

Real-Time Personalization and Geolocation in Tourism: Toward an Integrated Conceptual Model of Customer Experience and Loyalty in Morocco

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Abstract. Contemporary tourism is increasingly shaped by the convergence of real-time personalization and geolocation technologies, which enable service providers to deliver individually tailored, spatially contextualized experiences at unprecedented levels of precision and relevance. Yet despite their growing deployment, the mechanisms through which these technologies influence customer experience and loyalty remain insufficiently theorized — particularly in emerging market contexts and with respect to their joint, synergistic effects. This article addresses these gaps by proposing an integrated conceptual model linking real-time personalization and geolocation to customer loyalty in tourism, mediated by customer satisfaction, provider trust, and user experience quality. Ten theoretically grounded hypotheses are formally derived from person–environment fit theory, commitment–trust theory, and the experience economy framework, and are situated within the specific socio-cultural and institutional context of Morocco's tourism sector. The model introduces the concept of synergistic personalization–geolocation value and identifies the trust paradox of digital personalization as the central theoretical tension requiring resolution. Theoretical contributions, managerial implications for Moroccan tourism operators and destination management organizations, and directions for future empirical investigation are discussed.

Keywords: *Real-time personalization; Geolocation; customer loyalty; tourism; Morocco; customer experience; trust; structural equation modeling*

1. Introduction

“Know me, but don't watch me.” This paradox, increasingly voiced by digital consumers worldwide, captures one of the most pressing tensions in contemporary marketing: the simultaneous desire for personalized experiences and the resistance to the data collection that makes them possible (Awad & Krishnan, 2006). In the tourism industry, this tension reaches particular intensity. Tourists willingly share location data, browsing histories, and preference profiles with travel platforms and hospitality providers — yet they grow uneasy when recommendations feel too precise, too timely, or too knowledgeable about their movements. The boundary between attentive service and intrusive surveillance is thin, contextually contingent, and culturally variable.

Despite this complexity, the academic literature has largely treated personalization and geolocation as straightforwardly beneficial tools for enhancing customer experience and driving loyalty. Studies consistently document positive effects of perceived personalization on satisfaction (Bleier & Eisenbeiss, 2015), engagement (Arora et al., 2008), and behavioral loyalty (Kandampully, Zhang & Bilgihan, 2015). Similarly, location-based services have been shown to enhance perceived service value (Shankar & Balasubramanian, 2009) and foster

contextually rich tourist experiences (Buhalis & Amaranggana, 2015). Yet the conditions under which these technologies generate value rather than resistance — and the psychological mechanisms through which they do so — remain insufficiently theorized, particularly outside Western, high-income market contexts.

Three significant gaps motivate this article. First, the existing literature has examined personalization and geolocation largely in isolation, with few studies investigating their joint, synergistic effects on customer loyalty. Second, the mediating roles of trust, satisfaction, and user experience — the psychological pathways linking digital technologies to loyalty outcomes — have been theorized separately in distinct research streams but have not been integrated into a unified conceptual model. Third, the vast majority of empirical studies on these topics are situated in Western, North American, or East Asian market contexts. Emerging market destinations in the MENA region, including Morocco — a country whose tourism sector represents approximately 8.8% of GDP and whose cultural and relational norms differ substantially from those assumed in dominant theoretical frameworks — remain virtually absent from the literature.

This article addresses these gaps by proposing an integrated conceptual model of the joint influence of real-time personalization and geolocation on customer experience and loyalty in tourism, with a specific application to Morocco's tourism sector. The model integrates three mediating mechanisms — customer satisfaction, trust in the provider, and user experience quality — and proposes ten theoretically grounded hypotheses linking these constructs. In doing so, it makes three distinct contributions to the literature. Theoretically, it synthesizes and integrates previously fragmented research streams into a coherent explanatory framework. Conceptually, it introduces the notion of synergistic personalization–geolocation value — the argument that the joint deployment of these technologies generates loyalty effects that exceed the sum of their isolated contributions. Empirically, it establishes the conceptual foundations for a large-scale mixed-methods study of tourist behavior in Morocco, contributing to the growing literature on digital marketing in emerging tourism destinations.

The originality and added value of this article can thus be stated explicitly. To the best of the author's knowledge, no prior study has simultaneously (a) modeled real-time personalization and geolocation as joint, potentially interacting antecedents of customer loyalty, (b) articulated satisfaction, trust, and user experience quality as complementary mediating mechanisms within a single explanatory framework, and (c) anchored such a framework in an emerging North African tourism market. The theoretical contribution therefore consists in filling this integrative gap by specifying the psychological pathways — and, most distinctively, the synergistic interaction — through which these technologies translate into loyalty, thereby extending frameworks that have to date treated personalization and geolocation in isolation. The practical contribution consists in offering Moroccan tourism operators, destination management organizations, and public policymakers a theoretically grounded architecture for designing trust-preserving personalization and geolocation strategies aligned with the digitalization objectives of the Vision 2030 tourism roadmap. These contributions are, at this stage, conceptual in nature; their empirical corroboration constitutes the object of the forthcoming field study described in Section 6.

The remainder of this article is organized as follows. Section 2 reviews the theoretical literature on perceived personalization, geolocation, customer experience, and loyalty in tourism. Section 3 presents the proposed conceptual model and formally derives the research hypotheses. Section 4 discusses the theoretical implications of the proposed framework. Section 5 outlines implications for practitioners and policymakers. Section 6 concludes with directions for future empirical investigation.

2. Theoretical Background

a. Perceived Personalization: Foundations, Mechanisms, and Effects on Consumer Behavior

Perceived personalization has emerged as one of the most theoretically productive constructs in digital marketing research over the past two decades. Building on early conceptualizations in one-to-one marketing (Peppers & Rogers, 1993), the construct has been progressively refined to capture the subjective, evaluative dimension of personalization experiences: what matters for consumer outcomes is not the technical sophistication of algorithmic adaptation, but the degree to which consumers feel that services, offers, and communications are uniquely tailored to their individual preferences, needs, and identities (Bleier & Eisenbeiss, 2015). This distinction between actual and perceived personalization is theoretically consequential — it shifts analytical attention from the provider's technical capabilities to the consumer's psychological experience, and places perception, interpretation, and context at the center of the explanatory framework.

Several theoretical traditions illuminate the mechanisms through which perceived personalization influences consumer behavior. Person–environment fit theory (Edwards & Cooper, 1990) predicts that consumers experience heightened engagement and satisfaction when external conditions align with their internal values and needs — a condition that effective personalization approximates by tailoring service delivery to individual profiles. Relationship marketing theory (Morgan & Hunt, 1994) frames personalization as a relational signal: by individualizing interactions, service providers communicate recognition, investment, and care, thereby nurturing the trust and commitment that underpin long-term relational value. Self-congruence theory (Sirgy, 1982) adds the identity dimension: personalization enhances perceived fit between the consumer's self-image and the brand's or destination's offerings, generating stronger affective attachment and loyalty intentions. Information processing theory (Tam & Ho, 2006) provides the cognitive mechanism: by filtering out irrelevant content and surfacing contextually appropriate recommendations, personalization reduces decision-making effort and cognitive load, enhancing the efficiency and quality of the consumer experience.

A crucial distinction in the literature concerns static versus dynamic personalization. Static personalization relies on predefined demographic or psychographic profiles, offering relatively stable adaptations across interactions. Dynamic, or real-time, personalization processes live behavioral data streams — clickstreams, search queries, dwell times, transactional histories, and location signals — to adapt service delivery instantaneously as consumers navigate their experience (Arora et al., 2008). In tourism, this distinction is particularly consequential: a static recommendation engine may suggest a city's top-rated restaurant based on a traveler's stated cuisine preferences, while a dynamic, real-time system adjusts that recommendation based on the traveler's current location, the time of day, current wait times at nearby establishments, and the ambient weather conditions. The experiential richness and contextual precision of real-time personalization substantially amplifies its effects on satisfaction and engagement relative to static alternatives.

Empirical evidence consistently supports the positive effects of perceived personalization on key consumer outcomes. Satisfaction is enhanced because personalization reduces the cognitive friction associated with navigating complex, information-dense tourism environments (Tam & Ho, 2006), and generates a sense of individual recognition that is intrinsically rewarding (Bleier

& Eisenbeiss, 2015). Engagement deepens because personalized, technology-mediated interactions create reciprocal, evolving relationships that transcend the logic of discrete transactions (Cheng & Jiang, 2020). Loyalty intentions strengthen because personalized experiences produce memories that are emotionally resonant, individually meaningful, and difficult for alternative providers to replicate (Kandampully et al., 2015). However, these positive effects are not unconditional. The personalization–privacy paradox (Awad & Krishnan, 2006) identifies a fundamental tension: the more data collected to fuel personalization, the greater the risk of triggering privacy concerns, feelings of surveillance, and trust erosion — particularly when personalization is experienced as excessively precise or delivered without transparent disclosure of data practices. Recent evidence from smart tourism contexts confirms the enduring centrality of this tension: travelers' privacy concerns constrain their engagement with customized smart tourism technologies, and trust in the technology provider is the key mechanism that mitigates these concerns and sustains satisfaction and destination loyalty (Ngan, Eddy & Fong, 2025).

b. Geolocation and Mobile Marketing: Value Creation Through Spatial Contextualization

Location-based services (LBS) represent one of the most transformative developments in digital marketing practice over the past fifteen years. Building on the technical infrastructure of GPS, Wi-Fi positioning, cellular triangulation, and Bluetooth beacon systems, LBS enable service providers to deliver communications, recommendations, and offers that are anchored to the consumer's real-time geographic position — transforming the mobile device from a generic communication channel into a spatially aware, contextually intelligent companion (Shankar & Balasubramanian, 2009).

The marketing significance of geolocation lies in its capacity to operationalize the temporal and spatial dimensions of relevance. While personalization systems address the 'who' of marketing — adapting content to individual profiles — geolocation addresses the 'where' and 'when' — contextualizing interactions to the consumer's immediate physical environment and situational needs. The integration of these two dimensions, which several scholars have characterized as 'moment marketing' or 'hyper-local personalization' (Luo et al., 2014), generates a level of contextual relevance that substantially exceeds what either technology can achieve in isolation.

In tourism specifically, geolocation creates value through three distinct pathways. The first is navigational assistance: location-aware systems reduce the stress and uncertainty associated with exploring unfamiliar environments, enabling tourists to navigate with confidence through complex urban landscapes. The second is experiential discovery: by surfacing contextually relevant attractions, events, and services that tourists might not independently identify, LBS transform the travel experience from a pre-planned itinerary execution into a dynamic, exploratory encounter with the destination. The third is immersive augmentation: geolocation-enabled augmented reality applications overlay digital content onto the tourist's live physical environment, creating layered, multidimensional experiences that deepen engagement and foster lasting emotional connections to the destination (Buhalis & Amaranggana, 2015).

The effectiveness of geolocation-based marketing is, however, contingent on consumer acceptance, which is in turn substantially determined by trust. Drawing on a push–pull framework of location data sharing, Xu et al. (2011) demonstrate that consumers' willingness to enable location tracking is driven by the perceived magnitude of benefits received and inhibited by the perceived risks of privacy violation and loss of control over personal data. When service providers deliver tangible, immediate, and individually relevant value through location-based interactions — and when they do so transparently, with clear disclosure of data practices and meaningful mechanisms for user control — adoption and engagement increase.

c. Customer Experience and Loyalty in Tourism: Theoretical Mechanisms and Digital Mediators

Customer experience has been theorized as a multidimensional construct encompassing the cognitive, affective, behavioral, sensorial, and social responses of consumers to all interactions with a firm across the entire purchase journey (Lemon & Verhoef, 2016). In tourism, the experiential dimension of consumption is foundational rather than supplementary: tourists do not purchase products but encounter environments, cultures, and narratives, and the quality of these encounters — measured not merely by technical service delivery but by the depth of emotional resonance, cognitive stimulation, and sensorial richness they generate — is the primary determinant of satisfaction, loyalty, and advocacy behaviors.

Pine and Gilmore's (1999) experience economy framework provides the theoretical foundation for understanding why experience quality is so strategically central to loyalty in tourism. Their argument — that in advanced market economies, competitive advantage progressively shifts toward the staging of memorable, individually resonant experiences — has been substantially confirmed by subsequent empirical research in hospitality and tourism contexts. Kandampully, Zhang and Bilgihan (2015), in their review of customer loyalty research in the hospitality industry, demonstrate that emotionally engaging, personally meaningful, and culturally authentic experiences generate significantly stronger loyalty effects than technically excellent but emotionally thin service delivery.

Customer loyalty in tourism is conceptualized as a bidimensional construct integrating attitudinal loyalty — positive affective disposition, sense of attachment, and advocacy intentions — and behavioral loyalty — repeat visitation, exclusive patronage, and positive word-of-mouth referral (Oliver, 1999). Three mediating mechanisms connect the deployment of personalization and geolocation technologies to tourism loyalty outcomes: customer satisfaction, which captures the evaluative responses through which technology-enhanced interactions translate into global experience assessments; trust, which captures the psychological safety enabling consumers to embrace personalized and location-aware services; and user experience quality, which captures the functional and hedonic richness of interactions with digital tourism platforms. The Moroccan tourism context adds a theoretically productive layer: the country's distinctive collectivist values, relational trust norms rooted in the tradition of *diyafa* (hospitality), and linguistic plurality create conditions for technology adoption and consumer behavior that constitute a critical test of frameworks developed primarily in Western market contexts.

d. Why Existing Models Are Insufficient: Toward an Integrated Framework

Before introducing the proposed model, it is necessary to establish why the theoretical frameworks currently available — each valuable within its own domain — are individually insufficient to account for the phenomenon under investigation. Four families of models dominate the literature relevant to this research. The Technology Acceptance Model (TAM; Davis, 1989) explains the adoption of information technologies through perceived usefulness and perceived ease of use, and remains the reference framework for initial technology acceptance. Its explanatory scope, however, ends at the formation of usage intentions: TAM says nothing about the relational mechanisms — trust, commitment, privacy calculus — that determine whether adopted technologies subsequently generate or destroy loyalty, and it treats technology as a generic artifact rather than distinguishing the specific affordances of personalization and geolocation.

The Expectation–Confirmation Model (ECM; Bhattacharjee, 2001) extends the analysis to post-adoption behavior, explaining continuance intentions through the confirmation of initial expectations and the resulting satisfaction. While this satisfaction pathway is retained in the present model, the ECM’s single-mediator architecture cannot accommodate the trust dynamics that the personalization literature has shown to be decisive (Bleier & Eisenbeiss, 2015), nor does it address the spatial contextualization introduced by geolocation. The commitment–trust theory of relationship marketing (Morgan & Hunt, 1994) supplies precisely the relational mechanism that TAM and ECM lack, but it was formulated before the emergence of data-driven personalization: it explains why trust produces loyalty, yet remains silent on how algorithmic technologies build or erode that trust. Similarly, Shankar and Balasubramanian’s (2009) mobile marketing framework identifies the value drivers of location-based services but offers a conceptual synthesis rather than a formal mediation architecture, and does not model the interaction between personalization and location-awareness. Finally, Pine and Gilmore’s (1999) experience economy provides the macro-theoretical rationale for experiential differentiation but lacks operationalized constructs and testable causal paths. Table 1 summarizes this comparative assessment.

Table 1. Comparative assessment of existing theoretical models and their limitations

Model	Principal contribution	Limitations for the present research object
TAM (Davis, 1989)	Explains technology acceptance through perceived usefulness and perceived ease of use.	Stops at adoption intention; silent on relational mechanisms (trust), privacy tensions, and post-adoption loyalty; treats technology generically rather than distinguishing personalization from geolocation.
ECM (Bhattacharjee, 2001)	Explains post-adoption continuance through expectation confirmation and satisfaction.	Single-mediator architecture; does not theorize trust or the personalization–privacy tension; ignores spatial contextualization and joint technology effects.
Commitment–trust theory (Morgan & Hunt, 1994)	Establishes trust and commitment as the relational foundations of loyalty.	Predates digital personalization and geolocation; does not specify how data-driven technologies build — or erode — trust, nor the experiential pathway to loyalty.
Mobile marketing framework (Shankar & Balasubramanian, 2009)	Synthesizes the drivers of mobile and location-based marketing value.	Conceptual synthesis without a formal mediation architecture linking value to loyalty; does not model interactions between personalization and location-awareness.
Experience economy (Pine & Gilmore, 1999)	Positions memorable, staged experiences as the ultimate source of competitive advantage.	Macro-level and metaphorical; lacks operationalized constructs, testable causal paths, and any account of digital or spatial technologies.

The proposed model is designed to overcome these limitations through integration rather than substitution. It retains the satisfaction mechanism of the ECM, the trust mechanism of commitment–trust theory, the usability logic of TAM (operationalized as user experience quality), the value-creation logic of the mobile marketing framework, and the experiential rationale of the experience economy — but articulates them within a single structural architecture featuring two technological antecedents, three complementary mediators, two

contextual moderators, and, most distinctively, a synergistic interaction term absent from all of the frameworks reviewed above. It is precisely this integration, and its anchoring in an emerging market context, that none of the existing models achieves on its own.

3. Conceptual Model And Research Hypotheses

a. Model Overview

The conceptual model proposed in this article integrates the theoretical insights developed in Section 2 into a unified explanatory framework for the joint influence of real-time personalization and geolocation on customer loyalty in tourism. The model posits two independent variables — perceived personalization and geolocation-based service use — whose effects on customer loyalty are both direct and mediated through three psychological and relational mechanisms: customer satisfaction, trust in the provider, and user experience quality. The model further proposes that the joint deployment of personalization and geolocation technologies generates synergistic loyalty effects that exceed the sum of their isolated contributions. Ten theoretically grounded hypotheses formalize these relationships.

The model is anchored in three complementary theoretical traditions: person–environment fit theory, which explains why individually tailored interactions generate superior engagement and satisfaction; the commitment–trust theory of relationship marketing, which explains why trust serves as the critical relational mediator; and the experience economy framework, which explains why memorable, individually resonant experiences are the ultimate mechanism through which personalization and geolocation translate into loyalty.

b. Hypotheses Development

H1: Direct effect of perceived personalization on customer loyalty

The most fundamental proposition of the model is that perceived personalization exerts a direct positive effect on customer loyalty. When tourists feel individually recognized, understood, and catered to through personalized service delivery, they develop stronger affective attachment, greater resistance to competitive alternatives, and stronger intentions to return and recommend. Bleier and Eisenbeiss (2015) provide the most direct empirical support, demonstrating across multiple studies that perceived personalization significantly predicts attitudinal and behavioral loyalty indicators. Kandampully et al. (2015) confirm and extend these findings in hospitality and tourism settings.

H1: Perceived personalization has a significant direct positive effect on customer loyalty.

H2: Mediating role of customer satisfaction

While the direct effect of perceived personalization on loyalty is theoretically compelling, it is likely to be substantially mediated by customer satisfaction. Personalization enhances satisfaction by filtering irrelevant content and generating positive emotional responses through individual recognition (Oliver, 1980). Satisfaction, in turn, predicts loyalty through the expectation–confirmation mechanism: tourists whose expectations are met or exceeded develop positive evaluative schemas that sustain future purchase intentions. Recent evidence from smart tourism technology contexts confirms this satisfaction pathway toward destination loyalty (Ngan et al., 2025).

H2: Customer satisfaction mediates the relationship between perceived personalization and customer loyalty.

H3: Mediating role of trust

Trust constitutes the second, and theoretically most distinctive, mediating mechanism. When trust is present, perceived personalization generates positive relational signals — recognition, investment, benevolence — that strengthen commitment and loyalty. When trust is absent, personalization may be reinterpreted as surveillance and manipulation, generating resistance rather than engagement (Bleier & Eisenbeiss, 2015). The mediation of personalization effects by trust operates through the commitment–trust chain: trust generates commitment, which motivates the consistent, resistant, and advocacy-oriented behaviors constituting behavioral loyalty (Morgan & Hunt, 1994).

***H3:** Trust in the provider mediates the relationship between perceived personalization and customer loyalty.*

H4: Mediating role of user experience quality

User experience quality — the holistic assessment of the ease, intuitiveness, efficiency, and hedonic richness of interactions with digital tourism platforms — constitutes the third mediating mechanism. A personalization system that surfaces relevant recommendations through a poorly designed interface may fail to generate the positive experiential responses necessary for satisfaction and loyalty. Davis's (1989) Technology Acceptance Model establishes that perceived ease of use and usefulness are fundamental determinants of technology engagement and continued use — necessary conditions for sustained loyalty effects.

***H4:** User experience quality mediates the relationship between perceived personalization and customer loyalty.*

H5: Moderating role of cultural involvement

Tourists with higher levels of cultural involvement — defined as the degree of active engagement with local cultural practices, traditions, and social norms — are expected to respond more positively to culturally attuned personalization strategies. Recommendations that resonate with a tourist's cultural interests and demonstrate awareness of local norms generate stronger satisfaction and loyalty responses than culturally generic alternatives, suggesting a moderation effect of cultural involvement on the personalization–satisfaction relationship.

***H5:** Cultural involvement moderates the relationship between perceived personalization and customer satisfaction, such that the positive effect is stronger for tourists with higher cultural involvement.*

H6: Effect of geolocation on perceived service value

The primary mechanism through which geolocation-based services influence customer loyalty is the enhancement of perceived service value. Shankar and Balasubramanian (2009) demonstrate that the perceived value of mobile marketing services is significantly enhanced by location-awareness, particularly when location-triggered interactions deliver tangible utility — saving time, reducing navigational stress, revealing unexpected discoveries — rather than merely delivering spatially targeted advertising.

***H6:** The use of geolocation-based services significantly enhances tourists' perceived service value.*

H7: Mediating role of trust in geolocation data management

Parallel to the trust mediation identified for personalization, trust in the provider's management of location data serves as a critical mediating mechanism in the geolocation–loyalty relationship. Location data is inherently more intimate than behavioral or demographic data — it reveals physical movements and behavioral patterns in real time. Consumers who trust that their location data is collected with explicit consent and used exclusively for their benefit will

respond with openness and engagement; those who lack this trust will resist location tracking (Xu et al., 2011).

H7: *Trust in geolocation data management mediates the positive effect of geolocation use on customer loyalty.*

H8: Moderating effect of geolocation use frequency

The frequency with which tourists engage with geolocation-based services is expected to moderate the relationship between geolocation use and satisfaction. Initial encounters may generate uncertainty, but repeated positive interactions build familiarity, reduce uncertainty, and progressively strengthen the association between geolocation use and positive experiential outcomes. This habituation dynamic suggests that satisfaction benefits of geolocation use increase with frequency, up to a threshold beyond which information overload or notification fatigue may emerge.

H8: *The frequency of geolocation use moderates its positive effect on customer satisfaction, such that the relationship is stronger for frequent users.*

H9: Contextualized experience and destination attachment

Geolocation-enabled contextualization of the tourism experience is expected to generate a distinctive form of loyalty operating through emotional and place-based attachment mechanisms. When tourists receive recommendations spatially grounded in the specific places they are physically experiencing, they develop a stronger sense of connection to the destination itself. This place attachment mechanism (Scannell & Gifford, 2010) generates loyalty to the destination that transcends any individual service relationship and manifests in stronger revisitation intentions and more enthusiastic recommendation behaviors.

H9: *Contextualized experiences facilitated by geolocation foster stronger emotional attachment to tourism providers and destinations, positively influencing loyalty.*

H10: Synergistic effect of personalization and geolocation

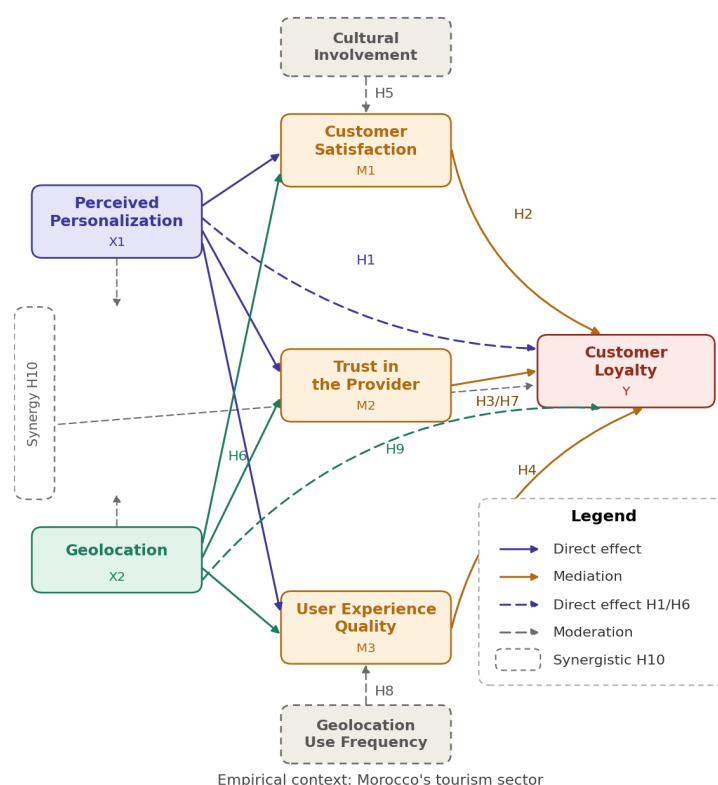
The final and most theoretically novel hypothesis concerns the joint effect of personalization and geolocation — the proposition that their combined deployment generates loyalty outcomes that exceed the sum of their isolated contributions. Personalization addresses the 'who' dimension of relevance, while geolocation addresses the 'where and when.' When these dimensions converge, the resulting interaction achieves a level of precision, utility, and experiential resonance that neither technology can approximate in isolation. Luo et al. (2014) provide partial empirical support in retail contexts, demonstrating that location-triggered personalized offers generate significantly higher response rates than either personalized or location-targeted offers in isolation.

H10: *The joint influence of real-time personalization and geolocation on customer loyalty is significantly stronger than their isolated effects, reflecting a synergistic interaction between the two technologies.*

c. Model Summary

The conceptual model integrates ten hypotheses organized around direct effects (H1, H6), mediation pathways (H2, H3, H4, H7), moderating relationships (H5, H8), place attachment mechanisms (H9), and synergistic joint effects (H10). Figure 1 presents the complete structural architecture of the model.

Figure 1. Integrated conceptual model of personalization, geolocation, and customer loyalty in tourism



4. Discussion

a. Theoretical Contributions

The conceptual model proposed in this article seeks to advance the theoretical understanding of digital marketing in tourism along three distinct dimensions. The first contribution concerns the integration of personalization and geolocation into a unified explanatory framework. The existing literature has examined these technologies largely in parallel research streams, with personalization scholars focusing on behavioral targeting and privacy trade-offs (Bleier & Eisenbeiss, 2015; Arora et al., 2008), and geolocation scholars concentrating on mobile marketing effectiveness and spatial contextualization (Shankar & Balasubramanian, 2009; Xu et al., 2011). The present model bridges these streams by proposing that personalization and geolocation are complementary technologies whose joint deployment generates synergistic value — a proposition grounded in the theoretical logic that individual relevance and spatial relevance are distinct dimensions of the same fundamental construct: contextual fit between the service offering and the consumer's momentary state.

The second contribution concerns the theoretical elaboration of the mediation architecture linking digital technologies to loyalty. While prior research has established bilateral relationships between personalization-driven customization and satisfaction in smart tourism contexts (Ngan et al., 2025), between trust and loyalty (Morgan & Hunt, 1994), and between user experience quality and engagement (Davis, 1989), the present model is the first, to the author's knowledge, to integrate all three mediators simultaneously within a single explanatory

framework applied to tourism. This simultaneous integration is theoretically important because the three mediators capture qualitatively distinct psychological processes: satisfaction captures evaluative cognition, trust captures relational security, and user experience captures functional-hedonic interface quality.

The third contribution concerns the theoretical positioning of Morocco as an analytically significant rather than merely incidental research context. The dominant frameworks in digital marketing and tourism research have been developed and validated primarily in Western, high-income, and individualist cultural contexts. By grounding the proposed model in the specific socio-cultural, institutional, and economic conditions of Moroccan tourism, this article contributes to a growing body of work seeking to contextualize digital marketing theory — testing, refining, and extending Western frameworks in a context whose distinctive characteristics constitute a theoretically productive stress test.

b. The Trust Paradox: Theoretical Implications

A central theoretical tension running through the proposed model — and through the broader literature on digital personalization — concerns what this article terms the trust paradox of digital personalization. The paradox can be stated as follows: the technologies most capable of generating superior consumer experiences and durable loyalty — real-time personalization and geolocation — are precisely those that most acutely raise the privacy concerns and trust anxieties that can undermine their effectiveness. More data enables better personalization; but more data collection raises higher privacy stakes. More precise geolocation enables richer contextual experiences; but more precise location tracking feels more invasive.

This paradox has several important theoretical implications for the proposed model. First, it suggests that trust is not merely one mediator among three but a necessary enabling condition for the entire causal chain from personalization and geolocation to loyalty — a conclusion consistent with recent evidence that trust in smart tourism technology providers is the pivotal factor mitigating travelers' privacy concerns (Ngan et al., 2025). Second, the paradox implies that transparency and consumer control are strategic necessities, not merely ethical desiderata, for the effectiveness of personalization and geolocation strategies. Third, the trust paradox suggests a dynamic, longitudinal dimension to the personalization–loyalty relationship that cross-sectional empirical studies may be ill-equipped to capture fully.

c. Contextual Boundary Conditions: Morocco as a Theoretical Lens

The Moroccan tourism context does not merely provide an empirical setting for testing a universally applicable model — it functions as a theoretical lens that brings into focus dimensions of the personalization–loyalty relationship that are invisible or underemphasized in Western-centric frameworks. The concept of *diyafa* — Moroccan hospitality — is particularly illuminating in this regard. In Moroccan cultural tradition, hospitality is not a service transaction but a moral obligation, a relational expression of generosity, dignity, and care for the guest. Digital personalization, in this cultural frame, can be understood as a technological approximation of *diyafa* — a mechanism for anticipating and fulfilling individual needs in ways that signal genuine attention and care.

This cultural resonance is, however, fragile and conditional. Personalization that feels algorithmic, transactional, or indifferent to the relational dimensions of the service encounter may violate rather than fulfill the expectations embedded in *diyafa*, generating disappointment and distrust rather than loyalty. The linguistic plurality of the Moroccan tourist market adds a further layer of complexity: personalization systems that adapt to linguistic and cultural registers — delivering recommendations in the consumer's preferred language, with culturally

appropriate framing — are likely to generate substantially stronger satisfaction and trust responses than systems defaulting to a single cultural template.

d. Limitations of the Proposed Framework

Three limitations merit explicit discussion. First, the model is inherently static in its current formulation: it does not account for the dynamic, evolutionary character of the personalization–loyalty relationship. A dynamic modeling approach incorporating longitudinal data or latent growth curve analysis would capture temporal dynamics more adequately than the cross-sectional PLS-SEM approach planned for the forthcoming empirical study. Second, the model focuses exclusively on the consumer side of the relationship, treating service providers as undifferentiated sources of personalized interactions. A dyadic or supply-side extension incorporating provider-level variables would generate a more complete understanding of the conditions for personalization effectiveness. Third, the model's treatment of the Moroccan cultural context relies on broad cultural characterizations that mask substantial within-country heterogeneity across generational cohorts, geographic regions, and linguistic communities.

5. Managerial Implications

a. For Tourism Operators and Hospitality Providers

The conceptual framework carries concrete and actionable implications for tourism operators, hospitality providers, and destination managers seeking to leverage real-time personalization and geolocation technologies to build sustainable competitive advantage and durable customer loyalty. The first and most fundamental implication concerns the primacy of trust as a strategic prerequisite rather than an operational afterthought. For Moroccan tourism operators, this means investing in transparent data governance practices that go beyond legal compliance with Law No. 09-08 on the protection of individuals with regard to the processing of personal data, promulgated by Dahir No. 1-09-15 of 18 February 2009 and published in the Bulletin Officiel No. 5714 of 5 March 2009 (Kingdom of Morocco, 2009), whose application is supervised by the Commission Nationale de contrôle de la protection des Données à caractère Personnel (CNDP): publishing clear and genuinely informative privacy policies; providing meaningful opt-in mechanisms; and creating visible, credible channels through which consumers can exercise their data rights.

The second implication concerns the strategic design of personalization systems that honor the cultural logic of *diyafa*. Operators should design personalization strategies around the question 'how can we make this guest feel genuinely seen, valued, and cared for?' rather than 'how can we maximize revenue from this visit?' — a reorientation that aligns commercial incentives with cultural values and generates superior long-term loyalty. The third implication concerns the integration of geolocation-based discovery into the core tourism experience. For operators in Morocco's imperial cities — whose extraordinary cultural heritage provides abundant material for contextually rich discovery experiences — this represents an enormous untapped opportunity to differentiate through depth and authenticity. The fourth implication concerns the importance of multilingual and culturally adaptive personalization: systems that adapt to linguistic and cultural registers will generate substantially stronger satisfaction and trust responses than single-template alternatives.

b. For Destination Management Organizations and Public Policy

Beyond individual operators, the proposed framework carries important implications for destination management organizations (DMOs) and public policy actors responsible for Morocco's tourism development strategy. The Vision 2030 tourism roadmap, which targets 26

million annual arrivals and positions digital innovation as a central pillar of competitiveness, creates both the imperative and the opportunity for systematic investment in personalization and geolocation infrastructure at the destination level. DMOs can play a catalytic role by developing shared digital infrastructure — open data platforms, interoperable recommendation systems, and city-wide geolocation networks — that enables individual operators to access personalization capabilities without bearing full technological development costs independently. Public policy actors should also develop sector-specific guidance for the tourism industry covering data minimization principles, consent design standards, and transparency requirements tailored to the tourist context.

c. For Technology Providers and Digital Platform Developers

Technology providers serving the Moroccan tourism market face specific design challenges that the proposed framework illuminates. The trust paradox suggests that the most commercially effective personalization and geolocation systems are not those that maximize data collection and algorithmic precision, but those that achieve the optimal balance between relevance and restraint. Concretely, this implies designing personalization interfaces that make data use transparent and legible; building geolocation systems that default to the minimum location precision necessary for effective recommendation; and creating feedback mechanisms through which tourists can actively shape their personalization profile. Platforms that empower consumers to co-create their personalization experience will generate higher trust, stronger engagement, and superior loyalty outcomes.

6. Conclusion And Future Research Directions

This article has proposed an integrated conceptual model of the joint influence of real-time personalization and geolocation on customer experience and loyalty in tourism, with specific theoretical grounding in Morocco's tourism sector. Ten theoretically derived hypotheses formalize the direct effects, mediation pathways, moderating relationships, and synergistic interactions that constitute the model's explanatory architecture. The discussion outlined three prospective theoretical contributions — the integration of personalization and geolocation into a unified framework, the elaboration of a three-mediator architecture, and the theoretical positioning of the Moroccan context as a productive stress test for dominant Western frameworks — alongside the central theoretical tension of the trust paradox and the boundary conditions delimiting the model's generalizability. It must be emphasized that these contributions are, at this stage, conceptual propositions rather than empirically established findings: the model has not yet been validated, and the relationships it posits — including the synergistic interaction that constitutes its most original claim — remain hypotheses whose confirmation, refinement, or refutation depends entirely on the forthcoming empirical investigation.

Several directions for future research emerge from this conceptual work. The most immediate priority is the empirical testing of the proposed hypotheses through the large-scale mixed-methods study currently in preparation. The quantitative phase will deploy partial least squares structural equation modeling (PLS-SEM), implemented in SmartPLS 4, with a representative sample of at least 350 tourists who have visited Morocco, enabling simultaneous estimation of direct effects, mediation pathways, and interaction effects. The choice of PLS-SEM over covariance-based SEM (CB-SEM) is deliberate and rests on four considerations (Hair, Risher, Sarstedt & Ringle, 2019). First, the research objective is exploratory and predictive — developing and testing a newly integrated framework — rather than confirming a well-established theory, a configuration for which PLS-SEM is recommended over the strictly confirmatory logic of CB-SEM. Second, the structural model is complex, combining direct effects, multiple parallel mediation pathways, moderation effects, and a latent interaction term

(H10), which PLS-SEM estimates efficiently and without the convergence difficulties that latent interactions frequently create in CB-SEM. Third, PLS-SEM imposes no multivariate normality assumption, a realistic requirement for field survey data collected across heterogeneous tourist populations. Fourth, PLS-SEM achieves adequate statistical power at moderate sample sizes relative to model complexity, which is consonant with the targeted sample of 350–400 respondents. Measurement quality will be assessed through indicator reliability, composite reliability, average variance extracted (AVE), and the heterotrait–monotrait ratio (HTMT) for discriminant validity, and the significance of structural paths will be evaluated through bootstrapping with 5,000 resamples. The qualitative phase will provide interpretive depth, capturing experiential and cultural dimensions that survey instruments cannot adequately operationalize.

Beyond this immediate empirical agenda, several theoretical extensions merit future investigation. Longitudinal designs tracking the evolution of trust, personalization perceptions, and loyalty over multiple tourist interactions would provide crucial insights into the dynamic character of the personalization–loyalty relationship. Comparative cross-cultural studies across multiple MENA destinations would enable systematic assessment of cultural boundary conditions. Dyadic research designs incorporating both consumer and provider perspectives would enrich understanding of how organizational capabilities moderate consumer-side effects. Finally, the emergence of generative artificial intelligence as a new paradigm for hyper-personalized tourism content raises novel theoretical questions about the nature of perceived personalization — its authenticity, its limits, and its ethical dimensions — that represent a frontier for future theoretical development.

The tourism industry stands at an inflection point. The convergence of real-time personalization, geolocation, and artificial intelligence creates unprecedented capabilities for delivering experiences that are individually resonant, contextually precise, and emotionally memorable. Morocco, with its extraordinary cultural heritage, ambitious digital tourism vision, and rich and underexplored consumer landscape, represents an ideal laboratory for investigating these possibilities — and for contributing to the theoretical conversations that will shape digital tourism marketing for the decade to come.

7. References

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