



A Proposed Theoretical Framework for Studying Tourist Trust in Generative Artificial Intelligence

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Abstract

The rapid proliferation of Generative Artificial Intelligence (GenAI) is fundamentally reshaping how tourists plan, experience, and reflect upon their travel activities. However, research on tourist trust in GenAI remains limited, particularly lacking an integrated and systematic theoretical framework. This paper pursues two objectives: (1) to critically synthesise foundational theories on trust, technology acceptance, and AI in tourism; and (2) to propose an integrated theoretical framework for studying tourist trust in GenAI, encompassing trust dimensions, multi-level antecedents, and multi-dimensional behavioural outcomes. The framework is grounded in three core theoretical pillars: the integrative trust model (Mayer *et al.*, 1995), the Unified Theory of Acceptance and Use of Technology (Venkatesh *et al.*, 2012), and the theory of human trust in AI (Glikson & Woolley, 2020). The proposed framework extends existing models by incorporating two GenAI-specific dimensions - *perceived algorithmic transparency* and *perceived data security* - into the trust construct, while identifying three antecedent groups and four behavioural outcome categories with clear theoretical foundations. The paper concludes with a discussion of theoretical contributions, implications for empirical research, and directions for future investigation.

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Keywords: generative artificial intelligence, tourism, tourist behaviour, AI trust, technology acceptance

1. Introduction

Within fewer than three years of next-generation large language models becoming publicly available, generative artificial intelligence has become one of the most rapidly diffused technologies in the history of digital consumption. In the tourism sector, GenAI applications span a broad continuum - from assisting tourists in crafting personalised itineraries, recommending destinations based on individual preferences, composing service booking requests, to delivering real-time on-site information - creating a form of assisted interaction that has no precedent in the history of the industry. Huang and Rust (2018) ^[6] argued that AI is not merely a tool for automation but an agent capable of fundamentally restructuring the service relationship between humans and organisations; this argument becomes sharper and more urgent when situated within the context of GenAI - a category of AI distinguished by natural language interaction capability, novel content generation, and deep per-user personalisation.

Yet alongside the considerable enthusiasm surrounding its utility, one central question remains inadequately answered in the scholarly literature: do tourists genuinely trust GenAI and feel prepared to rely upon it in their travel decisions, and if so, how is that trust constituted? Trust - understood as the core psychological mechanism governing behaviour under conditions of uncertainty and vulnerability (Mayer *et al.*, 1995) ^[9] - emerges as the pivotal construct requiring systematic investigation in this

context. Surveying the existing literature, despite a decades-long tradition of research on trust in technology and artificial intelligence dating from the 1990s (Davis, 1989; Lee & See, 2004; McKnight *et al.*, 2002) ^[1, 8, 10], at least three significant theoretical gaps persist. First, the majority of existing models approach AI as a homogeneous class of technology, failing to differentiate the distinctive characteristics of GenAI from service robots, rule-based chatbots, or classical recommender systems. Second, research on trust in the tourism context has concentrated primarily on robots and simple chatbots (Tussyadiah, 2020; Ivanov & Webster, 2017) ^[14, 7], without integrating the distinctive features of GenAI with respect to content generation capability, multi-turn interaction, and the risk of informational hallucination. Third, no existing framework integrates simultaneously the distinctive trust dimensions, multi-level antecedents, and multi-dimensional behavioural outcomes within a theoretically coherent structure designed specifically for empirical investigation of GenAI in tourism.

This paper is directed at filling these gaps through two specific objectives: (1) to synthesise and critically analyse foundational theories relevant to trust, technology acceptance, and AI in tourism; and (2) to propose an integrated theoretical framework for studying tourist trust in GenAI that is sufficiently grounded in theory to guide subsequent empirical research designs. The paper is organised as follows: Section 2 presents the theoretical review across four streams; Section 3 proposes the theoretical framework with full theoretical justification and component description; Section 4 discusses theoretical contributions, research implications, and limitations; Section 5 concludes.

2. Theoretical Review

2.1. Trust: From Interpersonal Constructs to Technology Trust

Trust is among the most widely investigated psycho-social constructs in the social sciences, spanning psychology, sociology, management, and behavioural economics. Mayer, Davis, and Schoorman (1995) - in the most widely cited work on trust in organisational contexts - define trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer *et al.*, 1995, p. 712) ^[9]. From this foundational definition, the authors identify three factors constituting the characteristics of the trusted party, commonly referred to as the ABi model: ability - the set of skills and competencies enabling the trusted party to perform effectively within a specific domain; benevolence - the degree to which the trusted party is perceived to want to do good to the trustor; and integrity - the trustor's perception that the trusted party adheres to an acceptable set of principles. The ABi model remains to this day the most frequently cited and extended theoretical foundation in trust research and will serve as the cornerstone of the framework proposed in Section 3.

When the object of trust shifts from persons to technological systems, the ABi model encounters certain limitations. Lee and See (2004) ^[8], in their foundational work on trust in automation, argue that trust in automated systems operates

across three dimensions: performance, process, and purpose. More importantly, Lee and See (2004) ^[8] emphasise the concept of "calibrated trust" - that is, a level of trust commensurate with the actual capabilities of the system. Both over-trust and under-trust lead to suboptimal behaviour, and this argument carries particular significance when studying tourists interacting with GenAI - a system that is simultaneously impressively capable and technically limited in documented ways.

In electronic commerce, McKnight, Choudhury, and Kacmar (2002) ^[10] developed a multi-dimensional trust measurement system comprising: cognitive trust (rational assessment of reliability), affective trust (positive emotion toward the trusted object), and behavioural trust (willingness to act on the basis of trust). This typology opens a more comprehensive approach to studying trust in digital environments - where tourists increasingly interact with virtual agents rather than human individuals. Gefen, Karahanna, and Straub (2003) ^[2] extended this framework into online shopping contexts and demonstrated that trust is a statistically significant mediator between technology familiarity and use intention - a finding suggesting that accumulated experience with GenAI will influence trust and, through it, usage behaviour in tourism.

A theoretical contribution of notable importance is the trust transfer mechanism proposed by Stewart (2003) ^[13]: trust can be transferred from a familiar entity to an unfamiliar one, provided there is a cognitive association between the two. In the context of GenAI for tourism, this has clear practical significance: the trust tourists hold toward the brand of the organisation providing GenAI may function as a bridge, transferring to trust in the specific GenAI tool - a mechanism that warrants integration into the antecedent structure of the proposed model.

2.2. Generative Artificial Intelligence and Its Applications in Tourism

Generative artificial intelligence is understood as the class of machine learning models capable of producing novel content - including text, images, audio, and code - based on large-scale training data and advanced deep learning architectures. The fundamental distinction between GenAI and previous AI systems in tourism lies in three characteristics: contextual multi-turn natural language reasoning, flexible response generation unconstrained by fixed structures, and deep within-conversation personalisation based on information provided by the user. These characteristics create both opportunities and risks that are categorically different from rule-based chatbots or classical recommender systems - and accordingly, existing trust models cannot be applied directly without deliberate adaptation.

Ivanov and Webster (2017) ^[7] were among the first scholars to systematically analyse AI adoption in tourism and hospitality through a cost-benefit framework, demonstrating that AI can perform tasks ranging from simple (automated check-in, standard information provision) to more complex operations (sentiment analysis, dynamic pricing optimisation). Tussyadiah (2020) ^[14], in a comprehensive review of AI and

robotics in tourism, identified three application waves: task automation, decision support, and intelligent interaction - with GenAI representing the apex of the third wave through its unprecedented capacity for natural interaction.

Huang and Rust (2018) ^[6] propose a taxonomy of AI service intelligence across four ascending levels: mechanical intelligence (executing predefined tasks), analytical intelligence (analysing data and generating predictions), intuitive intelligence (understanding context and situation), and empathetic intelligence (recognising and responding to human emotion). GenAI, with its advanced natural language processing capabilities, operates primarily at the third level and is beginning to approach the fourth - producing a qualitatively different interaction experience from all previous AI applications in tourism. Prentice, Dominique Lopes, and Wang (2020) ^[12] similarly argue that in hospitality contexts, the perceived emotional intelligence of AI is an important factor in building trust and satisfaction - suggesting that GenAI's linguistic empathy capacity may represent a significant antecedent of trust.

In the practical tourism journey, GenAI is present at a minimum of four principal touchpoints: (1) the planning stage - destination research, personalised itinerary creation, comparison of cost and experience options; (2) the booking stage - interaction with GenAI chatbots on accommodation platforms, service condition queries; (3) the on-site stage - instant local information retrieval, multilingual communication, navigation; and (4) the post-trip stage - AI-assisted review writing, complaint resolution. This multi-stage presence places an important demand on research design: trust in GenAI must be approached as a dynamic process, capable of evolving with context and accumulating through experience - rather than as a stable, consistent static state.

2.3. Technology Acceptance and Use Theory

Research on user technology acceptance has a developmental history spanning more than three decades, beginning with Davis's (1989) ^[1] Technology Acceptance Model (TAM). TAM identifies two core endogenous variables: perceived usefulness and perceived ease of use, both of which influence attitude and behavioural intention to use technology. The strength of TAM lies in its theoretical parsimony and broad applicability across contexts; however, the model has been criticised for neglecting the role of social, emotional, and hedonic motivational factors in usage decisions - factors that are especially important in tourism contexts, which are fundamentally experiential in nature.

Venkatesh, Thong, and Xu (2012) ^[16] synthesised and extended TAM alongside several competing models into UTAUT2, adding the variables: hedonic motivation (the enjoyment derived from using technology), price value, habit, and facilitating conditions. In a tourism context, UTAUT2 is particularly appropriate because tourism experiences are strongly hedonic and voluntary in character - meaning that both utilitarian and hedonic factors need to be considered simultaneously when studying tourists' use of GenAI in trip planning and execution.

The most important contribution to the present paper comes

from Pavlou (2003) ^[11], who integrated trust into TAM and demonstrated that trust is an independently significant predictor of transaction intention, above and beyond the separate contributions of usefulness and ease of use. Pavlou's (2003) ^[11] findings establish the theoretical rationale for placing trust at the centre of the research model for GenAI in tourism, rather than treating it as a supplementary variable or a control variable within an extended TAM framework.

2.4. Trust in AI: Distinctive Theoretical Features

Glikson and Woolley (2020) ^[3], in their comprehensive empirical review of human trust in AI, identify at least three fundamental differences from interpersonal trust. First, trust in AI is strongly influenced by form of representation - the way in which AI is embodied (pure text, avatar, voice, physical robot) meaningfully affects user trust levels. Second, algorithmic transparency - the degree to which users can understand the reasoning behind AI judgements and recommendations - is an entirely distinctive feature without equivalent in interpersonal trust models. Third, the anthropomorphism effect - the tendency to attribute human characteristics to AI - can either increase or decrease trust depending on its degree and context: moderate anthropomorphism typically raises trust, but beyond a certain threshold it may produce the "uncanny valley" effect, sharply reducing it.

Hancock and colleagues (2011) ^[4], through a meta-analysis of factors influencing trust in human-robot interaction, demonstrate that factors related to system performance exert the greatest influence on trust, surpassing both interface factors and individual user characteristics. This finding has direct implications for research on GenAI in tourism: the actual quality of generated content - informational accuracy, relevance of recommendations, ability to handle complex requests - is the irreducible foundational factor in the trust structure.

Heerink and colleagues (2010) ^[5], through the Almere Model in research on assistive robot acceptance, add the variables anxiety, social adaptability, and perceived utility to the technology acceptance structure. In particular, the data safety concerns that Heerink *et al.* (2010) ^[5] identified in the context of elderly-care assistive robots share a direct parallel with tourists' concerns about sharing personal information with GenAI in travel contexts.

In tourism specifically, Tussyadiah and Miller (2019) ^[15] demonstrated that AI agent responses are capable of nudging tourist behaviour, and the extent to which tourists accept such nudges depends upon their trust in the agent - meaning that trust determines not only whether tourists use GenAI but also to what extent and how many decisions will be delegated to AI. This constitutes important theoretical justification for distinguishing "intention to use" from "reliance on AI" as two distinct behavioural outcomes in the proposed framework.

3. Proposed Theoretical Framework

3.1. Foundational Propositions

From the theoretical review in Section 2, the paper identifies four foundational propositions that guide the development of the framework:

Proposition 1 - Distinctive Multidimensionality: Tourist trust in GenAI cannot be adequately measured by a single composite item or reduced to the dimensions of the traditional ABi model. It is a multidimensional construct that inherits but extends existing conceptualisations: the three dimensions of ability - benevolence - integrity from Mayer *et al.* (1995) ^[9] provide the foundation, but at least two GenAI-specific dimensions - algorithmic transparency (Glikson & Woolley, 2020) ^[3] and data security (McKnight *et al.*, 2002) ^[10] - must be added.

Proposition 2 - Contextual Dynamism: Trust in GenAI is not fixed but varies across tourism journey stages and according to the decision-risk level involved. A tourist may trust GenAI to locate a local restaurant (low risk) but not to decide on a flight itinerary change (high risk) - requiring the framework to incorporate contextual moderating variables rather than assuming trust to be a static state.

Proposition 3 - Multi-Level Antecedents: Trust does not form in a vacuum but is simultaneously shaped by three levels of antecedents: the intrinsic characteristics of the individual tourist, the characteristics of the GenAI system, and the social interaction context. The absence of any one level results in a model with insufficient explanatory power.

Proposition 4 - Outcomes Beyond Use Intention: In the GenAI context, trust does not only produce use intention as in conventional TAM but also shapes AI reliance in decision-making, willingness to disclose personal information, and overall travel experience quality - behavioural dimensions that classical technology acceptance models are not equipped to capture fully.

3.2. Five Dimensions of Trust in GenAI for Tourism

Drawing on the theoretical synthesis and the propositions above, the paper proposes five dimensions constituting tourist trust in GenAI:

Dimension 1 - Perceived Competence

Inherited from the "ability" dimension of the ABi model (Mayer *et al.*, 1995) ^[9] and reinforced by Hancock *et al.*'s (2011) ^[4] meta-analytic finding on the paramount importance of system performance, perceived competence in the GenAI tourism context refers to the degree to which tourists believe GenAI possesses sufficient knowledge, accuracy, and skill to provide reliable tourism information and recommendations. This is the most foundational dimension and represents a necessary - though not sufficient - condition for trust formation: a GenAI system that produces inaccurate information about destinations, itineraries, or costs cannot build trust along any other dimension.

Dimension 2 - Perceived Benevolence

Inherited from Mayer *et al.* (1995) ^[9], perceived benevolence is the degree to which tourists believe GenAI is designed and operated to serve their best interests rather than the concealed commercial interests of the provider (such as recommendations disguised as impartial suggestions that in

fact steer users toward higher-commission services). In the GenAI tourism context, the core question tourists ask - often implicitly - is: "Is this system helping me, or is it serving the provider's interests?" Perceived benevolence is precisely the answer to that question.

Dimension 3 - Perceived Integrity

Inherited from Mayer *et al.* (1995) ^[9], perceived integrity refers to tourists' perception of the consistency, honesty, and ethical compliance of GenAI in its interactions. In the tourism context, this dimension manifests in whether tourists believe GenAI will not generate plausible-sounding but factually incorrect content - a documented technical limitation of large language models, commonly referred to as "hallucination" - and will remain consistent in its responses on the same subject matter. This is simultaneously the most challenging and most complex dimension for GenAI and, consequently, may be the dimension with the strongest discriminatory influence on tourist behaviour.

Dimension 4 - Perceived Algorithmic Transparency

This is a construct distinctive to AI, identified by Glikson and Woolley (2020) ^[3] as having no equivalent in traditional interpersonal trust models. Perceived algorithmic transparency refers to the degree to which tourists feel they can understand the reasoning and basis of the recommendations that GenAI produces. Research in Explainable AI (XAI) indicates that when users cannot comprehend the reasons behind AI decisions, a sense of lost control develops and leads to a significant decline in trust. In tourism, this manifests concretely in tourists feeling more at ease when GenAI explains: "I recommend this itinerary because you mentioned preferring to avoid crowds and have a moderate budget - these attractions receive fewest visitors early in the morning."

Dimension 5 - Perceived Data Security

This dimension arises directly from the technical specifics of GenAI: to personalise responses effectively, GenAI systems process and store tourists' personal information - including travel preferences, search history, budget, and potentially health information in the case of medical or senior tourism. Perceived data security refers to the degree to which tourists believe their personal information is protected and will not be misused or shared with third parties without their consent. Heerink *et al.* (2010) ^[5] and McKnight *et al.* (2002) ^[10] both emphasise privacy and security concerns as important inhibitors of trust in digital environments, and this concern tends to be stronger in GenAI contexts given the considerably higher volume of personal information collected compared to conventional digital applications.

3.3. Three Antecedent Groups

Antecedent Group 1 - Tourist Individual Characteristics

This group captures individual differences that shape tourists' disposition to form trust in GenAI, comprising: (a) *AI literacy* - the degree to which tourists have knowledge of how GenAI works, since those with higher literacy tend to assess GenAI's capabilities and limitations more accurately; (b) *innovativeness* - openness to experimenting with new

technology, identified in UTAUT2 (Venkatesh *et al.*, 2012)^[16] as an important behavioural antecedent; (c) prior AI experience - accumulated familiarity, which McKnight *et al.* (2002)^[10] demonstrate influences cognitive trust; (d) demographic characteristics (age, education level) with the implication that different demographic groups may hold different baseline trust levels; and (e) propensity to trust following Mayer *et al.* (1995)^[9] - an individual's general disposition to be willing to trust across situations where information is incomplete, a relatively stable personality characteristic that influences trust from the very first interaction with GenAI.

Antecedent Group 2 - GenAI System Characteristics

This group encompasses the technical and interface attributes of GenAI that are perceptible from the user's perspective: (a) information quality - the accuracy, completeness, and currency of generated content; (b) perceived anthropomorphism - the degree to which GenAI simulates human communicative style and demonstrates linguistic empathy (Glikson & Woolley, 2020)^[3]; (c) explainability - whether GenAI proactively informs tourists of the basis for its recommendations; and (d) provider brand credibility - the reputational standing of the organisation behind the GenAI tool, directly connected to Stewart's (2003)^[13] trust transfer mechanism, through which trust in Google, Microsoft, or a major tourism corporation may transfer to trust in their specific GenAI tool.

Antecedent Group 3 - Interaction Context

This group captures the influence of situational and contextual factors: (a) task type - general information seeking (low risk) versus financial service booking or medical travel planning (high risk); (b) perceived risk - financial risk, experience quality risk, and misinformation risk, consistent with Pavlou's (2003)^[11] integration of risk into the technology acceptance model; (c) journey stage - pre-trip planning, in-destination, or post-trip, since each stage has distinctive interaction characteristics and varying levels of urgency; and (d) social context - individual interaction with GenAI versus situations involving community referencing or guide recommendation.

3.4. Four Behavioural Outcome Groups

Outcome 1 - Intention to Use and Continue Using

This is the most extensively studied outcome in the technology acceptance literature (Davis, 1989; Venkatesh *et al.*, 2012; Pavlou, 2003)^[1, 16, 11]. In the GenAI tourism context, use intention warrants differentiation between initial adoption intent and continuance intent - as e-commerce research has demonstrated that these two decisions are driven by different antecedents and bear different relationships to trust.

Outcome 2 - Reliance on GenAI

Beyond use intention, this outcome addresses the degree to which tourists actually rely upon GenAI recommendations in making specific travel decisions. Lee and See (2004)^[8] term this "appropriate reliance" - an important concept because both over-reliance (tourists following every GenAI suggestion without critical evaluation) and under-reliance (tourists dismissing valuable recommendations) lead to suboptimal travel decisions. Tussyadiah and Miller (2019)^[15]

provided empirical evidence of the relationship between trust in an AI agent and the extent of recommendation acceptance, establishing the empirical foundation for this outcome.

Outcome 3 - Voluntary Personal Information Disclosure (novel outcome)

This is the most distinctive and novel outcome relative to traditional trust models in tourism. When tourists trust GenAI, they tend to voluntarily share more personal information - detailed preferences, actual budget, health conditions, personal movement schedules - thereby creating a positive feedback loop: more personalised information → more appropriate recommendations → higher trust → greater willingness to share. McKnight *et al.* (2002)^[10] identified willingness to share personal information as an important behavioural manifestation of trust in digital environments. At the same time, this represents a significant ethical risk point warranting empirical investigation, since the positive feedback loop described above may lead to levels of information disclosure that exceed what tourists would actually prefer to share if asked explicitly.

Outcome 4 - Satisfaction and Travel Experience Quality

Trust in GenAI influences not only usage behaviour but also overall travel experience quality through at least two mechanisms: (a) trusted GenAI helps tourists reduce uncertainty and anxiety in planning and navigation, enhancing perceived control and confidence; and (b) trusted and effectively used GenAI produces more highly personalised itineraries and experiences that more closely approximate individual expectations - one of the foundational antecedents of satisfaction. This outcome connects the GenAI trust framework to the broader tradition of travel experience and tourist satisfaction research.

3.5. Moderating Variables

The proposed theoretical framework incorporates two important moderating variables affecting the strength of the relationship between trust and its behavioural outcomes:

Moderator 1 - Cultural Context: Cross-cultural comparative research on technology acceptance suggests that cultural values such as power distance, collectivism, and uncertainty avoidance moderate the degree to which trust dimensions influence behaviour. Tourists from low power distance cultures may require higher levels of algorithmic transparency before trusting GenAI, while tourists from high uncertainty avoidance cultures may be more sensitive to perceived integrity. This moderator underscores the importance of culturally comparative empirical studies, particularly those situating researches in non-Western contexts.

Moderator 2 - Decision Risk Level: The influence of trust on GenAI usage and reliance behaviour is stronger when the travel decision carries high risk (long-haul tour booking, substantial expenditure, entirely unfamiliar destination, medical situations) than when risk is low (locating a local restaurant, checking attraction opening hours). This is consistent with the arguments of Pavlou (2003)^[11] and Lee and See (2004)^[8] that trust exerts its strongest behavioural regulatory effect in situations of high uncertainty.

Table 1: Summary of the theoretical framework for studying tourist trust in GenAI

Framework Layer	Component	Primary Theoretical Foundation
Antecedents - individual	AI literacy, innovativeness, prior AI experience, propensity to trust	Mayer <i>et al.</i> (1995); Venkatesh <i>et al.</i> (2012)
Antecedents - system	Information quality, anthropomorphism, explainability, brand credibility	Glikson & Woolley (2020) ^[3] ; Stewart (2003)
Antecedents - context	Task type, perceived risk, journey stage, social context	Lee & See (2004); Pavlou (2003)
Trust construct	Perceived competence	Mayer <i>et al.</i> (1995); Hancock <i>et al.</i> (2011) ^[4]
	Perceived benevolence	Mayer <i>et al.</i> (1995) ^[9]
	Perceived integrity	Mayer <i>et al.</i> (1995) ^[9]
	Perceived algorithmic transparency (<i>novel</i>)	Glikson & Woolley (2020) ^[3]
	Perceived data security (<i>novel</i>)	McKnight <i>et al.</i> (2002) ^[10] ; Heerink <i>et al.</i> (2010) ^[5]
Outcomes	Intention to use / continue using	Davis (1989) ^[1] ; Pavlou (2003)
	Reliance on GenAI	Lee & See (2004); Tussyadiah & Miller (2019)
	Voluntary personal information disclosure (<i>novel</i>)	McKnight <i>et al.</i> (2002) ^[10]
	Satisfaction and travel experience quality	Tussyadiah & Miller (2019)
Moderators	Decision risk level	Lee & See (2004); Pavlou (2003)

4. Discussion

4.1. Theoretical Contributions

The proposed theoretical framework makes at least four significant scholarly contributions.

First, the framework achieves *deliberate theoretical integration* - that is, it does not simply stack existing theories upon one another but selects, adapts, and connects them according to a clear theoretical logic, directed at a specific research object: GenAI in tourism. While most existing research on AI in tourism applies TAM or UTAUT2 as an overarching framework with trust as an additional variable, the present paper places trust at the centre and builds the theoretical structure around it - a perspective shift with meaningful methodological implications.

Second, the framework extends the interpersonal trust model into the GenAI context by adding two distinctive dimensions with clear theoretical justification: perceived algorithmic transparency and perceived data security. These additions are not arbitrary but are derived from the technical specificities of GenAI - content generation capability and personal data collection - and are supported by Glikson and Woolley (2020) ^[3] and McKnight *et al.* (2002) ^[10] respectively.

Third, the framework proposes *multi-dimensional behavioural outcomes*, among which *voluntary personal information disclosure* and *reliance on GenAI* are novel contributions relative to conventional TAM/UTAUT2 outcomes. Treating information disclosure as a *consequence* of trust - rather than merely as an input condition - reflects the distinctive nature of the tourist-GenAI relationship: a reciprocal, continuously learning interaction that is qualitatively different from the use of conventional search engines or booking applications.

Fourth, the integration of *tourism journey stage* into the contextual antecedent structure reflects a conceptualisation of trust as a *dynamic process*, consistent with contemporary trends in trust research oriented toward long-term and multi-interaction contexts. This contribution has potential to open a valuable direction for longitudinal research designs.

4.2. Implications for Empirical Research

With respect to methodological design, structural equation modelling (SEM) - encompassing both covariance-based approaches (CB-SEM/AMOS) and partial least squares methods (PLS-SEM/SmartPLS) - is the appropriate choice for simultaneously testing the multidimensional trust

construct, the antecedent-trust-outcome relationships, and the moderating effects. However, because several of the proposed trust dimensions (particularly perceived algorithmic transparency) do not yet have validated measurement scales in the tourism context, a preliminary qualitative exploration phase (in-depth interviews, focus groups) is necessary before large-scale quantitative data collection.

With respect to research context, Vietnam's tourism landscape represents a particularly valuable setting for empirical investigation: the domestic tourism market is experiencing strong growth following the pandemic recovery period, a large and technically proficient youth traveller segment is actively using GenAI in trip planning, and a Southeast Asian cultural context characterised by relatively high power distance and collectivism provides a culturally comparative perspective of considerable value against the primarily Western-context studies that currently dominate the literature.

4.3. Practical Implications

For tourism enterprises and GenAI platform providers, the theoretical framework suggests that trust-building strategies need to be pursued with deliberate attention to each individual dimension. With respect to algorithmic transparency in particular - a dimension frequently overlooked in user interface design - priority should be given to proactive UX design that explains the basis for recommendations. With respect to data security, making data usage policies accessible in plain language - rather than through lengthy and complex legal terms - and providing mechanisms that allow tourists to control the scope of data collected may represent a meaningful competitive differentiator in a context of growing public concern about digital privacy.

4.4. Limitations and Directions for Future Research

This paper carries several limitations worthy of acknowledgement. First and foremost, it is a theoretical paper - the proposed framework requires empirical validation to confirm its construct validity and predictive validity. Second, the identification of five trust dimensions and four outcome groups was conducted primarily through theoretical synthesis; qualitative exploratory research conducted directly with tourists may supplement or refine this structure. Third,

GenAI is a domain evolving very rapidly in terms of technical capability - the characteristics of GenAI systems may differ substantially within one to two years, placing demands on temporal currency and requiring updates in follow-on empirical research.

Future research directions include: (1) qualitative exploratory research with tourists to enrich and validate the proposed trust dimension structure; (2) quantitative research testing the full framework across diverse tourist populations and tourism contexts; (3) cross-cultural comparative research examining the moderating effects of cultural context; (4) longitudinal research to understand the formation and change of trust through accumulated usage experience; and (5) experimental research designs testing the effects of interface design interventions - such as varying levels of algorithmic explanation - on individual trust dimensions.

5. Conclusion

This paper has accomplished two closely interconnected scholarly tasks: critically synthesising foundational theories on trust, technology acceptance, and AI in tourism; and from this synthesis constructing an integrated theoretical framework for studying tourist trust in GenAI. The proposed framework comprises five trust dimensions - among which perceived algorithmic transparency and perceived data security represent novel contributions relative to existing models - three antecedent groups, four behavioural outcome groups, and two moderating variables, connected by propositions with clear and internally consistent theoretical grounding.

The emergence of GenAI in tourism is not simply a technological advancement but a fundamental transformation in the nature of the tourism service interaction: from communication between people to communication between a person and an intelligent agent possessed of natural language capability that is increasingly indistinguishable from human expression. Within that fundamental transition, trust is not an auxiliary factor but a prerequisite - the condition without which GenAI cannot genuinely create value for tourists, for tourism enterprises, or for the industry at large. This theoretical framework is proposed as an initial step in the process of building a systematic and rigorous academic research foundation for a subject that is both nascent and urgent.

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