Unveiling the factors shaping consumer acceptance of AI assistant services in the hotel industry: a behavioral reasoning perspective

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ABSTRACT

Technological advancements in automation, artificial intelligence (AI), and robotics have completely changed the service industries, including the hospitality sector. This study aims to investigate the fundamental elements that impact the acceptance (or rejection) of artificial intelligence assistants’ services. This research employed semi-structured interviews to gather insights from both individuals who use AI services in hotels and those who do not. Based on Behavioral Reasoning Theory, this study is empirically tested by interviews with intended respondents. This study examines the “reasons for” and “reasons against” using AI assistant services in the hotel. Technology anxiety, privacy concern, prior experience, and task complexity are “reasons against,” while performance expectancy, effort expectancy, social influence, facilitating conditions, humanness, social presence, perceived interaction enjoyment, cuteness, and trust are “reasons for.” This study found that “reasons against” negatively affect attitude and adoption intention, while “reasons for” positively affect them. Behavioral Reasoning Theory is used for the first time to evaluate Bangladeshi hotel consumers’ AI service assistant adoption intentions. As a new technology, AI assistants provide a better understanding of user usage. Furthermore, this study offers essential facts regarding the utilization of technology in the hospitality sector.

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Introduction

The rapid development of the hospitality sector is being facilitated by technological developments in areas such as Artificial Intelligence (AI), automation, and big data (Webster & Ivanov, 2020). AI and digital methods are used in hospitality customer relationship management to synthesize key performance indicators (Mariani, Baggio, Fuchs, & Höepken, 2018; Ruel & Njoku, 2021). As AI services become more and more important in the hospitality sector, it is critical to comprehend how these technologies may affect service outcomes, such as client satisfaction, retention, and service quality (Chi, Denton, & Gursoy, 2020). Additionally, the development of artificial intelligence that enhanced internet connectivity affects all businesses, including hospitality. Companies may decrease costs, improve customer service, speed up operations, and even develop new ones with this cutting-edge, intelligent technology (Mingotto, Montaguti, & Tamma, 2021).

Artificial intelligence (AI) has become increasingly widespread and integrated into the day-to-day lives of consumers, dramatically altering how they engage with various stakeholders (Karnouskos, 2018; Moriuchi, 2019). A growing number of these individuals are showing an interest in communicating with their existing clients as well as new customers through the utilization of artificial intelligence technologies. In addition, the rise of artificial intelligence (AI) assistants (like Alexa, Siri, OK Google, and others) has attracted the attention of businesspeople and technology providers in the field of virtual personal assistants that are enabled by artificial intelligence (AI). Assistants powered by artificial intelligence have brought about a change in the manner in which
individuals engage with computers. They have also caused the fastest growth in the consumer technology sector, with the expansion of smartphones emerging as the second fastest-growing area (Feng, Fawaz, & Shin, 2017). Because of this, they have constantly improved to better satisfy user needs. AI assistant uses natural language processing methods for speech synthesis.

According to McLean and Osei-Frimpong (2019) the primary function is to recognize the user's speech to make advanced real-time chats possible. In addition, artificial intelligence assistants can be used to search, book a hotel room, check in and out, order food, make online purchases, hail a cab, be in charge of home automation, play music, listen to jokes, and do a variety of other tasks (Smith, 2020). Furthermore, Artificial intelligence assistants are used to search, book a hotel room, check-in and out, order food, buy online, get a taxi, control home automation, set reminders, play music, listen to jokes, and more (Smith, 2020). In 2019, the number of virtual assistants powered by artificial intelligence exceeded 3.25 billion. Projections indicate that the population is anticipated to reach approximately 8 billion by the year 2023 (Malodia, Islam, Kaur, & Dhir, 2021). This can be attributed to the extensive utilization of voice assistants operated by virtual devices.

Even though artificial intelligence has many advantages for all parties involved, current research has revealed a negative aspect of the technology that entrepreneurs and business leaders should be aware of (Park, Tung, & Lee, 2021). As an illustration, there is still a significant amount of uncertainty concerning the possible repercussions and impacts that could be brought about by artificial intelligence (Belanche, Casaló, & Flavián, 2019). Much research has shown that implementing AI when staff and customers lack knowledge of its operation might offer major hazards or financial constraints (Davenport & Ronanki, 2018). Likewise, consumer acceptance or resistance of AI services is critical for companies operating in the hotel sector, especially AI-based assistant services. However, an abundance of research has examined the different factors that impact consumer acceptance or resistance to AI services. This study is also one of the first to examine how a least developed country’s consumers accept AI assistants' hospitality services.

**Literature review**

In recent years, several academics have focused their research on the technology of AI assistants (Alarie, Niblett, & Yoon, 2018; Budzinski, Noskova, & Zhang, 2019; Gollhofer & Schüller, 2018). Such research often focuses on the effects of technology on legal issues, homes houses, or for personal use, not in hospitality settings. The present crop of research by Cain, Thomas, and Alonso Jr (2019) Cain et al. (2019); (Ivanov, 2019; Lukanova & Ilieva, 2019) on AI and automation in the hotel industry places greater emphasis on well-established and widely recognized technology, while neglecting in-depth exploration of AI assistants. There is a scarcity of studies focused on the implementation of AI-based assistants in hotels (Lukanova & Ilieva, 2019). As a result of the generally low degree of acceptance of the technology by hotels, they are not sufficient for the construction of a theoretical framework.

**AI assistants in the hospitality sector**

AI assistants are computer programs or mobile applications that can provide users with answers to queries, recommendations, and assistance. (Brill et al., 2022; Canbek & Mutlu, 2016). They are also called virtual or digital assistants. NLP and Machine Learning let virtual assistants understand and respond to user requests and feedback (Giachos, Papakitsos, Savvidis, & Laskaris, 2023). The existence of AI assistant technology has been established for a considerable period. Significant advancements in this field have occurred since the introduction of Apple Siri in 2010, Microsoft Cortana in 2013, Amazon Echo in 2014, and Google Assistant in 2016. AI-based virtual service assistants are referred to using interchangeable words (J. Wirtz et al., 2018), including but not limited to, 'Artificial intelligence voice assistants' (Gollhofer & Schüller, 2018), 'Artificial intelligence-powered virtual agents' (Rhee & Choi, 2020), 'voice-based digital assistants' (Paraskevas, Katsogridakis, Law, & Buhalis, 2011), 'AI voice assistants' (Jones, 2018), 'intelligent personal assistants' (Hauswald et al., 2015) and 'voice assistants on digital platforms' (Ivanov, Webster, & Seyyedi, 2018).

AI assistants can be software, like Apple Siri, that is integrated into a computer or smartphone, or they can be standalone devices, like Google Home, Amazon Echo, Alibaba Tmall Genie, Apple HomePod, and Apple HomePod, which are utilized in service settings.

**The use of artificial intelligence assistants in hospitality**

An increasing number of businesses in the hospitality industry are adopting the usage of artificial intelligence assistants, which have the potential to greatly improve both customer service and operational efficiency (Buhalis, 2020). AI assistants have been discovered to improve guest experiences and streamline procedures (Buhalis & Leung, 2018). Nevertheless, the effectiveness of its implementation hinges on the acceptance and utilization by customers (Zarmpou, Saprikis, Markos, & Vlachopoulou, 2012). The development of artificial intelligence is aligned with technological advancements and the execution of activities related to AI implementations (Saad, Afzal, El-Issawi, & Eid, 2017; Yang & Lee, 2019). The use of artificial intelligence in consumer products, namely voice-assisted tools, is centered around the integration of data in Internet of Things (IoT) applications. These systems engage in user communication through many means such as speech, text, facial recognition, and gestures (Laranjo et al., 2018), enabling user involvement through natural language (Stieglitz, Mirbahaie, Ross, & Neuberger, 2018). These devices are engineered to create an environment that closely resembles human interaction. They feature enhanced voice recognition technology compared to previous models. Additionally, their ability to learn from user input allows for improved performance and a higher level of personalization. This technological advancement represents a significant step forward (Vimalkumar, Sharma, Singh, & Dwivedi, 2021).
AI-assisted technology is also designed to enhance performance and productivity on the job. However, their connection to the joy and usefulness received from using them also affects the overall balance that users achieve in their personal lives (Mishra, Shukla, & Sharma, 2022). The current market includes popular personal assistant devices like Siri, Alexa, Cortana, and Bixby. These devices are incorporating everyday consumer technology such as speakers, autonomous vehicles, and mobile devices. They achieve this by integrating voice recognition into artificial intelligence, allowing users to interact with smartphones through a more innovative, unique, and immediate interface. Recently, there has been a growing trend in consumer technology towards digital devices that have built-in AI features. This is because these devices offer various advantages such as personalization, which is beneficial both at work and at home. Additionally, these devices are easy to use and have enhanced capabilities, which creates a positive perception of AI assistant tools (Mooorthy et al., 2019).

According to Denzin, Lincoln, Giardina, and Cannella (2023), AI-based service assistants' devices are often considered by hoteliers as a highly influential technology. In 2016, Wynn Resorts Las Vegas put 4,000 Amazon Echo speakers and Aloft-installed iPads with Apple Siri in each room (Ritzer, Schwab, & Moore, 2022).

As a result of the pioneering efforts of these individuals, speech technology was eventually implemented in a wide variety of different properties. The InterContinental Hotels Group entered into a partnership with Baidu in 2018 to utilize individualized gadgets in the Chinese market. (Buhalis & Moldavska, 2021). In 2018, Amazon introduced Alexa for Hospitality, which was designed to serve as a central location for the room and provide a more guest-focused experience. (Buhalis & Moldavska, 2021). Marriott International became the first company to cooperate with the invention, and the Charlotte Marriott City Centre in North Carolina was the first location where the innovative technology was put into operation. (Buhalis & Moldavska, 2021). An AI assistant-enabled voice-activated assistant provides a capability that is unique to hotels and answers the primary issues that are associated with voice-activated gadgets, namely their security. This is because the assistant is programmed to destroy recordings automatically after twenty-four hours. Still, several hoteliers remain dubious about Amazon's commitment to provide only fair items (Paraskevass et al., 2011). Therefore, to reassure visitors, they either manually reset devices regularly or assign the integration with Amazon to technology providers. These providers would then be responsible for facilitating the integration of speakers into the systems of hotels. Other hoteliers refer to the newly produced artificial intelligence assistants that have advanced security characteristics. These devices have been developed recently all over the world, such as Aragon (Buhalis & Moldavska, 2021), Angie Hospitality (Buhalis & Moldavska, 2021), Houndify (Buhalis & Moldavska, 2021).

**Behavioural Reasoning Theory (BRT)**

Many research studies have used Behavioral Reasoning Theory (BRT) to study customer adoption. These studies have been done in various locations. In this study project, BRT examines the factors that support or discourage the adoption of several products and services. Value systems, attitudes, and intents must be considered while studying consumer behavior. Behavioral research has been used to study adoption intentions and behavior in various contexts, including mobile payment systems. (Gupta & Arora, 2017), Industry 4.0 adoption (Virmani, Sharma, Kumar, & Luthra, 2023), beauty box subscription-based online services (Sahu, Padhy, & Dhir, 2020), and electric vehicle adoption (Sivathanu, 2021) According to the findings of these studies, the factors that influence attitudes and intentions to adopt are reasons for adoption, such as convenience, relative advantage, and value. On the other side, adoption intentions may be hampered by factors that are used to discourage adoption, such as the perception of risk and the presence of conventional barriers. Behavioral Research theory (BRT) provides valuable insights into the elements that influence the adoption behavior of consumers. These insights can be utilized to analyze behavioral patterns and provide valuable insights into methods for effective adoption (Bridi & Alhosani, 2021). According to Sahu et al. (2020); Westaby (2005), BRT allows scholars and practitioners to compare arguments for and against customer behavior about any innovation. Several researchers (Claudy, Garcia, & O’Driscoll, 2015; Sahu et al., 2020) found that the characteristics that drive invention acceptance and innovation resistance are different. BRT enables researchers to distinguish between positive and negative causes and analyze how these factors affect customer intent by adopting a unique decision-making framework (Sahu et al., 2020).

This study uses Behavioural Reasoning Theory (BRT) to examine the values, global motives, and reasons for customer acceptance (or resistance) of AI services in the hospitality industry in Bangladesh, a developing nation. This work is unique and adds to current studies. First, this study uses BRT to add to the literature on hospitality innovation resistance. This lens lets innovation researchers and marketers compare reasons for and against adopting new technology. Second, this research seeks to investigate the elements that influence hotel sector adoption and resistance to artificial intelligence services. This will be done with qualitative case studies. Organizations can help develop effective approaches to overcome reluctance and boost technology use. The final point is that this study is one of the first to investigate the factors that either encourage or discourage customers from using AI-based assistants in the hotel industry within the setting of a less-developed country.

**Reasons for adoption of AI assistants**

Several factors are driving the adoption of AI assistants within the framework of behavioral reasoning theory. Firstly several elements, including personalization, interactivity, perceived intelligence, and perceived anthropomorphism, are known to have a beneficial impact on the acceptability of AI-based services such as chatbots. (Pillai, Ghanghork, Sivathanu, Algharabat, & Rana, 2023). Second, one of the things that makes artificial intelligence assistants so popular is their ability to automate tasks that require human interaction and to provide users the ability to specify ethical standards (Gratch & Fast, 2022). In addition, the implementation of
intelligent assistants that are enabled by artificial intelligence in collaborative environments can assist teams in doing more in a shorter amount of time (Shaikh & Cruz, 2019). The adoption of artificial intelligence services in the hospitality industry is also driven by cultural values, which have a beneficial impact on attitudes and intents to adopt the technology (Rasheed, Chen, Khizar, & Safeer, 2023). In the context of tourism, Pillai and Sivathanu (2020) utilized several characteristics, including perceived trust, anthropomorphism, technology fear, and perceived intelligence. AI-powered service agents’ intention to continue working was investigated by Ashfaq, Yun, Yu, and Loureiro (2020) using a variety of parameters, including the quality of the information, the necessity for interaction with employee service personnel, perceived enjoyment, satisfaction, and service quality. Anthropomorphism, perceived usefulness, perceived intelligence, perceived ease of use, perceived enjoyment, trust, compatibility, and interaction are some of the important factors that make AI-driven assistants more likely to be adopted. Previous research has revealed these factors (Ashfaq et al., 2020; Pillai & Sivathanu, 2020; Sheehan, Jin, & Gottlieb, 2020). These elements are considered into account in this work for the abstract concept of “reasons for adoption.”

## Reasons against AI assistant adoption

There are several variables that could potentially hamper the adoption of artificial intelligence (AI) services by customers. As a result of consumers’ resistance to AI autonomy and their skepticism of other forms of artificial intelligence, there is a possibility that users are becoming less likely to make use of high-autonomy artificial intelligence services (Rasheed, He, Khizar, & Abbas, 2023). Furthermore, there is apprehension regarding the security and privacy implications linked to AI and IoT services, including the excessive gathering of personal data and the illicit exploitation of personal information through hacking (Frank, Jacobsen, Søndergaard, & Otterbring, 2023). Customers may also avoid AI services due to the risk of prejudice and misinformation, which could affect consumer applications. AI deployment is also affected by context-specific variables like customer values and global motives, as well as industry-specific factors like hotel customer preferences and cultural norms (Gans, 2023). These reasons collectively contribute to the reluctance and apprehension of consumers to adopt AI services. This lens examines the current research on the adoption of AI and investigates obstacles such as privacy concerns (Rese, Ganster, & Baier, 2020; Sheehan et al., 2020) and underdeveloped technology (Rese et al., 2020) that hinder the acceptance of AI assistants. Barriers to the use of AI-based technology in hospitality include factors such as insufficient trust, concerns about data privacy and security, and a perceived lack of personal interaction (Zel & Kongar, 2020). The current investigation uncovers variables that impede the acceptance of AI assistants, including technology anxiety, privacy concerns, and perceived risk (Eeuwen, 2017; Pillai & Sivathanu, 2020). Moreover, existing research addresses the problem of language barriers while interacting with AI helpers (Heo & Lee, 2019; Kaimakis, Davis, Breck, & Nye, 2018). In this research, we have examined the aforementioned obstacles to the elicitation of "reasons against". For this purpose, we conduct an exploratory study to understand how positive and negative instrumental reasons influence consumer adoption (or resistance) specially on AI assistants in the hospitality industry. Therefore, this study aims to answer the following research question.

- What are the instrumental reasons for and against the consumer adoption of AI assistants’ services in the hospitality sector?

## Methodology

Qualitative methodologies enable researchers to develop a comprehensive analysis of diverse customer behaviors while also facilitating an adaptable procedure (Bernard, 2013). Claudy et al. (2015) argue that qualitative methods are more suited for obtaining specific reasons as categories. In this study, an exploratory qualitative approach was employed. Qualitative methodologies are widely utilized to gain insights and a more profound comprehension of the implementation of artificial intelligence technologies in the hotel industry (Fuste-Forne, 2021; Nam, Dutt, Chatboth, Daghfous, & Khan, 2021).

Following the formulation of the criteria for the interviews, which relied on the UTAUT theoretical framework, the field data collection was carried out. The interview questions prompted participants to express their opinions and attitudes toward AI in the hospitality business, as well as their firsthand encounters with the technology. The questions were created to investigate the influence on consumer uptake and experience. Through leveraging professional and personal networks, we employed a purposive sampling method to enlist a diverse array of individuals for semi-structured interviews (Khizar, Iqbal, Khalid, & Adomako, 2022). To acquire a deeper understanding of both the factors that contribute to and the factors that hinder the adoption of AI assistants in the hotel sector, we included both users and non-users of AI services in our sample group.

## Sampling and data collection

The customer groups’ sample size adheres to the literature on exploratory research, which indicates that studies with eight to twelve interviews are sufficient for categorization (Eisenhardt, 1989; Kvale & Brinkmann, 2007). A qualitative survey was conducted using a sample size of 24, with an equal distribution of female and male participants. To obtain insightful and up-to-date information about the motivations for and against utilizing AI, we employed a semi-structured interview method that involved asking open-ended questions (Bagnoli, 2009; Klenke, 2016). We conducted 24 semi-structured interviews during June and July 2023 in Dhaka city. The sample consisted of 12 users (Female User = 6; Male User = 6) and 12 non-users (Female Non-User = 6; Male Non-User = 6). The respondents were interviewed face-to-face at a mutually convenient time and place. Volunteers were offered interviews and guaranteed privacy and anonymity. Each interview lasted 15–30 minutes. The interviews were taped and transcribed using data coding methods (Marinucci, Grové, & Allen, 2023; Radez, Reardon, Creswell, Orchard, & Waite, 2021). We tried to include people...
of varied ages in our sample, although older respondents are rare. Dwivedi et al. (2022); (Papagiannidis, Pantano, See-To, & Bourlakis, 2013) found that younger buyers prefer new technology for product information, searches, and judgments.

Analysis and findings

We used MAXQDA and comparative thematic analysis in our work. A complete qualitative data analysis program, MAXQDA Analytics pro-2024 (trial), streamlines the use of several approaches. Content analysis, focus groups, case studies, and word cloud analysis are examples. Our topic analysis was enhanced by using word clouds to collect client answers. Figure 1 shows a word cloud of about fifty terms accepted at least five times from the 2,251 words found in customer interview forms. A rigorous manual thematic content analysis was used in addition to MAXQDA’s word cloud analysis. This was done to comprehend and present interview responses. Our manual content analysis revealed two sets of reasoning for and against AI assistants, as shown in Figure 2. Interviews with respondents revealed these explanations. Reasons for adoption and arguments against adoption are the study’s main categories. Our data analysis determined these categories. Our adoption factors are further divided into subthemes: performance expectancy, effort expectancy, social influence, conducive conditions, humanness, social presence, contact enjoyment, perceived cuteness, and perceived trust. In a similar vein, we outline the arguments against AI adoption under the following subthemes: technological anxiety, privacy concerns, prior experience, and task complexity.

![Figure 1: Word cloud analysis](image)

Reasons for the adoption of AI assistants’ service in the hospitality sector

Performance expectancy

The first subtheme found by semi-automated content analysis was customer performance expectancy (PE). PE is defined as “the degree to which the use of a technology will provide benefits to consumers in carrying out certain activities”(Venkatesh, Morris, Davis, & Davis, 2003). Thus, it reveals how much an individual thinks an AI assistant can boost performance and productivity. Participants virtually unanimously agreed that AI helpers performed well. Most participants found the AI assistance useful. Some said it helped them finish their work.

“The AI assistants supported me and provided exactly what I needed, while someone else highlighted the time-saving advantages of using AI technology”

“I need peace of mind, so I choose a technology-based hotel because AI assistants are well managed and easy to handle in food ordering and delivering.” These responses reflected performance expectancy.”
Figure 2: Research framework of resource orchestration toward AI assistant adoption (Authors' compilation).

Effort expectancy

The second major subtheme from the word cloud study is effort expectancy (EE). Venkatesh et al. (2003) define it as “the degree of ease associated with using the system.” Their ease of use by AI helpers is also considered. This component is the best predictor of research technology uptake, according to B. W. Wirtz, Weyerer, and Geyer (2019). You may study how customers assess artificial intelligence assistants’ ability to increase order accuracy, wait times, and customer demands. Adding something would make the topic more complete. Many of this study’s respondents believe that technology and other connected objects are better than traditional hotel services in every way. This study supports this dilemma. Participant statements include;

“I always judge that AI assistants perform efficiently as compared to humans, so that’s why I like these kinds of hotels.”

“My family always suggests I go there, especially for lunch or dinner, where proper orders are delivered in time efficiently, so that’s why I choose technology-related restaurants.”
Social influence

The social influence that influences how people engage with artificial intelligence systems in the hospitality industry is the subject of this subtheme. According to Venkatesh et al. (2003), social influence is defined as the extent to which an individual feels that significant individuals believe that he or she ought to make use of the technology:

“Technology is always advancing. I’m not against interacting with AI assistants because we all know that we are entering an era in which technology and humans coexist, so I’m adapting to it.”

In another case, an older adult participant said: “I think that at my age, all that I can do is follow and avoid [new technologies] if I can. I am in a passive situation in using these modern technologies. I was raised in a different world to the one in which my granddaughter is growing up.”

Facilitating conditions

According to Venkatesh et al. (2003), control, resources, and knowledge make a system, such as an artificial intelligence agent, easier to employ. Some participants reported feeling out of control when communicating with the AI, but most did.

One participant said: “I feel pretty relaxed during the interaction with AI assistants, so I thought that I was in control.”

Another participant stated: “I’m 30 years old, so I’ve somewhat grown up with this technology. So probably a lot easier for me to use these kinds of technology.”

On the other hand, one older adult participant raised concerns regarding her experience interacting with the AI assistants: “It’s not difficult [to use the AI service]. It’s just probably obstinacy [that stops me from embracing new technology].”

Humanness

It was mentioned by a few of the participants that the virtual appearance of the AI assistant was appealing because of its facial expressions, voice, gestures, and comments.” Similarly, another participant said: “It was really good [to interact with the AIA]. I think its tone of voice was quite friendly.”

Social ability

In addition, participants assessed the social capability of the AI assistant to interact and converse with them when they were interacting with it. For example, one participant said: “I think its social skills were quite good, especially the way it talked and responded to me.”

Another participant said: “The AI agents can register that customer is in a queue to booking hotel rooms, and it was able to direct the customer and ask or answer questions”

Social presence

Akdim and Casaló (2023) describe social presence as the ability of computers, especially AI assistants, to engage with people and make them feel like part of the social unit.

: “I think it’s good to feel as if you’re talking to a real person. You can explain your problem to the AI assistant, but the subsequent options are limited; it would tell you to either wait or something else.”

Additional themes for adoption

We called it an “additional theme” because it emerged from the qualitative datasets and went beyond the study frameworks. These extra themes emphasized customers' AI assistant replies and how they were impacted. This topic encompasses happiness, cuteness, and trust.

Perceived enjoyment

This subtheme examines hotel guests' emotional responses to robots and AI. Consumers may find these technologies enjoyable cold or impersonal. The novelty of using new technology, the system's responsiveness to consumer requests, and the capacity to tailor the experience all contribute to the overall experience. Organizations can better create and sell robotics and AI when they understand client emotions. In the hospitality industry, AI's perceived enjoyment was a major motivation for adoption. Most restaurant patrons are excited and have fun when AI or robot services are used. This is because robot engagement makes them pleased.

One stated, “My daughter always insists me go to the AI assistants serving hotels because she enjoys its service.”

Other participants said, “I always prefer the AI agents serving hotels because it's pleasurable and I feel fantasy when I use the assistant service.”
Perceive the cuteness of AI assistants

Cuteness refers to visitors' opinion of the AI service assistants' cuteness. Customers called various product features "cute," "kawaii," "moe," and "adorable." Due to their childlike voice, charming appearance, and kind demeanor, AI assistants were considered cute. AI assistants' poor movement sometimes boosted cuteness. One participant expressed:

“I inexplicably thought it was a little bit cute.”

Additionally, the features of cute AI assistants referred to as a “cuteness effect” which can increase customers’ tolerance of service failure (Lv, Liu, Luo, Liu, & Li, 2021) and encourage their recommendation intention, another participant said:

“I recommend this hotel not because the breakfast is delicious or the room is good, but because the AI assistant is so cute.”

According to Dale, Goggin, Leyda, McIntyre, and Negra (2016), individuals have a significant desire to physically approach a cute object, which makes cuteness a valuable strategy for acquiring client acceptance: cuteness. Consequently, the development of cuteness cues is a clever method that can be utilized to facilitate the dissemination of innovation for artificial intelligence technologies, particularly service assistants.

Perceived trust

Mayer, Davis, and Schoorman (1995) define trust as judgments of another's expertise, integrity, and friendliness. TR significantly influences human-machine relationships (McLean & Osei-Frimpong, 2019). It boosts your trustworthiness by making you believe in your relationships (Hengstler, Enkel, & Duelli, 2016). One said:

*I feel that my AI voice-assistant is trustworthy.* TR is one of the most important elements in overcoming uncertainty (Yang & Lee, 2019).

When technology is emerging, users often feel uncertain due to a lack of information. Another person said: *I believe what my AI assistant tells me.*

On the other hand, this uncertainty can be removed when users already experience a sense of trust towards a particular technology, brand, or source.

Reasons against the adoption of AI assistant services in the hospitality sector

The section relates to four dimensions: technology anxiety, privacy risk, prior experience, and task complexity.

Technological anxiety

Our semi-automated content analysis revealed technological anxiety as a major subtheme. Due to a lack of experience or understanding, some customers may be wary of artificial intelligence assistants. Others may feel uncomfortable using AI assistance instead of being assisted by humans or worry about the consequences. Some respondents said they feel anxious when they see artificial intelligence helpers in restaurants and question how they can use it. One participant said:

“I am nervous about using this technology as I may make errors while using technology which I cannot fix.”

Privacy and security issues

The word cloud analysis revealed another crucial subtheme of reason against privacy and surety. These systems' collection and use of personal data may worry consumers, especially if they believe they have little control over it. They may be concerned about AI devices monitoring or tracking them, compromising their privacy and security, or sharing their data without their consent. New hotel technology requires sacrificing privacy, according to a few interviewees. One of the interviewees said:

“AI assistants or robots are operated or programmed by some humans, so if I use these services, then it means I am going to share my details with the third one, and that third one can mislead it.”

Prior experience

Following that, the next dimension that emerged was related to the customer's previous experience with artificial intelligence assistants. A majority of the participants believed that their previous experiences with AI devices gave them the adaptability to deal flexibly with the accelerating pace of technological change, including the applicability of AI devices. This finding is in line with the findings that were mentioned earlier regarding the participants' attitudes towards AI assistants. One participant said:

“I have not somewhat grown up with this technology. It’s probably not easier for me to use these kinds of AI technology.”

Task complexity

According to the findings of the word cloud analysis, technological complexity is a very significant subtheme of reason that we have found. The perception that these systems are technologically difficult is one of the primary reasons why customers may be resistant to the implementation of artificial intelligence in the hospitality business. The perception that artificial intelligence is too difficult to
use or comprehend might lead to dissatisfaction and resistance on the part of consumers. The use of modern technologies, such as artificial intelligence assistants, at restaurants causes them to feel uneasy. One respondent stated:

“I try to avoid new technologies because I feel insecure and face complexity about using these AI technologies like machines, robots, and others.”

Discussions and implementations

We explore the intention of consumers and non-consumers to use artificial intelligence assistants, and we present intriguing results that have implications for managers, businesspeople, and literature in the setting of consumer adoption. Within the scope of this study, the BRT theory was utilized, and an attempt was made to align it with the UTAUT model to build the conceptual model. The relationship between mindsets, arguments for and against the adoption of artificial intelligence assistants, and values is investigated in this article. Furthermore, it investigates the connection between reasoning (both for and against) and intents concerning the subject matter. According to the findings of the study, consumer mindsets are an important factor in the widespread adoption of artificial intelligence assistant services in the hospitality industry. Additionally, there are context-specific reasons for and reasons against the adoption (or resistance) of AI assistant services in the hospitality industry. The underlying factors that promote the adoption of AI services include performance expectancy, effort expectancy, social influence, facilitating conditions, humanness, social interactions, enjoyment of the interaction, perceived cuteness design of AI assistants, and perceived trust in AI assistants.

Similarly, we offer the reasons against using artificial intelligence in the following subthemes: anxiety around AI assistant technology, concern regarding privacy, prior experience, and the complexity of the work. Furthermore, the contribution that this study makes to the area is that it investigates the factors that either encourage or discourage the use of artificial intelligence services by customers in the hospitality industry or vice versa. The findings of the study indicate that hospitality businesses can make use of the information to develop and deploy artificial intelligence services that follow the individual mindset, values, and motivations of customers, as well as the concerns that they have. Additionally, this study can provide some other information such as the design of AI assistants, the trust that users have in them, and other similar information that is derived from the responses of the respondents. This information will be valuable for future research regarding consumer acceptance. Specifically, the implications for both theory and practice are going to be taken into consideration in the sections that are going to follow.

Theoretical implications

This research contributed to the literature on the hotel sector's adoption (or resistance) of artificial intelligence services. This study added to the literature on technology adoption in service industries by addressing hospitality's particular challenges and potential. The opinions of hotel guests were evaluated. The study has considerable theoretical implications. This research first provides a logical explanation for the adoption of AI-based assistants and then investigates customer attitudes and behaviors. Second, using the BRT to study the hospitality industry's adoption (or resistance) of artificial intelligence assistant services has contributed to the theoretical foundations of the current literature. This approach helps reveal the complex decision-making process behind technology adoption and opposition, notably in the hospitality industry. This study found that “reasons for” adoption include performance expectations, effort expectations, social influence, facilitating conditions, humanness, social interactions, enjoyment of the interaction, perceived cuteness design of AI assistants, perceived trust in AI assistants, and “reasons against” adoption, such as technological anxiety, privacy concerns, prior experience, and task complexity. This study emphasizes consumer adoption while considering customer cognition and emotion, adding to the literature on AI assistants-based service interaction. Our analysis also finds novel efforts in AI assistants’ cuteness, customer trust, and entertainment. This study sheds light on hospitality clients’ AI adoption (or resistance) attitudes and behaviors. These findings can help practitioners develop and implement effective technology adoption initiatives. These findings should also inspire other academics to explore similar topics across cultures and regions to extend the scholarly discussion on this topic.

Practical implications

Some significant practical implications can be drawn from this study about the adoption of AI assistants in the hotel business. First and foremost, the design of artificial intelligence service systems in the hotel business can be influenced by an understanding of the fundamental reasons for consumer behavior. Second, the findings of this study can be utilized by entrepreneurs and authorities to design targeted tactics that encourage consumers to utilize the services of AI assistants in the hospitality industry. The third reason is that customers are more likely to find an artificial intelligence assistant who speaks in a childlike voice or linguistic style, and occasionally has bodily traits that are similar to those of a cartoon character, to be adorable. This, in turn, leads to customers accepting AI assistants. As a result, utilizing cuteness value is an efficient method for humanizing new technologies. The whimsical aspect of an object (for example, capricious humor and playful disposition) can also connect to the feeling of cuteness (Nenkov and Scott, 2014), as was demonstrated in our study. This is in addition to the baby schema, which refers to the physical characteristics of a child, such as large eyes. As a result, an artificial intelligence assistant that has an attractive appearance, voice, and linguistic style is believed to be incredibly effective in making customers accept the technology. This study illustrates the advantages of adopting artificial intelligence technology, such as enhanced efficiency and decreased service times. Additionally, it identifies probable reasons for resistance, such as worries regarding privacy, technical anxiety, and the complex nature of the task at hand.
Conclusions

This research outlines the elements driving hotel adoption of AI-powered assistants. The BRT empirically tested the proposed research model and discovered that performance expectancy, effort expectancy, facilitating conditions, humaneness, trust, cuteness, and entertainment are "reasons for" it. As "reasons against" the proposed research approach, technological fear, privacy issues, prior experience, and task complexity have been cited. The study sheds light on the UTAUT relationship, and the new code argues for and against AI assistants. This phenomenon should be studied in the future, taking into consideration management, artificial intelligence service providers, and people. This study aims to explore the factors that influence the hotel industry's adoption of artificial intelligence assistants and their opposition to their use. By gaining an understanding of how these new technologies can improve consumer mindsets and attitudes, as well as quality and responsible innovation in the hotel industry, we can.

This study contains a few shortcomings that suggest more research. The tiny sample size of this study is a drawback. Targeted sampling can find people with specific traits or backgrounds, but it may not be typical of the community. That makes it possible that the findings cannot be applied to other hospitality sector events or circumstances. Future research may employ larger samples and more recruitment strategies to apply the findings to a wider population. This study's key contribution is to shed light on the arguments for and against the adoption of artificial intelligence assistants. This is the primary contribution of this research. During this cross-sectional inquiry, limited customer perspectives were taken into consideration. It is possible to conduct additional research on the implementation of artificial intelligence assistants and the impact that they have on customer satisfaction, engagement, retention, service failure, and recovery scenarios. In addition, research might be conducted to investigate how artificial intelligence aids contribute to the development of culture. Moreover, there is plenty of scope for further longitudinal studies to be carried out in this field. Another drawback is interviewer prejudice. Interviewers' past preconceptions and opinions may affect data interpretation due to this bias. This prejudice could be reduced by adding impartiality measures to future studies. Interviewers could learn reflexivity and qualitative approaches in future investigations. To further the academic debate, future investigations could repeat this finding in other least-developed and developed countries.

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Conflicts of Interest: The authors declare no conflict of interest.

References


Appendix:

**Interview Questions**

Participant interviews were conducted by following the guidelines that are presented in the table below.

<table>
<thead>
<tr>
<th>1. In your view, what impressions do you hold regarding the role of AI assistants within the hospitality sector?</th>
<th>2. Could you share any insights or personal encounters you've had while engaging with AI assistants in hospitality settings?</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. What factors do you think to influence people to embrace AI assistants in the hospitality industry?</td>
<td>4. Are there any particular concerns or reservations you have regarding the use of AI assistants in hospitality, and if so, what are they?</td>
</tr>
</tbody>
</table>

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