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The Role of Artificial Intelligence in Enhancing Personalized Tourism Marketing: The Mediating Effect of Consumer Engagement on Destination Choice in the UAE

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Research Background

The study explores Artificial Intelligence in Personalized Tourism Marketing

- The UAE is a major global tourism destination, supported by advanced infrastructure, luxury services, and strong tourism facilities. Increasing competition in tourism has created a need for personalized and technology-driven marketing strategies.
- Artificial Intelligence (AI) enables tourism businesses to analyze consumer preferences and behavior and provide tailored travel recommendations.
- Technologies such as machine learning, predictive analytics, chatbots, and recommendation systems support customized customer interactions.
- Despite the growing use of AI, there is a research gap regarding how AI-driven personalization influences consumer engagement and ultimately affects tourists' destination choices in the UAE.
- The study therefore investigates the pathway:

AI-Driven Personalized Tourism Marketing → Consumer Engagement → Destination Choice

Research Objectives

Purpose of the Study is explained by the four main objectives:

- Investigate the impact of AI on personalized tourism marketing.
- Analyze the role of AI in improving consumer engagement with tourism marketing activities.
- Evaluate the impact of consumer engagement on tourists' destination choices.
- Assess the mediating role of consumer engagement in the relationship between AI-driven personalized tourism marketing and destination choice.

Overall Research Focus

- The study seeks to explain not only whether AI influences destination choice, but also how consumer engagement acts as the mechanism connecting AI-based personalization with tourists' decisions.

Theoretical Framework

The study proposes a conceptual model of three key constructs:

1. **Independent Variable** — AI-Driven Personalized Tourism Marketing

- Machine learning
- Predictive analytics
- Chatbots
- Consumer data analysis
- Personalized travel recommendations
- Real-time interaction

2. **Mediating Variable** — Consumer Engagement

- Interaction with marketing content
- Behavioral engagement
- Cognitive engagement
- Emotional attachment
- Loyalty
- Interactive experiences and real-time assistance

Theoretical Framework_Contd.

3.Dependent Variable — Destination Choice

- Trust in AI recommendations
- AI-assisted decision-making
- Preference consistency
- Satisfaction and favorable perceptions

Proposed Relationships

AI-Driven Personalized Tourism Marketing –Consumer Engagement–Destination Choice

The framework also proposes a direct relationship between AI-driven personalization and destination choice, while consumer engagement is expected to partially mediate this relationship.

Hypotheses

H1: AI-driven personalized tourism marketing → Consumer engagement

H2: AI-driven personalized tourism marketing → Destination choice

H3: Consumer engagement → Destination choice

H4: Consumer engagement mediates the relationship between AI-driven personalized tourism marketing and destination choice

Research Methodology

Research Design

The Research approach is Quantitative and is designed using a cross-sectional survey in the tourism sector in the UAE.

Sample & Data Collection

A set of 300 respondents with participants including tourism marketing professionals, travel agencies, AI developers etc were called upon for this study.

Sampling: the method used is stratified random sampling. The instrument structured questionnaire was distributed online to measure the following:

- ✓ AI-driven personalization — recommendation accuracy, real-time interaction, data-driven insights
- ✓ Consumer engagement — interaction, emotional attachment, loyalty
- ✓ Destination choice — influence of personalized recommendations and trust in AI suggestions

Data Analysis: the analysis uses descriptive statistics and employing Structural Equation Modeling (SEM). The measurement model demonstrated acceptable reliability and validity, with AVE values above 0.50, composite reliability above 0.70, and HTMT values below 0.90

Key Findings

All Four Hypotheses Were Supported and the main findings are as below:

- AI-driven personalized tourism marketing has a significant positive relationship with consumer engagement.
- AI personalization also has a direct positive relationship with destination choice.
- Consumer engagement is an important determinant of destination selection.
- Consumer engagement partially mediates the relationship between AI-driven personalization and destination choice.
- The mediation result indicates that AI's influence on destination choice operates partly through stronger consumer engagement.

Core Finding was established as :

AI personalization → stronger consumer engagement → greater influence on destination choice

Relationship	β	Result
H1: AI → Consumer Engagement	0.62	Supported
H2: AI → Destination Choice	0.06	Supported
H3: Consumer Engagement → Destination Choice	0.56	Supported
H4: AI → Engagement → Destination Choice	0.38	Supported

Academic Contribution

Contribution to Research

1. Extends AI Tourism Marketing Research: Provides empirical evidence on the role of AI-driven personalization within the UAE tourism context.
2. Establishes Consumer Engagement as a Mediating Mechanism: The study demonstrates that consumer engagement helps explain how AI-driven personalization translates into destination choice.
3. Integrates three important constructs within a single empirical model.

Artificial Intelligence /Consumer Engagement /Destination Choice

4. Provides Empirical Support for the Conceptual Model: SEM results support all four proposed hypotheses and demonstrate significant direct and mediated relationships.
5. Practical Relevance for Tourism Research: The findings suggest that tourism organizations can use AI-based personalization and interactive experiences to strengthen relationships with visitors and support digital transformation in tourism.

Overall Contribution: The study moves beyond viewing AI simply as a technological tool and highlights the importance of consumer engagement as the connecting mechanism between personalized AI marketing and tourists' destination decisions.