International Journal of Sociology and Social Policy

Bridging the chatbot connection: the role of AI-driven chatbot affordances in e-commerce purchase intentions

Kalindu Mithila Bandara Yatawara, Tharaindu Sampath, Poorni Lakshani Kalupahana and Shehani Oshani Rathnayake
Department of Information Management, Sri Lanka Institute of Information Technology, Malabe, Sri Lanka
Nisha Jayasuriya
Department of Business Management, Sri Lanka Institute of Information Technology, Malabe, Sri Lanka, and
Nilmini Rathnayake
Tasmanian School of Business and Economics (TSBE), University of Tasmania, Hobart, Australia

Received 2 January 2025
Revised 30 April 2025
5 August 2025
4 October 2025
Accepted 5 October 2025

Abstract

Purpose – This paper explores how AI-driven chatbots, using social support and affordance theories, influence consumer behavior and purchase intentions (PIs) in e-commerce, addressing challenges like limited understanding and security concerns.

Design/methodology/approach – A quantitative study was conducted to collect data from 385 customers who had interacted with AI-driven chatbots on e-commerce platforms. Purposive sampling was employed to ensure the relevance of the respondents. Partial least squares-structural equation modeling (PLS-SEM) analysis was performed using SmartPLS 4 to test the hypothesized relationships and analyze the data.

Findings – The results show a small direct effect of chatbot affordances on PI, with stronger indirect effects via customer satisfaction (CS) and trust. Notably, trust does not directly influence PI, suggesting a reliance on word-of-mouth. Customer engagement (CE) plays a minor mediating role, highlighting the importance of emotional and experiential factors.

Originality/value – This pioneering study within the Sri Lankan context addresses the underexplored area of AI-driven chatbots and their influence on PI. Additionally, the study provides nuanced insights into the mediating mechanisms of CS, trust and engagement in the relationship between chatbot affordances and PI.

Keywords AI-driven chatbot, Chatbot affordance, E-commerce, Purchase intention, Social support

Paper type Research article

1. Introduction

AI-driven chatbots are transforming e-commerce by enhancing business-to-customer interactions and increasing sales and conversions through instant product information, personalized recommendations and excellent customer service (Coppola, 2023). Alibaba's AI chatbot, AliMe, revolutionized customer service in e-commerce through speech recognition, semantic analysis and tailored recommendations, handling 95% of inquiries in 2017 and contributing to $30.8 billion in sales in 2018 (Dong, 2018). AliMe enhances sales and customer service across pre-sales, during-sales and post-sales phases. These AI-driven conversational agents have transformed e-commerce by providing anytime, anywhere connectivity, information association, visibility and interactivity. They enable users to find information and resolve issues, thereby enhancing user engagement (Lee and Li, 2023). Chatbots offer ecological psychology-based affordances that improve user experience by reducing human error and increasing awareness of mental health services (Tan and Liew, 2022). Additionally, AI-driven chatbots in e-commerce have revolutionized user experience by delivering personalized interactions, real-time support, enhanced customer

International Journal of Sociology and Social Policy

e-ISSN: 1758-6720
p-ISSN: 0144-333X
DOI 10.1108/IJSSP-01-2025-0003

engagement (CE) and increased purchase intention (PI) (Roy *et al*., 2025; Xia and Shannon, 2025; Zhou *et al*., 2025; Joshi, 2025). By reducing uncertainties, managing inquiries instantly and simulating human-like interactions, chatbots create a more engaging shopping experience, making them essential in modern digital commerce (Baudier and de Boissieu, 2024).

The studies conducted by Li *et al*. (2023), ElSayad and Mamdouh (2024), and Fonseka *et al*. (2022) focused on the behavior of AI-driven chatbots in e-commerce, this study contributes by examining the relationships among CE, consumer trust (CT), customer satisfaction (CS) and PI as a whole within the context of an emerging market, specifically in Sri Lanka. The findings indicate that chatbot features significantly enhance CS and positively influence PI. AI chatbots, designed for individualized assistance, play a crucial role in shaping CE and PI (Bilal *et al*., 2024). Additionally, the relationship between chatbot assistance (CA) and CS is affected by design, perceived capabilities, task alignment, emotional engagement, usability and trust (Al-Shafei, 2024). Collectively, these findings underscore the importance of chatbots in influencing consumer PI by increasing engagement, motivation and trust, ultimately shaping actual purchasing behaviors across various e-commerce contexts (Khan *et al*., 2024).

This study differs from previous studies by examining how AI-driven chatbot affordances influence consumer PIs in e-commerce, while also emphasizing the mediating roles of CE, trust and satisfaction in this relationship. Although AI-driven chatbots have shown promise in e-commerce, recent research has not fully explored their significance in improving CE, CS and PI, particularly in relation to specific CA (Lee and Li, 2023). For example, Malhotra and Ramalingam (2023) demonstrate that customers with high trust in AI are more likely to purchase. Still, they do not investigate how specific chatbot features, such as personalized recommendations, drive this trust. Addressing this, the current study fills three key gaps. First, it examines the mediating roles of CE, CS and CT within the context of AI-driven chatbots, extending beyond the direct relationships explored in prior work (Deyalage and Kulathunga, 2019; Toader *et al*., 2020; Bilal *et al*., 2024). For instance, Deyalage and Kulathunga (2019) suggest a link between chatbots and PI but do not fully explore whether this relationship is strengthened when customers are highly engaged with the chatbot. Second, while European studies emphasize the importance of trust, engagement and satisfaction in mature digital markets (Elmashhara *et al*., 2024; Silva *et al*., 2023; Song and Shin, 2024), research in Asian countries, especially emerging markets like Sri Lanka, remains limited. For instance, while Elmashhara *et al*. (2024) find that perceived security is a key driver of trust in European e-commerce chatbots, it is unclear whether Sri Lankan consumers, who may rely more on word-of-mouth recommendations, place similar emphasis on this factor (Fathima Nushra and Mubarak, 2022). This study adds significant value by examining the mediating effects of CE, CS and CT on PI in Sri Lanka. Third, despite increasing interest in AI-driven chatbots, studies often concentrate on general usability and efficiency, neglecting the specific impact of affordances such as personalization, interactivity and contextual adaptability on consumer behavior (Li *et al*., 2023).

2. Literature review, theoretical framework and hypothesis development

AI-driven chatbots in e-commerce can boost CE, CS and CT, influencing PI. Combining these technologies allows real-time communication, customized experience and improved service delivery. Social support and affordability theories enhance chatbots' functionality, enhancing shopping experiences.

2.1 Social support theory

Social support theory, initially developed for offline environments and mental health by Huang *et al*. (2010), has been applied to online virtual social support, highlighting technology's role in

social networks and AI's impact on consumer engagement and satisfaction (Sharma and Khadka, 2019). Online virtual social support groups empower members, influence social capital and build trust in social commerce through satisfaction, consumer experience and social media engagement (Leong *et al*., 2020). This study examines social support, AI experiences, chatbot interactions and e-commerce engagement to explore individual participation and satisfaction (Rozzell *et al*., 2014). Chatbots provide emotional and informational support through friendly interactions, real-time responses and product recommendations, enhancing trust and satisfaction (Huang *et al*., 2010; Zhang *et al*., 2014). Social support theory suggests that AI-driven chatbots enhance trust, satisfaction and participation in e-commerce. This theory predicts consumer behaviors by explaining how technology's support influences customers' perceptions and decisions in online shopping, relating social processes to digital interaction and informing purchasing decisions across various markets.

2.2 Affordance theory

The affordance theory examines how AI-driven chatbots impact e-commerce by analyzing their behavioral properties: selectivity, interactivity, visibility, persistence and association. The study by Li and Zhang (2023) identified five AI-based conversational agent affordances: anytime/anywhere connectivity, association, visibility, personalization and interactivity. This study focuses on these factors, excluding personalization due to privacy and security concerns (Tiihonen and Felfernig, 2017).

In this context, anytime/anywhere connectivity refers to the accessibility of chatbot services at any time and place (Fang, 2019). Association specifies the relationships between individuals or between individuals and information content (Wagner *et al*., 2014). Visibility is defined as the ability to communicate behaviors, knowledge, preferences and network connections (Treem and Leonardi, 2013). Interactivity relates to the quality of interaction between a buyer and seller (Ou *et al*., 2022). The affordance theory is relevant for predicting consumer behavior, as it demonstrates how technological features drive user actions and preferences within an online environment, providing a foundation for understanding how conversational agents can affect shopping behavior in e-commerce.

2.3 AI-driven chatbot affordances and purchase intention

Studies indicate that AI can elevate customers' PI in e-commerce (Malhotra and Ramalingam, 2023; Bilal *et al*., 2024). Customers with high trust in AI are more likely to purchase. Many e-commerce websites have implemented AI-driven chatbots to boost sales. Interaction with chatbots can significantly influence customer PI (Lo Presti *et al*., 2021). Technological factors such as usefulness, interactivity, ease of use and relative advantage enhance PI through chatbot services (Le, 2023; Liu *et al*., 2024). Priyashani and Ariyapperuma (2024) emphasize that chatbots moderately influence PI in Sri Lanka. Additionally, Fonseka *et al*. (2022) found that successful AI-driven chatbot implementation enhances the shopping experience for Sri Lankan consumers.

When customers have a better experience with AI-driven chatbots, their likelihood of PI increases (Martínez Puertas *et al*., 2024). Customers prefer a single chatbot service for all product categories, positively impacting PI (Tan and Liew, 2022). Cheng and Jiang (2022) conclude that high-quality communication with chatbots fosters strong relationships, positively affecting PI. While many studies highlight the positive impact of chatbot affordances on PI, Khan *et al*. (2024) found that consumers generally report a lower purchase likelihood for products recommended by chatbots compared to those suggested by humans. Furthermore, Sinemus *et al*. (2025) showed that using an AI-driven chatbot in

shopping apps does not impact consumer behavior, suggesting customers may take this feature for granted. Consequently, the first hypothesis was developed to measure the impact of CA and PI.

H1. AI-driven chatbot affordances have a significant positive impact on PI.

The study, conducted in Sri Lanka, fills a gap in research on the impact of CA on consumers' PI behavior in e-commerce platforms, adding a new dimension to the existing literature.

2.4 AI-driven chatbot affordances and customer engagement

AI-driven chatbots significantly influence consumers' purchasing decisions by enhancing satisfaction, engagement and trust, particularly in online shopping. These chatbots utilize natural language processing (NLP) to simulate human interaction (Sanjaya *et al*., 2023). Affordances in chatbots refer to the actions and services these systems provide to users (Li *et al*., 2023). CA focuses on chatbots' real-time support, connectivity and interactivity, improving user experiences on e-commerce platforms during browsing, checkout and post-purchase stages. PI refers to a customer's intention to purchase within a specific timeframe, typically 6–12 months, based on their pre-decided plan (Maxham and Netemeyer, 2002; Yeo *et al*., 2023). PI is relevant in pre-purchase evaluations and promotions in e-commerce, focusing on individual decision-making processes.

AI-driven chatbots enhance CE in e-commerce by improving user experience and service quality. CE is often driven by brand loyalty, achieved through personalized experiences and sympathetic interactions (Al-Shafei, 2024). A recent study by Bilal *et al*. (2024) indicates that positive customer experiences with AI improve their social media engagement. CE is most relevant in personalized, real-time retail and social commerce interactions, focusing on individual behavioral engagement. In the Sri Lankan context, CE with AI chatbots can be enhanced through meaningful dialogues and tailored interactions (Kulathunga *et al*., 2024).

Recent studies show that AI chatbots can significantly increase CE by providing real-time answers to client questions, improving the overall customer experience (Jiang *et al*., 2022; Vapiwala and Pandita, 2022). Additionally, chatbots' dialogic conversations can influence customer behavior and engagement levels (Jiang *et al*., 2022). Tsai *et al*. (2021) recommended building chatbots to foster interconnectedness and connection to increase CE. Moreover, chatbots designed to provide prompt responses may enhance CE if they successfully resolve problems (Moriuchi *et al*., 2021).

Some studies find that CA positively influences personalization and customer experience, which are critical for enhancing user engagement (Li *et al*., 2023). A recent study by Elmashhara *et al*. (2024) identified that behavioral engagement enhances the chatbot relationship, while emotional engagement negatively affects it. The chatbot's effectiveness is demonstrated through its high engagement rate, suggesting that customers are willing to engage with AI-driven chatbots when their effectiveness is higher (Sharma and Mishra, 2024). Based on these studies, the second hypothesis was developed to measure the impact of CA on CE.

H2. AI-driven chatbot affordances have a significant positive impact on CE.

This study investigates the impact of CA on CE in Sri Lanka's e-commerce sector, addressing research limitations focusing on specific platforms or service environments.

2.5 AI-driven chatbot affordances and customer trust

By providing positive customer experience, reliability and product selection, AI-driven chatbots enhance e-commerce trust and facilitate successful transactions. CT in chatbots refers to the user's confidence in the chatbot's ability to perform tasks efficiently, reliably and

securely (Mostafa and Kasamani, 2022). In m-commerce, using a single chatbot service for all product categories leads to higher CS (Tan and Liew, 2022). Trust boosts CE and the intention to use chatbot services (Mostafa and Kasamani, 2022), indicating that consumers are more likely to utilize a trustworthy chatbot. Disclosing the chatbot's identity can also increase trust and positively impact retention (Mozafari *et al*., 2022). CT is critical during decision-making moments in secure e-commerce environments, especially for consumers sensitive to data privacy.

Trust significantly predicts chatbot behavioral intention for online purchasing (Murtarelli *et al*., 2023; Silva *et al*., 2023). Individuals with higher trust levels are more likely to use chatbots for online shopping. Perceived ease of use, performance expectations and social influence strongly affect initial trust and increase customer usage intention (Jyothsna *et al*., 2024; Joshi, 2025). Real-time engagement of AI chatbots fosters meaningful dialogues and tailored interactions that enhance CT (Kulathunga *et al*., 2024; Roy *et al*., 2025). Well-designed AI chatbots can also replace certain human functions while maintaining high CS and CT (Xia and Shannon, 2025).

Customers' perceptions of chatbot friendliness and empathy influence their trust and reduce reluctance to reuse it (Cheng *et al*., 2022). The service quality of chatbots, including their ability to guide customers and provide accurate information, is crucial for building trust; failures in these areas can diminish CT (Chen *et al*., 2023; Ranieri *et al*., 2024). In light of these insights, the study's third hypothesis can be formulated as follows:

H3. AI-driven chatbot affordances have a significant positive impact on CT.

This study explores the relationship between Sri Lankan consumers' trust and CA in the e-commerce sector, as most studies are limited to specific regions or service contexts.

2.6 AI-driven chatbot affordances and customer satisfaction

AI-driven chatbots in e-commerce enhance user experience and CS by providing personalized, real-time support, ensuring that products and services meet customer expectations (Chung *et al*., 2020). Delivering high-quality products and services using AI can increase satisfaction (Bilal *et al*., 2024). The implementation of AI chatbots has significantly improved CS (Sofiyah *et al*., 2024). The quality of chatbot information, waiting time and service quality are key determinants of CS (Ashfaq *et al*., 2020; Ruan and Mezei, 2022; Chen *et al*., 2023). CS applies to after-service delivery in e-commerce platforms, focusing on individual satisfaction based on responsiveness and service quality.

Customers are more satisfied when service agents provide trustworthy, relevant, current and in-depth product information (Chung *et al*., 2020). Chatbot attributes such as informativeness, empathy, interactivity and communication style significantly affect user satisfaction (Al-Shafei, 2024; Orden-Mejía *et al*., 2023; Xia and Shannon, 2025). Negative emotions and privacy concerns adversely affect CS, while positive emotions and information quality enhance it (Al-Shafei, 2024; Ruan and Mezei, 2022). AI-driven chatbots can also boost consumer decision confidence and post–purchase satisfaction (Zhou *et al*., 2025). In Sri Lanka, chatbots significantly improve service quality in tourism by providing personalized, real-time responses, enhancing CS (Pushpakumara and Ahsan, 2025).

Moreover, a positive relationship exists between online customer experience and CS, indicating that improved experiences lead to higher satisfaction levels (Chen *et al*., 2021). Chatbots can customize responses by continuously learning from user interactions, improving product selection accuracy and enhancing user satisfaction through precise recommendations (Nwokedi and Nwafor, 2024; Rahevar and Darji, 2024). In line with prior literature, the fourth hypothesis in this study is developed as follows:

H4. AI-driven chatbot affordances have a significant positive impact on CS.

This study examines the impact of CS on Sri Lanka's e-commerce sector, considering the influence of CA, as confirmed in previous literature.

2.7 Customer engagement and purchase intention

CE is important for e-commerce PI, as it links consumers and brands. According to Prentice *et al.* (2019), PI is positively correlated with CE, meaning that more engaged customers are more likely to purchase. This is supported by a positive correlation between PI and customer involvement behaviors such as live streaming views, likes and comments (Zheng *et al*., 2022).

Moreover, genuine, engaging and entertaining e-commerce live streaming significantly impacts customers' intention to purchase (Wu *et al*., 2024). CE also positively impacts online buying intention (Ou *et al*., 2022; Yang and Lin, 2024), highlighting that increased CE significantly influences the willingness to purchase and attracts customers' attention to the brand (Ou *et al*., 2022).

Furthermore, Yu and Zheng (2022) show a strong positive correlation between PI and CE, implying that PI increases with CE. Additionally, CE mediates the relationship between utilitarian and hedonic motivations and online PI (Akram *et al*., 2021).

With the expectation of testing the gap, the fifth hypothesis was generated as follows:

H5. CE has a significant positive impact on PI.

This study explores the impact of CE on PI in the Sri Lankan e-commerce sector. It highlights the lack of research on the simultaneous impact of CA on CE and PI, thereby filling a research gap.

2.8 Customer trust and purchase intention

Numerous studies have shown that trust is a key variable influencing consumers' decisions to make online purchases in e-commerce, directly affecting PI. Zhu *et al*. (2023) point out that CT is a strong predictor that positively affects the intention to purchase from AI chatbots. A significant positive correlation between trust and PI has been identified (Chu and Zhang, 2016; Wang *et al*., 2023), indicating that high levels of trust lead to increased PI among consumers.

Yin *et al*. (2019) and Song and Shin (2024) suggest that enhancing overall trust will likely increase PI in cross-border e-commerce transactions, as trust is a key factor in social commerce. Trust develops through social interactions, particularly connections that increase user confidence in shared information (Yin *et al*., 2019).

Trust is essential for consumers using online services, significantly influencing their perception of these offerings' worth and their decision-making and PI in AI-powered retail platforms (ElSayad and Mamdouh, 2024). The relationship between trust and PI has also been recognized as a significant mediator of PI in e-commerce (Nam *et al*., 2014). Based on these studies, the sixth hypothesis was generated to measure the impact of CT and PI.

H6. CT has a significant positive impact on PI.

The study explores the relationship between CT and PI using CA, addressing the gap in existing research on the simultaneous impact of CA on these factors.

2.9 Customer satisfaction and purchase intention

Numerous studies indicate that the relationship between CS and PI is crucial for online retailers aiming to boost sales. Satisfaction is an emotional state formed through chatbot interactions (Hsu *et al*., 2012). CS directly relates to PI and positively impacts it (Bai *et al*., 2008; Ali, 2016). A significant correlation exists between CS and PI, with higher satisfaction levels leading to increased PI (Chu and Zhang, 2016).

In this context, perceived product quality and involvement determine overall satisfaction (Tsiotsou, 2006), while affective attachment moderates the relationship (Bilal *et al*., 2024). The

quality of chatbots and websites significantly influences CS, enhancing PI (Lee *et al*., 2022b). Additionally, CS is affected by brand identity, perceived usefulness, perceived ease of use and perceived flow on e-commerce platforms (Hossain *et al*., 2018; Dash *et al*., 2021; Lee *et al*., 2022b).

Another study revealed that quality significantly impacts CS, which influences the desire to repurchase (Fazizah *et al*., 2024; Savastano *et al*., 2024). High-quality service is essential for customer retention. Furthermore, CS is a significant factor in determining the likelihood of future purchases (Kuo *et al*., 2009; Lin *et al*., 2022). Based on these findings, the seventh hypothesis was developed to assess the impact of CS and PI.

H7. CS has a significant positive impact on PI.

This study explores the relationship between consumer involvement and PI in Sri Lankan e-commerce, focusing on the enhanced responsiveness of AI chatbots in enhancing CS.

2.10 Mediating effects of customer engagement, trust and satisfaction

The relationship between CA and PI relies on mediators such as engagement, satisfaction and trust. These factors enhance chatbots' effectiveness in influencing customer behavior and purchasing decisions. According to Lin and Wu (2023), increased consumer engagement with chatbots correlates with higher purchase likelihood. This was further supported by Khan *et al*. (2024), who found that engagement fully mediates the relationship between chatbots and PI. In social media, engagement mediates the relationship between chatbot satisfaction and PI (Jiang *et al*., 2022). However, different types of CE affect chatbots and PI differently. Elmashhara *et al*. (2024) noted that behavioral engagement positively mediates, while emotional engagement has a negative effect and cognitive engagement does not mediate. In light of the above, the study's eighth hypothesis can be formulated as follows:

H8. CE significantly mediates the relationship between AI-driven chatbot affordances and PI.

According to Zhu *et al*. (2023), trust is a fundamental attitudinal response variable that directly affects PI. Moreover, according to Le (2023), information credibility fosters trust, influencing PI, while the effect of cognitive and product trust on chatbot design elements mediates the purchasing decisions (Wu and Huang, 2023; Wei *et al*., 2025). Further, trust significantly mediates the relationship between chatbots and PI (Song and Shin, 2024). Based on the above-explained studies, the ninth hypothesis was generated to measure the impact of CT and PI.

H9. CT significantly mediates the relationship between AI-driven chatbot affordances and PI.

Higher satisfaction from AI experiences predicts PI, with highly satisfied customers more likely to buy (Lee *et al*., 2022a; Jiang *et al*., 2022; Bilal *et al*., 2024). Chatbot interaction influences PI through CS, explaining chatbots' impact on consumer behavior in e-commerce (Pereira *et al*., 2021; Oktavia and Arifin, 2024). However, Akdemir and Bulut (2024) state that chatbot usage indirectly affects reuse intention, with satisfaction as a mediator and a lesser effect on PI. In reference to the above-mentioned literature, the tenth hypothesis in this study is developed as follows:

H10. CS significantly mediates the relationship between AI-driven chatbot affordances and PI.

CE, CT and CS positively mediate the relationship between AI chatbots and PI, but no studies have examined these three mediators simultaneously. This study addresses that gap in the e-commerce sector in Sri Lanka.

Based on the hypotheses, the authors developed a conceptual framework where CA is the independent variable and PI is the dependent variable, with CE, CS and CT as mediating variables (see Figure 1).

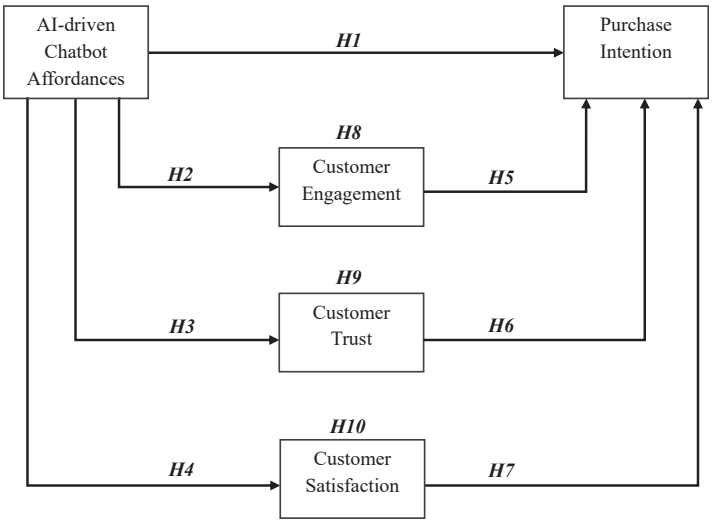

Figure 1. Conceptual framework of the study. **Source:** Authors' compilation based on literature review and theory

This model addresses the role of specific CA (connectivity, visibility, association, and interactivity) in driving engagement, trust, satisfaction and PI within the under-researched Sri Lankan e-commerce context.

3. Methodology

3.1 Measurement development

The data collection process distributed a 33-item questionnaire among respondents (see Table 1). The items were adapted based on pilot test feedback to suit the study's context. The questionnaire used a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) (Singh *et al*., 2024). According to Amin (2024), this scale is reliable for empirical research,

Table 1. Definitions of constructs

Variable	Definition	Reference
AI-driven Chatbot Affordances	An AI-driven chatbot is a computer program that influence NLP to interact with humans to simulate human interaction while chatbot affordances refer to anytime/ anywhere connectivity, association, visibility, and interactivity	Sanjaya *et al*. (2023), Li and Zhang (2023)
Purchase Intention	The willingness of a customer to buy a particular product or service within a certain period over the next 6 or 12 months	Yeo *et al*. (2023)
Customer Engagement	This is the loyalty, often achieved through personalized experiences and sympathetic interactions	Al-Shafei (2024)
Customer Satisfaction	How well goods and services meet consumers' expectations	Chung *et al*. (2020)
Customer Trust	The user's confidence in the chatbot's ability to perform tasks efficiently, reliably, and securely	Mostafa and Kasamani (2022)

Source(s): Extracted from past studies

making it suitable for the current study. The survey collected 518 responses from Sri Lankan customers between June and September 2024, focusing on their shopping experiences with AI-driven chatbots and employing a purposive sampling method. Krejcie and Morgan (1970) indicated a minimum of 384 responses was needed, but 385 were used in the analysis. The survey inquired about respondents' experiences with AI-driven chatbots in online shopping. However, 133 responses were removed due to response bias and inexperience with AI-driven chatbots. A written statement ensured respondents' privacy and clarified that the survey would be used for academic purposes only.

3.2 Statistical analysis

In the data analysis process, partial least squares-structural equation modeling (PLS-SEM) was used with SmartPLS version 4.1.0.8 software (Li and Zhang, 2023). PLS-SEM was chosen for its suitability for exploratory research, specifically to investigate how CA predicts intention to purchase for e-commerce consumers in Sri Lanka through CE, CT and CS. Unlike other methods, PLS-SEM can derive insights from complex models using smaller datasets (Hair *et al*., 2019). The standard SEM algorithm and bootstrapping were used to estimate the model, measuring the effects of CE, CT and CS on PI (Bilal *et al*., 2024). The study's constructs and scale items were adopted from existing literature.

3.3 Common method bias (CMB)

This study used a quantitative approach with a self-reported survey. Data were obtained from a single source, so CMB should be addressed using procedural and statistical remedies. The questionnaire design made the questions more readable by using simple words and eliminating complex questions.

3.4 Non-response bias

To ensure sample representativeness, a non-response bias check was conducted using a paired samples *t*-test comparing early and late responses. Results showed no statistically significant differences ($p > 0.05$) between the groups, indicating no non-response bias. This analysis confirms the reliability of the data and supports the validity of the study's findings (see Table 2).

4. Results

4.1 Demographic results

Table 3 shows the demographic characteristics of 385 respondents from Sri Lanka engaged in e-commerce. University students (60.52%) primarily use AI-driven chatbots for online purchases. The lowest percentages are among part-time employees and the unemployed.

Table 2. Non-response bias results

Variable pair	Mean difference	t-value	*p*-value (two-tailed)	Interpretation
CA (early vs late)	−0.188	−1.207	0.237	No significant bias
CE (early vs late)	−0.100	−0.514	0.611	No significant bias
CS (early vs late)	−0.193	−0.972	0.339	No significant bias
CT (early vs late)	0.033	0.191	0.850	No significant bias
PI (early vs late)	0.044	0.261	0.796	No significant bias

Source(s): Demonstrated based on the analysis

Table 3. Demographic analysis

	Items	*n*	%
Age Category	18–29	221	57.40
	30–39	105	27.27
	40–49	59	15.32
Gender	Male	233	60.52
	Female	152	39.48
Employment Type	University Student	233	60.52
	Employed part-time	19	4.94
	Employed full-time	113	29.35
	Unemployed	20	5.19
Frequency of Online Shopping	Daily	16	4.16
	Weekly	50	12.99
	Monthly	145	37.66
	A few times a year	135	35.06
	Rarely	39	10.13

Source(s): Demonstrated based on the analysis

Regular online purchases are 4.16%, while monthly purchases are 37.66%. The 18–29 age group has the highest percentage of chatbot users (57.40%), with lower percentages in the 30–39 and 40–49 age groups.

4.2 Measurement model results

Table 4 summarizes survey items' reliability, confirming their appropriateness for testing research questions. Cronbach's alpha and composite reliability scores measure internal consistency, while average variance extracted (AVE) values calculate convergent validity. Overall, Cronbach's alpha and composite reliability values are well above acceptable thresholds, indicating strong reliability and validity for all constructs (Nunnally, 1978). The fact that all the AVE values are more than 0.5 suggests that the structures account for a substantial amount of the variance in their components. The structures are genuine and dependable measurements within the study model (Bagozzi and Yi, 1988).

4.3 Structural model results

Table 5 shows the model's predictive capacity and effect sizes linking CA, CE, CT, CS and PI. The model was evaluated using the coefficient of determination (R^2), effect size (f^2) and predictive relevance (Q^2). The model explained 68.1%, 60.6% and 61.3% of the variance in CE, CS and CT, respectively, by CA. The combination of CA, CE, CS and CT accounted for 66.2% of the variance in PI. Furthermore, the Q^2 values of CE (0.679), CS (0.601), CT (0.609) and PI (0.481) are more significant than the acceptable value of zero. Additionally, it was noted that f^2 values, ranging from 0.002 to 2.133, are greater than permissible zero values.

Table 6 supports the study's claim that constructs are distinct, with research questions focusing on affordances, engagement, trust, satisfaction and PI. The discriminant validity assessment using Fornell–Larcker criterion values and Heterotrait-Monotrait ratio (HTMT) values shows acceptable discriminant validity. Thus, the threshold of HTMT values should be lower than 0.90, except for the CE and CA (0.937), and all other variables have acceptable discriminant validity. Higher HTMT values indicate that AI-driven chatbots indirectly describe engagement in e-commerce. Further, Fornell–Larcker criterion values should be higher than the square root of AVE values for acceptable discriminant validity.

Table 7 presents the results of research hypotheses regarding the relationship between CA and PI, both directly and indirectly through engagement, trust and satisfaction. It includes findings from Sri Lanka's e-commerce context, highlighting the 95% confidence interval

Table 4. Measurement model assessment

Construct	Item code	Outer loading	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	AVE
AI-driven Chatbot Affordances	CA1	0.743	0.907	0.910	0.922	0.520
	CA2	0.663				
	CA3	0.695				
	CA4	0.702				
	CA5	0.784				
	CA6	0.778				
	CA7	0.743				
	CA8	0.754				
	CA9	0.659				
	CA10	0.609				
	CA11	0.777				
Customer Engagement	CE1	0.780	0.844	0.848	0.889	0.615
	CE2	0.734				
	CE3	0.799				
	CE4	0.819				
	CE5	0.786				
Customer Satisfaction	CS1	0.815	0.901	0.902	0.924	0.669
	CS2	0.788				
	CS3	0.855				
	CS4	0.806				
	CS5	0.798				
	CS6	0.844				
Customer Trust	CT1	0.769	0.875	0.879	0.910	0.669
	CT2	0.835				
	CT3	0.857				
	CT4	0.856				
	CT5	0.767				
Purchase Intention	PI1	0.838	0.899	0.901	0.922	0.664
	PI2	0.805				
	PI3	0.808				
	PI4	0.805				
	PI5	0.828				
	PI6	0.804				

Source(s): Demonstrated based on the analysis

Table 5. Structural model assessment

Variable	R^2	f^2 CE	CS	CT	PI	Q^2
CA		2.133	1.540	1.584	0.004	
CE	0.681				0.024	0.679
CS	0.606				0.287	0.601
CT	0.613				0.002	0.609
PI	0.662					0.481

Source(s): Demonstrated based on the analysis

values, t-statistics (t), path coefficients (B) and *p*-values. The analysis reveals that CA significantly impacts CE (H2: $B = 0.825$, $p = 0.001$), CT (H3: $B = 0.783$, $p = 0.001$) and CS (H4: $B = 0.779$, $p = 0.001$). However, CA has an insignificant direct impact on PI (H1: $B = 0.070$, $p = 0.379$). These results confirm that CA significantly improves CE, CS and CT,

Table 6. Fornell–Larcker criterion values and Heterotrait-Monotrait ratio (HTMT) Assessment

	CA	CE	CS	CT	PI
CA	0.721	*0.937*	*0.860*	*0.876*	*0.766*
CE	0.825	0.784	*0.863*	*0.895*	*0.796*
CS	0.779	0.756	0.818	*0.894*	*0.879*
CT	0.783	0.772	0.794	0.818	*0.773*
PI	0.698	0.702	0.798	0.694	0.815

Note(s): Values in *Italics* represent Heterotrait-Monotrait ratio (HTMT) values
Source(s): Demonstrated based on the analysis

Table 7. Hypotheses testing assessment

	Paths	B	t	*P* Values	Decision
Direct	CA → CE	0.825	39.05	0.001	Accepted
	CA → CS	0.779	32.58	0001	Accepted
	CA → CT	0.783	33.46	0.001	Accepted
	CA → PI	0.070	0.88	0.379	Rejected
	CE → PI	0.174	2.73	0.006	Accepted
	CS → PI	0.573	6.75	0.001	Accepted
	CT → PI	0.050	0.62	0.536	Rejected
Indirect	CA → PI	0.628	10.61	0.001	Accepted
	CA → CT → PI	0.039	0.69	0.536	Rejected
	CA → CS → PI	0.446	6.79	0.001	Accepted
	CA → CE → PI	0.143	2.74	0.006	Accepted

Source(s): Demonstrated based on the analysis

while indicating no significant positive impact on PI. This suggests that CA affects PI indirectly through mediators such as CS (H10: $B = 0.451$, $p = 0.001$) and CE (H8: $B = 0.143$, $p = 0.006$). The results indicate that CE and CS significantly mediate the relationship between PI and AI-driven chatbots.

The findings indicate that CS (H7: $B = 0.178$, $p = 0.005$) and CE (H5: $B = 0.174$, $p = 0.006$) significantly influence consumer behavior by affecting PI. However, CT shows no significant direct (H6: $B = 0.050$, $p = 0.536$) or mediating (H9: $B = 0.039$, $p = 0.536$) effect on PI. Only CS and CE positively impact PI, while CT does not. Additionally, CA influences PI indirectly through mediators like CS (H10: $B = 0.451$, $p = 0.001$) and CE (H8: $B = 0.143$, $p = 0.006$) (see Figure 2).

4.4 Model fit summary

The model fit indices indicate that the estimated model fits the data well. The SRMR values for the saturated (0.057) and estimated (0.070) models are below the acceptable threshold of 0.08. The NFI values for both models are close to 1, indicating a strong overall fit. Although the discrepancy measures (d_ULS and d_G) are slightly higher for the estimated model, they remain acceptable. The high chi-square values are expected due to the large sample size and do not indicate poor fit (see Table 8).

5. Discussion

This paper assesses the relationship between CA and PI in Sri Lanka's e-commerce, finding a significant correlation with CE, CT and CS, but not with PI. This contrasts with previous

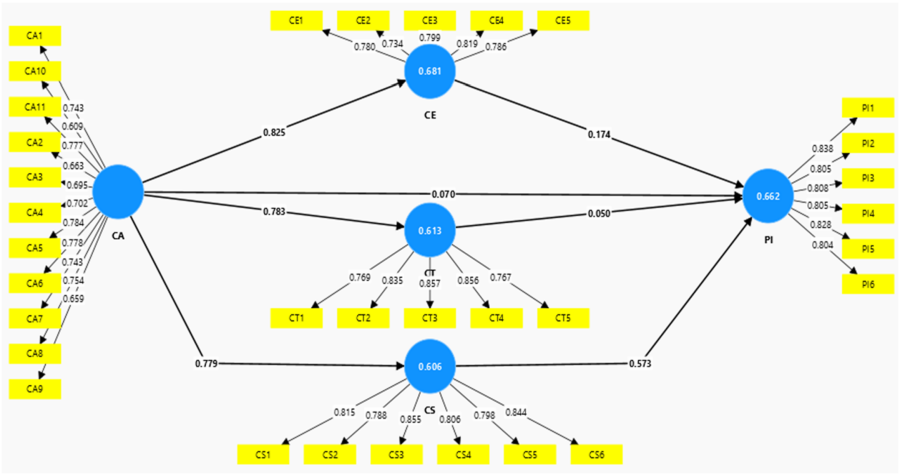

Figure 2. Algorithm output. **Source:** SmartPLS 4.1.0.8

Table 8. Model fit summary

	Saturated model	Estimated model
SRMR	0.057	0.070
d_ULS	1.791	2.772
d_G	0.710	0.787
Chi-square	1495.218	1588.933
NFI	0.832	0.821

Source(s): Demonstrated based on the analysis

studies, such as Malhotra and Ramalingam (2023), which showed a positive correlation between chatbots and PI in more technologically mature countries. As a developing economy with low chatbot maturity rates, one explanation for these findings is Sri Lanka's digital literacy rate, which was 39% in 2023 (Statistics.gov, 2023), leading to limited reliance on chatbots for purchase decisions (Deyalage and Kulathunga, 2019). The study confirms that CA is significantly related to CE, CT and CS. Jiang *et al*. (2022) and Jyothsna *et al*. (2024) noted that AI chatbots improve CE through immediate responses and notifications. Additionally, Al-Shafei (2024) states that CS is enhanced by personal support from chatbots. In Sri Lanka, CA supports CE and CS as e-commerce is still growing, but CT for AI-driven chatbots remains low. This supports the affordance theory, suggesting that technological capabilities influence CT and PI in relation to user adoption (Li and Zhang, 2023).

In recent analyses of the relationship between CA and PI in Sri Lanka, it was found that CE and CS significantly mediate the CA-PI link, while CT does not play a notable role. This contrasts with findings by Song and Shin (2024), which identified trust as a key predictor of PI for AI-driven chatbots. Cultural norms in Sri Lanka, which emphasize human interaction, might explain this divergence, alongside privacy concerns that may diminish the importance of trust (Ruan and Mezei, 2022). Additionally, Fathima Nushra and Mubarak (2022) observed that Sri Lankans tend to rely on word-of-mouth recommendations, suggesting that trust may not be essential for determining PI. Instead, CE and CS, which are based on practical user experiences with chatbots—such as prompt responses and utility—are more immediate

drivers of PI (Moriuchi *et al*., 2021). Further studies have corroborated the significant roles of CE and CS in mediating the CA-PI relationship, with suggestions that engagement enhances the effectiveness of chatbots. In contrast, the emphasis on trust prior to PI evaluation is more common in Western contexts (ElSayad and Mamdouh, 2024).

The study highlights a significant contextual aspect of e-commerce in Sri Lanka, noting that trust influences CE and CS, especially in light of the rural-urban digital divide. While previous research indicates that chatbots enhance CE, the direct impact of CA on PI appears minimal, reinforcing the importance of indirect effects through CE and CS. This finding contrasts with earlier studies that emphasized trust as crucial for chatbot adoption, suggesting that cultural factors may affect decision-making in this context. Overall, comparable global research supports the value of personalized assistance and responsiveness in elevating service quality and satisfaction. This study deepens the understanding of chatbot effectiveness specifically within Sri Lanka's e-commerce landscape.

6. Conclusion

The study highlights CA's role in Sri Lanka's e-commerce industry, emphasizing the importance of continuous connectivity, information connection, visibility and interactivity in chatbot design. It also emphasizes that businesses need to deliver exceptional interactions to compensate for users who are not technologically savvy.

6.1 Managerial implications

This research highlights the strategic importance of AI-driven chatbots in enhancing customer experience within e-commerce. The findings suggest that chatbots can effectively boost CE and CS, which are key drivers of PI. Managers should prioritize the development of chatbot features that offer real-time assistance, personalized recommendations and seamless navigation. Investing in user-friendly interfaces and context-aware responses can improve customer retention. Additionally, integrating chatbots into loyalty programs, post-purchase support and promotional campaigns can help build stronger customer relationships and increase long-term value.

6.2 Theoretical implications

This study extends affordance theory and social support theory by examining how chatbot affordances shape consumer experiences in e-commerce. It highlights that functional and relational affordances enhance CE and CS, reinforcing the role of digital agents as socio-technical actors. By adapting social support theory to AI-mediated contexts, the findings suggest that emotional and informational support from chatbots can substitute, but not fully replace, human interaction in fostering trust. The lack of significant impact on PI reveals a theoretical boundary, while chatbot affordances drive engagement and satisfaction; they may fall short in triggering transactional commitment, pointing to a gap in perceived authenticity and trustworthiness in AI-driven commerce.

6.3 Limitations and directions for future research

This study has several limitations that should be acknowledged. First, the cross-sectional design with limited variables constrains the ability to observe how other variables mediate the relationship. Second, the reliance on purposive sampling introduces selection bias that may affect the results' generalizability. We recommend implementing probability sampling techniques or experimental designs to validate the self-reported data for future research. Additionally, while PLS-SEM provided valuable insights, supplementary analytical approaches such as Importance-Performance Map Analysis (IPMA) and necessary condition analysis (NCA) would offer a deeper understanding of chatbot affordances and

their impact on user experience. These methods would better identify the features most significantly influencing user satisfaction and engagement.

References

Akdemir, D.M. and Bulut, Z.A. (2024), "Business and customer-based chatbot activities: the role of customer satisfaction in online purchase intention and intention to reuse chatbots", *Journal of Theoretical and Applied Electronic Commerce Research*, Vol. 19 No. 4, pp. 2961-2979, doi: 10.3390/jtaer19040142.

Akram, U., Junaid, M., Zafar, A.U., Li, Z. and Fan, M. (2021), "Online purchase intention in Chinese social commerce platforms: being emotional or rational?", *Journal of Retailing and Consumer Services*, Vol. 63, pp. 102-669, doi: 10.1016/j.jretconser.2021.102669.

Al-Shafei, M. (2024), "Navigating human-chatbot interactions: an investigation into factors influencing user satisfaction and engagement", *International Journal of Human–Computer Interaction*, Vol. 41, pp. 1-18, doi: 10.1080/10447318.2023.2301252.

Ali, F. (2016), "Hotel website quality, perceived flow, customer satisfaction and purchase intention", *Journal of Hospitality and Tourism Technology*, Vol. 7 No. 2, pp. 213-228, doi: 10.1108/JHTT-02-2016-0010.

Amin, H. (2024), "Zakat Wakalah system in Malaysia: an extension of innovation diffusion theory", *The Bottom Line*, Vol. 38 No. 3, pp. 333-348, doi: 10.1108/BL-02-2024-0020.

Ashfaq, M., Yun, J., Yu, S. and Loureiro, S.M.C. (2020), "I, Chatbot: modeling the determinants of users' satisfaction and continuance intention of AI-powered service agents", *Telematics and Informatics*, Vol. 54, pp. 101-173, doi: 10.1016/j.tele.2020.101473.

Bagozzi, R.P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16 No. 1, pp. 74-94, doi: 10.1007/BF02723327.

Bai, B., Law, R. and Wen, I. (2008), "The impact of website quality on customer satisfaction and purchase intentions: evidence from Chinese online visitors", *International Journal of Hospitality Management*, Vol. 27 No. 3, pp. 391-402, doi: 10.1016/j.ijhm.2007.10.008.

Baudier, P. and de Boissieu, E. (2024), "Are social media robot influencers credible? A cross-continental analysis in a fashion context", *Computers in Human Behavior*, Vol. 162, pp. 108-447, doi: 10.1016/j.chb.2024.108447.

Bilal, M., Zhang, Y., Cai, S., Akram, U. and Halibas, A. (2024), "Artificial intelligence is the magic wand making customer-centric a reality! An investigation into the relationship between consumer purchase intention and consumer engagement through affective attachment", *Journal of Retailing and Consumer Services*, Vol. 77, pp. 103-674, doi: 10.1016/j.jretconser.2023.103674.

Chen, J.-S., Le, T.-T.-Y. and Florence, D. (2021), "Usability and responsiveness of artificial intelligence chatbot on online customer experience in e-retailing", *International Journal of Retail and Distribution Management*, Vol. 49 No. 11, pp. 1512-1531, doi: 10.1108/IJRDM-08-2020-0312.

Chen, Q., Lu, Y., Gong, Y. and Xiong, J. (2023), "Can AI chatbots help retain customers? Impact of AI service quality on customer loyalty", *Internet Research*, Vol. 33 No. 6, pp. 2205-2243, doi: 10.1108/INTR-09-2021-0686.

Cheng, Y. and Jiang, H. (2022), "Customer–brand relationship in the era of artificial intelligence: understanding the role of chatbot marketing efforts", *Journal of Product and Brand Management*, Vol. 31 No. 2, pp. 252-264, doi: 10.1108/JPBM-05-2020-2907.

Cheng, X., Bao, Y., Zarifis, A., Gong, W. and Mou, J. (2022), "Exploring consumers' response to text-based chatbots in e-commerce: the moderating role of task complexity and chatbot disclosure", *Internet Research*, Vol. 32 No. 2, pp. 496-517, doi: 10.1108/INTR-08-2020-0460.

Chu, F. and Zhang, X. (2016), "Satisfaction, trust and online purchase intention: a study of consumer perceptions", *2016 International Conference on Logistics, Informatics and Service Sciences (LISS)*, 24-27 July 2016, pp. 1-4, doi: 10.1109/liss.2016.7854436.

Chung, M., Ko, E., Joung, H. and Kim, S.J. (2020), "Chatbot e-service and customer satisfaction regarding luxury brands", *Journal of Business Research*, Vol. 117, pp. 587-595, doi: 10.1016/j.jbusres.2018.10.004.

Coppola, D. (2023), *Share of Consumers Interested in Chatbots as Online Shopping Assistants in 2023*, Statista, available at: https://www.statista.com/statistics/1422346/interest-in-chatbots-as-shopping-assistants/ (accessed 2024).

Dash, G., Kiefer, K. and Paul, J. (2021), "Marketing-to-Millennials: marketing 4.0, customer satisfaction and purchase intention", *Journal of Business Research*, Vol. 122, pp. 608-620, doi: 10.1016/j.jbusres.2020.10.016.

Deyalage, P.A. and Kulathunga, D. (2019), "Factors affecting online customer satisfaction: the Sri Lankan perspective", *International Journal of Business and Management*, Vol. 14 No. 2, p. 99, doi: 10.5539/ijbm.v14n2p99.

Dong, A. (2018), *AI Chatbot behind Alibaba's $31 Billion Single's Day Sales Miracle*, Digital Initiative, available at: https://d3.harvard.edu/platform-rctom/submission/ai-chatbot-behind-alibabas-31-billion-singles-day-sales-miracle/ (accessed 2024).

Elmashhara, M.G., De Cicco, R., Silva, S.C., Hammerschmidt, M. and Silva, M.L. (2024), "How gamifying AI shapes customer motivation, engagement, and purchase behavior", *Psychology and Marketing*, Vol. 41 No. 1, pp. 134-150, doi: 10.1002/mar.21912.

ElSayad, G. and Mamdouh, H. (2024), "Are young adult consumers ready to be intelligent shoppers? The importance of perceived trust and the usefulness of AI-powered retail platforms in shaping purchase intention", *Young Consumers*, Vol. 25 No. 6, pp. 969-989, doi: 10.1108/YC-02-2024-1991.

Fang, Y.-H. (2019), "An app a day keeps a customer connected: explicating loyalty to brands and branded applications through the lens of affordance and service-dominant logic", *Information and Management*, Vol. 56 No. 3, pp. 377-391, doi: 10.1016/j.im.2018.07.011.

Fathima Nushra, M.N. and Mubarak, K.M. (2022), "Influence of customer generated e-WOM on purchase intention of cosmetic products in Sri Lanka", *Sri Lanka Journal of Marketing*, Vol. 8, pp. 92-112, doi: 10.4038/sljmuok.v8i0.96.

Fazizah, A., Rakhmawati, A., Alfianto, E.A. and Husnah, D.N. (2024), "Customer satisfaction and repurchase intention in terms of E-commerce logistics service quality and recovery service", *Sketsa Bisnis*, Vol. 11 No. 1, pp. 1-23, doi: 10.35891/jsb.v11i1.4150.

Fonseka, K., Jaharadak, A.A. and Raman, M. (2022), "Impact of E-commerce adoption on business performance of SMEs in Sri Lanka; moderating role of artificial intelligence", *International Journal of Social Economics*, Vol. 49 No. 10, pp. 1518-1531, doi: 10.1108/IJSE-12-2021-0752.

Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), "When to use and how to report the results of PLS-SEM", *European Business Review*, Vol. 31 No. 1, pp. 2-24, doi: 10.1108/EBR-11-2018-0203.

Hossain, M.S., Zhou, X. and Rahman, M.F. (2018), "Examining the impact of QR codes on purchase intention and customer satisfaction on the basis of perceived flow", *International Journal of Engineering Business Management*, Vol. 10, pp. 1-11, doi: 10.1177/1847979018812323.

Hsu, C.-L., Chang, K.-C. and Chen, M.-C. (2012), "The impact of website quality on customer satisfaction and purchase intention: perceived playfulness and perceived flow as mediators", *Information Systems and E-Business Management*, Vol. 10 No. 4, pp. 549-570, doi: 10.1007/s10257-011-0181-5.

Huang, K.-Y., Nambisan, P. and Uzuner, Ö. (2010), "Informational support or emotional support: preliminary study of an automated approach to analyze online support community contents", *International Conference on Information Systems (ICIS) 2010 Proceedings*, Association for Information Systems, St. Louis, Vol. 12.

Jiang, H., Cheng, Y., Yang, J. and Gao, S. (2022), "AI-powered chatbot communication with customers: dialogic interactions, satisfaction, engagement, and customer behavior", *Computers in Human Behavior*, Vol. 134, pp. 107-329, doi: 10.1016/j.chb.2022.107329.

Joshi, H. (2025), "Integrating trust and satisfaction into the UTAUT model to predict Chatbot adoption – a comparison between Gen-Z and Millennials", *International Journal of Information Management Data Insights*, Vol. 5 No. 1, pp. 100-332, doi: 10.1016/j.jjimei.2025.100332.

Jyothsna, M., Subbaiah, P.V. and Kryvinska, N. (2024), "Exploring the chatbot usage intention - a mediating role of chatbot initial trust", *Heliyon*, Vol. 10 No. 12, e33028, doi: 10.1016/j.heliyon.2024.e33028.

Khan, H., Sararueangpong, P., Mathmann, F. and Wang, D. (2024), "Consumers' promotion focus mitigates the negative effects of chatbots on purchase likelihood", *Journal of Consumer Behaviour*, Vol. 23 No. 3, pp. 1528-1539, doi: 10.1002/cb.2289.

Krejcie, R.V. and Morgan, D.W. (1970), "Sample size determination table", *Educational and Psychological Measurement*, Vol. 30 No. 3, pp. 607-610.

Kulathunga, N., Laknath, R. and Abeywickrama, H.N. (2024), "The impact of digital marketing strategies on consumer repurchase intention in the food and beverage industry: a study in Colombo District, Sri Lanka", *Journal of Business Research and Insights*, Vol. 10 No. 2, pp. 83-96, doi: 10.31357/jbri.v10i02.7963.g5578.

Kuo, Y.-F., Wu, C.-M. and Deng, W.-J. (2009), "The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services", *Computers in Human Behavior*, Vol. 25 No. 4, pp. 887-896, doi: 10.1016/j.chb.2009.03.003.

Le, X.C. (2023), "Inducing AI-powered chatbot use for customer purchase: the role of information value and innovative technology", *Journal of Systems and Information Technology*, Vol. 25 No. 2, pp. 219-241, doi: 10.1108/JSIT-09-2021-0206.

Lee, K.-W. and Li, C.-Y. (2023), "It is not merely a chat: transforming chatbot affordances into dual identification and loyalty", *Journal of Retailing and Consumer Services*, Vol. 74, pp. 103-447, doi: 10.1016/j.jretconser.2023.103447.

Lee, C.T., Pan, L.-Y. and Hsieh, S.H. (2022a), "Artificial intelligent chatbots as brand promoters: a two-stage structural equation modeling-artificial neural network approach", *Internet Research*, Vol. 32 No. 4, pp. 1329-1356, doi: 10.1108/INTR-01-2021-0030.

Lee, V., Park, S. and Lee, D. (2022b), "The effect of E-commerce service quality factors on customer satisfaction, purchase intention, and actual purchase in Uzbekistan", *Global Business Finance Review*, Vol. 27 No. 3, pp. 56-74, doi: 10.17549/gbfr.2022.27.3.56.

Leong, L.-Y., Hew, T.-S., Ooi, K.-B. and Wei, J. (2020), "Predicting mobile wallet resistance: a two-staged structural equation modeling-artificial neural network approach", *International Journal of Information Management*, Vol. 51, pp. 102-147, doi: 10.1016/j.ijinfomgt.2019.102047.

Li, C.-Y. and Zhang, J.-T. (2023), "Chatbots or me? Consumers' switching between human agents and conversational agents", *Journal of Retailing and Consumer Services*, Vol. 72, pp. 103-264, doi: 10.1016/j.jretconser.2023.103264.

Li, C.-Y., Fang, Y.-H. and Chiang, Y.-H. (2023), "Can AI chatbots help retain customers? An integrative perspective using affordance theory and service-domain logic", *Technological Forecasting and Social Change*, Vol. 197, pp. 122-921, doi: 10.1016/j.techfore.2023.122921.

Lin, J.-S. and Wu, L. (2023), "Examining the psychological process of developing consumer-brand relationships through strategic use of social media brand chatbots", *Computers in Human Behavior*, Vol. 140, pp. 107-488, doi: 10.1016/j.chb.2022.107488.

Lin, B., Chen, Y. and Zhang, L. (2022), "Research on the factors influencing the re-purchase intention on short video platforms: a case of China", *PLoS One*, Vol. 17 No. 3, e0265090, doi: 10.1371/journal.pone.0265090.

Liu, M., Yang, Y., Ren, Y., Jia, Y., Ma, H., Luo, J., Fang, S., Qi, M. and Zhang, L. (2024), "What influences consumer AI chatbot use intention? An application of the extended technology acceptance model", *Journal of Hospitality and Tourism Technology*, Vol. 15 No. 4, pp. 667-689, doi: 10.1108/JHTT-03-2023-0057.

Lo Presti, L., Maggiore, G. and Marino, V. (2021), "The role of the chatbot on customer purchase intention: towards digital relational sales", *Italian Journal of Marketing*, Vol. 2021 No. 3, pp. 165-188, doi: 10.1007/s43039-021-00029-6.

Malhotra, G. and Ramalingam, M. (2023), "Perceived anthropomorphism and purchase intention using artificial intelligence technology: examining the moderated effect of trust", *Journal of Enterprise Information Management*, Vol. 38 No. 2, pp. 401-423, doi: 10.1108/JEIM-09-2022-0316.

Martínez Puertas, S., Illescas Manzano, M.D., Segovia López, C. and Ribeiro-Cardoso, P. (2024), "Purchase intentions in a chatbot environment: an examination of the effects of customer experience", *Oeconomia Copernicana*, Vol. 15 No. 1, pp. 145-194, doi: 10.24136/oc.2914.

Maxham, J.G. and Netemeyer, R.G. (2002), "Modeling customer perceptions of complaint handling over time: the effects of perceived justice on satisfaction and intent", *Journal of Retailing*, Vol. 78 No. 4, pp. 239-252, doi: 10.1016/S0022-4359(02)00100-8.

Moriuchi, E., Landers, V.M., Colton, D. and Hair, N. (2021), "Engagement with chatbots versus augmented reality interactive technology in e-commerce", *Journal of Strategic Marketing*, Vol. 29 No. 5, pp. 375-389, doi: 10.1080/0965254X.2020.1740766.

Mostafa, R.B. and Kasamani, T. (2022), "Antecedents and consequences of chatbot initial trust", *European Journal of Marketing*, Vol. 56 No. 6, pp. 1748-1771, doi: 10.1108/EJM-02-2020-0084.

Mozafari, N., Weiger, W.H. and Hammerschmidt, M. (2022), "Trust me, I'm a bot – repercussions of chatbot disclosure in different service frontline settings", *Journal of Service Management*, Vol. 33 No. 2, pp. 221-245, doi: 10.1108/JOSM-10-2020-0380.

Murtarelli, G., Collina, C. and Romenti, S. (2023), "'Hi! How can I help you today?': investigating the quality of chatbots–millennials relationship within the fashion industry", *The TQM Journal*, Vol. 35 No. 3, pp. 719-733, doi: 10.1108/TQM-01-2022-0010.

Nam, S.-T., Jin, C.-Y. and Sim, J. (2014), "A meta-analysis of the relationship between mediator factors and purchasing intention in E-commerce studies", *Journal of Information and Communication Convergence Engineering*, Vol. 12 No. 5, pp. 257-262, doi: 10.6109/jicce.2014.12.4.257.

Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York.

Nwokedi, C. and Nwafor, C. (2024), "Enhancing customer service and user experience through the use of machine learning powered intelligent chatbots", *World Journal of Advanced Research and Reviews*, Vol. 23 No. 2, pp. 181-191, doi: 10.30574/wjarr.2024.23.2.2307.

Oktavia, T. and Arifin, C.W. (2024), "Revolutionizing E-commerce with AI chatbots: enhancing customer satisfaction and purchase decisions in online marketplace", *Journal of Theoretical and Applied Information Technology*, Vol. 102 No. 19, pp. 7224-7237, available at: https://www.jatit.org/volumes/Vol102No19/29Vol102No19.pdf

Orden-Mejía, M., Carvache-Franco, M., Huertas, A., Carvache-Franco, O. and Carvache-Franco, W. (2023), "Modeling users' satisfaction and visit intention using AI-based chatbots", *PLoS One*, Vol. 18 No. 9, e0286427, doi: 10.1371/journal.pone.0286427.

Ou, C.-C., Chen, K.-L., Tseng, W.-K. and Lin, Y.-Y. (2022), "A study on the influence of conformity behaviors, perceived risks, and customer engagement on group buying intention: a case study of community E-commerce platforms", *Sustainability*, Vol. 14 No. 4, 1941, doi: 10.3390/su14041941.

Pereira, T., Limberger, D.P.F. and Ardigó, D.C.M. (2021), "The moderating effect of the need for interaction with a service employee on purchase intention in chatbots", *Telematics and Informatics Reports*, Vols 1-4, 100003, doi: 10.1016/j.teler.2022.100003.

Prentice, C., Wang, X. and Loureiro, S.M.C. (2019), "The influence of brand experience and service quality on customer engagement", *Journal of Retailing and Consumer Services*, Vol. 50, pp. 50-59.

Priyashani, S.A.D. and Ariyapperuma, A.R.M.I. (2024), "Influence of artificial intelligence on consumer purchase intention with special reference to social media users of Sri Lanka", *International Conference on Management and Entrepreneurship (ICOME) 2024*, The Open University of Sri Lanka.

Pushpakumara, T.D.C. and Ahsan, F.J. (2025), "Artificial intelligence adoption in sustainable tourism in Sri Lanka: an operator perspective", *International Journal of Innovative Science and Research Technology*, Vol. 10 No. 1, pp. 2516-2530, doi: 10.5281/zenodo.14885949.

Rahevar, M. and Darji, S. (2024), "The adoption of AI-driven chatbots into a recommendation for E-commerce systems to targeted customer in the selection of product", *International Journal of Management, Economics and Commerce*, Vol. 1 No. 2, pp. 128-137, doi: 10.62737/m1vpdq75.

Ranieri, A., Di Bernardo, I. and Mele, C. (2024), "Serving customers through chatbots: positive and negative effects on customer experience", *Journal of Service Theory and Practice*, Vol. 34 No. 2, pp. 191-215, doi: 10.1108/JSTP-01-2023-0015.

Roy, S.K., Tehrani, A.N., Pandit, A., Apostolidis, C. and Ray, S. (2025), "AI-capable relationship marketing: shaping the future of customer relationships", *Journal of Business Research*, Vol. 192, 115309, doi: 10.1016/j.jbusres.2025.115309.

Rozzell, B., Piercy, C.W., Carr, C.T., King, S., Lane, B.L., Tornes, M., Johnson, A.J. and Wright, K.B. (2014), "Notification pending: online social support from close and nonclose relational ties via Facebook", *Computers in Human Behavior*, Vol. 38, pp. 272-280, doi: 10.1016/j.chb.2014.06.006.

Ruan, Y. and Mezei, J. (2022), "When do AI chatbots lead to higher customer satisfaction than human frontline employees in online shopping assistance? Considering product attribute type", *Journal of Retailing and Consumer Services*, Vol. 68, 103059, doi: 10.1016/j.jretconser.2022.103059.

Sanjaya, W., Calvin, Muhammad, R., Meiliana and Fajar, M. and Meiliana, (2023), "Systematic literature Review on implementation of chatbots for commerce use", *Procedia Computer Science*, Vol. 227, pp. 432-438, doi: 10.1016/j.procs.2023.10.543.

Savastano, M., Anagnoste, S., Biclesanu, I. and Amendola, C. (2024), "The impact of e-commerce platforms' quality on customer satisfaction and repurchase intention in post COVID-19 settings", *The TQM Journal*, Vol. 37 No. 7, pp. 2074-2093, doi: 10.1108/TQM-04-2024-0143.

Sharma, S. and Khadka, A. (2019), "Role of empowerment and sense of community on online social health support group", *Information Technology and People*, Vol. 32 No. 6, pp. 1564-1590, doi: 10.1108/ITP-09-2018-0410.

Sharma, R. and Mishra, A. (2024), "Advanced NLP and ML techniques in E-commerce: enhancing customer experience with AI chatbots", *2024 2nd World Conference on Communication and Computing (WCONF)*, 12-14 July 2024, pp. 1-5, doi: 10.1109/wconf61366.2024.10692186.

Silva, S.C., De Cicco, R., Vlačić, B. and Elmashhara, M.G. (2023), "Using chatbots in e-retailing – how to mitigate perceived risk and enhance the flow experience", *International Journal of Retail and Distribution Management*, Vol. 51 No. 3, pp. 285-305, doi: 10.1108/IJRDM-05-2022-0163.

Sinemus, K., Zielke, S. and Dobbelstein, T. (2025), "Improving consumer satisfaction through shopping app features: a Kano-based approach", *Journal of Retailing and Consumer Services*, Vol. 85, pp. 104-243, doi: 10.1016/j.jretconser.2025.104243.

Singh, C., Dash, M.K., Sahu, R. and Kumar, A. (2024), "Investigating the acceptance intentions of online shopping assistants in E-commerce interactions: mediating role of trust and effects of consumer demographics", *Heliyon*, Vol. 10 No. 3, e25031, doi: 10.1016/j.heliyon.2024.e25031.

Sofiyah, F.R., Dilham, A., Hutagalung, A.Q., Yulinda, Y., Lubis, A.S. and Marpaung, J.L. (2024), "The chatbot artificial intelligence as the alternative customer services strategic to improve the customer relationship management in real-time responses", *International Journal of Economics and Business Research*, Vol. 27 No. 5, pp. 45-58, doi: 10.1504/IJEBR.2024.10064925.

Song, S.W. and Shin, M. (2024), "Uncanny Valley effects on chatbot trust, purchase intention, and adoption intention in the context of E-commerce: the moderating role of avatar familiarity", *International Journal of Human–Computer Interaction*, Vol. 40 No. 2, pp. 441-456, doi: 10.1080/10447318.2022.2121038.

Statistics.gov (2023), *Computer Literacy Statistics 2023*, Department of Census and Statistics.

Tan, S.-M. and Liew, T.W. (2022), "Multi-chatbot or single-chatbot? The effects of M-commerce chatbot interface on source credibility, social presence, trust, and purchase intention", *Human Behavior and Emerging Technologies*, Vol. 2022 No. 1, 2501538, doi: 10.1155/2022/2501538.

Tiihonen, J. and Felfernig, A. (2017), "An introduction to personalization and mass customization", *Journal of Intelligent Information Systems*, Vol. 49 No. 1, pp. 1-7, doi: 10.1007/s10844-017-0465-4.

Toader, D.-C., Boca, G., Toader, R., Măcelaru, M., Toader, C., Ighian, D. and Rădulescu, A.T. (2020), "The effect of social presence and chatbot errors on trust", *Sustainability*, Vol. 12 No. 1, 256, doi: 10.3390/su12010256.

Treem, J.W. and Leonardi, P.M. (2013), "Social media use in organizations: exploring the affordances of visibility, editability, persistence, and association", *Annals of the International Communication Association*, Vol. 36 No. 1, pp. 143-189, doi: 10.1080/23808985.2013.11679130.

Tsai, W.-H.S., Liu, Y. and Chuan, C.-H. (2021), "How chatbots' social presence communication enhances consumer engagement: the mediating role of parasocial interaction and dialogue", *Journal of Research in Interactive Marketing*, Vol. 15 No. 3, pp. 460-482, doi: 10.1108/JRIM-12-2019-0200.

Tsiotsou, R.H. (2006), "The role of perceived product quality and overall satisfaction on purchase intentions", *International Journal of Consumer Studies*, Vol. 30 No. 2, pp. 207-217, doi: 10.1111/j.1470-6431.2005.00477.x.

Vapiwala, F. and Pandita, D. (2022), "Analyzing the application of artificial intelligence for E-commerce customer engagement", *2022 International Conference on Data Analytics for Business and Industry (ICDABI)*, 25-26 Oct. 2022, pp. 423-427, doi: 10.1109/icdabi56818.2022.10041655.

Wagner, D., Vollmar, G. and Wagner, H.-T. (2014), "The impact of information technology on knowledge creation", *Journal of Enterprise Information Management*, Vol. 27 No. 1, pp. 31-44, doi: 10.1108/JEIM-09-2012-0063.

Wang, C., Liu, T., Zhu, Y., Wang, H., Wang, X. and Zhao, S. (2023), "The influence of consumer perception on purchase intention: evidence from cross-border E-commerce platforms", *Heliyon*, Vol. 9 No. 11, e21617, doi: 10.1016/j.heliyon.2023.e21617.

Wei, Y., Syahrivar, J. and Simay, A.E. (2025), "Unveiling the influence of anthropomorphic chatbots on consumer behavioral intentions: evidence from China and Indonesia", *Journal of Research in Interactive Marketing*, Vol. 19 No. 1, pp. 132-157, doi: 10.1108/JRIM-09-2023-0295.

Wu, Y. and Huang, H. (2023), "Influence of perceived value on consumers' continuous purchase intention in live-streaming E-commerce—mediated by consumer trust", *Sustainability*, Vol. 15 No. 5, p. 4432, doi: 10.3390/su15054432.

Wu, Y.-Y., Batool, H. and Yang, Y.-J. (2024), "Relationship between the characteristics of e-commerce live streaming and purchase intentions: moderating effect of hedonistic shopping value", *Emerging Science Journal*, Vol. 8 No. 3, pp. 1097-1117, doi: 10.28991/ESJ-2024-08-03-018.

Xia, Z. and Shannon, R. (2025), "Navigating the digital frontier: exploring the dynamics of customer–brand relationships through AI chatbots", *Sustainability*, Vol. 17 No. 5, 2173, available at: https://www.mdpi.com/2071-1050/17/5/2173

Yang, J. and Lin, Z. (2024), "From screen to reality: how AR drives consumer engagement and purchase intention", *Journal of Digital Economy*, Vol. 3, pp. 37-46, doi: 10.1016/j.jdec.2024.07.001.

Yeo, S.F., Tan, C.L., Leong, I.Y.C., Palmucci, D.N. and Then, Y.J. (2023), "Supplements purchase intention: young consumer's perspective", *British Food Journal*, Vol. 125 No. 7, pp. 2610-2627, doi: 10.1108/BFJ-09-2022-0818.

Yin, X., Wang, H., Xia, Q. and Gu, Q. (2019), "How social interaction affects purchase intention in social commerce: a cultural perspective", *Sustainability*, Vol. 11 No. 8, 2423, doi: 10.3390/su11082423.

Yu, F. and Zheng, R. (2022), "The effects of perceived luxury value on customer engagement and purchase intention in live streaming shopping", *Asia Pacific Journal of Marketing and Logistics*, Vol. 34 No. 6, pp. 1303-1323, doi: 10.1108/APJML-08-2021-0564.

Zhang, H., Lu, Y., Gupta, S. and Zhao, L. (2014), "What motivates customers to participate in social commerce? The impact of technological environments and virtual customer experiences", *Information and Management*, Vol. 51 No. 8, pp. 1017-1030, doi: 10.1016/j.im.2014.07.005.

Zheng, R., Li, Z. and Na, S. (2022), "How customer engagement in the live-streaming affects purchase intention and customer acquisition, E-tailer's perspective", *Journal of Retailing and Consumer Services*, Vol. 68, 103015, doi: 10.1016/j.jretconser.2022.103015.

Zhou, Y., Li, H. and Yin, P. (2025), "Leveraging platform-based technologies to mitigate product returns in E-commerce: an affordance actualization perspective", *Industrial Management and Data Systems*, Vol. 125 No. 4, pp. 1247-1278, doi: 10.1108/IMDS-05-2024-0440.

Zhu, Y., Zhang, R., Zou, Y. and Jin, D. (2023), "Investigating customers' responses to artificial intelligence chatbots in online travel agencies: the moderating role of product familiarity", *Journal of Hospitality and Tourism Technology*, Vol. 14 No. 2, pp. 208-224, doi: 10.1108/JHTT-02-2022-0041.

Further reading

Kok Wah, J.N. (2023), "Assumptions for structure equation modeling (SEM), normality of data distribution analysis and model fit measures", *Journal of Clinical Epidemiology and Toxicology*, Vol. 4 No. 2, pp. 1-5, doi: 10.47363/JCET/2023(4)135.

Corresponding author

Nisha Jayasuriya can be contacted at: nisha.j@sliit.lk