Technology Implementation and Guests' Visit Intentions: A Generational Analysis between Millennials and Generation Z in Malaysian Hotels

Afdhal Afiq Lasila, Hanis Amanina Mohamad Hairi, Nadia Hanin Nazlan

Faculty of Hotel & Tourism Management, Universiti Teknologi MARA Cawangan Selangor

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ABSTRACT

The hospitality industry is rapidly transforming through digital innovation, with hotels increasingly adopting technologies such as smart-room systems, self-check-in kiosks, and mobile key access to enhance service quality and guest satisfaction. This study investigates the influence of technology implementation on guests' visit intentions, focusing on generational differences between Millennials and Generation Z, two cohorts that dominate the contemporary travel market. Drawing upon the Unified Theory of Acceptance and Use of Technology (UTAUT), four constructs; performance expectancy, effort expectancy, social influence, and facilitating conditions were examined to determine their effects on visit intention. A quantitative, cross-sectional design was employed using an online survey of 347 hotel guests in Malaysia (162 Millennials, 185 Generation Z). Partial Least Squares Multi-Group Analysis (PLS-MGA) was used to assess measurement validity and test hypotheses. Results indicate that effort expectancy significantly predicts visit intention for both generations, while facilitating conditions exert a significant effect only among Millennials. Performance expectancy and social influence were found to be non-significant across groups. These findings highlight the central role of ease of use and infrastructural support in technology adoption within hospitality services, as well as the differing expectations of each generation. The study extends the UTAUT model to a multigenerational hospitality context and offers actionable insights for hotel operators to design inclusive, user-friendly, and technologically enhanced experiences that align with the post-digital era of hospitality.

Keywords: UTAUT, hospitality technology, generational difference, visit intention, Malaysia

INTRODUCTION

The hospitality industry has entered an era of digital transformation in which technology has become integral to service delivery and guest satisfaction. From mobile check-in systems and smart-room controls to artificial intelligence (AI)-driven concierge applications, digital innovation is redefining how hotels operate and how guests interact with services (Buhalis et al., 2024; Wu et al., 2024). These technologies not only increase operational efficiency but also facilitate personalized, seamless, and contactless experiences that align with changing consumer expectations. In Malaysia, technological innovation has accelerated post-pandemic as hotels adopt digital solutions to enhance competitiveness, ensure safety, and improve service convenience. Despite these advances, a persistent question remains: do different generations of guests perceive and respond to hotel technologies in the same way?

Understanding how technology influences guests' behavioral intentions is critical in a service landscape that increasingly blends physical and digital touchpoints. Behavioral intention, conceptualized as a person's willingness to engage with a particular service or brand, serves as a proxy for actual behavior such as revisiting or recommending a hotel (Pan et al., 2022). The Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003) provides a comprehensive model for understanding technology adoption behaviors. The model posits that four constructs; performance expectancy, effort expectancy, social influence, and facilitating conditions, jointly determine behavioral intention and use behavior. While widely applied in information systems research, the UTAUT framework has gained traction in hospitality contexts for explaining

both employee and guest adoption of digital tools (Ibrahim & Islam, 2024; Hao, 2021). However, its application to multigenerational consumer groups remains limited, particularly within the Southeast Asian hospitality sector.

Millennials (born 1981–1996) and Generation Z (born 1997–2012) together constitute the most dominant demographic groups in today's travel market. Both generations are digital natives but differ significantly in their technological motivations and expectations. Millennials witnessed the evolution of digitalization and often view technology as a tool for convenience, time efficiency, and enhanced productivity (Calvo-Porral & Pesqueira-Sanchez, 2019). They value intuitive systems but also appreciate structured support and reliability. In contrast, Generation Z was born into a hyperconnected, mobile-driven world and perceives technology not merely as a tool but as an extension of lifestyle and identity (Dolot, 2018). They expect immediacy, automation, and personalization, often preferring minimal human interaction if digital systems meet their standards (Seyfi et al., 2024). These generational nuances suggest that the same hotel technology may evoke different cognitive and emotional responses, leading to variations in visit intentions.

Research in hospitality technology has largely focused on general adoption trends or on single generations, often neglecting intergenerational comparisons. Studies by Romero and Lado (2021) and Chen et al. (2022) examined Generation Z's acceptance of service robots, while others such as Rauf et al. (2022) explored Millennials' attitudes toward AI-driven service interfaces. However, few investigations have compared both cohorts simultaneously to assess whether the determinants of technology-driven visit intentions differ between them. Moreover, contextual factors in developing markets like Malaysia, where technological infrastructure and consumer readiness vary; further highlighting the need for comparative inquiry. Addressing this research gap will contribute to both theoretical refinement and managerial insight in the domain of hospitality technology adoption.

Malaysia offers a relevant empirical setting for such an investigation. As a fast-developing tourism destination, the country has positioned digital transformation as a strategic priority under its national tourism framework. The Ministry of Tourism, Arts and Culture (2023) emphasizes smart tourism and service automation as critical pathways for enhancing destination competitiveness. Yet, within Malaysian hotels, technology adoption rates and guest acceptance levels remain uneven. Younger travelers, particularly Millennials and Generation Z, are often the first to embrace digital interactions, while older guests continue to prefer traditional face-to-face engagement. Understanding how generational differences shape attitudes toward hotel technologies can help industry practitioners craft inclusive strategies that align innovation with guest diversity.

Grounded in the UTAUT framework, this study investigates how technology implementation in hotels influences guests' visit intentions, while explicitly accounting for generational differences between Millennials and Generation Z. The study's overarching objective is to evaluate whether the key determinants of technology adoption—performance expectancy, effort expectancy, social influence, and facilitating conditions—vary in their impact across these generational cohorts. By doing so, this research bridges theoretical and empirical gaps in hospitality technology adoption studies and advances a generationally sensitive interpretation of digital behavior.

Accordingly, the following hypotheses are proposed:

H1: The effect of performance expectancy on guests' visit intentions toward technology-enabled hotels differs significantly between Millennials and Generation Z.

H2: The effect of effort expectancy on guests' visit intentions toward technology-enabled hotels differs significantly between Millennials and Generation Z.

H3: The effect of social influence on guests' visit intentions toward technology-enabled hotels differs significantly between Millennials and Generation Z.

H4: The effect of facilitating conditions on guests' visit intentions toward technology-enabled hotels differs significantly between Millennials and Generation Z.

By integrating generational perspective directly into the UTAUT model, this study not only enhances understanding of behavioral intention in technology-mediated hospitality environments but also provides actionable insights for hotel operators seeking to design user-centric, inclusive digital experiences. The findings are expected to contribute to both theoretical enrichment and managerial decision-making, aligning with Malaysia's broader vision for sustainable and innovation-driven tourism in the digital era.

LITERATURE REVIEW

Evolution of Technology in the Hotel Industry

Technology has been integral to the hospitality industry's modernization for more than six decades. Early hotel systems in the 1950s and 1960s primarily supported back-office operations such as reservations, billing, and accounting. The introduction of electronic reservation systems and centralized booking platforms marked a shift toward improved efficiency and interconnectivity (Han et al., 2021). By the 1990s, Property Management Systems (PMS) and Centralized Reservation Systems (CRS) became mainstream, automating room assignment, occupancy tracking, and front-office communication (Law & Jogaratnam, 2005). However, these early applications were operationally focused, emphasizing cost reduction rather than guest experience enhancement.

The rise of the Internet and Web 2.0 technologies transformed this landscape dramatically. Hotels began to leverage digital channels for online bookings, reputation management, and customer engagement (Leung, 2020). The current phase; often referred to as Hospitality 4.0, is characterized by the integration of artificial intelligence (AI), the Internet of Things (IoT), and data analytics to deliver personalized, automated experiences (Buhalis et al., 2024). The COVID-19 pandemic accelerated these transitions as contactless technologies became synonymous with hygiene and safety (Wu et al., 2024).

Modern innovations such as smart-room controls, mobile keys, and voice-activated assistants enable guests to tailor temperature, lighting, and entertainment preferences autonomously (Tyagi & Patvekar, 2019). Similarly, self-service kiosks have reduced check-in queues while maintaining distancing protocols (Gupta & Sharma, 2021). Global hotel chains like Hilton, Marriott, and Hyatt have rolled out digital key systems and mobile concierge apps to streamline the guest journey (Keymolen, 2017). These developments illustrate a paradigm shift from technology as a supporting tool to technology as a *core component of the guest experience*.

Despite rapid digitalization, adoption outcomes vary. Many hotels—particularly independent and mid-scale properties—struggle with integration costs, staff training, and inconsistent guest acceptance (Montargot & Lahouel, 2018). The success of technological implementation therefore depends not only on infrastructure investment but also on guests' readiness and attitudes toward digital interfaces. As such, understanding behavioral intention toward hotel technology has become an emerging research priority.

UTAUT and Technology Acceptance in Hospitality

The Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Venkatesh et al. (2003) synthesizes eight earlier acceptance models—including TAM, TPB, and DOI—into a unified framework comprising four core determinants: performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). UTAUT posits that these constructs shape behavioral intention (BI), which in turn predicts actual use behavior. The model's robustness and flexibility have led to its application across diverse domains, including education, healthcare, and hospitality (Tao et al., 2019; Ibrahim & Islam, 2024).

In hospitality research, performance expectancy refers to the degree to which guests believe that using hotel technology will enhance their stay experience or service quality (Venkatesh et al., 2003). For instance, contactless check-in or mobile applications can save time, reduce uncertainty, and improve satisfaction (Hao, 2021). Studies indicate that when guests perceive technology as beneficial and efficient, they are more likely to engage with it and revisit the property (Ali et al., 2022).

Effort expectancy, often equated with ease of use, denotes how simple and intuitive a technology is perceived to be (Thusi & Maduku, 2020). In hotel contexts, user-friendly mobile interfaces or straightforward self-check-in

kiosks encourage guest adoption. When the perceived cognitive load is low, intention to use rises (Ibrahim & Islam, 2024).

Social influence captures the perceived social pressure or encouragement from others to use technology. In hospitality, online reviews, influencer recommendations, or peer discussions can shape travelers' perceptions of technology-enabled hotels (Pan et al., 2022). While this variable has shown strong predictive power in collectivist cultures, its influence may weaken as digital adoption becomes normative.

Finally, facilitating conditions encompass the technical and organizational resources that support technology use (Venkatesh et al., 2003). For guests, this includes reliable Wi-Fi, clear instructions, and responsive technical support (Ibrahim & Islam, 2024). When these conditions are perceived as adequate, users feel more confident engaging with digital systems.

Within hospitality, UTAUT has been extended in several directions. Hao (2021) integrated perceived risk and trust to study contactless technology adoption during COVID-19, finding performance and effort expectancy as dominant predictors. Davari and Jang (2021) linked UTAUT with the Theory of Planned Behavior to explain travel and visit intentions, reinforcing its suitability for tourism behavior research. Yet, despite these applications, few studies test generational moderation, even though user perceptions and digital proficiencies are known to vary across age cohorts. The current study addresses this omission by examining how Millennials and Generation Z differ in how they evaluate the four UTAUT constructs when forming hotel visit intentions.

Generational Differences in Technology Perception

The generational cohort theory posits that individuals born within the same historical period share formative experiences that influence attitudes, values, and behaviors (Pinto, 2020). In the context of technology adoption, these experiences shape expectations about usability, trust, and innovation.

Millennials (1981–1996) are often characterized by pragmatic technology use. They experienced the emergence of the Internet and mobile communication during adolescence and early adulthood, cultivating adaptability but also a preference for reliability and structure (Calvo-Porral & Pesqueira-Sanchez, 2019). In hotel contexts, Millennials value conveniences such as mobile check-in or online booking, but still appreciate human interaction for complex or personalized services.

Generation Z (1997–2012), sometimes labeled "digital natives 2.0," has grown up in a world of constant connectivity, social media, and algorithmic personalization (Dolot, 2018). They expect speed, automation, and seamless transitions between online and offline experiences. Studies show that Generation Z travelers rely heavily on mobile applications for planning and booking and are more open to fully automated hotel environments (Gorynski, 2024; Seyfi et al., 2024).

Empirical evidence highlights meaningful differences in technology acceptance across these cohorts. For example, Cain et al. (2024) found that Generation Z associates hotel technology with novelty and innovation, whereas Millennials associate it with functional convenience. Gupta and Sharma (2021) observed that Millennials prioritize clarity of instructions and technical support in self-service kiosks, while Generation Z assumes such systems to be self-explanatory. Additionally, social influence manifests differently: Millennials respond to recommendations from trusted peers and family, whereas Generation Z is more influenced by online communities, influencers, and digital reviews (Shah, 2024).

These generational dynamics suggest that behavioral intentions toward hotel technologies are not uniform. While both cohorts are digitally proficient, their motivations differ—Millennials seek assurance and user-friendliness, Generation Z seeks novelty and control. Integrating these insights into the UTAUT framework provides a more nuanced understanding of technology adoption in hospitality.

METHODOLOGY

Research Design

This study adopted a quantitative, cross-sectional research design to examine how the four core constructs of the Unified Theory of Acceptance and Use of Technology (UTAUT)—performance expectancy, effort expectancy, social influence, and facilitating conditions—affect guests' visit intentions toward technology-enabled hotels, and whether these effects differ between Millennials and Generation Z. Quantitative methods were selected to allow statistical testing of hypothesized relationships and to facilitate multigroup comparisons based on generational cohorts.

The research design was non-experimental and correlational, focusing on measuring relationships among constructs rather than manipulating variables. Data were collected using a structured online survey to capture guests' perceptions of hotel technologies, consistent with similar studies in hospitality technology adoption (e.g., Hao, 2021; Ibrahim & Islam, 2024). The study followed ethical standards for human participant research, ensuring voluntary participation, anonymity, and confidentiality.

Population and Sampling

The target population consisted of hotel guests in Malaysia who had stayed in a hotel offering technology-enabled services (e.g., mobile check-in, digital key access, smart-room features, or self-service kiosks) within the preceding 12 months. This inclusion criterion ensured that all respondents possessed relevant experiential knowledge of technology use in a hospitality setting.

Quota sampling was employed to ensure balanced representation of Millennials (born 1981–1996) and Generation Z (born 1997–2012). This non-probability sampling method is appropriate when specific subgroups must be proportionately represented for comparative analysis (Saunders et al., 2019). A total of 347 valid responses were obtained: 162 from Millennials and 185 from Generation Z.

Demographic information such as gender, age, educational background, and travel frequency was also collected to contextualize the sample. Both generations exhibited a balanced gender ratio and similar hotel usage patterns, suggesting comparability between cohorts. The sample size exceeded the minimum threshold of 200 respondents recommended for Partial Least Squares Structural Equation Modeling (PLS-SEM) (Hair et al., 2019), ensuring adequate statistical power.

Research Instrument

The research instrument was a structured questionnaire comprising six sections corresponding to the study variables such as Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), Visit Intention (VI). Each construct was measured using multiple items adapted from established scales in UTAUT and hospitality literature (Venkatesh et al., 2003; Ibrahim & Islam, 2024; Pan et al., 2022). All items employed a five-point Likert scale ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. Sample items include: "Using hotel technology makes my stay more efficient" (Performance Expectancy), "Hotel technology systems are easy to use" (Effort Expectancy), "People important to me think I should use hotel technology" (Social Influence), "I have the necessary support to use hotel technology when needed" (Facilitating Conditions), and "I intend to choose hotels with advanced technology in future stays" (Visit Intention).

The questionnaire underwent content validation by three hospitality and tourism researchers to ensure conceptual clarity and relevance. A pilot test involving 30 respondents was conducted prior to the main survey. Reliability analysis from the pilot yielded Cronbach's alpha values above 0.80 for all constructs, confirming internal consistency. Minor wording adjustments were made for clarity, particularly in distinguishing "hotel technology" from general "travel apps."

Data Collection Procedures

Data collection occurred over a seven-week period through online channels such as Facebook, Instagram, and WhatsApp. These platforms were chosen due to their high engagement rates among Millennials and Generation Z (Shepherd, 2025). Respondents were provided with a short introduction explaining the study's purpose and assuring anonymity. Screening questions confirmed their eligibility (e.g., age cohort, hotel technology usage within the past year).

To prevent response bias, participation was voluntary and uncompensated. Responses exhibiting straight-lining, incomplete data, or unrealistic completion times were excluded, yielding 347 usable cases. The online format enabled wide geographical reach across Malaysia while minimizing physical contact, consistent with post-pandemic data collection ethics.

Ethical Considerations

Ethical integrity was maintained throughout the research process. Participation was voluntary, and respondents were informed of their rights to withdraw at any time without penalty. The survey introduction outlined the study's purpose, confidentiality measures, and contact information for inquiries. No personal identifiers (such as names, hotel details, or IP addresses) were collected.

The research complied with the UiTM Research Ethics Guidelines and aligned with the principles of the Declaration of Helsinki (2013) regarding anonymity and informed consent. Data were stored securely on password-protected systems and used solely for academic purposes.

RESULTS

Introduction

Data analysis was conducted using Partial Least Squares–Multigroup Analysis (PLS-MGA) through the SmartPLS software package. PLS-MGA is well suited for this study because it allows simultaneous estimation of multiple latent constructs and comparison of structural relationships across distinct groups (Hair et al., 2016). The method's flexibility and predictive orientation make it particularly valuable in examining moderating effects such as generational differences within behavioral intention models.

Overview of Respondent Demographic Characteristics

After data collection and screening, a total of 347 valid responses were analyzed, consisting of 162 (46.7%) Millennials and 185 (53.3%) Generation Z participants. Table 1 summarizes the demographic distribution of both cohorts.

Table 1 The Demographic Characteristics of the Respondents (N = 347)

Characteristics	Category	Millennials (n=162)		Generation Z (n=185)	
		Frequency	%	Frequency	%
Gender	Male	78	48.1	83	44.9
	Female	84	51.9	102	55.1
Night of stay	0 night	12	7.4	17	9.2
	1 – 3 nights	47	29.0	67	36.2
	4 – 6 nights	47	29.0	37	20.0

	6 – 8 nights	36	22.2	40	21.6
	9+ nights	20	12.3	24	13.0

Note. This table presents the gender and hotel-stay frequency for respondents from both generational cohorts.

For gender, the Millennial sample comprised 78 (48.1%) males and 84 (51.9%) females, whereas Generation Z included 83 (44.9%) males and 102 (55.1%) females. Overall, the data show a balanced representation across gender, with a slightly higher proportion of females among Generation Z.

Regarding hotel-stay frequency over the past 12 months, Millennials reported 12 (7.4%) respondents with no hotel stay, 47 (29.0%) staying 1–3 nights, another 47 (29.0%) staying 4–6 nights, 36 (22.2%) staying 6–8 nights, and 20 (12.3%) staying more than 9 nights. Generation Z showed a comparable distribution: 17 (9.2%) with no hotel stay, 67 (36.2%) staying 1–3 nights, 37 (20.0%) staying 4–6 nights, 40 (21.6%) staying 6–8 nights, and 24 (13.0%) staying more than 9 nights. These results indicate similar travel behaviors across generations, although Generation Z reported a slightly higher proportion of short stays (1–3 nights).

Measurement Model Assessment

To assess the reliability and validity of constructs, composite reliability (CR) and average variance extracted (AVE) were calculated. According to Cheung et al. (2024), CR values above 0.70 indicate internal consistency, while AVE values above 0.50 demonstrate convergent validity.

As shown in Table 2, all constructs across both generations exceed these thresholds (CR = 0.964–0.974; AVE = 0.800–0.848), confirming that the measurement items are both reliable and valid. These results support the adequacy of the measurement model for subsequent structural analysis.

Table 2 Convergent Validity and Reliability

Generation	Millennials		Generation Z	
	CR	AVE	CR	AVE
Performance Expectancy (PE)	0.967	0.812	0.974	0.848
Effort Expectancy (EE)	0.966	0.810	0.973	0.843
Facilitating Condition (FC)	0.968	0.819	0.974	0.845
Social Influence (SC)	0.964	0.800	0.970	0.825
Visit Intentions (VI)	0.967	0.813	0.974	0.844

Note. This table presents CR and AVE values for each construct for both generational cohorts.

The measurement model's quality is further illustrated in Figure 1, which displays the outer loadings for each observed variable, all exceeding the recommended threshold of 0.70.

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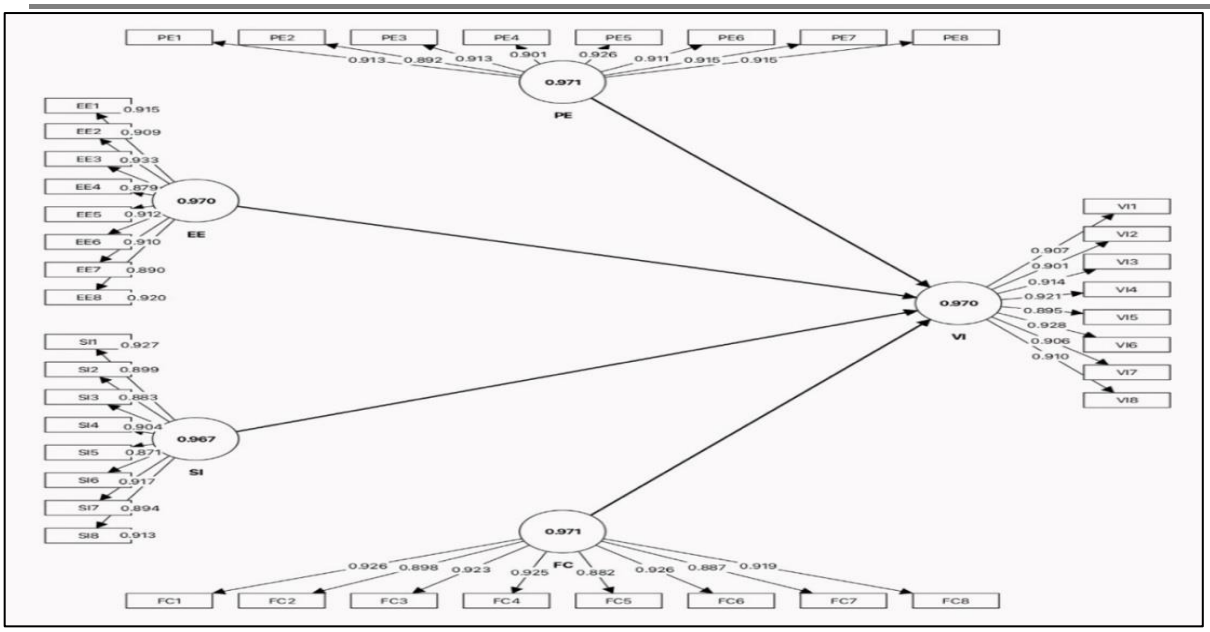

Figure 1. Measurement model's quality.

Structural Model Evaluation

Following the establishment of measurement validity, the structural model was tested using a bootstrapping procedure with 5,000 resamples to estimate the significance of path coefficients (β) and p-values. Hypotheses were accepted when $p < 0.05$ and rejected when $p > 0.05$ (Gildeh et al., 2017).

Millennials

The structural model for Millennials is presented in Figure 2. The path coefficients are as follows:

- Performance Expectancy → Visit Intention (β = 0.133, p > 0.05)
- Effort Expectancy → Visit Intention (β = 0.360, p < 0.05)
- Social Influence → Visit Intention (β = 0.053, p > 0.05)
- Facilitating Conditions → Visit Intention (β = 0.456, p < 0.05)

Thus, effort expectancy and facilitating conditions significantly influence Millennials' visit intentions, whereas performance expectancy and social influence do not. Accordingly, H2 and H4 are supported for this cohort, while H1 and H3 are rejected.

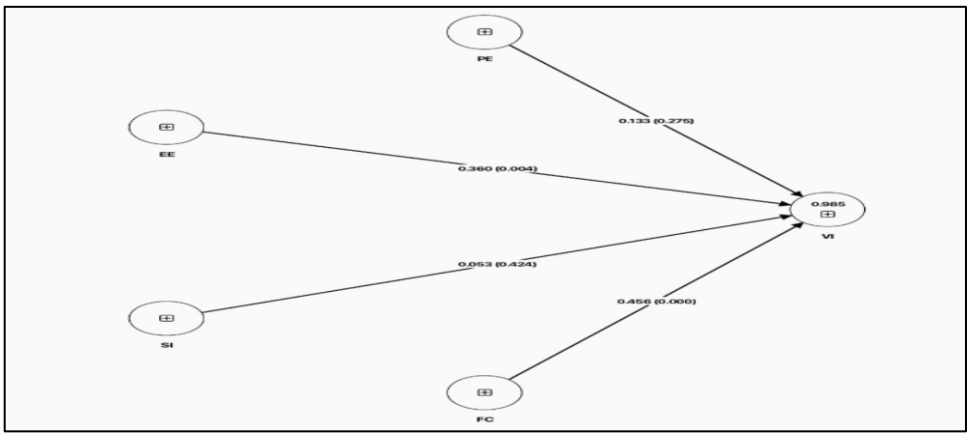

Figure 2. Structural model for Millennials.

Generation Z

The structural model for Generation Z is shown in Figure 3 . The coefficients indicate:

- Performance Expectancy → Visit Intention (β = −0.037, p > 0.05)
- Effort Expectancy → Visit Intention (β = 0.524, p < 0.05)
- Social Influence → Visit Intention (β = 0.101, p > 0.05)
- Facilitating Conditions → Visit Intention (β = 0.397, p > 0.05)

Only effort expectancy exhibits a significant positive relationship with visit intention ($p < 0.05$). Therefore, for Generation Z, H2 is accepted, while H1, H3, and H4 are rejected.

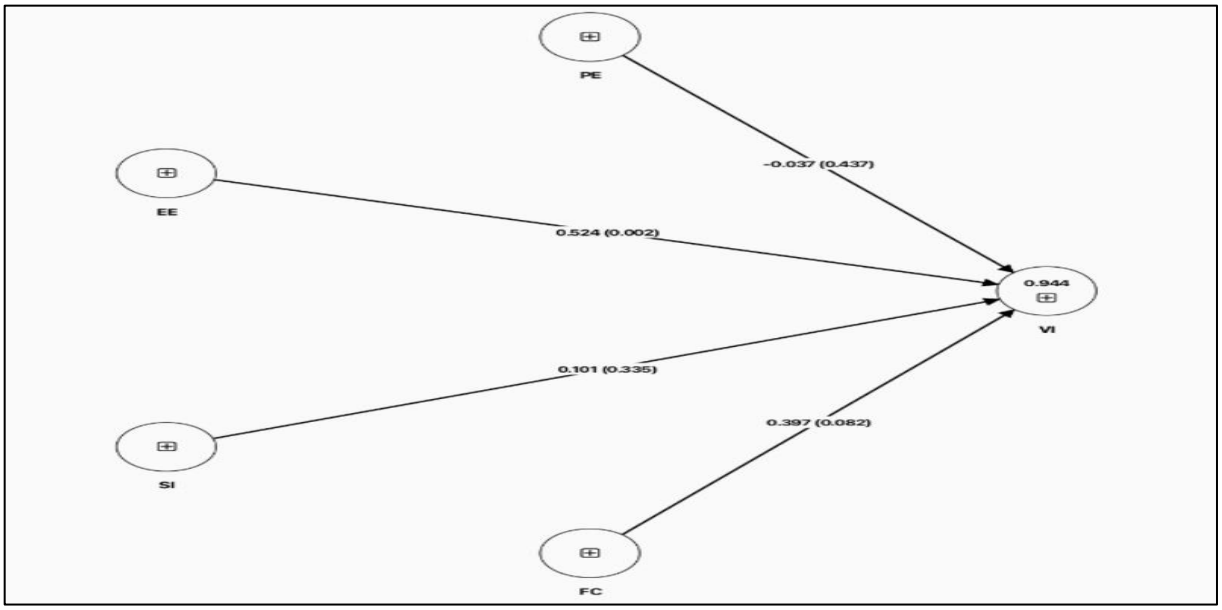

Figure 3. Structural model for Generation Z.

Hypothesis Testing Summary

The summary of direct effects for both generations is provided in Table 3. The Two predictors, effort expectancy and facilitating conditions, significantly affect visit intention among Millennials, whereas only effort expectancy is significant among Generation Z.

Table 3 Hypothesis Testing: Direct Effect

Hypothesis	Relationship	Millennials			Generation Z		
		Path Coefficient	p-value	Decision	Path Coefficient	p-value	Decision
H1	PE à VI	0.133	0.275	Rejected	-0.037	0.437	Rejected
H2	EE à VI	0.360	0.004	Accepted	0.524	0.002	Accepted
H3	SI à VI	0.053	0.424	Rejected	0.101	0.335	Rejected
H4	FC à VI	0.456	0.000	Accepted	0.397	0.082	Rejected

Note. This table displays the direct-effect results for each hypothesis across both generational cohorts.

Summary of Findings

Based on the analysis, both Millennials and Generation Z are not significantly influenced by performance expectancy or social influence in forming visit intentions toward technology-enabled hotels. However, effort expectancy exerts a strong and significant positive effect for both groups, confirming that perceived ease of use remains central to technology acceptance.

For facilitating conditions, only Millennials show a significant positive relationship, suggesting that this generation relies more heavily on available support systems and technological infrastructure when engaging in hotel technologies. Generation Z, conversely, may assume such support to be implicit, reflecting higher digital self-efficacy.

Collectively, these findings indicate partial generational moderation, where only the facilitating-conditions on visit-intention pathway differ significantly between Millennials and Generation Z. This partially supports the moderating hypothesis, reinforcing that while ease of use is universally influential, perceptions of support and reliability remain generation specific.

DISCUSSION

The results reveal meaningful patterns in how Millennials and Generation Z perceive, evaluate, and act upon technological innovations in hotel settings. Although both cohorts are digital natives, their distinct formative experiences shape different expectations and behavioral intentions. The findings extend the theoretical understanding of technology acceptance and offer nuanced insights into generationally differentiated digital behavior.

Effort Expectancy as a Universal Predictor

The results highlight effort expectancy as the only construct that significantly influences visit intention for both Millennials and Generation Z. This finding affirms the central role of perceived ease of use in technology acceptance, aligning with the foundational premise of UTAUT (Venkatesh et al., 2003) and corroborating prior studies in hospitality contexts (Hao, 2021; Ibrahim & Islam, 2024). Regardless of generational cohort, guests are more likely to choose and revisit hotels where technological systems are intuitive, responsive, and frictionless.

For Millennials, ease of use likely reduces cognitive effort and enhances the sense of control when navigating hotel technologies such as self-check-in kiosks or digital concierge applications. This generation values technology as a functional enabler that simplifies travel logistics (Calvo-Porral & Pesqueira-Sanchez, 2019). For Generation Z, ease of use may instead reflect expectations of technological fluency; a seamless, app-based experience that mirrors the immediacy of their social and digital lives (Dolot, 2018). Thus, while both groups prioritize usability, the underlying motivations differ: Millennials seek convenience; Generation Z expects intuitiveness as a default.

These findings support the notion that effort expectancy remains a baseline determinant of behavioral intention, even in technology-mature environments. In contrast to studies suggesting that ease of use loses relevance once users gain digital literacy (Amoako-Gyampah, 2023), this research shows that in hospitality, perceived usability continues to drive engagement because it intersects with service quality and emotional comfort. In a high-contact service sector, simplicity and clarity of technological interaction become extensions of hospitality itself.

The Diminished Role of Performance Expectancy

Contrary to expectations, performance expectancy did not significantly influence visit intention for either generation. This finding diverges from earlier research where perceived usefulness was a strong driver of technology adoption (Davis, 1989; Pan et al., 2022). A plausible explanation is that hotel technologies are now ubiquitous and standardized, leading guests to view them as basic operational features rather than differentiating factors. As contactless check-in, mobile keys, and smart-room controls become industry norms, their perceived utility may no longer enhance guests' decision-making.

For Millennials, technology's contribution to performance, such as speed or convenience, might already be assumed. For Generation Z, functionality is overshadowed by experiential innovation; they value novelty, aesthetics, and personalization more than incremental efficiency gains (Seyfi et al., 2024). This generational divergence underscores a broader shift in consumer expectations: technology is no longer judged solely by its instrumental value but by its ability to enhance experience and emotion.

From a theoretical standpoint, these results suggest that in mature digital environments, performance expectancy's predictive power weakens, necessitating an expanded conceptualization of "perceived value" that includes hedonic and symbolic dimensions (UTAUT2; Venkatesh et al., 2012). Hospitality researchers should thus explore constructs such as enjoyment, trust, and emotional engagement to capture the evolving nature of technological acceptance among younger travelers.

The Limited Influence of Social Influence

The non-significance of social influence for both generations contrasts with studies conducted in collectivist cultures where peer and family opinions often shape behavioral intentions (Pan et al., 2022; Davari & Jang, 2021). This result may reflect the individualized nature of technology-related decisions in hotel selection. Unlike social media or fashion consumption that are highly driven by social validation, hotel technology adoption is largely private and utilitarian. Guests interact with hotel systems independently, limiting the relevance of interpersonal persuasion.

Generationally, this outcome also reflects differing socialization patterns. Millennials, though community-oriented, rely on trusted peer recommendations rather than public endorsements (Gorynski, 2024). Generation Z, by contrast, engages in digital collectivism, where opinions are abundant but filtered through skepticism. Their digital literacy enables them to evaluate technologies critically, reducing susceptibility to external influence (Shah, 2024). Consequently, social influence loses explanatory strength in contexts where autonomous experience and self-efficacy dominate.

This result extends UTAUT's theoretical application by demonstrating that the salience of social norms varies by behavioral domain. In technology-mediated hospitality, where service interaction is individualized and transient, normative pressures may exert minimal effect on decision-making. Future research could consider alternative social constructs such as electronic word-of-mouth (eWOM) credibility or online trust to capture subtle social dynamics in digital hospitality ecosystems.

Facilitating Conditions and the Generational Divide

The results reveal that facilitating conditions significantly affect visit intention for Millennials but not for Generation Z, supporting partial generational moderation. This distinction underscores the evolving meaning of "support" and "infrastructure" across age cohorts.

For Millennials, the presence of reliable Wi-Fi, clear usage instructions, and responsive technical support enhances confidence in hotel technologies. They value the reassurance that assistance is available should technological issues arise. This aligns with previous findings suggesting that Millennials prefer a hybrid service model, blending automation with the human touch (Gupta & Sharma, 2021). Hotels that visibly maintain support systems and staff readiness foster trust among this cohort.

In contrast, Generation Z's lack of sensitivity to facilitating conditions reflects their inherent digital self-efficacy. Having grown up with intuitive technology, they expect systems to function seamlessly and often interpret the need for assistance as a sign of poor design (Dolot, 2018). This generation prizes autonomy, perceiving external support as unnecessary unless technology fails entirely. Their emphasis on self-navigation parallels trends in mobile banking, e-learning, and travel apps, where Generation Z users exhibit low dependence on formal assistance (Cain et al., 2024).

This finding reinforces that facilitating conditions operate as a generationally contingent factor. For older digital natives, they represent an enabling resource; for younger ones, they signify redundancy. Practically, hotel

managers must tailor technological ecosystems accordingly providing visible support channels for Millennials while focusing on minimalist, user-driven design for Generation Z. From a theoretical angle, this supports the integration of technology readiness and self-efficacy into future adaptations of UTAUT within hospitality contexts.

Partial Generational Moderation

The multigroup analysis (PLS-MGA) indicated partial moderation: the path between facilitating conditions and visit intention significantly differs between generations, whereas other relationships remain stable. This partial moderation suggests that while the core mechanisms of technology acceptance (e.g., ease of use) are consistent across cohorts, the contextual interpretation of these constructs diverges.

Such findings echo the argument of Venkatesh et al. (2012) that demographic moderators—including age and experience—affect the salience of different determinants. In hospitality, generationally distinct cognitive schemas influence how users perceive risk, convenience, and reliability. Millennials prioritize structured functionality; Generation Z emphasizes fluid usability. Consequently, technology acceptance in hotels cannot be assumed homogeneous, even among digitally proficient users.

From a methodological standpoint, the robustness of PLS-MGA supports the study's theoretical contribution: by empirically validating generational variation within UTAUT, the research advances a contextualized understanding of digital behavior in hospitality—one that accounts for temporal, cultural, and demographic heterogeneity.

Theoretical Implications

This study extends existing literature in several ways. First, it demonstrates that UTAUT remains relevant in hospitality but requires adaptation to account for generational and experiential nuances. The universal influence of effort expectancy affirms the model's foundation, while the reduced role of performance expectancy and social influence suggests saturation effects in technologically mature service environments.

Second, the results highlight that facilitating conditions are generationally dependent, expanding UTAUT's explanatory boundary by linking it to technology readiness and self-efficacy frameworks. This generational contextualization enriches theoretical models that traditionally treat users as homogenous.

Third, the research reinforces that behavioral intention toward hotel technology is not merely a rational evaluation of usefulness but also a reflection of experiential alignment, how technology fits users' lifestyles, expectations, and identity. This insight invites integration of constructs such as hedonic motivation, habit, and *trust* from UTAUT2 and the Technology Readiness Index to build more comprehensive predictive models for hospitality technology adoption.

Managerial Implications

The practical implications are equally significant. For hotel managers, the findings underscore the importance of usability design and digital inclusivity. Since effort expectancy drives intention for both generations, hotels should prioritize intuitive interfaces, minimal steps, and responsive functionality in their technology systems. Self-service kiosks, mobile apps, and digital room controls should be designed with consistent navigation logic and clear prompts.

For Millennials, visible support mechanisms, such as on-screen guidance, chat assistance, or front-desk troubleshooting, enhance confidence and satisfaction. Marketing communications should emphasize reliability, customer support, and seamless problem resolution.

For Generation Z, the focus should shift to personalization and autonomy. This cohort appreciates mobile-first platforms that integrate loyalty programs, social-sharing features, and real-time customization. Their loyalty is earned through experiential engagement rather than service reassurance. Incorporating gamification or AI-driven recommendations can further strengthen their connection to hotel brands.

Strategically, hotels should recognize that digital transformation is not purely technological but behavioral. By segmenting users based on generational needs, managers can optimize return on technology investments, improve satisfaction, and enhance revisit intentions.

In summary, this study reveals both convergence and divergence across generational cohorts in their responses to hotel technology. Both Millennials and Generation Z emphasize ease of use as a critical determinant of visit intention, confirming that user-friendly design is central to digital hospitality. However, their expectations diverge regarding infrastructural support as Millennials value visible assistance, while Generation Z presumes technological competence and autonomy.

The absence of significant effects for performance expectancy and social influence underscores the normalization of technology in hospitality: what was once an innovation is now an expectation. As hotels continue to digitize, future differentiation will depend less on the presence of technology and more on its integration into meaningful guest experiences.

Collectively, the discussion positions this study as an important step toward understanding how digital transformation intersects with generational behavior in hospitality, offering both theoretical enrichment and actionable managerial insight.

IMPLICATIONS AND CONCLUSION

Theoretical Implications

This study advances understanding of technology adoption in hospitality by applying and contextualizing the Unified Theory of Acceptance and Use of Technology (UTAUT) across generational cohorts. The findings reaffirm that effort expectancy remains the strongest and most consistent predictor of visit intention among both Millennials and Generation Z. Regardless of age, guests are more inclined to revisit hotels when digital systems are intuitive, seamless, and easy to navigate, confirming that usability remains central to technology acceptance even among digitally literate users.

Conversely, performance expectancy and social influence no longer significantly influence visit intentions, suggesting a shift in perception as hotel technologies become normalized. Guests may now take functionality and usefulness for granted, focusing instead on experience, quality and personalization. This finding supports extending UTAUT with constructs from UTAUT2, such as hedonic motivation and trust, to better reflect post-adoption behavior in hospitality.

The only construct showing generational moderation was facilitating conditions, significant for Millennials but not for Generation Z. Millennials still value visible infrastructural support, while Generation Z expects technology to be inherently reliable and self-guided. This distinction introduces a generational dimension to UTAUT, linking it to technology readiness and self-efficacy theory, and showing that enabling factors are interpreted differently across cohorts.

Managerial Implications

The findings provide several practical insights for hotel operators striving to align technological innovation with guest expectations. Since effort expectancy emerged as the most consistent determinant of visit intention, hotels must prioritize usability and simplicity in every technological interface. Digital check-in systems, room controls, and mobile applications should be designed to be intuitive, visually coherent, and responsive to minimize guest effort. For Millennials, visible technological support—such as staff assistance, clear instructions, and responsive troubleshooting—remains important for building trust and confidence in digital systems. In contrast, Generation Z values autonomy and expects seamless, self-directed experiences that mirror their broader digital lifestyles. This cohort prefers mobile-first platforms that enable personalization, gamified engagement, and quick access without human intervention. Accordingly, managers should adopt differentiated digital strategies, balancing automation with human touchpoints depending on the generational profile of their clientele. Furthermore, technology in hotels should no longer be treated merely as a back-end efficiency tool but as a strategic element

of service experience design. When digital systems are integrated with emotional engagement, aesthetic appeal, and brand storytelling, they enhance not only satisfaction but also long-term loyalty. To sustain these innovations, staff training must emphasize digital empathy—equipping employees to guide guests through technology with confidence and warmth. Collectively, these managerial insights position technology not as a replacement for hospitality but as a means to redefine guest experience through seamless digital–human synergy.

Limitations and Future Research

The study's non-probability sampling limits generalizability, though balanced generational representation adds robustness. Future research could employ stratified or longitudinal designs to explore how perceptions evolve with technological maturity. Including variables such as trust, risk perception, and hedonic value could enrich understanding of post-pandemic digital hospitality behavior. Comparative studies across regions or cultures would further test the generality of the findings.

Conclusion

This research demonstrates that while both Millennials and Generation Z value technological ease of use, their responses to infrastructural support differ. Millennials' visit intentions are strengthened by visible assistance, whereas Generation Z's are driven by autonomy and intuitive design. The results refine UTAUT's applicability in hospitality and guide managers toward adaptive, generation-sensitive digital ecosystems. As hotels advance into a new era of smart hospitality, competitive success will depend not on what technology is implemented, but how meaningfully it enhances the guest experience—balancing digital efficiency with the human warmth that defines true hospitality.