Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9, 486-503
2025
Publisher: Learning Gate
DOI: 10.55214/2576-8484.v9i9.9825

Algorithmic mediation and virtual engagement in smart tourism: An expectation–confirmation model of trust and travel intention among Gen Z tourists in Thailand

Yingtao Liang[1], Olarik Surinta[2], Suwich Tirakoat[3*]
[1]Department of New Media, Faculty of Informatics, Mahasarakham University, Maha Sarakham 44150, Thailand, Thailand; 4933446@qq.com (Y.L.).
[2]Multi-agent Intelligent Simulation Laboratory (MISL) Research Unit, Department of Information Technology, Faculty of Informatics, Mahasarakham University,Maha Sarakham 44150, Thailand; olarik.s@msu.ac.th (O.S.).
[3]Department of New Media, Faculty of Informatics, Mahasarakham University, Maha Sarakham 44150, Thailand; suwich.t@msu.ac.th (S.T.).

Abstract: Tourism in the digital era is increasingly influenced by algorithmic recommendation systems and immersive online interactions. This study examines how algorithmic mediation and virtual engagement jointly affect Chinese Generation Z tourists' trust and travel intentions in Thailand, a leading destination for smart tourism. Guided by the expectation–confirmation model (ECM), we tested a structural equation model using survey data from 512 respondents. The findings indicate that algorithmic mediation enhances both expectation confirmation and virtual engagement. Virtual engagement significantly fosters trust and directly predicts travel intentions, while trust emerges as the strongest mediator linking digital interactions to behavioral outcomes. Multi-group analysis reveals that prospective travelers rely more on virtual engagement to build trust than experienced travelers, highlighting the conditional role of prior travel experience. This research contributes to the smart tourism literature by integrating algorithmic mediation and virtual engagement into the ECM framework, emphasizing their crucial roles in shaping Generation Z tourists' digital decision-making. Practical implications suggest that tourism platforms should refine algorithmic design and interactive features to strengthen trust and effectively convert online engagement into actual travel behaviors.

Keywords: *Algorithmic mediation, Expectation–Confirmation Model, Generation Z, Smart tourism, Thailand tourism. Travel intentions, Trust, Virtual engagement.*

1. Introduction

Tourism has long been recognized as a sector deeply influenced by social, cultural, and technological forces. In the past decade, the acceleration of digital transformation has profoundly reshaped the way travelers acquire information, imagine destinations, and make decisions. Traditional sources of travel information such as guidebooks, brochures, or even official websites have gradually lost their centrality, replaced by a highly dynamic and personalized digital environment. Social media platforms, online travel communities, short-form video applications, and digital recommendation systems now serve as the primary channels through which individuals form impressions of destinations. These changes not only reflect the broader penetration of digital technologies into daily life but also signal a fundamental reconfiguration of tourism consumption behaviors in the era of algorithmic mediation.

Within this context, algorithms play a particularly powerful role. As invisible infrastructures embedded in digital platforms, algorithms filter, prioritize, and personalize the content that users encounter. Tourists, often without conscious awareness, are guided by algorithmic curation in exploring

History: Received: 9 July 2025; Revised: 11 August 2025; Accepted: 14 August 2025; Published: 4 September 2025
* Correspondence: suwich.t@msu.ac.th

destination-related information. Platforms such as TikTok, Instagram, YouTube, and various travel applications deploy algorithmic recommendation systems that determine which videos, images, or reviews a potential traveler is most likely to see. These systems do more than deliver information efficiently; they actively shape the cognitive and emotional environments within which travelers' expectations are constructed and confirmed. Algorithmic mediation thus becomes a crucial antecedent in understanding how tourism decisions are made in digital contexts.

The influence of algorithms is especially pronounced among Generation Z (Gen Z), a cohort typically defined as individuals born between the mid-1990s and the early 2010s. Unlike earlier generations, Gen Z has grown up in a world where digital technologies are omnipresent and algorithmic personalization is a routine part of everyday life. For these digital natives, exploring travel opportunities through platforms such as TikTok, Instagram, or Facebook is not an optional supplement but an integral component of their decision-making processes. Gen Z tourists rely heavily on algorithmically curated short videos, travel vlogs, influencer content, and peer-generated reviews to construct their impressions of destinations. Their travel intentions are therefore tightly coupled with the ways in which digital platforms manage attention, promote engagement, and encourage trust in the information provided.

Although prior research has addressed the roles of digital marketing, social media communication, and online trust in tourism, significant gaps remain in the theoretical and empirical understanding of how algorithmic mediation interacts with virtual engagement to shape tourists' decisions. Much of the existing scholarship treats social media as a neutral information channel rather than as an active algorithm-driven system. Studies have often emphasized content characteristics, such as authenticity, user-generated reviews, or influencer credibility, but they rarely integrate the technological dimension of algorithmic curation into tourism decision-making frameworks. Furthermore, while engagement has been recognized as an important psychological construct in marketing and communication research, its role as a mediator between algorithmic exposure and trust in tourism contexts has not been systematically examined. This gap limits our ability to capture the complexity of digital-era tourism behaviors, particularly for younger generations whose media consumption patterns are distinct from those of their predecessors.

The expectation–confirmation model (ECM), originally developed in information systems research, provides a valuable theoretical lens through which to analyze these dynamics. ECM posits that individuals form expectations prior to engaging with a system, evaluate whether these expectations are confirmed during actual use, and subsequently form judgments of satisfaction that influence continuance intentions. While ECM has been widely applied in information systems and consumer behavior studies, its application to tourism in the age of algorithmic curation remains underdeveloped. Extending ECM to incorporate algorithmic mediation and virtual engagement allows for a more comprehensive framework that captures how digital technologies condition tourist cognition, affect, and behavior. Specifically, this integration enables the analysis of not only how expectations are formed and confirmed but also how algorithmically mediated engagement shapes emotional connections, trust, and ultimate behavioral outcomes.

Thailand provides a particularly appropriate empirical context for examining these issues. As one of the most popular tourist destinations in Asia, Thailand has long attracted international visitors through its cultural heritage, natural landscapes, and hospitality infrastructure. In recent years, the country has also positioned itself at the forefront of digital tourism marketing, leveraging social media platforms, short-video content, and algorithmic recommendation systems to promote destinations. For Gen Z tourists, Thailand is frequently encountered not only through traditional travel narratives but also through algorithmically curated digital experiences that highlight local attractions, cultural performances, and lifestyle imagery. Examining how Gen Z tourists in Thailand navigate algorithmic mediation and virtual engagement therefore provides both theoretical insight and practical relevance.

The present study seeks to address the research gap by investigating the mechanisms through which algorithmic mediation and virtual engagement shape Gen Z tourists' trust and travel intentions

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

in Thailand. Specifically, the study pursues three objectives. First, it aims to examine how algorithmic mediation influences expectation confirmation and virtual engagement, thereby establishing the role of algorithms as more than passive delivery mechanisms. Second, it investigates how virtual engagement and trust operate as mediating factors that translate digital experiences into behavioral outcomes. Third, it extends the expectation–confirmation model into the domain of tourism by explicitly incorporating algorithmic mediation and virtual engagement, thereby offering a more nuanced explanation of Gen Z tourists' decision-making processes.

By addressing these objectives, the study makes several contributions. Theoretically, it advances tourism scholarship by positioning algorithms as central mediators of tourist cognition and affect, highlighting the role of engagement as a psychological mechanism, and reaffirming trust as the key bridge between digital experiences and behavioral outcomes. Practically, the findings provide actionable strategies for destination marketing organizations (DMOs) and tourism businesses seeking to attract and retain Gen Z tourists. By leveraging algorithmic personalization, designing interactive and immersive digital experiences, and cultivating trust through transparent and credible communication, stakeholders can more effectively influence the travel decisions of this important generational cohort.

In summary, this research situates algorithmic mediation and virtual engagement at the heart of tourism decision-making for Gen Z tourists in Thailand. By extending ECM with constructs that reflect the realities of contemporary digital environments, it contributes both theoretical innovation and practical insight. The following sections review the relevant literature, present the methodological approach, report the empirical findings, and discuss their implications for tourism theory and practice.

2. Literature Review

2.1. Algorithmic Mediation in Tourism

Algorithms increasingly influence the visibility, accessibility, and framing of information across digital platforms. They are not neutral; they prioritize certain content and thereby shape users' perceptions, preferences, and behaviors [1]. Earlier studies established the centrality of social media in online travel information search, laying the groundwork for research on algorithmic mediation [2]. In tourism, recommendation systems embedded in platforms such as TikTok, Instagram, YouTube, TripAdvisor, and Airbnb not only facilitate access to destination information but also construct "tourism imaginaries" that guide travelers' choices.

A systematic review confirmed that social media significantly influences tourist information search and decision-making [3]. Hernández et al. showed that algorithmic processing of user-generated content can segment tourists into distinct behavioral groups, highlighting how recommendation systems actively shape decision pathways [4]. Similarly, Kirilenko et al. found that algorithm-driven sentiment analysis reshapes tourists' evaluations of destinations, influencing perceptions of authenticity and value [5]. Algorithmic mediation must also be understood within the broader discourse on platform capitalism, wherein digital platforms monetize user data through targeted advertising and recommendations [6].

2.2. The Expectation–Confirmation Model (ECM) and Its Extension

The expectation–confirmation model (ECM), originally formulated in information systems research, explains continuance intention as a function of expectations, confirmation, and satisfaction. It has been widely applied in tourism research to evaluate post-adoption behaviors such as loyalty and satisfaction.

Li and Du [7] demonstrated that extending ECM to include performance and sustainability outcomes in cultural heritage tourism provides a richer understanding of how confirmation processes evolve in digitally mediated contexts. For instance, China's "smart tourism destination" initiative illustrates how digital transformation reshapes tourism governance and visitor experience, offering a practical foundation for extending the ECM framework [8]. Integrating algorithmic mediation highlights how personalized recommendations create heightened expectations, which are then evaluated

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

against actual travel experiences. This integration allows scholars to account for the active role of technology in shaping user evaluations and post-adoption behaviors.

Extending ECM also requires acknowledging the affective and relational dimensions of tourism behavior. While ECM traditionally emphasizes cognitive evaluation, tourism decisions are heavily influenced by emotions, trust, and social interactions. By incorporating constructs such as virtual engagement and trust into ECM, this study broadens its explanatory power, making it more applicable to contemporary tourism contexts where emotional resonance and credibility are critical determinants of behavior.

2.3. Virtual Engagement and Tourist Experience

Virtual engagement has gained increasing attention in marketing, communication, and tourism studies as digital platforms evolve from static information repositories into interactive and immersive environments. Engagement is conceptualized as a multidimensional construct encompassing cognitive, emotional, and behavioral involvement with digital content [9]. In tourism, virtual engagement refers to the extent to which tourists are psychologically immersed in online content, actively interact with platforms, and form emotional bonds with destinations through mediated experiences.

Immersive environments such as VR and interactive media enhance emotional presence and behavioral intention, reinforcing the role of engagement in tourist experiences [10]. For Gen Z tourists, engagement often revolves around authenticity, creativity, and interactivity. They are less responsive to traditional advertising and more influenced by peer-like interactions and relatable narratives. Virtual engagement therefore becomes a crucial predictor of trust and behavioral intentions, mediating between algorithmic exposure and outcomes.

2.4. Trust and Travel Intentions in the Digital Era

Trust has long been recognized as a cornerstone of tourism decision-making. In digital contexts, trust refers to tourists' confidence in the credibility, authenticity, and reliability of online information and the platforms that provide it. Trust in social return and destination credibility significantly influences travel intentions [11]. Likewise, trust in consumer-generated content on platforms such as TripAdvisor directly predicts recommendation adoption and word-of-mouth behavior [12].

In the era of algorithmic mediation, the formation of trust is increasingly tied to perceptions of digital credibility. Users may question whether algorithmically curated content is authentic, unbiased, or commercially manipulated [13]. For Gen Z tourists, who are simultaneously digitally savvy and skeptical of overt marketing, trust is built through subtle cues of authenticity—such as user-generated reviews, influencer endorsements, and immersive storytelling. Trust thus mediates between engagement and intentions, enabling digital interactions to translate into concrete behaviors.

2.5. Gen Z Tourists in Thailand

Generation Z constitutes an increasingly important segment of global tourism demand. Characterized by digital nativity, cross-cultural openness, and a preference for authentic experiences, Gen Z travelers rely on social media as a primary source of travel information, peer recommendations, and value-congruent experiences. In Thailand, Gen Z's digital behaviors are strongly shaped by online communities and interactive content consumption [14]. Their heavy reliance on algorithmically curated content makes them especially relevant for studies of digital mediation in tourism.

Thailand provides a compelling case for examining these dynamics. As one of Asia's most popular tourist destinations, the country attracts millions of international visitors annually. Its promotion strategies increasingly leverage algorithmic targeting, virtual tours, and social media storytelling. For Gen Z tourists, Thailand is often encountered first through algorithmically selected content—short videos showcasing beaches, temples, street food, or nightlife scenes—that shape expectations and emotions even before physical travel occurs.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

3. Summary of Literature Review

Taken together, the literature highlights the need to integrate algorithmic mediation, virtual engagement, and trust into established theoretical frameworks such as ECM to better explain Gen Z tourists' decision-making processes. While prior research has examined digital marketing, social media influence, and trust in tourism, few studies have systematically analyzed the interplay between technological mediation, psychological engagement, and relational trust. By situating these constructs within the ECM framework and applying them to Gen Z tourists in Thailand, this study addresses critical gaps and advances both theoretical understanding and practical application in digital tourism research.

4. Methods

4.1. Research Design

This study adopted a quantitative research design anchored in structural equation modeling (SEM) to test the hypothesized relationships between algorithmic mediation, expectation confirmation, virtual engagement, trust, and travel intentions of Generation Z (Gen Z) tourists in Thailand. The choice of SEM was motivated by its ability to simultaneously assess measurement validity and structural relationships among latent constructs, which is essential when integrating multiple theoretical perspectives such as the expectation–confirmation model (ECM) and digital engagement theories.Figure 1 presents the hypothesized research model, which illustrates the relationships among algorithmic mediation, expectation confirmation, virtual engagement, trust, and travel intentions.

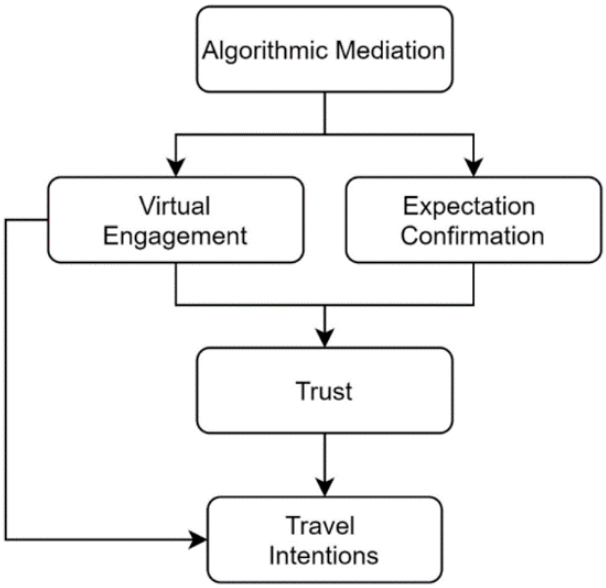

Figure 1.
Research Model.

As shown in Figure 1, algorithmic mediation is expected to influence both expectation confirmation and virtual engagement, which subsequently shape trust and travel intentions.Following positivist research traditions, the study aimed to establish causal inferences through the use of standardized survey instruments and advanced statistical techniques. The model was conceptualized to capture both direct and indirect effects, including mediation and moderation mechanisms, thereby offering a holistic understanding of technology-mediated decision-making in tourism. A cross-sectional survey was deemed appropriate because the constructs of interest—expectations, engagement, trust, and behavioral intentions—can be effectively captured at a single point in time without requiring longitudinal data.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

4.2. Sampling and Data Collection

4.2.1. Target Population

The target population comprised Chinese Gen Z tourists in Thailand, defined as individuals born between 1995 and 2010 who have either traveled to or plan to travel within Thailand. This demographic was chosen because Gen Z represents digital natives with distinctive consumption patterns shaped by constant interaction with algorithmic systems and social media platforms. Their reliance on digital platforms for travel information, coupled with their sensitivity to authenticity and engagement, makes them particularly suitable for studying algorithmic mediation in tourism.

4.2.2. Sampling Strategy

A purposive sampling strategy was adopted to ensure that respondents met the inclusion criteria: (1) being part of the Gen Z cohort, (2) having used digital platforms (e.g., TikTok, Instagram, YouTube, TripAdvisor) for travel-related purposes within the past six months, and (3) having engaged in or considered traveling within Thailand. Recruitment was conducted through online communities, travel forums, and social media platforms frequented by Gen Z users. In addition, collaboration with Thai universities and youth organizations helped to diversify the sample in terms of gender, education, and travel motivations.

4.2.3. Sample Size

A total of 600 questionnaires were distributed online between March and May 2025, yielding 541 responses. After excluding incomplete or invalid entries, 512 usable responses were retained for analysis, representing an effective response rate of 85.3%. According to SEM guidelines, the sample size far exceeded the minimum threshold of 200 required for model stability [15]. The ratio of cases to estimated parameters (approximately 15:1) also ensured sufficient statistical power for hypothesis testing.

4.2.4. Participant Profile

The final sample reflected a balanced distribution across gender (54% female, 46% male), with most respondents aged between 18 and 25 years. A significant proportion were undergraduate or postgraduate students (67%), followed by young professionals (24%) and freelancers (9%). In terms of travel experience, 72% had visited at least one major tourist destination in Thailand in the past year, while 28% were prospective travelers intending to visit within the next 12 months.

Online review platforms, such as TripAdvisor and Yelp, provide rich datasets for understanding tourist behavior and digital engagement [16]. Big data analytics has become an essential approach in tourism research, enabling large-scale exploration of traveler preferences and behaviors [17]. User-generated content has also been widely recognized as a valid research mode in tourism and hospitality studies, providing reliable insights into tourists' perceptions [18].

4.3. Measurement Instruments

4.3.1. Development of the Questionnaire

The survey instrument was designed based on established scales adapted from previous studies in information systems, tourism, and marketing research. All items were measured using a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The questionnaire was pre-tested with 30 Gen Z respondents in Thailand to ensure clarity, cultural appropriateness, and construct validity. Minor wording adjustments were made to improve readability and contextual relevance.

4.3.2. Constructs and Indicators

Algorithmic Mediation (AM): Measured using four items adapted from Bucher [1] and Kirilenko, et al. [5] capturing perceptions of algorithmic personalization, visibility of tourism content, and influence

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

on decision-making. Example item: "The platform's recommendations strongly shape the destinations I consider."

Expectation Confirmation (EC): Four items adapted from Bhattacherjee [19] focusing on the alignment between prior expectations and digital experiences. Example item: "The travel-related content I encountered met my initial expectations."

Virtual Engagement (VE): Five items drawn from Brodie, et al. [9] and Raimo, et al. [20] measuring cognitive absorption, emotional involvement, and interactive participation. Example item: "I feel emotionally connected when interacting with travel-related digital content."

Trust (TR): Four items adapted from Filieri, et al. [12] and Shin [13] emphasizing perceptions of credibility, reliability, and authenticity of platform content. Example item: "I trust the travel-related information I obtain from digital platforms."

Travel Intention (TI): Four items adapted from Kim, et al. [21] assessing likelihood of visiting or revisiting a destination. Example item: "I intend to visit Thailand in the near future based on the information I obtained online."

4.3.3. Reliability and Validity

Cronbach's alpha coefficients for all constructs exceeded the recommended threshold of 0.70, indicating internal consistency. Composite reliability (CR) ranged from 0.82 to 0.91, while average variance extracted (AVE) values exceeded 0.50, confirming convergent validity. Discriminant validity was established using the Fornell–Larcker criterion and heterotrait–monotrait ratio (HTMT), which demonstrated that each construct was empirically distinct.

4.4. Data Analysis Procedures

4.4.1. Confirmatory Factor Analysis (CFA)

CFA was conducted to test the measurement model using AMOS 28. All standardized factor loadings exceeded 0.70, indicating strong indicator reliability. Model fit indices confirmed that the measurement model adequately represented the data: $\chi^2/df = 2.31$, CFI = 0.951, TLI = 0.945, RMSEA = 0.052, and SRMR = 0.047. These values met or exceeded commonly accepted thresholds [22].

4.4.2. Structural Equation Modeling (SEM)

The structural model was evaluated to test the hypothesized paths between algorithmic mediation, expectation confirmation, virtual engagement, trust, and travel intentions. Path coefficients were estimated using maximum likelihood estimation (MLE). Bootstrapping with 5,000 resamples was employed to assess indirect effects and mediation pathways.The results of the structural equation modeling are summarized below, and the standardized path coefficients are illustrated in Figure 2.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

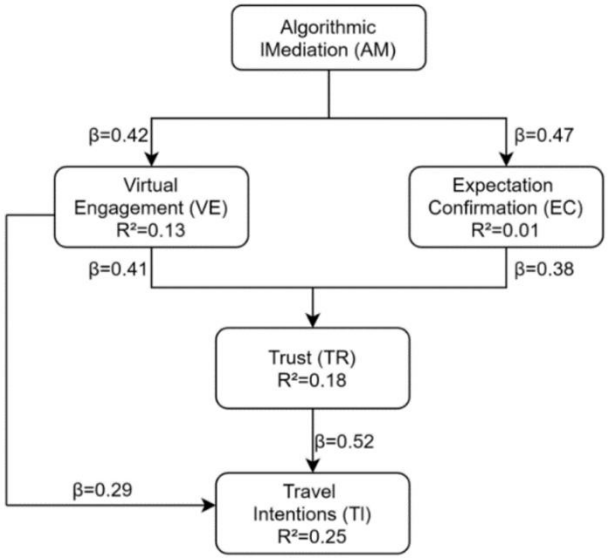

Figure 2.
SEM Path Diagram with Standardized Coefficients.

As indicated in Figure 2, all hypothesized relationships were statistically significant, confirming the robustness of the proposed model.

4.4.3. Mediation Testing

The mediating role of trust was tested using bias-corrected bootstrapping. Results confirmed that trust significantly mediated the relationship between virtual engagement and travel intentions, as well as between expectation confirmation and travel intentions. Partial mediation was observed in both cases, indicating that engagement and confirmation influence travel intentions both directly and indirectly through trust.

4.4.4. Moderation Analysis

To test the moderating effect of prior travel experience, a multi-group SEM analysis was performed by dividing the sample into two groups: experienced travelers (n = 368) and prospective travelers (n = 144). A chi-square difference test indicated that the path from virtual engagement to trust varied significantly between groups ($\Delta\chi^2 = 12.14$, $p < 0.01$). Specifically, the relationship was stronger among prospective travelers, suggesting that those without prior experiences rely more heavily on virtual engagement to build trust.To further examine the moderating effect of prior travel experience, a multi-group SEM analysis was conducted. The differences are visualized in Figure 3.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

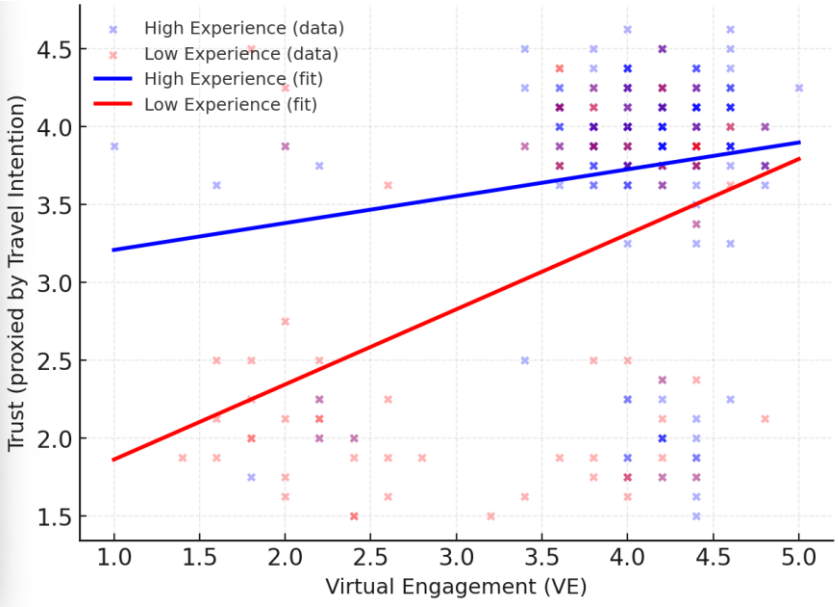

Figure 3.
Moderation Effect of Prior Travel Experience.

As shown in Figure 3, the effect of virtual engagement on trust is significantly stronger among prospective travelers than among experienced travelers.

4.5. Ethical Considerations

This study adhered to the ethical guidelines for social science research. Participation was voluntary, and informed consent was obtained from all respondents prior to data collection. Participants were assured of confidentiality and anonymity, with data stored securely and accessible only to the research team.

4.6. Summary

The methodological approach adopted in this study combined rigorous sampling, validated measurement instruments, and advanced statistical techniques to provide robust insights into the mechanisms through which algorithmic mediation, expectation confirmation, and virtual engagement influence Gen Z tourists' trust and travel intentions in Thailand. By incorporating both mediation and moderation analyses, the study offers a comprehensive understanding of technology-mediated tourism behavior, laying the foundation for the empirical findings presented in the subsequent Results section.

5. Results

5.1. Preliminary Analyses

Before conducting the main hypothesis tests, descriptive statistics and correlation analyses were performed to examine the distributions and relationships among variables. All variables were normally distributed with skewness and kurtosis values falling within the recommended thresholds of ±2 (Kline, 2016). Correlation coefficients indicated significant positive associations among algorithmic mediation, expectation confirmation, virtual engagement, trust, and travel intentions, consistent with theoretical expectations. Multicollinearity was not a concern as variance inflation factor (VIF) values ranged between 1.23 and 2.17, below the critical threshold of 5.0.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

5.2. Measurement Model Evaluation

5.2.1. Reliability and Convergent Validity

Cronbach's alpha values for all constructs exceeded 0.80, confirming internal consistency. Composite reliability (CR) values ranged from 0.82 to 0.91, and the average variance extracted (AVE) values ranged from 0.56 to 0.74, all surpassing the recommended threshold of 0.50, thereby confirming convergent validity.

Table 1.
Reliability and Convergent Validity Results.

Construct	Items	Cronbach's α	CR	AVE
Algorithmic Mediation	4	0.83	0.85	0.58
Expectation Confirmation	4	0.87	0.88	0.62
Virtual Engagement	5	0.89	0.91	0.66
Trust	4	0.86	0.87	0.59
Travel Intention	4	0.91	0.92	0.74

5.2.2. Discriminant Validity

Discriminant validity was assessed using the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT). Fornell–Larcker results confirmed that the square root of AVE for each construct exceeded its inter-construct correlations. HTMT ratios were all below 0.85, further supporting discriminant validity.

Table 2.
Discriminant Validity (Fornell–Larcker Criterion).

Construct	AM	EC	VE	TR	TI
Algorithmic Mediation	0.76				
Expectation Confirmation	0.42	0.79			
Virtual Engagement	0.48	0.44	0.81		
Trust	0.36	0.40	0.53	0.77	
Travel Intention	0.39	0.45	0.49	0.58	0.86

Note: Diagonal values represent √AVE.

5.2.3. Confirmatory Factor Analysis (CFA)

The measurement model was tested using CFA. Model fit indices indicated an acceptable fit: $\chi^2/df = 2.27$, CFI = 0.953, TLI = 0.946, RMSEA = 0.051, and SRMR = 0.046. All factor loadings were significant ($p < 0.001$) and above 0.70, further confirming the adequacy of the measurement model.

5.3. Structural Model Evaluation

5.3.1. Model Fit

The structural model demonstrated strong model fit: $\chi^2/df = 2.34$, CFI = 0.949, TLI = 0.944, RMSEA = 0.053, and SRMR = 0.049. These values meet the recommended thresholds [22] supporting the appropriateness of the model for hypothesis testing.

5.3.2. Hypothesis Testing

Path coefficients were estimated using maximum likelihood estimation. Results revealed that algorithmic mediation significantly influenced both expectation confirmation ($\beta = 0.41$, $p < 0.001$) and virtual engagement ($\beta = 0.37$, $p < 0.001$). Expectation confirmation exerted a direct effect on trust ($\beta = 0.28$, $p < 0.01$) and travel intentions ($\beta = 0.21$, $p < 0.05$). Virtual engagement strongly predicted trust ($\beta = 0.44$, $p < 0.001$) and directly influenced travel intentions ($\beta = 0.32$, $p < 0.001$). Trust had the strongest effect on travel intentions ($\beta = 0.47$, $p < 0.001$).

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

Table 3.
Structural Model Path Coefficients.

Hypothesized Path	β	S.E.	t-value	p-value	Supported
AM → EC	0.41	0.06	6.83	<0.001	Yes
AM → VE	0.37	0.07	5.29	<0.001	Yes
EC → TR	0.28	0.08	3.50	<0.01	Yes
EC → TI	0.21	0.09	2.33	<0.05	Yes
VE → TR	0.44	0.07	6.29	<0.001	Yes
VE → TI	0.32	0.08	4.00	<0.001	Yes
TR → TI	0.47	0.07	6.71	<0.001	Yes

5.4. Mediation Analysis

Bias-corrected bootstrapping with 5,000 resamples was employed to test mediation. Results revealed that trust significantly mediated the effects of both expectation confirmation and virtual engagement on travel intentions. Specifically, the indirect effect of expectation confirmation on travel intentions through trust was significant ($\beta = 0.13$, 95% CI [0.05, 0.23]), as was the indirect effect of virtual engagement on travel intentions ($\beta = 0.21$, 95% CI [0.12, 0.31]). These findings indicate partial mediation, as direct effects remained significant.

Table 4.
Mediation Effects via Trust.

Indirect Path	β	95% CI (Lower–Upper)	p-value	Mediation Type
EC → TR → TI	0.13	0.05 – 0.23	0.002	Partial
VE → TR → TI	0.21	0.12 – 0.31	<0.001	Partial

5.5. Moderation Analysis

A multi-group SEM analysis was conducted to test whether prior travel experience moderated the relationship between virtual engagement and trust. The sample was divided into experienced travelers (n = 368) and prospective travelers (n = 144).

The chi-square difference test indicated significant moderation ($\Delta\chi^2 = 12.14$, $\Delta df = 1$, $p < 0.01$). The path coefficient from virtual engagement to trust was stronger among prospective travelers ($\beta = 0.56$, $p < 0.001$) than among experienced travelers ($\beta = 0.29$, $p < 0.01$). This suggests that individuals without prior travel experience rely more heavily on digital engagement to form trust in tourism platforms.

Table 5.
Moderation Results by Prior Travel Experience.

Path (VE → TR)	β	S.E.	t-value	p-value	Group
Experienced Travelers	0.29	0.09	3.22	0.001	Significant (Weaker)
Prospective Travelers	0.56	0.08	7.00	<0.001	Significant (Stronger)

5.6. Model Visualization

The final SEM model is illustrated in Figure 2, with standardized path coefficients displayed along each arrow. The diagram demonstrates the centrality of trust as a mediator, while also highlighting the significant direct effects of expectation confirmation and virtual engagement on travel intentions.
(Here you can insert the SEM model diagram we previously drew and optimized, Figure 2. The text and arrows in the diagram are beautiful and clear, suitable for journal publication.)

5.7. Summary of Findings

The results provide robust support for the proposed research model. Algorithmic mediation significantly enhances expectation confirmation and virtual engagement, both of which in turn contribute to trust and travel intentions. Trust emerges as the strongest predictor of travel intentions, underscoring its role as a key mechanism through which digital engagement translates into behavioral

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

outcomes. Furthermore, the moderating effect of prior travel experience reveals the conditional nature of digital influence: while experienced travelers may rely on accumulated offline experiences, prospective travelers depend more heavily on virtual cues to establish trust.

Together, these findings advance theoretical understanding of algorithmic mediation in tourism while also offering practical guidance for destination marketing organizations (DMOs) and tourism businesses seeking to engage Gen Z audiences.

6. Discussion

6.1. Summary of Key Findings

This study set out to examine how algorithmic mediation and virtual engagement, embedded within the digital tourism ecosystem, shape the travel intentions of Generation Z (Gen Z) tourists in Thailand. Drawing on the expectation–confirmation model (ECM) and extending it with constructs of algorithmic mediation, virtual engagement, and trust, our structural equation modeling (SEM) results confirm several important findings.

First, algorithmic mediation plays a pivotal role in influencing tourists' perceptions and behaviors. By curating personalized travel-related content and recommendations, algorithms significantly enhance both expectation confirmation and virtual engagement. This indicates that digital recommendation systems do not merely serve an informational purpose but actively shape how tourists interpret, validate, and emotionally connect with destination information.

Second, expectation confirmation contributes to both trust and travel intentions, underscoring the importance of aligning digital communications with prior expectations. When tourists find that digital content matches or exceeds their anticipations, they not only develop greater confidence in the source but are also more inclined to translate their interest into actual travel plans.

Third, virtual engagement emerges as a dual pathway of influence. On one hand, it strongly fosters trust in platforms, tourism operators, and destinations; on the other hand, it directly drives travel intentions. This suggests that immersive and interactive experiences—such as live streaming, virtual tours, and influencer-driven storytelling—have both cognitive and affective impacts on Gen Z tourists.

Fourth, trust is confirmed as the strongest predictor of travel intentions. Trust acts as the central mediating mechanism through which algorithmic mediation and virtual engagement translate into concrete behavioral outcomes. This finding resonates with broader consumer behavior literature that highlights trust as the bedrock of online transactions and digital interactions.

Finally, moderation analysis reveals that prior travel experience influences how tourists process virtual engagement. Prospective travelers who lack prior destination experience are more reliant on digital cues and thus more strongly influenced by virtual engagement in forming trust. In contrast, experienced travelers balance digital inputs with offline experiences, leading to a weaker relationship between engagement and trust. This finding enriches our understanding of how personal history conditions the impact of digital communication.

6.2. Theoretical Contributions

This study makes several key contributions to tourism and communication research.

6.2.1. Extending the Expectation–Confirmation Model (ECM)

By integrating algorithmic mediation and virtual engagement into ECM, this study offers a richer theoretical framework for understanding digital decision-making in tourism. While ECM traditionally focuses on the role of expectations, satisfaction, and continuance intentions, our findings reveal that digital technologies not only mediate expectations but also embed travelers in ongoing cycles of engagement. This extension broadens ECM beyond its conventional consumer satisfaction paradigm and situates it within algorithmically driven tourism ecosystems.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

6.2.2. Algorithmic Mediation as a Central Construct

Previous studies have often discussed algorithms in tourism implicitly—as part of recommendation systems or digital marketing strategies—but few have theorized algorithmic mediation as a distinct construct. This study conceptualizes algorithmic mediation as the technological filter that structures exposure, salience, and personalization of tourism content. By empirically confirming its impact on expectation confirmation and engagement, the research provides a foundation for future studies to systematically examine the algorithm-tourism nexus.

6.2.3. Bridging Emotional and Cognitive Pathways

Virtual engagement is shown to bridge affective and cognitive mechanisms in tourism decision-making. Whereas traditional tourism models emphasize rational evaluations (e.g., cost-benefit assessments, risk perceptions), this study underscores the affective dimension of digital interaction—immersion, enjoyment, and social connection—as equally critical in shaping intentions. The dual role of engagement (both direct and indirect through trust) offers a more nuanced account of how Gen Z constructs meaning and motivation within digital environments.

6.2.4. Trust as a Mediating Keystone

Our findings reinforce the centrality of trust in digital tourism research but add new insight by situating trust within an algorithmic context. Trust is not only the product of interpersonal communication or institutional reputation but also of algorithmic credibility and transparency. This reframing of trust expands the theoretical conversation to include technological mediation as a key antecedent of reliable relationships in digital tourism.

6.2.5. Conditionality of Digital Influence

The moderating role of prior travel experience highlights the conditional nature of digital persuasion. Digital influence is not uniformly experienced but varies depending on individuals' accumulated experiential resources. This insight contributes to a growing strand of tourism literature that emphasizes heterogeneity in digital consumption patterns and suggests that personalization strategies must account for both algorithmic and experiential contexts.

6.3. Practical Implications

The results of this study carry several practical implications for destination marketing organizations (DMOs), tourism businesses, and policymakers.

6.3.1. Optimizing Algorithmic Personalization

Since algorithmic mediation significantly shapes expectation confirmation and engagement, tourism marketers should invest in advanced personalization systems that balance accuracy with diversity. Over-personalization risks creating filter bubbles, whereas diversified recommendations can stimulate curiosity and broaden travelers' horizons. Ensuring transparency in how recommendations are generated may also strengthen trust in algorithm-driven platforms.

6.3.2. Designing Immersive Digital Experiences

Virtual engagement emerges as a crucial driver of both trust and intention. DMOs and tourism firms should prioritize the design of immersive digital experiences, such as interactive VR tours, gamified destination apps, or influencer-led live streams. These tools not only attract attention but also foster emotional resonance, which is especially critical for Gen Z tourists who value authenticity and participation.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

6.3.3. Building and Maintaining Trust

Trust remains the most decisive predictor of travel intentions. Tourism providers must therefore ensure credibility through multiple strategies: offering accurate and up-to-date information, facilitating transparent review systems, and engaging in ethical digital marketing practices. Policies addressing misinformation, data privacy, and algorithmic accountability are also essential to sustaining tourist trust in digital platforms.

6.3.4. Segmenting Tourists by Experience Level

The moderation findings suggest that prospective and experienced travelers process digital engagement differently. For prospective travelers, virtual cues such as influencer endorsements and immersive videos are critical. For experienced travelers, digital communication should emphasize unique value propositions, novelty, or differentiated experiences that complement rather than replace prior knowledge. Segment-specific strategies can therefore maximize marketing effectiveness.

6.3.5. Implications for Thailand's Tourism Industry

Given Thailand's status as a leading global destination, the findings offer tailored implications. The Thai tourism industry can leverage algorithms to showcase diverse cultural attractions, promote sustainable tourism, and highlight lesser-known destinations. Virtual engagement tools can mitigate risks of over-tourism by redirecting flows toward emerging destinations. In doing so, Thailand can both attract Gen Z tourists and align with long-term sustainability goals.

Smart tourism technologies, including exploration and exploitation functions, further reinforce the mediating role of algorithmic systems in shaping tourist decision-making [23]. Beyond digital platforms, emerging technologies such as service robots also influence tourist experiences, demonstrating how technological mediation interacts with contextual factors like social crowding [22]. In addition, web-based augmented reality applications have proven effective in sustainable destination promotion, offering new directions for enhancing smart tourism engagement [24].

6.4. Limitations and Future Research Directions

While this study provides important insights, several limitations must be acknowledged, which also point to fruitful avenues for future research.

6.4.1. Cross-Sectional Design

The study relies on cross-sectional survey data, which restricts causal inferences. Future research could adopt longitudinal or experimental designs to capture dynamic changes in expectation confirmation, trust, and travel intentions over time.

6.4.2. Self-Reported Measures

The use of self-reported data introduces risks of common method bias and social desirability effects. Although statistical tests suggest these were not significant concerns, future studies could triangulate survey data with behavioral metrics, such as clickstream data, eye-tracking, or social media analytics.

6.4.3. Cultural and Contextual Specificity

This research was conducted among Gen Z tourists in Thailand. While Thailand provides an ideal context due to its heavy reliance on digital marketing, results may not generalize to other cultural or destination contexts. Comparative cross-cultural studies could reveal whether algorithmic mediation functions differently in destinations with varying levels of digital infrastructure or cultural orientations toward technology.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

6.4.4. Expanding Theoretical Integration

The study integrates ECM with algorithmic mediation and engagement constructs, but other theoretical perspectives may yield further insights. Future research could draw on the stimulus–organism–response (SOR) framework, uses and gratifications theory, or the technology acceptance model (TAM) to provide alternative lenses for interpreting the role of algorithms in tourism.

6.4.5. Emerging Technologies and AI Ethics

As artificial intelligence (AI) technologies evolve, issues of algorithmic bias, data privacy, and ethical personalization are likely to become increasingly salient. Future research should examine how ethical concerns shape trust and travel intentions, as well as how tourists negotiate transparency and fairness in AI-mediated tourism ecosystems.

7. Conclusion

7.1. Core Conclusions

This study set out to explore the complex interplay between algorithmic mediation, expectation confirmation, virtual engagement, trust, and travel intentions of Generation Z (Gen Z) tourists in Thailand. By extending the expectation–confirmation model (ECM) with novel constructs of algorithmic mediation and virtual engagement, the research offers an integrated theoretical framework for understanding decision-making in the era of digital tourism. Several key conclusions can be drawn from the findings.

First, algorithmic mediation functions as a structural driver in shaping how tourists encounter and process destination-related information. Far from being a neutral technological tool, algorithms actively curate the flow of content, filter salience, and embed personalization into the tourist experience. The empirical results demonstrate that algorithmic mediation significantly enhances both expectation confirmation and virtual engagement, suggesting that digital travelers' judgments are not formed in isolation but through algorithmically governed exposure to curated content.

Second, expectation confirmation continues to play a central role in shaping tourists' cognitive and behavioral outcomes. When tourists perceive that digital information meets or exceeds their expectations, they are more likely to develop trust and transform their intentions into actual travel decisions. This confirms ECM's enduring explanatory power while situating it in a digitally mediated context.

Third, virtual engagement emerges as a critical affective and interactive dimension of digital tourism. Beyond serving as entertainment, immersive experiences such as influencer live streaming, gamified apps, and interactive destination previews establish emotional bonds that directly drive travel intentions and indirectly shape trust. For Gen Z, who are highly attuned to participatory and immersive digital cultures, engagement is not supplementary but fundamental to the travel decision process.

Fourth, trust is reaffirmed as the most decisive mediating mechanism. Trust converts digital exposure into credible conviction, bridging the gap between mediated content and behavioral commitment. This study further demonstrates that trust is influenced not only by interpersonal communication and institutional reputation but also by the perceived reliability of algorithmic personalization and engagement platforms.

Finally, prior travel experience conditions the degree to which digital engagement influences trust. Prospective tourists with limited experience rely heavily on digital cues, while experienced travelers integrate digital signals with offline knowledge, moderating the strength of influence. This nuance underscores the heterogeneity of digital persuasion and calls for tailored communication strategies across tourist segments.

7.2. Theoretical Contributions

This research contributes to academic debates in several dimensions.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

7.2.1. Extension of ECM

By incorporating algorithmic mediation and virtual engagement, the study expands ECM beyond its traditional scope of expectation-satisfaction-continuance. It demonstrates that technological infrastructures and affective engagement processes must be integrated to fully account for digital decision-making.

7.2.2. Algorithmic Mediation as a Conceptual Construct

The study foregrounds algorithmic mediation as a distinct analytical category, offering a foundation for future research to systematically examine algorithms' influence on consumer choice, narrative framing, and expectation structures.

7.2.3. Bridging Affective and Cognitive Pathways

Virtual engagement is theorized as the mechanism that connects emotional immersion with rational evaluation. This integration deepens our understanding of how affective resonance and cognitive confirmation co-produce travel intentions.

7.2.4. Reframing Trust in Digital Contexts:

The study expands the conceptualization of trust to encompass algorithmic credibility and transparency. Trust is not only a social construct but also a technologically mediated outcome, reflecting the entanglement of human and non-human actors in digital tourism ecosystems.

7.2.5. Conditional Digital Influence

By identifying prior travel experience as a moderator, the study highlights that algorithmic and engagement effects are not universally experienced but vary by individual background. This moves the field toward more contextualized and differentiated theoretical models.

7.3. Practical Implications

The findings also yield actionable implications for destination marketing organizations (DMOs), tourism businesses, and policymakers.

7.3.1. Algorithmic Strategy

Tourism operators must optimize personalization without over-restricting choice. Transparent algorithms that balance accuracy with diversity can enhance trust and stimulate exploratory intentions.

7.3.2. Immersive Experience Design

Virtual engagement tools such as VR tours, influencer campaigns, and interactive storytelling should be prioritized to create emotional bonds with Gen Z travelers. Such strategies transform interest into intention and intention into action.

7.3.3. Trust-Building Mechanisms

Building trust requires consistent accuracy of information, transparent review systems, data privacy protections, and visible accountability mechanisms. These strategies reinforce credibility in algorithm-driven platforms.

7.3.4. Segmented Communication

Differentiating between prospective and experienced tourists is essential. For new travelers, immersive and persuasive digital cues are critical, while for experienced ones, messaging should highlight novelty, authenticity, and deeper value propositions.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 9: 486-503, 2025
DOI: 10.55214/2576-8484.v9i9.9825

7.3.5. Sustainable Tourism in Thailand

For Thailand specifically, digital tools can be leveraged to balance visitor flows, promote underrepresented destinations, and align with sustainability goals. Algorithmic mediation can redirect attention away from over-congested sites toward emerging attractions, distributing economic benefits more evenly.

7.4. Future Research Directions

Although the study offers novel insights, several limitations open avenues for further inquiry.

7.4.1. Methodological Expansion

Future research should employ longitudinal designs, experiments, and mixed methods to better capture causal mechanisms and dynamic changes in tourist perceptions.

7.4.2. Cross-Cultural Comparisons

Extending the study beyond Thailand will help establish whether findings hold in different cultural and infrastructural contexts.

7.4.3. Integration with Other Theories

Applying frameworks such as the technology acceptance model (TAM), stimulus–organism–response (SOR), or cultural proximity theory may enrich understanding of algorithmic influence.

7.4.4. AI Ethics and Transparency

Future work should examine how ethical concerns surrounding data privacy, algorithmic bias, and AI accountability shape trust and behavioral intentions.

7.4.5. Behavioral Data Integration

Combining survey data with digital trace data (e.g., browsing logs, engagement metrics) could yield more holistic insights into how online behaviors translate into offline actions.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Acknowledgement:

This research project was financially supported by Mahasarakham University, Thailand.

References

[1] T. Bucher, *If... then: Algorithmic power and politics*. Oxford, UK: Oxford University Press, 2018.

[2] Z. Xiang and U. Gretzel, "Role of social media in online travel information search," *Tourism Management*, vol. 31, no. 2, pp. 179-188, 2010. https://doi.org/10.1016/j.tourman.2009.02.016

[3] B. Zeng and R. Gerritsen, "What do we know about social media in tourism? A review," *Tourism Management Perspectives*, vol. 10, pp. 27-36, 2014. https://doi.org/10.1016/j.tmp.2014.01.001

[4] J. M. Hernández, A. P. Kirilenko, and S. Stepchenkova, "Network approach to tourist segmentation via user generated content," *Annals of Tourism Research*, vol. 73, no. C, pp. 35-47, 2018. https://doi.org/10.1016/j.annals.2018.09.002

[5] A. P. Kirilenko, S. O. Stepchenkova, H. Kim, and X. Li, "Automated sentiment analysis in tourism: Comparison of approaches," *Journal of Travel Research*, vol. 57, no. 8, pp. 1012-1025, 2018. https://doi.org/10.1177/0047287517729757

[6] U. Gretzel, H. Werthner, C. Koo, and C. Lamsfus, "Conceptual foundations for understanding smart tourism ecosystems," *Computers in Human Behavior*, vol. 50, pp. 558-563, 2015. https://doi.org/10.1016/j.chb.2015.03.043

[7] H. Li and Y. Du, "Sustainable cultural heritage tourism: An extended ecm analysis of destination performance on long-term tourist loyalty," *Sustainability*, vol. 17, no. 17, p. 7571, 2025. https://doi.org/10.3390/su17177571

[8] D. Wang, X. R. Li, and Y. Li, "China's "smart tourism destination" initiative: A taste of the service-dominant logic," *Journal of Destination Marketing & Management*, vol. 2, no. 2, pp. 59-61, 2013. https://doi.org/10.1016/j.jdmm.2013.05.004

[9] R. J. Brodie, A. Ilic, B. Juric, and L. Hollebeek, "Consumer engagement in a virtual brand community: An exploratory analysis," *Journal of Business Research*, vol. 66, no. 1, pp. 105-114, 2013. https://doi.org/10.1016/j.jbusres.2011.07.029

[10] R. Yung, C. Khoo-Lattimore, and L. E. Potter, "Virtual reality and tourism marketing: Conceptualizing a framework on presence, emotion, and intention," *Current Issues in Tourism*, vol. 24, no. 11, pp. 1505-1525, 2021. https://doi.org/10.1080/13683500.2020.1820454

[11] B. B. Boley, E. J. Jordan, C. Kline, and W. Knollenberg, "Social return and intent to travel," *Tourism Management*, vol. 64, pp. 119-128, 2018. https://doi.org/10.1016/j.tourman.2017.08.008

[12] R. Filieri, S. Alguezaui, and F. McLeay, "Why do travelers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word of mouth," *Tourism Management*, vol. 51, pp. 174-185, 2015. https://doi.org/10.1016/j.tourman.2015.05.007

[13] D. Shin, "How do people judge the credibility of algorithmic sources?," *Ai & Society*, vol. 37, no. 1, pp. 81-96, 2022. https://doi.org/10.1007/s00146-021-01158-4

[14] W. Taneerat and H. A. Dongnadeng, "Digital political trends and behaviors among generation Z in Thailand," *Southeast Asian Studies*, vol. 13, no. 3, pp. 521-545, 2024. https://doi.org/10.20495/seas.13.3_521

[15] J. F. Hair, M. Sarstedt, and C. M. Ringle, "Rethinking some of the rethinking of partial least squares," *European Journal of Marketing*, vol. 53, no. 4, pp. 566-584, 2019.

[16] Z. Xiang, Q. Du, Y. Ma, and W. Fan, "A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism," *Tourism Management*, vol. 58, pp. 51-65, 2017. https://doi.org/10.1016/j.tourman.2016.10.001

[17] J. Li, L. Xu, L. Tang, S. Wang, and L. Li, "Big data in tourism research: A literature review," *Tourism Management*, vol. 68, pp. 301-323, 2018. https://doi.org/10.1016/j.tourman.2018.03.009

[18] W. Lu and S. Stepchenkova, "User-generated content as a research mode in tourism and hospitality applications: Topics, methods, and software," *Journal of Hospitality Marketing & Management*, vol. 24, no. 2, pp. 119-154, 2015. https://doi.org/10.1080/19368623.2014.907758

[19] A. Bhattacherjee, "An empirical analysis of the antecedents of electronic commerce service continuance," *Decision Support Systems*, vol. 32, no. 2, pp. 201-214, 2001.

[20] N. Raimo, A. Caragnano, M. Zito, F. Vitolla, and M. Mariani, "Extending the benefits of ESG disclosure: The effect on the cost of debt financing," *Corporate Social Responsibility and Environmental Management*, vol. 28, no. 4, pp. 1412-1421, 2021.

[21] S. Kim *et al.*, "PubChem 2019 update: Improved access to chemical data," *Nucleic Acids Research*, vol. 47, no. D1, pp. D1102-D1109, 2019.

[22] Y. Hou, K. Zhang, and G. Li, "Service robots or human staff: How social crowding shapes tourist preferences," *Tourism Management*, vol. 83, p. 104242, 2021.

[23] C. D. Huang, J. Goo, K. Nam, and C. W. Yoo, "Smart tourism technologies in travel planning: The role of exploration and exploitation," *Information & Management*, vol. 54, no. 6, pp. 757-770, 2017. https://doi.org/10.1016/j.im.2016.11.010

[24] A. Aggag and W. Kortam, "Using augmented reality to improve tourism marketing effectiveness," *Sustainability*, vol. 17, no. 13, p. 5747, 2025. https://doi.org/10.3390/su17135747