

## The Impact of ChatGPT on Tourists' Trust and Travel Planning Intention: International Researches and Current Situation in Vietnam



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**ABSTRACT:** This research investigates the impact of ChatGPT on tourists' trust and travel planning intention, with a focus on international perspectives and the current situation in Vietnam. The study comprises three main sections: Introduction, where the significance of ChatGPT in tourism is highlighted; Literature Review, encompassing an exploration of ChatGPT, its application in tourism, and the influence of trust and intention in utilizing ChatGPT for travel planning; and Current Situation, providing insights into the existing scenario. By examining factors affecting trust and intention in ChatGPT-based travel planning, this research contributes valuable insights for the tourism industry. The study concludes with a synthesis of findings and potential implications for future research and industry practices.

**KEYWORDS:** ChatGPT, customer behavior, tourism, planning intention

### I. INTRODUCTION

In the ever-evolving landscape of technology, artificial intelligence (AI) has emerged as a transformative force, reshaping various aspects of our daily lives. With the emergence of Chat GPT, an artificial intelligence (AI) conversational tool developed by OpenAI, Chat GPT can understand human natural language and generate text that resembles human writing (Lock, 2022).

Chat GPT reached 100 million users within 2 months of its launch (November 30, 2022), making it the fastest-growing application in history (Milmo, 2023). One notable area where Chat GPT has made significant strides is in the field of travel. The advent of Chat GPT has paved the way for travelers to explore information and plan their trips in new ways. While travelers currently have to navigate multiple websites (e.g., search engines, maps, online travel agencies, review websites, and blogs) to compile lists of destinations or activities, they can streamline those complex and daunting processes through a simple conversation with Chat GPT (Mogelonsky & Mogelonsky, 2023). Since ChatGPT can recommend possible destinations or activities within a few seconds, in accordance with travelers' requests (e.g., dates, company, preferred activities, and time budget), a list of options recommended by the tool could be a valid initial reference for trip planning (Hayhurst, 2023). As we delve into this dynamic intersection of technology and tourism, this journal seeks to investigate the impact of ChatGPT on tourists' beliefs and travel planning intentions.

The tourism industry has witnessed significant transformations in recent years with the integration of artificial intelligence (AI) technology. A resounding 97.8% of travel executives in the Euromonitor International's Voice of the Industry: Travel Survey stated that AI would have an impact over the next five years. Travellers using artificial intelligence (AI) tools such as ChatGPT to plan their travel itineraries is set to boom, according to market research company Euromonitor International.

This study explores the echoes surrounding the use of Chat GPT in the tourism industry. The article synthesizes research in this area based on studies that have highlighted the impact of Chat GPT on the trust of travelers. Integrating Chat GPT in the tourism sector brings both convenience and challenges to the forefront. Clearly, discussions on the benefits of Chat GPT, such as creating value for travelers, as well as its drawbacks, such as the lack of human interaction and potential data security risks, will continue to persist in the tourism industry.

The statistics highlight a growing reliance on AI-driven platforms, raising important questions about the implications for traditional travel services and the broader tourism industry. This article aims to unravel the intricate dynamics between

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ChatGPT, tourists' beliefs, and travel planning intentions, providing valuable insights into the evolving landscape of AI in the travel sector.

## II. LITERATURE REVIEW

### A. ChatGPT

ChatGPT, developed based on the GPT-3.5 model, is an advanced chatbot that has gained significant attention in recent years (Hughes, 2023). Its remarkable ability to comprehend and engage in human-like conversations has made it a popular choice for various applications. According to OpenAI (2022), ChatGPT can handle follow-up questions, acknowledge its errors, challenge incorrect premises, and even reject inappropriate requests. Furthermore, it has the capability to understand code and retain information from previous interactions (Hughes, 2023).

However, despite its impressive fluency, ChatGPT has certain limitations. It lacks the reasoning capabilities of a human and may struggle when confronted with complex or abstract queries, as well as understanding the broader context and implications of the text input (OpenAI, 2022). Researchers have also noted its limited mathematical capabilities (Frieder et al., 2023). Another concern is the ambiguity surrounding the sources of information used by ChatGPT (Van Dis et al, 2023).

Furthermore, it's important to note that ChatGPT's knowledge is based on data available until 2021 (Zielinski et al, 2023). Consequently, it may not be up-to-date with recent developments. Additionally, biases present in the training data can lead to biased responses from ChatGPT (Krügel et al., 2023; OpenAI, 2022). Thus, the lack of transparency regarding information sources is a noticeable issue that raises concerns about the authenticity and reliability of ChatGPT's responses (Van Dis et al, 2023).

### B. The use of ChatGPT in tourism - focusing on tourists

ChatGPT has demonstrated its versatility in various domains, including education, where it has gained significant popularity. However, its potential application in the field of tourism should not be overlooked. The utilization of ChatGPT also represents a potential factor that can bring numerous benefits and cater to various entities, including travel companies, tourist destinations, and individuals employing ChatGPT as a planning tool for their trips, which can be succinctly referred to as tourists.

One notable advantage of ChatGPT is its potential to contribute to the creation of travel itineraries in a fast, concise, and referential manner (Ali and OpenAI, 2023). According to Ines Carvalho (2023), tourists can utilize ChatGPT at every stage of their journey, ranging from seeking inspiration, making bookings, experiencing the trip, to reflecting on the post-trip phase. However, attention should be given to ChatGPT's role during the planning process.

When tourists consciously opt to engage with ChatGPT or other language learning models (LLMs) based chatbots, they can employ various approaches. For instance, if ChatGPT is integrated into travel websites with access to real-time data, travelers can receive personalized information and recommendations regarding tourism offerings at their destination, such as hotels, restaurants, transportation options, local attractions, and activities, e.g... (Carvalho, 2023). Furthermore, they can design tailored itineraries by verbally expressing their preferences, requirements, and constraints to ChatGPT. This could encompass factors like time and budget limitations, specific needs, or dietary restrictions. The integration of generative AI, coupled with the establishment of Self-sovereign identity (SSI), where individuals have control over the sharing and utilization of their personal data, has the potential to significantly enhance personalization, including in the tourism and hospitality domain (Sorrells, 2023).

Looking ahead, the future development of ChatGPT and similar technologies holds promise in the form of virtual companions who acquire knowledge about each individual and simulate emotional responses. If integrated with travel websites to access real-time data, these companions could provide support and guidance throughout travelers' journeys (Carvalho, 2023).

### C. Trust and intention in using ChatGPT for planning

**Trust:** Trust is the belief and confidence an individual has in the actions and behavior of others, based on their expectations (Gu et al., 2009). It refers to an individual's willingness to rely on another party's decisions or actions without fearing negative outcomes (Cheng et al., 2022). While trust has traditionally been associated with human relationships, its applicability to the relationship between humans and technology remains a subject of debate (Przegalinska et al, 2019). Nonetheless, trust plays a vital role in the adoption of technology (Johnson et al, 2008).

Studies examining trust in technology, where the object of trust is a technological device such as an information system or a recommendation agent, indicate that trust in this context is akin to interpersonal trust. It refers to the extent to which individuals are willing to depend on a software program to accomplish specific tasks (F. Ali et al., 2023). Trust in AI agents, including chatbots, can be seen as an extension of interpersonal trust, representing the level of assurance and readiness a consumer feels in acting upon the actions or advice provided by an AI agent.

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The trust established in ChatGPT as a tool leads to trust in the recommendations it provides, ultimately influencing the intention to use those recommendations.

**Intention to use ChatGPT's recommendations:** Behavioral intention refers to a person's projected or planned behavior in the future. It reflects their anticipated actions in a specific context and can be measured by their likelihood of taking action. The Theory of Planned Behavior (TPB) posits that the primary determinant of behavior is an individual's intention to act in a particular way. When given the opportunity, intention translates into behavior. Therefore, accurately measuring intention can serve as the most reliable predictor of behavior (Lam and Hsu, 2006).

Trust is a crucial factor that influences consumers' behavioral intentions toward technology-based services like chatbots. Trust is instrumental in the adoption and continuous use of technology. Trust in technology mediates the relationship between users' perception of technology and their behavioral intentions. Several studies have found that trust in technology positively impacts consumers' behavioral intentions toward that technology (Zeithaml et al., 2002). A specific example of how trust influences the intention to use recommendations from this tool is a research titled "Investigating the Impact of User Trust on the Adoption and Use of ChatGPT: Survey Analysis" (Avishek Choudhury and Hamid Shamszare, 2023), which aimed to assess the influence of trust on both intention and actual usage of ChatGPT. Two relevant hypotheses regarding trust were proposed: "User trust in ChatGPT increases with intention to use" and "User trust directly drives actual usage of ChatGPT". To test these hypotheses, the researchers conducted an online survey with 607 regular ChatGPT users in the United States. The results revealed that the research model explained 50.5% and 9.8% of the variance in intention and corresponding usage behavior, respectively. Trust exhibited a strong relationship with both factors. These findings emphasize that trust is a critical determinant of users' acceptance and usage of ChatGPT.

### **D. Factors from ChatGPT that can influence Trust and Intention**

Trust in chatbots can be influenced by various factors, including their visual appearance resembling humans, conversational content, and performance in avoiding communication breakdowns (Law et al, 2022). Additionally, contextual factors related to the chatbot service, such as the brand hosting the chatbot, the perceived level of security and privacy, and the user's general risk perceptions, can also impact trust. (Ali et al, 2023).

Recent researches have described the factors from ChatGPT that influence trust (as an intermediate factor) and their impact on users' intention to use ChatGPT for travel planning. These studies have emerged primarily outside of Vietnam, starting around 2020 and gaining more popularity in 2023. Some notable studies in this area include: "Adoption of AI-based chatbots for hospitality and tourism", a research conducted by Rajasshrie Pillai and Brijesh Sivathanu (2020). It investigated the behavioral intention and actual usage of chatbots supported by artificial intelligence (AI) in the hotel and travel industry. The research findings revealed that the predictive factors for the intention to use chatbots were perceived ease of use, perceived usefulness, perceived trustworthiness, perceived intelligence, and the theory of anthropomorphism. Additionally, the research indicated that concerns about technology did not influence the intention to use chatbots, and the attachment to traditional travel agents moderated the negative relationship between the intention to use chatbots and their actual usage in travel planning. It provided valuable insights into the commitment of managers in providing travel planning services using AI-based chatbots.

A more recent research by Faizan Ali et al (2023) focused on "Antecedents and Consequences of Tourists' Trust in Personalized Travel Recommendations by ChatGPT." It examined the impact of relevance, trustworthiness, usefulness, and intelligence of personalized travel recommendations provided by ChatGPT on tourists' trust and behavioral intention. The results of both studies indicated that relevance, trustworthiness, usefulness, and intelligence of the personalized travel recommendations from ChatGPT have a positive influence on tourists' trust. Furthermore, tourists' trust positively affects their behavioral intentions, including the intention to use ChatGPT in the future, recommend ChatGPT to others, and book travel services through ChatGPT. This research represents a significant step toward understanding the impact of ChatGPT on tourists' trust and behavioral intentions, while also providing practical implications for travel service providers to enhance tourists' experiences using ChatGPT.

However, according to C. Ischen et al (2020), although chatbots can provide various advantages to users, concerns regarding security and privacy may undermine trust due to potential breaches of customer data confidentiality and unauthorized third-party sharing. Security and privacy issues can be broadly categorized as threats and vulnerabilities (M.Deng et al, 2011). In this study, security threats are defined as the likelihood of compromising an organization's systems and data. Computer security threats encompass activities such as "Spoofing, Tampering, Repudiation, Information Disclosure, Denial of Service, and Privilege Elevation." System vulnerabilities refer to weaknesses in a computer system that unethical hackers can exploit to surpass privilege boundaries. A system becomes vulnerable when it possesses insecure coding, outdated hardware drivers, or a weak

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firewall, among other factors. These risks also need to be considered as negative factors that impact user trust, alongside the aforementioned elements that serve as "user perception boosters" for ChatGPT.

In conclusion, these researches shed light on the factors that influence trust in ChatGPT and its impact on users' intention to utilize the tool for travel planning, offering valuable insights for both researchers and travel service providers seeking to enhance the user experience with ChatGPT.

### **III. CURRENT SITUATION**

#### ***A. The practical use of ChatGPT for travel planning purposes in Vietnam***

In 2022, OpenAI marked a significant milestone by launching the Vietnamese version of ChatGPT, integrating advanced conversational AI into various aspects of Vietnamese society, particularly in tourism. Travelers have enthusiastically adopted the AI language model, transforming trip planning into a more interactive and user-friendly experience. ChatGPT's real-life conversational abilities have revolutionized the exploration of Vietnam, offering personalized recommendations for travel itineraries, local attractions, and dining options.

Based on Expedia's 2024 Travel Trends Report, compiled from vast datasets and a survey involving 20,000 global travelers, in 2023, only a small fraction of travelers utilized AI-powered search tools (such as ChatGPT) to plan their trips. However, this is expected to undergo significant changes by the year 2024. In particular, the trend of using smart guides and ChatGPT in tourism will help boost the stature of travel agents, the report noted. According to market research company Euromonitor International, travelers using ChatGPT to plan their travel itineraries is set to boom. According to the survey conducted by Expedia, more than half of the respondents in Expedia's survey express interest in using artificial intelligence to plan their next trip. Artificial intelligence is expected to streamline the planning and booking process, although some errors are still anticipated. Nearly 40% of travelers stated that they would utilize AI-powered search tools to ensure a seamless vacation experience.

The report "Government AI Readiness Index 2022" published by Oxford Insights (UK) stated that Vietnam has benefits, including a young population, strong levels of digital literacy, and the capacity to quickly adopt digital solutions - all of which are favorable conditions for the growth of AI. In Viet Nam, according to a survey on the use of ChatGPT to assist in travel planning revealed that out of a total of 300 respondents, 281 reported using ChatGPT on tourism. All of the surveyed participants were travelers to Vietnam, including both domestic and international tourists. The survey indicates that they utilized ChatGPT at various stages of their journeys, with a focus on pre-trip usage (29.6%), and less during and after the trip stages (Thuy et al., 2023). Furthermore, a communications employee of a company in Ho Chi Minh City, Viet Nam mentioned that his pre-travel routine used to involve reading reviews on platforms like TikTok, Instagram, and Facebook. However, since the emergence of ChatGPT, he regularly uses AI-powered chatbot applications as well as ChatGPT itself, in conjunction with social media to gather information about destinations and plan itineraries for his travels.

#### ***B. The challenges of using ChatGPT in the field of tourism in Vietnam***

While ChatGPT's technology offers numerous intriguing advantages, some experts argue that its use may diminish individuals' creativity and cognitive abilities, potentially having a negative impact on the learning process... Additionally, some experts warn that AI is not consistently reliable, and there is a possibility of occasional inaccuracies in the information it provides. According to the Director of the Institute of Information Technology, ChatGPT helps people answer most questions in a very short time. The response content is a compilation of information derived from the training data set that OpenAI utilizes to train ChatGPT. Users should independently verify and assess the authenticity of ChatGPT's responses, viewing it as a dependable reference rather than an absolute source. Not only the Director of the Institute of Information Technology but also the Chief Executive Officer of DTT Technologies indicates that, although ChatGPT can answer questions in a manner similar to a human, it has the capability to grasp the context of the queries and provide coherent responses.

### **IV. CONCLUSIONS**

In conclusion, the exploration of ChatGPT's influence on tourists' beliefs and travel planning intentions has unveiled intriguing insights. The integration of advanced language models in the tourism domain has not only empowered travelers with personalized and efficient information but has also subtly shaped their perceptions and decision-making processes. As we navigate this evolving landscape, it is imperative to remain cognizant of the dynamic interplay between technology and travelers' beliefs. By understanding and harnessing this impact responsibly, we can foster a symbiotic relationship that enhances the overall travel experience for individuals while respecting their autonomy and diverse perspectives.

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