

Perceived experiential value and continued use intention of e-retail chatbots

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Abstract

Purpose – In the quest to build a sense of human contact, e-retailers are increasingly depending on the scalability of chatbots to promote assistive dialogue during online shopping. Not much is known about the experiential value of customer interaction. This research proposes and evaluates a conceptual model for understanding the value perceptions emanating from the experiences of fashion shoppers utilising e-retail chatbots.

Design/methodology/approach – Data were collected using an online survey administered to 460 online panellists. Structural equation modelling was used to test the proposed research model.

Findings – Continued chatbot use intentions (CUIs) are influenced positively by perceived hedonic and utilitarian experiential value. Perceived social experiential value had a negative effect on shoppers' continued intention to use the chatbot. Both perceived chatbot anthropomorphism and perceived chatbot intelligence positively and significantly affect shoppers' experiential value while perceived chatbot risk yields a significantly negative effect.

Social implications – By using conversational artificial intelligence chatbots, engagement at e-retail stores can be driven based on the user data and made more interactive.

Originality/value – The study introduces an e-retail chatbot model which asserts the power of selected chatbot attributes as catalysts of shoppers' experiential value. Cumulatively, the model is a first-step approach providing a novel and balanced (both positive attributes and negative risks) view of chatbot continued use intentions.

Keywords Perceived experiential value, Perceived chatbot anthropomorphism, Perceived chatbot intelligence, Perceived chatbot risk, Electronic retailing, Continued chatbot use intention

Paper type Research paper

1. Introduction

According to [Chen et al. \(2021\)](#), p. 1512), the rapid evolution of artificial intelligence (AI) has “re-defined the customer experience” and created huge opportunities for companies to easily interact with customers. At the peak of the coronavirus disease 2019 (COVID-19) pandemic when human sales agents were confined and unable to perform their function in the



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brick-and-mortar environment, chatbots emerged as a viable scalable solution for retailers (De Cicco *et al.*, 2020). Subsequently, a report by the [Business Insider Report \(2019\)](#) projected extensive global growth of the chatbot market size from 2.6 billion US Dollars at the end of 2019 to 9.4 billion US Dollars by 2024.

Chatbot is a portmanteau term for a chat robot, defined as “a robot for establishing communication with humans utilising AI technology via an in-built computer program” (Ramachandran, 2019, p. 1). The chatbot mimics human conversation using natural language capabilities, commonly acting as a “virtual assistant on the internet” (Fryer *et al.*, 2019, p. 281). Thus, chatbots are increasingly replacing human service agents on websites, social media and messaging services, acting as the frontier of customer service.

In seeking to map the future of research in electronic retailing, Bansal *et al.* (2023, p. 310) indicate that research is scarce, “particularly with emerging industry trends such as augmented reality (AR), machine learning, m-commerce and chatbots”. Notably, previous studies investigated the usability of chatbot technology (Chen *et al.*, 2021; Chopra, 2019; De Cicco *et al.*, 2020), yet Aslam (2023) points out the need for more empirical approaches that “provide a complete understanding of customer experiences and expectations of chatbots”. This is important since the success of chatbots as conversational technologies will only be realised if adoption rates match the openness of customers towards using the technology. Thus, Chen *et al.* (2021) and Hu *et al.* (2018) simultaneously called for expansive research to help ascertain those essential constructs that contribute to building a chatbot value proposition from a customer perspective.

One caveat in the existing literature is that research on AI technologies (such as chatbots) is predominantly embedded in technology acceptance theories, such as the technology acceptance model (TAM) and the unified theory of adoption and use of technology (UTAUT2) (see, for example, Kasilingam, 2020; Chen *et al.*, 2021), which only focus on technological features but ignore experiential determinants. The limitations of a technology-based perspective are that it ignores the role of innate psychological drivers in the determination of shopper behaviour. In fact, Cabiddu *et al.* (2022) caution against the use of traditional technology acceptance theories to explain customer responses to chatbots since AI technologies differ fundamentally from other information technology innovations owing to the ability to mimic human sales assistants.

This study adds to the path taken by recent scholars (Li and Wang, 2023) on the importance of understanding how human–chatbot interactions may facilitate a valuable customer experience and thereby accentuate the business potential of chatbot re-usage. As per Mathwick *et al.* (2001), experiential value refers to customer perceptions of products or services through direct use or direct observation, of which existing research on customer experiential value of chatbots is very sparse and fragmented as it is often studied from multidisciplinary lenses. It appears that pre-eminent researchers focus mainly on utilitarian and hedonic aspects (see, for example, Cheng and Jiang, 2020; Kasilingam, 2020; Chen *et al.*, 2021), which lend credence to chatbot content and form, alone, to the neglect of the social component of chatbot service experience. To address the research gaps, these questions were posited:

- (1) What experiential value dimensions influence fashion shoppers’ interaction with chatbots?
- (2) What role do chatbot humanistic elements (perceived anthropomorphism and intelligence) play in explaining chatbot experience value?
- (3) How does shopper perception of risk influence chatbot experience value?
- (4) What is the effect of total shopper experiential value on continued chatbot usage intention?

The next section presents the study's theoretical framework, literature, methodology, results and discussion of findings. The theoretical and managerial implications of the study are presented before citing the study limitations and concluding remarks.

2. Theoretical framework and literature review

To better understand how shoppers perceive interactions with chatbots, we draw on the stimulus-organism (SOR) theory of [Mehrabian and Russell \(1974\)](#). This approach captures the complex interplay between external factors (stimuli) and internal psychological states (organism), offering a nuanced understanding of how chatbots influence consumer intentions and behaviour (response) holistically. Thus, the SOR provides detailed and comprehensive theoretical lenses for understanding how and why shoppers continue engaging with chatbots, particularly in the emotionally driven and experience-rich environment of fashion retailing.

A “stimulus” is defined as the unique sensory attributes of the chatbot that arouse retail shoppers in some way. The “organism” includes the cognitive and affective perceptions of individuals of their experience during consumption. The third element, “response”, has been described as the behavioural consequences or outcomes of individuals to the environment ([Donovan and Rossiter, 1982](#), p. 37). A positive response may include the willingness of shoppers to stay, explore or affiliate, while a negative response may refer to their intention to discontinue the use of technology. In this research, continued chatbot usage intention is a desirable behavioural reaction.

2.1 Stimulus one: perceived chatbot risk

[Cheng and Jiang \(2020\)](#) infer that perceived risk is both multi-faceted and situation-specific, implying that each risk attribute is based on the usage situation. For instance, shoppers might consider chatbot messaging irritating, as they worry about possibly losing time engaging with chatbots, rather than concluding shopping. On the other hand, chatbot conversations and information requests might breed anxiety about shoppers' personal details and billing information being exposed to domains with harmful intent to misuse the information. Thus, chatbot benefits are sometimes dampened by shoppers' concerns about the amount of collected personal information, which makes individuals less likely to use the service ([Choe et al., 2021](#)). In this research, perceived chatbot risk comprises both time and privacy information risk.

[Fan et al. \(2022\)](#) underscores the importance of trust in facilitating customer engagement. More specifically, [Fan et al. \(2022\)](#) suggest that consumer misgivings about the legitimacy of an electronic retailer increase the risk factor resulting from their concerns about the retailer's trustworthiness. If customers perceive higher levels of risk associated with using e-retailers' chatbots, they may hesitate to engage. Moreover, when customers experience some concern about the privacy of their information and online shopping activities, this might induce shopper anxiety, which would most likely diminish chatbot usage inclinations. Interestingly, findings by [Cheng and Jiang \(2020\)](#) confirm that perceived chatbot risk was a key determinant preventing customer satisfaction and could decrease the continued usage of chatbots. Based on this, the research hypothesises that:

Perceived chatbot risk has a significant negative influence on the utilitarian experiential value (H1), hedonic experiential value (H2) and social experiential value (H3) of e-retail fashion shopping.

2.1.1 Stimulus two: perceived chatbot anthropomorphism.

Anthropomorphism involves “endowing humanity to non-human objects” ([Epley et al., 2007](#), p. 865) to make them easily adaptable to human–social interactions. Anthropomorphism extends to self-driving cars ([Waytz et al., 2010](#)), voice-activated virtual assistants and chatbots ([Crolic et al., 2022](#)).

Crolic *et al.* (2022, p. 133) define chatbot anthropomorphism as “the extent to which the chatbot is endowed with humanlike qualities such as a name or avatar”. In attempting to position conversational chatbots as customer-service platforms, developers would make significant efforts to make chatbots mimic human-to-human conversations (Crolic *et al.*, 2022) through the use of realistic and engaging natural language interfaces in a dialogue format.

Han (2021) and Yen and Chiang (2021) suggest that inducing anthropomorphic features is linked to improved marketing outcomes. Anthropomorphic bots can make online shopping experiences enjoyable, thereby increasing purchase intentions (Yen and Chiang, 2021). However, Liu and Tao (2022), report mixed results on the impact of anthropomorphism on acceptance intention of smart health services. Considering that chatbots pose a minimal threat in the broader constructions of the robot community, this study anticipates that the chatbot characteristic of anthropomorphism will aid the development of positive shopper perceptions.

Perceived chatbot anthropomorphism has a significant and positive influence on the utilitarian experiential value (H4), hedonic experiential value (H5) and social experiential value (H6) of e-retail fashion shopping.

2.1.2 Stimulus three: perceived chatbot intelligence. Scholars view robotic agents as intelligent based on their apparent ability to process a reply to natural languages (Moussawi *et al.*, 2021). This is linked to the common sense ability, multilingualism and/or pronunciation fluency of voice-based robots. It is possible to have an emotion-evoked conversation with chatbots owing to their ability to understand commands, complete requested tasks quickly and thereafter communicate effectively while offering personalised content to engage shoppers, deeply. In a later study, Moussawi *et al.* (2021) found that perceptions of intelligence make users of intelligence agents perceive them to be useful. Moreover, since chatbots can provide personalised recommendations and findings to customers, they could be deemed as intelligent. This contributes positively towards shoppers’ experiential value. Thus, it is hypothesised that:

Perceived chatbot intelligence has a significant and positive influence on the utilitarian experiential value (H7), hedonic experiential value (H8) and social experiential value (H9) of e-retail fashion shopping.

2.1.3 Organism: chatbot experiential value. Whereas Babin *et al.* (1994) determined that internal states can be divided into hedonic and utilitarian, Verhoef *et al.* (2009) determined that the totality of customer experiences is symbolised by the cognitive, affective, emotional, social and physical responses of customers towards a brand, product or process. Thus, while a comprehensive approach to understanding value perception requires considering both utilitarian and hedonic aspects, “chatbots represent a par excellence tool for establishing social relationships and bonds with customers” (Silva *et al.*, 2022, p. 286).

Utilitarian value relates to one’s ability to complete their specified mission, e.g. a shopping task. On the other hand, affective experiential value is more personal and subjective (than utilitarian) since it derives from the multi-sensory and emotional aspects of the shopper’s experience. Consumers seek fun, enjoyment and fantasy in shopping experiences (Babin *et al.*, 1994; Holbrook and Hirschman, 1982). Similarly, Brandtzaeg and Følstad (2017) showed that chatbots fulfil human needs for entertainment, killing time and seeking emotional support. Thirdly, social experiential value is important in e-retail shopping. This is consistent with Araujo’s (2018) intimation that users adopt agency bots because “of the feeling that another being (living or synthetic) also exists in the world and appears to react to you”. In the same vein, Brandtzaeg and Følstad (2017, p. 381) noted that people used “small-talk orientated chatbots such as Jessie Humani” for social interaction. In this study, we integrate utilitarian, hedonic and social experiential value as the consummate organismic variable.

2.1.4 Response: Chatbot continued usage intentions. The response element in the SOR theory is about behavioural reactions and intentions elicited from marketer-induced stimuli and internal states of individuals (Donovan and Rossiter, 1982). In this study, the response relates to shoppers' intention to continue using chatbots when shopping for fashion online (Song and Kim, 2021).

The problematisation followed in this research is informed by Vayghan *et al.* (2023) who confirm that perceived value exerts a positive influence on customer behaviour. Whereas Qu *et al.* (2023) found that utilitarian and hedonic values are the only determining factors towards user stickiness of social commerce, related submissions in consumer psychology demonstrate that consumers are motivated by utilitarian, hedonic and social benefits when shopping online (Vayghan *et al.*, 2023).

Since Chen *et al.* (2021) determined that extrinsic and intrinsic values of online customer experience are enhanced by chatbot adoption, this paper submits that the tripartite dimensionality of chatbot value is embodied in the totality of utilitarian, hedonic and social value derived from online shopping experiences. Akin to Cheng and Jiang (2020), utilitarian value is derived from chatbot efficiency in searching for products and providing real-time resolutions. Thus, shoppers are likely to be inclined to return to the online retail store to be assisted again. The same would be expected of hedonic value, which captures the emotional or sensory pleasure consumers derive from using a product or service (Vayghan *et al.*, 2023). Chatbots sometimes incorporate playful interaction that evokes positive emotions. On the other hand, social value captures the benefits of social interactions emanating from chatbot usage yielding shopping companionship and social support (Aslam *et al.*, 2022; Vayghan *et al.*, 2023). Thus, it is reasonable to assume that the derived experiential value will positively influence behavioural intention towards chatbot use for future fashion shopping assistance. It is hypothesised that:

- H10. Shoppers' utilitarian experiential value has a significant and positive effect on chatbot continued use intentions.
- H11. Shoppers' hedonic experiential value has a significant and positive effect on chatbot continued use intentions.
- H12. Shoppers' social experiential value has a significant and positive effect on chatbot continued use intentions.

3. Methodology

3.1 Sample and data collection

Data were collected from a consumer panel of South African online shoppers using a self-administered e-survey. Focus on a single market simplified logistical aspects such as language consistency, entry and regulatory compliance during data collection. Panellists were invited to participate in the e-survey via a hyperlink. The selection criteria of being aged 18 years and above and having completed a fashion shopping task with the assistance of an e-retail chatbot within three months from the survey date was a pre-requisite for e-survey completion. The standard chatbot interaction duration is noted as below 2 min. A total of 460 usable responses were received from fashion shoppers who confirmed getting assistance from a chatbot service to complete their fashion shopping. As per Table 1, the sample consisted of 44.1% male and 55.9% female respondents. Most respondents were below 40 years of age (70%). Most were holders of a high school certificate (33.9%), post-high school diploma/certificate (29.3%) or bachelor's degree (30.0%). Regarding usage, 25.3% of the sample indicated that they use chatbots at least once a week while shopping, 22.7% at least once in two weeks and 27.3% at least once a month. Data were normally distributed, with skewness and kurtosis ranging between ± 1 , indicating that the responses were closely centred around the arithmetic mean signalling limited response divergence.

Table 1.
Demographic
characteristics of the
sample

Demographics		Frequency	Percentage %
Gender	Male	203	44.1
	Female	257	55.9
Age	18–24	113	24.6
	25–29	145	31.6
	30–40	76	16.6
	41–59	56	12.2
	60+	69	15.0
Education	Below High School	1	0.2
	High School	154	33.9
	Diploma/Certificate	133	29.3
	Bachelor's Degree	136	30.0
	Postgraduate qualification	30	6.6
Use of retailers' chatbots during fashion shopping	More than once a week	64	14.1
	At least once a week	115	25.3
	At least once in two weeks	103	22.7
	At least once a month	124	27.3
	Less than once a month	48	10.6

Source(s): Table by authors

3.2 Measurement

In developing the survey instrument, multi-item scales were adapted from the literature. Perceived chatbot risk was measured using four items adapted from McLean and Osei-Frimpong, while the five items used to measure perceived chatbot anthropomorphism were adapted from Waytz *et al.* (2010). Perceived chatbot intelligence was measured using four items adapted from Moussawi *et al.* (2021). Shopper's utilitarian and hedonic experiential value were measured using four and six items, respectively, adapted from Hu *et al.* (2018) while shoppers' social experiential value was measured using five items adapted from Cheng and Jiang (2020). Continued chatbot use intention (CUI) was measured using four items adapted from Pillai and Sivathanu (2020). All the scale items were anchored along a seven-point Likert scale with endpoints ranging from 1 (very strongly disagree) to 7 (very strongly agree).

3.3 Data analysis

The Statistical Analysis System (SAS) version of SAS 9.4 was used to analyse the data. First, Harman's single-factor test confirmed the absence of common method bias in the data. The unrotated factor solution showed that the single factor accounted for 43% of the explained variance, which is below the 50% threshold. The two-step approach to data analysis were performed using the structural equation modelling (SEM) technique as recommended by Anderson and Gerbing (1998) was applied since it provides a more robust and comprehensive assessment of the measurement model, reliability, construct validity and hypotheses testing, when compared to the one-step approach.

4. Results

4.1 Assessment of the measurement model

Table 2 shows the goodness-of-fit for the measurement model.

The Chi-square value of 2.283 (less than 3.0), as along with the Normed Fit Index (NFI) of 0.934, the CFI of 0.962 and the Root Mean Square Error of Approximation (RMSEA) of 0.053, indicates a satisfactory fit of the measurement model for this research.

The confirmation factor analysis (CFA) was applied in assessing the measurement model as per [Table 3](#).

The CFA procedure enabled the evaluation of the item loadings, as per [Table 3](#). The assessment of construct validity proceeds in two sequential steps: (1) convergent validity and (2) discriminant validity. To assess convergent validity, we implemented the three conditions recommended by [Fornell and Larcker \(1981\)](#), namely (1) all the CFA loadings for all the measurement items are significant and exceed 0.70; (2) each construct composite reliability exceeds 0.80; and (3) each construct's average variance estimate exceeds 0.50. Our study met the conditions for convergent validity, as shown in [Table 3](#) since the composite reliability (ranging from 0.906 to 0.956) as well as the variance extracted (ranging from 0.680 to 0.812) estimates depicted in [Table 3](#) are within the acceptable range.

[Table 4](#) illustrates the results of the discriminant validity, which signals the theoretic uniqueness of each study construct.

We employ the criterion recommended by [Fornell and Larcker \(1981\)](#), which states the recommendation that the square root of the average variance extracted (AVE) estimates for each construct should exceed the correlation of that construct and any other constructs in the matrix. [Table 4](#) validates that our study met these conditions for discriminant validity.

4.2 Hypotheses testing and structural model

A review of [Table 2](#) also depicts that the structural model reported satisfactory goodness-of-fit (Chi-square value of 2.610 is less than 3.0; NFI = 0.923; CFI = 0.951; RMSEA = 0.059; less than 0.10). These results are commonly accepted levels recommended by [Chau and Hu \(2001\)](#).

We use SEM for path model analysis. The structural model and/or hypotheses test results in [Table 5](#) depict (1) the explanatory power of each path in our model, (2) the R-square value of each endogenous variable in our model and (3) the significance of each path in our model.

[Figure 1](#) shows the explanatory power and significance of each path in our research model.

The SEM output in [Figure 1](#) indicates that shoppers' utilitarian, hedonic and social experiential values explain 57% of continued CUI. Perceived chatbot risk, perceived chatbot anthropomorphism and perceived chatbot intelligence together explain 83% of utilitarian experiential value; 76% of shoppers' hedonic experiential value and 77% of shoppers' perceived social experiential value derived from using chatbots during fashion shopping encounters on e-retailers' platforms.

As expected, the effects of perceived chatbot risk were found to be negative when observed on shoppers' utilitarian experiential value ($\beta = -0.09; p < 0.01$), hedonic experiential value ($\beta = -0.13; p < 0.01$) and social experiential value ($\beta = -0.09; p < 0.01$), yet the observed effect remained significant on all accounts. Thus, hypotheses H1, H2 and H3 are supported.

Perceived chatbot anthropomorphism yielded positive and significant effects on shoppers' utilitarian ($\beta = 0.14; p < 0.01$), hedonic ($\beta = 0.28; p < 0.01$) and social experiential value ($\beta = 0.34; p < 0.01$). Accordingly, hypotheses H4, H5 and H6 are supported.

Goodness-of-fit	Values on the measurement model	Values on the path model	Recommended thresholds
Chi-square/degree of freedom	2.283	2.610	≤3.000
Normed Fit Index (NFI)	0.934	0.923	≥0.900
Comparative Fit Index (CFI)	0.962	0.951	≥0.900
Root Mean Square of Approximation (RMSEA)	0.053	0.059	≤0.100

Source(s): Table by the authors

Table 2.
Goodness-of-fit of the two models (measurement and path model)

Item	Factor loading	Composite reliability	AVE
Chatbot use intention (CUI)		0.939	0.795
CUI1	0.863		
CUI2	0.922		
CUI3	0.896		
CUI4	0.885		
Risk (PR)		0.913	0.723
PR1	0.828		
PR2	0.878		
PR3	0.834		
PR4	0.861		
Utilitarian (Uev)		0.926	0.758
Uev1	0.900		
Uev2	0.883		
Uev3	0.852		
Uev4	0.846		
Hedonic (Hev)		0.951	0.765
Hev1	0.866		
Hev2	0.883		
Hev3	0.833		
Hev4	0.897		
Hev5	0.881		
Hev6	0.886		
Social (Sev)		0.956	0.812
Sev1	0.891		
Sev2	0.890		
Sev3	0.919		
Sev4	0.893		
Sev5	0.911		
Anthropomorphism (PA)		0.914	0.680
PA1	0.815		
PA2	0.786		
PA3	0.797		
PA4	0.857		
PA5	0.865		
Intelligence (PI)		0.906	0.708
PI1	0.8038		
PI2	0.8614		
PI3	0.8719		
PI4	0.8261		

Table 3. Measurement model
Note(s): All loadings in Table 2 are significant at $p < 0.01$
Source(s): Table by the authors

Designers of chatbot should include features and interactive, humanlike, intriguing and engaging functionalities on the chatbots to enrich the fashion shopping experience.

Table 5 shows the effect of perceived chatbot intelligence on shoppers' utilitarian ($\beta = 0.84$; $p < 0.01$), hedonic ($\beta = 0.70$; $p < 0.01$) and social experiential value ($\beta = 0.66$; $p < 0.01$) is significant at the two-tailed level. Accordingly, hypotheses H7, H8 and H9 are supported.

Hypothesis H10 and H11 are both supported by the positive reported effect of shoppers' utilitarian ($\beta = 0.50$; $p < 0.01$) and hedonic ($\beta = 0.40$; $p < 0.01$) experiential value dimensions on continued CUI. This denotes the direct effect of utilitarianism and hedonic experiences on continued intention to use chatbots to support the purchase of fashion merchandise. Surprisingly, shoppers' social experiential value reported a negative effect on continued CUI ($\beta = -0.13$). Thus, hypothesis H12 is rejected.

	CU	PR	Uev	Hev	Sev	PA	PI
CU	0.892						
PR	-0.014	0.851					
Uev	0.750	0.004	0.871				
Hev	0.724	-0.000	0.865	0.875			
Sev	0.593	0.043	0.795	0.824	0.901		
PA	0.378	0.282	0.537	0.594	0.645	0.825	
PI	0.616	0.054	0.855	0.766	0.787	0.510	0.841

Note(s): The diagonal values represent the square root of the average variance extracted (AVE) of the specific construct. Construct legend: CU: Continued Chatbot Use Intention; PR: Perceived Chatbot Risk; Uev: Shoppers' Utilitarian Experience; Hev: Shoppers' Hedonic Experience; Sev: Shoppers' Social Experience; PA: Perceived Chatbot Anthropomorphism; PI: Perceived Chatbot Intelligence

Source(s): Table by the authors

Table 4.
Discriminant validity

Hypotheses	Paths coefficient	p-value	Accept/reject hypothesis
H1: PR → Shoppers' Uev	-0.09	p < 0.01	Accept
H2: PR → Shoppers' Hev	-0.13	p < 0.01	Accept
H3: PR → Shoppers' Sev	-0.09	p < 0.01	Accept
H4: PA → Shoppers' Uev	0.14	p < 0.01	Accept
H5: PA → Shoppers' Hev	0.28	p < 0.01	Accept
H6: PA → Shoppers' Sev	0.34	p < 0.01	Accept
H7: PI → Shoppers' Uev	0.84	p < 0.01	Accept
H8: PI → Shoppers' Hev	0.70	p < 0.01	Accept
H9: PI → Shoppers' Sev	0.66	p < 0.01	Accept
H10: Sev → CU	0.50	p < 0.01	Accept
H11: Shoppers' Hev → CU	0.40	p < 0.01	Accept
H12: Shoppers' Sev → CU	-0.13	p < 0.01	Reject

Source(s): Table by the authors

Table 5.
Explanatory power
and path significance

5. Discussion of findings

Informed by the SOR theory, this study tested a fashion e-retail chatbot model that widens and deepens understanding of how experiential value contributes to shoppers' intention to continue using chatbot services in online fashion shopping. It offers a valuable framework for understanding shopper expectations and intentions in the context of e-retail chatbots. Thus, this study provides a structured approach to assessing the influence of selected bot-based stimuli on shoppers' perceptions of a valuable fashion shopping scenario. Furthermore, it expands the scope of continued use intention within the context of e-retail chatbot usage, an area that is scantily understood.

The negative influence of perceived chatbot risk on shoppers' perceived experiential value denotes the diminishing impact of e-retail shopping risks on customer experience value from the chatbot. Of note, these risks arise from concerns relating to practices that expose customers' sensitive, private and personal information to unauthorised use and/or users. These findings are consistent with Choe *et al.* (2021) noting that perceived risk has a significant and negative influence on the use of products and services by individuals. Moreover, perceived risk has been found to have a negative and significant effect on both customer satisfaction and continued chatbot usage intention (Cheng and Jiang, 2020).

The findings of this research validate the connection between anthropomorphism and improved marketing outcomes. The study found that chatbot anthropomorphism yields the

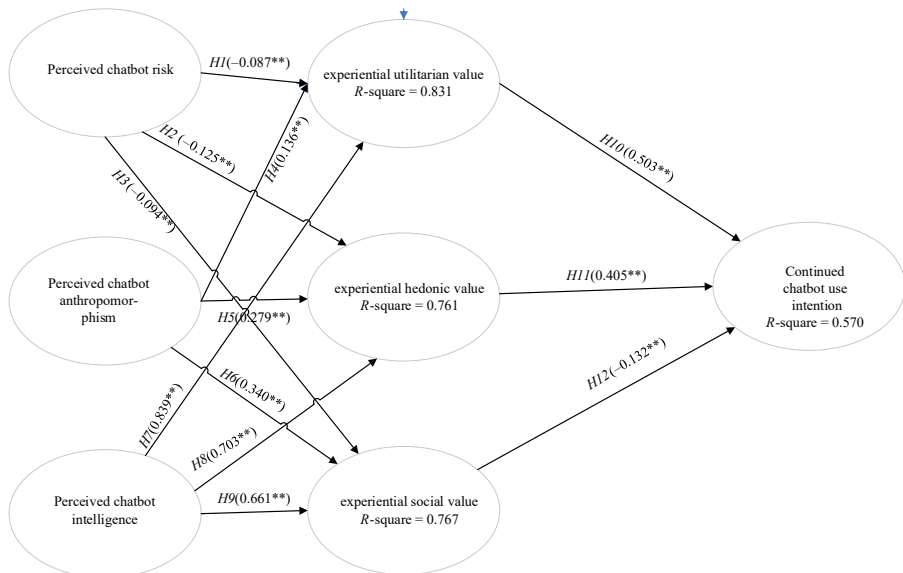


Figure 1.
SAS-based SEM
analysis with path
coefficients and
R-square

Note(s): **indicate: $p < 0.01$; parentheses inside the constructs indicate *R*-square value

Source(s): Figure by authors

largest significant effect on shoppers' social experience and the least effect on shoppers' utilitarian experiential value. The high impact of social influence may be because shoppers find it quite remarkable that empathy, sociableness and communication ability could be attributed to a non-human entity by evoking a presence which makes chatbots appear and feel social and more human-like. Furthermore, the interactive nature of chatbots mirrors the social aspects of in-store shopping, yielding perceptions of a valuable shopping experience. Likewise, the effects of anthropomorphism on hedonic experience are also consistent with assertions by Han (2021) and Yen and Chiang (2021) that features and functions of anthropomorphism make online shopping behaviours and experiences more fun, exciting and enjoyable.

Findings on perceived chatbot intelligence show a positive influence on customer experience. They confirm that users tend to be inclined towards technology interactions that are characterised by competence, personalised outcomes and knowledge. The findings show that perceived chatbot intelligence engages online shoppers at a deeper level and enhances interactions. This is a result of intelligent chatbots having the capacity to understand and interpret customers' requests for personalised shopping. By delivering personalised recommendations, intelligent chatbots foster enjoyment and enrich shoppers' emotional states, hence the significant effect on hedonic experience in particular. The significant effects on social experience may be explained by the fact that intelligent chatbots fulfil utilitarian needs by offering accurate replies and the right assistance. Furthermore, the positive effect on social experience can be explained by the fact that intelligent chatbots boost interaction and quality of support.

The findings in this study showing a positive effect of the utilitarian and hedonic experience of shoppers on customer decision-making are in line with seminal arguments by Holbrook and Hirschman (1982), advocating an experiential view of consumer behaviour, while McLean and Osei-Frimpong (2019) showed that social benefits have a positive and

significant influence on the intention to use technology. Social benefits enrich the experiential social value users experience during their interactions with chatbots, which include social support, companionship and a sense of belongingness facilitated by chatbots (Brandtzaeg and Følstad, 2017).

6. Paper contribution

6.1 Theoretical contribution

This study makes four contributions to the literature. First, it answers recent calls for research on customer experience with AI-powered technologies, particularly chatbots (see Ling *et al.*, 2021; Mariani *et al.*, 2022). Using the SOR theory, this study inaugurates and empirically tests a comprehensive e-retail chatbot model that exhibits 57% explanatory power in continued CUIs. This robust explanatory capability signifies advancement in a previously neglected theoretical area.

Second, by empirically demonstrating the multi-faceted nature of experiential value derived from chatbot interactions, the study deepens the comprehensiveness of a valuable online fashion shopping experience, thereby shedding light on the ongoing debate surrounding the meaningful contribution of AI technologies, termed “value-in-use”. It is proven that chatbots not only fulfil the utilitarian function, such as providing quick assistance and information retrieval but also deliver hedonic experiences, comprising emotional pleasure together with social support while simulating human experiences. This nuanced understanding of the value-add of chatbots contributes to broader discussions on the efficacy and impact of AI technologies on user experiences.

Third, this study demonstrates the importance of perceived chatbot risk, perceived chatbot anthropomorphism and perceived intelligence in creating customer value. The findings of this research underscore the negative effects of perceived risk of chatbot use on utilitarian, hedonic and social experiential value. Likewise, the elements shoppers perceive to be in-built traits of chatbots such as intelligence and anthropomorphism were found to deliver substantial effects on shoppers’ perceptions of what they consider as the derived value from chatbot usage.

Finally, this study is, to the authors’ knowledge, one of the first to expound on the relative influence of chatbot-related stimuli on perceived experiential value. The findings enrich our understanding of the practical utility derived from chatbot interactions while elucidating the role of hedonic value in cultivating shoppers’ motivation to continue using chatbots. The unsupported impact of social experiential value on continued usage intention challenges conventional thinking, prompting further exploration into the complex dynamics of social experiences with chatbots. It may be that despite efforts to stimulate humanlike interactions, users ultimately consider such interactions as lacking authenticity owing to their scripted and predictable responses. This finding prompts the need for further research into the differences between rule-based and non-rule-based intelligence agents in e-retail settings.

6.2 Managerial contribution

With the deployment of chatbots increasingly growing in the retail sector (De Cicco *et al.*, 2020), this study shows that there are good prospects for retail managers to generate significant customer experiential value, including utilitarian, hedonic and social value by using AI bot technology. Retailers can, for example, ensure that at the end of an interaction, customers have an opportunity to complete a brief feedback survey about the chatbot use experience as customer feedback can be used to inform the design and re-design of vital chatbot features.

For risk mitigation relating to the erosion of customer data privacy, e-retail store managers should invest in information security tools. Furthermore, transparency is an invaluable principle when collecting customer data and determining how it will be used.

Considering that the sample in this study included customers who were aware that they were interacting with a chatbot during their retail shopping experience, the study poses implications for the ongoing debate about disclosures (Mozafari *et al.*, 2022). Thus, *a priori* disclosure that customers are interacting with an AI-based chatbot (not a human agent) is recommended, not only from an ethical perspective but also because conscious shopper interactions with chatbots can still deliver utilitarian, hedonic and social experiential value.

The pronounced effects of perceived intelligence and anthropomorphism on the three-dimensional experiential value constructs in this research point to the urgent need to pay attention to chatbot features that are more “believable” by adding conversation feelers, humour and small-talk elements, which mirror human expression. e-Retailers and system developers could also adapt the chatbot experience to offer a humanistic shopping experience by including anthropomorphised and intelligent attributes such as multilingual suggestions for fashion merchandise styles, the capacity to curate fashion content using video tutorials as well as the ability to memorise customer sizes and preferences to supplement customer support.

7. Conclusion, limitations and future research

This study proposed and tested an e-retail chatbot model, which provides previously unexplored insights into a rich mix of positive trait-based (chatbot intelligence and anthropomorphism) as well as negative (chatbot risk) elements that drive sustained value and continued usage intentions of chatbots as support sales assistants during online fashion shopping. We believe that the contribution of our study is crucial for fashion retailers aiming to leverage chatbots not just as a novel feature but as a strategic tool for customer retention and loyalty. Understanding the correlation between perceived value and continued use can help retailers refine chatbot functionalities, improve customer perceptions and ultimately increase repeat business, ensuring that the investment in chatbot technology yields significant and sustained returns.

This study is not without limitations. First, the sample was predominantly youths aged between 18 and 29, limiting the applicability of the results to older cohorts. Future research should consider more balanced samples to enable age-group comparison analysis as age-related differences might drive continued use of retail chatbots. Second, the sample excludes customers with infrequent experience, i.e. shoppers who had used the chatbot and stopped within three months. Future research could focus on consumers who stopped making use of chatbots for fashion shopping to uncover barriers towards chatbot continued use intentions. Lastly, the model explains only 57% of the variance in continued CUIs. While this variance may be significant, future research should consider uncovering other stimuli not covered in this research, which may influence chatbot continued use intentions since this has been proven to be an outcome of multiple, value-based customer experiences. It is also encouraged to test the clinical validity of the model across different contexts, including service industries (e.g. pharmacy, banking etc.) and other countries with diverse digital, economic and cultural landscapes. Notwithstanding these limitations, the study provided an understanding of the power of customer–chatbot interactions.

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