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Do chatbots attract users? Exploring the drivers of consumer intention

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Abstract

Background: Chatbot become more popular, marketing research has paid enormous attention to chatbot and its impact on customer's intention.
Aims: This article aims to reveal the utilitarian motivations and communication style of the chatbot by highlighting the role of social presence and its impacts on user intent.
Methodology: In this study, by applying social presence theory, adding utilitarian motivation and communication style as explicative variables, a survey data of 200 users of chatbot was used. The theoretical model was tested and confirmed via structural equation modelling (SEM).
Findings: The results indicated that the utilitarian motivations, communication style and social presence of the chatbot are the main determinants of the intention to use this electronic channel. Theoretical and managerial implications as well as the limits and future directions of the study are discussed.
Conclusion: This study examines the impact of chatbots on consumer intent, highlighting the role of social presence and communication style. The results confirm that these factors positively influence user intentions.

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1. Introduction

Artificial Intelligence-based messaging solutions, namely conversational bots, represent one of the first stepping stones in order for companies to become faster, more efficient, and more capable of providing customers with relevant and personalized experiences. Indeed, chatbots can be perceived as the perfect illustration of the development and implementation of customer- centric artificial intelligence that mimics human behavior, which has a wide range of applications in various fields, such as education, healthcare, financial services, e-commerce (Toader et al., 2020).

Despite the continuous growth and wide popularity of chatbots, unfortunately, little is known about the motivational drivers of how and why consumers engage with chatbots (Dinh & Park, 2022).

To fill these gaps in the literature by revealing the underlying mechanism of chatbot adoption utilitarian motivation, we seek to attain resources and/or reduce of the risk.

The perceived presence of another social being, characterized by human warmth and personal touch, via a technological medium to reveal an underlying utilitarian motivation by highlighting the role of social presence should be considered (Biocca et al., 2003).

The few studies suggest that brand manager should enhance the humanness of chatbots, and has examined how identity cues (e.g., human name), visual cues (e.g., human figure), genders, and conversational cues (e.g., conversation skill) shape consumer attitudes and behaviors (Shumanov & Johnson, 2021). However, despite calls for further work to unpack how to calibrate the communication style used by chatbots to optimize customer experience (Bleier et al., 2019), a simple and more fundamental feature of consumer-chatbot service interactions has been relatively unexplored: the chatbot's communication style.

This paper aims to reveal underlying utilitarian motivation by highlighting the role of social presence and its impact on consumer intention and examine chatbot's communication style and its impact on consumer intention.

2. Literature review and Hypothesis

Chatbots are "natural language computer programs that simulate human language and interact with customers with the aid of a text-based dialog" (Zumstein & Hundertmark, 2017: 96-109).

In particular, contemporary customer service chatbots are still perceived as low-end AI systems that can learn and adapt only to a limited extent, and often in a mechanical manner (Huang & Rust, 2021). For many years, scholars and designers have sought to improve the human-likeness of chatbots (Roy & Naidoo, 2021). Research has shown that incorporating human characteristics into chatbots can enhance

users' positive experiences and foster social and emotional connectedness (Adam et al., 2021).

2.1. Social presence theory

Social presence theory, first articulated by Short, Williams and Christie (1976), provides a foundational framework for understanding how individuals perceive and interact with others through communication media. The theory posits that different media possess varying capacities to transmit social cues such as facial expressions, vocal inflection, eye contact, and body language and that this capacity directly influences the degree to which communicators feel psychologically connected or perceive each other as "real". Media that support rich, multi-channel cue transmission, like face-to-face interaction or high-definition video conferencing, are classified as high in social presence. These foster a stronger sense of intimacy, immediacy, and emotional engagement. Conversely, leaner media, such as email or text-based chat, which filter out nonverbal cues, are considered low in social presence and may lead to more impersonal, task-oriented, and potentially misinterpreted interactions.

The evolution of digital communication has profoundly expanded the relevance and application of social presence theory.

2.2. Utilitarian motivation

Consumers' utilitarian motivation refer to a goal-oriented, task-focused engagement in which individuals are primarily concerned with efficiency, effectiveness, and practical benefits when interacting with technology. In the context of chatbot services, utilitarian motivation is expected to increase consumers' intention to use these systems because chatbots are inherently *informative* (Cheng & Jiang, 2020) and *easy to use* (Pitardi & Marriott, 2021). By providing timely and accurate information, chatbots enable consumers to make well-informed decisions (Mimoun & Poncin, 2015), solve problems efficiently (Chung et al., 2020), and achieve their desired goals more effectively (Vimalkumar et al., 2021). These task-oriented benefits make chatbots particularly appealing to consumers with strong utilitarian needs, who value functional performance and goal achievement over hedonic or purely social interactions.

Empirical research further supports the positive role of utilitarian motivations in shaping behavioral intention. Studies have shown that *utilitarian aspects* such as perceived benefits (McLean & Osei-Frimpong, 2019), functional values (Mimoun & Poncin, 2015), and positive attitudes toward chatbots (Mishra et al., 2022) all significantly enhance consumers' intention to adopt and continue using chatbot services. Moreover, investigations examining consumer uptake of chatbot services consistently indicate that both *hedonic and utilitarian motivations* positively influence usage intention. Importantly, when

consumers perceive a chatbot as *useful for accomplishing specific tasks or solving problems*, they demonstrate a greater willingness to engage with it and integrate it into their decision-making processes.

Based on these theoretical and empirical insights, it can be argued that consumers' utilitarian motivation directly contributes to their intention to use chatbot services. This relationship is grounded in the practical utility and functional performance of chatbots, which align with users' goal-oriented needs.

Hence, we propose the following hypothesis:

H1: Consumers' utilitarian motivation positively influence the intention to use a chatbot service.

According to social presence theory, social presence refers "to the extent to which a medium allows individuals to feel as if others are psychologically present" (Short et al., 1976: 65). Technology with high social presence is typically described as warm, personal, sensitive, and sociable. Because these attributes are valued in interpersonal relationships, communication technologies that provide high social presence (e.g., video or voice calls) are preferred for tasks requiring interpersonal involvement (ibid). Conversely, technologies with low social presence (e.g., email or fax) tend to be favored for tasks centered on efficiency and requiring minimal interaction (Straub, 1994).

According to Biocca et al. (2003), social presence is frequently examined in the field of human–computer interaction because it helps explain how design cues can elicit favorable attitudinal or behavioral responses (De Cicco et al., 2020). Chatbots, by definition, are artificial agents that emulate human-like intelligence and can simulate human conversation (Crolic et al., 2022).

Consequently, social presence has become a central concept in research on human–chatbot interactions, as it reflects the "sense of being with another… whether a human or artificial intelligence" (Biocca et al., 2003: 456). Utilitarian motivation directs individuals toward instrumental outcomes such as financial gain, recognition, power, or physical attractiveness (Ryan & Deci, 2024). In such contexts, people may perceive relationship partners as instruments for achieving utilitarian objectives rather than as mutually supportive and respected counterparts (Deci & Ryan, 2014). Prior research indicates that in peer-to-peer accommodation environments, guests driven by utilitarian motives may view social interactions with hosts as a burden instead of a benefit (Geiger et al., 2018). Accordingly, we propose that when consumers prioritize utilitarian motivations, a chatbot's warmth or sociability offers limited value in fulfilling their functional goals. As a result, these consumers are unlikely to seek or appreciate a sense of social presence from chatbots.

H2: Consumers' utilitarian motivation positively influence chatbots' social presence.

The computer-as-social-actors (CASA) paradigm posits that even though individuals fully recognize chatbots as non-human entities, they often respond to them as they would to human agents when chatbots exhibit social cues and presence (Lee, 2004). This phenomenon occurs because users' mental schemas for chatbots align with their pre-existing schemas for human interaction, leading them to respond favorably and socially to chatbot behaviors (Aggarwal & McGill, 2007). In this context, social presence becomes a crucial determinant of how users perceive, evaluate, and interact with chatbots. Beyond cognitive processing, humans possess an inherent need for social relatedness, which motivates them to seek connections, recognition, and interaction even in mediated environments (Ryan & Deci, 2024). Chatbots that demonstrate warmth, empathy, sociability, and responsiveness can effectively satisfy this basic psychological need, facilitating the formation of perceived high-quality relationships between users and the technology (Canevello & Crocker, 2010). As a result, chatbots' social presence not only enhances engagement but also encourages users to accept and adopt chatbot-mediated services, as evidenced by prior research linking social presence positively to chatbot adoption and user intention (Oliveira, 2021).

From a goal-directed perspective, social presence theory suggests that utilitarian motivation defined as consumers' focus on efficiency and task-oriented engagement can amplify perceptions of a chatbot's competence and responsiveness. When a chatbot successfully addresses users' task-related needs, such as providing timely information or solving problems effectively, users tend to attribute intelligence, intentionality, and reliability to the system. These attributions, in turn, elevate perceptions of social presence, as the chatbot appears not only functional but also responsive and attentive to user requirements. Consequently, utilitarian motivation does not merely drive task completion but also fosters relational perceptions of the chatbot. On this theoretical basis, it can be argued that consumers' utilitarian motivation positively influences chatbots' social presence, creating a reinforcing loop in which functional effectiveness and perceived social capabilities jointly enhance users' engagement and adoption of chatbot services. Thus, we propose.

H3: A chatbot's social presence positively affects consumers' intentions to use the chatbot service

"Scholars recently began paying attention to the design of discourse and communication styles to enhance chatbot humanness" (Roy & Naidoo, 2021: 2). They point out that human-like language, interactive

messaging, conversational abilities, emotional support, and dialogue styles are all beneficial (Shumanov & Johnson, 2021). Crucially, communication style represents the most easily adjustable element in chatbot design (Thomaz et al., 2020). Since numerous communication-style dimensions can influence consumers' intentions, this study concentrates on two key onestask-oriented and social- oriented to conceptualize a chatbot's communication style.

2.3. Chatbot's communication style

Communication style is widely recognized as a significant topic in business research due to its strong association with key relational and performance outcomes, including sales performance (Williams & Spiro, 1985), intention to use chatbots (Keeling et al., 2010), brand trust (Gretry et al., 2017), and customer satisfaction (van Dolen et al., 2007). Early studies in interpersonal selling contexts demonstrated that adaptive and relational communication styles enhance persuasion effectiveness and long-term customer relationships. With the digital transformation of service environments, scholars have extended this line of inquiry to technology-mediated interactions, including online group communication, social media exchanges, and, more recently, AI-powered chatbots. In these contexts, communication style continues to shape users' cognitive evaluations and emotional responses.

More specifically, a social-oriented chatbot adopts a personalized and relational communication approach. It aims not only to provide information but also to address consumers' emotional and relational needs. Such a style is typically characterized by informal language, greetings, small talk, empathetic expressions, social praise, and well-wishing. By incorporating these relational cues, the chatbot simulates human-like interaction patterns, thereby fostering a sense of intimacy and interpersonal closeness. This type of communication goes beyond conveying warmth alone; it reinforces perceived attentiveness and relational engagement.

In contrast, a task-oriented communication style is more formal, structured, and efficiency-driven. It focuses primarily on task completion and problem resolution, maintaining a strictly goal-focused dialogue (Chattaraman et al., 2019). The emphasis is placed on clarity, precision, and speed, minimizing relational or emotional elements. From the customer's perspective, both communication styles can satisfy utilitarian needs by delivering product-related information and answering inquiries effectively. However, while the social-oriented style may additionally fulfill social and emotional needs, it may require more time and cognitive engagement. Consequently, the effectiveness of each style may depend on the interaction context and the user's underlying motivations.

Based on the above arguments, we propose that:

H4: Communication style positively affects consumers' intentions to use the chatbot service.

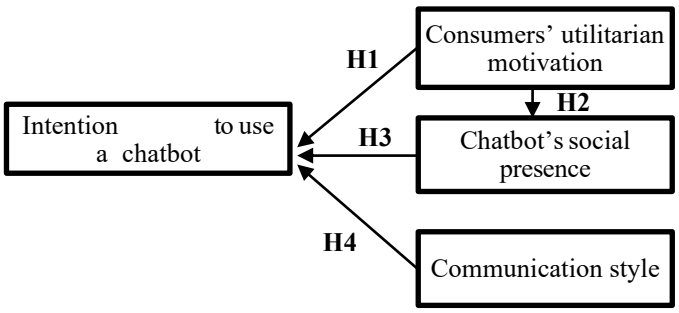


Figure 1. Conceptual model

3. Methodology

3.1. Data collection

In this study, a quantitative research approach was employed to systematically analyze empirical data collected through a structured questionnaire survey. The target population comprised individuals who actively use chatbots, ensuring that the responses would directly reflect user experiences and perceptions related to chatbot interactions. A convenience sampling method was adopted to select participants, allowing for efficient data collection from readily accessible respondents while maintaining diversity across key demographic characteristics. The final sample consisted of 200 respondents, with a balanced representation across age groups, gender, and educational levels. This distribution enhances the generalizability of the findings and provides a robust foundation for examining patterns in user behavior, motivations, and attitudes toward chatbot services. The questionnaire was designed to capture multiple dimensions of user engagement, including utilitarian and hedonic motivations, perceived social presence, and behavioral intentions, enabling a comprehensive analysis of the factors influencing chatbot adoption.

3.2 Measurement of variables

All items are measured on a 5-point Likert scale. The measurement scales used have been adapted from previous research. The vocabulary of these scales has been adapted to the context of chatbot. Utilitarian motivation was measured through 3 items (Babin et al., 1994). The scale of social presence (of chatbots) has been measured through 4items and developed by Gefen and Straub (2004). Style of communication was measured by the two-dimension (van Dolen et al., 2007). These two dimensions, namely social oriented and task oriented, are operationalized by 8 items. Intention to use was measured through 4 items (Kim et al., 2010).

3.3. Method of data analysis

We used the Structural Equation Modeling SEM which it is a comprehensive statistical approach to testing hypotheses about relations among observed and latent variables (Hoyle, 1995) using SPSS 20 and AMOS20 software

4. Results

4.1. Descriptive analysis of variables

The research framework consists of two exogenous (utilitarian motivation, social presence of chatbots and style of communication) and one endogenous variables (intention to use) (Table 1). Each construct shows Cronbach alpha readings of acceptable values of above 0.60 (Nunnally, 1970).

Table 1. The psychometric quality of scales

Concepts	Original items	Total mean	Standard deviation	Items after EFA	Cronbach alpha CFA
Utilitarian motivation	3	4.04	1.261	0.788	0.955
		4.11	1.133	0.830	
		4.21	1.197	0.897	
Social presence (of chatbots)	4	3.82	1.657	0.826	0.977
		3.71	1.740	0.911	
		3.89	1.595	0.800	
		3.75	1.798	0.827	
Style of communication	8	4.14	1.044	0.732	0.924
		4.11	1.100	0.826	
		3.96	1.319	0.805	
		3.96	1.201	0.830	
		4.25	1.076	0.766	
		4.39	0.786	0.935	
		4.50	0.745	0.772	
		4.14	1.079	0.633	
Intention to use	4	3.86	1.297	0.821	0.943
		4.21	1.101	0.691	
		4.00	1.440	0.770	
		4.11	1.197	0.802	

4.2. Construct reliability

Construct reliability is presented in Table 2. The reliability of the scales is satisfied (ρ of Jöreskog and α of Cronbach> 0.7).

4.3. Convergent validity

Average variance extracted (AVE) is the average VE values of two constructs.

Table 2. Construct reliability indicators (n= 200)

Concepts	Items	Rho de Joreskog
Utilitarian motivation (UM)	UM1: I often accomplish exactly what I want to when I engage with chatbot. UM2: I often feel that my use of chatbot is successful. UM3: In general, using chatbot is a good experience because the functions work very quickly.	0.955
Social presence of chatbots (SP)	SP1: Interacting with the chatbot service of a wealth management app provides a sense of human contact. SP2: Interacting with the chatbot service offered by a wealth management app provides the sense of a personal touch. SP3: Interacting with the chatbot service offered by a wealth management app provides a sense of sociability. SP4: Interacting with the chatbot service of a wealth management app provides a sense of human warmth.	0.982
Style of communication (SC)	**Social-oriented** SO1: The chatbot is easy to talk with. SO2: The chatbot genuinely liked to help me. SO3: The chatbot seemed interested in me not only as a customer, but also as a human or a person. So4: The chatbot liked to talk and put me at ease. **Task-oriented** TO1: The chatbot worked hard to provide information. TO2: The chatbot primarily focused on the details pertaining to the shoes. TO3: The chatbot mainly provided she information. TO4: The chatbot wanted to make sure I made a decision about the shoes.	0.955
Intention to use (IU)	IU1: Now I intend to use chatbots to shop and procure products. IU2: Assuming that I have access to chatbots, I intend to use it. IU3: During the next 6 months, I intend to use chatbots for shopping. IU4: I intend to use chatbots for shopping after 5 years.	0.947

According to Fornell and Larcker (1981), average variance extracted (AVE) should be more than 0.5.

The results also show that the convergent validity is satisfied.

Table 3. Construct validity indicators (n= 200)

	VME
Utilitarian motivation (UM)	0.877
Social presence of chatbots (SP)	0.931
Style of communication (SC)	0.812
Intention to use (IU)	0.818

4.4. Discriminant validity of constructs

Discriminant validity refers to the extent to which constructs that should

not be related and indeed observed as unrelated. In other words, it reflects the degree to which constructs are empirically distinct from one another. According to Fornell and Larcker (1981), discriminant validity is supported when the average variance extracted (AVE) of each construct is greater than the squared correlation between that construct and any other.

Table 4. Discriminating validity indicators of buildings (n= 200)

	Utilitarian motivation (UM)	**Social presence of chatbots (SP)**	**Style of communication (SC)**	**Intention to use (IU)**
Utilitarian motivation (UM)	0.936			
Social presence of chatbots (SP)	0.699	0.946		
Style of communication (SC)	0.731	0.756	0.949	
Intention to use (IU)	0.674	0,632	0.686	0.904

Each AVE value is found to be more than correlation square; thus, discriminant validity is supported.

5. Hypothesis test

The results indicated that the model provided a satisfactory fit to the data (Akrout, 2018) (Table 5).

Table 5. Model fit indices

Indicator	**χ2**	**df**	**P**	**RMSEA**	**AGFI**	**TLI**	**GFI**
Value	342.24	108	0.000	0.074	0.846	0.914	0.921
Threshold	-	-	-	< 0.08	≥ 0.90	≥ 0.90	≥ 0.90

To judge a relationship as meaningful, it must verify that the CR is higher than 1.96 with a significant *P* (*P* must be less than 5%).

Table 6. Hypothesis test

			Estimate	**SE**	**CR**	***P***
IU	<---	UM	2.431	0.701	3.467	***
SP	<---	UM	1.299	0.321	4.052	***
IU	<---	SP	0.204	0.090	2.258	0.024
IU	<---	SC	1.012	0.263	3.843	***

Note: ***means that *P* must be less than 5%.

5.1. Results of the mediation test

We conducted a mediation analysis following the classical approach of Baron and Kenny (1986), with results summarized in Table 7. Both direct and indirect effects were examined using bootstrap procedures with 2,000 samples and a 90% bias-corrected confidence interval. The analysis revealed a significant indirect effect (β= 0.148, *P*< 0.05), indicating that social presence mediates the relationship between utilitarian motivation and behavioral intention to adopt the chatbot service. Therefore, this mediation hypothesis is supported.

Table 7. Mediation test

Direct effect	Indirect effect	Total effect
0.005	0.148	0.124

Note:* <0.05

6. Discussions

First, the findings reveal that utilitarian motivation has a direct and significant impact on consumers' intention to use chatbots. This result aligns with prior research (McLean & Osei-Frimpong, 2019; Mimoun & Poncin, 2015; Mishra et al., 2022), confirming that consumers are primarily driven by functional and goal-oriented benefits when interacting with digital technologies. Utilitarian motivation reflects the extent to which individuals perceive a technology as useful, efficient, and instrumental in achieving specific objectives. In the context of chatbot services, consumers seek quick access to information, assistance in decision-making, problem resolution, and support in completing transactions.

While previous research (De Cicco et al., 2020) identified interaction quality, pleasure, and convenience as the main drivers of chatbot usage intention, the present study deepens this understanding by emphasizing the motivational mechanisms underlying such behaviors. Specifically, it demonstrates that when consumers perceive chatbots as effective tools that help them accomplish their desired goals, their intention to use these digital agents significantly increases. This finding contributes to the broader literature on technology adoption by reinforcing the idea that perceived usefulness remains a central determinant of behavioral intention in digital environments.

Chatbots therefore function as decision-support systems that reduce cognitive effort and uncertainty during the purchasing process. By providing instant responses, personalized recommendations, and structured guidance, they help consumers make informed choices. In this sense, chatbots are not merely communication tools but instrumental agents that facilitate goal attainment. Their ability to offer real-time assistance strengthens consumers' perceptions of efficiency and control, which in turn enhances their intention to engage with such systems.

Second, the results indicate that utilitarian motivation also has a direct and significant effect on chatbot social presence. Consistent with the self-determination framework (Deci & Ryan, 2014; Ryan & Deci, 2024) and related findings (Geiger et al., 2018), this suggests that when consumers perceive a chatbot as useful and supportive in achieving their goals, they are more likely to attribute human-like qualities to it. In other words, functional effectiveness can reinforce the perception that the chatbot is socially present.

This finding is theoretically meaningful because social presence is often associated with emotional or relational dimensions rather than instrumental ones. However, our results demonstrate that utilitarian

value can serve as a foundation for perceived psychological closeness. When a chatbot consistently delivers relevant, accurate, and helpful responses, users may interpret this competence as attentiveness and responsiveness two key elements of social presence. Thus, task efficiency and relational perception are not mutually exclusive; rather, they can reinforce one another in digital interactions.

Third, the study confirms that chatbot social presence has a direct and significant impact on consumers' intention to use chatbot services. This result is supported by previous research (Canevello & Crocker, 2010; Oliveira, 2021) and aligns with social presence theory. Social presence refers to the degree to which a medium allows users to perceive warmth, sociability, and psychological closeness. When consumers feel that a chatbot exhibits empathy, friendliness, and conversational engagement, they are more likely to develop positive attitudes and behavioral intentions toward it.

By demonstrating the mediating and influential role of social presence, this study enriches the literature on innovative marketing channels and human-chatbot interaction. It extends social presence theory to AI-powered commercial contexts, showing that psychological closeness can be strategically designed through conversational cues. As highlighted by Cyr et al. (2007), warmth, friendliness, and relational communication contribute significantly to perceived presence. A chatbot that uses personalized greetings, supportive language, and interactive dialogue can create an experience that resembles interpersonal interaction.

Importantly, chatbots' social presence can satisfy consumers' need for relatedness, one of the core psychological needs identified in self-determination theory. When users feel socially connected even in interactions with artificial agents, they are more motivated to accept and use the technology. This confirms previous findings suggesting that social presence positively influences chatbot adoption and reinforces the importance of relational elements in digital service encounters.

Finally, the findings show that communication style has a significant and positive effect on intention to use chatbot services, corroborating the results of Chattaraman et al. (2019). Communication style represents a critical design element in human-chatbot interaction. A socially oriented communication style, characterized by informal language, small talk, emotive expressions, and interactive features (e.g., emojis or exclamation marks), can mitigate the impersonal perception often associated with artificial intelligence. Such interaction styles enhance enjoyment and perceived presence, thereby increasing usage intention.

Conversely, a task-oriented communication style emphasizes efficiency, clarity, and goal completion. It focuses on delivering precise information and guiding users through structured processes. While this style supports utilitarian motivation, the study suggests that

incorporating social elements may further strengthen engagement and acceptance.

From a managerial perspective, this research offers several practical implications. First, companies aiming to attract younger consumers particularly millennials should adopt a relational and socially engaging conversational approach. Designing chatbots that include informal exchanges, expressive cues, and interactive dialogue can enhance perceived enjoyment and social presence. Second, businesses must carefully balance task efficiency with relational warmth. A chatbot that is both competent and personable is more likely to foster trust and repeated use.

Launching and developing chatbots involves significant uncertainty, as they can be programmed with diverse conversational rules and visual designs (Zarouali et al., 2018). This study provides guidance for optimizing these design choices by emphasizing features that enhance social interaction and motivational appeal. Online practitioners should invest in virtual assistants capable of delivering entertaining, interactive, and socially rich experiences.

Moreover, marketers can strategically emphasize motivational triggers when promoting chatbot services. For instance, when targeting consumers who prioritize rational evaluation and product performance, communication should highlight the utilitarian benefits of chatbot use, such as time savings, convenience, and decision support. Increased chatbot adoption may ultimately translate into higher revenues through in-app purchases, personalized promotions, and valuable consumer data collection.

7. Conclusion

Chatbots become more advanced, marketing research has paid enormous attention to chatbot and its impact on customer's intention. This paper aims to reveal underlying utilitarian motivation by highlighting the role of social presence and its impact on consumer intention and examine chatbot's communication style and its impact on consumer intention. After analyzing collected data, we find that all hypotheses are accepted.

This research presents many contributions but suffer from same limits. At first, the study findings cannot be generalized to all customer segments in the online environment. Thus, in order to validate the results, future research could integrate more heterogeneous samples for better consumer segmentation.

Second, the sample size for the older generation (i.e., baby boomers) was relatively small and the number of participants was not balanced across the three generational cohorts. It is true that the senior generation often constituted a small proportion of the samples collected in previous research (Canziani & Macsween, 2021; Lissitsa & Kol, 2021; Agárdi & Alt, 2022). Nevertheless, it would be beneficial for future research to use a systematic sampling approach to collect a more balanced sample.

Conflict of interest
The authors declared no conflicts of interest.

Ethical considerations
The authors have completely considered ethical issues, including informed consent, plagiarism, data fabrication, misconduct, and/or falsification, double publication and/or redundancy, submission, etc. This article was not authored by artificial intelligence.

Data availability
The dataset generated and analyzed during the current study is available from the author on reasonable request.

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