Understanding Gen Z's AI adoption for travel planning and recommendation intent

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Abstract

Artificial intelligence (AI) has transformed travel planning by providing personalized recommendations, interactive assistance, and more efficient decision-making processes. Despite the growing adoption of AI technologies in tourism, limited studies have examined how younger travelers embrace these technologies and subsequently recommend them to others. This study investigates the factors influencing Generation Z's intention to use AI for travel planning and their willingness to recommend AI-based travel planning tools. Extending the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), this study collected data from 216 Indonesian Generation Z respondents who had prior experience using AI for travel planning and analyzed the data using Partial Least Squares Structural Equation Modeling and Multi-Group Analysis. The findings indicate that facilitating conditions, hedonic motivation, and habit are the primary drivers of Generation Z's intention to use AI for travel planning, which subsequently encourages their willingness to recommend AI technologies to others. Conversely, performance expectancy, effort expectancy, and social influence do not appear to play a substantial role in shaping adoption intentions. The findings suggest that tourism practitioners and AI developers should prioritize enjoyable, engaging, and seamlessly integrated digital experiences to encourage broader adoption and recommendation of AI-assisted travel planning technologies among younger travelers.

Keywords: *Artificial Intelligence, travel planning, Generation Z, UTAUT2, behavioral intention*

Introduction

Technological advancement has significantly transformed various aspects of human life, including how individuals search for information, make decisions, and organize travel activities (Foroughi et al., 2025). In an era of rapid technological development, artificial intelligence (AI) has emerged as a significant force across industries by enabling natural language processing, predictive analytics, and personalized recommendations (Seyfi et al., 2025). In the tourism sector, digital transformation has reshaped how travelers identify destinations, compare alternatives, seek information, and design travel experiences. Previously, travel planning relied heavily on travel agencies, guidebooks, and interpersonal recommendations. However, digitalization has shifted these traditional approaches toward more autonomous, efficient, and personalized travel experiences (Carvalho & Ivanov, 2024; Dwivedi et al., 2023). As a result, travelers increasingly expect fast, relevant, and customized information to support decision-making throughout the travel process (Foroughi et al., 2025).

The integration of technology into tourism has become increasingly important as travelers face growing complexity and information overload during travel planning. The

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availability of online travel agencies, digital reviews, recommendation systems, and social media platforms has broadened access to travel information while simultaneously increasing the difficulty of evaluating alternatives (Gursoy et al., 2023). Consequently, travelers increasingly require technologies that can efficiently filter information and provide tailored recommendations aligned with personal preferences and travel needs (Ali et al., 2023; Seyfi et al., 2025).

Among recent technological developments, Artificial Intelligence (AI) and Machine Learning (ML) have emerged as transformative innovations in tourism and hospitality. AI refers to systems designed to mimic human intelligence, while ML enables systems to learn from data and improve decision-making over time (Dwivedi et al., 2024). In tourism, AI technologies are increasingly used to automate customer service, personalize experiences, improve destination recommendations, and optimize business operations (Carvalho & Ivanov, 2024). Through predictive analytics and natural language processing, AI can analyze user preferences and behavioral data to generate more personalized tourism experiences (Buhalis et al., 2023).

One of the most widely discussed AI innovations is generative AI, particularly conversational platforms such as ChatGPT. Developed by OpenAI, ChatGPT utilizes Natural Language Processing (NLP) to provide contextual recommendations based on user inquiries (Foroughi et al., 2025). In tourism settings, ChatGPT can assist travelers in identifying destinations, suggesting attractions, recommending accommodations, and creating personalized itineraries. It can also provide practical travel information, including transportation options, weather conditions, cultural practices, and travel costs in real time, thereby reducing search effort and enhancing travel convenience (Gursoy et al., 2023; Wong et al., 2023).

The benefits of AI in tourism extend beyond travelers and also provide strategic advantages for tourism stakeholders. Hotels, restaurants, and tourism service providers increasingly adopt AI systems to improve customer engagement, automate responses, and deliver more personalized services (Carvalho & Ivanov, 2024). AI technologies can improve operational efficiency and customer satisfaction, while recommendation systems help travelers discover tourism options aligned with their preferences (Dwivedi et al., 2024). As AI adoption continues to expand, understanding travelers' behavioral acceptance of AI-based travel planning systems becomes increasingly important.

The growing relevance of AI in tourism aligns with the rapid development of Indonesia's tourism sector. Tourism has become one of Indonesia's strategic sectors, contributing to economic growth, employment, and regional development. Following the post-pandemic recovery period, domestic tourism has grown significantly. According to the Indonesian Central Statistics Agency, domestic tourist trips exceeded 1 billion in 2024, reflecting a strong recovery in tourism demand (BPS, 2025). This growth highlights increasing public interest in tourism and the growing importance of digital travel-planning tools. As tourism mobility expands, travelers increasingly rely on digital platforms to search for destinations, compare alternatives, and organize travel activities more efficiently.

Among various traveler segments, Generation Z represents one of the most relevant groups for investigating AI adoption in travel planning. Commonly defined as individuals born between 1997 and 2012, Generation Z is widely recognized as a digitally native generation raised alongside internet technologies, mobile devices, and social media

ecosystems (Slepian et al., 2024; Seyfi et al., 2025). Compared with previous generations, Gen Z demonstrates higher digital literacy, greater familiarity with emerging technologies, and stronger dependence on digital platforms in everyday activities (Slepian et al., 2024; Febliza et al., 2024). Previous studies also indicate that younger generations tend to show greater openness toward AI-based services due to lower technological anxiety and stronger adaptability to innovation (Baham et al., 2023; Vitezić & Perić, 2021).

Generation Z also demonstrates distinctive travel characteristics that make this cohort particularly relevant in tourism studies. Gen Z travelers tend to travel more frequently, prioritize meaningful and personalized experiences, and actively seek authentic tourism activities aligned with their identities and preferences (Seyfi et al., 2025; Robinson & Schänzel, 2019). They are also more digitally connected and highly dependent on online information during travel decision-making processes (Slepian et al., 2024; Vitezić & Perić, 2021). Social media platforms, travel influencers, online reviews, and recommendation systems substantially shape their travel preferences and destination choices (Seyfi et al., 2025; Wong et al., 2023). Furthermore, Gen Z travelers are more likely to use digital technologies throughout their travel journeys, including searching for inspiration, comparing prices, booking accommodations, and planning itineraries (Foroughi et al., 2025; Carvalho & Ivanov, 2024). Their familiarity with digital ecosystems contributes to greater acceptance of AI-enabled services, suggesting that AI-based travel planning systems, such as ChatGPT, may increasingly shape travel decision-making among younger travelers (Slepian et al., 2024; Baham et al., 2023; Ali et al., 2023; Foroughi et al., 2025).

Despite the growing adoption of Artificial Intelligence (AI) in tourism, limited studies have examined travelers' behavioral acceptance of AI-powered travel planning systems. Existing research has mainly focused on the technical capabilities and practical benefits of AI in tourism, while fewer studies have investigated the factors influencing travelers' intentions to adopt AI for travel planning (Carvalho & Ivanov, 2024; Dwivedi et al., 2024). As AI-assisted systems become increasingly integrated into tourism experiences, understanding travelers' acceptance behavior becomes increasingly important.

The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) has been widely used to explain individuals' behavioral intention to adopt emerging technologies through constructs such as performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, and habit (Venkatesh et al., 2012). In the tourism context, Foroughi et al. (2025) extended UTAUT2 to examine travelers' intention to use ChatGPT for travel planning and found that UTAUT2 constructs significantly influence behavioral intention. However, the study only focused on intention to use and did not examine post-adoption outcomes. Meanwhile, Ali et al. (2023) explored travelers' trust toward personalized travel recommendations generated by ChatGPT, while Seyfi et al. (2025) examined travelers' adoption of AI-generated travel advice across generations. Nevertheless, neither study integrated UTAUT2 with post-adoption behavioral outcomes.

Accordingly, a research gap remains regarding how technology acceptance factors influence not only travelers' behavioral intention to use AI for travel planning but also their willingness to recommend such technologies. Behavioral intention reflects an individual's intention to use technology, whereas willingness to recommend represents users' tendency to advocate or recommend technology to others (Ali et al., 2023; Seyfi et al., 2025). Despite their conceptual differences, studies integrating both constructs within a single framework

remain limited, particularly in tourism contexts. Beyond addressing the identified research gaps, this study also aims to contribute theoretically to the UTAUT2 literature. Specifically, it extends the framework by incorporating Willingness to Recommend as a post-adoption outcome, examines whether the traditional UTAUT2 determinants remain applicable in the context of generative AI for travel planning among Generation Z, and investigates whether gender and travel frequency serve as boundary conditions through multi-group analysis.

Table 1. Comparison of the Present Study with Previous Studies

Aspect	Foroughi et al. (2025)	Ali et al. (2023)	Seyfi et al. (2025)	This Study
Research context	AI-assisted travel planning	AI-enabled tourism services	AI in smart tourism	AI-assisted travel planning among Indonesian Generation Z
AI technology	AI chatbots for travel planning	AI-enabled services	AI technologies in tourism	Generative AI applications (e.g., ChatGPT, Gemini, and similar LLM-based applications)
Theoretical framework	UTAUT2	UTAUT	Technology acceptance and recommendation behavior	Extended UTAUT2
Main objective	Examinefactors influencing AI adoption intention	Examine AI acceptance and recommendation behavior	Investigate AI-enabled tourism experiences and recommendation	Examine AI adoption intention and willingness to recommend generative AI for travel planning
Dependent variable(s)	Behavioral Intention	Recommendation behavior	Willingness to Recommend	Behavioral Intention and Willingness to Recommend
Target respondents	General AI users	General tourists	Tourism service users	Indonesian Generation Z
Analytical approach	PLS-SEM	SEM	SEM	PLS-SEM with Multi-Group Analysis (Gender and Travel Frequency)
Research contribution	Explains determinants of AI adoption intention	Explains recommendation behavior toward AI-enabled services	Explains recommendation in AI-enabled tourism	Extends UTAUT2 by incorporating Willingness to Recommend as a post-adoption outcome and examining group differences in AI adoption for travel planning among Indonesian Generation Z.

This study focuses on the initial adoption stage of AI-assisted travel planning among Generation Z. Specifically, it examines the factors influencing individuals' behavioral intention to use AI for travel planning and the subsequent effect of behavioral intention on their willingness to recommend AI to others. Accordingly, this study does not investigate continued use intention or actual post-adoption usage behavior, but rather emphasizes the determinants of initial technology acceptance. The present study focuses on Generation Z because this generation represents the most active users of artificial intelligence in Indonesia. According to the Indonesian Internet Service Providers Association (APJII), 43.7% of Generation Z actively use AI, the highest proportion among all generations, indicating that AI has become an integral part of their daily activities. Furthermore, as digital natives, Generation Z is generally more familiar with emerging digital technologies and more willing to experiment with generative AI applications than older generations. Consequently, Generation Z provides an appropriate context for investigating the adoption of generative AI in travel planning.

Furthermore, empirical evidence on the adoption of AI-based travel planning among Generation Z in emerging tourism markets such as Indonesia remains scarce. Considering that Generation Z represents one of the most digitally engaged traveler segments, understanding their acceptance of AI technologies is increasingly relevant (Slepian et al., 2024; Seyfi et al., 2025). In addition, differences in gender and travel frequency may influence technology adoption behavior, yet limited studies have explored these differences using a Multi-Group Analysis (MGA) approach (Baham et al., 2023; Foroughi et al., 2025). Therefore, this study aims to extend the UTAUT2 framework by incorporating willingness to recommend as a post-adoption outcome in AI-assisted travel planning among Generation Z in Indonesia. Specifically, this study examines the influence of performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, and habit on behavioral intention, as well as the influence of behavioral intention on willingness to recommend. This study also applies MGA to examine differences by gender and travel-frequency groups.

Artificial Intelligence (AI) has become an increasingly important technology across industries, including tourism and hospitality. AI refers to computational systems capable of simulating human intelligence to perform tasks such as prediction, recommendation, and decision-making (Dwivedi et al., 2024). In tourism, AI has transformed how travelers search for information, compare alternatives, and organize travel experiences through automation and personalized recommendations (Carvalho & Ivanov, 2024). The rapid development of generative AI, particularly conversational platforms such as ChatGPT, has further enhanced travel planning by enabling users to obtain contextual recommendations, personalized itineraries, and real-time travel information more efficiently (Foroughi et al., 2025).

Travel planning has become increasingly digitalized due to the widespread use of online travel agencies, review platforms, social media, and recommendation systems. While digitalization broadens access to information, it also creates information overload, making decision-making more complex for travelers (Gursoy et al., 2023). In this context, AI-based technologies can help travelers reduce information-search effort and improve travel decision-making by providing relevant and personalized recommendations aligned with individual preferences (Ali et al., 2023). In this study, travel planning refers to the use of generative AI to support pre-trip decision-making activities, including searching for

destinations, obtaining travel information, developing itineraries, estimating travel budgets, identifying tourist attractions, selecting transportation and accommodation options, and seeking travel recommendations.

The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) is one of the most widely adopted theoretical frameworks for explaining individuals' behavioral intention to use technology (Venkatesh et al., 2012). UTAUT2 posits that technology acceptance is influenced by several determinants: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, and habit. Previous studies have demonstrated the predictive capability of UTAUT2 in explaining user acceptance toward emerging technologies, including AI-based systems (Foroughi et al., 2025; Dwivedi et al., 2024). In the tourism context, UTAUT2 is particularly relevant because travelers increasingly depend on digital technologies to support travel planning and decision-making.

Behavioral intention refers to an individual's intention or willingness to adopt and use a technology in the future (Venkatesh et al., 2012). In AI-based travel planning, behavioral intention reflects travelers' tendency to use technologies such as ChatGPT for information searching, itinerary planning, and travel decision-making (Foroughi et al., 2025). Meanwhile, willingness to recommend is a post-adoption behavioral outcome that reflects users' tendency to recommend a service or technology to others based on positive experiences and evaluations (Ali et al., 2023; Seyfi et al., 2025). Although willingness to recommend differs conceptually from behavioral intention, favorable usage intention may encourage stronger recommendation behavior toward AI-based travel planning systems.

Performance expectancy reflects the extent to which individuals perceive that technology can improve efficiency and effectiveness in performing specific tasks (Foroughi et al., 2025). In travel planning, AI technologies such as ChatGPT can assist travelers in obtaining relevant information, generating personalized itineraries, and simplifying travel-related decision-making (Carvalho & Ivanov, 2024; Foroughi et al., 2025). Previous studies have consistently reported that perceived usefulness and performance benefits positively influence behavioral intention to adopt AI in tourism and digital services (Foroughi et al., 2025; Seyfi et al., 2025; Topsakal & Çuhadar, 2025). For Generation Z travelers, who prioritize convenience and efficiency, AI-based travel planning systems may offer practical support in enhancing travel experiences. Therefore, the hypothesis proposed in this study is as follows:

H1: Performance expectancy positively influences behavioral intention to use AI for travel planning.

Effort expectancy reflects the extent to which individuals perceive a technology as easy to learn and use (Foroughi et al., 2025). In AI-assisted travel planning, conversational platforms such as ChatGPT enable travelers to interact naturally through text-based communication, thereby simplifying information search and itinerary planning (Carvalho & Ivanov, 2024). Previous studies reported that technologies perceived as user-friendly and easy to operate tend to strengthen behavioral intention toward AI adoption and digital travel services (Foroughi et al., 2025; Seyfi et al., 2025; Baham et al., 2023; Topsakal & Çuhadar, 2025). In tourism and digital service settings, ease of use has been recognized as an important factor influencing travelers' willingness to adopt AI-enabled technologies (Huang et al., 2024). Since Generation Z is highly familiar with digital platforms, convenient

and easy-to-use AI systems may encourage a stronger intention to adopt AI for travel planning. Therefore, the hypothesis proposed in this study is as follows:
H2: Effort expectancy positively influences behavioral intention to use AI for travel planning.

Social influence reflects the extent to which individuals' decisions to adopt a technology are shaped by recommendations, opinions, and expectations from important others, including peers and online communities (Foroughi et al., 2025). In travel planning, recommendations from friends, social media influencers, and digital communities may influence travelers' perceptions toward AI-assisted travel planning tools such as ChatGPT (Seyfi et al., 2025). Previous studies reported that social influence positively affects behavioral intention toward emerging technologies and AI-based services, particularly among younger and digitally connected users (Chi et al., 2022; Foroughi et al., 2025; Baham et al., 2023; Zhou et al., 2023). Since Generation Z is highly exposed to digital interactions and social media environments, stronger social encouragement may increase their intention to adopt AI for travel planning. Therefore, the hypothesis proposed in this study is as follows:
H3: Social influence positively influences behavioral intention to use AI for travel planning.

Facilitating conditions reflect the extent to which individuals perceive the availability of resources, infrastructure, and support necessary to use a technology effectively (Foroughi et al., 2025). In AI-assisted travel planning, access to smartphones, stable internet connectivity, and digital skills may help travelers use AI technologies such as ChatGPT efficiently (Carvalho & Ivanov, 2024). Previous studies reported that facilitating conditions positively affect behavioral intention toward digital technologies and AI-enabled systems (Foroughi et al., 2025; Dwivedi et al., 2024; Seyfi et al., 2025; Sukthankar et al., 2026). Since Generation Z is generally familiar with digital technologies and online platforms, favorable facilitating conditions may strengthen their intention to adopt AI for travel planning. Therefore, the hypothesis proposed in this study is as follows:
H4: Facilitating conditions positively influence behavioral intention to use AI for travel planning.

Hedonic motivation reflects the extent to which individuals perceive enjoyment, pleasure, and excitement from using a technology (Foroughi et al., 2025). In AI-assisted travel planning, technologies such as ChatGPT may provide engaging and interactive experiences through conversational interactions and personalized recommendations, making travel planning more enjoyable and convenient (Carvalho & Ivanov, 2024; Kim & Koo, 2024). Previous studies reported that hedonic motivation positively affects behavioral intention toward AI-enabled systems and digital technologies, particularly among younger users who value interactive and enjoyable experiences (Foroughi et al., 2025; Seyfi et al., 2025; Dwivedi et al., 2024; Zhou et al., 2023). Since Generation Z tends to prefer engaging, personalized digital experiences, greater enjoyment of using AI may strengthen their intention to adopt it for travel planning. Therefore, the hypothesis proposed in this study is as follows:
H5: Hedonic motivation positively influences behavioral intention to use AI for travel planning.

Habit reflects the extent to which individuals tend to perform behaviors automatically,

based on prior experience and repeated use of technology (Foroughi et al., 2025). In the context of travel planning, individuals accustomed to using digital platforms to search for information and make decisions may be more likely to adopt AI-assisted technologies such as ChatGPT (Carvalho & Ivanov, 2024). Previous studies reported that habit positively affects behavioral intention toward AI-enabled systems and digital technologies, particularly among younger and digitally connected users (Foroughi et al., 2025; Dwivedi et al., 2024; Baham et al., 2023; Seyfi et al., 2025). Since Generation Z is highly familiar with digital technologies and online interactions, habitual use of digital platforms may strengthen their intention to adopt AI for travel planning. Therefore, the hypothesis proposed in this study is as follows:

H6: Habit positively influences behavioral intention to use AI for travel planning.

Behavioral Intention reflects an individual's personal intention to adopt and continue using AI for travel planning, whereas Willingness to Recommend represents a post-adoption behavioral outcome in which users voluntarily advocate the technology to others based on their evaluations and experiences. Thus, Behavioral Intention focuses on one's own future usage, while Willingness to Recommend reflects external advocacy behavior directed toward other potential users (Ali et al., 2023; Seyfi et al., 2025). From the perspective of technology acceptance theory, individuals who develop a strong intention to adopt a technology are more likely to form favorable evaluations toward that technology, increasing their likelihood of recommending it to others. Recommendation behavior represents an important post-adoption consequence because users generally recommend technologies only when they perceive them as beneficial, useful, and worthy of continued use.

In the context of AI-assisted travel planning, travelers with stronger behavioral intentions are more likely to recognize the usefulness, convenience, and efficiency offered by AI tools such as ChatGPT in searching destinations, planning itineraries, and obtaining travel-related information. These positive evaluations may subsequently encourage users to share their experiences and recommend the technology to friends, relatives, or online communities (Foroughi et al., 2025). This mechanism is particularly relevant for Generation Z, who actively exchange travel experiences and technology-related information through digital platforms and social media. As digitally connected users, Generation Z frequently engages in electronic word-of-mouth (e-WOM), making recommendation behavior an important extension of technology acceptance beyond individual usage.

Previous studies have consistently shown that favorable behavioral responses toward digital technologies and AI-enabled services increase users' willingness to recommend those technologies, particularly when users perceive high levels of usefulness, convenience, trust, and satisfaction (Ali et al., 2023; Seyfi et al., 2025; Dwivedi et al., 2024). Therefore, individuals with stronger behavioral intentions toward AI-assisted travel planning are expected to exhibit greater willingness to recommend the technology to others. Therefore, the hypothesis proposed in this study is as follows:

H7: Behavioral intention positively influences willingness to recommend AI for travel planning.

Figure 1 illustrates the research model proposed in this study. The model explains the relationships among UTAUT2 dimensions, namely performance expectancy, effort

expectancy, social influence, facilitating conditions, hedonic motivation, and habit, toward behavioral intention to use AI for travel planning, as well as the influence of behavioral intention on willingness to recommend.

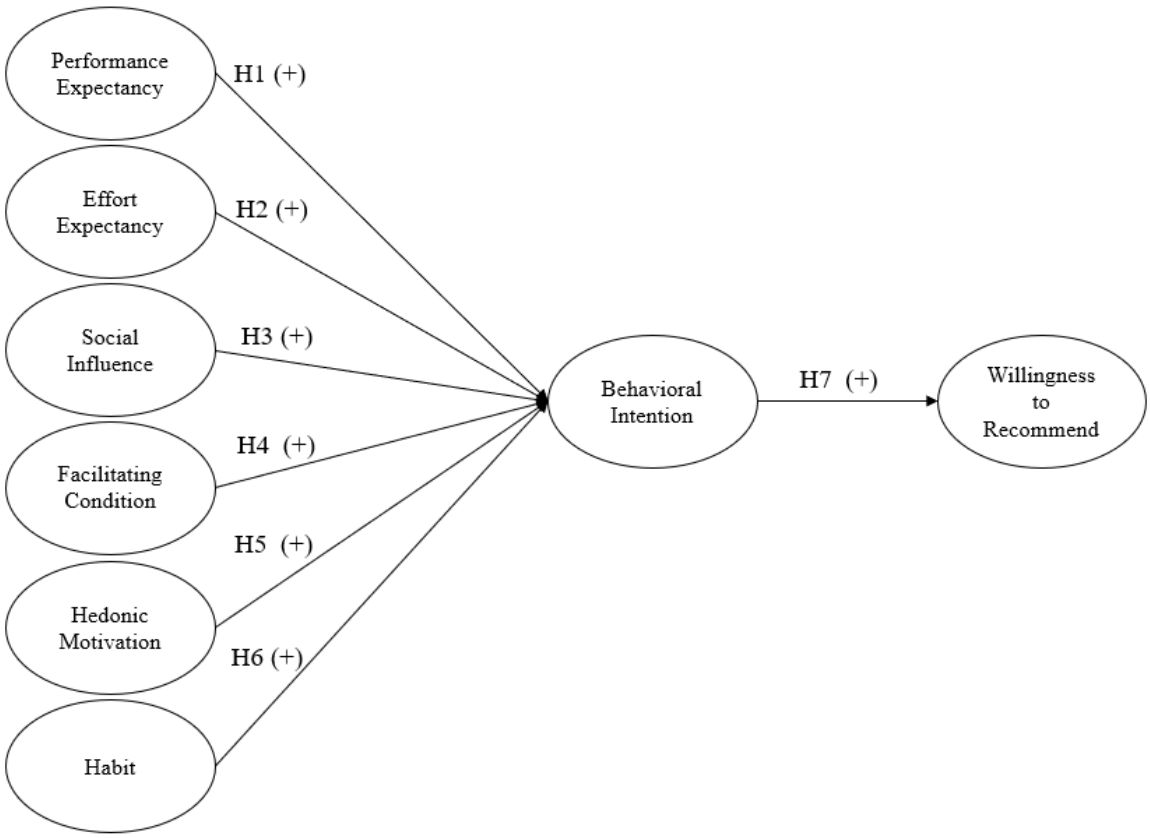

Figure 1. Research Model

Methods

This study employed an explanatory research design to examine the causal relationships among variables related to the adoption of Artificial Intelligence (AI) in travel planning among Generation Z. The explanatory approach was selected to test the proposed relationships derived from previous theoretical frameworks, particularly in understanding how factors influence behavioral intention and willingness to recommend AI for travel planning purposes. Through this approach, the proposed hypotheses were empirically examined using systematic statistical testing.

The population of this study consisted of Generation Z individuals in Indonesia aged 17 to 29 years in 2026 who had experience using Artificial Intelligence (AI), including generative AI platforms such as ChatGPT and Gemini, for any purpose. Respondents were expected to have sufficient familiarity with AI technologies to understand and evaluate the questionnaire items appropriately. This study used a non-probability sampling method, specifically convenience sampling, in which respondents were selected based on their accessibility and willingness to participate. The use of convenience sampling was considered appropriate due to the exploratory nature of respondents' experiences with AI-based travel planning. The questionnaire was distributed online through various social media platforms to reach a broader range of Generation Z respondents across Indonesia.

Data were collected using a structured questionnaire consisting of measurement items adapted from previous studies. All constructs were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The measurement items for performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, and habit were adapted from Foroughi et al. (2025). The behavioral intention construct was adapted from Foroughi et al. (2025) and Ali et al. (2023), while willingness to recommend was adapted from Seyfi et al. (2025). Prior studies served as the primary basis for adapting the measurement indicators to ensure content validity and consistency with established theoretical constructs. Participation in this study was voluntary. All respondents were informed about the purpose of the study and provided informed consent before completing the questionnaire. The questionnaire was anonymous, and no personally identifiable information was collected.

To analyze the proposed model, this study employed Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM was selected because it is particularly suitable for predictive and theory-extension research involving complex structural models with multiple latent constructs. Moreover, PLS-SEM is appropriate for examining the relationships among latent variables while maximizing the explained variance of endogenous constructs and does not require strict multivariate normality assumptions (Hair et al., 2022). The analysis was conducted in two main stages, namely the evaluation of the measurement model and the assessment of the structural model. The measurement model evaluation focused on assessing reliability and validity, while the structural model evaluation examined the hypothesized relationships among variables. Furthermore, Multi-Group Analysis (MGA) was performed to investigate potential differences across gender groups and travel frequency categories, specifically between infrequent travelers and frequent travelers. MGA was employed because it enables the comparison of structural relationships across predefined groups, thereby identifying potential heterogeneity in the proposed research model (Henseler et al., 2015; Hair et al., 2022). The use of PLS-SEM is also consistent with previous studies investigating AI adoption and technology acceptance in tourism and travel planning, including those by Foroughi et al. (2025) and Ali et al. (2023). Similarly, MGA has been widely employed to examine heterogeneity across demographic groups in technology adoption research, providing additional insights beyond the overall structural relationships (Hair et al., 2022).

Result and Discussions

A total of 216 valid responses were collected and included in the analysis. The respondents comprised Generation Z individuals aged 17 to 25 years who had previously used Artificial Intelligence (AI) for travel planning. Regarding gender, the sample was dominated by male respondents, comprising 126 participants (58.3%), while the remaining were female. In terms of occupation, the vast majority of respondents were university students (214; 99.1%), of whom 22 simultaneously worked while pursuing their studies. With respect to travel behavior, most respondents were categorized as infrequent travelers (156; 72.2%), while the remaining were classified as frequent travelers. The demographic characteristics indicate that the sample predominantly consisted of digitally native university students with relatively low travel frequency, making them an appropriate group for examining AI adoption in travel planning among Generation Z.

Table 2 presents the results of indicator reliability, internal consistency reliability, and convergent validity assessments. All measurement items exhibited outer loading values above the recommended threshold of 0.70, ranging from 0.709 to 0.951, indicating satisfactory indicator reliability. Furthermore, the Cronbach's alpha values ranged from 0.715 to 0.935, while rho_A values varied between 0.758 and 0.939. All constructs also demonstrated composite reliability values exceeding 0.70, ranging from 0.837 to 0.958, indicating adequate internal consistency. In addition, the average variance extracted (AVE) values ranged from 0.620 to 0.885, surpassing the recommended cut-off value of 0.50 and indicating satisfactory convergent validity. Overall, these findings suggest that the measurement model demonstrates adequate reliability and validity for subsequent evaluation of the structural model (Hair et al., 2022; Henseler et al., 2015).

Table 2. Outer Loading, Cronbach's Alpha, rho_A, Composite Reliability, and AVE

Items	Indicators	Loading	Cronbach's Alpha	rho_A	CR	AVE
Performance Expectancy			0.847	0.847	0.891	0.620
PE1	Information provided by AI would make my travel planning faster.	0.757				
PE2	Information provided by AI would make it easier for me to compare different travel options.	0.794				
PE3	Information provided by AI would improve my travel planning.	0.788				
PE4	Information provided by AI would help me make better travel decisions.	0.800				
PE5	I find the information provided by AI useful for my travel planning.	0.797				
Effort Expectancy			0.789	0.858	0.873	0.698
EE1	Learning how to use AI is easy for me.	0.709				
EE2	Using AI to find information needed for travel planning is easy for me.	0.891				
EE3	Using information provided by AI to plan a trip is easy for me.	0.894				
Social Influence			0.822	0.836	0.894	0.737
SI1	People who are important to me support my use of AI for travel planning.	0.820				
SI2	People whose opinions I value think that I should use AI for travel planning.	0.877				
SI3	I have the necessary resources to use AI for travel planning.	0.877				
Facilitating Condition			0.715	0.758	0.837	0.632

Items	Indicators	Loading	Cronbach's Alpha	rho_A	CR	AVE
FC1	I have the necessary knowledge to use AI for travel planning.	0.767				
FC2	I feel comfortable using AI for travel planning experiences.	0.862				
FC3	I do not experience difficulties in using AI for travel planning.	0.751				
Hedonic Motivation			0.892	0.893	0.933	0.822
HM1	Using AI for travel planning is enjoyable.	0.908				
HM2	Using AI for travel planning provides an enjoyable experience.	0.906				
HM3	Using AI for travel planning is entertaining.	0.906				
Habit			0.935	0.939	0.958	0.885
HB1	I frequently use AI/chatbots for travel planning.	0.926				
HB2	I am accustomed to using AI/chatbots for travel planning.	0.945				
HB3	Using AI/chatbots for travel planning has become a habit for me.	0.951				
	I frequently use AI/chatbots for travel planning.					
Behavioral Intention			0.881	0.884	0.910	0.628
BI1	I would not hesitate to use AI for travel planning.	0.761				
BI2	I expect to use AI for planning my trips in the future.	0.812				
BI3	I intend to seek travel advice through AI.	0.795				
BI4	I am willing to purchase tour and travel products recommended by AI.	0.760				
BI5	I would encourage others to use AI for travel planning.	0.836				
BI6	I would tell others about the benefits of using AI for planning and organizing trips.	0.788				
Willingness to Recommend			0.920	0.921	0.940	0.759
WR1	I am willing to recommend the use of AI for travel planning to others.	0.872				
WR2	I would suggest friends or family use AI when planning travel.	0.893				
WR3	I am willing to share my positive experiences of using AI for travel planning with others.	0.874				

Items	Indicators	Loading	Cronbach's Alpha	rho_A	CR	AVE
WR4	I would recommend AI as a tool for travel planning.	0.881				
WR5	If someone asks for travel advice, I would suggest using AI.	0.835				

The assessment of discriminant validity using the Fornell-Larcker criterion demonstrates satisfactory results. The square root of the AVE for each construct exceeds its correlations with all other constructs. For instance, Behavioral Intention exhibited a square root of AVE value of 0.792, while Willingness to Recommend showed a value of 0.871, both of which were greater than their respective inter-construct correlations. Similar patterns were observed across all latent variables, indicating that each construct captures a distinct concept and is empirically different from the other constructs included in the model. Accordingly, the measurement model satisfies the discriminant validity criterion recommended by Fornell and Larcker (1981) and Hair et al. (2022).

Table 3. Discriminant Validity

Variable	BE	EE	FC	HB	HM	PE	SI	WR
BE	0.792							
EE	0.365	0.836						
FC	0.582	0.563	0.795					
HB	0.676	0.242	0.432	0.941				
HM	0.710	0.494	0.626	0.659	0.907			
PE	0.551	0.622	0.634	0.449	0.658	0.787		
SI	0.589	0.416	0.597	0.552	0.631	0.539	0.859	
WR	0.825	0.378	0.520	0.562	0.642	0.500	0.556	0.871

The bootstrapping results reveal that only four of the seven proposed hypotheses are statistically supported. Specifically, facilitating conditions positively influence behavioral intention ($\beta = 0.177$, $p = 0.013$). In contrast, hedonic motivation ($\beta = 0.296$, $p < 0.001$) and habit ($\beta = 0.332$, $p < 0.001$) also demonstrate significant positive effects on behavioral intention to use AI for travel planning. In addition, behavioral intention significantly affects willingness to recommend AI for travel planning ($\beta = 0.825$, $p < 0.001$). Conversely, the effects of performance expectancy ($\beta = 0.074$, $p = 0.312$), effort expectancy ($\beta = -0.045$, $p = 0.533$), and social influence ($\beta = 0.093$, $p = 0.203$) are statistically insignificant. Therefore, H4, H5, H6, and H7 are supported, whereas H1, H2, and H3 are not supported. Following the recommendations of Hair et al. (2022), hypotheses are considered supported when the p-value is below 0.05.

To further explore potential group differences, a multi-group analysis (MGA) was conducted based on gender. The respondents were classified into two groups: male ($n = 126$) and female ($n = 90$). These group sizes correspond to the demographic characteristics presented earlier and provide sufficient observations for conducting PLS-MGA. The multi-group analysis indicates both similarities and differences between male and female respondents regarding the determinants of AI adoption for travel planning. Across both groups, hedonic motivation, habit, and behavioral intention toward willingness to

recommend remain significant predictors. Hedonic motivation significantly influences behavioral intention among male respondents (β = 0.288, p = 0.002) and female respondents (β = 0.276, p = 0.033). Likewise, habit demonstrates significant positive effects among males (β = 0.403, p < 0.001) and females (β = 0.239, p = 0.001). Moreover, behavioral intention significantly predicts willingness to recommend in both groups, with path coefficients of 0.810 for males and 0.854 for females (p < 0.001). However, social influence and facilitating conditions are significant only among female respondents, whereas performance expectancy and effort expectancy remain insignificant for both groups. These findings suggest that certain determinants of AI adoption differ according to gender.

Table 4. Hypothesis Test Results

H	Hyphotesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Result
H1	PE --> BI	0.074	0.079	0.073	1.012	0.312	Unsupported
H2	EF --> BI	-0.045	-0.043	0.073	0.623	0.533	Unsupported
H3	SI --> BI	0.093	0.090	0.073	1.274	0.203	Unsupported
H4	FC --> BI	0.177	0.180	0.071	2.480	0.013	Supported
H5	HM --> BI	0.296	0.292	0.073	4.062	0.000	Supported
H6	HB --> BI	0.332	0.333	0.057	5.836	0.000	Supported
H7	BI --> WR	0.825	0.825	0.026	32.042	0.000	Supported

A second MGA was conducted based on respondents' travel frequency. Respondents were categorized as infrequent travelers (n = 156), defined as individuals who had traveled no more than twice during the previous six months, and frequent travelers (n = 60), defined as individuals who had traveled more than twice during the same period. Differences in travel frequency also produce varying patterns in the proposed relationships. The findings show that hedonic motivation, habit, and behavioral intention toward willingness to recommend are consistently significant among both infrequent and frequent travelers. In contrast, performance expectancy and effort expectancy remain insignificant regardless of travel frequency. Furthermore, social influence and facilitating conditions are insignificant among infrequent travelers but become significant among frequent travelers. In particular, facilitating conditions significantly influence behavioral intention among frequent travelers (β = 0.204, p = 0.047), whereas the relationship is insignificant among infrequent travelers (β = 0.140, p = 0.201). Overall, the results indicate that travel frequency partially differentiates the factors influencing Generation Z's intention to use AI for travel planning.

The results indicate that facilitating conditions (H4), hedonic motivation (H5), and habit (H6) significantly influence behavioral intention. In contrast, behavioral intention positively influences willingness to recommend (H7), suggesting that resources, enjoyment, and digital routines collectively drive Gen Z's AI adoption and subsequent recommendation behavior (Dwivedi et al., 2024; Foroughi et al., 2025; Ali et al., 2023). Conversely, performance expectancy (H1), effort expectancy (H2), and social influence (H3) were unsupported. The insignificance of H1 suggests that Gen Z, as a digitally native cohort, views efficiency as a baseline expectation rather than an exceptional benefit that motivates adoption (Slepian et al., 2024; Febliza et al., 2024); thus, perceived usefulness does not significantly elevate their intention (Baham et al., 2023). Similarly, the unsupported H2 is

attributed to Gen Z's high digital literacy. Given their extensive familiarity with intuitive interfaces, interacting with conversational AI requires minimal cognitive effort, rendering ease of use insignificant in predicting intention (Vitezić & Perić, 2021; Seyfi et al., 2025). Furthermore, the lack of significance for H3 indicates that Gen Z's decision to adopt AI is independent of normative pressures. Their engagement with emerging technologies is driven by individual exploration rather than social compliance, meaning their intention does not rely on external validation from peers (Carvalho & Ivanov, 2024; Baham et al., 2023).

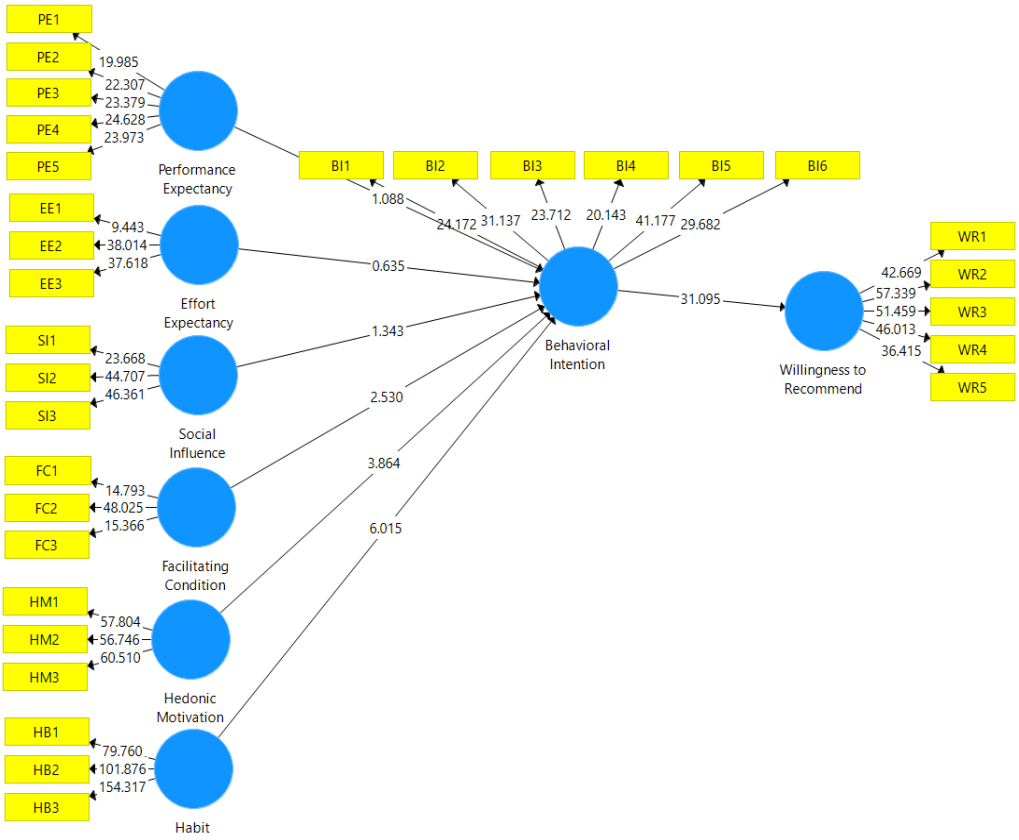

Figure 2. Structural Model Assessment

Table 5. Results of Multi-Group Analysis (MGA) Based on Gender

H	Hyphotesis	Male			Female		
		Path Coeff.	P Values	Result	Path Coeff.	P Values	Result
H1	PE --> BI	0.130	0.148	Unsupported	0.026	0.846	Unsupported
H2	EF --> BI	-0.028	0.731	Unsupported	-0.058	0.609	Unsupported
H3	SI --> BI	0.018	0.858	Unsupported	0.219	0.037	Supported
H4	FC --> BI	0.140	0.201	Unsupported	0.204	0.047	Supported
H5	HM --> BI	0.288	0.002	Supported	0.276	0.033	Supported
H6	HB --> BI	0.403	0.000	Supported	0.239	0.001	Supported
H7	BI --> WR	0.810	0.000	Supported	0.854	0.000	Supported

Table 6. Results of Multi-Group Analysis Based on Travel Frequency

H	Hyphotesis	Infrequent Travelers			Frequent Travelers		
		Path Coeff.	P Values	Result	Path Coeff.	P Values	Result
H1	PE --> BI	0.130	0.148	Unsupported	0.026	0.846	Unsupported
H2	EF --> BI	-0.028	0.731	Unsupported	-0.058	0.609	Unsupported
H3	SI --> BI	0.018	0.858	Unsupported	0.219	0.037	Supported
H4	FC --> BI	0.140	0.201	Unsupported	0.204	0.047	Supported
H5	HM --> BI	0.288	0.002	Supported	0.276	0.033	Supported
H6	HB --> BI	0.403	0.000	Supported	0.239	0.001	Supported
H7	BI --> WR	0.810	0.000	Supported	0.854	0.000	Supported

The multi-group analysis based on gender demonstrates that hedonic motivation (H5), habit (H6), and behavioral intention influencing willingness to recommend (H7) remain consistently supported across both cohorts, reinforcing that enjoyment and digital routines are universal drivers of AI adoption irrespective of gender (Zhou et al., 2023). However, for male travelers, performance expectancy (H1), effort expectancy (H2), social influence (H3), and facilitating conditions (H4) were unsupported. This implies that male Gen Z travelers are predominantly motivated by hedonic and habitual aspects, perceiving AI as an engaging interface rather than a utilitarian tool; consequently, external factors such as social encouragement or perceived usefulness fail to shape their intention (Foroughi et al., 2025). For female travelers, while social influence and facilitating conditions emerged as significant, H1 and H2 remained unsupported. This suggests that female digital natives also consider usefulness and ease of use as standard technological givens, with their intention contingent on possessing resources and receiving social validation rather than on utilitarian attributes (Seyfi et al., 2025).

In the multi-group analysis based on travel frequency, hedonic motivation (H5), habit (H6), and behavioral intention influencing willingness to recommend (H7) were supported for both groups, confirming that interactive enjoyment and digital habits fundamentally drive adoption across varying travel experiences (Gursoy et al., 2023). Conversely, for infrequent travelers, performance expectancy (H1), effort expectancy (H2), social influence (H3), and facilitating conditions (H4) were entirely unsupported. This suggests that infrequent travelers lack practical exposure to complex planning, making them less equipped to evaluate AI's actual performance or the resources required; thus, their intentions are detached from the realities of trip organization and driven exclusively by technological curiosity and general digital habits (Wong et al., 2023). For frequent travelers, H1 and H2 also remained unsupported. This provides compelling evidence that even among travelers accustomed to making complex decisions, perceived usefulness and ease of use are not primary motivational drivers. Ultimately, for Generation Z, AI adoption for travel planning transcends traditional utilitarian values, relying predominantly on the technology's capacity to deliver an engaging, habit-forming experience regardless of travel frequency (Topsakal & Çuhadar, 2025).

This study provides several theoretical contributions to the technology acceptance literature. First, it extends UTAUT2 by introducing Willingness to Recommend as a post-adoption outcome, demonstrating that technology acceptance may lead to users' advocacy

behavior. Second, the findings refine the explanatory power of UTAUT2 by showing that traditional utilitarian determinants (performance expectancy and effort expectancy) are less influential than hedonic motivation, habit, and facilitating conditions in explaining Generation Z's intention to adopt generative AI for travel planning. Third, the findings suggest that the determinants of generative AI adoption differ from those of conventional digital technologies, highlighting the unique characteristics of AI-based services. Finally, the multi-group analysis identifies gender and travel frequency as important boundary conditions, providing a more nuanced understanding of AI adoption among different user segments.

Conclusion

This study demonstrates that facilitating conditions, hedonic motivation, and habitual use of digital technologies primarily drive Generation Z's intention to use AI for travel planning. The findings indicate that Generation Z tends to adopt AI-based travel planning systems not merely because of their perceived usefulness or ease of use, but because adequate digital resources support such technologies, provide enjoyable and engaging experiences, and have become integrated into their daily digital routines. Furthermore, stronger intentions to use AI subsequently encourage Generation Z travelers to recommend AI-based travel planning technologies to others, highlighting the potential of AI applications to generate positive word-of-mouth and wider adoption within digitally connected communities.

This study is limited by its focus on Generation Z respondents in Indonesia, the dominance of university students in the sample, and the use of cross-sectional data, which may restrict the generalizability of the findings to other demographic groups and contexts. Moreover, the study examined only selected UTAUT2 constructs and willingness to recommend as an outcome variable. Future studies are encouraged to include more diverse respondent profiles, conduct cross-country or longitudinal investigations, and incorporate additional variables such as trust, perceived risk, technology anxiety, or AI literacy to provide a more comprehensive understanding of AI adoption and recommendation behavior in travel planning contexts.

References

Ali, F., Yasar, B., Ali, L., & Dogan, S. (2023). Antecedents and consequences of travelers' trust towards personalized travel recommendations offered by ChatGPT. *International Journal of Hospitality Management*, *114*, 103588. https://doi.org/10.1016/j.ijhm.2023.103588

Baham, C., Alalwan, A. A., & Rana, N. P. (2023). Understanding young consumers' adoption of artificial intelligence technologies: The role of technology anxiety and adaptability. *Technological Forecasting and Social Change, 190*, 122419. https://doi.org/10.1016/j.techfore.2023.122419

Buhalis, D., & Moldavska, I. (2022). Voice Assistants in Hospitality: Using Artificial Intelligence for Customer Service. *Journal of Hospitality and Tourism Technology, 13,* 386-403. https://doi.org/10.1108/jhtt-03-2021-0104

Carvalho, I., & Ivanov, S. (2024). ChatGPT for tourism and hospitality: Opportunities, challenges and implications for the future. *Tourism Review*. Advance online publication. https://doi.org/10.1108/TR-02-2023-0088

Chi, O. H., Gursoy, D., & Chi, C. G. (2022). Tourists' attitudes toward the use of artificially intelligent (AI) devices in tourism service delivery: moderating role of service value seeking. *Journal of travel research*, *61*(1), 170-185. https://doi.org/10.1177/0047287520971054

Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M., Al-Busaidi, K. A., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2024). So what if ChatGPT wrote it? Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management, 71*, 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642

Febliza, A., Kadarohman, A., Aisyah, S., & Abdullah, N. (2024). Generation Z and the use of digital technology: A review from 2014 to 2023. *Jurnal Pendidikan Sains Indonesia, 12*(4), 1021–1038

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Foroughi, B., Iranmanesh, M., Asadi, S., Al-Emran, M., Ghobakhloo, M., & Batouei, A. (2025). Extending UTAUT2 to explore intention to use ChatGPT for travel planning: a hybrid PLS-ANN approach. *Journal of Tourism Futures*. https://doi.org/10.1108/JTF-11-2023-0256

Foroughi, B., Iranmanesh, M., Asadi, S., Al-Emran, M., Ghobakhloo, M., & Batouei, A. (2025). Extending UTAUT2 to explore intention to use ChatGPT for travel planning: A hybrid PLS-ANN approach. *Journal of Tourism Futures*. Advance online publication. https://doi.org/10.1108/JTF-11-2023-0256

Gursoy, D., Chi, O. H., Lu, L., & Nunkoo, R. (2023). Consumers' acceptance of artificially intelligent service robots in hospitality and tourism. *International Journal of Hospitality Management, 108*, 103336. https://doi.org/10.1016/j.ijhm.2022.103336

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd ed.). Thousand Oaks, CA: Sage.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Huang, A., Ozturk, A. B., Zhang, T., de la Mora Velasco, E., & Haney, A. (2024). Unpacking AI for hospitality and tourism services: Exploring the role of perceived enjoyment on future use intentions. *International Journal of Hospitality Management*, *119*, 103693. https://doi.org/10.1016/j.ijhm.2024.103693

Mich, L., & Garigliano, R. (2023). ChatGPT and tourism: Implications for travel planning and destination experiences. *Tourism Review, 78*(6), 1542–1554.

Robinson, V. M., & Schänzel, H. A. (2019). A tourism inflex: Generation Z travel experiences and expectations. Journal of Tourism Futures, 5(2), 127–141. https://doi.org/10.1108/JTF-01-2019-0014

Seyfi, S., Lee, C., Jo, Y., & Kim, M. J. (2025). Generational differences in adopting AI-generated travel advice: What drives trust and reduces resistance? *Tourism Management Perspectives, 57*, 101364. https://doi.org/10.1016/j.tmp.2025.101364

Slepian, R. C., Vincent, A. C., Patterson, H., & Furman, H. (2024). Social media, wearables, telemedicine and digital health: A Gen Y and Z perspective. In K. S. Ramos (Ed.), *Comprehensive precision medicine* (1st ed., pp. 524–544). Elsevier. https://doi.org/10.1016/B978-0-12-824010-6.00072-1

Statistics Indonesia (Badan Pusat Statistik/BPS). (2025). *Domestic tourism statistics 2024*. Jakarta, Indonesia: BPS-Statistics Indonesia.

Statistics Indonesia (Badan Pusat Statistik/BPS). (2025). *International visitor arrivals in Indonesia in December 2024*. Jakarta, Indonesia: BPS-Statistics Indonesia.

Sukthankar, S., Fernandes, R., Gaonkar, S., & Shetye, A. (2026). Unveiling the determinants of tourists' behavioural intention to adopt AI-powered chatbots for the hospitality and tourism industry: Revising the UTAUT2 model. *Tourism and Hospitality*, *7*(3), 65. https://doi.org/10.3390/tourhosp7030065

Topsakal, Y., & Çuhadar, M. (2025). *Usage intention of tourists regarding the acceptance of artificial intelligence enhanced tour guides apps*. *Current Issues in Tourism, 28*(15), 2415–2431. https://doi.org/10.1080/13683500.2024.2375361

Universitas Gadjah Mada. (2025, November 19). *Gen Z leads AI adoption, UGM expert shares tips for using artificial intelligence wisely*. https://ugm.ac.id/en/news/gen-z-leads-ai-adoption-ugm-expert-shares-tips-for-using-artificial-intelligence-wisely/

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly, 36*(1), 157–178.

Vitezić, V., & Perić, M. (2021). Artificial intelligence acceptance in services: Connecting with Generation Z. *The Service Industries Journal, 41*(13–14), 926–946. https://doi.org/10.1080/02642069.2021.1974406

Vitezić, V., & Perić, M. (2021). Digital transformation and technology adoption among younger travelers. *Tourism and Hospitality Management, 27*(3), 601–618.

Wong, I. A., Wan, Y. K. P., & Qi, S. (2023). Artificial intelligence and personalization in tourism experiences. *Journal of Travel Research, 62*(8), 1712–1729.