The Synergy between Sustainable Tourism Practices and Social Media Engagement: An In-Depth Study

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Abstract
This study explores the interplay between consumer behaviour on social media platforms and sustainable tourism practices. Using a mixed-methods approach, it aims to investigate how sustainable activities shape visitors' engagement on digital platforms. By analysing scholarly articles from 2013 to 2023, the research seeks to identify key sources, notable authors, prevalent topics, and leading countries in social media research related to sustainable tourism practices. The study specifically strives to identify the primary sources, prominent authors, prevalent subjects, and leading countries that contribute to this research landscape. This research intends to provide valuable implications for stakeholders in the tourist industry, politicians, and researchers by offering nuanced insights into the complex relationship between sustainable practices and social media involvement in the realm of tourism. The investigation aims to reveal the dominant themes, influential authors, and leading countries in the field of sustainable tourism through content analysis, surveys, and interviews. Additionally, it seeks to understand the underlying motivations and perceptions that drive visitors' engagement with sustainable tourism content on digital platforms. Through this exploration, the study aims to provide nuanced insights into the dynamics of social media participation within the realm of sustainable tourism.

Keywords: Sustainable Tourism, Sustainable, Tourism, Social Media.
Subject Classification: 90B60, 90B06

1. Introduction

In recent years, there has been a growing focus on incorporating sustainable practices in the tourist industry to reduce environmental harm and promote responsible travel. Social media platforms have become a major influence in molding consumer behavior and affecting decision-making processes in numerous fields (Kumar, 2021). The overlap of these two phenomena in sustainable tourism offers a complicated and fertile area for investigation. emphasize the significant influence of social media on sharing travel information and communication, particularly in modern marketing techniques in the tourist industry (Gretzel & Yoo, 2013). (Lu & Nepal, 2009)highlights the growing significance of sustainability in tourism, mirroring wider societal trends towards eco-friendly behaviors. The exact connection between sustainable practices and social media engagement in sustainable tourism has not been thoroughly investigated.

This study aims to fill this gap by providing a thorough analysis of the complex relationship between consumer behavior on social media platforms and sustainable tourism practices (Gretzel U. , 2018). Previous research on the influence and functions of social media in tourism has mostly concentrated on particular areas, including word-of-mouth, travellers' hotel booking intentions, and perceptions of destination risks (S.W., R.E., & B., 2008). Tourists use various social media platforms to make travel decisions, such as selecting a destination or a hotel. It is important to carefully examine all aspects of a trip to understand how social media impacts decision-making in tourism (A & Pennington-Gray, 2014). This research aims to provide valuable insights into the intellectual landscape of this developing topic by using VOSviewer to analyze scholarly publications published from 2013 to 2023. This study aims to explore how sustainable practices, social media involvement, and sustainable tourism influence consumer behaviour and decision-making in the modern tourism industry.

2. Review of Literature

According to (Ardoin, Wheaton, Bowers, Hunt, & Durham, 2015) systematic review analyses 30 empirical research conducted between 1995 and 2013 regarding the impact of nature-based tourism on tourists' environmental attitudes and practices. Some studies indicate a rise in environmental knowledge among tourists, however results on attitudes and behaviours vary. According to (Butler, 2018) the extensive acceptance of "sustainable tourism," emphasizing its limitations and the adverse effects of unsuitable development in delicate regions. It promotes a critical approach that prioritizes destination resilience to safeguard against negative impacts of tourist development. According to (Hausmann, et al., 2018) The study contrasted tourists' inclinations towards biodiversity in Kruger National Park by utilizing both conventional surveys and social media information. No substantial disparity was discovered between preferences expressed in surveys and preferences deduced from social media material. Social media, especially Flickr, was found to be successful in tracking preferences for biodiversity and human activity in protected areas, providing a cost-effective alternative to conventional surveys. According to (He, He, & Xu2, 2018) The research suggests using a dynamic evolutionary game model to transform traditional tourist into green tourism. The study examines the most effective green incentive strategies including governments, tourism businesses, and tourists.

According to (Kumar, 2021) the viability of social media as a marketing tool in the tourism industry, with a specific focus on User Generated Content (UGC) and its influence on tourists' decision-making. The text examines how social media is

cost-effective, environmentally friendly, and promotes social participation by utilizing sustainability dimensions (environmental, economic, social) to assess its advantages. Social media is deemed a sustainable instrument in tourism marketing based on the study's findings. According to (Hysa & Karasek, 2022) Poland examines how travellers utilize social media to share their trip experiences. Research results indicate variations in behaviours related to trip planning, accessing accommodation information, and sharing impressions based on generation and gender. Women primarily utilize social media for acquiring accommodation details and exchanging travel experiences. Monitoring such conduct assists city administrators in efficient urban governance and marketing, vital for sustainable tourism revival amid the COVID-19 pandemic. According to (Gómez-Calvet, 2020) social media is vital for marketing products and services to consumers, as users actively share their consumption experiences. Social media serves as a valuable marketing tool and a venue for travellers to exchange experiences, benefiting sustainable tourism. Research in this particular field is still scarce.

According to (Tripathi, Maitra, Shukla, & Kumar, 2023) this study investigates the relationship between sustainable tourism elements, such as natural and artificial resources, renewable and non-renewable assets, and government participation. The study assesses how social media contributes to promoting Responsible/Sustainable Tourism in India, acknowledging technological improvements as crucial factors in reaching sustainability objectives for Vision 2030. According to (Kilipiri, Papaioannou, & Kotzaivazoglou, 2023) this study examines how Instagram travel influencers influence users' views on sustainable locations and the use of geo-location data in selecting destinations. Examining content from 10 influencers and 30 sustainable destinations reveals a favourable correlation between influencers and the selection of sustainable destinations. The study found that influencers using geo-location data do not have a substantial impact on tourists' intents to select sustainable places, questioning their effect in this aspect. According to (Sharma & Bhat, 2022) this study explores the correlation of community engagement, social and environmental innovation, and the advancement of sustainable tourism in Jammu and Kashmir.

According to (Bajrami, Radosavac, Cimbaljevi´c, & Syromiatnikova, 2020) The article analyses how rural communities in Serbia view sustainable tourist development, with a specific focus on economic, social, environmental, and physical advantages. Recognizing these variables highlights the importance of local communities in promoting sustainable tourism and economic development. (Gursoy & Dyer, 2009) The article analyses how rural communities in Serbia view sustainable tourism development, with a specific focus on its economic, social, environmental, and physical advantages. A study including 881 inhabitants revealed that perceived tourism values impact both the endorsement of sustainable tourism and the quality of life. Community attachment influences perspectives on tourism development. Recognizing these variables highlights the importance of local communities in promoting sustainable tourism and economic development. According to (Bruyn, Said, Meyer, & Soliman, 2023) this article analyses how rural communities in Serbia view sustainable tourist development, with a specific focus on economic, social, environmental, and physical advantages

3. Research Methodology

The paper applies several bibliometric tools to analyse and comprehend the connections, patterns, and shifts in the scholarly literature on consumer behaviour on social media platforms in the tourism industry. The primary methodologies employed encompass co-occurrence analysis, co-citation analysis, bibliographic coupling, co-authorship analysis, and citation analysis. These tools offer a thorough analysis of the academic setting, uncovering interrelated ideas, cooperative intellectual endeavours, significant publications, and the networks of scholars. Using bibliometric methods enables a methodical and evidence-driven investigation of the fundamental principles, trends, and connections in the topic of research. This offers valuable insights to politicians, industry specialists, and researchers. The study used VOS viewer, a well-established and user-friendly bibliometric visualization tool, to examine and present the scholarly literature on consumer behaviour on social media platforms in the tourism industry. VOS viewer allows researchers to create and investigate bibliometric networks, such as networks that show the co-occurrence of keywords, the co-citation of references, the bibliographic coupling of publications, and the co-authorship of researchers. The study utilizes the capabilities of VOS viewer to undertake thorough studies of the connections, patterns, and developments within the academic literature. This enables the discovery of important concepts, influential publications, collaborations among authors, and new research trends.

A theoretical Framework of the Problem explored in Tourism (PRISMA FRAMEWORK)

This study emphasizes a systematic research process that adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, ensuring a thorough approach. During the Identification phase, co-occurrence analysis was conducted with Vos Viewer to examine the association between various terms. A threshold of 4 occurrences was used during the analysis on a subset of 43 keywords chosen for detailed examination. The subset exhibited six interrelated themes. Furthermore, 17 references were identified by citation analysis, a bibliometric technique requiring a minimum of six citations per reference. The second procedure in the model, the screening process, entails a thorough examination of many topics linked to consumer behaviours, with a primary focus on the interrelated relationships between values, motives, attitudes, and behaviours. Various business psychology and social media studies were utilized, along with the idea of Forecasting Behaviour for psychological models. The third phase focuses on studying co-authorship networks and bibliographic mechanics.
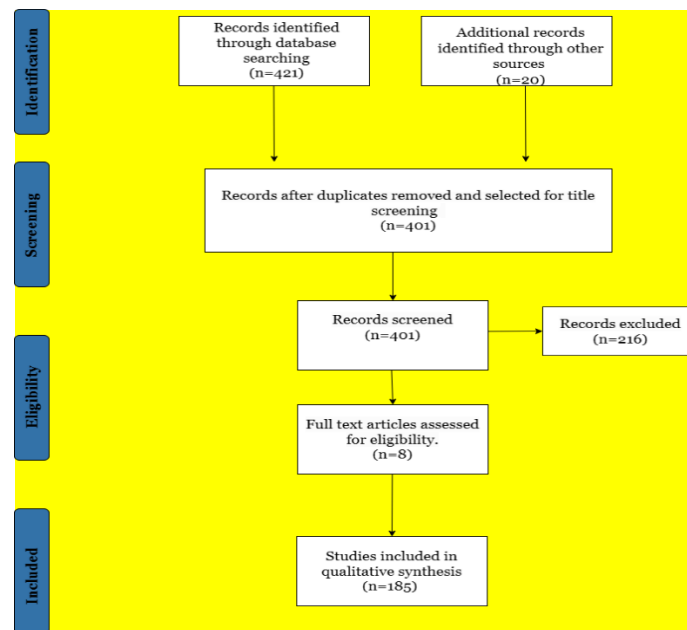
Fig. 1. Data Extraction Using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Approach.

4. Results And Discussions

4.1 Co-occurrence Analyses

Co-occurrence analysis is a technique applied in research literature to identify relationships between frequently associated keywords, thereby providing insights into underlying themes and topics. Through the analysis of keyword co-occurrence frequencies, researchers are able to recognize important and interlinked concepts, thereby gaining valuable knowledge regarding crucial themes, developing patterns, and complex interconnections. By applying a threshold of four occurrences, a subset of 43 keywords was selected for in-depth analysis out of a total of 827. This methodology offers significant perspectives on the field of research, serving as a roadmap for subsequent investigations and evaluations.
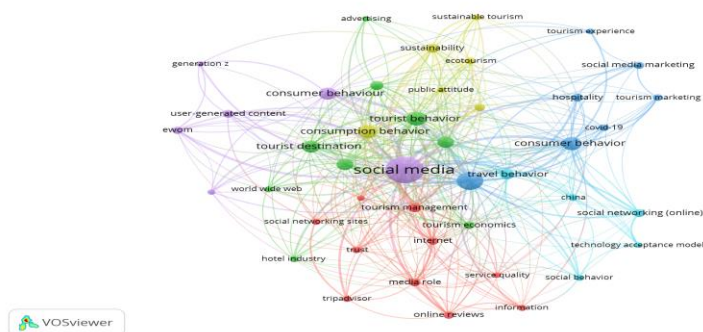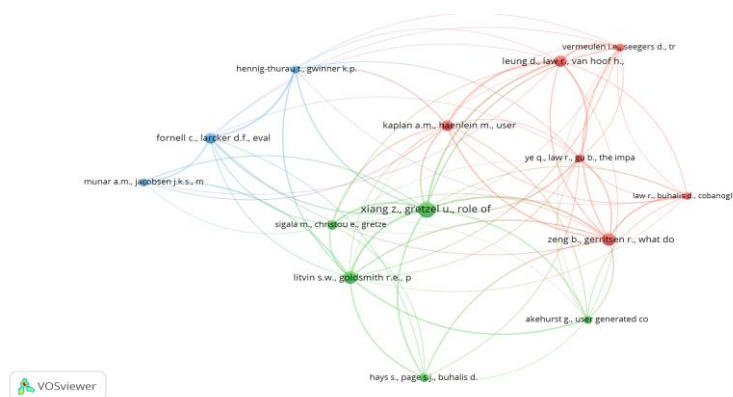

CLUSTERS	KEYWORDS (Occurrence)
PINK	Information (5)
	Internet (7)
	Media role (8)
	Online reviews (7)
	Service quality (4)
	Social network (4)
	Social networking sites (5)
	Tourism Management (11)
	TripAdvisor (5)
	Trust (6)
GREEN	Advertising (4)

	Hotel industry (5)
	Marketing (16)
	Tourism development (10)
	Tourism economics (7)
	Tourism market (16)
	Tourist behaviour (23)
	Tourist destination (18)
	World wide web (5)
DARK BLUE	Consumer behaviour (22)
	Covid -19 (6)
	Hospitality (11)
	Social media marketing (7)
	Tourism (39)
	Tourism experience (4)
	Tourism marketing (6)
YELLOW	Consumer behaviour (19)
	Eco tourism (11)
	Perception (7)
	Public attitude (4)
	Sustainability (11)
	Sustainable tourism (5)
PURPLE	Consumer behaviour (19)
	Decision making (4)
	Ewom (7)
	Generation Z (4)
	Social media (5)
	User generated content (5)
LIGHT BLUE	China (6)
	Social Behaviour (7)
	Social networking (online) (8)
	Technology acceptance model (4)
	Travel behaviour (12)

4.2 Co Citation Analyses

Co-citation analysis is a bibliometric method that examines the citation patterns among a collection of documents in order to identify relationships between the sources that are referenced. Two or more documents are considered to be co-cited according to that method if they both make reference to the identical third document. Through the implementation of a minimum criterion of six citations per cited reference, this research successfully identified 17 references out of 10648 that satisfied this requirement. This analysis facilitates the identification of intellectual connections between various works through the examination of their mutual citations. The discussions related to the domain of consumer behaviour in social media travel centerer on a multitude of interconnected themes, each providing a distinct vantage point on the multifaceted nature of engagement in online travel. Through the integration of perspectives from various academic disciplines, including marketing, psychology, and social media studies, a more comprehensive understanding of consumer behaviours regarding travel via social platforms can be achieved. In the domain of social media travel, psychological models such as the Theory of Forecasting Behaviour are crucial for deciphering the complex dynamics of consumer decision-making. These models offer conceptual frameworks that explicate the ways in which values, attitudes, social norms, and perceived control intersect to shape the intentions and actions of individuals in the realm of digital travel. By functioning as foundational principles, these models provide researchers, industry practitioners, and policymakers with invaluable insights that aid in comprehending and capitalizing on the influence of social media on travel decisions. The influence of values and ethics on consumer behaviour in social media travel is profound. Consumer choices are significantly influenced by the congruence of personal values with digital and travel-related sustainability, as ethical considerations function as guiding principles. The interaction between ethical viewpoints and individual values influences the formation of a more conscientious and accountable approach to travel decisions facilitated by social media platforms.
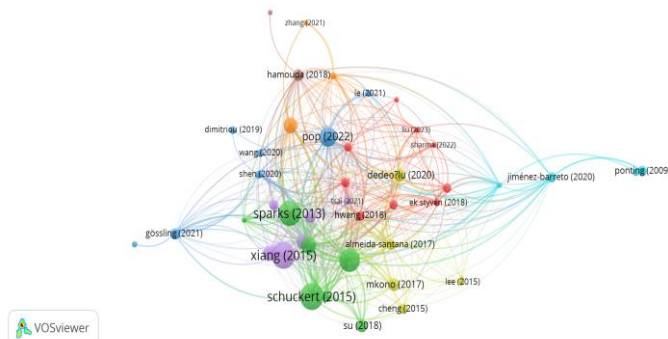
CLUSTERS	KEYWORDS (Occurrence)
PINK	kaplan a.m., haenlein m., users of the world, unite! the challenges and opportunities of social media, business horizons, 53, 1, pp. 59-68, (2010); (11)
	law r., buhalis d., cobanoglu c., progress on information and communication technologies in hospitality and tourism, international journal of contemporary hospitality management, 26, 5, pp. 727-750, (2014); (6)
	leung d., law r., van hoof h., buhalis d., social media in tourism and hospitality: a literature review, journal of travel & tourism marketing, 30, 1-2, pp. 3-22, (2013); (13)
	vermeulen i.e., seegers d., tried and tested: the impact of online hotel reviews on consumer consideration, tourism management, 30, 1, pp. 123-127, (2009) ;(7)
	ye q., law r., gu b., the impact of online user reviews on hotel room sales, international journal of hospitality management, 28, 1, pp. 180-182, (2009); (7)
	zeng b., gerritsen r., what do we know about social media in tourism? a review, tourism management perspectives, 10, pp. 27-36, (2014); (17)
GREEN	akehurst g., user generated content: the use of blogs for tourism organisations and tourism consumers, service business, 3, 1, pp. 51-61, (2009) ;(7)
	hays s., page s.j., buhalis d., social media as a destination marketing tool: its use by national tourism organisations, current issues in tourism, 16, 3, pp. 211-239, (2013) ;(8)
	litvin s.w., goldsmith r.e., pan b., electronic word-of-mouth in hospitality and tourism management, tourism management, 29, 3, pp. 458-468, (2008) ;(17)
	litvin s.w., goldsmith r.e., pan b., electronic word-of-mouth in hospitality and tourism management, tourism management, 29, 3, pp. 458-468, (2008) ;(17)
	xiang z., gretzel u., role of social media in online travel information search, tourism management, 31, 2, pp. 179-188, (2010) ;(26)
LIGHT BLUE	fornell c., larcker d.f., evaluating structural equation models with unobservable variables and measurement error, journal of marketing research, 18, 1, pp. 39-50, (1981) ;(12)
	hennig-thurau t., gwinner k.p., walsh g., gremler d.d., electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet? journal of interactive marketing, 18, 1, pp. 38-52, (2004) ;(7)
	munar a.m., jacobsen j.k.s., motivations for sharing tourism experiences through social media, tourism management, 43, pp. 46-54, (2014) ;(7)

4.3 Bibliographic Coupling

The concept of "Bibliographic coupling" refers to the arrangement and interconnections that exist among theories, concepts, concepts, and research within a particular discipline. Within the framework of discussions surrounding tourism consumer behavioural, the term "interconnection" alludes to the interrelationships and contributions of diverse components—including theories, authors, concepts, and research outcomes—to an in-depth comprehension of the subject. By analysing the references frequently referenced in multiple documents, this methodology uncovers complex networks of intellectual collaboration and influence within a particular academic domain. Bibliographic coupling is predicated on the notion that a significant number of references that are shared between two documents indicate a thematic or research-oriented

connection. Within the confines of this research investigation, a minimum criterion of nineteen citations per document was implemented, resulting in the examination of forty eight of the 182 documents. A total of nineteen were discovered to be interconnected, underscoring the interdependent character of scholarly contributions in the domain of tourism behaviour.

CLUSTERS	KEYWORDS (Occurrence)
PINK	ben-shaul (2018) (50)
	ek styvén (2018) (33)
	hwang (2018) (58)
	joo (2020) (56)
	kitsios (2022) (44)
	liu (2023) (22)
	seyfi (2023) (20)
	sharma (2022) (19)
	so (2018) (57)
GREEN	atwood (2015) (22)
	fernandes (2018) (54)
	schuckert (2015) (413)
	sotiriadis (2017) (168)
	sparks (2013) (372)
	sparks (2016) (322)
	su (2018) (93)
LIGHT BLUE	dimitriou (2019) (38)
	gössling (2021) (74)
	le (2021) (28)
	pantano (2019) (24)
	pop (2022) (221)
	shen (2020) (37)
	wang (2020) (40)
YELLOW	almeida-santana (2017) (59)
	cheng (2015) (63)
	dedeo?lu (2020) (97)
	jamal (2019) (21)
	lee (2015) (25)
	mkono (2017) (91)
PURPLE	di pietro (2012) (137)
	gretzel (2008) (87)
	tsai (2021) (22)
	varkaris (2017) (120)
	xiang (2015) (420)
	öz (2015) (62)
LIGHT BLUE	amuquandoh (2013) (41)
	chen (2021) (20)

	corvo (2011) (35)
	jiménez-barreto (2020) (59)
	ponting (2009) (61)
ORANGE	dolan (2019) (139)
	latif (2020) (28)
	zhang (2021) (22)
MAJENTA	fall (2000) (22)
	hamouda (2018) (86)

5. Conclusion

The comprehensive review thoroughly examines how consumer behaviour in the social media tourist sector is a complex and autonomous setting. Constraints related to sustainability, information technology disruption, and the influence of influencers significantly impact the tourism experience through digital platforms. The significance of multidimensional search efforts lies in fostering collaboration in academia and impacting the dynamic character of consumer behaviour, particularly focusing on social media-driven tourism. The collaboration of co-occurrence, co-citation, bibliographic coupling, co-authorship, and citation analyses offers a thorough representation of the intellectual structure of the area. The analyses discussed provide important information on key themes, notable authors, and collaborative networks. This information is valuable for policymakers, practitioners, and researchers seeking to understand social media consumer behaviour in the tourism industry.

The findings show the ongoing development of research trends in the behaviour of consumers on social media within the tourist literature. The highlighted clusters, significant works, and influential writers exemplify the multidimensional nature of this discipline. The relationship between technology, sustainability, and influencers suggests a significant change in how people engage in and shape tourism experiences through digital platforms. This significant volume of data contributes to the ongoing conversation about using social media to advance sustainable and enhanced tourism practices.

6. Limitation

• Focus mostly on behavioural intention- This study primarily focuses on examining the impact of social media on behavioural intentions rather than actual behaviour. This limitation may hinder a comprehensive understanding of how social media influences tourists' opinions and decisions.

• Specific aspect orientation- Prior study has primarily concentrated on specific aspects such as "word-of-mouth, hotel-booking intentions, and destination risk perceptions." This narrow focus may hinder a comprehensive understanding of social media's intricate role throughout various stages of a traveller's journey.

• Limited exploration of travel element- While tourists are known to use various social media platforms to make travel decisions, there is a lack of empirical research that thoroughly explores the influence of social media on all significant aspects of a trip.

• Overemphasize on internet platform- The study mainly focuses on the impact of social media on online distribution and dissemination, with little consideration given to potential offline recognition.

• Limited cultural disparity- This study did not definitively explore potential cultural differences in the impact and functions of social media in influencing decisions related to tourism. Cultural differences can significantly impact how individual travellers are influenced and engaged by social media

7. Future Scope

• Longitudinal Study- Consider adopting longitudinal research to examine changes in social media usage patterns and the impact on customer behaviour over an extended time.

• Offline influence- Previous study only laid emphasis only on the online impact of social media, thus there is lot of potential value in investigating the offline influence. Investigate how social media discussions and material affect travellers' choices beyond the digital realm and analyse their potential to shape face-to-face engagements.

• Incorporation of big data analytics- Utilizing big data analytics is recommended for extracting pertinent information from the vast amount of accessible social media data. Utilizing advanced analytics to analyse trends, attitudes, and interactions can provide a deeper understanding of how social media impacts customer behaviour in the tourism sector.

8. Implications

• Policy Implications: The study emphasizes the intricate and independent character of consumer behaviour in the social media tourism industry, specifically drawing attention to the limitations associated with sustainability, disruption caused by information technology, and the impact of influencers.

• Practical Implications for Industry Practitioners: Industry practitioners can gain advantages from the multifaceted search endeavours and cooperation encouraged in academia. An in-depth comprehension of the ever-changing nature of

consumer behaviour on social media platforms can provide valuable insights for marketing strategies, product development, and customer engagement activities in the tourist business.

- Future study Directions: The continuous advancement of study trends in consumer behavior on social media in the field of tourism literature indicates potential areas for future studies. Researchers can further explore the correlation between technology, sustainability, and influencers to provide suggestions for improving tourism experiences via digital platforms, while also encouraging sustainability and responsible tourism practices.

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