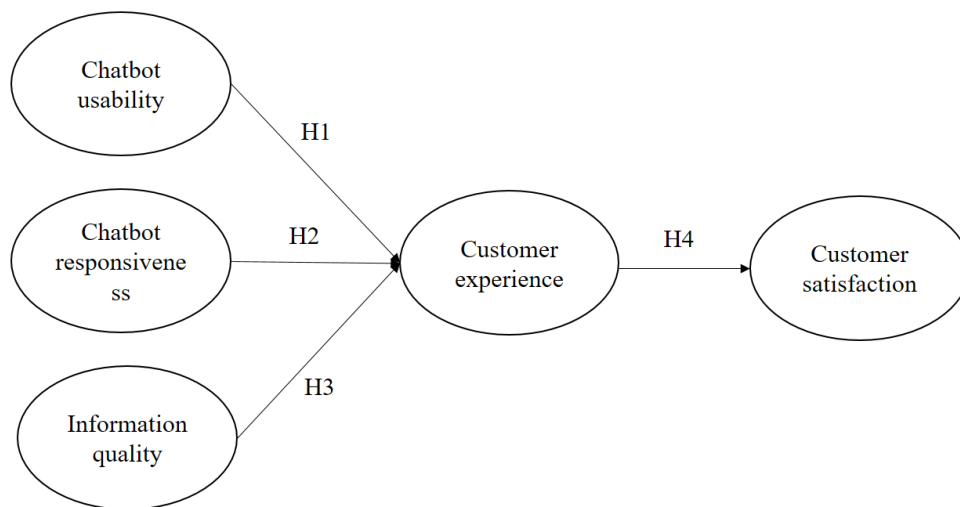
Prior research demonstrates that information quality is a key predictor of positive customer experiences and satisfaction in technology-mediated services. Customers who perceive chatbot-provided information as trustworthy and useful are more likely to evaluate their online interactions favorably. Therefore, information quality is expected to play a critical role in enhancing online customer experience. Based on these arguments, the following hypothesis is proposed:

**H3: Information quality provided by chatbots has a positive effect on online customer experience.**

Customer satisfaction reflects the extent to which customers’ expectations are fulfilled through service experiences, resulting in positive affective responses. In online contexts, satisfaction is commonly conceptualized as a post-consumption evaluation shaped by customers’ cumulative experiences with digital interfaces. Molla and Licker (2001) define customer satisfaction in e-commerce as a positive emotional response arising from favorable online interactions.

In chatbot-enabled online shopping, satisfying experiences emerge when chatbots support customers in searching for products, resolving problems, and making decisions efficiently. As customers begin to enjoy and value these interactions, their satisfaction with the service increases. Accordingly, the following hypothesis is proposed:

**H4: Online customer experience with chatbots has a positive effect on customer satisfaction.**



**Figure 1: Research Model**

### 3. Methodology

#### 3.1 Sampling Approach

This study adopts a mixed-methods sampling approach to ensure both contextual relevance and empirical generalizability. As stated in the paper, the research design combines qualitative in-depth interviews (to validate and refine the conceptual model) and a quantitative survey (to test hypotheses) among consumers who have experience using chatbots in online shopping contexts.

For the qualitative phase, the sampling approach is exploratory and confirmatory: the purpose is to obtain rich insights into how customers perceive chatbot acceptance attributes (e.g., usability, responsiveness, information quality) and how these perceptions translate into online customer experience and satisfaction. Therefore, the study focuses on recruiting participants who can provide information-rich cases, i.e., respondents who have interacted with chatbots during e-commerce shopping journeys (e.g., asking product information, tracking orders, handling complaints).

For the quantitative phase, the sampling approach is cross-sectional and user-based, targeting individuals who have actually used chatbots for online shopping. This aligns with the research goal of examining how chatbot acceptance enhances online customer experience and drives downstream outcomes such as satisfaction and loyalty. The unit of analysis is the individual online consumer, and the study context is e-retailing/e-commerce.

To ensure data quality, eligibility criteria should be applied through screening questions, such as: (1) whether the respondent has used a chatbot while shopping online within a recent period; and (2) whether the respondent can recall a specific chatbot interaction. In addition, the survey should emphasize voluntary participation, anonymity, and that there are no right/wrong answers, reducing social desirability bias.

### **3.2 Sampling Technique**

The survey link can be distributed through online channels where chatbot users are likely to be present (e.g., e-commerce community groups, university networks, social media platforms, and online shopping forums). Respondents who pass the screening questions are retained. Additionally, snowballing can be used by encouraging qualified respondents to share the survey with peers who also shop online and have used chatbots. The final dataset in the paper includes 386 valid responses, which is adequate for PLS-SEM analysis of the proposed model. The study also specifies the use of SPSS and SmartPLS for measurement evaluation and hypothesis testing, which fits the chosen technique and sample size (i.e., suitable for prediction-oriented modeling and complex path structures). For the qualitative phase, the recommended technique is purposive sampling (selecting participants with chatbot shopping experience), and recruitment may continue until the interviews reach thematic saturation—when no substantially new insights emerge regarding chatbot acceptance attributes and customer experience mechanisms. This step supports refining the instrument and improving content validity before large-scale data collection.

## **4. Data analysis and Results**

### **4.1 Descriptive Statistics**

According to Table 1, the final sample consisted of 386 valid respondents who had experience using chatbots in online shopping contexts. In terms of gender distribution, male respondents accounted for 41.1% of the sample, while female respondents represented the majority with 58.7%. Regarding age, the sample was predominantly composed of young consumers. The majority of respondents were between 18 and 25 years old, accounting for 91.5% of the total sample. Respondents aged from 26 to 35 represented 7.9%, while those aged above 46 accounted for the smallest proportion at 0.6%. These results indicate that the sample largely consists of young users, which is consistent with the study's focus on digitally active consumers who are more familiar with chatbot technologies.

In terms of educational background, most respondents held an undergraduate degree, accounting for 86.5% of the sample. Respondents with a bachelor’s degree represented 7.9%, while those pursuing a master’s degree accounted for 0.9%, and those holding a master’s degree or higher represented 1.5%. Additionally, respondents currently studying at the high school level accounted for 3.2%. Overall, the sample demonstrates a relatively high level of education, which is appropriate for examining technology acceptance and online service experiences. With respect to chatbot usage frequency in online shopping, 38.4% of respondents reported interacting with chatbots whenever they made online purchases. Meanwhile, 24.3% indicated that they interacted with chatbots less than once per month, and 21.7% reported using chatbots one to two times per month. Weekly usage was less common, with 9.7% reporting chatbot use one to two times per week, 4.4% using chatbots three to four times per week, and only 1.2% interacting with chatbots more than five times per week. These results suggest that while chatbot interactions are not highly frequent on a weekly basis, chatbots are readily available and flexibly used during online shopping occasions.

Finally, regarding the duration of chatbot interactions, most respondents reported relatively short usage times. Interactions lasting less than five minutes accounted for 45.7% of responses, followed by interactions lasting five to ten minutes (35.5%). Interactions of ten to twenty minutes accounted for 11.1%, while longer interaction durations were less common, with 3.5% reporting usage between twenty and thirty minutes and 4.1% reporting usage between thirty minutes and one hour. This finding suggests that chatbots are primarily used for quick information search and problem resolution during online shopping.

**Table 1: Sample Characteristics**

| Characteristics                            | Category                         | Frequency | Percentage (%) |
|--|----------------------------------|-----------|----------------|
| Gender                                     | Male                             | 159       | 41.1           |
|  | Female                           | 227       | 58.7           |
| Age  | 18–25 years old                  | 353       | 91.5           |
|  | 26–35 years old                  | 31        | 7.9            |
|  | Above 46 years old               | 2         | 0.6            |
| Educational background                     | High school                      | 12        | 3.2            |
|  | Undergraduate degree             | 334       | 86.5           |
|  | Bachelor’s degree                | 31        | 7.9            |
|  | Studying for a master’s degree   | 3         | 0.9            |
| Chatbot usage frequency in online shopping | Master’s degree or higher        | 6         | 1.5            |
|  | Whenever making online purchases | 148       | 38.4           |
|  | Less than once per month         | 94        | 24.3           |
|  | One to two times per month       | 84        | 21.7           |
|  | One to two times per week        | 37        | 9.7            |
|  | Three to four times per week     | 17        | 4.4            |
| Duration of chatbot interactions           | More than five times per week    | 5         | 1.2            |
|  | Less than 5 minutes              | 176       | 45.7           |
|  | 5–10 minutes                     | 137       | 35.5           |
|  | 10–20 minutes                    | 43        | 11.1           |
|  | 20–30 minutes                    | 14        | 3.5            |
|  | 30 minutes to 1 hour             | 16        | 4.1            |

#### 4.2 Cronbach’s Alpha

The internal consistency reliability of the measurement scales was assessed using **Cronbach’s Alpha**. All constructs exhibit Cronbach’s Alpha values exceeding the recommended threshold of **0.70**, indicating satisfactory internal consistency and reliability of the measurement instruments.

**Table 2: Cronbach's Alpha**

| Constructs | Number of items | Cronbach's Alpha |
|------------|-----------------|------------------|
| CU         | 4               | 0.842            |
| CS         | 4               | 0.861            |
| IQ         | 4               | 0.883            |
| CE         | 4               | 0.874            |
| CS         | 3               | 0.856            |

### 4.3 Discriminant Validity (HTMT Criterion)

Discriminant validity was examined using the **Heterotrait–Monotrait ratio (HTMT)**, as recommended for PLS-SEM analysis. According to established guidelines, HTMT values should be below **0.85** (or 0.90 for conceptually close constructs) to confirm discriminant validity (Table 3).

**Table 3: Discriminant Validity (HTMT Criterion)**

| Constructs | CU    | CS    | IQ    | CE    | CS |
|------------|-------|-------|-------|-------|----|
| CU         | —     |       |       |       |    |
| CS         | 0.624 | —     |       |       |    |
| IQ         | 0.711 | 0.743 | —     |       |    |
| CE         | 0.668 | 0.702 | 0.784 | —     |    |
| CS         | 0.602 | 0.645 | 0.721 | 0.812 | —  |

All HTMT values are below the conservative threshold of 0.85, indicating that discriminant validity among the constructs is well established.

### 4.4 Structural Model Results

The structural model was evaluated by examining **path coefficients ( $\beta$ )**, **t-values**, and **p-values** using the bootstrapping procedure. In addition, the model's explanatory power was assessed through **R<sup>2</sup> values** for endogenous constructs (Table 4).

**Table 4: Structural Model Results**

| Hypothesis | Path                | $\beta$ | t-value | p-value | Result    |
|------------|---------------------|---------|---------|---------|-----------|
| H1         | CU $\rightarrow$ CE | 0.312   | 4.86    | < 0.001 | Supported |
| H2         | CS $\rightarrow$ CE | 0.421   | 6.73    | < 0.001 | Supported |
| H3         | IQ $\rightarrow$ CE | 0.657   | 14.02   | < 0.001 | Supported |
| H4         | CE $\rightarrow$ CS | 0.689   | 15.47   | < 0.001 | Supported |

Regarding H1, the results indicate that chatbot usability has a positive and significant effect on online customer experience ( $\beta = 0.312$ ,  $t = 4.86$ ,  $p < 0.001$ ). This finding suggests that when customers perceive chatbots as easy to use, understandable, and convenient to interact with, they are more likely to report a favorable online experience. In e-retailing environments, where customers often seek quick support and smooth interactions, usability becomes an essential determinant of experiential quality. A user-friendly chatbot can reduce the effort required to obtain information, solve problems, and complete shopping-related tasks. As a result, customers are more likely to feel comfortable and satisfied during the interaction process. This result is aligned with the Technology Acceptance Model, which emphasizes that ease of use significantly influences user perceptions and evaluations of technological systems.

With respect to H2, chatbot responsiveness is found to exert a positive and significant influence on online customer experience ( $\beta = 0.421$ ,  $t = 6.73$ ,  $p < 0.001$ ). This result highlights the importance of prompt, timely, and relevant responses in chatbot-mediated service encounters.

In online shopping contexts, customers generally expect immediate assistance when they have questions about products, orders, payments, or delivery. A responsive chatbot helps reduce waiting time and provides a sense of support and reliability, which contributes positively to customers' experiential evaluations. The stronger coefficient of responsiveness compared to usability also implies that speed and immediacy of service may be particularly valued in digital retail settings. This finding is consistent with the Information Systems Success Model, which views service quality as a crucial determinant of positive user outcomes.

For H3, the findings reveal that information quality has the strongest positive effect on online customer experience among the three antecedents ( $\beta = 0.657$ ,  $t = 14.02$ ,  $p < 0.001$ ). This result indicates that customers attach considerable importance to the accuracy, relevance, completeness, and clarity of the information provided by chatbots. In e-retailing, where customers cannot physically inspect products or directly communicate with sales staff, chatbot-delivered information becomes a critical basis for decision-making. When chatbots provide useful and trustworthy information, customers are more likely to feel confident, informed, and supported throughout the shopping process. The particularly high coefficient of this relationship suggests that information quality is the most influential factor in shaping customer experience in this context. Thus, beyond simply responding quickly or being easy to use, chatbots must also deliver meaningful and reliable content to create a superior online experience.

Finally, H4 shows that online customer experience has a strong and significant positive effect on customer satisfaction ( $\beta = 0.689$ ,  $t = 15.47$ ,  $p < 0.001$ ). This finding confirms that customer satisfaction is largely driven by the quality of the overall experience customers have when interacting with chatbots during online shopping. Positive experiences characterized by ease of use, prompt responsiveness, and high-quality information create favorable impressions that accumulate over time and lead to stronger satisfaction judgments. This result reinforces the idea that customer experience serves as a central mechanism linking chatbot-related attributes to post-interaction outcomes. In other words, when customers perceive chatbot interactions as efficient, supportive, and informative, they are more likely to feel satisfied with the service encounter and, potentially, with the retailer more broadly.

Overall, the structural model results demonstrate that chatbot acceptance is not only a matter of technological adoption but also a key driver of experiential and attitudinal outcomes in e-retailing. Among the examined factors, information quality emerges as the most influential determinant of customer experience, followed by responsiveness and usability. At the same time, customer experience strongly predicts customer satisfaction, underscoring its central role in the broader chatbot-enabled service process.

## **5. Conclusion**

### **5.1 Summary of Findings**

This study examined how chatbot acceptance enhances online customer experience and drives customer satisfaction in the context of electronic retailing. Drawing on the technology acceptance model and information systems success perspectives, the research investigated the effects of chatbot usability, service responsiveness, and information quality on customer experience, as well as the subsequent impact of customer experience on customer satisfaction. The empirical results provide strong support for all proposed hypotheses. The findings reveal that chatbot usability, service responsiveness, and information quality all exert significant positive effects on online customer experience. Among these factors, information quality

demonstrates the strongest influence, indicating that customers place high value on accurate, reliable, and useful information provided by chatbots during online shopping interactions. In addition, the results confirm that online customer experience plays a critical role in shaping customer satisfaction. Positive experiences accumulated through effective chatbot interactions significantly enhance customers' overall satisfaction with chatbot-based services. Overall, the study highlights the importance of chatbot acceptance as a key driver of experiential and attitudinal outcomes in e-retailing environments.

## **5.2 Theoretical and Managerial Implications**

From a theoretical perspective, this study contributes to the growing literature on artificial intelligence-enabled services by integrating chatbot acceptance factors with online customer experience and satisfaction. By combining insights from the technology acceptance model and information systems success theory, the research extends existing frameworks beyond initial technology adoption to explain how acceptance-related attributes influence experiential evaluations in online retail contexts. The findings also reinforce the central role of customer experience as a mediating mechanism linking system characteristics to customer outcomes.

From a managerial perspective, the results offer several practical implications for online retailers and service providers. First, firms should prioritize chatbot usability by designing intuitive interfaces that minimize user effort and facilitate smooth interactions. Second, enhancing chatbot responsiveness is essential, as timely and relevant responses can significantly improve customers' perceived service quality. Third, the strong effect of information quality suggests that chatbot content must be accurate, up to date, and clearly presented to support customers' decision-making processes. By focusing on these aspects, managers can leverage chatbots as an effective tool to improve customer experience and satisfaction, thereby strengthening long-term customer relationships in online retailing.

## **5.3 Limitation and Future research**

Despite its contributions, this study has several limitations that should be acknowledged. First, the data were collected using a cross-sectional survey, which limits the ability to infer causal relationships among the studied variables. Future research could employ longitudinal designs to better capture changes in customer experience and satisfaction over time. Second, the sample is limited to users with online shopping and chatbot experience within a specific context, which may restrict the generalizability of the findings to other industries or cultural settings. Further studies could replicate the model in different service sectors or countries to enhance external validity. In addition, future research may extend the current model by incorporating additional variables such as trust, perceived risk, emotional responses, or customer engagement to provide a more comprehensive understanding of chatbot-based interactions. Comparative studies examining different types of chatbots or levels of AI sophistication may also yield valuable insights into how technological characteristics influence customer experience and satisfaction.

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## **Conflict of Interest Statement**

The authors declare that there is no conflict of interest regarding the publication of this study.

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