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TRACKING RESEARCH TRENDS IN CULTURAL TOURISM: A BIBLIOMETRIC ANALYSIS OF THE S-O-R FRAMEWORK

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ABSTRACT

This study presents a comprehensive bibliometric analysis of cultural tourism research employing the Stimulus–Organism–Response (S-O-R) framework from 2014 to 2024, using 456 Scopus-indexed publications. The analysis uncovers three dominant thematic clusters: innovation and cultural tourism management, sustainability and pro-environmental behavior, and psychological mechanisms shaping tourist experiences. Findings reveal that the S-O-R framework has expanded beyond environmental psychology into interdisciplinary applications, offering deeper insights into how cultural stimuli shape tourists' internal states and behavioral responses. Recent research demonstrates growing attention to sustainability, identity-based experiences, and digital transformation in tourism contexts. The study also identifies influential authors, journals, and co-citation networks, outlining the intellectual structure of the field. Overall, the results clarify how S-O-R processes drive tourist behavior and highlight future research opportunities in heritage experiences, identity formation, and experiential cultural tourism.

KEYWORDS: Cultural Identity, S-O-R Framework, Tourism Behaviour, Bibliometric Analysis, Cultural Space.

1. INTRODUCTION

In recent decades, cultural spaces have emerged as pivotal elements of the tourism experience, offering more than aesthetic or historical value (Jiang et al., 2024). These tangible and intangible spaces—architecture, rituals, customs, and symbols—serve as dynamic arenas where tourists encounter and interpret cultural meaning (Evans, 2024). Such engagements shape visitors' perceptions and contribute to cultural identity formation, influencing how destinations are remembered, revisited, and represented (Alvarez, 2010; Qiu et al., 2024). For example, Song et al. (2025) adopt a multidimensional perspective to examine visitor behaviour in cultural heritage contexts, showing how sensory, emotional, and cognitive evaluations shape tourist satisfaction in crowded environments such as Chinese classical gardens.

Tangible cultural elements represent the physical manifestations of culture—monuments, architecture, museums, and designed spaces—that serve as immediate visual cues shaping tourists' impressions (Ito, 2003). In contrast, intangible elements, including rituals, festivals, folklore, performing arts, and community practices, foster deeper emotional engagement and reflection (Lenzerini, 2011). Together, these dimensions provide a holistic foundation for cultural tourism, which extends beyond sightseeing to involve authentic interaction with heritage, traditions, and local communities.

The Stimulus–Organism–Response (S-O-R) framework offers a valuable theoretical framework to explain these dynamics. Originating in environmental psychology, the model conceptualizes how external stimuli (S) influence individuals' internal states (O), which in turn shape behavioural responses (R). Tourism research increasingly applies this framework to understand how heritage sites, cultural performances, and symbolic artifacts affect tourist cognition, emotions, and behaviour (Cheng et al., 2020; Lin et al., 2024).

Researchers have emphasized the broader relationship between tourism, space, and place-making (Crouch, 2013; Yamashita, 2025). Crouch (2013) highlights how tourists actively co-construct meaning through engagement with cultural settings, while Yamashita (2025) underscores the multidimensional character of cultural tourism that blends customs, traditions, arts, and everyday life. Together, these perspectives emphasize the need to understand cultural tourism as passive consumption of space and as active, meaning-making processes that contribute to identity formation.

Despite the growing number of tourism studies employing the S-O-R framework (Crouch, 2013; Song et al., 2025; Yamashita, 2025), a systematic synthesis of its applications in cultural tourism remains limited. For example, in cultural tourism research, sustainability emphasizes balancing tourism development with heritage preservation and community well-being (Li et al., 2021). Technological development plays an increasingly important role in shaping cultural tourism experiences (Fasone & Puglisi, 2024). Information management focuses on how cultural tourism data—ranging from visitor flows to online reviews—is collected, organized, and analyzed to support decision-making (Wang, 2024). However, despite their relevance, relatively few studies have systematically examined these dimensions within the S-O-R framework in cultural tourism. Therefore, we decided to use Bibliometric analysis to provide a methodological approach to address this gap by mapping the intellectual landscape, identifying influential authors and journals, and uncovering thematic clusters.

Thus, this study conducts a bibliometric review of the application of the S-O-R framework in cultural tourism, with particular attention to cultural spaces and identity. Specifically, it seeks to answer the following research questions:

1. What are the key trends in applying the S-O-R model within cultural tourism?
2. Who are the most influential authors, institutions, and journals contributing to this field?
3. What is the intellectual structure of the literature applying the S-O-R framework to tourism behaviour?

2. RESEARCH METHODS

We employed a Bibliometric analysis method to systematically evaluate academic literature applying the Stimulus-Organism-Response (S-O-R) framework within cultural spaces, identity, and tourism behaviour. Bibliometric analysis is a research method used to quantitatively study scientific publications to understand trends, patterns, and structures in a field of knowledge (Donthu et al., 2021). It combines statistics, information science, and visualization tools. This analytical method utilizes Bibliometric indicators, such as publication frequency, citation analysis, co-citation patterns, keyword co-occurrences, and network relationships, to identify research themes, detect emerging trends, and uncover scholarly influence. By employing Bibliometric analysis, we aimed to present a comprehensive overview of existing scholarship, delineate significant academic contributions, and

reveal research gaps and potential opportunities for future research developments within the study of cultural tourism and related fields.

2.1. Data Collection

We sourced our data from the Scopus database, which provides extensive coverage of high-quality academic journals (Ballew, 2009). While other databases such as Web of Science, Google Scholar, and PubMed also offer valuable resources, focusing solely on Scopus allowed us to maintain methodological consistency and ensure the comparability and reliability of Bibliometric data (Passas, 2024). Additionally, Scopus is renowned for its comprehensive and multidisciplinary journal coverage, making it highly suitable for systematically examining literature across diverse research areas related to our study objectives (Xu & Xia, 2025).

The search strategy involved using specific keywords related to our research focus, such as "Stimulus-Organism-Response," "cultural spaces," "cultural identity," "place dependence," and "tourism behaviour." Publications from the inception of the S-O-R framework in environmental psychology up to the present were considered. We included articles, reviews, and conference proceedings to capture a broad spectrum of scholarly work. Only publications in English language were included to maintain consistency in the analysis. Figure 1 shows the process of identifying the S-O-R model via Scopus.

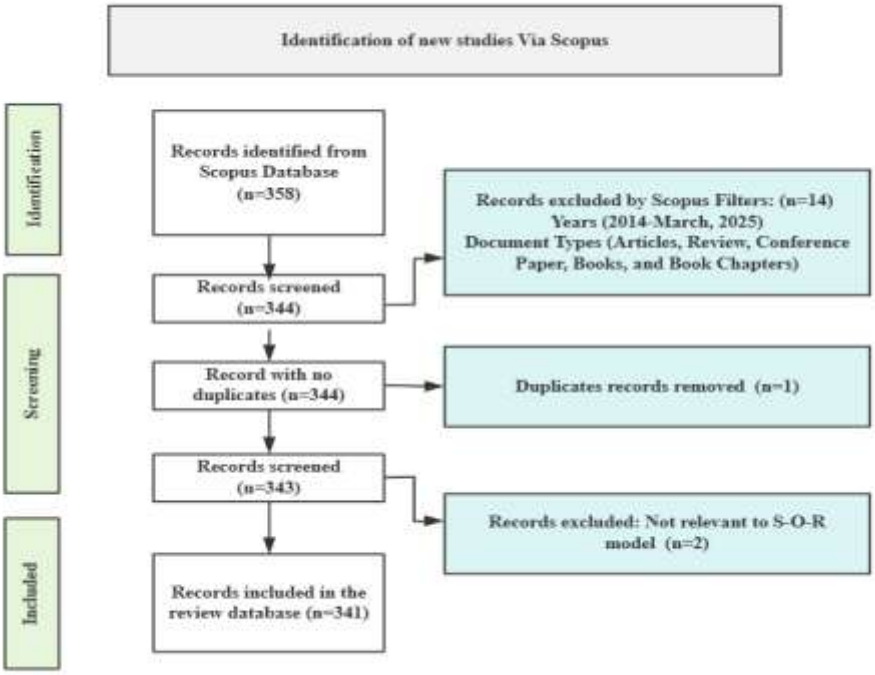

Figure 1: The PRISMA Diagram of the S-O-R Model Toward Tourism Customer Behaviour.

2.2. Data Analysis

The collected data underwent a Bibliometric analysis encompassing quantitative, qualitative, and structural indicators. Quantitative indicators measure publication productivity, qualitative indicators assess the impact and quality of the research, and structural indicators examine the relationships and collaborations within the research field (Donthu et al., 2021). Descriptive analysis involves assessing the annual publication trends, leading authors, contributing countries, and prominent journals in the field. Co-occurrence analysis analyzes the frequency and co-occurrence of author keywords to identify prevalent themes and emerging topics within the research domain. Co-citation analysis examines how often pairs of documents are cited together, and we identify influential works and intellectual structures shaping the field (Passas, 2024). We utilized the VOS viewer software to visualize the complex networks and patterns identified. This tool is adept at creating maps based on network data, allowing for the graphical representation of bibliometric relationships such as co-authorship networks, keyword co-occurrence, and citation linkages. The visualizations facilitated a clearer understanding of the structural and thematic developments within the research area.

3. DATA RESULTS

3.1. Research Objective 1 Key Research Themes and Trends

The Bibliometric dataset from Scopus comprised academic publications between 2014 and 2024 that applied the Stimulus-Organism-Response (S-O-R) framework within cultural space, identity, and tourism behaviour. Descriptive analysis revealed a steady increase in publication output over the past decade, indicating growing scholarly interest in applying psychological and environmental behaviour models to tourism studies, as shown in Figure 2.

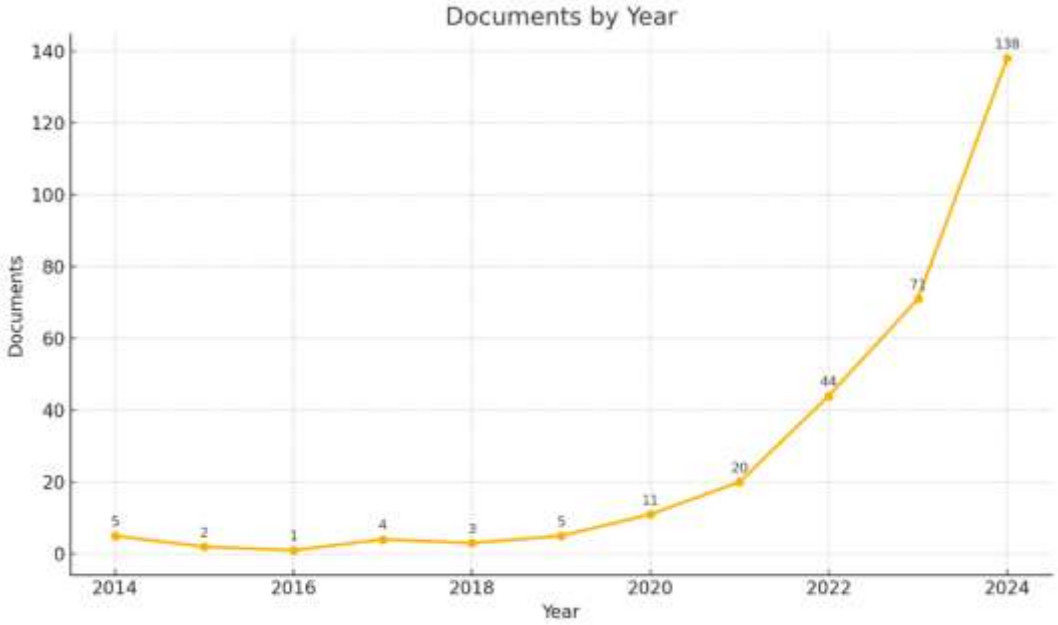

Figure 2: The Trends of S-O-R from 2014 to 2024.

The publication trend from 2014 to 2024 reveals a significant rise in academic interest in applying the Stimulus-Organism-Response (S-O-R) framework within tourism research. From 2014 to 2019, the number of publications remained relatively low, fluctuating between 1 and 5 documents per year, indicating a slow initial adoption of the model in tourism contexts. However, starting in 2020, the field began gaining momentum. Publications increased to 11 in 2020, followed by a steady rise to 20 in 2021 and 44 in 2022. This growth suggests a growing recognition of the S-O-R framework's relevance, particularly in the post-pandemic tourism landscape, where emotional and psychological responses have become central to understanding tourist behaviour. Besides, 2022 and 2023 saw the highest number of publications, reflecting a post-pandemic surge in research focused on cultural immersion and behavioural shifts in tourism. The trend sharply accelerated in 2023 with 77 documents and peaked in 2024 at 138 publications. This exponential growth reflects the framework's increased application in cultural identity, visitor experience, and behavioural Intention.

3.2. Research Objective 2: The Most Influential Cited Authors and Journals

Table 1: The Top Cited Journal Of S-O-R, 2014 To 2024.

Rank	Source	Documents	Citation
1	*Journal of Travel Research*	8	973
2	*Journal of Retailing and Consumer Services*	5	467
3	*Asia Pacific Journal of Tourism Research*	18	353
4	*Journal of Sustainable Tourism*	5	323
5	*Journal of Travel and Tourism Marketing*	9	314
6	*Journal of Hospitality and Tourism Technology*	5	308
7	*Journal of Hospitality and Tourism Management*	12	272
8	*International Journal of Contemporary Hospitality Management*	6	245
9	*Current Issues in Tourism*	16	233
10	*Journal of Hospitality and Tourism Insights*	16	204

11	*Journal of Destination Marketing and Management*	7	136
12	*Journal of Hospitality and Tourism Research*	5	122
13	*Frontiers in Psychology*	10	121
14	*International Journal of Tourism Research*	13	69
15	*Asia Pacific Journal of Marketing and Logistics*	6	41

The citation analysis reveals the most influential journals contributing to developing and disseminating S-O-R framework applications in tourism research in Table 1. The Journal of Travel Research leads the list, with 8 documents accumulating an impressive 973 citations, indicating its central role in advancing theoretical and empirical insights. It is followed by the *Journal of Retailing and Consumer Services* (467 citations) and the *Asia Pacific Journal of Tourism Research*, which, despite having more documents (18), garnered fewer citations (353), suggesting a broader but less concentrated impact.

Besides, journals focusing on tourism and hospitality, such as the *Journal of Sustainable Tourism, Journal of Travel and Tourism Marketing*, and J*ournal of Hospitality and Tourism Management,* dominate the rankings. This reflects the interdisciplinary integration of environmental psychology models into tourism, marketing, and management studies. Other prominent outlets include *Current Issues in Tourism, Frontiers in Psychology,* and *Journal of Destination Marketing and Management*, demonstrating the S-O-R model's application beyond conventional tourism literature, especially in *consumer psychology and behavioural studies.*

Table 2: Top Cited Authors Of S-O-R, 2014 To 2024.

Rank	Author	Areas	Focus	Number of documents	Scopus citations
1	Kim M.J.	South Korea	Virtual Reality Tourism	1	818
2	Fang J.	China	Virtual Reality Tourism	1	288
3	Hew J.-J.	Malaysia	Virtual Reality Tourism	1	255
4	Gao L.	China	Consumer Behaviour	1	223
5	Ali F.	United States	Consumer Behaviour	1	214
6	Su L.	China	Consumer Behaviour	1	207
7	Lin H.	China	Tourism Experience	1	184
8	Talwar S.	India	Virtual Reality Tourism	1	141
9	Chen X.	China	Tourism Experience	1	140
10	Do H.-N.	Taiwan	Consumer Behaviour	1	135
11	Cheah J.-H.	Malaysia	Consumer Behaviour	1	130
12	Abbasi A.Z.	Saudi Arabia	Tourism Experience	1	110
12	Su L.	China	Consumer Behaviour	1	110
14	Hsiao C.-H.	Taiwan	Consumer Behaviour	1	98
15	Chen G.	United States	Tourism Experience	1	95

The citation analysis of top-cited documents in the S-O-R framework research provides valuable insights into the foundational literature driving this field, as shown in Table 2.

Table 2 reveals that a select group of studies have significantly influenced scholarly discourse, with individual documents achieving high citation counts despite being represented by a single publication. For instance, documents authored by Kim, M.J., along with works by Fang, J., and Hew, J.-J., are among the most cited, highlighting their pivotal role in integrating the S-O-R framework with tourism behavior analysis.

These high-impact documents have laid the groundwork for subsequent research by addressing key elements such as environmental stimuli, psychological responses, and behavioral outcomes. Their high citation counts reflect the community's recognition of robust methodologies and insightful findings that bridge theoretical frameworks and empirical applications.

Besides, the diversity in author backgrounds underscores the interdisciplinary nature of this research, merging concepts from environmental psychology, consumer behavior, and tourism studies.

Overall, the analysis of top-cited documents confirms the S-O-R model's prominence and sustained relevance in understanding tourist experiences. This concentrated influence serves as a cornerstone for future studies aiming to expand upon and refine the applications of the S-O-R framework in cultural and tourism research.

3.3. Research Objective 3: Intellectual Structure On S-O-R Model

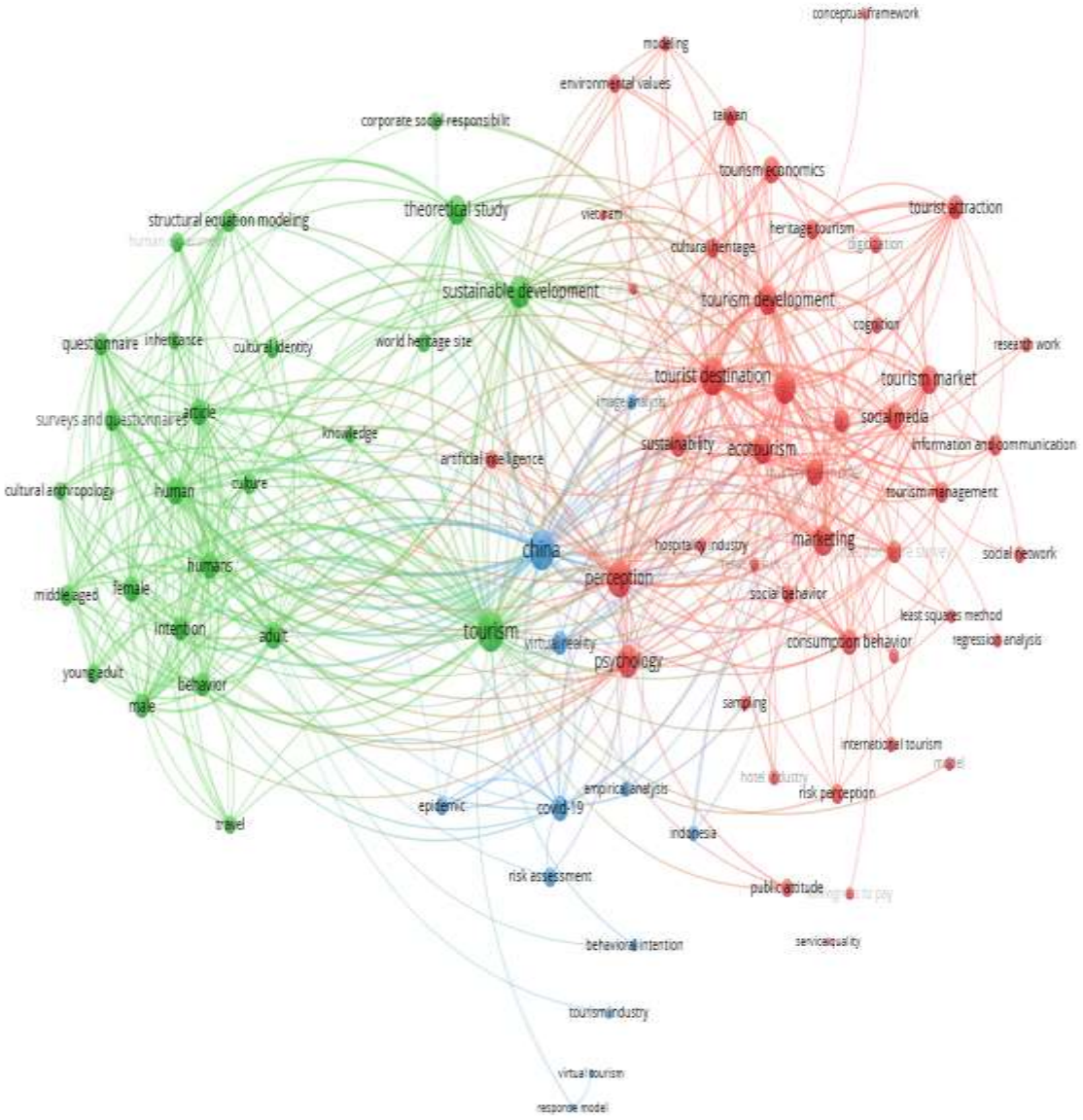

Figure 3: Keyword Co-Occurrence Network Map Of S-O-R Studies (2014–2024).

This map in Figure 3 visualizes the co-occurrence relationships among author keywords in cultural tourism research using the S-O-R framework, revealing major thematic clusters and the intellectual structure of the field. The network was generated using VOSviewer based on 456 Scopus-indexed publications.

The red cluster centers around tourism development, destination marketing, tourist behavior, and ecotourism. This group primarily focuses on applied aspects of the S-O-R model, linking consumer behavior, perception, and market dynamics in tourism settings.

The green cluster emphasizes human behavior, sustainability, theoretical studies, and structural equation modeling. This suggests focusing on methodological approaches and integrating behavioral science with the Sustainable Development Goals.

Though more minor, the blue cluster includes recent and emerging topics such as virtual tourism, COVID-19, empirical analysis, and risk perception, indicating a shift in research focus during the pandemic and increased interest in digital or

mediated tourism experiences.

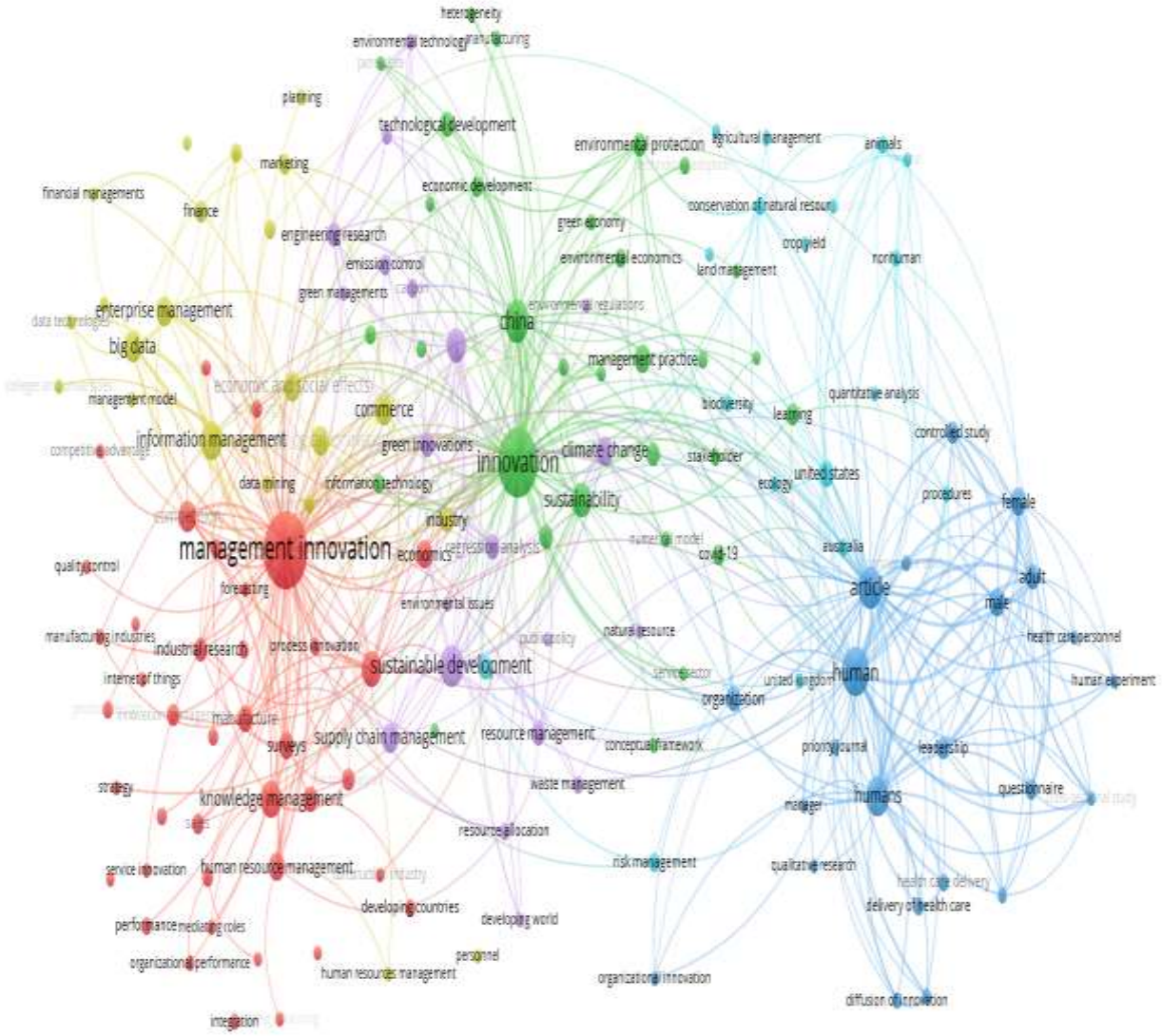

Figure 4: Index Keyword Network Map Of S-O-R Studies (2014–2024).

This Figure 4 displays the index keyword co-occurrence network derived from cultural tourism research employing the S-O-R framework. The map highlights the most frequently indexed terms and their thematic linkages, illustrating the broader conceptual landscape captured in Scopus-indexed publications. It presents a keyword co-occurrence network that maps the intellectual landscape of Stimulus-Organism-Response (S-O-R) framework research between 2014 and 2024. This visualization highlights clusters of thematically related keywords, indicating major research domains, trending topics, and interdisciplinary intersections. The figure was generated using VOSviewer, a powerful bibliometric visualization tool, and identifies several major clusters differentiated by color, representing distinct thematic areas.

The red cluster, centered around the term "*management innovation*", emerges as the most densely populated. This suggests that substantial studies of S-O-R literature are focused on innovation within enterprise management, knowledge management, human resource management, and information systems. Related terms such as "*big data*," "*enterprise management*," "*economic model*," and "*strategy*" indicate the application of S-O-R in studying organizational behavior, technological adoption, and innovation management. This cluster likely reflects studies on how organizational stimuli (e.g., digital

transformation, information systems) impact managerial cognition and innovation-driven behaviors.

The green cluster is dominated by the term "*sustainability*", with close links to "*climate change*," "*green economy*," "*environmental protection*," and "*natural resources*." This indicates that the S-O-R model has been increasingly applied in the context of environmental behavior, sustainable development, and ecological tourism. Keywords such as "*agricultural management*," "*land management*," and "*biodiversity*" suggest that scholars are using S-O-R to examine how environmental cues influence attitudes and behaviors toward conservation, resource use, and sustainable travel. The green cluster emphasizes the growing intersection of tourism studies with sustainability science.

The blue cluster is characterized by keywords such as "*humans*," "*article*," "*adult*," "*female*," "*male*," and "*questionnaire*." This represents a methodological cluster that includes studies on survey-based data collection, demographic segmentation, and psychological behavior modeling. The prominence of terms like "*qualitative research*," "*health care delivery*," and "*controlled study*" suggests that this group includes broader applications of the S-O-R model, especially in social sciences and health behavior research. The presence of "*leadership*," "*organization*," and "*manager*" also indicates the overlap with workplace and leadership studies.

The purple cluster, although smaller, is centered around "*technological development*," "*economic development*," and "*engineering research*." This reflects S-O-R's role in innovation systems and technological change, potentially in smart tourism or digital infrastructure contexts.

The yellow cluster connects terms like "*information management*," "*data mining*," "*financial management*," and "*economic effects*." This reflects the application of S-O-R in analyzing how data-driven environments influence managerial and consumer responses, especially in the digital economy and financial sectors.

Furthermore, the co-occurrence map reveals that S-O-R is a multidisciplinary framework widely applied in innovation management, sustainability, human behavior, and technological research. It bridges psychological processes with external stimuli in diverse contexts, from ecological tourism to digital enterprise systems. The diverse and interconnected keyword networks underscore the model's flexibility and expanding utility in contemporary behavioral and organizational research.

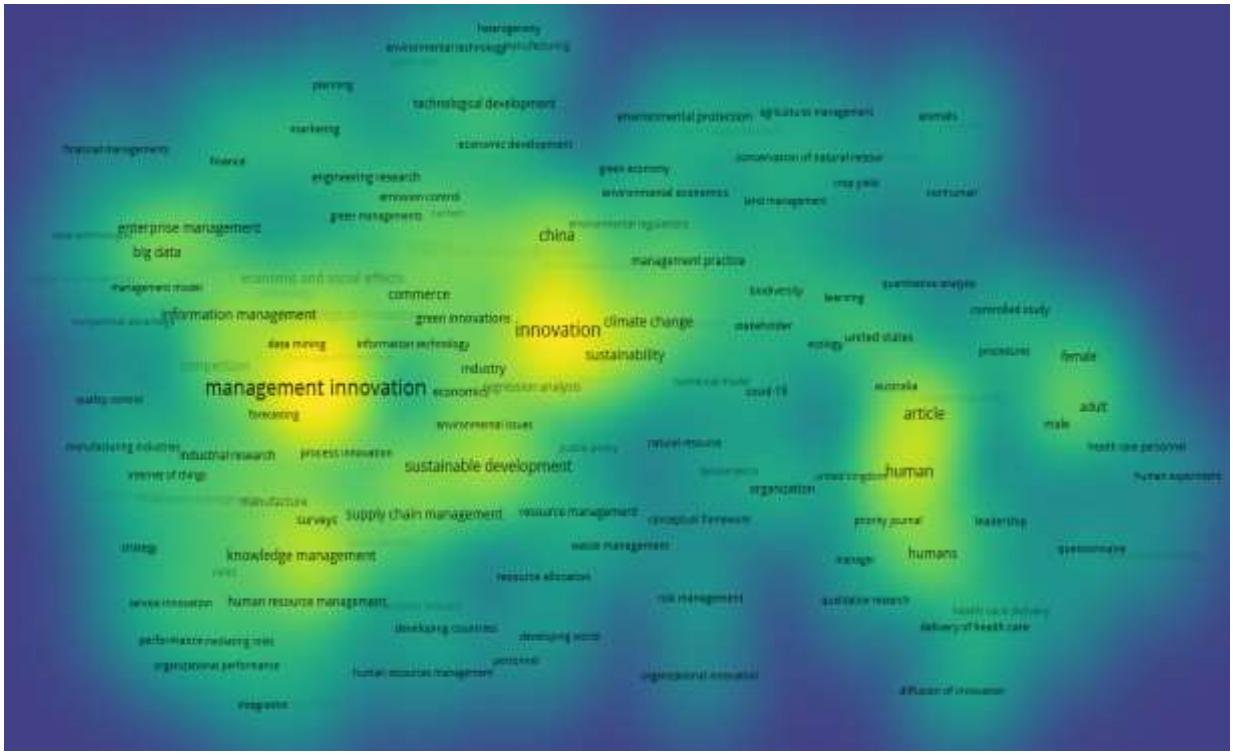

Figure 5. Density Visualization of S-O-R Studies (2014–2024).

This density map in Figure 5 illustrates the concentration and prominence of key terms within

cultural tourism research applying the S-O-R framework. Areas with higher density represent frequently occurring and strongly interconnected keywords, offering insights into major research hotspots during the study period. It illustrates the density visualization of keyword co-occurrences in S-O-R research from 2014 to 2024, highlighting areas of intensive scholarly focus. The color spectrum—from blue to green to yellow—indicates increasing frequency of keyword usage and stronger research density. Central to the visualization is the keyword "*management innovation*", appearing in bright yellow, suggesting it is the most frequently studied concept within the S-O-R literature. Closely associated terms like "*knowledge management*," "*information management*," "*supply chain management*," and "*big data*" suggest an organizational and technological orientation in many studies.

Another hotspot surrounds "*innovation*," "*sustainability*," and "*climate change*," reflecting growing academic interest in applying the S-O-R framework to sustainability and environmental behavior. Additionally, keywords like "*human*," "*article*," "*questionnaire*," and "*qualitative research*" on the right side of the map point to the methodological intensity of human-centered behavioral studies.

Less dense but emerging areas—displayed in green and blue—include "*agricultural management*," "*risk management*," and "*cultural framework*," indicating potential for further exploration. Overall, this visualization confirms that while management and sustainability dominate the current S-O-R discourse, significant scope exists to expand into underrepresented domains such as cultural tourism and symbolic identity.

4. DISCUSSIONS

4.1. Innovation and Management-Focused Applications Of S-O-R

The bibliometric analysis revealed that one of the most prominent and densely populated thematic areas in the S-O-R literature lies in innovation and management-focused applications. This domain is heavily represented by keywords such as "*management innovation*," "*knowledge management*," "*information systems*," "*strategy*," and "*enterprise development*," all of which form the central red cluster in the keyword co-occurrence map. These terms' high frequency and central positioning in both the co-occurrence and density visualizations suggest that researchers have increasingly employed the S-O-R framework to explore how various organizational stimuli influence internal cognitive and emotional responses that drive innovative behavior and strategic management decisions.

The prominence of this theme highlights the evolution of the S-O-R model beyond its original psychological and environmental contexts into organizational and managerial studies. In this realm, stimuli may include digital transformation initiatives, data-driven environments, or knowledge-sharing platforms, while the organismic processes involve managerial cognition, employee motivation, or leadership perception (Confente & Scarpi, 2021; Hew et al., 2018). The resulting responses regarding innovation performance, strategic agility, or organizational adaptability are typically observed. For instance, the growing interest in how big data and digital systems stimulate managerial decision-making and organizational change reflects a broader shift toward understanding innovation as a behavioral outcome mediated by internal processing mechanisms.

The intellectual structure of this thematic cluster also indicates a significant overlap with information management and human resource development. This is evident from the frequent pairing of terms such as "*knowledge sharing*," "*collaborative learning*," and "*performance management*" within the bibliometric network. These connections suggest that researchers increasingly leverage the S-O-R framework to analyze how knowledge and technology-related stimuli affect employees' cognitive engagement and behavioral output in innovation settings. Applying the model in this context enables a deeper understanding of the psychological mechanisms that underlie innovative behavior in individuals and organizations, particularly in response to evolving technological and managerial stimuli (Gao & Bai, 2014).

Moreover, the surge in publications after 2020 indicates an intensified interest in exploring innovation through the S-O-R lens in response to the global challenges posed by the COVID-19 pandemic. The pandemic served as a major disruptive stimulus, prompting rapid organizational adaptation, technological uptake, and reconfiguration of business models. Researchers applied the S-O-R model to investigate how sudden environmental shocks influenced managerial attitudes, employee resilience, and innovative responses across various sectors. This development marks a shift from static innovation models to more dynamic and responsive frameworks that emphasize psychological and emotional factors.

Overall, the growing literature on innovation and management within the S-O-R framework underscores the model's versatility and relevance in

organizational research. It demonstrates how environmental stimuli—from strategic reforms to technological interventions—affect managerial and employee-level responses through internal evaluative processes. This thematic cluster broadens the theoretical scope of the S-O-R model and provides valuable insights into how innovation can be better facilitated by understanding behavioral and cognitive dynamics in modern organizational settings. Future research could build on this foundation by incorporating longitudinal studies, exploring sector-specific applications, and integrating cross-cultural perspectives to validate further and expand the framework's utility in innovation and management science.

4.2. Sustainability and Environmental Behavior in Tourism

The bibliometric findings indicate that sustainability and environmental behavior have emerged as a significant thematic cluster in applying the Stimulus-Organism-Response (S-O-R) framework within tourism research. This area is prominently represented by the green cluster in the keyword co-occurrence and density visualizations, which includes high-frequency terms such as "*sustainability*," "*climate change*," "*green economy*," "*environmental protection*," "*natural resources*," and "*ecotourism*." The widespread use of these terms suggests that scholars are increasingly employing the S-O-R model to explore the psychological and emotional mechanisms that drive pro-environmental behaviors among tourists in response to ecological and socio-cultural stimuli.

This thematic cluster reflects a paradigm shift in tourism research, where the S-O-R framework is no longer limited to understanding basic tourist motivations or preferences. However, it is instead used to explain how environmental stimuli—such as natural landscapes, conservation messaging, or sustainable infrastructure—affect tourists' internal evaluations and subsequent behaviors. In this context, stimuli often take the form of environmental cues, such as the cleanliness of natural sites, visible signs of conservation efforts, or interpretive signage explaining ecological significance. These stimuli influence the organismic components of the S-O-R model, including tourists' emotional responses, environmental concern, cognitive awareness, and perceived responsibility (Chong et al., 2024; Zhang et al., 2024). The resulting responses are manifested as behavioral intentions or actions, such as waste reduction, compliance with conservation rules, support for sustainable tourism initiatives, or repeat visitation to eco-friendly destinations.

The emphasis on sustainability also indicates a growing alignment between tourism studies and global environmental objectives, including the United Nations Sustainable Development Goals (SDGs). Researchers using the S-O-R model contribute to this alignment by providing evidence-based insights into how sustainable tourism practices can be promoted through psychological engagement (Chi, 2022). This involves identifying the conditions under which tourists internalize sustainability values and translate them into meaningful behaviors. For instance, studies have shown that when tourists experience feelings of awe, guilt, or inspiration in response to environmental cues, they are more likely to engage in conservation-oriented behaviors and support local sustainability initiatives.

In addition, the bibliometric mapping highlights a strong methodological focus in this thematic area, with keywords such as "*structural equation modeling*," "*qualitative research*," and "*questionnaire*" appearing frequently. This suggests that scholars are not only exploring the sustainability conceptually but are also employing rigorous empirical techniques to validate the internal processes and behavioral outcomes hypothesized within the S-O-R model. Such methods allow for testing complex relationships between stimuli, organismic variables, and responses, offering a nuanced understanding of how sustainable behavior can be cultivated in various tourism contexts.

The growing prominence of this cluster also signals the potential for future research to delve deeper into underexplored dimensions of environmental behavior, including symbolic environmental stimuli, the role of digital technology in promoting sustainability, and cross-cultural differences in eco-tourism responses (Fang et al., 2017; Xia & Shannon, 2025). As the tourism industry faces increasing pressure to reduce its environmental footprint, the S-O-R framework provides a robust theoretical and analytical foundation for designing interventions that resonate emotionally and cognitively with tourists. By leveraging insights from this line of research, tourism stakeholders can create more effective strategies to encourage sustainable practices and foster environmentally responsible travel behaviors globally.

4.3. Human-Centered Research Methods and Psychological Analysis

Applying human-centered research methods and psychological analysis within the Stimulus-Organism-Response (S-O-R) framework has become

an increasingly important focus in tourism studies. As revealed in the bibliometric analysis, this thematic cluster is prominently represented in the keyword co-occurrence and density visualizations by terms such as "*humans*," "*article*," "*questionnaire*," "*adult*," "*male*," "*female*," "*qualitative research*," and "*psychological behavior*." The concentration of these terms highlights the S-O-R literature's strong methodological and conceptual orientation toward understanding human experiences, perceptions, and emotions in tourism contexts through qualitative and quantitative approaches.

This human-centered strand of research emphasizes the internal psychological states of tourists—emotions, attitudes, beliefs, and motivations—as key mediating variables between external stimuli and behavioral responses. Within this framework, the organismic component serves as the psychological core, transforming environmental cues into subjective interpretations that drive decision-making. The prominence of terms like "*qualitative research*" and "*questionnaire*" suggests that researchers have adopted diverse methodological tools, such as structured surveys, in-depth interviews, and psychometric testing, to capture the richness of these internal processes. Structural Equation Modeling (SEM), regression analysis, and thematic coding are often employed to examine how cognitive and affective factors mediate the relationship between tourism environments and behavioral outcomes such as satisfaction, loyalty, revisit intention, and sustainable behavior (Hasan et al., 2017).

The prevalence of demographic keywords (e.g., "*adult*," "*female*," "*male*") in this cluster further illustrates the attention paid to the segmentation of tourist populations in psychological analyses. Many studies investigate how different demographic groups respond to stimuli differently based on age, gender, cultural background, or past travel experience. This segmentation allows for a more nuanced understanding of tourist behavior and contributes to the development of tailored tourism strategies that consider the psychological diversity of travelers. For example, older adults may respond more strongly to cultural authenticity and heritage-related stimuli, while experiential and immersive digital environments might more influence younger tourists (Kim et al., 2020). Understanding such distinctions enables researchers and practitioners to design more personalized and emotionally resonant tourism experiences.

Furthermore, this cluster underscores the interdisciplinary integration of tourism research with psychology, behavioral science, and human geography. Concepts such as flow state, place attachment, identity formation, and emotional arousal have been widely applied to explain how tourists process stimuli in cultural, natural, and digital environments. This has led to a richer and more comprehensive interpretation of tourist behavior, going beyond observable actions to explore the underlying cognitive and emotional mechanisms. Moreover, studies on virtual reality tourism, sensory engagement, and tourist satisfaction rely heavily on psychological constructs to model internal states within the S-O-R framework (Beall et al., 2021).

In sum, the S-O-R model's human-centered and psychologically oriented applications have significantly enriched tourism research by deepening our understanding of how tourists interpret and respond to various stimuli. This thematic focus advances theoretical development and informs practical strategies for enhancing visitor experience, satisfaction, and behavioral outcomes. As tourism continues to evolve in response to social, technological, and environmental changes, integrating psychological analysis within the S-O-R framework will remain a vital approach for explaining and shaping human behavior in complex travel environments.

5. CONCLUSION

This study systematically examined the application of the Stimulus-Organism-Response (S-O-R) framework in cultural tourism, focusing on how cultural spaces affect tourists' psychological states and behavioural intentions. The study achieved its four core objectives through a bibliometric analysis of 456 Scopus-indexed publications from 2014 to 2024.

First, the study identified three key thematic trends in the literature: (1) cultural behaviour and destination marketing, (2) sustainability and methodological advancements, and (3) the emergence of digital experiences such as virtual tourism. These clusters indicate that research on S-O-R has evolved from basic behavioural models toward more nuanced understandings of identity, experience, and emotional engagement within tourism settings.

Second, the analysis highlighted the most influential contributors in this field. Journals like the *Journal of Travel Research* and the *Asia Pacific Journal of Tourism Research* emerged as central publication venues. Authors such as Kim M.J. and Fang J. were found to be significant thought leaders, particularly in extending S-O-R applications to virtual reality

tourism. This confirms the framework's adaptability across both physical and digital cultural spaces.

In conclusion, this study contributes to the advancement of identity-based tourism behaviour research by demonstrating the growing scholarly engagement with the S-O-R model.

6. FUTURE STUDY

Future research in cultural tourism can significantly benefit from the continued application of human-centered and psychologically grounded methodologies within the S-O-R framework. By emphasizing tourists' internal emotional and cognitive responses to cultural stimuli—such as historical architecture, traditional rituals, symbolic artifacts, and local narratives—this approach enables researchers to move beyond surface-level observations and uncover the deeper psychological mechanisms that drive engagement, identity formation, and revisit intention. Applying structured surveys, in-depth interviews, and psychometric tools can help capture how individuals interpret and internalize cultural meaning in diverse contexts. This is particularly useful in examining how different demographic groups or cultural backgrounds influence how tourists process symbolic and experiential stimuli in heritage-rich environments. Furthermore, integrating advanced analytical methods such as structural equation modeling or mediation analysis can offer robust insights into how cultural identity mediates the relationship between cultural experiences and behavioral outcomes. As cultural tourism continues to evolve alongside digital transformation and post-pandemic recovery, a human-centered psychological lens will be essential for designing immersive, meaningful, and sustainable tourism experiences that resonate with diverse tourist populations and foster long-term cultural appreciation.

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