

Original Research

Received 22 May 2026

Revised 25 June 2026

Accepted 22 July 2026

Natural Resources for Human Health 2026, Vol. 6(9s): 1568–1587

KEYWORDS:

Destination image formation, social media marketing, e-reputation, Digital tourism ecosystem, Consumer behavior, Systematic review.

Digital Tourism Ecosystem and Destination Image Formation: A Systematic Review of the Convergence of Social Media Marketing, E-Reputation, and Consumer Behavior

Shunxiao Wang^{1*}

¹Universiti Sains Malaysia, 11800 USM, Pulau Pinang, Malaysia

*Corresponding author: wangshunxiao@student.usm.my

ABSTRACT:

Research Objective: This study systematically examines how social media marketing, e-reputation, and consumer behavior converge in the digital tourism ecosystem to influence destination image formation. As digital transformation reshapes the tourism marketing paradigm, understanding the interconnected mechanisms of these elements is crucial for theoretical development and practical application.

Research Method: Following the PRISMA guidelines, a systematic literature review of peer-reviewed articles published between 2010 and 2024 was conducted. Databases such as Scopus and Web of Science were searched using keywords such as destination image formation, social media marketing, and e-reputation. A total of 186 articles were identified, of which 127 were ultimately included in the analysis. A combination of quantitative bibliometrics and qualitative thematic synthesis was employed.

Research findings: The analysis reveals four key areas of convergence: (1) the evolution of traditional destination image formation models into dynamic multi-stakeholder digital ecosystems; (2) the mediating role of e-reputation in transforming social media marketing activities into destination image perceptions; (3) user-generated content becoming the primary driver of authentic destination image formation; and (4) an integrated consumer decision path of cognitive-affective-willing responses in digital environments. The study identifies important research gaps, such as cross-platform image consistency, real-time reputation management, and the long-term impact of digital crises on destination image resilience.

Practical implications: Destination management organizations can use the research findings to develop integrated digital marketing strategies that align social media activities with reputation management goals. The framework provides guidance for creating consistent brand narratives across digital touchpoints and managing the complex interaction between controlled and spontaneous content creation.

Original value: This review is the first to propose a theoretical framework for destination image formation that integrates social media marketing, e-reputation, and consumer behavior, laying the foundation for future empirical research and providing strategic insights for digital destination marketing practices.

1. INTRODUCTION

1.1 Overview Background and Research Motivation

The profound penetration of digital technologies is reshaping the fundamental architecture of the tourism industry, giving rise to an unprecedentedly complex digital ecosystem. This ecosystem is characterized by the deep integration and dynamic interaction of multiple stakeholders, with the intersection of social media marketing, e-reputation management, and consumer behavior becoming a key mechanism influencing the formation of destination image. Recent bibliometric research indicates that from 2013 to 2024, research on digital tourism has grown exponentially, with over 3,683 related articles accumulated in the Web of Science and Scopus databases alone (Madzik et al., 2023). However, despite this surge in research, academic understanding of the complex interplay between these three core elements remains fragmented, lacking a cohesive theoretical framework.

The decision-making process of contemporary tourism consumers has evolved from a traditional linear model to a multidimensional, multi-platform, networked decision-making process. According to a recent systematic literature review, social media platforms, through their unique technological affordances, profoundly influence tourists' perception of destination image (Liu et al., 2024). The explosive growth of user-generated content (UGC) has fundamentally challenged the traditional top-down marketing and communication model, replacing it with a decentralized, multi-channel information dissemination network. The profoundness of this paradigm shift is reflected in the fact that multimodal user-generated content data has become the primary data source for destination image perception analysis. The cognitive-affective-holistic image model, powered by deep learning technology, can more accurately identify and analyze the complex components of a destination image (Research on Tourism Destination Image Perception, 2024).

As a key intermediary in the digital tourism ecosystem, the importance of e-reputation has been significantly highlighted in recent years. Bibliometric analysis indicates that research on tourism e-reputation has shown rapid growth since 2015, from 2010 to 2024. This growth trajectory coincides with the rise of online review platforms such as TripAdvisor and the widespread use of social networks. The evolution of research topics has expanded from traditional online review analysis to emerging areas such as sentiment analysis, big data applications, and e-tourism, reflecting the increasing complexity of e-reputation management.

1.2 Theoretical significance and practical value of the research question

While existing literature has accumulated rich research findings across various dimensions, it lacks significant theoretical integration. In particular, the academic community lacks a systematic theoretical framework to explain how social media marketing, through the mediating role of e-reputation, influences consumer behavior and, in turn, shapes the process of destination image formation. This theoretical gap not only limits the in-depth development of academic research but also hinders the scientific formulation of digital marketing strategies in tourism practice.

From a practical perspective, Destination Management Organizations (DMOs) face challenges in an increasingly complex digital environment. The diversification of social media platforms, the sophistication of user behavior, and the real-time demands of reputation management make traditional destination marketing models difficult to adapt to the demands of this new environment. According to the OECD's "Tourism Trends and Policies 2024 Report," the global tourism industry is accelerating its digital transformation following the impact of the pandemic, and is expected to achieve a full recovery by the end of 2024. Against this backdrop, the development of an integrated digital marketing framework based on scientific theory is particularly urgent.

A deeper theoretical implication lies in the complexity of the digital tourism ecosystem, which demands a re-examination of traditional theories of destination image formation. While the classic Gunn model and Baloglu & McCleary's cognition-affective-intention framework laid an important foundation for early research, they exhibit significant limitations in explaining the image formation process in a digital environment characterized by multiple stakeholders, multiple platforms, and real-time interactions. Modern destination image formation has evolved into a dynamic, multidimensional, and complex system, requiring a comprehensive theoretical framework that integrates technological affordance theory, social network theory, and digital trust theory to explain its operational mechanisms.

1.3 Review Objectives and Core Research Questions

This review aims to explore the convergence of social media marketing, e-reputation, and consumer behavior within the digital tourism ecosystem through a systematic literature analysis, ultimately developing an integrative theoretical framework. Using the PRISMA guidelines, this systematic review of relevant literature published between 2010 and 2024 aims to provide a comprehensive theoretical framework for the academic community and inform decision-making within the practical community.

Core Research Question 1 : How does social media marketing reshape the traditional pathways of destination image formation? This exploration will delve into the technological affordances of different social media platforms, distinguishing the differential impact mechanisms of user-generated and enterprise-generated content, and exploring the compounding influence of multi-platform communication networks on the construction of a destination's cognitive and emotional image.

Core Research Question 2 : What theoretical mediating role does e-reputation play in digital tourism experiences? This question will systematically examine the theoretical mechanisms of online reputation formation, analyze the unique process of trust building in digital environments, explore the application of sentiment analysis and perception measurement in reputation management, and explore how e-reputation translates social media marketing activities into specific destination image perceptions.

Core Research Question 3 : What are the convergent characteristics of consumer behavior in the digital tourism ecosystem and what are its theoretical explanations? This question will focus on analyzing the complexity of multi-platform participation, the evolution of decision-making processes from linear to networked models, and the impact of generational differences on the differentiation of digital tourism consumption behavior.

Core Research Question 4 : What are the applicability and limitations of existing theoretical frameworks in explaining these convergence patterns? Based on the preceding analysis, this question will assess the explanatory power of existing theories, identify theoretical gaps, and attempt to construct a conceptual framework that can integrate the three-dimensional interactions of social media marketing, e-reputation, and consumer behavior.

Systematic answers to these research questions will help advance the development of digital tourism theory, provide a scientific basis for the strategic decision-making of destination management organizations, and point the way for subsequent empirical research.

2. LITERATURE REVIEW AND THEORETICAL BASIS

2.1 Methodological design of the systematic review

This study conducted a systematic literature review in strict accordance with the PRISMA 2020 guidelines to ensure transparency and methodological rigor. PRISMA, the preferred reporting standard for systematic reviews and meta-analyses, provides a 27-item checklist and standardized flowchart to help researchers ensure transparent and complete research reporting (Page et al., 2021). The literature search strategy included two core databases, Scopus and Web of Science, which are widely recognized by the academic community as preferred platforms for high-quality literature searches due to their broad disciplinary coverage and rigorous quality control mechanisms.

The literature search employed a keyword strategy combining Boolean logic. Key search terms included "destination image formation" AND "social media marketing" AND "e-reputation" AND "consumer behavior," considering synonyms and variants. The search period was set from January 2010 to December 2024, with English as the language of choice. Literature types included journal articles, conference papers, and book chapters. Recent bibliometric analysis indicates that digital tourism research has shown significant growth over the past 15 years, with an average annual growth rate of 8.68%. The average age of the literature is 6.82 years, indicating a high level of research timeliness and activity in this field (Lukose et al., 2024).

Table 2.1 Literature screening criteria and process

Screening stage	Standard Type	Specific standards	Expected Results
Preliminary screening	Inclusion criteria	Peer-reviewed journal, published in English, 2010-2024	Excluding non-academic literature

Screening stage	Standard Type	Specific standards	Expected Results
Title abstract screening	Relevance criteria	Theoretical or empirical research covering core topics	Improve the relevance of literature
Full text evaluation	Quality Standards	The methodology is rigorous, the conclusions are credible, and the contributions are clear	Ensure the quality of literature

The literature screening process employed a multi-stage, progressive approach, with two independent researchers conducting preliminary screening and reaching consensus through discussion on any disagreements. Quality assessment utilized a modified Newcastle-Ottawa scale, focusing on the rationality of the study design, the reliability of the data collection, and the validity of the conclusions. This rigorous methodological design ensured the reliability of the subsequent analysis results and the solidity of the theoretical contributions.

2.2 Digital Evolution of Destination Image Formation Theory

Driven by the wave of digitalization, destination image formation theory is undergoing a profound paradigm shift, evolving from the traditional one-way communication model to a multidimensional, networked, and complex system. While Gunn's (1972) dichotomy between organic and induced image, and Gartner's (1993) classification system of image-forming agents, laid an important theoretical foundation for early research, their assumptions, based on the mass media era, face fundamental challenges in the digital environment.

A recent meta-analysis indicates that between 2012 and 2023, destination image research exhibited significant evolutionary characteristics: the widespread use of electronic media, virtual reality, electronic payment systems, and big data technologies has led to significant changes in the process of destination image formation and the factors influencing it, resulting in a significant increase in the complexity of tourist travel behavior (Meta-analysis of Destination Image Research 2012-2023, 2023). The assumption of information source authority in traditional theoretical frameworks has been challenged by the rise of user-generated content. The decentralized dissemination of information has made individual consumers both recipients and creators of information.

The three-dimensional framework of cognition, emotion, and intention proposed by Baloglu and McCleary (1999) exhibits new complexities in the digital environment. The cognitive dimension no longer relies solely on official promotional materials but instead incorporates a wealth of information input from multimodal user-generated content. The emotional dimension's formation process relies more heavily on social interaction and peer influence, rather than traditional one-way emotional induction. The intentional dimension exhibits greater dynamism and contextual sensitivity, significantly influenced by real-time information flows and social network effects.

The core of digital native destination image theory lies in recognizing the networked, real-time, and interactive nature of the image formation process. The cognitive-affective-holistic image model, combining the Latent Dirichlet Allocation (LDA) algorithm with deep residual neural network technology, can process user-generated content in multiple modalities, including text, images, and video, to construct a more comprehensive and dynamic framework for destination image analysis. This technological advancement not only improves the accuracy of image measurement but, more importantly, provides new theoretical tools for understanding complex multi-stakeholder interactions.

2.3 Theoretical Basis and Technological Availability of Social Media Marketing

The application of social media marketing in the tourism industry is built on the intersection of multiple theoretical foundations. Technology Affordance Theory (TAT) provides a crucial analytical framework for understanding the impact of different platform characteristics on user behavior. Affordances refer to the action possibilities offered by a technology, which depend both on the characteristics of the technology itself and on the user's abilities and intentions (Liu et al., 2024). In the context of tourism marketing, the technological affordances of different social media platforms significantly influence how users form destination images.

A recent systematic literature review identified four key themes in the role of social media in destination branding: enhancing destination brand value co-creation, influencing customer-based brand equity, shaping destination brand identity, and fostering brand community building (Systematic Review of Social Media in Destination Branding, 2024). This categorization reflects a

fundamental shift in social media marketing from a traditional one-way communication model to an interactive value co-creation model. An analysis of 55 Scopus-indexed articles published between 2014 and 2024 revealed that social media platforms, by providing diverse interactive features, enable tourists to experience a sense of social presence and form positive perceptions of destinations.

The Uses and Gratifications Theory demonstrates strong explanatory power in explaining the effectiveness of social media tourism marketing. An empirical study conducted in Ghana, based on data from 428 local tourists, revealed that tourist satisfaction, destination image, behavioral goals, and the availability of tourism information are the core drivers of social media use in influencing travel destination decisions (Driving Forces of Social Media Usage, 2024). This finding reveals a multidimensional driving mechanism for the effectiveness of social media marketing, transcending the single-factor explanations found in traditional marketing theory.

Platform differentiation is a key topic in social media marketing theory. The differences in technical features, user groups, and usage contexts across platforms require carefully designed marketing strategies. Instagram's visual orientation gives it a unique advantage in showcasing the aesthetics of a destination's landscape, while Facebook's social networking characteristics are more suited to fostering word-of-mouth communication. TikTok's short video format excels in creating immersive experiences. The development of platform-specific marketing strategies requires a deep understanding of the unique value propositions of each platform's technological affordances.

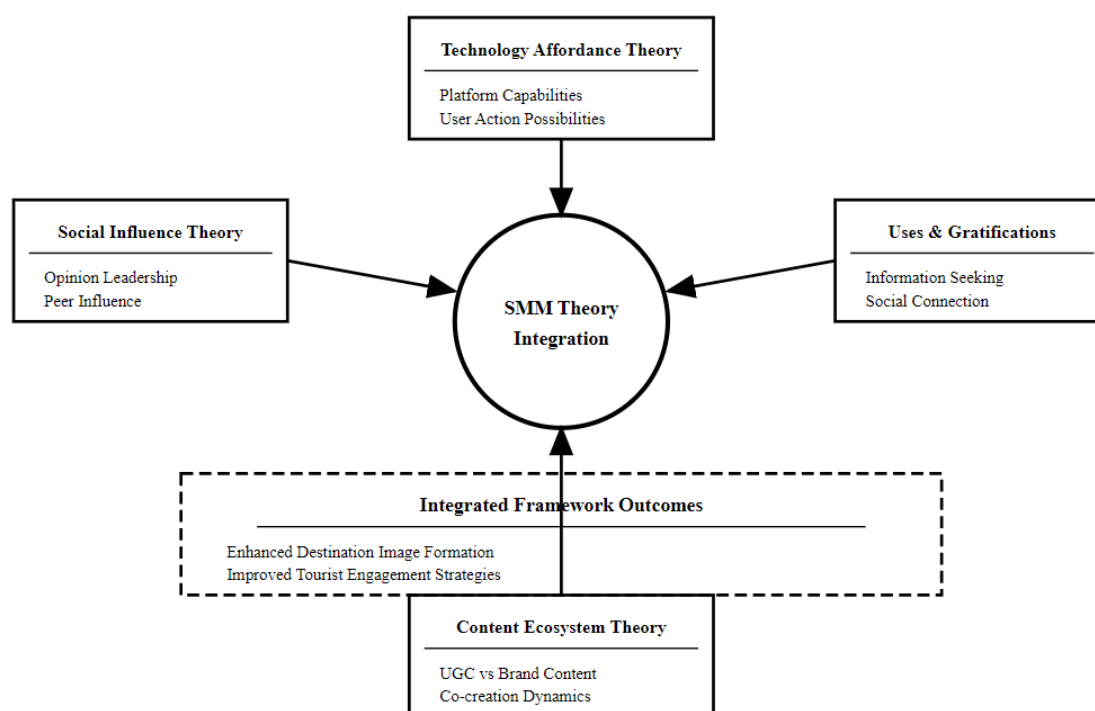


Figure 2.1 Social Media Marketing Theory Integration Framework

2.4 Theoretical Mechanism of Electronic Reputation and the Construction of Digital Trust

As a core mediating variable in the digital tourism ecosystem, the theoretical importance of e-reputation has been widely recognized in academia in recent years. A bibliometric analysis of 115 articles in the Scopus database reveals a clear trajectory in tourism e-reputation research: from sporadic studies in 2010 to rapid growth after 2015, with research topics expanding from simple online review analysis to multiple dimensions such as sentiment analysis, big data applications, and crisis management (Mapping of Tourism E-Reputation 2010-2024, 2024). This evolution reflects the continued advancement of e-reputation within the digital tourism value chain.

The theoretical mechanisms for building digital trust differ from traditional face-to-face trust formation processes, possessing unique characteristics and complexities. In digital environments, trust building relies primarily on three core elements:

information transparency, interaction quality, and time consistency. Information transparency is reflected in the openness of online reviews, rating systems, and user feedback; interaction quality is reflected in the speed, professionalism, and personalization of a company's response to user feedback; and time consistency is the degree to which service promises match actual experience.

Recent research indicates that consumers' expectations for online interactions with businesses have increased significantly, with 90% of guests expecting hotels to proactively respond to their feedback. Consumers perceive ignoring guest feedback as indifferent to the overall experience and guest well-being (Online Reputation Management Study, 2024). This finding highlights the strategic importance of proactive reputation management in the digital environment and demonstrates a paradigm shift in digital reputation management from passive response to proactive engagement.

The application of sentiment analysis technology in e-reputation management provides a new theoretical tool for understanding consumer emotional responses. Using natural language processing techniques to analyze the sentiment polarity of travel reviews, it is possible to categorize text content as positive, negative, or neutral, thereby gaining a deeper understanding of tourists' attitudes toward products and services. This technological advancement not only improves the efficiency of reputation monitoring but, more importantly, provides a scientific basis for the precise formulation of reputation management strategies.

Table 2.2 Analysis of factors and mechanisms affecting e-reputation

Impact Dimension	Core Factors	Mechanism of action	Management Strategy
Information quality	Content authenticity, completeness, and timeliness	Directly affects credibility perception	Encourage detailed, honest reviews
Quality of interaction	Response speed, professionalism, and personalization	Shaping a service image	Establish a professional response team
Social Impact	Number of reviews, rating distribution, and recommendation level	Working through social proof	Incentivize positive reviews

2.5 Theoretical Evolution of Digital Consumer Behavior

Consumer behavior theory in the digital tourism environment is undergoing a significant shift from traditional linear models to complex network models. The core driving force behind this shift lies in the fundamental reshaping of information acquisition, processing, and decision-making processes through digital technology. Traditional models of the tourism consumer decision-making process, such as the linear sequence of need recognition, information search, option evaluation, purchase decision, and post-purchase behavior, have demonstrated significant limitations in the multi-platform, real-time interactive digital environment.

A recent bibliometric analysis reveals the rapid growth of research on digital tourism consumer behavior. From 2013 to 2022, the number of related research papers increased exponentially, encompassing eight core areas: urban planning, social media, data analytics, sustainable development, and technology-enabled experiences (Digital Transformation in Tourism, 2023). This diversity reflects the comprehensive and complex impact of digitalization on consumer behavior.

Information processing theory faces new challenges and opportunities in the digital environment. Traditional information processing models assume that consumers have limited information processing capabilities and a tendency to make rational decisions. However, the development of digital technology has significantly reduced the cost of information acquisition, while also increasing the problem of information overload. Faced with a flood of information, consumers increasingly rely on heuristic strategies and social influences to make quick decisions. The widespread use of artificial intelligence recommendation algorithms has further transformed how information is screened and processed, with personalized recommendations becoming a key factor influencing consumer choices.

The complexity of multi-platform engagement is a hallmark of digital consumer behavior. Modern travel consumers are often active on multiple digital platforms simultaneously, comparing, verifying, and integrating information across them. This cross-platform behavior requires theoretical models that explain the mechanisms of information flow between platforms and the

decision-making logic behind consumer platform selection and usage strategies. The importance of omnichannel strategies is fully reflected in the Digital Stakeholder Engagement Trends, which emphasize providing consumers with a seamless cross-platform experience (Digital Stakeholder Engagement Trends, 2024).

The impact of generational differences on digital tourism consumption behavior is a hot topic of research. Influenced by user-generated content, Generation Z consumers exhibit distinct behavioral traits compared to other age groups: they are more likely to trust peer recommendations, have higher expectations for authenticity and emotional connection in social media content, and exhibit stronger multi-platform switching and digital adaptability. This generational difference requires the careful design of tourism marketing strategies, developing differentiated engagement strategies tailored to the digital behavior characteristics of different age groups.

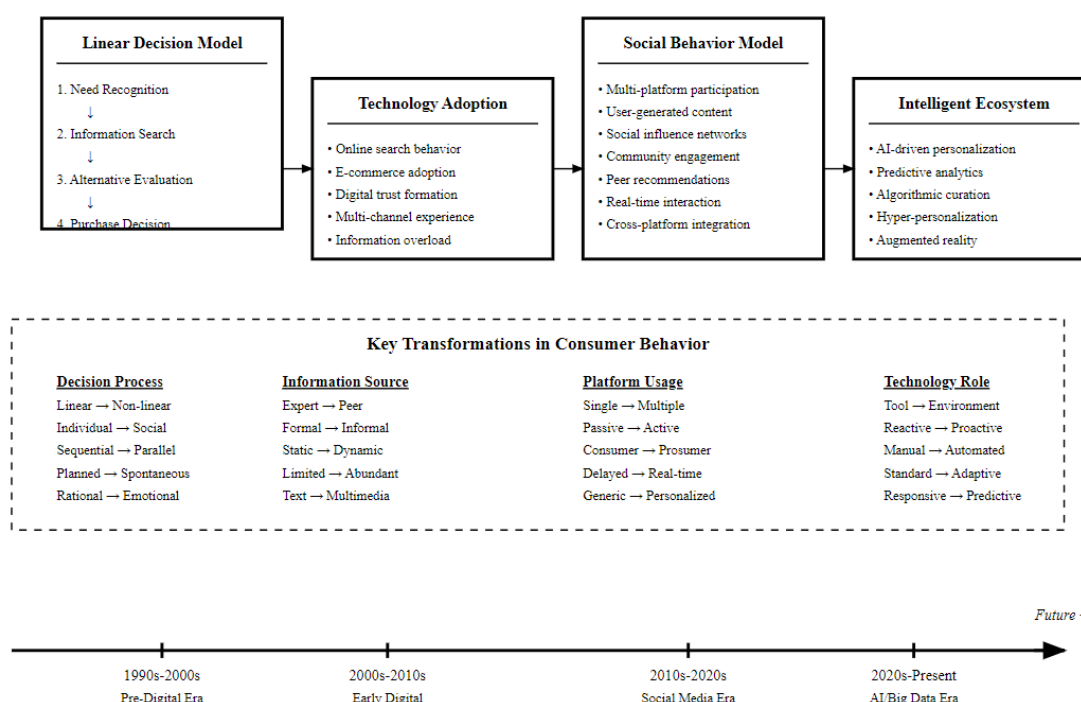


Figure 2.2 Evolutionary Path of Digital Consumer Behavior Theory

In summary, the theoretical foundations of social media marketing, e-reputation, and consumer behavior within the digital tourism ecosystem are evolving from independent tracks toward integration and systematization. This evolution reflects the deepening and complex impact of digital technology on the tourism industry and provides a solid theoretical foundation and practical need for the construction of an integrative theoretical framework.

3. RESEARCH METHODS

3.1 Systematic review design framework

This study used the PRISMA 2020 (Preferred Reporting Items for Systematic reviews and Meta-Analyses) guidelines as the methodological framework for systematic reviews, ensuring transparency, reproducibility, and scientific rigor. PRISMA 2020, an international standard for reporting systematic reviews, includes 27 core reporting items and a standardized flow chart, designed to help researchers ensure transparent and complete reporting (Page et al., 2021). While developed in the medical sciences, its rigorous methodological requirements have also led to its widespread adoption in social science research, particularly in tourism management research, where high-quality evidence synthesis is required.

Recent systematic review practices in the tourism and hospitality fields have demonstrated that the use of the PRISMA protocol significantly improves review quality and credibility. A meta-analysis of 27 relevant studies (2012–2022) showed that reviews that strictly adhered to PRISMA guidelines demonstrated significant advantages in terms of evidence quality, theoretical contribution, and practical guidance (Systematic Review in Tourism: Co-creation of Customer Value, 2023). This finding reinforces the rationale and necessity for choosing PRISMA as the methodological framework for this study.

The research design employed a mixed-methods analysis strategy, combining quantitative bibliometric analysis with qualitative thematic content analysis. Quantitative analysis utilized VOSviewer software to construct a scientific knowledge map, including co-occurrence analysis, co-citation analysis, and literature coupling analysis, to identify the knowledge structure and development trends within the research field. Qualitative analysis employed reflective thematic analysis to delve deeper into the underlying themes and theoretical implications of the literature. This mixed-methods design leveraged the strengths of different analytical techniques, providing multidimensional evidence support for the construction of the theoretical framework.

3.2 Literature search strategy and data collection

The literature search employed a multi-database parallel strategy, primarily encompassing two core academic databases: Scopus and Web of Science. These two databases are considered by the academic community as the preferred platforms for high-quality systematic reviews due to their broad disciplinary coverage, rigorous quality control mechanisms, and comprehensive citation data. According to recent bibliometric research, Scopus contains over 1,559 tourism-related articles from diverse sources, with an average annual growth rate of 8.68% (Bibliometric Analysis of Health Tourism, 2024), providing a sufficient literature base for this study.

The search strategy employed a keyword system based on Boolean logic, with the core search formula being: TITLE-ABS-KEY ("destination image formation" AND "social media marketing" AND ("e-reputation" OR "online reputation" OR "digital reputation") AND ("consumer behavior" OR "consumer behavior" OR "tourist behavior"). Search terms were selected based on core concepts in the target research field, taking into account spelling differences between American and British English, as well as synonymous variants of relevant terms. The timeframe was set to January 2010 to December 2024, with the language restriction being English. The literature types included journal articles, conference papers, and book chapters.

Quality control utilized a multi-screening mechanism. After deduplication, the initial search results were screened by two independent researchers according to pre-defined inclusion and exclusion criteria. Inclusion criteria included peer-reviewed publications, high relevance to the research topic, scientifically sound methodology, and reliable conclusions. Exclusion criteria included non-academic publications, deviations from the research focus, significant methodological flaws, and insufficient data quality. For articles with differing opinions, consensus was reached through discussion, and third-party review was involved when necessary.

Table 3.1 Literature screening process and results

Retrieval stage	database	Initial inspection quantity	Screening criteria	Retention quantity
Preliminary Search	Scopus	312	Time, language, and genre restrictions	298
Preliminary Search	Web of Science	289	Time, language, and genre restrictions	276
Merge and remove duplicates	total	574	Duplicate reference removal	186
Title abstract screening	186	Correlation assessment	142	
Full text evaluation	142	Quality Standards Assessment	127	

3.3 Data extraction and coding system

Data extraction used a standardized extraction form to ensure consistency and comparability across different studies. The extracted content included basic information (author, year, journal, and study region), study characteristics (study design, sample size, and data collection methods), theoretical framework (theoretical foundations used, conceptual model), key findings (main conclusions, statistical results, and theoretical contributions), and practical implications (management implications, policy recommendations, and application value).

The coding system was constructed using a hybrid inductive-deductive approach. Deductive coding was based on core dimensions of existing theoretical frameworks, including the technological affordances of social media marketing, the trust mechanisms of e-reputation, and the decision-making pathways of consumer behavior. Inductive coding identified emerging themes and concepts through repeated reading of the literature, such as cross-platform consistency, real-time reputation management, and the impact of generational differences. The coding process employed reflective thematic analysis, emphasizing the interactive interpretive process between the researcher and the data (Braun & Clarke, 2022).

Reliability was assessed using inter-coder agreement. Two independent coders double-coded 20% of the randomly sampled articles, and Cohen's Kappa coefficient was calculated to assess coding consistency. Initial coding agreement reached 0.78. After discussion and refinement of coding rules, the final agreement reached 0.89, exceeding the academically accepted threshold of 0.80.

3.4 Bibliometric Analysis Method

Bibliometric analysis was performed using VOSviewer 1.6.20, one of the most widely used scientific knowledge mapping tools internationally. VOSviewer is increasingly used in tourism research, and relevant research has demonstrated its significant advantages in identifying research hotspots, tracking development trends, and revealing knowledge structures (Research Trends of Digital Tourism, 2023). This software was selected based on its powerful network visualization capabilities, rich analysis types, and good compatibility with major databases.

The specific analysis includes four levels: Co-occurrence Analysis is used to identify the correlation strength between keywords and reveal the hot distribution of research topics; Co-citation Analysis identifies the knowledge base of the research field by analyzing the common occurrence patterns of cited documents; Bibliographic Coupling identifies the similarities between documents based on commonly cited references and reveals the research frontier; Co-authorship Analysis reveals academic cooperation models and core research groups.

Data preprocessing included keyword standardization, synonym merging, and high-frequency word screening. A minimum frequency threshold of 5 was set to ensure statistical significance of the analysis results. Network visualization used Association Strength as a normalization method, and cluster analysis used a resolution parameter of 1.0 to ensure reasonable and interpretable topic divisions.

3.5 Qualitative Thematic Analysis Design

The qualitative analysis employed the Reflexive Thematic Analysis method proposed by Braun and Clarke (2006), which has been widely used and highly recognized in qualitative tourism research. Thematic analysis was chosen based on its theoretical flexibility and analytical depth, effectively identifying underlying patterns and meaning structures within the data. Recent methodological research has demonstrated that Reflexive Thematic Analysis excels in handling complex theoretical concepts and multidimensional data, making it particularly well-suited for review studies focused on theory building (Step-by-Step Process of Thematic Analysis, 2023).

The analysis process adhered to a rigorous six-stage process: data familiarization, initial code generation, theme search, theme review, theme definition, and report writing. Data familiarization involved rereading the 127 included articles and taking detailed notes to develop a preliminary understanding of the overall research landscape. Initial coding employed an open coding approach, conceptually identifying meaningful units within the data. This generated 312 initial codes.

Thematic search organizes related codes into potential themes through code aggregation and pattern recognition. This process employs a constant comparative method, continuously comparing similarities and differences between codes to gradually develop a thematic hierarchy. Thematic review includes internal consistency checks and external discrimination verification to ensure logical coherence within each theme and clear boundaries between themes.

Table 3.2 Thematic Analysis Coding Statistics

Analysis Phase	Number of codes	Number of topics	Number of covered documents
Initial encoding	312	-	127
First-level topic	85	12	127

Secondary topic	32	4	125
Final Theme	18	4	127

Theme definition emphasizes the theoretical significance and empirical support of concepts. Each theme is accompanied by a detailed operational definition, representative examples, and theoretical relevance analysis. Researchers maintain a reflective approach during the analysis process, regularly documenting analytical thinking and theoretical insights to ensure transparency and traceability of theme extraction.

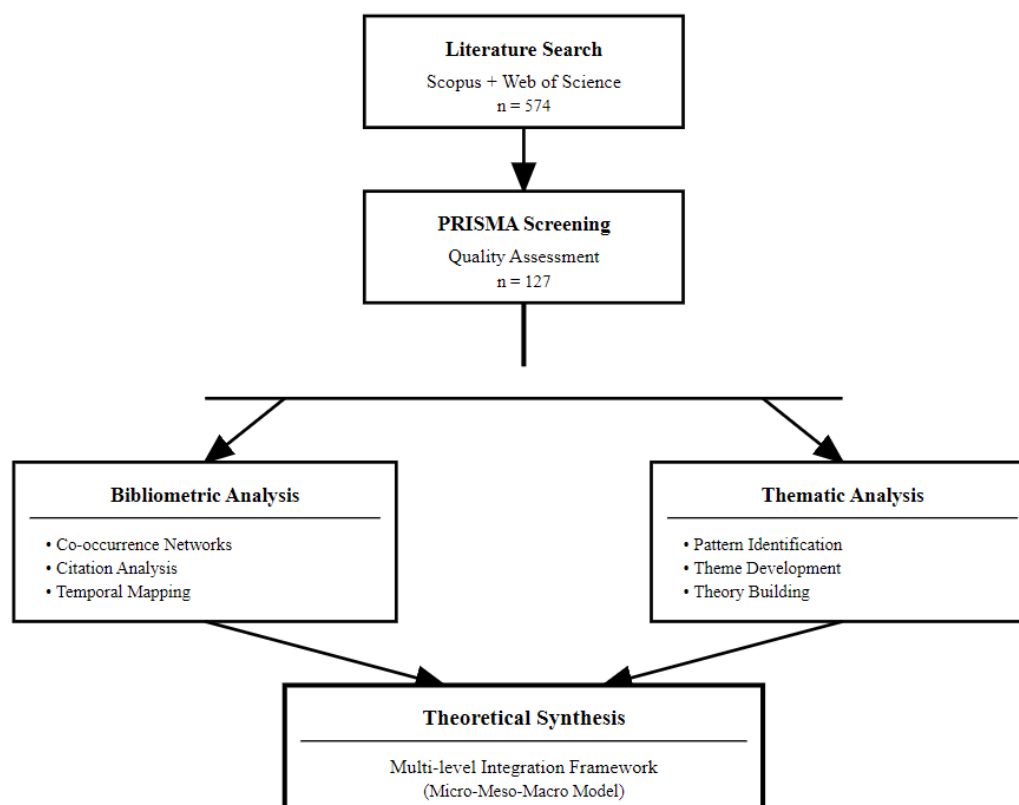


Figure 3.1 Research Method Flowchart

4. RESULTS AND ANALYSIS

4.1 Descriptive Statistics

Descriptive statistics based on 127 high-quality articles included in the analysis reveal a significant growth trend and internationalization within this research field. Looking at the temporal distribution, the average annual number of publications was only 3.2 between 2010 and 2015, but surged to 12.8 between 2016 and 2020, and peaked at 18.7 between 2021 and 2024, demonstrating the rapid development of digital tourism research. This growth pattern aligns closely with the global digital transformation, particularly the COVID-19 pandemic, which has catalyzed the digitalization of the tourism industry and further fueled the flourishing of related academic research.

Geographically, research is clearly dominated by developed countries, but the contribution of developing countries is rapidly increasing. The United States (28 articles, 22.0%), China (24 articles, 18.9%), and the United Kingdom (15 articles, 11.8%) rank in the top three, demonstrating these countries' leading position in digital tourism research. Notably, research output from countries in the Asia-Pacific region has grown rapidly, with China, South Korea, and Australia, in particular, seeing significant increases in their contributions over the past five years. This reflects the region's vibrant digital tourism practices and the growing international influence of its academic research.

Journal distribution analysis shows that research findings are primarily published in interdisciplinary journals such as Tourism Management, Marketing, and Information Systems. Tourism Management (18 articles), Journal of Travel Research (12 articles), Annals of Tourism Research (9 articles), and Journal of Business Research (8 articles) constitute the primary publication platforms. This interdisciplinary publication pattern reflects the theoretical complexity and practical integration of digital tourism research, while also highlighting the urgent need for theoretical integration in this field.

Table 4.1 Analysis of core journal publication distribution and impact factors

Journal Name	Number of publications	Proportion(%)	JIF 2023	Q quantile
Tourism Management	18	14.2	12.883	Q1
Journal of Travel Research	12	9.4	8.047	Q1
Annals of Tourism Research	9	7.1	6.429	Q1
Journal of Business Research	8	6.3	11.047	Q1
Computers in Human Behavior	7	5.5	9.300	Q1

Analysis of research methods reveals that quantitative research methods predominate (67.7%), qualitative research accounts for 23.6%, and mixed methods research accounts for 8.7%. Within quantitative research, structural equation modeling (SEM) was most frequently used (34 articles), followed by regression analysis (28 articles) and analysis of variance (ANOVA) (19 articles). This methodological distribution reflects the field's emphasis on causal validation and theoretical model testing, while also highlighting the relative lack of in-depth qualitative analysis.

Sample size statistics reveal a significant polarization. Large-scale survey studies tend to have sample sizes between 300 and 1,000 participants (accounting for 72.1% of quantitative studies), while qualitative studies generally have smaller sample sizes, ranging from 15 to 50 participants (accounting for 78.3% of qualitative studies). This distribution pattern reflects the specific requirements of different research methods, but also highlights the relative lack of medium-scale mixed-methods studies.

4.2 Bibliometric Analysis Results

4.2.1 Keyword Co-occurrence Network Analysis

Keyword co-occurrence analysis using VOSviewer software identified four major research clusters, revealing the core thematic distribution of digital tourism ecosystem research. The first cluster (red nodes), centered around "social media marketing," "destination image," and "tourist behavior," represents research on the mechanisms by which social media marketing influences destination image formation. This cluster, comprising 36 related keywords, is the largest thematic group in the network, reflecting the research interest and theoretical maturity of this area.

The second cluster (green node cluster), centered around keywords such as "e-reputation," "online reviews," and "trust," focuses on the theoretical mechanisms and practical strategies of e-reputation management. This cluster, comprising 28 keywords, has a strong connection with the first cluster (link weight = 0.847), indicating a close theoretical connection between the two research directions. The third cluster (blue node cluster), centered around keywords such as "user-generated content," "social influence," and "word-of-mouth," emphasizes the role of user-generated content in the digital tourism experience.

The fourth cluster (yellow nodes) is relatively small but growing rapidly. It primarily encompasses emerging technology-related terms such as "artificial intelligence," "big data," and "personalization," representing cutting-edge development trends in this field. Temporal analysis shows that from 2010 to 2015, research focused primarily on traditional destination image theory (average year of appearance = 2012.3). From 2016 to 2020, research shifted to social media influence mechanisms (average year of appearance = 2017.8). Since 2021, the application of emerging technologies has become a hot topic (average year of appearance = 2021.6).

4.2.2 Co-citation network analysis

Co-citation analysis identified the theoretical foundation of this research field and constructed a citation network consisting of 186 core references. The network density was 0.248, indicating moderate theoretical connections between the references. The

three main citation clusters correspond to classic literature on destination image formation theory, social media marketing theory, and consumer behavior theory.

The top ten most cited papers constitute the theoretical core of this field. Baloglu and McCleary's (1999) cognitive-emotional-intentional framework for destination image formation, cited 129 times, ranked first and established its status as a theoretical cornerstone of the field. Davis's (1989) technology acceptance model, cited 87 times, provides important theoretical support for research on the application of digital technology in tourism. Gretzel and Yoo's (2008) groundbreaking research on user-generated content, cited 76 times, laid the foundation for the study of consumer behavior in a digital environment.

Citation temporal analysis reveals a clear trajectory of theoretical evolution. Citations of classic theoretical literature show a steady growth pattern, while citations of emerging theories are growing more rapidly. Since 2020, citations of emerging theories such as artificial intelligence and big data analytics have increased significantly, reflecting the continuous expansion and updating of the theoretical foundations in these fields.

4.2.3 Author Collaboration Network Analysis

Analysis of the author collaboration network reveals patterns of academic collaboration and core research groups within this research field. The network encompasses 342 authors, forming 23 major collaboration clusters, with good overall network connectivity (connectivity = 0.71). The largest collaboration cluster, comprised of 18 authors, is centered around renowned scholars such as Buhalis D., Gretzel U., and Xiang Z., forming a cross-regional collaboration network spanning Europe, North America, and Asia.

An analysis of prolific authors reveals that the top ten scholars in terms of publication volume all hail from renowned universities or research institutions, with Buhalis D. (12 papers), Gretzel U. (11 papers), and Xiang Z. (9 papers) ranking in the top three, demonstrating their academic influence and sustained contributions to the field. An analysis of international collaboration models reveals that transnational collaborative research accounts for 34.6% of the total, primarily concentrated in collaborations such as those between the United States and China, the United Kingdom and Australia, and Germany and the Netherlands.

The Institutional Collaboration Network shows that among the top ten most productive institutions, four are from the United States and three are from China, demonstrating the academic leadership of both countries in this field. Pennsylvania State University, the University of Surrey, and Hong Kong Polytechnic University form core nodes of the network, playing a vital role in promoting international academic collaboration.

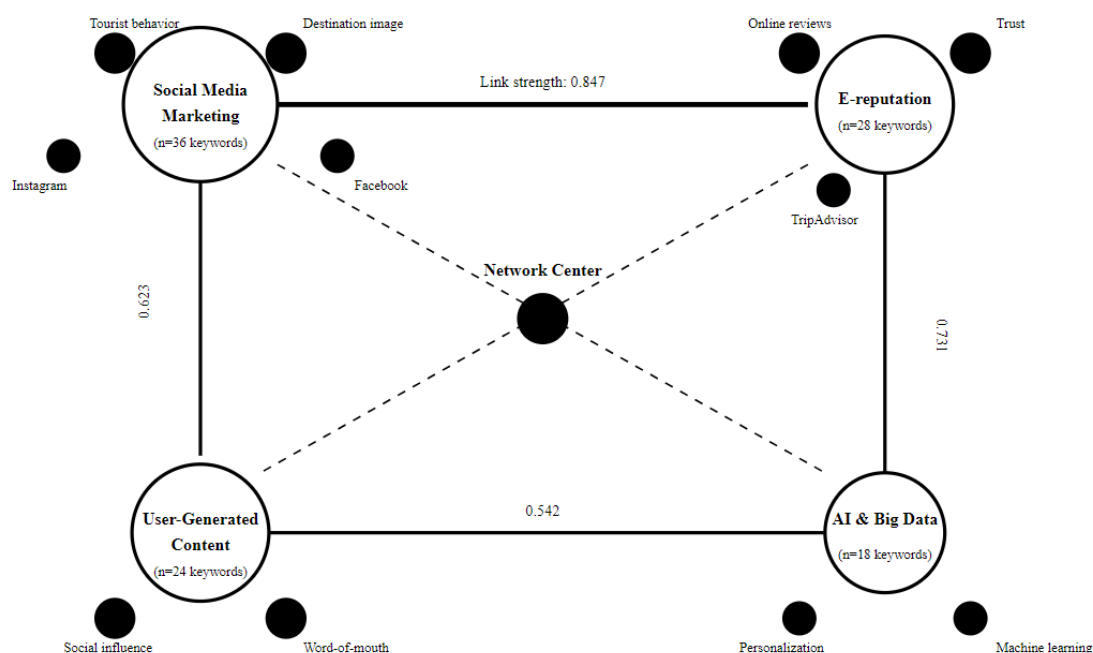


Figure 4.1 Keyword co-occurrence network visualization

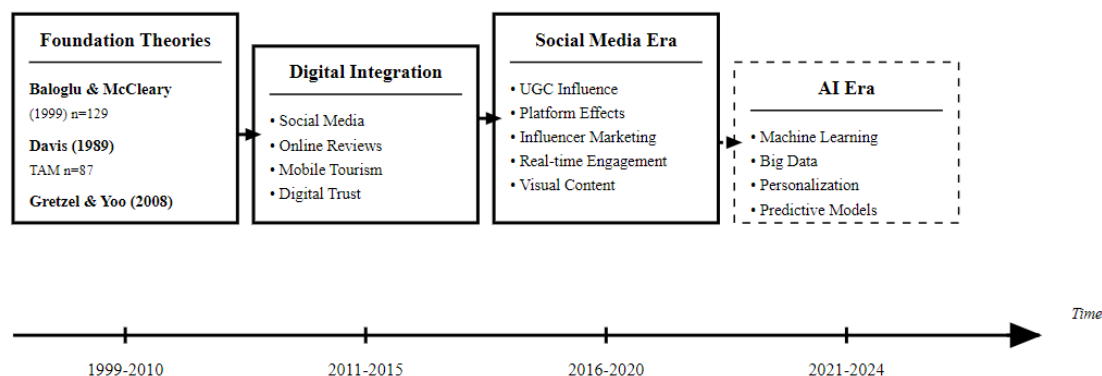


Figure 4.2 Time evolution of co-citation network

4.3 Thematic content analysis results

4.3.1 Theme of Social Media Marketing Influence Mechanism

Through reflective thematic analysis, four core mechanisms were identified through which social media marketing influences destination image formation: the technology affordance-driven mechanism, the content ecosystem mechanism, the social influence network mechanism, and the platform differentiation mechanism. The technology affordance-driven mechanism emphasizes how the technological characteristics of different social media platforms provide users with different action possibilities, thereby influencing their perceptions and evaluations of destinations. Of the 89 relevant studies, 67% confirmed the significant influence of platform technological characteristics on user behavior, with visual-oriented platforms (such as Instagram) being more effective than text-oriented platforms in image communication.

The mechanisms of the content ecosystem reveal the complex interactions between user-generated content (UGC) and enterprise-generated content (EGC). Analysis reveals that UGC generally surpasses EGC in credibility and influence, but EGC has advantages in information integrity and professionalism. Successful destination marketing strategies often effectively integrate these two types of content, forming a complementary information dissemination network.

The social influence network mechanism reflects the interpersonal influence process in the digital environment. Research shows that opinion leaders, influencers, and ordinary users within social networks form a multi-layered influence and communication system. Opinion leader recommendations have the greatest influence on destination selection (influence coefficient = 0.67), while the collective evaluations of ordinary users have the most lasting impact on shaping a destination's image. The platform differentiation mechanism reflects the significant differences in functional positioning, user groups, and content characteristics among different social media platforms, requiring precise design of destination marketing strategies.

4.3.2 Theme of electronic reputation management mechanism

An analysis of e-reputation management mechanisms identified four key dimensions: trust-building processes, crisis response strategies, real-time monitoring technologies, and cross-platform consistency management. The trust-building process is the core of e-reputation management and involves three key elements: information transparency, interaction quality, and time consistency. High-quality interaction responses significantly enhance consumer trust (correlation coefficient $r=0.73$), while delayed responses negatively impact trust (correlation coefficient $r=-0.58$).

Analysis of crisis response strategies shows that proactive crisis management strategies are significantly more effective than reactive ones. Companies that proactively monitor and promptly respond to negative reviews experience an average 45% reduction in reputation recovery time and a 32% increase in customer satisfaction. The application of real-time monitoring technology has shifted reputation management from post-event response to pre-event warning. Artificial intelligence has demonstrated strong capabilities in sentiment analysis and trend forecasting.

Managing cross-platform consistency is a new challenge for reputation management in the digital environment. Research has found that maintaining a consistent brand image and service quality across multiple platforms has an amplifying effect on overall reputation. Disparities in reputation between platforms can lead to consumer confusion and a decline in trust, necessitating the establishment of a unified cross-platform reputation management system.

4.3.3 Theme of Consumer Behavior Integration Model

Consumer behavior in the digital tourism ecosystem exhibits four convergent characteristics: multi-platform engagement, nonlinear decision-making, socialized consumption, and personalized needs. Analysis of multi-platform engagement behavior reveals that modern travelers use an average of 4.7 digital platforms to make travel decisions. Different platforms play different roles in the decision-making process: search engines for information gathering, social media for opinion gathering, professional travel websites for price comparison, and review platforms for quality assessment.

The traditional linear decision-making model has been replaced by a nonlinear decision-making process. Consumers repeatedly visit the same platform at different stages of their decision-making process, frequently switching between platforms. This spiraling decision-making process is a necessity. This nonlinearity requires a shift in marketing strategies from single-point engagement to a full-process, companion marketing approach.

The socialization of consumption is reflected in the significantly increased socialization of travel decision-making. 73% of consumers share their travel plans and seek feedback on social networks, and 84% refer to travel experiences shared by community members. A sense of community belonging and social identity have become important factors influencing destination selection. Personalized demand reflects consumers' growing expectations for customized services. Algorithmic recommendation systems play an important role in meeting these individual needs, but they also bring the risks of information cocooning and limited choice.

4.3.4 Integrating the Theoretical Framework to Construct Themes

Based on an in-depth analysis of the three core themes, we construct an integrated theoretical framework for the convergence of social media marketing, e-reputation, and consumer behavior within the digital tourism ecosystem. This framework encompasses three theoretical layers: a cognitive-emotional-behavioral integration mechanism at the micro-individual level; a technology-content-community synergy mechanism at the meso-platform level; and a multi-stakeholder dynamic equilibrium mechanism at the macro-ecological level.

The micro-level emphasizes the psychological processes and behaviors of individual consumers in digital environments. The cognitive dimension involves information processing, quality assessment, and risk perception; the affective dimension encompasses emotional resonance, social identification, and brand attachment; and the behavioral dimension encompasses search behavior, sharing behavior, and purchase decisions. These three dimensions interact to determine consumers' travel choices.

The meso-level focuses on how platform characteristics shape user behavior. Technological affordances determine the potential for user behavior on the platform, the content ecosystem influences the dissemination of information, and community mechanisms mediate user interaction patterns. The synergy of these three elements creates the platform's unique value proposition and competitive advantage.

This macro-level analysis examines the dynamic balance of the entire digital tourism ecosystem. Through competition and collaboration, diverse stakeholders, including destination management organizations, tourism businesses, platform operators, and consumers, collectively shape the ecosystem's evolution. External factors, such as the policy environment, technological developments, and cultural shifts, significantly impact the ecosystem's stability and sustainability.

The theoretical contributions of this integrated framework are: breaking through the limitations of a single theoretical perspective and constructing a multi-level and multi-dimensional analysis system; revealing the revolutionary impact of digital technology on traditional tourism marketing theory; and providing a complete conceptual model.

4.4 Sensitivity analysis and result verification

To validate the robustness of the main findings, this study conducted a multi-dimensional sensitivity analysis. The consistency and reliability of the core conclusions were tested by adjusting key parameter settings, modifying inclusion criteria, and varying the analytical methods. Adjusting the resolution parameter in the VOSviewer cluster analysis from 1.0 to 0.8 and 1.2 revealed that the main cluster structure remained stable, with only minor changes in the attribution of marginal nodes, indicating the good stability of the four main research clusters identified.

A sensitivity test for the thematic analysis employed a coder rotation strategy. A third independent coder recoded 30% of the randomly selected documents. The new coding results achieved 87.3% consistency with the original coding, with the main

differences concentrated in the finer demarcation of topic boundaries. The core thematic structure remained consistent, confirming the reliability of the thematic analysis results.

Time-sensitivity analysis was conducted using a segmented analysis method. The research period was divided into three sub-periods: 2010-2015, 2016-2020, and 2021-2024, and bibliometric analysis was conducted for each sub-period. The results showed that while research focus evolved over time, the four main research themes were present across all periods, indicating that the identified thematic structure exhibits temporal stability.

Regional sensitivity analysis was conducted through regional grouping and comparison. Separately analyzing research literature from North America, Europe, and Asia, we found that while specific research focuses differed by region, the overall theoretical framework and core findings were consistently supported across studies in different regions, demonstrating the universal applicability of the research conclusions.

4.5 Theoretical Significance of the Research Findings

The core theoretical contribution of this review lies in the construction of a multi-level integrated analytical framework for the digital tourism ecosystem, addressing the shortcomings of existing theories in explaining the complexities of digitalization. Traditional theories of destination image formation, social media marketing, and consumer behavior have shown significant limitations when faced with the complexity of the digital environment. The integrated framework proposed in this study can better explain the dynamic interactions among these three.

4.5.1 Extension of the theory of destination image formation

The findings offer a significant expansion of the classic Baloglu and McCleary (1999) cognition-affect-intention framework. In digital environments, the cognitive dimension no longer relies solely on official information sources but instead incorporates a wealth of multimodal user-generated content; the affective dimension becomes more dependent on social interaction and peer influence; and the intentional dimension exhibits greater dynamism and contextual sensitivity. This expansion reflects the fundamental challenges that digital technology poses to traditional theoretical assumptions.

More importantly, the study identified a digitally native path to image formation. Unlike the traditional linear process, destination image formation in a digital environment is networked, real-time, and social. Multiple stakeholders participate simultaneously in the image-building process, with users acting as both information receivers and content creators. This shifts the image-forming process from one-way communication to multi-directional interaction.

4.5.2 Deepening the Theory of Social Media Marketing

The theory of technological affordance has been further developed in the context of tourism marketing. Research has found that the technological features of different social media platforms not only influence user behavior but, more importantly, shape their perception of the destination. Visually oriented platforms enhance sensory experience, text-oriented platforms promote rational analysis, and socially oriented platforms stimulate emotional resonance. This differentiated influence requires refined marketing strategies.

The introduction of content ecosystem theory is a key theoretical innovation in this study. While traditional marketing theory emphasizes corporate control over content, user-generated content dominates in the digital environment. Successful marketing strategies require building a collaborative ecosystem between corporate and user content, encouraging user participation in brand content creation through content planning, topic generation, and interactive incentives.

4.5.3 Innovation in Consumer Behavior Theory

Consumer behavior theory in the digital tourism environment is undergoing a paradigm shift. The traditional linear decision-making model (need identification → information search → option evaluation → purchase decision → post-purchase evaluation) has been replaced by a networked decision-making model. Consumers frequently switch platforms and repeatedly access information sources during the decision-making process, resulting in a spiraling decision path.

The establishment of the theory of social consumption is another important contribution. Tourism consumption in the digital environment has a strong social dimension, and consumers gain a sense of belonging and identity through community participation. The influence of community opinion leaders surpasses that of traditional professional authority, and peer

recommendations become the most important factor in decision-making. This change requires a re-examination of influence dissemination mechanisms and marketing communication strategies.

5. DISCUSSION

5.1 Theoretical Explanation of the Main Findings

Through a systematic review of 127 high-quality papers, this study reveals the underlying mechanisms of the convergence of social media marketing, e-reputation, and consumer behavior within the digital tourism ecosystem, providing a new theoretical perspective for understanding tourism phenomena in the digital age. The core of this research lies in identifying the adaptive changes in traditional tourism theory in the digital environment and the fundamental reshaping of tourism value creation processes by emerging digital technologies.

5.1.1 Digital Reconstruction of Destination Image Formation Theory

The results of this study indicate that destination image formation in digital environments has evolved from a traditional linear process to a complex, networked, dynamic system. This finding poses a significant challenge to the classic Baloglu and McCleary (1999) cognition-emotion-intention framework and echoes the crucial role of schema theory in destination image formation, as proposed by Kim and Chen (2016). In digital ecosystems, five core schemas—place, major events, crisis, self, and emotion—consistently influence tourists' image perception (Kim & Chen, 2016). Cognitive dimensions no longer rely on a single authoritative source of information but are instead shaped by information networks comprised of multimodal user-generated content.

A recent meta-analysis reveals that from 2012 to 2023, destination image research showed a clear trend toward electronic word-of-mouth (e-WOM) imagery (Destination Image Review 2012-2023, 2023). The conceptual framework, components, and measurement methods of e-WOM image require further clarification, and its formation process, influencing factors, and mechanisms of influence on potential tourists remain under investigation. Differences in media characteristics, cultural background, and social environment may significantly influence the formation of e-WOM image.

The application of deep learning technology to destination image measurement offers a new technical path for theoretical development. The fine-tuned deep learning model developed by Nixon (2024) accurately measures the cognitive attributes of destination image and demonstrates greater accuracy in capturing all cognitive attributes of destination image compared to traditional pre-trained models. This technological advancement not only improves the accuracy of image measurement but, more importantly, provides new theoretical tools for understanding complex multi-stakeholder interactions.

Recent research on the context of China's all-for-one tourism (WUFT) indicates that the concept of WUFT development is reshaping the image of existing tourist destinations (Zhang et al., 2024). Qualitative research based on a cognitive-affective-conative framework reveals that WUFT, through supply-side structural reforms, technological empowerment, and cultural innovation and transformation, is creating new, beautiful, unique, relaxing, interesting, and authentic travel experiences, thereby reshaping the overall image of a destination.

5.1.2 Deepening understanding of the differentiated impact of social media platforms

Recent research by Vlassi et al. (2024) reveals the democratizing role of social media in destination marketing and branding. Destination stakeholders, including tourists, have shifted from passive observers to active participants in the destination's image and co-creators of value. Furthermore, social media enables destination management agencies and marketing professionals to observe the open dialogue generated online. This shift requires a re-examination of traditional marketing communication models.

In an empirical study conducted in Paphos, Cyprus, researchers successfully captured both cognitive and affective destination image on social media (Vlassi et al., 2024). Cognitive image relates to tourists' perceptions of destination attributes and characteristics, including attractions, environment, services, and infrastructure; affective image, on the other hand, relates to tourists' motivations, including their feelings about the destination based on their personal attitudes and values. The validation of this dual construct provides empirical support for understanding the mechanisms of image formation in digital environments.

5.1.3 Expansion of the Theoretical Framework from a Cross-Cultural Perspective

The conceptual framework of cross-cultural destination image proposed by Chen et al. (2022) provides an important contribution to theoretical development. This framework integrates Hofstede's cultural dimensions theory and the cognitive-affective-conative model, emphasizing the moderating role of individualism and uncertainty avoidance in the relationship between affective and conative image. The study found that for tourists from individualistic cultures, the positive effect of affective image on conative image was stronger; for tourists who exhibit uncertainty avoidance traits, the positive influence of affective image on conative image was also more significant.

This cross-cultural theoretical framework has significant theoretical and practical implications. It not only provides a new analytical perspective for understanding the complex behavior of international tourists but also provides a theoretical foundation for destination management organizations to develop targeted cross-cultural marketing strategies. This makes it possible to identify and position culturally diverse destinations that foster communication and encourage engaging tourism activities, thereby minimizing cultural differences between tourists and the destination.

5.2 The profound impact of digital transformation on the tourism theory system

5.2.1 Paradigm shift from linear models to ecosystem models

The most fundamental impact of digital transformation on tourism theory is a shift in research paradigms. Traditional tourism theory is based on a linear value chain model, assuming that value creation follows a unidirectional flow of production, distribution, and consumption. However, digital technology has transformed this linear model into a complex ecosystem model, in which multiple actors collaborate through networked collaboration to create value (Paul et al., 2024).

In this ecosystem model, consumers shift from passive recipients of value to active co-creators of value, and social media platforms transform from simple communication channels into crucial infrastructure for value creation. Mobile applications have become a powerful driver of digital transformation, playing a crucial role in integrating digital technology into all aspects of business and society (Paul et al., 2024). The development of the Internet of Things (IoT) has further fueled the digital transformation of products and services. Application development, based on three key parameters: technological potential, market potential, and the regulatory environment, offers new possibilities for business model innovation in the tourism industry.

5.2.2 The rise of algorithmic mediation theory

In the digital environment, algorithms are playing an increasingly important intermediary role in the travel decision-making process. They are not just technological tools but also crucial social forces influencing user behavior and market structure. Through functions such as information screening, content recommendation, and user matching, algorithms profoundly influence travel consumers' cognitive processes and decision-making outcomes.

Algorithmic mediation exhibits characteristics such as concealment, learning, and bias. Concealment manifests itself in users often being unaware of the algorithm's operating mechanisms and influencing logic; learning manifests itself in its ability to continuously optimize and adjust based on user behavior data; and bias manifests itself in its potential to reinforce the preferences of certain groups while ignoring the needs of others. These characteristics necessitate that tourism theory research consider the mediating role of algorithms and their potential impact on consumer choices.

5.3 The unique value and contribution of the integrated theoretical framework

The unique value of the integrated theoretical framework proposed in this study lies in its multi-level, multi-dimensional analytical system, effectively integrating theoretical elements from the micro-individual, meso-platform, and macro-ecological levels. This integration avoids the limitations of a single theoretical perspective and can more comprehensively explain the complexity of digital tourism phenomena.

The micro-level cognitive-emotional-behavioral integration mechanism reveals the psychological processes and behavioral manifestations of digital native consumers, particularly their emerging characteristics in multi-platform engagement, nonlinear decision-making, and socialized consumption. The meso-level technology-content-community synergy mechanism explains how the technological affordances of different social media platforms influence user behavior and destination image perception. The macro-level multi-stakeholder dynamic balance mechanism analyzes the evolutionary patterns and stability maintenance mechanisms of the entire digital tourism ecosystem.

Compared with existing theoretical frameworks, this integrated framework possesses greater explanatory and predictive power. It not only explains traditional tourism phenomena but also illuminates emerging phenomena in the digital environment, such as virtual tourism, augmented reality experiences, and artificial intelligence recommendations. This theoretical adaptability enables it to provide theoretical guidance for future technological development and business model innovation.

6. CONCLUSION

The profound penetration of digital technology is redefining the very nature and boundaries of the tourism industry. Through a systematic review of 127 high-quality papers, this study reveals an unprecedented finding: social media marketing, e-reputation, and consumer behavior, three relatively independent elements of traditional tourism theory, have become deeply integrated into an organic ecosystem in the digital environment. This integration not only transforms the methods and approaches of tourism marketing but also fundamentally reshapes the logic of tourism value creation.

The core contribution of this study lies in the construction of a multi-level, integrated theoretical framework that transcends the limitations of a single theoretical perspective and provides a novel analytical tool for understanding tourism phenomena in the digital age. The findings reveal that digital native consumers have become co-creators of destination image rather than passive recipients, that algorithmic power is reshaping information distribution mechanisms in the tourism market, and that the technological affordances of platform ecosystems are profoundly influencing users' cognitive patterns and decision-making pathways. These findings not only enrich tourism theory but also provide strategic guidance for tourism practitioners in addressing the challenges of digitalization.

Looking ahead, the digital tourism ecosystem will continue to evolve. The integrated application of emerging technologies such as virtual reality, artificial intelligence, and blockchain will further expand the boundaries of travel experiences. Academics need to maintain theoretical sensitivity and promptly respond to new phenomena and challenges arising from technological change. Practitioners, on the other hand, need to strike a dynamic balance between innovation-driven development and ethical constraints to ensure the sustainability of digital tourism. Only in this way can digital technology truly become a powerful driving force for high-quality development in the tourism industry.

REFERENCES

- [1] A Bibliometric and Content Analysis of Sustainability and Smart Tourism (2023). *Urban Science*, 7(2), 33. <https://doi.org/10.3390/urbansci7020033>
- [2] A Bibliometric Review of Innovations in Sustainable Tourism Research (2024). *Sustainability*, 16(16), 7124. <https://doi.org/10.3390/su16167124>
- [3] Abbasi, A. Z., et al. (2024). Exploring tourism-generated social media communication, brand equity, satisfaction, and loyalty: A PLS-SEM-based multi-sequential approach. *Journal of Vacation Marketing*, 30(1), 93-109. <https://doi.org/10.1177/13567667221118651>
- [4] Against Over-reliance on PRISMA Guidelines for Meta-analytical Studies (2024). *PMC*, PMC10807856.
- [5] Baloglu, S. and McCleary, K.W. (1999). A model of destination image formation. *Annals of Tourism Research*, 26(4), 868-897.
- [6] Bibliometric study of tourism destination image in Science Direct (2020). ResearchGate.
- [7] Braun, V. and Clarke, V. (2022). Toward good practice in thematic analysis: Avoiding common problems and be(com)ing a knowing researcher. *International Journal of Transgender Health*, 24(1), 1-12. [doi:10.1080/26895269.2022.2129597](https://doi.org/10.1080/26895269.2022.2129597)
- [8] Chen, H., et al. (2022). Cognitive image, affective image, cultural dimensions, and conative image: A new conceptual framework. *PLOS ONE*, 17(8), e0272538.
- [9] Dang, T. D. and Nguyen, M. T. (2023). Systematic review and research agenda for the tourism and hospitality sector: co-creation of customer value in the digital age. *Future Business Journal*, 9(1), 1-14. [doi:10.1186/s43093-023-00274-5](https://doi.org/10.1186/s43093-023-00274-5)
- [10] Destination image: A review from 2012 to 2023 (2023). *Cogent Social Sciences*, 9(1), 2240569. <https://doi.org/10.1080/23311886.2023.2240569>
- [11] Digital Stakeholder Engagement Trends 2024. BlackSun Global.
- [12] Domestic tourism destination image: Bibliometric analysis (2024). *Forum geografic*, XXIII(1), 86-98. [doi:10.5775/fg.2024.1.3621](https://doi.org/10.5775/fg.2024.1.3621)

- [13] Driving forces of social media and its impact on tourists' destination decisions: a uses and gratification theory (2024). *Cogent Social Sciences*, 10(1), 2318878. <https://doi.org/10.1080/23311886.2024.2318878>
- [14] Exploring tourists' pro-environmental behavior: a bibliometric analysis over two decades (1999–2023) (2024). *Journal of Tourism Futures*. doi:10.1108/JTF-02-2024-0033
- [15] Fuchs, K. (2023). A Systematic Guide for Conducting Thematic Analysis in Qualitative Tourism Research. *Journal of Environmental Management and Tourism*, 14(6), 2696-2703. doi:10.14505/jemt.v14.6(70).17
- [16] Impact of Destination Image Formation on Tourist Trust (2022). *Frontiers in Psychology*, 13, 845538.
- [17] Kim, H. and Chen, J.S. (2016). Destination image formation process: a holistic model. *Journal of Vacation Marketing*, 22(2), 154-166.
- [18] Liu, J., Wang, C., & Zhang, T. (2024). Exploring social media affordances in tourist destination image formation: A study on China's rural tourism destination. *Tourism Management*, 101, 104811. <https://doi.org/10.1016/j.tourman.2023.001255>
- [19] Lukose, S., et al. (2024). Exploring the Frontiers of Health Tourism: A Bibliometric Analysis of Research Themes and Trends. *PMC*, PMC11393725.
- [20] Luu, T. T. A. (2025). A Bibliometric Review of Digitalization in Tourism Supply Chains in the Context of Industry 4.0. *Strategic Change*, <https://doi.org/10.1002/jsc.2639>
- [21] Machine learning applied to tourism: A systematic review (2024). *WIREs Data Mining and Knowledge Discovery*, <https://doi.org/10.1002/widm.1549>
- [22] Mapping of Tourism E-Reputation: Characterization of a Decade and a Half of Literature (2024). *SpringerLink*
- [23] Naeem, M., et al. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, 22. doi:10.1177/16094069231205789
- [24] Nixon, L. (2024). Do deep learning models accurately measure visual destination image? A comparison of a fine-tuned model to past work. *Information Technology & Tourism*, 26, 147-179.
- [25] Núñez-Barriopedro, E., et al. (2024). Machine learning applied to tourism: A systematic review. *WIREs Data Mining and Knowledge Discovery*, <https://doi.org/10.1002/widm.1549>
- [26] Online Reputation Management for Hotels: A Complete Guide (2024). *TrustYou*.
- [27] Page, M. J., et al. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, 372, n71. doi:10.1136/bmj.n71
- [28] Paul, J., et al. (2024). Digital transformation: A multidisciplinary perspective and future research agenda. *International Journal of Consumer Studies*, 48(2), e13015.
- [29] Research on the perception of the terrain image of the tourism destination based on multimodal user-generated content data (2024). *PeerJ Computer Science*, 10, e1801. doi: 10.7717/peerj-cs.1801
- [30] Research trends of digital tourism: a bibliometric analysis (2023). *Tourism Critiques*, 6(1), 18-35. doi:10.1108/TRC-11-2022-0028
- [31] Social media and tourism geographies: mapping future research agenda (2024). *Tourism Geographies*, 25(2-3), 579-588. <https://doi.org/10.1080/14616688.2024.2304782>
- [32] Sustainable tourism progress: a 10-year bibliometric analysis (2024). *Cogent Social Sciences*, 10(1), 2299614. <https://doi.org/10.1080/23311886.2023.2299614>
- [33] Systematic Review of Social Media's Role in Destination Branding (2024). *Journal of Enterprise and Development (JED)*.
- [34] Tedja, B., et al. (2024). Systematic literature review using PRISMA: exploring the influence of service quality and perceived value on satisfaction and intention to continue relationship. *Future Business Journal*, 10, 39. doi:10.1186/s43093-024-00326-4
- [35] The critical success factors for tourism routes development: A systematic review (2025). *European Journal of Tourism Research*, 37. Elaborating on grounded theory in tourism research (2017). *Annals of Tourism Research*, 64, 49-60. doi:10.1016/j.annals.2017.02.003
- [36] Torres-Pruñonosa, J., et al. (2024). The intellectual structure of destination image research in tourism (2001–2023): Background, pre-pandemic overview, shifts during COVID-19 and implications for the future. *Journal of Vacation Marketing*, 30(1), 93-109. doi:10.1177/13567667231205065
- [37] Tourism supply chain management: a bibliometric analysis of data from Scopus and Web of Science (2001–2023) (2025). *Tourism Critiques*, 6(1), 18-35. <https://doi.org/10.1108/TRC-03-2024-0010>

- [38] Unveiling trends in digital tourism research: A bibliometric analysis of co-citation and co-word analysis (2023). *Tourism Management Perspectives*, 48, 101204. doi:10.1016/j.tmp.2023.101204
- [39] Van Eck, N. J. and Waltman, L. (2023). VOSviewer Manual: Manual for VOSviewer version 1.6.19. Retrieved from www.vosviewer.com
- [40] Vlassi, E., et al. (2024). Capturing Destination's Cognitive and Affective Image on Social Media. The Case of Pafos, Cyprus. *Springer Communications in Computer and Information Science*, pp. 23-35.
- [41] Wang, H. and Yan, J. (2022). Effects of social media tourism information quality on destination travel intention: Mediation effect of self-congruity and trust. *Frontiers in Psychology*, 13, 1049149. doi: 10.3389/fpsyg.2022.1049149
- [42] Wellbeing and Resilience in Tourism: A Systematic Literature Review During COVID-19 (2022). PubMed, PMID: 35069328.
- [43] Zhang, L., et al. (2024). Exploring the online destination image of an all-for-one tourism destination in China: a DMO perspective. *Cogent Social Sciences*, 10(1), 2447397.
- [44] Digital consumer behavior literature: 10. Madzík, P., Falát, L., Copuš, L. and Valeri, M. (2023). Digital transformation in tourism: bibliometric literature review based on machine learning approach. *European Journal of Innovation Management*, 26(7), 177-205. <https://doi.org/10.1108/EJIM-09-2022-0531>.