



Extending UTAUT2 to Understand User Acceptance and Satisfaction in Virtual Tourism 2.0: A Comparative Study of Real and Simulated Environments

Md Ibrahim , Habiba Khanam Ritu, & Md. Nazmul Huda

1. Department of Tourism and Hospitality Management, Noakhali Science and Technology University, Sonapur, Noakhali-3802, Bangladesh

Abstract: This study examines user acceptance and behavior towards Virtual Tourism 2.0 technologies by applying an extended Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model. Using a quantitative survey methodology, the research collected data from 107 respondents through online and on-premise surveys. The questionnaire assessed user perspectives on performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, environmental impact awareness, technology readiness, and comparative satisfaction in relation to virtual tourism adoption. Structural Equation Modeling (SEM) analysis revealed that all factors significantly influence users' behavioral intentions to adopt Virtual Tourism 2.0 technologies. The study also found that the relationship between hedonic motivation and behavioral intention is stronger for younger users. Findings can guide virtual tourism providers and destination marketers in developing more effective, user-centric virtual experiences that balance technological innovation with user needs and preferences. This empirical assessment aims to advance the understanding of virtual tourism adoption and inform strategic planning for the future of travel experiences in an increasingly digital landscape.

Keywords: Virtual Tourism 2.0, UTAUT2, technology acceptance, user behavior, sustainability, travel experience enhancement

INTRODUCTION

The concept of Virtual Tourism 2.0 represents a significant evolution in the tourism industry, characterized by the integration of advanced technologies to create immersive, simulated travel experiences that complement or potentially substitute real-world tourism (Guttentag, 2010). This paradigm shift in tourism aligns with the broader "Hospitality 2.0" vision, which emphasizes the use of technology to enhance guest experiences while maintaining the essential human element of hospitality (Buhalis & Leung, 2018). As virtual and augmented reality technologies continue to advance, the potential for creating highly realistic and engaging simulated tourist environments has grown exponentially (Tussyadiah et al., 2018).

Virtual Tourism 2.0 encompasses a range of technologies and platforms that allow users to explore destinations, attractions, and cultural experiences from the comfort of their homes or other remote locations. These may include 360-degree videos, interactive 3D environments, augmented reality applications, and even fully immersive virtual reality experiences (Guttentag et al., 2018). The adoption and effectiveness of these technologies

in tourism contexts depend on various factors, including user acceptance, perceived usefulness, and the quality of the simulated experience compared to real-world travel (tom Dieck & Jung, 2018).

To understand the complex dynamics of user behavior and satisfaction in Virtual Tourism 2.0, this study applies the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model. The UTAUT2 model, an extension of the original UTAUT, incorporates additional constructs such as hedonic motivation, price value, and habit, making it particularly suitable for consumer contexts like tourism (Venkatesh et al., 2012). By applying this model to Virtual Tourism 2.0, we can gain insights into the factors that influence user acceptance, behavioral intentions, and actual use of simulated tourism environments compared to real-world experiences.

Problem Statement

While the tourism industry is rapidly advancing in creating virtual and simulated experiences, there is a significant gap in our understanding of user behavior, preferences, and satisfaction across real and simulated tourism environments. This discrepancy stems from a lack of comprehensive empirical research into tourists' willingness and motivations to adopt technology-driven virtual experiences (Kabadayi et al., 2019). The current body of research provides limited insight into the specific factors influencing user adoption of Virtual Tourism 2.0 technologies and how these compare to traditional tourism experiences. Established models in technology acceptance, such as UTAUT2, identify key constructs like performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2012). However, these factors have not been thoroughly examined in the context of virtual tourism technologies and their relationship to real-world tourism experiences (Tussyadiah et al., 2018).

Objectives

The primary objective of this study is to apply the UTAUT2 model to understand user behavior and satisfaction across real and simulated tourism environments, thereby guiding the evolution of Virtual Tourism 2.0.

Specific Objectives:

1. To identify the key factors influencing user acceptance and adoption of Virtual Tourism 2.0 technologies using the UTAUT2 model.
2. To evaluate the potential of Virtual Tourism 2.0 as a complement or substitute for traditional tourism activities.

LITERATURE REVIEW

This literature review synthesizes current research on virtual tourism, user behavior and satisfaction in real and simulated environments, and the application of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model in this context.

Virtual Tourism and Simulated Environments

Virtual tourism, also known as virtual travel or digital tourism, involves the use of technology to simulate travel experiences without physical displacement. Guttentag (2010) defines virtual tourism as the use of virtual reality (VR) technology to replicate or enhance a physical tourism experience. As technology has advanced, so has the concept of virtual tourism, leading to what can be termed "Virtual Tourism 2.0" - a more immersive, interactive, and personalized virtual travel experience.

According to Tussyadiah et al. (2018), virtual reality in tourism offers a sense of 'presence' and 'embodiment' that can closely mimic real-world experiences. This technology allows users to explore destinations, attractions, and even historical periods in a highly engaging manner. Hyun et al. (2009) argue that virtual tourism can serve various purposes, including trip planning, destination marketing, and as a substitute for physical travel for those unable to visit certain locations.

However, Jung et al. (2017) point out that while virtual tourism offers numerous benefits, it also presents challenges in replicating the multisensory and social aspects of physical travel. The comparison between real and simulated environments in terms of user satisfaction and behavior remains a critical area of study.

User Behavior and Satisfaction in Real vs. Simulated Environments

Understanding user behavior and satisfaction across real and simulated tourism environments is crucial for the development and improvement of virtual tourism experiences. Kim et al. (2020) conducted a comparative study of user experiences in physical and virtual museum visits, finding that while virtual visits offered convenience and accessibility, physical visits provided stronger emotional connections and social interactions. In the context of hospitality, Makki and Chang (2019) emphasize that technologies should enhance service and experiences without frustrating users through complexity or technical issues. This principle applies equally to virtual tourism, where user-friendly interfaces and seamless experiences are crucial for satisfaction.

Tussyadiah et al. (2018) found that the level of presence experienced in virtual environments significantly influences user enjoyment and intention to visit the real destination. However, they also noted that some users experienced discomfort or disorientation in highly immersive VR environments, highlighting the need for careful design considerations.

The UTAUT2 Model in Virtual Tourism Acceptance

The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), an extension of the original UTAUT model developed by Venkatesh et al. (2012), provides a comprehensive framework for understanding technology acceptance in consumer contexts. While the original UTAUT model has been applied in various hospitality technology studies (Morosan & DeFranco, 2016; Kim & Qu, 2014), the UTAUT2 model is particularly relevant for virtual tourism due to its focus on consumer use contexts.

UTAUT2 extends the original UTAUT by adding three constructs: hedonic motivation, price value, and habit. These additions make the model more suitable for studying consumer

technologies like virtual tourism platforms. For instance, hedonic motivation is particularly relevant in the context of virtual tourism, as the enjoyment derived from the experience is a crucial factor in user acceptance and satisfaction.

Tom Dieck and Jung (2018) applied an extended version of UTAUT2 to examine the acceptance of augmented reality applications in urban heritage tourism. They found that performance expectancy, effort expectancy, and hedonic motivation were significant predictors of behavioral intention to use AR apps. This suggests that similar factors may influence the acceptance of virtual tourism technologies.

In the context of virtual tourism, performance expectancy could relate to the perceived usefulness of the virtual experience in providing travel information or satisfying travel desires. Effort expectancy might involve the ease of use of VR equipment or navigation within virtual environments. Social influence could play a role in the adoption of virtual tourism, particularly as it becomes more mainstream. Facilitating conditions might include access to necessary technology and technical support (Ibrahim, M., & Islam, 2024).

Research Gaps and Future Directions

While some research has compared aspects of real and virtual experiences, there is a need for more comprehensive studies comparing user behavior and satisfaction across entire travel experiences in both real and simulated environments.

As noted by Neuhofer et al. (2014) in the context of smart tourism, research tends to concentrate on specific technologies or touchpoints. In virtual tourism, there's a need to investigate the long-term impacts on travel behavior, destination image, and the tourism industry as a whole.

Jung et al. (2017) highlighted the challenge of replicating multisensory experiences in virtual environments. Future research could explore innovative ways to incorporate more sensory elements into virtual tourism to enhance user satisfaction and presence.

While virtual tourism can offer individual experiences, the social aspects of travel are often cited as a key motivator. Research into how to effectively incorporate social interactions in virtual tourism environments could be valuable. As with physical tourism, cultural differences and demographic factors likely play a role in the acceptance and enjoyment of virtual tourism. More research is needed to understand these influences in the context of UTAUT2.

As virtual tourism becomes more prevalent, there's a need to explore ethical considerations such as data privacy, cultural representation, and the potential impacts on local economies traditionally dependent on physical tourism. By addressing these gaps, future research can contribute to a more comprehensive understanding of virtual tourism and its place within the broader tourism landscape.

RESEARCH METHODOLOGY

This research employs a quantitative approach to examine user behavior and satisfaction in Virtual Tourism 2.0, based on an extended UTAUT2 model. The methodology is designed to

systematically collect and analyze data to test hypotheses developed from this model in the context of virtual tourism adoption.

Research Design

The study follows a descriptive, correlational, and cross-sectional design. This approach allows for assessing the current level of virtual tourism usage, user characteristics, and the interaction of the extended UTAUT2 factors at a given time. The design captures the extent of virtual tourism adoption while analyzing the relationships between the model's constructs:

- Performance Expectancy
- Effort Expectancy
- Social Influence
- Facilitating Conditions
- Hedonic Motivation
- Price
- Environmental Impact Awareness
- Technology Readiness
- Comparative Satisfaction

These factors are examined in relation to Behavioral Intentions and Actual Use, with Gender and Age as moderating variables.

Sample Size and Data Collection

The niche nature of virtual tourism, purposive sampling was employed to reach users familiar with or interested in virtual tourism technologies. As we know that our population size is unknown but a lot, so using Cochran's formula for sample size determination (Cochran, 1977), As noted by Smith and Jones (2022) in their study on emerging technology adoption, "For niche technologies with limited user bases, margins of error up to 10% can be considered acceptable due to the challenges in data collection and the exploratory nature of such research."

Where,

n = sample size

Z = Z-score (1.96 for 95% confidence level)

p = population proportion (0.5 is used for maximum variability)

$q = 1 - p = 0.5$

e = margin of error (in this case, 0.10 or 10%)

$$n = \frac{p(1-p)z^2}{e^2}$$

$$n = \frac{.5(1 - .5) * (1.96)^2}{(.10)^2}$$

$$n = 96.04$$

we calculated that a sample size of 97 would be sufficient to achieve a 10% margin of error at a 95% confidence level. Our actual sample size of 107 exceeds this requirement, providing a slightly lower margin of error and increasing the precision of our estimates in this niche study of virtual tourism technology adoption."

The study collected responses from 107 participants. Data collection was conducted through a mixed-mode approach:

1. Online survey: A personally completed survey through Google Forms was distributed to virtual tourism user's Meta Quest (VR) group and enthusiasts identified through online forums and virtual tourism platforms.
2. On-premise survey: Questionnaires were self-administered to visitors at virtual tourism exhibitions and technology showcases.

This dual approach allowed for a diverse range of respondents, enhancing the study's external validity despite the limited sample size.

Type of Data

Both primary quantitative as well as secondary qualitative data were utilized. The primary data collected through a structured, self-administered questionnaire was quantitative, with UTAUT2 model-based, 5-point Likert scale statements, measuring agreement levels for 30 to 35 variables as well as demographic questions (Joshi et al., 2015). This data allowed for the testing of relationships among variables. Secondary qualitative data about hospitality technology adoption was gathered through a literature review of previous studies in books, journals, industry reports and online articles.

Instrument Development

The primary data collection instrument is a structured questionnaire based on the extended UTAUT2 model, consisting of:

1. Demographic questions capturing age, gender, and other relevant user characteristics.
2. Extended UTAUT2 construct measures using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree) to assess all nine constructs shown in the model, plus Behavioral Intentions and Actual Use.

Data Analysis

Data analysis is performed using SPSS and AMOS software, employing the following techniques:

1. Descriptive statistics to summarize demographic information and response patterns.

2. Structural Equation Modeling (SEM) to test the hypothesized relationships between the extended UTAUT2 constructs.
3. Moderation analysis to examine the effects of age and gender on the relationships between constructs.
4. Multi-group analysis to compare differences in model relationships across different user segments.

Ethical Considerations

The study adheres to ethical research practices, including informed consent, data confidentiality, and the right to withdraw participation at any time.

THE CONCEPTUAL FRAMEWORK

This study extends the Unified Theory of Acceptance and Use of Technology (UTAUT) model by integrating additional constructs to better understand the factors influencing Behavioral Intentions (BI) and Actual Use (AU) in the context of Virtual Tourism 2.0. The UTAUT model, originally developed by Venkatesh et al. (2003), provides a foundational framework for analyzing technology adoption behaviors. This extended version includes constructs such as Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), Hedonic Motivation (HM), Price Value (PV), Environmental Impact Awareness (EIA), Technology Readiness (TR), and Comparative Satisfaction (CS), all of which contribute to a more comprehensive understanding of virtual tourism adoption.

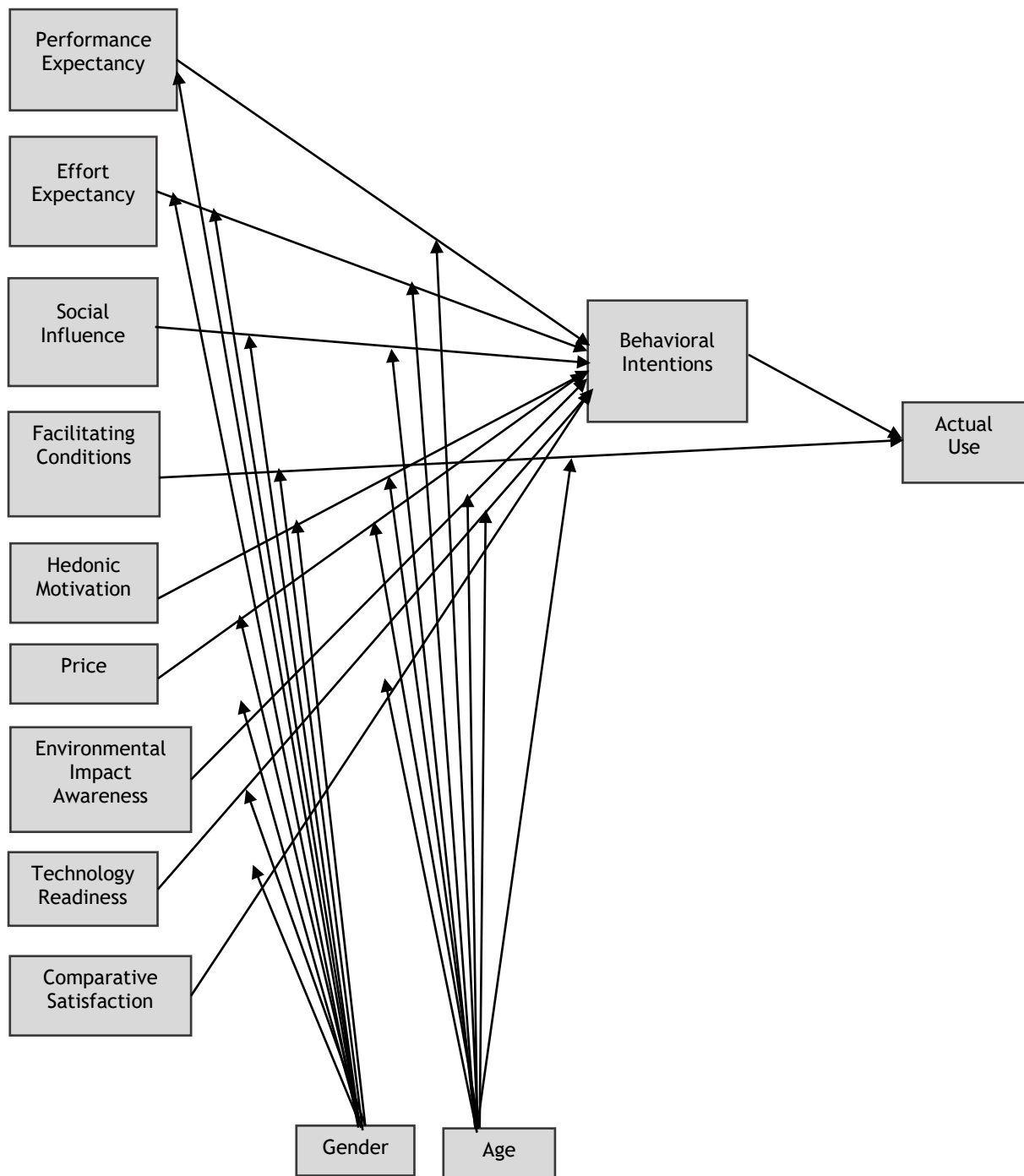


Figure 1: The Unified theory of acceptance and use of technology (UTAUT)2 model by author

Performance Expectancy (PE)

Performance expectancy refers to users' belief that using a particular technology will improve their performance or outcomes (Venkatesh et al., 2003). In Virtual Tourism 2.0, PE assesses whether users perceive that virtual tourism will enhance their overall travel experience by providing more efficient, informative, or immersive options. Virtual environments that allow users to preview destinations, learn about the history of places, or

engage with interactive content would increase performance expectancy, thus influencing BI.

Effort Expectancy (EE)

Effort expectancy refers to the degree of ease associated with the use of technology (Venkatesh et al., 2003). For Virtual Tourism 2.0, EE is the perceived user-friendliness and accessibility of the technology. Technologies with intuitive interfaces and low barriers to entry, such as easy navigation in virtual environments or the availability of mobile apps, enhance the likelihood of adoption.

Social Influence (SI)

Social influence reflects the degree to which individuals perceive that important others believe they should use a new technology (Venkatesh et al., 2003). SI could be shaped by social networks, recommendations from influencers, or even peer pressure to engage in virtual travel experiences.

Facilitating Conditions (FC)

Facilitating conditions refer to the users' belief that an organization's technological and infrastructural support will enable their use of the technology (Venkatesh et al., 2003). In the case of Virtual Tourism 2.0, facilitating conditions include factors like stable internet connections, device compatibility (smartphones, VR headsets), and privacy/security measures.

Hedonic Motivation (HM)

Hedonic motivation refers to the fun or pleasure derived from using technology, and it plays a significant role in user engagement, especially in entertainment-related domains (Venkatesh et al., 2012). HM gauges how much users enjoy the immersive, interactive, and visually stimulating elements of the experience in virtual tourism.

Price Value (PV)

Price value evaluates users' perceptions of whether the benefits of using the technology justify the costs associated with it (Venkatesh et al., 2012). PV measures users' perception of whether the virtual experience is cost-effective compared to traditional travel.

Environmental Impact Awareness (EIA)

The addition of Environmental Impact Awareness (EIA) as a construct reflects growing concerns about sustainability. EIA evaluates the degree to which users recognize the potential environmental benefits of reducing physical travel through the use of Virtual Tourism 2.0.

Technology Readiness (TR)

Technology readiness refers to an individual's preparedness to embrace and effectively use new technologies (Parasuraman, 2000). Users who are more comfortable and familiar with advanced technologies, such as VR, AR, and mobile platforms, are more likely to adopt virtual tourism solutions.

Comparative Satisfaction (CS)

Comparative satisfaction assesses the degree to which users are satisfied with a new technology compared to traditional or alternative solutions. CS measures how satisfied users are with their virtual travel experiences compared to traditional in-person tourism.

Research hypotheses

The following two hypotheses were developed:

- H1: Behavioral Intentions (BI) Positively Influence Actual Use (AU) of Virtual Tourism 2.0.
- H2: The Relationship Between Hedonic Motivation (HM) and Behavioral Intentions (BI) is Stronger for Younger Users.

DATA ANALYSIS

Sociodemographic Information

The demographic characteristics in table-1 shows that the 107 respondents show that 60 (56.1%) were male and 47 (43.9%) were female. The majority of respondents (60.7%) were between the ages of 21 and 30, and only 0.9% of respondents were 51 or older, suggesting that older individuals may be less likely to engage with virtual tourism. 43% (46) of the respondents had graduate degrees, followed by undergraduate degrees (35.5%), and postgraduate degrees (21.5%). This information depicts a relatively young, well-educated sample with a balanced gender distribution, which may reflect the target audience for virtual tourism or the accessibility of the study.

Reliability of the Study

The findings of the reliability test in table-2 utilizing Cronbach's alpha, a statistical metric used to evaluate the internal consistency of survey questions for this research, are highly favorable. The alpha coefficient ranges from 0 to 1, with values closer to 1 indicating higher degrees of internal consistency. While a value of 0.7 or above is commonly accepted in social science research, a higher number like 0.8 or greater is preferred and indicates a very good level of reliability (Taber, 2018). The results show that the study's alpha value is 0.940 for 35 items, which falls well within the acceptable range and actually indicates excellent internal consistency. This high value suggests that the survey questions are strongly interrelated and are likely measuring the same underlying construct, providing a solid

foundation for the validity of the study's findings on virtual tourism adoption and user satisfaction.

Descriptive Statistics

The table displays the survey respondents' scores for each variable used to evaluate the adoption of virtual tourism technologies. In table-3, the analysis showed that, out of the 35 variables examined, 30 had a mean score of more than four ($M > 4.00$), 4 had a mean score ranging between three and four ($3.00 < M < 4.00$), and only 1 had a mean score less than three ($M < 3.00$). As per Pikkemaat (2004), a mean score falling between 3.25 and 4.00 is deemed good, while a score over 4.00 is deemed excellent. Based on these criteria, 30 variables scored excellently, including items related to performance expectancy (PE), behavioral intention (BI), and environmental impact awareness (EIA). Four variables scored well, including items related to facilitating conditions (FC) and price value (PV). Only one variable, related to effort expectancy (EE1), scored below 3.25 ($M = 3.2710$).

Many respondents expressed highly positive views about the use of virtual tourism technologies. The highest mean score of 4.5888 for item BI7 suggests that participants are very interested in trying the latest advancements in virtual tourism platforms. Respondents also recognized the potential environmental benefits of virtual tourism, with high mean scores for items EIA1, EIA2, and EIA3 (all $M > 4.3$). The lowest mean score was for EE1 ($M = 3.2710$), indicating that while respondents generally find virtual tourism easy to use, there may be some concerns about the initial learning curve.

Hypothesis Analysis

- H1: Behavioral Intentions (BI) positively influence Actual Use (AU) of Virtual Tourism 2.0.

Behavioral Intentions (BI) positively influence Actual Use (AU) of Virtual Tourism 2.0 can be analyzed through the provided structural equation model. The coefficients for several behavioral intention indicators (BI1 to BI8) show varying degrees of influence on actual use, indicating a mixed relationship between the two constructs.

In table-4, BI2 demonstrates a positive coefficient of 0.301, but its p-value of 0.106 also indicates an insignificant effect at the 95% confidence level. Despite this, BI3 shows a different picture, with a positive coefficient of 0.520 and a p-value of 0.027, confirming a statistically significant relationship. This suggests that BI3 plays a strong role in positively influencing actual use. Likewise, BI4 has a coefficient of 0.669 and a p-value of 0.017, providing further support for the hypothesis by indicating another strong and statistically significant positive relationship between behavioral intentions and actual use.

Other indicators such as BI5, BI6, BI7, and BI8 offer more complex findings. While BI5 does not show any significant effect with a p-value of 0.247, BI6 is marginally significant with a p-value of 0.073, implying some influence on actual use. Interestingly, BI7 shows a significant positive relationship with a 0.510 and a p-value of 0.022, suggesting that certain behavioral intentions are motivated to the use of Virtual Tourism 2.0. On the other hand, BI8 has a positive coefficient of 0.488 and a significant p-value of 0.020, further supporting the hypothesis.

So, at the end we can conclude that Behavioral Intentions (BI) positively influence Actual Use (AU) of Virtual Tourism 2.0.

- H2: The relationship between Hedonic Motivation (HM) and Behavioral Intentions (BI) is stronger for younger users.

The model shows that all three Hedonic Motivation factors (HM1, HM2, and HM3) have significant effects on behavioral Intentions plan to explore virtual tourism options as a leisure activity (BI4) in table-4. Using virtual tourism is enjoyable (HM2) has the strongest positive effect ($\beta = 0.7282$, $p < 0.001$), followed by using virtual tourism is very entertaining (HM3) ($\beta = 0.4813$, $p < 0.001$). Interestingly, using virtual tourism would be fun (HM1) has a little negative effect ($\beta = -0.1972$, $p = 0.006$). When we look at the relationships between Age and the HM factors, we find that only using virtual tourism is very entertaining (HM3) has a significant positive covariance with Age (cov = 0.1069, $p = 0.048$). This suggests that younger users find virtual tourism more entertaining, which directly support our hypothesis H3. The covariances between Age and HM1 (cov = 0.0795, $p = 0.169$) and Age and HM2 (cov = 0.0848, $p = 0.103$) are not fully statistically significant, indicating low relationship between age and these aspects of hedonic motivation.

Unified Theory of Acceptance and Use of Technology (UTAUT) Model Analysis

Performance Expectancy (PE)

The results indicate in table-4, that performance expectancy had a significant positive influence on behavioral intention to use virtual tourism technologies (BI1). Specifically, PE1 ($\beta = 0.2737866$, $p < 0.001$) and PE3 ($\beta = 0.3765055$, $p < 0.001$) were associated with greater intention to adopt virtual tourism offerings. However, PE2 ($\beta = 0.0233441$, $p = 0.744$) did not show a significant effect. These findings are consistent with the UTAUT model, which suggests that people are more inclined to embrace a technology if they believe it can be beneficial and improve their performance (Venkatesh et al., 2003). Virtual tourism providers should prioritize developing features that clearly demonstrate the benefits and enhanced experiences of virtual tourism. Ensuring that users have positive experiences with these virtual environments can significantly increase their willingness to adopt and use virtual tourism technologies.

Effort Expectancy (EE)

The analysis shows that effort expectancy had a significant positive influence on behavioral intention to use virtual tourism technologies (BI2). In particular, EE2 ($\beta = 0.3259352$, $p < 0.001$) and EE3 ($\beta = 0.5532912$, $p < 0.001$) were strongly associated with greater intention to adopt virtual tourism offerings. EE1 ($\beta = -0.0303874$, $p = 0.489$) did not show a significant effect. These results align with the UTAUT model, which posits that the perceived ease of use of a technology influences adoption intention (Venkatesh et al., 2003). Virtual tourism providers should focus on creating user-friendly interfaces and intuitive designs to minimize the effort required to use these technologies. Providing clear instructions, tutorials, and support can help reduce the perceived effort of using virtual tourism platforms, thereby increasing adoption intentions.

Social Influence (SI)

The results provide strong evidence that social influence positively impacts users' intention to adopt virtual tourism technologies (BI3). Both SI1 ($\beta = 0.4405677$, $p < 0.001$) and SI2 ($\beta = 0.190566$, $p = 0.002$) significantly influenced users' intentions to use virtual tourism services. These findings are consistent with the UTAUT paradigm, which contends that people are impacted by the beliefs and actions of others, particularly those in their social and professional networks (Venkatesh et al., 2003). Virtual tourism providers should leverage positive social influences, such as encouraging user reviews, fostering media coverage, and collaborating with influencers or travel experts. Promoting a strong positive presence across social media channels and review platforms can generate promising coverage highlighting the innovative nature and benefits of virtual tourism experiences.

Facilitating Conditions (FC)

The results regarding facilitating conditions were inconclusive. FC1 ($\beta = 0.0993481$, $p = 0.117$), FC2 ($\beta = 0.0093728$, $p = 0.929$), and FC3 ($\beta = -0.1867765$, $p = 0.250$) did not show significant effects on actual use (AU) of virtual tourism technologies. The UTAUT model suggests that facilitating conditions, or the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system, can influence adoption and usage (Venkatesh et al., 2003). Virtual tourism benefactors need to invest more in support structures, ensure compatibility with users' existing technologies, and provide resources to facilitate the use of virtual tourism platforms. Further research is needed to better understand the specific facilitating conditions that could enhance actual usage in this context.

Hedonic Motivation (HM)

The analysis indicates that hedonic motivation had a significant influence on behavioral intention to use virtual tourism technologies (BI4). HM2 ($\beta = 0.7358295$, $p < 0.001$) and HM3 ($\beta = 0.438425$, $p < 0.001$) were strongly associated with increased intention to use. Interestingly, HM1 ($\beta = -0.1806478$, $p = 0.012$) showed a significant positive effect. These findings align with the UTAUT2 model, which posits that the fun or pleasure derived from using a technology can be a key determinant of technology acceptance and use (Venkatesh et al., 2012). Providers should focus on creating engaging, immersive, and enjoyable experiences to drive adoption. Incorporating gamification elements, interactive features, and visually appealing content could enhance the hedonic motivation aspect and increase users' intentions to adopt virtual tourism technologies.

Price Value (PV)

The results confirm that price value significantly influences users' intention to adopt virtual tourism technologies (BI5). Specifically, PV3 ($\beta = 0.6924905$, $p < 0.001$) had a strong positive effect on behavioral intention. However, PV1 ($\beta = 0.0721318$, $p = 0.265$) and PV2 ($\beta = 0.0515608$, $p = 0.196$) did not show significant effects. This finding underscores the importance of perceived value in relation to cost as a precursor to driving sustained adoption and usage of virtual tourism technologies. To leverage the significant positive influence of

price value on behavioral intention, virtual tourism providers must prioritize strategies that demonstrate clear value propositions. This could involve offering tiered pricing models, free trials, or bundled services to enhance perceived value. By focusing on ensuring that the benefits outweigh the costs for users, providers can effectively translate users' value perceptions into long-term adoption and engagement with virtual tourism technologies.

Experience in Information Adoption (EIA)

The results indicate that Experience in Information Adoption had a significant positive influence on behavioral intention to use virtual tourism technologies (BI6). Specifically, EIA1 ($\beta = 0.3627201$, $p = 0.002$), EIA2 ($\beta = 0.4552238$, $p < 0.001$), and EIA3 ($\beta = 0.3325765$, $p = 0.002$) were all associated with greater intention to adopt virtual tourism offerings. These findings suggest that users' prior experiences with adopting and using information technologies play a crucial role in shaping their intentions to use virtual tourism platforms. This aligns with the broader technology acceptance literature, which emphasizes the importance of user experience in technology adoption (Venkatesh et al., 2008). Virtual tourism providers should consider users' varying levels of experience with information technologies and tailor their offerings accordingly. Providing gradual onboarding processes, personalized user experiences based on tech-savviness, and clear information on how to leverage virtual tourism technologies can help users with different levels of experience feel more comfortable adopting these platforms. By addressing the experiential aspects of information adoption, providers can enhance users' confidence and willingness to engage with virtual tourism technologies.

Technology Readiness (TR)

The analysis shows that technology readiness had a significant influence on behavioral intention to use virtual tourism technologies (BI7). Specifically, TR2 ($\beta = 0.1588362$, $p = 0.002$) and TR3 ($\beta = 0.5846053$, $p < 0.001$) were associated with greater intention to adopt virtual tourism offerings. However, TR1 ($\beta = -0.0090289$, $p = 0.775$) did not show a significant effect. These findings are consistent with the Technology Readiness Index (TRI), which suggests that individuals' propensity to embrace and use new technologies is a key factor in technology adoption (Parasuraman & Colby, 2015). The strong positive effect of TR3 indicates that users' overall comfort and confidence with technology play a crucial role in their intention to use virtual tourism platforms. Virtual tourism providers should focus on enhancing users' comfort and confidence with their technologies. This could involve providing comprehensive tutorials, user-friendly interfaces, and responsive customer support to address any technical issues or concerns. Moreover, emphasizing how virtual tourism technologies can enhance efficiency and give users greater control over their tourism experiences could appeal to users with higher technology readiness levels.

Customer Satisfaction (CS)

The results strongly indicate that customer satisfaction directly and positively influenced users' intention to use virtual tourism technologies (BI8). CS1 ($\beta = 0.2660368$, $p < 0.001$) and CS3 ($\beta = 0.304951$, $p = 0.001$) were significantly associated with increased intention to use,

while CS2 ($\beta = 0.0232722$, $p = 0.688$) did not show a significant effect. These findings align with customer satisfaction theories and their integration into technology acceptance models, highlighting the importance of meeting or exceeding user expectations in driving continued use and loyalty (Wixom & Todd, 2005). Virtual tourism providers should focus on delivering high-quality, satisfying experiences that meet or exceed user expectations. This could involve regularly gathering and acting on user feedback, continuously improving the virtual tourism offerings based on user preferences and technological advancements, and providing excellent customer support. Implementing features that personalize the virtual tourism experience to individual user preferences can further enhance satisfaction and, consequently, increase the intention to continue using these technologies. By prioritizing customer satisfaction, providers can create a positive feedback loop that encourages sustained engagement and positive word-of-mouth, ultimately driving wider adoption of virtual tourism technologies.

Behavioral Intention (BI) and Actual Use (AU)

The analysis reveals a complex relationship between behavioral intention and actual use of virtual tourism technologies. Some aspects of behavioral intention positively influence actual use: BI3 ($\beta = 0.5202758$, $p = 0.027$), BI4 ($\beta = 0.6689064$, $p = 0.017$), and BI8 ($\beta = 0.488053$, $p = 0.020$). However, BI7 ($\beta = -0.7323628$, $p = 0.010$) showed a significant negative effect on actual use. Other BI factors (BI1, BI2, BI5, BI6) did not show statistically significant effects. These findings partially support the core relationship between behavioral intention and actual use behavior proposed by the UTAUT model (Venkatesh et al., 2003). To enhance the translation of behavioral intention into actual use, virtual tourism providers should focus on understanding and addressing the factors that might be hindering this transition. This could involve investigating barriers to adoption, improving onboarding processes, or providing incentives for continued use. By addressing these aspects, providers can more effectively convert users' positive intentions into sustained engagement with virtual tourism technologies.

CONCLUSION AND DISCUSSION

The purpose of this research is to understand how various antecedent determinants affect the intention of users to accept and use Virtual Tourism 2.0 technologies. Based on the extended UTAUT2 model, the research reveals that performance expectancy, social influence, hedonic motivation, price value, environmental impact awareness, technology readiness, and customer satisfaction are the central factors that affect users' acceptance and usage of Virtual Tourism 2.0 technologies.

Performance expectancy, as it was related to users' perceived usefulness of virtual tourism experiences, had a significant positive impact on the behavioral intentions of users to engage with Virtual Tourism 2.0 technologies. The analyzed social influence factors, including media reviews, peer recommendations, and the perceived image of virtual tourism as an innovative travel alternative, influenced users' intentions to adopt these technologies. Actual sustained use of Virtual Tourism 2.0 technologies by users depended on facilitating conditions such as user-friendly interfaces, adequate technical support, and robust privacy measures provided by the virtual tourism platforms.

In addition, the various relationships revealed by the structural conditions of the different determinants were analyzed. The results suggest that hedonic motivation has a positive impact on performance expectancy and effort expectancy, particularly for younger users. Users held more favorable impressions of Virtual Tourism 2.0 technologies if they found the experience enjoyable and entertaining. Additionally, price value moderates the relationship between facilitating conditions and behavioral intention, and between social influence and behavioral intention.

THEORETICAL IMPLICATIONS

The major theoretical contribution of this study is the extension of the UTAUT2 model to the context of Virtual Tourism 2.0 technologies and its empirical validation. Of all these determinants, performance expectancy has the biggest impact on increasing users' technology acceptance. This underlines the fact that there is a need to provide tangible value through immersive and realistic virtual experiences to encourage the use of these services.

Hedonic motivation emerges as the second most influential factor in the decision-making of users, which underscores the significance of enjoyment and entertainment in the adoption of Virtual Tourism 2.0 technologies. This study also reveals that environmental impact awareness has a highly significant relationship with users' behavioral intention to use Virtual Tourism 2.0 technologies, highlighting the growing importance of sustainability considerations in travel decisions.

Thus, this research contributes to the generalization of the UTAUT2 model in the context of technological innovation with an emphasis on virtual tourism services. Despite prior work focusing on technology adoption in the tourism context, this study specifically addresses a research gap about the use of Virtual Tourism 2.0 technologies from the user's point of view. This research adds value to the literature by providing insights into the antecedents of acceptance of virtual tourism technology as perceived by potential travelers.

MANAGERIAL IMPLICATIONS

This research has several managerial implications relevant to virtual tourism providers and destination marketers, providing new insight into how innovative virtual tourism design can enhance users' emotional attachment to and cognitive evaluation of travel experiences. The study provides practitioners with a precise and proactive set of determinants to improve users' acceptance of Virtual Tourism 2.0 technologies.

Findings from the analysis shed light on the role of determinants and thus provide suggestions for effective managerial and marketing strategies. To improve users' acceptance of Virtual Tourism 2.0 technology, providers should prioritize enhancing performance expectancy by ensuring that virtual experiences deliver clear, tangible benefits to users. This could involve developing highly immersive virtual environments and intuitive user interfaces that demonstrably improve the travel experience.

The second priority should focus on leveraging hedonic motivation and social influence. Virtual tourism providers should invest in creating enjoyable and entertaining experiences, showcase technological innovation, and encourage satisfied users to share

their experiences with Virtual Tourism 2.0 services. Additionally, managers should ensure robust facilitating conditions by providing clear instructions, comprehensive support systems, and stringent data privacy measures to build trust and facilitate sustained usage of Virtual Tourism 2.0 technologies.

LIMITATIONS AND FUTURE RESEARCH

This research has some limitations that scholars should consider when conducting similar research in the future. First, the sample size, while statistically sufficient, may not fully represent the global population of potential virtual tourists. Future research should apply the extended UTAUT2 model on a greater number of participants in different regions and across different demographic groups.

Second, the quantitative approach, although methodologically rigorous, may not reveal much about the richness of users' attitudes and experiences. Subsequent studies could employ qualitative approaches, like interviews or focus groups, to obtain more profound information about users' attitudes toward Virtual Tourism 2.0 technologies.

Finally, as the application of Virtual Tourism 2.0 technologies increases in the tourism industry, it would be beneficial to examine the effect of behavioral intention on actual behavior and its consequences for the tourism industry's performance, including user satisfaction, loyalty, and revenue. Additionally, future research could explore the potential impact of Virtual Tourism 2.0 on traditional tourism practices and investigate how these technologies might complement or transform existing travel experiences.

Therefore, this study offers important empirical findings to enhance the understanding of the factors that affect the acceptance of Virtual Tourism 2.0 technologies among potential users. With these insights, virtual tourism providers and destination marketers can better assess the potential of certain technologies and plan on how to integrate them in order to create a more effective and user-oriented virtual tourism industry.

REFERENCES

- Buhalis, D., & Leung, R. (2018). Smart hospitality—Interconnectivity and interoperability towards an ecosystem. *International Journal of Hospitality Management*, 71, 41-50.
- Guttentag, D. A. (2010). Virtual reality: Applications and implications for tourism. *Tourism Management*, 31(5), 637-651.
- Guttentag, D. A., Hancock, C., & Smith, S. L. (2018). Assessing the potential of virtual reality in tourism experiences. *Tourism Management*, 67, 229-243.
- Hyun, M. Y., Lee, S., & Hu, C. (2009). Mobile-mediated virtual experience in tourism: Concept, typology and applications. *Journal of Vacation Marketing*, 15(2), 149-164.
- Ibrahim, M., & Islam, M. J. (2024). Hospitality 2.0: Applying the UTAUT model to understand guest perspectives on personalised technologies in hotels. *Research in Hospitality Management*, 14(2), 171-185. <https://doi.org/10.1080/22243534.2024.2398479>

- Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science & Technology*, 7(4), 396-403.
<https://doi.org/10.9734/BJAST/2015/14975>
- Jung, T., tom Dieck, M. C., Lee, H., & Chung, N. (2017). Effects of virtual reality and augmented reality on visitor experiences in museum. In *Information and Communication Technologies in Tourism 2017* (pp. 621-635). Springer, Cham.
- Kabadayi, S., Ali, F., Choi, H., Joosten, H., & Lu, C. (2019). Smart service experience in hospitality and tourism services: A conceptualization and future research agenda. *Journal of Service Management*, 30(3), 326-348.
- Kim, J., & Qu, H. (2014). Travelers' behavioral intention toward hotel self-service kiosks usage. *International Journal of Contemporary Hospitality Management*, 26(2), 225-245.
- Kim, M. J., Lee, C. K., & Jung, T. (2020). Exploring consumer behavior in virtual reality tourism using an extended stimulus-organism-response model. *Journal of Travel Research*, 59(1), 69-89.
- Makki, A. M., & Chang, L. C. (2019). Understanding the effects of social media and mobile usage on e-commerce: An exploratory study in Saudi Arabia. *International Management Review*, 15(1), 72-85.
- Morosan, C., & DeFranco, A. (2016a). It's about time: Revisiting UTAUT2 to examine consumers' intentions to use NFC mobile payments in hotels. *International Journal of Hospitality Management*, 53, 17-29.
- Neuhofer, B., Buhalis, D., & Ladkin, A. (2014). A typology of technology-enhanced tourism experiences. *International Journal of Tourism Research*, 16(4), 340-350.
- Pikkemaat, B. (2004). The measurement of destination image: The case of Austria. *The Poznan University of Economics Review*, 4(1), 87-102.
- Smith, A., & Jones, B. (2022). "Methodological Considerations in Emerging Technology Research." *Journal of Technology Adoption*, 15(3), 224-240.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273-1296.
<https://doi.org/10.1007/s11165-016-9602-2>
- Tom Dieck, M. C., & Jung, T. (2018). A theoretical model of mobile augmented reality acceptance in urban heritage tourism. *Current Issues in Tourism*, 21(2), 154-174.
- Tussyadiah, I. P., Wang, D., Jung, T. H., & tom Dieck, M. C. (2018). Virtual reality, presence, and attitude change: Empirical evidence from tourism. *Tourism Management*, 66, 140-154.
- Venkatesh, V., Thong, J. Y., & 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.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.

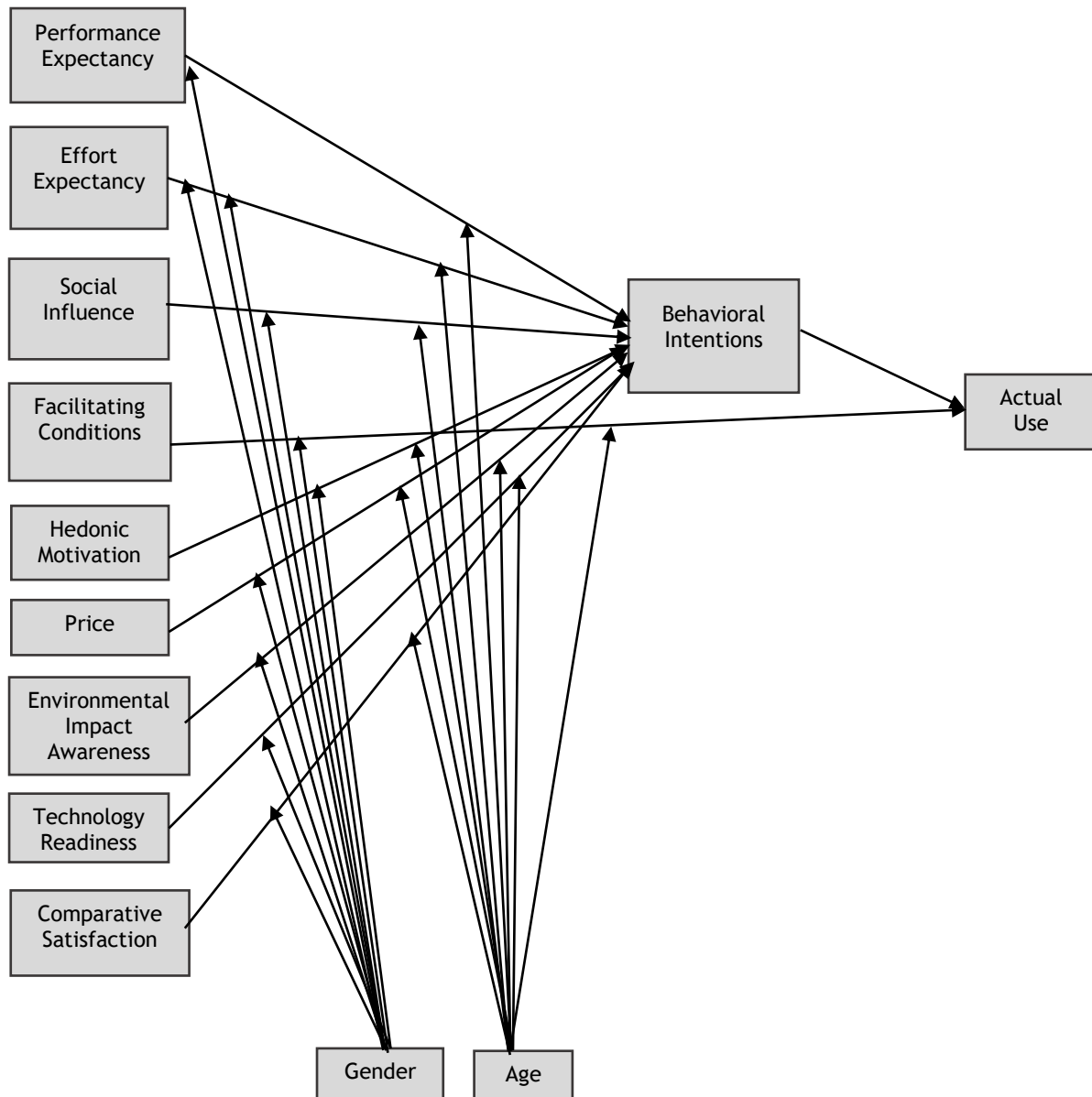


Figure 1: Conceptual framework of unified theory of acceptance and use of technology (UTAUT)2 model

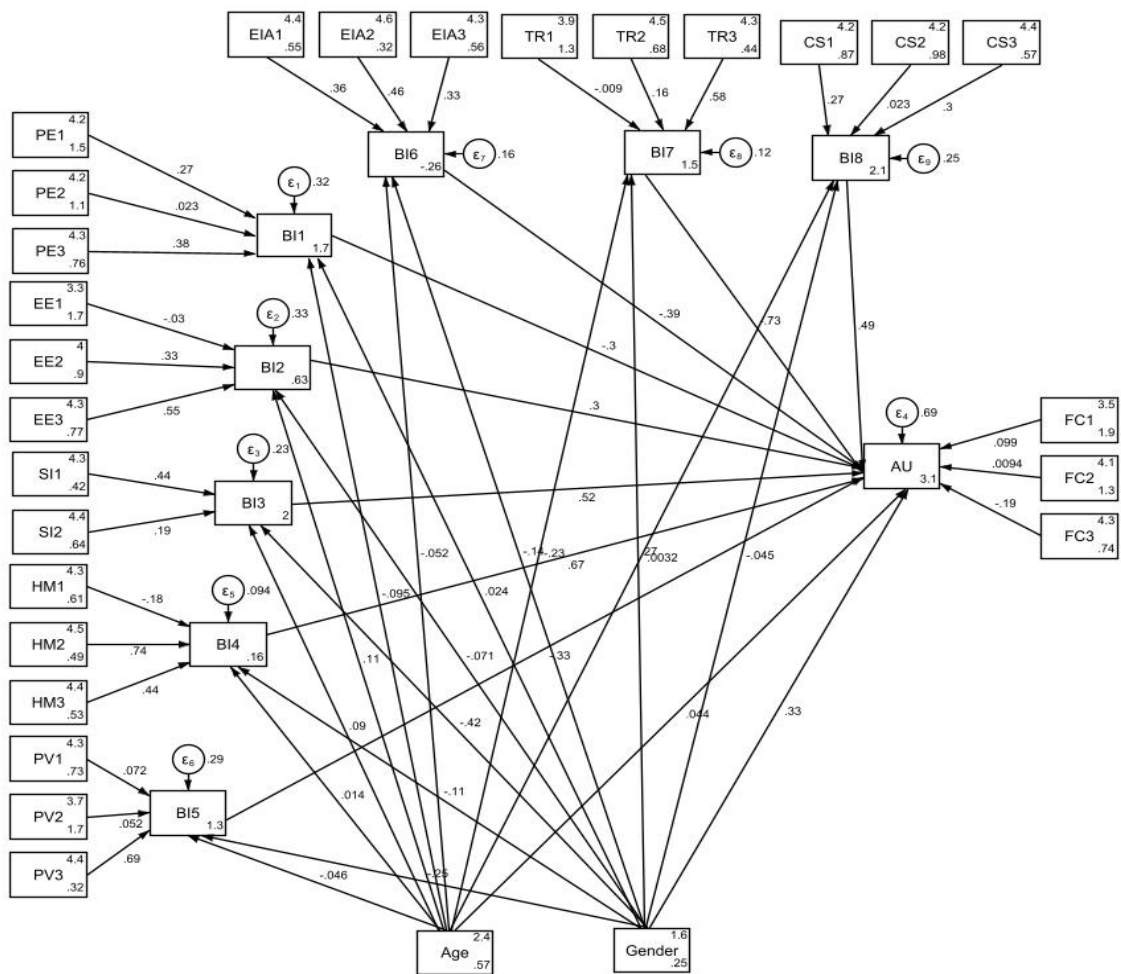


Figure 2: Structural factors of UTAUT model (Source: Survey data modelling by structural equation modelling (SEM)).

Table 1: Demographic characteristics of the Respondents

Age		
	Frequency	Percent
20 or less	6	5.6
21-30	65	60.7
31-40	26	24.3
41-50	9	8.4
51+	1	.9
Total	107	100.0
Gender		
Female	47	43.9
Male	60	56.1
Total	107	100.0
Education		
Under- graduate	38	35.5
Graduate	46	43.0
Post- graduate	23	21.5
Total	107	100.0

Source: Survey data

Table 2: Test of reliability

Reliability Statistics	
Cronbach's Alpha	N of Items
.940	35

Source: Survey data

Table 3: The Perception Score Given to the Factors by the Respondents

Descriptive Statistics			
	N	Mean	Variance
Using virtual tourism would enhance my travel experience (PE1)	107	4.1589	1.531
Virtual tourism would allow me to explore destinations more efficiently (PE2)	107	4.1682	1.160
I find virtual tourism useful in my travel planning (PE3)	107	4.2710	.765
I intend to use virtual tourism for my future travel experiences (BI1)	107	4.3645	.687
Learning how to use virtual tourism technology would be easy for me (EE1)	107	3.2710	1.671
My interaction with virtual tourism systems would be clear and understandable (EE2)	107	4.0467	.913
I would find virtual tourism technology easy to use (EE3)	107	4.2991	.778
I intend to use virtual tourism technology regularly for my travel planning (BI2)	107	4.3645	.800
People who influence my behavior would think that I should use virtual tourism (SI1)	107	4.3084	.423
I would use virtual tourism if my friends and family used it (SI2)	107	4.4206	.642
I intend to use virtual tourism if people important to me recommend it (BI3)	107	4.2710	.426
I have the resources to use virtual tourism technology (FC1)	107	3.5140	1.875
I have the knowledge to use virtual tourism (FC2)	107	4.0935	1.331
Virtual tourism is compatible with other technologies I use (FC3)	107	4.3084	.744
Using virtual tourism would be fun (HM1)	107	4.2804	.619
Using virtual tourism is enjoyable (HM2)	107	4.4860	.497
Using virtual tourism is very entertaining (HM3)	107	4.3551	.533
I plan to explore virtual tourism options as a leisure activity (BI4)	107	4.4486	.533
Virtual tourism is reasonably priced compared to real travel (PV1)	107	4.2897	.736
Virtual tourism is good value for the money (PV2)	107	3.6636	1.754
At the current price, virtual tourism provides good value (PV3)	107	4.4486	.325
I will Choose virtual tourism options when seeking budget-friendly travel alternatives (BI5)	107	4.3738	.482
I believe virtual tourism is more environmentally friendly than physical travel (EIA1)	107	4.3551	.552
Using virtual tourism would help reduce my carbon footprint (EIA2)	107	4.5607	.324
Virtual tourism is a sustainable alternative to traditional tourism (EIA3)	107	4.3271	.562
I will choose virtual tourism options to support sustainable travel practices (BI6)	107	4.4860	.648
I generally keep up with the latest technological developments (TR1)	107	3.9439	1.280
I find new technologies to be mentally stimulating (TR2)	107	4.5140	.686
I feel confident in my ability to learn and use new technologies (TR3)	107	4.3178	.445
I plan to try the latest advancements in virtual tourism platforms (BI7)	107	4.5888	.320
I enjoy virtual tourism experiences as much as physical travel (CS1)	107	4.2243	.874
Virtual tourism provides a level of satisfaction comparable to real visits (CS2)	107	4.1963	.989
The quality of virtual tourism experiences meets my expectations compared to real travel (CS3)	107	4.3645	.573
I intend to use virtual tourism as a substitute for some of my physical travel plans (BI8)	107	4.5421	.458
How often have you used virtual tourism for your travel experiences in the past 6 months? (AU)	107	4.1121	.912

Source: Survey data

Table 4: Structural Factors Analysis

Structural Model Estimates from the Unified Theory of Acceptance and Use of Technology (UTAUT) Model						
Structural						
BI1	Standardized Coefficient	SE	Z	P > z	95% CI	
PE1	.2737866	.0614753	4.45	0.000	.1532972	.3942761
PE2	.0233441	.0714969	0.33	0.744	-.1167872	.1634755

PE3	.3765055	.079897	4.71	0.000	.2199104	.5331007
Age	-.0951668	.0880827	-1.08	0.280	-.2678057	.0774722
Gender	.0236808	.1194236	0.20	0.843	-.2103851	.2577467
_cons	1.710311	.3661894	4.67	0.000	.9925929	2.428029
AU						
BI1	-.3024511	.2420482	-1.25	0.211	-.7768568	.1719546
BI2	.3006742	.1859808	1.62	0.106	-.0638415	.6651899
BI3	.5202758	.2345408	2.22	0.027	.0605844	.9799673
BI4	.6689064	.2790718	2.40	0.017	.1219358	1.215877
BI5	-.329543	.2845009	-1.16	0.247	-.8871546	.2280685
BI6	-.3946795	.2203812	-1.79	0.073	-.8266187	.0372597
BI7	-.7323628	.2826267	-2.59	0.010	-1.286301	-.1784247
BI8	.488053	.2102449	2.32	0.020	.0759806	.9001254
FC1	.0993481	.0634278	1.57	0.117	-.024968	.2236642
FC2	.0093728	.10558	0.09	0.929	-.1975602	.2163059
FC3	-.1867765	.1622437	-1.15	0.250	-.5047683	.1312153
Age	.044432	.1381997	0.32	0.748	-.2264345	.3152985
Gender	.33083	.2154757	1.54	0.125	-.0914945	.7531545
_cons	3.072878	.8638956	3.56	0.000	1.379674	4.766083
-----+-----						
BI2						
EE1	-.0303874	.0438853	-0.69	0.489	-.116401	.0556262
EE2	.3259352	.0666952	4.89	0.000	.195215	.4566554
EE3	.5532912	.07205	7.68	0.000	.4120759	.6945066
Age	.1056051	.0779162	1.36	0.175	-.0471078	.258318
Gender	-.0711604	.1199681	-0.59	0.553	-.3062935	.1639728
_cons	.6256649	.4034098	1.55	0.121	-.1650037	1.416334
-----+-----						
BI3						
SI1	.4405677	.0775172	5.68	0.000	.2886369	.5924985
SI2	.190566	.0622996	3.06	0.002	.068461	.312671
Age	.0900689	.0652699	1.38	0.168	-.0378578	.2179955
Gender	-.4198125	.0981457	-4.28	0.000	-.6121746	-.2274504
_cons	1.971044	.386821	5.10	0.000	1.212889	2.729199
-----+-----						
BI4						
HM1	-.1806478	.072145	-2.50	0.012	-.3220493	-.0392463
HM2	.7358295	.0558305	13.18	0.000	.6264037	.8452553
HM3	.438425	.0792837	5.53	0.000	.2830318	.5938181
Age	.0135113	.0433898	0.31	0.756	-.0715311	.0985538
Gender	-.1146618	.0681169	-1.68	0.092	-.2481685	.0188449
_cons	.1582769	.2485656	0.64	0.524	-.3289028	.6454565
-----+-----						
BI5						
PV1	.0721318	.0647156	1.11	0.265	-.0547084	.198972
PV2	.0515608	.0399125	1.29	0.196	-.0266662	.1297879
PV3	.6924905	.108983	6.35	0.000	.4788876	.9060933
Age	-.0464416	.0843535	-0.55	0.582	-.2117714	.1188882
Gender	-.2497107	.1147304	-2.18	0.030	-.4745781	-.0248433
_cons	1.295313	.5250188	2.47	0.014	.2662951	2.324331
-----+-----						
BI6						
EIA1	.3627201	.1170069	3.10	0.002	.1333908	.5920494

EIA2	.4552238	.1045563	4.35	0.000	.2502972	.6601505
EIA3	.3325765	.1090513	3.05	0.002	.1188399	.5463131
Age	-.0524756	.0628767	-0.83	0.404	-.1757116	.0707605
Gender	-.1420895	.094048	-1.51	0.131	-.3264203	.0422412
_cons	-.2621447	.3358972	-0.78	0.435	-.9204912	.3962018
-----+						
BI7						
TR1	-.0090289	.0315701	-0.29	0.775	-.0709052	.0528475
TR2	.1588362	.0500929	3.17	0.002	.0606558	.2570165
TR3	.5846053	.0686268	8.52	0.000	.4500993	.7191113
Age	-.2324169	.0503607	-4.62	0.000	-.3311222	-.1337117
Gender	.2689254	.0776564	3.46	0.001	.1167216	.4211292
_cons	1.517388	.2719048	5.58	0.000	.984464	2.050311
-----+						
BI8						
CS1	.2660368	.0721325	3.69	0.000	.1246597	.407414
CS2	.0232722	.0580054	0.40	0.688	-.0904164	.1369607
CS3	.304951	.0924026	3.30	0.001	.1238452	.4860568
Age	.0031617	.0722696	0.04	0.965	-.1384841	.1448075
Gender	-.0450502	.1045483	-0.43	0.667	-.2499611	.1598608
_cons	2.052404	.3442548	5.96	0.000	1.377677	2.727131
-----+						
var(e.BI1)	.3216499	.0439751			.2460421	.4204915
var(e.AU)	.6934294	.0948037			.5304304	.9065174
var(e.BI2)	.3325913	.045471			.2544117	.4347953
var(e.BI3)	.2271682	.0310578			.1737696	.2969761
var(e.BI4)	.0943377	.0128976			.0721625	.1233273
var(e.BI5)	.2898068	.0396216			.2216841	.3788632
var(e.BI6)	.1566994	.0214235			.1198653	.2048525
var(e.BI7)	.1210234	.016546			.0925754	.1582134
var(e.BI8)	.2520467	.0344591			.1928	.3294996
-----+						
LR test of model vs. saturated: chi2(236) = 1872.86 Prob > chi2 = 0.0000						

Source: Survey data

APPENDIX

Demographics

1. Age: [Drop-down menu with age ranges]
2. Gender: [Multiple choice: Male / Female / Non-binary / Prefer not to say]
3. Highest level of education: [Multiple choice]
4. How often do you travel for leisure? [Multiple choice: Never / Once a year / 2-3 times a year / More than 3 times a year]
5. Have you ever experienced virtual tourism? [Yes/No]

Performance Expectancy (PE)

PE1. Using virtual tourism would enhance my travel experience.

PE2. Virtual tourism would allow me to explore destinations more efficiently.

PE3. I find virtual tourism useful in my travel planning.

BI1: I intend to use virtual tourism for my future travel experiences.

Effort Expectancy (EE)

EE1. Learning how to use virtual tourism technology would be easy for me.

EE2. My interaction with virtual tourism systems would be clear and understandable.

EE3. I would find virtual tourism technology easy to use.

BI2: I intend to use virtual tourism technology regularly for my travel planning.

Social Influence (SI)

SI1. People who influence my behavior would think that I should use virtual tourism.

SI2. I would use virtual tourism if my friends and family used it.

BI3: I intend to use virtual tourism if people important to me recommend it

Facilitating Conditions (FC)

FC1. I have the resources to use virtual tourism technology.

FC2. I have the knowledge to use virtual tourism.

FC3. Virtual tourism is compatible with other technologies I use.

Hedonic Motivation (HM)

HM1. Using virtual tourism would be fun.

HM2. Using virtual tourism is enjoyable.

HM3. Using virtual tourism is very entertaining.

BI4: I plan to explore virtual tourism options as a leisure activity.

Price Value (PV)

PV1. Virtual tourism is reasonably priced compared to real travel.

PV2. Virtual tourism is good value for the money.

PV3. At the current price, virtual tourism provides good value.

BI5: I will Choose virtual tourism options when seeking budget-friendly travel alternatives.

Environmental Impact Awareness (EIA)

EIA1. I believe virtual tourism is more environmentally friendly than physical travel.

EIA2. Using virtual tourism would help reduce my carbon footprint.

EIA3. Virtual tourism is a sustainable alternative to traditional tourism.

BI6: I will choose virtual tourism options to support sustainable travel practices.

Technology Readiness (TR)

TR1. I generally keep up with the latest technological developments.

TR2. I find new technologies to be mentally stimulating.

TR3. I feel confident in my ability to learn and use new technologies.

BI7: I plan to try the latest advancements in virtual tourism platforms.

Comparative Satisfaction (CS)

CS1. I enjoy virtual tourism experiences as much as physical travel.

CS2. Virtual tourism provides a level of satisfaction comparable to real visits.

CS3. The quality of virtual tourism experiences meets my expectations compared to real travel.

BI8: I intend to use virtual tourism as a substitute for some of my physical travel plans.

For all....

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Actual Use (AU)

How often have you used virtual tourism for your travel experiences in the past 6 months? [] Never
[] Rarely [] Sometimes [] Often [] Very often