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Editorial

Anestis Fotiadis, Associate Editor
Zayed University, United Arab Emirates

JEL Classification: *L83, M1, O1*

Biographical note: Anestis Fotiadis is professor of tourism, at the College, of Communication & Media Sciences, at Zayed University, in the United Arab Emirates (anestis.fotiadis@zu.ac.ae).

1 INTRODUCTION

I am pleased to present the sixteenth publication of JTHSM (volume 8, issue 2), the last issue in its eighth year of publication. This issue focus on furthering the journal's scope and consolidating its position in both conceptual developments and practical applications in tourism, heritage, and services through publication of six quality manuscripts: five full papers that underwent rigorous double-blind reviewing, and a book review.

2 PRESENTATION OF THE LAST ISSUE FOR 2022

The present issue of JTHSM contains five full papers written by fourteen authors located in six different countries and affiliated with nine different universities.

The first full paper is written by Garyfallos Fragidis and Iordanis Kotzaivazoglou, both from International Hellenic University in Greece. The paper suggests goal modelling as a method for the strategic analysis in tourism destinations. Destination management is quite complex and challenging and requires deep understanding of the intentions, the roles and the strategies of the various stakeholders. This paper identifies the challenges and major issues of destination management, evaluates the capacity of goal modelling to address them and demonstrates the use of goal modelling for stakeholder and strategic analysis. The paper provides a holistic, multi-level modelling approach that begins with stakeholder analysis, continues with the analysis of strategic dependencies between stakeholders and ends with the analysis of the strategic alignment of the Destination Management Systems. Goal modelling is used for the analysis of the roles and functions of stakeholders, the analysis of the interdependencies between stakeholders in terms of goals, tasks and resources, the selection between alternative business configurations, and the business model and strategic analysis. Three important issues of destination management are addressed: stakeholder analysis, strategic dependency analysis, and strategic alignment of information systems. The formalism of goal modelling can provide rigor and visualization in the analysis of the complex relationships in destination management.

Pet-friendly tourism has stood out as a very recognized and valid tourism and marketing segment, growing worldwide, urging the complex needed advances on tourism practices performance. The aim of the second paper, written by Helena Margarida Alves and Bruno Sousa from Polytechnic Institute of Cávado and Ave in Portugal, Aida Carvalho from Instituto Politécnico dea Bragança, Vasco Santos from ISLA Santarém, Álvaro Lopes Dias from Universidade Lusófona and Marco Valeri from Niccolò Cusano University in Italy is to study the factors that influence consumer behaviour through brand attachment, in the pet-friendly segment in Portugal. The application of a model to a group of 190 respondents carried out in order to analyse the relationships between brand attachment, trust, satisfaction, commitment, loyalty and quality of service. To test our measurement model, data was analysed using the SmartPLS 3.2. Results reveal that quality of the service, satisfaction, trust and commitment had a strong relationship with the loyalty of the respondents. As for the brand attachment, the variables that showed the most influence were satisfaction, trust and commitment. The research still needs to be empirically applied in pet-friendly tourism settings to enrich their robustness in a cross-cultural tourism experiences, covering a wider spread of abroad tourism destinations and products. This study thus contributes to a better clarity at the theoretical level of brand attachment and consumer behaviour, as well as making it possible to understand from the consumers' side, which characteristics are part of their decision-making process, granting relevant data that can cooperate in the definition of better marketing strategies.

In the third full paper, Subhankar Das, Subhra Mondal and Vikram Puri (all from Duy Tan University in Vietnam), and Vasiliki Vrana from International Hellenic University in Greece, aim to to find trends of research in relic tourism-related topics. Specifically, this paper uncovers all published studies having latent issues with the keywords "relic tourism" from the Web of Science database. A total of 109 published articles (2002-2021) were collected related to "relic tourism." Machine learning tools were applied. Network analysis was used to highlight top researchers in this field, their citations, keyword clusters, and collaborative networks. Text analysis and Bidirectional Encoder Representation from Transformer (BERT) of artificial intelligence model were used to predict text or keyword-based topic reference in machine learning.

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All the papers are published basically on three primary keywords such as “relics,” “culture,” and “heritage.” Secondary keywords like “protection” and “development” also attract researchers to research this topic. The co-author network is highly significant for diverse authors, and geographically researchers from five countries are collaborating more on this topic. Academically, future research can be predicated with dense keywords. Journals can bring more special issues related to the topic as relic tourism still has some unexplored areas.

The fourth full paper is written by Shekhar Asthana from University of Delhi in India. Small and Medium Enterprises (SMEs) have been grabbing the attention of tourism and hospitality academicians. However, the fragmented and scattered research makes it difficult for upcoming researchers to identify the major thematic areas. Thus, this study maps the evolution of SME research in tourism and hospitality. The study adopts a bibliometric protocol to carry out the desired analysis. The literature is retrieved from the Scopus database using the desired search string and analysis is conducted on 385 documents. The study uses VOSviewer, the Science of Science tool, Gephi, and Inkscape to carry out the bibliometric and network analysis. The results from network analysis helps in the identification of five major thematic areas such as strengthening SMEs' performance, transformational leadership, building SME resilience, entrepreneurship and sustainability, and building competitiveness in SMEs. The dynamic co-citation analysis helps in identifying the evolution of these themes. The content analysis of the literature provides future research direction and the need for methodological advancement in SMEs' performance and growth. The study offers implications for future researchers by summarising the literature, identifying the gaps and suggesting future directions of the research. The study limits itself to data retrieval from a single database.

The fifth paper comes from an author based at Ho Chi Minh City University of Technology in Vietnam, Trong Tien Bao Bui. This study aims to evaluate and validate travel intention through the extended theory of planned behaviour (TPB) and overall image of the destination, e-WOM, that travel intention linked to actual tourist behavior. A sample of 389 domestic tourists was empirically exaimined, and analysed by using the partial least squares structural equation modelling (PLS-SEM) technique in order to demonstrate that the new conceptual model has a power to an insight understanding of tourist behaviour. The major findings of the study identified that the influence of e-WOM on the original TPB and overall destination image constructs was statistically confirmed. In addition, destination image is as mediating variable linking between e-WOM and travel intention, which in turns lead to increasing actual tourist behavior. The major findings of this study are useful for local authority in enhancing positive image of the destination and particularly e-WOM to increase travel intention and lead to better predicting tourist behaviour. This study further provides some theoretical and managerial implications to comprehensive understand travel intention.

Hugues Séraphin from University of Winchester Business School, UK, through a book review, conclude that the content of the book, the writing style, the illustrations (pictures), the activities, the resources provided in the appendix section, and the stories shared by the authors make this book highly appropriate for practitioners, couples, academics, and students alike. In short, The *Practical Guide to Wedding Planning* represents an important source for readers seeking to deepen their understanding of the role, importance, and relevance of wedding planners. Having said that, with an academic aspect (even if limited), this guide would have been even more appealing to academics/researchers and students.

Based on the above, I trust that you will enjoy reading this new issue of JTHSM, the third one indexed in Scopus!

Anestis Fotiadis
Zayed University
Associate Editor

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Goal modelling for strategic dependency analysis in destination management

Garyfallos Fragidis
International Hellenic University, Greece

Iordanis Kotzaivazoglou
International Hellenic University, Greece

Abstract:

Purpose: *The paper suggests goal modelling as a method for the strategic analysis in tourism destinations. Destination management is quite complex and challenging and requires deep understanding of the intentions, the roles and the strategies of the various stakeholders.*
Methods: *This paper identifies the challenges and major issues of destination management, evaluates the capacity of goal modelling to address them and demonstrates the use of goal modelling for stakeholder and strategic analysis.*
Results: *The paper provides a holistic, multi-level modelling approach that begins with stakeholder analysis, continues with the analysis of strategic dependencies between stakeholders and ends with the analysis of the strategic alignment of the Destination Management Systems. Goal modelling is used for the analysis of the roles and functions of stakeholders, the analysis of the interdependencies between stakeholders in terms of goals, tasks and resources, the selection between alternative business configurations, and the business model and strategic analysis.*
Implications: *Three important issues of destination management are addressed: stakeholder analysis, strategic dependency analysis, and strategic alignment of information systems. The formalism of goal modelling can provide rigor and visualization in the analysis of the complex relationships in destination management.*

Keywords: *Destination management, destination management systems, goal model, strategic dependencies, stakeholder analysis, strategic alignment.*

JEL Classification: *L1, L8, M1*

Biographical note: Garyfallos Fragidis (gary.fragidis@ihu.gr) is an Assistant Professor in the field of analysis and design of service systems in the Department of Business Administration of the International Hellenic University, Greece. He holds a PhD in Information Systems from the University of Geneva. He is a member of the IFIP TC5 Working Group 5.5, Cooperation Infrastructures for Virtual Enterprises and Electronic Business. Iordanis Kotzaivazoglou (ikotza@ihu.gr) is an Associate Professor in Communication and Public Relations in the Department of Business Administration of the International Hellenic University, Greece. He collaborates as tutor and consultant with many public and private organizations in Greece. His research interest focuses on communication, public relations and political marketing.

1 INTRODUCTION

Tourism is a cross-road business domain of several sectors and activities that are organized at the level of destination (Fyall and Garrod, 2020). Destinations are characterized by the geographical proximity of the tourist service providers and their collaboration and sharing of resources in order to deliver valuable tourist experiences (Fyall et al., 2012; Bornhorst et al., 2010). Destination success requires the collaboration of tourist service providers, who pursue the accomplishment of both individual and common goals (Laesser and Beritelli, 2013). Competition takes place firstly at the level of destination, aiming at persuading tourists to visit the destination, while the competition between the tourist service providers takes place at a next stage.

Destination management refers to the structures and procedures required for the integration of the various resources of the tourist service providers for the configuration of destination-level tourist services and the coordination of the activities of stakeholders and service providers for the development of a common or at least a coherent image and experience for tourists (Fyall and Garrod, 2020; Pearce and Schänzel, 2013; Haugland et al., 2011). Destination management is extremely challenging, not only because of the great number of tourist service providers and other

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stakeholders, the diversity of tourist services and activities and the fragmented nature of service provision, but additionally because tourist service providers must collaborate and coordinate their actions for the achievement of both common (i.e. attract tourists in the destination) and individual goals (i.e. be chosen over competitors in the destination). Successful destination management requires effective information systems that are aligned with the strategic priorities of the destination, support the requirements of destination management and respect the roles and the goals of the stakeholders. Destination Management Systems (DMSs) integrate and provide information about resources and services, support the collaboration and coordination of actions among the destination partners, promote the destination to potential tourists and enable tourists purchase tourist services (Estevao, 2014; Sigala, 2013).

These challenges of destination management that derive from the irregular mix of collaboration, coordination and competition implies that a variety of dependencies exists in the strategies, the operations and the resources of the tourist service providers. This situation makes destination management a complex and challenging issue that is governed by a variety of forces and requires the deep understanding of the motivations, the intentions and the behaviors the various stakeholders (Fyall and Garrod, 2020). This paper seeks to address these challenges of destination management for the analysis of the forces that govern collaboration, coordination and competition at destinations by focusing on the analysis of the interdependencies between stakeholders. In particular, the paper seeks to examine the role of stakeholders in destination management in relationship to other stakeholders, the collaborative and competitive behaviour of stakeholders for the achievement of common and individual goals and the interdependencies among stakeholders in their goals and in the coordination of their activities. The paper also seeks to support the strategic alignment of the key decisions of destination management with the development of DMSs and other 'smart' information systems that support destination management and coordinate and promote the operations of the stakeholders.

For this we employ goal modelling, a requirement engineering approach that uses goals as the key concept for the elicitation, analysis and modelling of the intentional behavior of stakeholders (Yu, 1997). Goal modelling helps analyze the complex relationships between stakeholders and reveals the various interdependencies, the potential conflicts in their intentions and behavior and the requirements for collaboration for the accomplishment of common or individual goals (Yu, 2001). This way, goal modelling illustrates the collaboration and the contributions that can be necessary for the fulfilment of the goals and supports the exploration of solutions and the experimentation with alternatives. Goal modelling can be used beyond software engineering, for business modelling and strategic analysis in multi-stakeholder business environments and for the strategic alignment of information systems (Goncalves et al., 2018). In the recent years the interest for goal modelling has been increased significantly (Horkoff et al., 2019; Gonçalves et al., 2018), because the ultimate criterion for system success is their capacity to meet the goals and address the concerns of the users and other stakeholders.

The paper demonstrates the use of goal modelling for stakeholder and strategic analysis in destinations and for the analysis of the strategic alignment of DMSs and other information systems. Stakeholder and strategic analysis has business orientation, refers to the business requirements for the improvement and the successful implementation of destination management and supports the better understanding of the intentions, the roles, the strategies, the behavior and the interdependencies among the stakeholders in tourist destinations. In particular, the paper demonstrates the use of goal modelling for the strategic dependency analysis of stakeholders, the analysis of their roles and functions, business model analysis, the analysis of alternative business configurations, and collaboration analysis. The analysis and design of DMSs has a system orientation and supports the better understanding of the requirements and the operations of DMSs as multistakeholder and collaborative systems and the strategic alignment of destination management and DMSs.

2 DESTINATION MANAGEMENT: CHALLENGES AND KEY ISSUES

Destination management is usually performed by Destination Management Organizations (DMOs) that have strategic, marketing and coordinating responsibilities (Bornhorst et al., 2010). Their tasks include the development of the strategic development plan for the destination that designates and arranges the tourism activities and attractions in the destination, the development of the communication and promotion plan that builds the common image of the destination, and the development of sales systems that support selling tourist services in an integrated and coherent way (Estevao et al., 2020; Almeyda-Ibanez and George, 2017; Laesser and Beritelli, 2013). DMOs have a decisive role in the development of collaboration among the tourist service providers, the coordination of their activities and the management of stakeholder relationships (Estevao et al., 2014).

Destinations require effective information systems in order to fulfil their objectives. DMSs are the main type of information systems that support destinations management (Bedard et al., 2008). A DMS is an inter-organisational information platform that supports the operation of DMOs and addresses the needs of both tourists and tourist service providers (Sigala, 2013). In particular, a DMS supports a DMO to perform the day-to-day operations more efficiently and effectively by integrating all information about resources, products and services of the destination in one place and concentrating customer inquiries and demand for the destination (Le et al., 2021). In addition, they foster coordination of actions and collaboration amongst the numerous destination partners and stakeholders (Sigala, 2013; Estevao et al., 2022). In the era of smart tourism and with tourists becoming more knowledgeable and demanding, DMSs have become fundamental for the improvement of the competitiveness of the destinations (Fyall and Garrod, 2020; Femenia-Serra and Ivars-Baidal, 2021) and for maximizing the value for all stakeholders (Buhalis, 2019), especially the small and medium tourism providers who do not have the resources and the capacity to develop their own systems (Estevao et al., 2020).

According to these, the major challenges of destination management can be classified in five broad categories: a) the effective management of stakeholder relationships, b) the effective collaboration and cooperation between stakeholders, c) the integration of information and resources for the development of integrated tourist offers, d) the strategic development of destinations and the management of the strategic relationships between the partners and stakeholders, e) the strategic alignment of DMSs.

2.1 Stakeholder analysis and management

Destinations are characterized by the multiplicity of the stakeholders, who have an interest in the affairs of the destination, the region or the local community, affect the provision of tourist services or are affected by the tourist activities that take place in the destination. Next to the principal tourist service providers, such as accommodation, transportation, attraction and entertainment providers, destinations concentrate a great number of other stakeholders, with particular interests and objectives. For instance, the residents in local communities (Laesser and Beritelli, 2013), who are affected dramatically especially in situations of over-tourism (Fyall and Garrod, 2020), the employees in tourist establishments, local commercial stores and trade associations, activist groups, regional and national government bodies and policy makers, educational and research institutions, etc. (Sigala, 2013). In fact, the importance of the role of these non-business stakeholders for destination success is increasing in the last years (Mandic and Kennell, 2021).

Tourism, as a fragmented sector with major interdependencies, favors the conceptualization of the destination as a network of stakeholders with multiple and complex relationships (Heidari et al., 2018) and the study of destinations as business networks and business ecosystems has gained great interest in the literature. Destinations operate like business networks of tourism providers and stakeholders who are linked together, collaborate in order to attain both individual and common objectives and interact in a coordinated way, with the actions of each member affecting the others (Manente and Minghetti, 2006). Destinations as business ecosystems build on the concept of ecosystems as environments that host a variety of species that share resources, face a mutual fate, need to collaborate and support each other in order to achieve common goals, but also compete with each other for the acquisition of the sparse resources and the accomplishment of individual goals (Fragidis et al., 2007).

2.2 Collaboration and cooperation between stakeholders

Collaboration is necessary in order to support tourists to develop valuable experiences through the integration of various tourist services from different providers. The concept of collaborative destination management is widely advocated in the literature as an effective way for designing and implementing tourism development strategies that cater for the different interests of the stakeholders (Sigala, 2013; Wang and Xiang, 2007). There are various types of collaborative destination management models, e.g. Wang and Xiang (2007) suggest a framework of different forms that includes affiliation, cooperation, coordination, collaboration and strategic networks.

2.3 Integration of information and resources

Integration of information and resources for the development of integrated tourist offers. Tourist services should be delivered in an integrated way in order to meet tourists' expectations and develop valuable experiences (Laesser and Beritelli, 2013; Bornhorst et al., 2009). Destination management coordinates and integrates the efforts of the various tourist service providers to address the needs of particular customer segments in order to develop complementary offerings and integrated solutions that create valuable experiences (Ndou and Petti, 2007; Erschbamer, 2020). In particular, DMSs concentrate all the information about the resources, the activities, the opportunities and the offers in the destination and allow customers to search for information, plan their visit by integrating different resources and activities and purchase tourist services (Estevao et al., 2014; Sigala, 2012).

2.4 Strategic development of destinations

Destination management aims at the development of the destination as a whole, by taking into account the needs of all the stakeholders and fostering collaboration and coordination among them (Fyall and Garrod, 2020). The diversity and the fragmented nature of tourist services, the particular competitive structure in destinations, and the need for sharing resources and collaborating with others have induced the study of coopetition in tourism destinations. Tourist providers must collaborate with each other in order to offer integrated solutions to tourists and enhance their value and experiences, while at the same time they compete with each other in the destination in order to attract the interest and receive the preference of tourists (Chim-Miki and Batista-Canino, 2017; Wang and Xiang, 2007). Collaboration and coopetition is a matter of business mindset, with firms developing more collaborative or more competitive attitudes according to their strategic disposition and understanding of the role of other firms in their business (Czakon and Czernek-Marszałek, 2021). Hence, DMOs have the responsibility to develop the right mindset that favors collaboration, rather than competition, for the success of the destination in total. Grauslund, and Hammershoy (2021) describe the characteristics of passive, reactive, and proactive patterns of coopetition in destinations.

2.5 Strategic alignment of the destination management systems

DMSs must be well-aligned with the strategies of the destination in order to be able to address the major challenges of destination management. The most important functions of DMSs refer to their capacity to foster participation in destination management procedures, support strategic development at destination level and support collaboration and the coordination of actions for the implementation of the strategic action plans (Bédard and Louillet, 2008). DMSs serve as an information system for increasing customer awareness and motivation, a distribution channel for the execution of reservations and purchases, a customer relationship system for the development of loyalty and long-lasting relationships with the customer, a strategic management system for the strategic development of the destination, and an inter-organizational information system for the coordination and collaboration of tourism providers (Sigala, 2013; Wang, 2008). The development of DMSs faces the collaborative and organisational challenges of the development of inter-organisational systems and requires the adoption of multi-stakeholder approaches (Sigala, 2013).

3 GOAL MODELLING

Goal modelling is an early-phase requirements engineering method that studies the role of the system with regard to its environment and focuses on the needs and the concerns of the stakeholders (van Lamsweerde, 2000). It uses goals as the major concept for the elicitation, analysis and modelling of the intentional behavior of actors, i.e. stakeholders, and supports the better understanding of the motivations, the intentions, the business rationale and the strategic dependencies among stakeholders. Goals are the high-level objectives of the actors, or states of affairs that the actors wish to achieve. Actors are ‘social’ and ‘strategic’ (Yu, 1997), in the sense they are seeking opportunities to achieve their goals, but their operation relies on the effective interaction and collaboration with other actors. By depending on others, actors may be able to achieve goals that are difficult or impossible to achieve by their own, or on the contrary they may fall short in their intentions because other actors deny or fail to deliver their contribution.

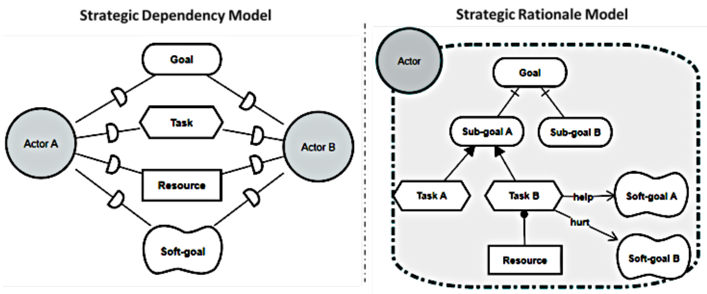
3.1 The i* goal modelling method

There are several goal-modelling approaches. The paper employs the i* (i-star) method (Yu, 1997) because it is a well-established and widely-practiced approach (Horkoff et al., 2019) that has been used for strategic dependencies analysis beyond software engineering. The i* can be used for the identification of the motivation (‘why’) of what is happening and also for the description of the business rationale (‘how’) for the satisfaction of the actors’ motivation.

The i* method analyzes first the strategic relationships among actors with the Strategic Dependency (SD) models (Yu, 1997), which represent actors with goals and dependencies on other actors, i.e. what actors require from other actors in order to achieve their goals. There are four types of dependency relationships: a) an actor can depend on other actors for the achievement of goals (goal dependency), b) the execution of tasks (task dependency), c) the acquisition of resources (resource dependency), and d) the achievement of some quality standards (quality dependency). The method proceeds with the development of Strategic Rationale (SR) models, which reason for the identified strategic dependencies by analyzing the relationship between goals, tasks, resources and softgoals and explore ways for achieving goals. There are three types of relationships: a) decomposition, b) means-end, and c) contribution relationships. A decomposition relationship links hierarchically goals and tasks, revealing their structure into higher-level and lower-level goals or tasks. A means-end relationship refers to the means (tasks or resources) that contribute to the achievement of an end (goal or task). It can be an Inclusive (‘And’) or Exclusive (‘Or’) relationship, indicating the different possible ways to obtain an end. A contribution relationship shows the positive or negative contribution of the execution of tasks on softgoals.

The SD model and the SR model are depicted in Figure 1. The SD model represents that Actor A depends on Actor B for the achievement of a goal, the execution of a task, the acquisition of a resource and the achievement of a soft-goal. The SR model represents that the Actor has a (major) Goal that is fulfilled by the accomplishment of Sub-goal A and Sub-goal B (inclusive decomposition relationship). Sub-goal A can be implemented in two alternative ways (exclusive mean-end relationship), by executing either Task A or Task B. The execution of task B requires some Resource and contributes positively (‘helps’) to the achievement of Soft-goal A, while contributes negatively (‘hurts) to the achievement of Soft-goal B (‘make’ and ‘break’ are other types of contributions that signify extremely positive and negative impact, respectively).

Figure 1: SD and SR models in i goal*



3.2 Applications of the i* goal modelling for stakeholder and strategic alignment analysis

The i* goal modelling method helps analyzing the complex relationships between stakeholders, reveals the interdependencies between them and the potential conflicts in their intentions and behavior, supports the exploration of potential solutions and elaborates the collaboration and contributions that can be necessary for the fulfilment of the individual and common goals (Yu, 2001). All these situations are effective in destination management; therefore, this paper advocates the i* as a method for the analysis of the strategic development requirements and the collaboration challenges of destination management.

In the recent years, the interest for goal-oriented modelling approaches has increased significantly because the ultimate criterion for system success is the capacity to meet the goals and address the concerns of the users and other stakeholders (Horkoff et al., 2019). Goal modelling can be used beyond software engineering, for business modelling and strategic analysis in multi-stakeholder business environments and for the strategic alignment of information systems. Business analysts have shown increased interest for the analysis of requirements with goal-oriented modelling in several fields (Gonçalves et al., 2018). Next, we review certain applications of the i* goal modelling method for addressing the issues that are related to the requirements and challenges of destination management that have been identified in the previous section.

a) Stakeholder management. Goal modelling has been applied for stakeholder analysis, especially for addressing the challenges of designing and operating multi-stakeholder distributed systems. Clotet et al. (2007) applied goal modelling to the analysis of DMSs as a typical example of multi-stakeholder distributed systems for resolving conflicts and improving the operation of the organization; their approach is mostly technology-driven and focuses on the needs of system engineering, while in this paper we suggest a management-driven approach.

b) Collaboration and cooperation between stakeholders for the development of integrated offers. Value creation requires the collaboration with different stakeholders and goal modelling can serve to the understanding of the interest and the intentions of the stakeholders, the description of their requirements for collaboration and the resolution of the conflicts that may emerge. Adali et al. (2021, 2020) analysed goal dependencies between actors for the co-creation of service value. They modelled value co-creation with the i* SD Model in order to represent the stakeholders, elicit their goals, analyse goal dependencies and map their capabilities, and the i* SR Model in order to decompose each actor's value proposition and co-contribution activity into dependencies with other actors. Henkel et al. (2011) used goal models as the bridge that connects business value concepts with the design of e-services, that require flexible collaboration with customers and providers. Suhaib (2019) employed goal modelling for the identification and resolution of conflicts among stakeholders in the execution of tasks.

c) Strategic analysis. The strategic analysis of business environments is a major field for the application of goal modelling. Carvallo and Franch (2012) analysed common competitive patterns in business situations that derive from Porter's 5 Forces Model. Giannoulis et al. (2011) analysed interdependencies that derive from Kaplan and Norton's concepts of strategy maps and balanced scorecard. Samavi, Yu and Topaloglou (2009) proposed a business strategy modelling framework for explaining the rationale of strategic decisions in multi-stakeholder business environments. In a similar way, Pant and Yu (2018) studied the refinement of strategies into lower-level strategies and tactics and suggested a method for the development and selection of strategic alternatives. They also studied coopetition in strategic relationships in order to understand the impact of coopetition relationships on the design of information systems (Pant and Yu, 2019).

d) Strategic alignment of information systems. Goal modelling has been used widely for the investigation of the strategic alignment between business strategy and information technology. Singh and Woo (2009) studied the stakeholders' ability to relate their tasks to the strategic goals of the firm. Babar and Wong (2011) analysed the impact of stakeholders on the development of information systems and employed goal modelling to resolve any conflicts in the goals and requirements of the organisation and the stakeholders. Giannoulis et al. (2013) analysed the relationship between business strategy and consumer preferences.

4 GOAL MODELLING FOR STRATEGIC ANALYSIS IN DESTINATION MANAGEMENT

Goal modelling can be used for the analysis of the strategic and the operational relationships between stakeholders in destination management. It can be useful for the better understanding of the motivations, the intentions, the business rationales and the strategic dependencies between stakeholders that will improve the management of destinations and will support their strategic development. It can also support the strategic alignment of DMSs and other 'smart tourism' systems, and their analysis and design as multi-stakeholder systems that are required to reinforce strategic collaboration and coordination of actions. This section demonstrates the application of goal modelling in destination management both for analysis of the stakeholders and their strategic and operational dependencies (in section 4.1) and for analysis of information systems (in section 4.2).

4.1 Goal modelling for stakeholder and strategic analysis

Goal modelling can be used initially for the identification of the stakeholders with a critical role and a clear strategic value for destination management, the determination of their goals and classification of strategic dependencies. In particular, we demonstrate next the application of goal modelling for the analysis of strategic dependencies between stakeholders in destination management, for role and business model analysis, for alternatives analysis for improved decision making, and for strategic analysis with respect to the development of collaborative and co-opetitive relationships.

4.1.1 Stakeholder strategic dependency analysis

The analysis of the strategic dependencies between stakeholders in destination management is extremely important because of the fragmented nature of tourism service provision, the great number of the stakeholders, the multiplicity of their particular interests and the diversity of the relationships that may affect the interests and the activities of other stakeholders. SD Models are appropriate for the stakeholder analysis in destination management, as they represent the stakeholders and the dependencies that exist between them.

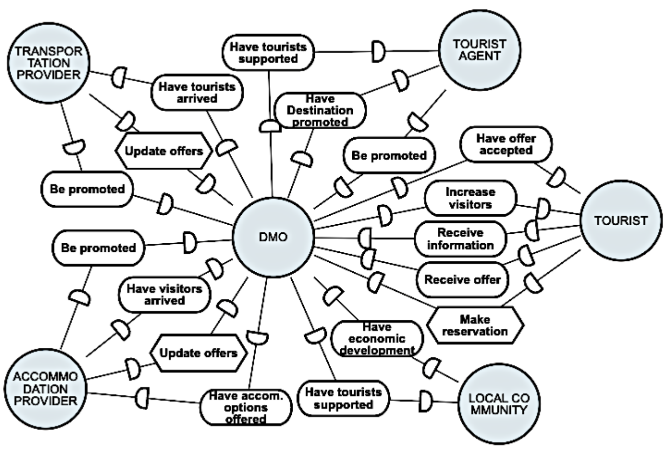
Table 1: Stakeholder strategic dependency analysis

STAKEHOLDERS		DEPENDENCY TYPE	DEPENDENCY DIRECTION	DEPENDENCY DESCRIPTION
DMO	TOURIST	Goal	→	Increase visitors
		Goal	→	Have offer (value proposition) accepted
		Goal	←	Receive information about destination
		Goal	←	Receive offer
		Task	←	Make reservation
DMO	TRANSPORTATION PROVIDERS	Goal	→	Have tourists arrived
		Goal	→	Have updated & valid information
		Goal	←	Have routes promoted to tourists
		Task	←	Update information and offers in the DMS
DMO	ACCOMMODATION PROVIDERS	Goal	→	Have accommodation options offered
		Goal	←	Have visitors in the destination
		Goal	←	Be promoted in the DMS
		Task	←	Update DMS information and offers
DMO	TOURIST AGENTS	Goal	→	Have tourist supported
		Goal	→	Have destination promoted
		Goal	←	Be promoted in the DMS
		Goal	←	Be informed of events and offers
		Task	←	Update DMS information and offers
DMO	LOCAL COMMUNITY	Goal	→	Welcome and support tourists
		Goal	←	Achieve economic development
		Goal	←	Promote heritage

Table 1 provides information for the strategic dependency analysis with respect to some major stakeholders in destination management: DMOs, Tourists, Accommodation Providers, Transportation Providers, Attractions Providers, Tourist Agents and the Local Community. It describes the type of the dependency (i.e. goal, task, resource, or soft-goal), the direction of the dependency (who depends on whom) and the description of the dependency. The analysis is focused on the strategic dependencies between the DMO and the other major stakeholders (for reasons of simplicity and limited space; according to the particular needs in each case, the model can be expanded with the inclusion of additional stakeholders). Goal dependencies dominate normally in the initial phase of analysis, because it is the most basic type of strategic dependency; other types of dependency between stakeholders appear usually later (e.g. in SR Models), as detailed knowledge is introduced.

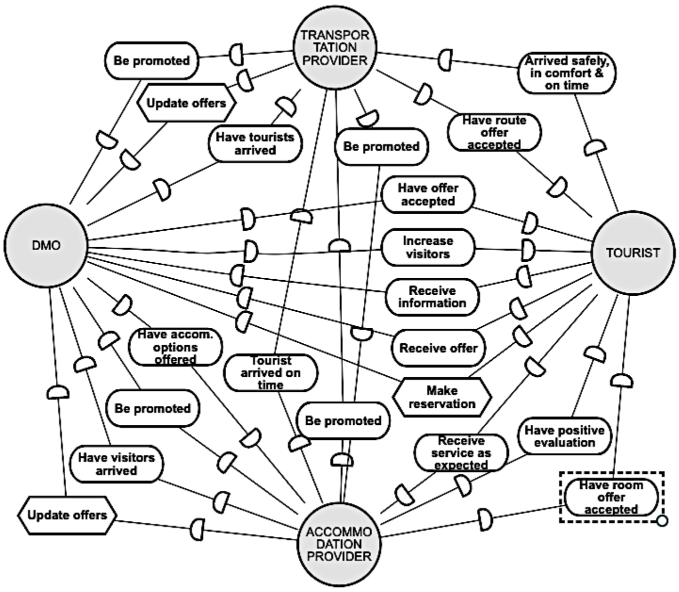
Based on the information of table 1, Figure 2 represents the SD Model for the DMO, that provides the perspective of the DMO in stakeholder analysis. The model describes in a visual way the stakeholders that are related to and affect or are affected by the operation of the DMO and the goal/ softgoal, task and resource dependencies between the DMO and these stakeholders. The model demonstrates in a clear and direct way the multiple goals of the DMO and the stakeholders, reveals the interdependencies in the achievement of these goals and highlights the central and orchestrating role of the DMO in destination management. It reveals also multi-level dependencies, such as in the case of increasing the number of visitors in the destination: the DMO depends on Tourists to increase the number of visitors in the destination (their willingness to visit the destination) and on Transportation Providers to have tourists arrived in (transferred to) the destination, while the Accommodation Providers depend on the DMO to have tourists arrived in the destination. A similar example of a multi-level dependency exists in Figure 2 with regard to the goal of Tourists to receive information about the destination, as the DMO requires that Transportation Providers and Accommodation Providers update regularly their offers, so that the information for the tourist is collected orderly.

Figure 2: the SD Model for the DMO



Goal modelling can zoom in and out to support stakeholder analysis from different points of view and with different objectives. Figure 3 provides a SD Model that represents the interdependencies amongst DMO, Tourist, Transportation Provider and Accommodation Provider. In addition to the information depicted in Figure 2, this model includes the direct relationships between Tourists, Transportation Providers and Accommodation Providers. For instance, Tourists seek to arrive safely, in comfort and on time and receive service as promised and expected, while the Transportation Providers and the Accommodation Providers depend on Tourists to have their offers accepted (in order to make sales). The Accommodation Providers and the Transportation Providers have direct dependencies with each other on certain issues; for instance, Accommodations Providers depend on Transportation Providers to have Tourists arrived on time, while Transportation Providers depend on Accommodation Providers to have their services promoted to Tourists.

Figure 3: The Multi-Stakeholder SD Model



The development of SD models, both when they represent the view of a single stakeholder or when they provide a market-wide and multi-stakeholder view, can reveal the complexity of destination management. They can help identify relationships that provide mutual benefits and form the basis for collaboration or bring conflicts and can cancel the collaboration between stakeholders. In addition, the identification and understanding of multi-level dependencies that derive from indirect relationships between stakeholders is critical because such dependencies reveal pre-requisites or conflicts in the accomplishment of goals that may be hidden or not explicit. In sum, SD Models can serve as the basis for the development of coherent strategies in destinations, the building of collaborative relationships between stakeholders and the establishment of effective coordination mechanisms in the development and execution of strategic development plans.

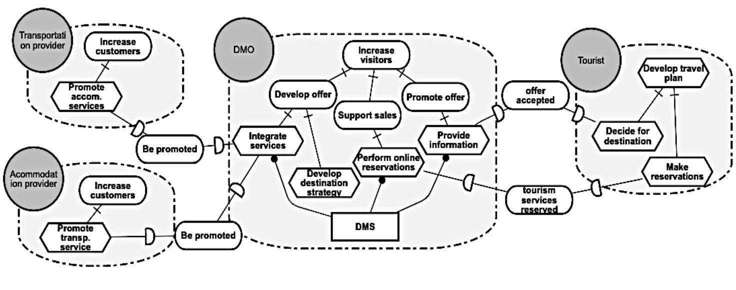
4.1.2 Role and business model analysis

After the development of SD Models, potentially from different angles and with different objectives, we can proceed with the development of SR Models that zoom in the relationships and the operations of the stakeholders, include both intentional and behavioral characteristics and provide opportunities for an in-depth analysis of stakeholder management. SR Models not only show the major goals of the stakeholders, but reveal also their analysis into sub-goals and tasks that bring about the achievement of these goals, as well as the key resources that are required for the execution of the tasks. Hence, they expose the role of stakeholders in destination management and how it affects the goals and operations of the other stakeholders.

In Figure 4 we provide the SR Model for the DMO with respect to some major stakeholders, such as Tourists, Transportation Providers and Accommodation Providers. The major goal of a DMO is to increase the number of visitors in the destination. This goal can be analyzed in (hence, it is achieved by) three sub-goals: to develop offers for tourists, to promote offers, and to support sales. To achieve these sub-goals, the DMO is required to take particular actions. In order to develop attractive offers, the DMO must develop the destination strategy, that will provide the guidelines for the rest decisions and activities, and also integrate services from the various tourism service providers into tourist packages. The task to integrate services uses the DMS as a resource and requires the contribution from tourist service providers (the Accommodation Provider and the Attractions Provider), who offer their services to be integrated by the DMO, because they want to be promoted by the DMO (notice their internal goal is to increase sales, which can be achieved by promoting their services, amongst else – full analysis of their roles is left out for reasons of limited space).

The sub-goal to promote the offers can be implemented with various activities. In Figure 4 we single out the task of providing information about the available offers through the DMS. Providing information for the destination offers supports the goal of the DMO to have the offers accepted by Tourists, that depends on the decision of Tourists for their destination, taken when they develop their next travel plans. The third sub-goal refers to supporting sales, which is achieved with the execution of online reservations, again with the support of the DMS; online reservations enable Tourists to have the selected offers/ services reserved, which is the goal they want to accomplish when they make reservations in the course of implementing a travel plan.

Figure 4: SR Model for DMOs



The SR model supports the better understanding of the roles, the intentions and the operations of stakeholders and reveals the collaborative and strategic relationships between the stakeholders in destination management. This way, is can provide answers to the most basic questions for the description of a business model: what is a stakeholder doing, why is he doing it (goals and softgoals), how is he doing it (tasks and resources) and for whom/ with whom is he doing it (relationships with other stakeholders who act as customers, suppliers or partners). As a tool that supports business model analysis, the SR Model clarifies the strategic goals, the course of actions and the resources that are required. Stakeholders can use this information in order to recognize competitive advantages or weaknesses in their business models, experiment with different configurations with tasks and resources and think about business model improvement and innovation.

4.1.3 Analysis of alternative options

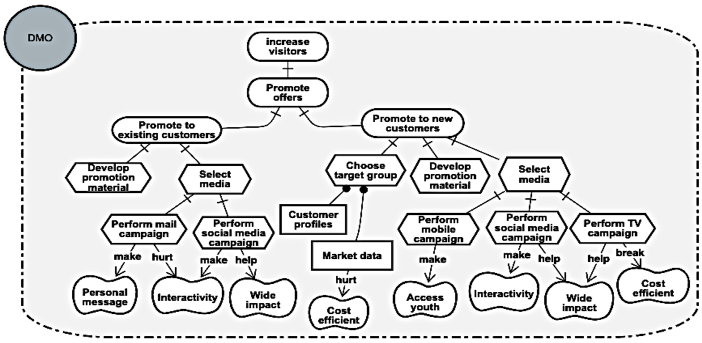
Goal models can be used for the analysis of alternatives in the accomplishment of goals and the execution of tasks and therefore support decisions of strategic management and operations management. For example, Horkoff and Yu (2016) argued recently that i* can address the analysis of 'what if' questions and 'is this possible – how/ why not' questions.

Figure 5 represents an example for the analysis of alternatives regarding the promotion strategy of the destination, as a means to increase the arrival of visitors. The goal to promote offers can be analyzed into promoting offers to existing customers or promoting offers to new customers. It is clear that both these options serve different objectives (e.g. increasing loyalty, or expanding the customer base) and require different implementation plans. The decomposition of the primary goal into sub-goals reveals the alternative ways that are available for the accomplishment of the primary goal. The DMO can decide to pursue only one of these sub-goals, or to pursue both of them (this conjoint option is depicted in Figure 5), according to its strategy and the available resources.

The option to promote to existing customers is implemented by the tasks of developing promotion material and selecting media, with the latter being implemented by different courses of actions, such as by performing a mail campaign and a social media campaign. A mail campaign can bring the big benefit ('make') because of being able to deliver a highly personalized message, but it is restrained ('hurt') by the lack of interactivity with the customer. A social media campaign on the other hand has the big benefit ('make') of developing interactivity with the customer and the moderate benefit ('help') of attaining possibly a higher impact through sharing to personal networks.

The alternative to develop a promotion campaign for new customers on the other hand is implemented by the tasks of selecting target group, selecting media and developing promotional material. The task of selecting target group requires as resources the customer profiles and market data, the acquisition of which is not a cost-efficient option ('hurt'). The task of selecting media is implemented by performing a social media campaign, a mobile campaign or a television campaign. Each of these options has different characteristics and brings different outcomes: a mobile campaign can achieve access to youth, a social media campaign can bring wider impact and increased interactivity with the target group, and a television campaign has a wider impact, but is not cost-efficient.

Figure 5: SR Model for the Analysis of Alternatives



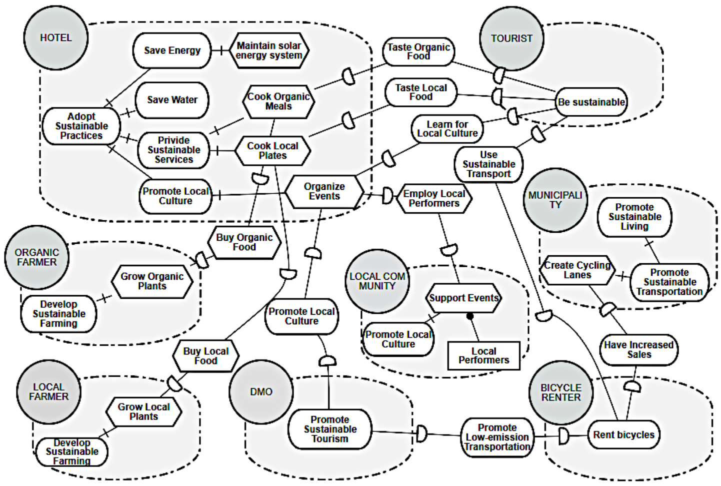
The SR Model can provide a roadmap for decision making that indicates the different options that are available, shows their implementation through different requirements and courses of actions and highlights the expected outcomes that derive from each alternative, taking into account also quality issues and qualitative data. In the previous example, a goal can be achieved by two alternative options, depicted as alternative routes. Each of these options requires the execution of particular tasks and sub-tasks and the use of resources, which can bring different outcomes and satisfy the goals in different ways. The DMO can explore the alternative options and weight their expected outcomes in order to decide for the promotion strategy. For example, the restriction of low-budget would exclude the alternatives that increase the cost of the promotion strategy. Hence, the promotion to new customers becomes less advantageous, because it requires market data that are expensive to be obtained.

4.1.4 Stakeholder collaboration analysis

The SR Model can be used for the analysis and representation of the way stakeholders decide to collaborate and choose partners. By widening the frame, goal modelling can be used for the analysis of collaboration opportunities and co-opetition conditions in destination management.

Figure 6 provides an example for the collaboration that is required among stakeholders for the development of sustainable tourism in a destination. In order to keep the model concise, we include only the necessary elements and relationships for the explication of the use of goal modelling in this example. First of all, notice that sustainability is a common goal for all the stakeholders, which is the reason they all collaborate somehow for the development of sustainable tourism. For instance, the DMO has the goal to promote sustainable tourism, which is analyzed in the sub-goals of promoting the local culture and low-emission transportation (other relevant sub-goals may exist. The DMO depends on other stakeholders (a Hotel and a Bicycle Render) for the achievement of these goals, who organize local cultural events and rent bicycles, respectively. The Tourist has the goal to be sustainable in his vacations, which means (for a particular tourist) to taste organic and local food, learn the local culture and use sustainable transportation (other tourists may have other preferences and goals). The satisfaction of these goals of the sustainable Tourist depends on the services provided by tourist service providers: organic and local food is provided by the Hotel - and probably this is the reason a sustainable Tourist selects a Hotel that adopts sustainable practices (the selection between alternative Hotels that adopt sustainable practices and offer sustainable service is discussed in the next model, depicted in Figure 7). In a similar way, the Tourist selects the Bicycle Render because cycling is a sustainable way of transportation. The Hotel adopts sustainable practices in various aspects of its operations (energy and water consumption, services, tourist entertainment, etc.) and depends on Organic Farmers and Local Farmers for the procurement of organic and local ingredients, as well as on the Local Community for the hiring of local performers that will support the local cultural events. The promotion of environmentally friendly transportation, and particularly in this model the increased revenues for the Bicycle Renter, depends on the initiatives of the Municipality to promote sustainable living and sustainable transportation, that is implemented in this model with the creation and maintenance of cycling lanes.

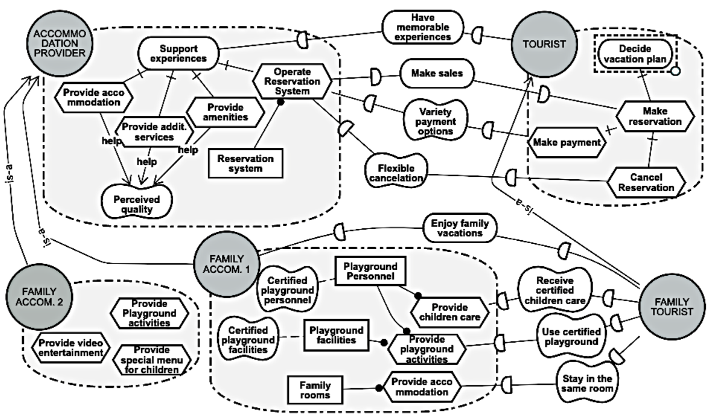
Figure 6: SR Model for the Analysis of Collaboration



Goal modelling can be used also for representation of the selection among alternative options, that introduces co-opetition in destination management. Figure 7 provides an example for the selection of Accommodation Provider by Tourists. This can be seen as an example of getting into agreement with a stakeholder and choosing the best option among competing offers. In the upper part of the model we have the abstract entities of Tourist and Accommodation Provider with their abstract operations and relationships. It means that this part of the model provides an 'abstract', general pattern for the operations and the relationships between tourists and accommodation providers. According to this general pattern, Tourists have the goal to decide for a vacation plan, which is executed by making reservations, making payments and possibly asking for the cancellation of previous reservations. Tourists require that Accommodation Providers support several payment methods that can meet their particular needs and preferences, and also to provide flexible cancelation policies. The ultimate goal of Tourists is to have memorable tourism experiences, which depends (partially) on the Accommodation Providers. The Accommodation Providers, on the other side, have the goals to make sales and support Tourists develop memorable experiences. The key operations of Accommodation Providers refer to providing accommodation as a core service, providing additional services (e.g. food), providing amenities (e.g. for relaxation, for physical exercise) and operating the reservation system that supports sales. The execution of these tasks is related to various quality criteria (represented in a general way in this abstract pattern).

In the lower part of the model we have particular entities of Tourists and Accommodation Providers and the model represents their specific goals, behaviors and relationships. The Family Tourist is a particular case of Tourist that seeks accommodation for family vacations. The Family Tourist has all the general characteristics of the abstract Tourist entity, but the dependency goal can be specified into "Enjoy family vacations" and three particular soft-goal dependencies are added to describe the key requirements for this particular Family Tourist ("Receive certified children care", "Use certified playground", and "Stay in the same room"). These particular requirements will serve as the major criteria for choosing the Accommodation Provider. For reasons of saving space, it is assumed this Family Tourist has no other particular characteristics, tasks and resources than the abstract Tourist. In a similar way, the Family Accommodation Provider 1 and 2 are two particular cases of Accommodation Providers that provide services for families. The Family Accommodation Provider 1 performs the tasks 'Provide children care' (with certified playground personnel as a quality characteristic), 'Provide playground activities' (in certified playground facilities) and 'Provide accommodation' in family rooms (derives from the resource 'Family rooms'). The Family Accommodation Provider 1 can meet all the requirements specified as soft-goals of the Family Tourist and can become the Accommodation Provider that will receive the reservation. The Family Accommodation Provider 2, on the other hand, has particular characteristics that do not fit with the requirements of the Family Tourist and therefore he is not chosen.

Figure 7: SR Model for the Analysis of Selection of Partners and Co-opetition



4.2. Goal modelling for DMS analysis

Goal modelling has been developed as an early-phase requirement method for software engineering that emphasizes on the role of the system in its environment, the identification of system requirements and the design of system configurations. Hence, goal modelling can also support the analysis of requirements and the design of DMSs as complex multi-stakeholder and collaborative systems that seek the coordination of the stakeholder activities, as well as other information systems that take an increasingly important role in the age of 'smart tourism'. Information system analysis and design follows the stakeholder and strategic analysis by introducing the role of the information system (i.e. DMS) in the models and relocating the point of interest to the interactions and the impact of the information system to the stakeholders.

Figure 8 provides a SD Model for DMS analysis and design that is based on the model of Figure 2. The DMS is introduced in the model and the relationships with the DMO and the stakeholders are rearranged: now the DMO depends on the DMS in order to achieve the goals of promoting the destination and performing sales, while some of the dependencies between the DMO and the stakeholders from Figure 2 are now transferred and related to the DMS (e.g. the Tourist depends on the DMS in order to learn for the destination and make reservations). The remaining dependencies between the DMO and the stakeholders refer to business relationships that are not affected by the introduction of the DMS.

Figure 8: SD Model for DMS Analysis and Design

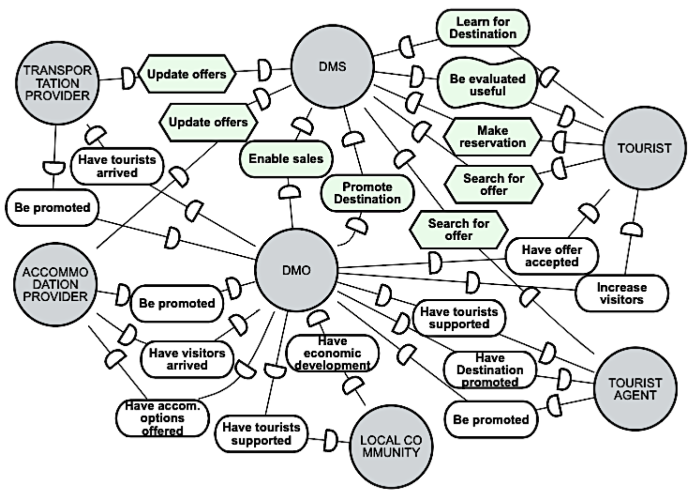
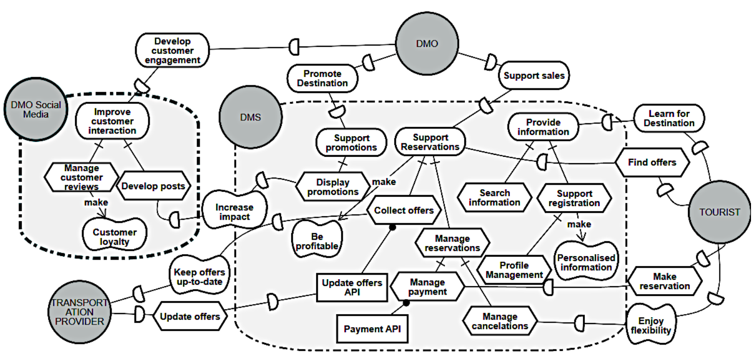


Figure 9 provides a SR Model for DMS analysis and design. This model portrays the objectives of the DMS (support promotions, support reservations and provide information), the key operations (display promotions, collect offers, manage reservations, support searches, etc.), the quality, non-functional requirements (personalize information, provide flexibility, etc.) and the key resources of the information system (the use of a variety of APIs for payments, collecting data from stakeholders, etc.). The SR Model emphasizes on the operations of the DMS and how they support they roles of the destination stakeholders. Additional SR Models can be developed that will provide different views on the role and the requirements of the DMS, such as for the data requirements (data management and exchanges), the technical requirements (relationships with other systems and sub-systems of the DMO and the stakeholders), technological requirements (software technologies and standards that are employed).

Figure 9: SD Model for DMS Analysis and Design



5 RESEARCH IMPLICATIONS AND DISCUSSION

The paper presents the use of goal modelling as a method for stakeholder and strategic analysis in destination management. Goal modelling addresses the early-phases of requirements engineering and emphasizes on the intentions of the stakeholders, hence it can be used for business analysis as well. In fact, the interest for goal modelling has been increased in the recent years and several research works take a business orientation and study the strategic analysis of multi-stakeholder business environments. The paper suggest goal modelling can be used in particular as an analytical tool for the investigation of the strategic and operational relationships in multi-stakeholder systems, as a visualization tool for the graphical representation of these relationships, and as a communication tool for the development of common understanding and for improved decision making. The formalism of goal modelling, as a requirement engineering method, can provide rigor in the analysis of the complex business relationships, especially as concerns the analysis of the roles, the goals and the dependencies of the stakeholders. The paper demonstrates the i* goal modelling method and argues for the benefits it can offer in business analysis. The i* method can help in the analysis of the complex relationships between stakeholders, reveal their interdependencies and the potential conflicts in their intentions and behavior, support the exploration of potential solutions and explicate the collaboration and contributions that can be necessary for the fulfilment of the individual and common goals. All these situations are effective in destination management. Thus, the paper suggests goal modelling can be an pertinent and useful method for stakeholder and strategic analysis in destination management and demonstrates its use in several cases.

The use of goal modelling enhances the research in destination management and development. Destination management and development are important topics in tourism research that face great challenges related to the development of an overall strategy for the destination and the coordination of the objectives and the activities of tourism service providers and stakeholders (Haugland et al., 2011). The new technologies and other socio-economic and cultural impacts make destination management and development an even harder to solve puzzle (Hartman et al., 2020) that requires new and advanced analytical methods and tools for the deep understanding of the intentions, the roles and the strategies of the various service providers and stakeholders and the coordination of their tasks and resources. The variety of the stakeholders, the fragmented nature of competition, the high degree of interdependencies and the interconnectedness of the tourist products and tourists' activities make it very hard to accomplish effective destination management at strategic and operations level.

Goal modeling can support destination management and development as it can provide answers to most of these requirements and challenges. Goal models explicate how stakeholders in destination management strive to achieve their own goals and support others in the achievement of common and individual goals. They support the analysis of strategic dependencies, when the goals of one stakeholder depend on the goals of others, and operational dependencies, when the operations of one stakeholder depend on the tasks or the resources of others.

Goal modelling can be used also to support some novel research approaches in tourism. As a visualization method, goal modelling can support the emerging notion of destination design (Volgger e al., 2019) as an approach that employs the principles of design thinking for gaining fresh understandings of challenges in tourism destinations and for offering innovative solutions. In particular, goal modelling can provide visual representations of the relationships between stakeholders. In a similar way, goal modelling can support strategic storytelling as a method for the communication of the challenges and the development of a common understanding between strategic stakeholders in destination development projects (Hartman et al., 2019). In this case, goal models can be used to represent visually and clarify the strategic and resource dependencies between stakeholders that exist in the various stories employed for destination management. Finally, goal modelling can be appropriate also for studies that employ the strategic mapping for destination development (Palatkova, 2015) by supporting the visualization of the relationships between the objectives and the required resources.

The theoretical contribution of this paper derives from the introduction of goal modelling as an analytical method for destination management and development. The paper addressed three important topics of destination management and development: stakeholder analysis, strategic dependency analysis, and strategic alignment of information systems. Stakeholder analysis is extremely important in complex multi-stakeholder environments, such as destinations. Goal modelling goes to the point of stakeholder analysis and it analyzes the relationships between stakeholders and especially their strategic and operational dependencies and the impact they provoke. It zooms in the multiple relationships between stakeholders, features their characteristics and analyzes their conditions. The visualization of stakeholder analysis helps also making explicit the relationships, their conditions and their consequences. Current approaches in stakeholder management lack structured analytical and visualization methods for the investigation of stakeholder relationships, while the analysis remains usually at a high level and does not get in the details of the particular aspects of the relationships.

The analysis of the strategic dependencies is necessary for the development of a destination strategies and plans, the collaboration between the stakeholders, and the coordination of their actions and resources. Goal modelling provides a pertinent method for the analysis of strategic dependencies as it employs as constructs the goals/ softgoals, the tasks and the resources of stakeholders and analyzes the strategic and operational dependencies in the achievement of goals. In general, goal modelling can support any theoretical framework and approach that employs the concepts of goals, tasks and resources. Several research works in destination management are based on or inspired by the resource-based view of the firm, that employs relevant key concepts (resources, capabilities and competencies) for the analysis of the competitive advantage of destinations.

The strategic alignment of information systems is pre-eminent for the successful destination development. It has become an even more important challenge today with the increasing use of information systems and the development of 'smart tourism'. Goal modelling can support the studies for the strategic alignment of information systems by accommodating in the same analytical framework the strategic characteristics of destinations and the strategic requirements of information systems.

The paper contributes also to the research of destination management with the development of a multi-level, goal modelling approach that integrates stakeholder, strategic and information system alignment analysis. Goal modelling is used initially for the identification of the stakeholders that have a strategic role in destination management, the determination of their goals and the classification of their dependencies. The strategic analysis follows, with the development of detailed models that zoom in the relationships and the operations of the stakeholders, include both intentional and behavioral characteristics and provide an in-depth view on the strategic dependencies. Goal models can be used, hence, for role and business model analysis, the analysis of alternatives that supports improved decision making, collaboration and co-opetition analysis. The strategic alignment can follow as a potential extension of the approach, especially when the destination development is based on the use of information technologies. Here the emphasis is put on the impact of information systems on the strategic relationships between stakeholders and the support they provide to the strategies for destination development.

The practical contribution of the paper is related to the use of modelling techniques in destination management and development. Modelling techniques enable the explicit expression and the visualization of the issues under investigation, facilitate the communication and the development of common understanding between the stakeholders and support the experimentation with, the evaluation and the selection of alternatives. In particular, goal models are graphical representation that visualize and hence make explicit and easier to grasp the complex relationships and the interdependencies between stakeholders. In addition, they enable all to speak the same language by using the same notation and the same modelling rules, that results in the better and common understanding of the relationships and the underlying conditions. Goal models can easily represent the alternative options that are available and thus make explicit their differences. The development of alternative ideas, views and approaches can be achieved easily with the development of alternative goal models.

6 CONCLUSIONS

The paper presented goal modelling as a method for the strategic analysis in destination management. It suggested a multi-level approach that begins with the stakeholder analysis, continues with the analysis of strategic dependencies between stakeholders and ends with the strategic alignment of information systems. The approach provides a logical culmination from general and broad issues (stakeholder management) to specific ones (strategic relationships and strategic alignment). Goal modelling is used for the description of the intentions of the stakeholders and the visualization of their interdependencies with regard to intentions, tasks and resources.

The application of goal modelling for stakeholder and strategic analysis is a fairly new issue in the literature. The paper enhances the research in destination management and development by addressing the major challenges of the field, i.e. the collaboration of tourism service providers and stakeholders for the configuration of tourist services as a result of the integration of diverse stakeholders' resources, and the coordination of stakeholder activities for the development of a coherent view of the destination in the eyes of tourists.

The research presented in this paper has certain limitations. The most important research limitation has to do with the lack of validation of the approach in real-world conditions, such as with a case study, or a survey with destination managers. The paper adopted a theoretical approach for the demonstration of the potential uses and the benefits of goal modelling in destination management. This is necessary in order to promote goal modelling as a new method in the literature of destination management. The paper provides several examples for the application of goal modelling in respect to various issues in destination management. Future work should focus on the development of comprehensive and real-world validation procedures.

Additional limitations have to do with the goal modelling method itself. The development and reading of goal models require the people involved (managers and consultants) have the necessary knowledge and likely some practical experience. Even though goal modelling is a quite simple method, the business people usually lack this knowledge. In addition, goal models tend to be numerous, depicting the different views and options of the situation under investigation, oversized because they can accommodate many details, and without certain rules for their scalability. Therefore, the successful goal modelling depends on the expertise and the experience of the modeler.

Some other supposed limitations of goal modeling are not relevant, in our opinion, to the strategic analysis in destination management. For instance, subjectivity is inherent in goal modeling and the existing goal modelling methods lack reasoning capabilities, especially for quantitative analysis. Hence, goals models are used mostly for the visual representation of the situation and do not support conditional logic for the comparison of alternatives and the selection of the best option. However, we believe such limitations do not affect adversely the strategic analysis for destination development, because the strategic decisions are based mostly on the critical mind and the judgment of the managers.

Directions for future research can address these limitations, as well as other important issues. In the wider context, future research can seek to elaborate goal modelling as a business modelling method, especially for the strategic analysis. The development of a specific notation and ontology for business/ strategic modelling can serve this objective. Relevant to this is the development of goal model patterns that address the requirements of destination management and development. Such patterns could describe general situations in destination management and development that can provide the basis, as well as insights for the strategic analysis in destination management.

Regarding the suggested in this paper multi-level approach that integrates stakeholder, strategic and information system alignment analysis, a priority for future research is the further development of the structure and the modelling procedure. From a structural point of view, future research can investigate the relationship between these levels, how do they contribute to destination management and development, how does the analysis proceed from the one level to the other, and if additional levels and, thus modelling aspects, can be developed. From a procedural point of view, there are several practical issues that need to be studied with regard to the preparation of the modeling procedure (e.g., how can we involve the stakeholders and how can we collect all the necessary information for the development of goal models?), the development of goal models (e.g., how can we manage effectively the modelling procedure, given the great number of models that need to be developed? How can we scale up the models for the inclusion of a great number of stakeholders, how can we change the focus between stakeholders, and how can we zoon in and zoom out effectively and without losing or repeating information?), and the exploitation of the goal models for decision making in destination management (e.g., what particular issues of destination management can be resolved by goal modelling and in what way?).

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Encouraging brand attachment on consumer behaviour: Pet-friendly tourism segment

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Abstract:

Purpose: *The aim of this paper is to study the factors that influence consumer behaviour through brand attachment, in the pet-friendly segment in Portugal. Pet-friendly tourism has stood out as a very recognized and valid tourism and marketing segment, growing worldwide, urging the complex needed advances on tourism practices performance.*
Methods: *The application of the model to a group of 190 respondents carried out in order to analyse the relationships between brand attachment, trust, satisfaction, commitment, loyalty and quality of service. To test our measurement model, data was analysed using the SmartPLS 3.2.*
Results: *Results reveal that quality of the service, satisfaction, trust and commitment had a strong relationship with the loyalty of the respondents. As for the brand attachment, the variables that showed the most influence were satisfaction, trust and commitment.*
Implications: *The research still needs to be empirically applied in pet-friendly tourism settings to enrich their robustness in a cross-cultural tourism experiences, covering a wider spread of abroad tourism destinations and products. This study thus contributes to a better clarity at the theoretical level of brand attachment and consumer behaviour, as well as making it possible to understand from the consumers' side, which characteristics are part of their decision-making process, granting relevant data that can cooperate in the definition of better marketing strategies.*

Keywords: *Pet-friendly, brand attachment, consumer behaviour, decision making, niche marketing, SmartPLS.*

JEL Classification: *Q18, D11, P36*

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1 INTRODUCTION

Several sectors of activity decided to shape themselves to receive pets and thus become "pet-friendly". These services typology has been progressing in a positive way, with several hotels and accommodation services already allowing animals to enter and stay, as well as restaurants and some shopping centers. The understanding in the definition of "pet-friendly" varies between "vacation destination where family pets are permitted" and "accommodation property which may allow certain types of pets to accompany guests during their stay or some may permit animals inside the accommodation or have appropriate fencing to contain animals" (Ksenia et al., 2015). Nowadays, it is notorious the multiplication of people who choose to travel or to be accompanied by their animal during the holidays, on trips or even on short walks, such as trips to restaurants or shopping at the mall or other stores (Valeri, 2022a; 2022b).
In fact, the number of consumers looking for and enjoying services available that are pet-friendly is increasing, due to the impact and importance that have been given to animals, as well as their care and well-being. Therefore, there has been a notorious increase in sensitivity on the part of the population towards four-legged beings.
According to Anjo et al. (2021), within the tourism sector, one of the most popular forms of travel is cultural tourism, in which tourists travel to historical sites, cultural landscapes, events or festivals related to culture and visit museums, among many other activities. In this context, travel with pets sometimes involves more uncertainties and constraints than other forms of tourism, because pets are incapable of self-management and it can be a challenge for pet owners to do tourism activities with them (Ying et al., 2020; Valeri, 2021), as an example: pet's lack of agility, other participants resentments and destination restrictions. The institution speculates that longer daylight hours and struggling to find someone to pet sit while families go on vacation could be big contributing factors as well. Pets will never be able to understand why they've been abandoned by the ones they love. Thus, social marketing success relates to the success of the influence of desired behaviour. The chosen target public is free to accept, reject, modify or abandon behaviour in favor of society and individual good (Soares & Sousa, 2021).
This research analyses the brand attachment in the context of the pet-friendly segment in Portugal, focusing on the opinions, attitudes and habits of Portuguese consumers. Thus, the key question for the study is: What is the impact of the brand attachment on consumer affectivity in relation to pet-friendly services in Portugal? The main goal of this study is to analyse and evaluate the impact of brand attachment on consumer behaviour, in the specific context of pet-friendly in Portugal, using the affective and emotional relationship established between consumers and existing services for the segment under study.
Brand attachment allows, in this context, to understand and examine how the affective relationship that consumers develop, conditions their decision making, in the specific case of pet-friendly services in Portugal. the main objectives of the investigation are fourfold: (1) to understand the decision-making process of choosing consumers in view of the pet-friendly services existing in Portugal; (2) analyse the propensity of consumers in relation to the variables under study and the existing relationship with the brand attachment; (3) to investigate a possible market expansion in Portugal and what services could be developed in this area; and (4) identify and analyse consumers' monthly and annual spending on pet-friendly services.
This paper is structured in four sections: (1) the literature background on brand attachment, pet friendly segment and hypothesis development; (2) the methodology approach; (3); results and discussion. Finally, (4) conclusions, including managerial implications, limitations and suggestions for future research, are presented.

2 BACKGROUND LITERATURE

2.1 Brand attachment

In the context of brands, consumers have innate connections that allow them to connect and establish links with brands. Attachments occur only when the brand is able to develop a strong connection with the "I", and this connection progresses with the evolution of time and based on real or imagined experiences of the individual, of a personal character that originate in turn, autobiographical memories, personalized meanings and trust (Park et al., 2006). Talking about a brand is bringing together elements crucial to its composition, from image, notoriety and loyalty, to customers. A brand is characterized as a symbolic entity that represents cultural (Cardoso & Sousa, 2020), emotional and historical elements with meaning for individuals (Santos et al., 2021; Sousa et al., 2020). In recent years, the brand has managed to become an interpretation of the total consumer experience that the company offers its customers (Kotler et al., 2017; Rossi et al., 2022). Semprebon and Prado (2016) found that the relationship established between brands and consumers results from a basis of trust and commitment, mostly of an affective and emotional nature, thus contributing to the preference for a particular brand. Brands perform numerous functions for consumers, which result in benefits for the strengthening of the brand-consumer relationship (Santos et al., 2021).

In a particularly affective context, the term brand attachment, it is difficult to confine this concept to just one definition, since there were several already presented by several authors, however, in general it is possible to say that the term suggests the development of a "love" between the consumer and the brand (Chinomona, 2013, p. 1305). According to Belaid & Behi (2011), the brand attachment as a construct is considered fundamental in the representation of the affective components in the consumer-brand relationship (Belaid & Behi, 2011; Malar et al., 2011; Sousa & Rocha, 2019; Vieira & Sousa, 2020). Park et al. (2006) refers that the term brand attachment can be defined as "the cognitive and emotional attachment that connects a given brand to the self" (Park et al., 2006, p. 5).

Brand attachment triggers intentions whose intention will be to perform behaviours using consumer resources, namely time, money and reputation (Park et al., 2010). For instance, Santos et al. (2021) concluded that the role of emotion and attachment in tourism has received increasing recognition in the field of tourism and marketing (Christou & Chatzigeorgiou, 2020), affirming itself as a good predictor of some types of behaviour: "emotions establish a strong importance in the comprehension of consumer behaviour and even the definition of experiences and also enhance consumer reactions and on tourist" (Prayag et al., 2013, p. 119). Emotions have a crucial role and impact in memorable tourism experiences, from travel planning to the recall of their memorable tourism experiences, in overall representations of tourism experiences (Nella & Christou, 2016; Baggio and Valeri, 2020; Valeri, 2016; Valeri and Baggio, 2020). According to Thomson, Macinnis and Park (2005), the attachment varies essentially through strength, that is, stronger attachments are related to stronger feelings as well, namely at the level of connection (emotions of attachment and attachment), affection (emotions like love, friendship and passivity) and passion (emotions of enchantment, fascination and attraction). However, Park et al. (2010) adds that in the measurement of attachment, joy, excitement, pride, contentment, relief, nostalgia, or other element that identifies with the individual's memories must also be included. In this way, it can be inferred that the attachment, through the evidenced components, manifests an emotional connection in the individual similar to love.

Regarding the growing importance in the development of the connection between the consumer and the brand, it is essential that marketers know and understand which factors affect the brand attachment (Japutra et al., 2014). In their study, the authors realized that the brand attachment can be defined based on three dimensions: emotions, self-connection and importance, which allowed the definition of six determinants of brand attachment: self-congruence, experience, responsiveness, quality, reputation and trust. In this way, the more affection the consumer is to a brand, the more he will be able to transform and control the relationship with the brand (moving from an egocentric to a reciprocal way), in such a way that allows the sharing of resources with brand (Park et al., 2010).

Tsai (2011, p.523), attests four assumptions that make up the brand-consumer relationship: (1) the existence of physical attraction between the consumer and the brand; (2) the brand and the consumer were made for each other; (3) the brand encompasses the ideal image that the consumer has of himself; and (4) the consumer feels desolate if the brand is not available.

2.2 Pet-friendly segment

The pet-friendly concept was initially created to designate the "holiday destination where pets are allowed" and later, it was adapted and generalized to all services dedicated to this segment, thus conceptualizing "accommodation properties that may allow certain types of animals pets to accompany owners during their stay or some places may allow animals inside the housing or have appropriate fences to protect animals" (Kirillova et al., 2015, p. 26). The number of services that accept the presence of pets worldwide is increasing, and go beyond the accommodation service, so it can be seen that a pet-friendly service can be any that is intended to allow the presence of the animal in a given space. These places can be shopping centers, shops, restaurants, cafes, leisure parks, beaches, owners' workplaces, airports and air travel, among others. Pets have become significant in human lives, as the numbers of pet owning population are continuously growing, this fact occurs because they provide companionship, friendship, love and affection in a sense of family members.

This relation between animals and humans, has shown that holidaying with dogs or cats can provide a variety of benefits for owners and their pets (Dashper, 2020). As the traditional image of vacations for humans with pets, was going somewhere and leave the pets with family or friends, but as the world changed, so as the definition of vacation with pets. Pet-friendly tourism is a new trend that has been developed along the years and since it is also recent, is constantly changing and growing into different groups of services inside the big tourism idea.

"People have more attention and care when it comes to their pet's health and well-being, just as they do with a family member or yourself" (Daneshvary & Schwer, 1993, p.25). According to Belk (1988, p.155), the pet segment (animals) is usually considered as an important part of their owner's life, in such a way that they interfere in their emotions as much as a person, a brand or an object. Holbrook (2008) states that pets are remarkable creatures, which should not be seen as a material asset in the sense of ownership and possession for humans, but as a faithful companion with whom it is possible to share and experience activities consumption (such as walking, running, watching TV, listening to music, playing, traveling, eating and sleeping), identical to those that are shared in the relationship between people. Thus, there is an increasing concern for the welfare of animals, hence there are currently numerous adoption campaigns, associations and people willing to contribute monetarily with food or even with a home for an animal in need. In this perspective, the multiplication of people who choose to travel or to be accompanied by their animal during holidays, on trips or even on short walks, such as trips to restaurants or shopping at the mall or other stores, is notorious.

In fact, the number of consumers looking for and enjoying services available that are pet-friendly is increasing, due to the impact and importance that have been given to animals, as well as their care and well-being. Therefore, there has been a notorious increase in sensitivity on the part of the population towards four-legged beings. It is common for owners to call animals, feed and care for them, photograph them, spend money on goods and accessories, talk to them, protect them, play and even sleep with them (Holbrook, 2008). In light of this, Holbrook and Woodside (2008) argue that these attitudes, especially monetary expenditures (sometimes excessive), are very much related to investment in the affective relationship. People spend more and more time, money and affection with animals (Toloni & Duque-Estrada, 2017).

Animals play a variety of roles in the daily lives of individuals, whether at family or social level. In addition to transmitting attachment, affection and loyalty, animals can exercise functions of partnership and help for the human being, while guard or hunting dogs, also performing police and rescue work, even as guides for people with special needs (Alves & Sousa, 2022). As a consequence of the development of the human-pet relationship and in view of its percussions, since individuals tend to attribute some characteristics and/or behaviours typically human to animals (Kielser, 2006).

The pet friendly market segment is very comprehensive, as it encompasses all the content related to animals and the concept pet-friendly, namely the locations, companies and pet-friendly services. For the context of this research, the existing pet-friendly services in Portugal were addressed, which also include some locations and companies, dedicated to the sector under analysis, which remain in constant evolution, given that the segment is still recent and little studied in Portugal.

The travel and tourism industry has seen an influx of accommodations to support pet-friendly travel, from pet bathrooms in the airport to pet-friendly rental cars and more – traveling with your pet is only getting easier. And when it comes to the latest trends in hospitality and beyond, savvy hoteliers are realizing that the benefits of pet-friendly hotels far outweigh the possible disadvantages or limitations (Dashper, 2020; Alves & Sousa, 2022).

Figure 1: Rules and restrictions of the pet-friendly services

Pet-friendly Service	Rules & Regulations	Restrictions
Four Seasons Hotels and Resorts	▪ Size - Small pets only - under 15lbs ▪ Maximum 2 pets ▪ Pets must be fully trained and appropriately restrained and comply with local legislation requirement. ▪ Guests are responsible for cleaning up after their pets on hotel property and in the neighborhood and responsible for all property damages and/ or personal injuries resulting from their pets. ▪ The hotel reserves the right to charge guest's account commensurate to the cost of such damages.	▪ Pets must not be left unattended, pet-sitter is available upon request. ▪ Not allowed in any food and beverages outlets, health club and pool area, except guide dogs. ▪ Any disturbances must be curtailed to ensure other guests are not inconvenienced.
Sheraton Hotels & Resorts (176 of 196 hotels within North America welcome dogs)	▪ Weigh limit of 80 pounds, but GM's decision is discretion for dog with over weight limit. ▪ Luxurious custom pet services and amenities.	▪ Additional restrictions may be applied
Travel by plane	▪ Some Airlines allow guide and assistance dogs to travel in cabin with owners ▪ Animals usually travel in plane's hold meaning, so owners won't have access to them until arrival ▪ Pets must be microchipped ▪ They must have valid pet passport provided by animal's vet and microchip number must be recorded (e.g. certificate). ▪ For international travel, dogs must have tapeworm treatment (between 1 and 5 days before travel and it should be recorded on the pet passport/ veterinary certificate detailed.	▪ Any animal that enters in UK from outside of EU, must stay four-month in quarantine ▪ Some Airlines have limited number of pets to travel ▪ Pugs and snub nose breeds (i.e. Persian cats and Pekingese dogs) aren't accepted by some Airlines because they have breathing issues when travelling in altitude ▪ Many carriers require owners to use a designated pet travel agent

Source: Adapted from Kongtaveesawas & Namwong (2020); Penson (2013)

In general, the inclusion of animals in families and the proportion they took in terms of affection, dedication and importance for humans, revolutionized the markets in such a way that pets began to be seen as customers and included in various services, many developed especially for this new sector and others adapted to new pet customers. However, the most recent data dates back to 2015 through a study of GfK (GfK Track.2Pets) carried out by GfK 4 in Portugal, which states that "Portugal is a pet-friendly country". This study allowed us to analyse that the number of pets in Portugal has been increasing. According to GfK data, it was found that 54% of homes have at least one pet, which in 2015 represented about 2 million Portuguese homes, out of the total of 3,869 million homes in Portugal that year. Compared to 2011 (44%), there was a gradual increase over a 4-year period, which represents about 9%, according to the consultancy GfK and the study carried out in 2011. GfK estimates that these values were at the base changes in family nuclei and the fact that the population perceives that animals can make a positive contribution to improving their physical and psychological well-being.

The study carried out by GfK in 2015 shows the population more emotionally connected with the animal as a member of the family, both dogs (47%) and cats (49%). GfK also states that there is another trend that stands out: the more humanized treatment of dogs and cats, which culminates in the establishment of a connection that is much more emotional and affective than functional. To sum up, the GfK (2015) also presents, in another complementary study, the ranking of European countries with more pets. Portugal is in the 12th place in the ranking, with Russia at the top, followed by France, Italy, Germany and the UK. To sump, worldwide, the USA (United States of America) emerges as the most pet-friendly country, given that they have a greater number of pets, about 65% of homes have at least one animal, on average.

2.3 Formulation of hypotheses

Brand satisfaction is the culmination of the consumer's initial expectations and the brand's performance after purchase. Satisfaction is a function of consumer expectations (Sharma, 2020). Also Levy and Hino (2016), state that consumer satisfaction comes from the result between their expectations before using the product, the performance of the product and their level of satisfaction after the initial expectations. Carroll and Ahuvia (2006) state that satisfaction corresponds to a cognitive judgment that results as a specific consequence of a transaction. Although satisfaction and quality of service are similar concepts, there are factors that distinguish them, since the quality of the service represents the result of the consumer's perception of a service and its respective provision in accordance with the aspects defined for the service by the consumer (Levy and Hino, 2016). Belaid and Behi (2011) explain satisfaction through a cognitive and affective response; as well as, a consequence of product evaluation, through product characteristics and/or product consumption experience; and it occurs before or after the choice, after consumption (transactional satisfaction) or after a long experience (relational satisfaction). Thus, an individual who is emotionally connected to a brand is likely to be satisfied with it (Pereira et al., 2021; Pina & Dias, 2021; Thomson et al., 2005).

Trust of consumer in a brand is considered a key aspect in the development of the brand attachment (Chinomona, 2013; Levy & Hino, 2016). The trust is influenced by consumer satisfaction and, in turn, by consumer loyalty (Levy & Hino, 2016). In the view of Belaid and Behi (2011), the concept of trust in the theory of the relationship between the consumer and the brand, may go beyond satisfaction (functional performance). The author explains that trust should not be perceived as a prerequisite for brand attachment, however, it plays an important role in extolling this affective bond.

Commitment presents solidity, robustness and stronger stability in relation to a brand, than an attitude in general (Caceres & Paparoidamis, 2007). According to Hess and Story (2005), the term commitment is used to describe the consumer's final disposition in relation to the brand, namely their beliefs, attitudes and behaviours in relation to the brand. Commitment plays an important role, as it stabilizes behaviour over time, thus becoming an indispensable component of loyalty (Caceres & Paparoidamis, 2007).

Loyalty is described as a behavioural and attitudinal concept, and is also referred to as a repetition in the consumer's behavioural buying attitude towards a given brand (Belaid & Behi, 2011). Consumer loyalty to a service can be defined as “the degree to which the customer has repeated buying behaviour towards a company, has a positive attitude towards the brand or service provider, in such a way that it commits itself to use this brand whenever you need this service” (Gremler & Brown, 1996, p. 173). Therefore, customer loyalty allows companies to understand and analyze which elements of the company's marketing mix the customer values most when purchasing (Othmana, et al., 2019).

Drawing on the previous findings, the set of hypotheses is as follows (table 1):

Table 1: Postulated hypotheses

Hypothesis 1a	Brand attachment has a positive relationship with consumer confidence
Hypothesis 1b	Brand attachment has a positive relationship with the consumer's commitment
Hypothesis 1c	Brand attachment has a positive relationship with consumer loyalty
Hypothesis 1d	Brand attachment has a positive relationship with consumer satisfaction
Hypothesis 2a	Consumer confidence has a positive relationship with consumer loyalty
Hypothesis 2b	Consumer confidence mediates the relationship between brand attachment and consumer loyalty
Hypothesis 3	Consumer commitment has a positive relationship with consumer loyalty
Hypothesis 4a	Service quality has a positive relationship with consumer loyalty
Hypothesis 4b	Service quality has a positive relationship with consumer satisfaction
Hypothesis 5	Satisfaction has a positive relationship with consumer loyalty

3 METHODOLOGY

3.1 Procedures and sampling

The questionnaire was carried out online to respondents between 1 and 31 May 2020, through the use of a random sample and targeted at the national population in general. The construction of the conceptual model used in this study resulted in the adaptation of two models previously studied and tested in the studies of Belaid and Behi (2011) and Levy and Hino (2016). The questionnaire was structured within four parts. In the first part, two initial questions were asked, which sought to find out if the respondent has any pets, in order to be able to answer the remaining questions continuously or, if the answer is negative, he was asked to proceed to the last part of the survey, referring only to the profile of the respondent. In the second part, all variables under study of the conceptual model and their respective mediation scales were aggregated. For this purpose, the Likert-type scale was used, designed to measure multiple items in relation to a service. In the third part, questions were asked related to the behavioural aspect of the consumer vis-à-vis the pet-friendly service, and finally, the fourth and last part of the questionnaire presented questions related to the sociodemographic profile of the respondents.

3.2 Sample

Regarding the comparison of gender and individuals who claim to have pets. It was found that 104 (68%) are female and 49 (32%) are male and, of those who claim not to have pets, 22 (59.5%) are female and 15 (40, 5%) are male. Thus, it can be concluded that there are no differences with regard to gender, between individuals who have pets, from those who claim not to have.

As for the age group of the 190 respondents, there can be a diversity of responses for the stipulated age groups, with the majority of respondents, 59, aged between 36 and 45 years (31.1%). It follows the age group between 26 and 35 years of age, to which 56 respondents (29.5%) refer, 36 (18.9%) of the respondents represent the age group of 46 to 55 years, followed by the age group from 18 to 25 years old, composed of 27 (14.2%) and, finally, 12 respondents are older than 55 years old (6.3%). On the other hand, the number of respondents who do not have pets in the majority is between

26 and 35 years old, which may be related to the factor of personal and professional stability and independence.

As for the educational qualifications of the respondents, it can be seen that, in general, 3 (1.6%) have studies up to the 9th grade, 49 (25.8%) are those with only secondary education and 20 (10.5%) of the respondents have vocational education. It is also observed that the majority of respondents, 71 (37.4%) have a degree and 47 (24.7%) hold a postgraduate degree, a master's degree and / or a doctorate. With regard to the respondents' housing, it appears that only 50 (26.3%) claim to live in an apartment and the majority, 140 (73.7%) stand out to live in houses.

Respondents who claim to have pets, live mostly in houses making up 123 (80.4%) of the total, while only 30 (19.6%) live in apartments. However, those who claim to have no animals, are distributed evenly in housing, 17 (45.9%) and apartment, 20 (54.1%).

With regard to the respondents' job, it is possible to see, that there is a predominance between the health and well-being sector with 30 (15.8%) respondents, education with 41 (21.6%) and other professions 31 (16.3%). It is also verified that 22 (11.6%) belong to the hotel and restaurant sector, 10 (5.3%) to commerce, 5 (2.6%) are from domestic services, 23 (12.1%) operate in public administration, 15 (7.9%) in financial services, 11 (5.8%) in the textile sector, and only 2 (1.1%) are unemployed. 153 of the 190 respondents claim to have a pet (80.5%) and 37 claims to have no pet (19.5%). In view of this, there were several reasons given by individuals who claim not to have pets, of which they stand out mainly: the lack of space at home, mostly in the case of those who live in apartments; the lack of time to dedicate to the animal; health problems of household members, such as asthma; difficulties in the family budget; and also, the fact of living in a rented house and not being allowed to have animals, among others. In turn, of the 153 respondents who claim to have pets (80.5%). In addition, 56 respondents have 1 pet (36.6%), 51 respondents have 2 animals (33.3%), 22 are those who have 3 animals (14.4%), 10 respondents have 4 animals (6.5%), 4 are who have 5 animals (2.6%), as are 4 who have 6 animals. Then there are 2 respondents with 7 animals (1.3%), as 2 respondents have 8 animals and finally, 1 of the respondents has 9 animals (0.7%) and 1 of the respondents has 10 animals (0.7%). In view of this, it can be concluded that, mostly and on average, respondents have 1 or 2 pets.

4 RESULTS AND DISCUSSION

To test our measurement model, data was analysed using the SmartPLS 3.2 (Ringle et al., 2015). The assessment of the model involves calculating the reliabilities of the individual items as well of each latent variables, internal consistency (Cronbach alpha and composite reliability), convergent validity through average variance extracted (AVE) and discriminant validity using the Fornell-Larcker criterion and heterotrait-monotrait ratio (HTMT) criterion (Hair et al., 2017).

Regarding the individual items, the results revealed that the standardized factor loadings were above 0.6 (with a minimum value of 0.867; $p < 0.001$) as suggested by Hair et al. (2017). By estimating the values of Cronbach alpha and composite reliability (Table 2) we verified that these indicators surpassed the threshold of 0.7 (Hair et al., 2017).

Table 2: Composite reliability, average variance extracted, correlations, and discriminant validity checks

Latent Variables	α	CR	AVE	1	2	3	4	5	6
(1) Brand attachment	0,850	0,900	0,699	**0.836**	0,887	0,885	0,883	0,764	0,824
(2) Consumer confidence	0,956	0,968	0,882	0,835	**0.939**	0,882	0,829	0,866	0,855
(3) Consumer commitment	0,913	0,938	0,792	0,798	0,847	**0.890**	0,853	0,837	0,887
(4) Consumer loyalty	0,948	0,962	0,865	0,826	0,885	0,891	**0.930**	0,886	0,823
(5) Service quality	0,961	0,972	0,895	0,728	0,830	0,788	0,847	**0.946**	0,832
(6) Consumer satisfaction	0,944	0,960	0,857	0,857	0,907	0,846	0,874	0,793	**0.926**

Note: α -Cronbach Alpha; CR -Composite reliability; AVE -Average variance extracted.

Bold numbers are the square roots of AVE. Below the diagonal elements are the correlations between the constructs. Above the diagonal elements are the HTMT ratios. Convergent validity was assessed by calculating the AVE for each constructs which were higher than 0.5, thus proving support for convergent validity (Bagozzi & Yi, 1988). The discriminant validity followed a two-step approach. First, we used the Fornell-Larcker criterion requiring that the square root of AVE (corresponding to the diagonal in Table 2) is superior to the biggest correlation with any construct (Fornell & Larcker, 1981). Second, we estimated the HTMT criterion which was inferior to 0.9 (Gold et al., 2001). All the HTMT values were bellow this value, assuring the discriminant validity of the constructs.

To assess the quality of the structural model several tests were conducted. First, we tested the collinearity by estimating the VIF values, which ranged from 1.00 to 3.52, bellow the cut-off value of 5 (Hair et al., 2017), indicating no collinearity. Second, the R2 value was calculated for each endogenous variable: consumer confidence, consumer commitment, consumer satisfaction, and consumer loyalty. The values were 69.8%, 63.7%, 79.6%, and 87.9%, respectively, surpassing the threshold value of 10% (Falk and Miller, 1992). Third, we also estimated the Stone Stone-Geisser's Q2 values for the four endogenous variables (0,599, 0,469, 0,740, and 0,657 respectively) which appeared all positive revealing the model's predictive relevance (Hair et al., 2017).

To test the hypotheses, we conducted a bootstrapping test with 5,000 subsamples to evaluate the significance of the parameter estimates (Hair et al., 2017). The results in Table 3 show that brand attachment has a significantly positive effect on consumer confidence, consumer commitment, and consumer satisfaction (β =0.835, β =0.798, β =0.594, respectively, all significant at $p < 0.001$). However, the relationship between brand attachment and consumer loyalty (β = 0.111, n.s.) was not supported.

These results provide support for H1a, H1b and H1d, respectively. Consumer commitment has a significantly positive relation with consumer loyalty (β = 0.358, $p <$ 0.001), which supports H3. H2a was not supported since the relationship between consumer confidence and consumer loyalty is not significant (β = 0.177, n.s.).

Table 3: Structural model assessment

Path	Path coefficient	Standard errors	t statistics	p values
Brand attachment → Consumer confidence	0,835	0,034	24,637	0,000
Brand attachment → Consumer commitment	0,798	0,043	18,764	0,000
Brand attachment → Consumer loyalty	0,111	0,070	1,572	0,117
Brand attachment → Consumer satisfaction	0,594	0,068	8,728	0,000
Consumer confidence → Consumer loyalty	0,177	0,124	1,426	0,154
Consumer commitment → Consumer loyalty	0,358	0,087	4,130	0,000
Service quality → Consumer loyalty	0,234	0,058	4,058	0,000
Service quality → Consumer satisfaction	0,361	0,072	5,045	0,000
Consumer satisfaction → Consumer loyalty	0,130	0,098	1,332	0,184

Service quality has a significantly positive relation with consumer loyalty ($\beta = 0.234$, $p < 0.001$) and consumer satisfaction ($\beta = 0.361$, $p < 0.001$). These results provide support for H4a and H4b, respectively. The relationship between consumer satisfaction and consumer loyalty has no significance ($\beta = 0.130$, n.s.), thus H5 was not supported.
To test the mediation hypothesis (H2b), we followed the recommendations of Hair et al. (2017; p. 232). Thus, we used a bootstrapping procedure to test the significance of the indirect effects via the mediator (Preacher & Hayes, 2008). Table 4 presents the results of the mediation effects.

Table 4: Bootstrap results for indirect effects

Indirect effect	Estimate	Standard errors	t statistics	p value
Brand attachment → Consumer confidence → Consumer loyalty	0,286	0,074	3,879	0,000

The indirect effects of brand attachment on consumer loyalty via the mediator of Consumer confidence is significant with $\beta = 0.286$ ($p < 0.01$). This result provide support for the mediation hypothesis H2b.

5 CONCLUSIONS

It has been proven that the brand attachment plays a crucial role in the performance of the affectivity created by the consumer in relation to specific pet-friendly services. This new segment in tourism industry can be benefited by the potential lucrative market of pet-owning population, specifically in hotel accommodation and this fact can be an obvious advantage for hotels to become pet-friendly, because booking showed the increasing in reservations for this market. When it comes to hospitality, accept pets and being a pet-friendly unit, became a customization strategy in some big chains hotels, due to their potential influences in on the industry service pattern (Kongtaveesawas & Namwong, 2020).
The results obtained in this study allowed us to understand that the decision-making process of choosing consumers in relation to pet-friendly services in Portugal is considered and is based on some characteristics related to the available offers and what the consumer is looking for, namely in terms of safety, quality, comfort hygiene, among others. In turn, the variables under study made it possible to understand and determine that the brand attachment has a major contribution in the decision-making of consumers, given that it has an influence on trust, satisfaction and commitment in greater weight than in relation to loyalty. However, it was found that consumer loyalty results from the influence of the variables satisfaction, trust, commitment and the quality of the service that had the greatest weight on this variable, which allows us to realize that consumers feel more loyal to a given service, if it is of higher quality and care when it is provided. Considering the possible services to be developed in this segment in Portugal, the following stand out: libraries and gyms that allow animals to enter, more beaches and more adapted to animals, public outdoor training parks.
The main limitation of the investigation falls on the sample used, since of the 190 respondents, only 153 said they have pets, the applicability of the model was made based on this number. Conversely, the number of respondents who reported not having pets was also reduced (N = 37). Another limitation concerns the way in which the survey was made available, since initially the intention would be to physically distribute the survey in stores and pet-friendly services, this was not possible due to the situation of the pandemic crisis COVID-19, during data collection was collected. Thus, the survey was only made available online. Even so, a larger sample could allow a greater number of responses in both situations described. Regarding future research, in the scope of comparison, it is suggested to develop the study in comparison to two pet-friendly countries, for example between Portugal, where the concept is still new and growing, and France, which is one of the countries more in vogue with regard to the pet-friendly segment.

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Structural review of relics tourism by text mining and machine learning

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Abstract:

Purpose: *The objective of the paper is to find trends of research in relic tourism-related topics. Specifically, this paper uncovers all published studies having latent issues with the keywords "relic tourism" from the Web of Science database.*
Methods: *A total of 109 published articles (2002-2021) were collected related to "relic tourism." Machine learning tools were applied. Network analysis was used to highlight top researchers in this field, their citations, keyword clusters, and collaborative networks. Text analysis and Bidirectional Encoder Representation from Transformer (BERT) of artificial intelligence model were used to predict text or keyword-based topic reference in machine learning.*
Results: *All the papers are published basically on three primary keywords such as "relics," "culture," and "heritage." Secondary keywords like "protection" and "development" also attract researchers to research this topic. The co-author network is highly significant for diverse authors, and geographically researchers from five countries are collaborating more on this topic.*
Implications: *Academically, future research can be predicated with dense keywords. Journals can bring more special issues related to the topic as relic tourism still has some unexplored areas.*

Keywords: *Text analysis, machine learning, artificial intelligence, topic modelling, relic tourism.*

JEL Classification: *Z00, Z11, Z32*

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1 INTRODUCTION

Relics are historical objects that carry cultural value and relevance even in modern times despite having no current use (Cambridge Dictionary, 2021; Mugobi & Mlozi, 2021). They are the mirrors of the past for everyday people. The cultural influence of relics lies in people still believing in their importance (Alonsopérez et al., 2022). The belief and existence in cultural folklores are the foundation of tangible heritage for humanity. Their conservation is always a topic of concern as the process is very time-consuming, and finance is always concerned. Restoration and protection of relics directly impact cultural and heritage tourism (Cerquetti & Ferrara, 2018; Manosso & Domareski Ruiz, 2021).
Tourism research has progressed significantly and is now recognized as a distinct and diversified management sector (McKercher, 2018). Academic research journals on tourism

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pump new life into the already crowded cauldron of management research, showing tourism research's diversity and evolution as a distinct academic discipline (Cripps, 2021; Scholtz & De Ridder. 2021). So, the topic "relics tourism" has gathered significance in the last two decades. Relics tourism is closely associated with cultural and heritage tourism in many aspects and is represented as a part of the culture in most tourism research. So, to understand the trends and explore all possible importance of different related topics in this subject, the authors investigate this topic.

Furthermore, McKercher (2018) stated that any new research targeting tourism management must enhance new avenues and explore hidden areas. Various scholars reviewed different aspects of tourism research to lend a helping guide for researchers and industry insiders (Manosso & Domareski, 2021; Mugobi & Mlozi, 2021; Sinclair-Maragh & Simpson, 2021; Daskalaki et al., 2020). There is no structural review of "relics tourism" available, which can help future researchers explore hidden areas linked with cultural and heritage tourism. So, here the researchers try to examine central databases for papers related to relic tourism.

According to McKercher (2018), researchers of different universities aim to publish approved journals in SSCI (social science citation index) to get more reach and enhance their reputation in the research fraternity. So, here we also believe that publications indexed in SSCI can give prominence to the published study and enrich the importance of authors. So here, we believe that indexing a journal in SSCI can significantly alter the course of published research in the journal and the authorship structure. Web of Science is the best source for SSCI journals. Thus, the Web of Science database is explored, and the authors collected papers mainly focused on relic tourism. So, here the researchers intend to

a. Identify the topics and their unexplored relations in all publications by text classification modeling using ML
b. Highlight prominent researchers and their network by bibliometrics analysis using Vos viewer.

The enormous amount of research papers available on the Web of Science is not the only problem; the more significant obstacle is a lack of other methodological rigor in the systematic review. Too many replication studies are available with different representations (Pratt et al., 2019). Most authors use Vos viewer software and bibliometrics to study citation, authorship, keywords, and geographical distribution of authorship. But besides all these, there is a strong need to explore the trends and patterns that text mining and ML applications can explore. ML tools help give more accuracy to information analysis as they have no biases in human judgment. The output of AI and ML-based text mining for reviews of research articles will have fewer critical errors. Here, we don't intend to say that text mining based on ML is devoid of all limitations or the best way to analyze. Here, we tried to give a more precise, unbiased output that will differ from all the existing tools that can be more explored. The AI tools use all the organic inputs which humans entered. ML analyzes these inputs to give a more unbiased output. AI took human entered data for learning and repeated the prejudiced organic thought that we popularly call ML analysis (LaGrandeur, 2020).

Recent developments in ML applications capture researchers' attention. In recent years scholars have started to use ML to review the literature and explore hidden trends ((Cabitza et al., 2018; Sabahi & Parast, 2020). With AI and ML, researchers can conduct many text analyses and explore the complexities of information (Hamel et al., 2020). We can use classical bibliometrics analysis to explore the authorship, citation, keywords, geographical distribution, and co-authorship. But here, the authors want to explore the available research of "relics tourism" by text mining methods with the help of various tools of artificial intelligence (AI) and machine learning (ML). Here, the authors do not suggest that all the systematic review research should be done by AI and its ML tools replacing the human element of research. Instead, researchers of this study emphasize exploring AI and ML tools to explore text mining and bring out hidden patterns of social science studies.

Since social science, especially management and tourism research papers, are very diverse, future researchers should try AI and ML tools to explore and get output with less ambiguity. These AI and ML tools are predominantly used in medical imaging research to produce more specific results (Hamel et al., 2020). So, social science research will open new avenues if these tools are used to clarify topic identification. Our manuscript intends to explore this research gap of not having more structural and systematic reviews of papers in relic tourism and no previous use of text mining in such subjects by AI and ML tools. Generally, researchers explored heritage tourism by cultural aspect where they studied religious places, monuments, arts, history, dark events, and placed of cultural importance. But significantly relics tourism is not studied so much as compared to other aspects of heritage tourism.

We may say this area of heritage tourism is subsided under dark tourism or cultural heritage when this aspect has its own identity and significance in overall field of heritage tourism. Here in this study, we argue that tourism scholars will benefit from the evidence-based explanation of current keywords, patterns of topics, and network analysis for relics tourism. Our research results will help new and experienced researchers get more insights into using text mining techniques to identify trends and topics. This study will add more valid and reliable output to relic tourism studies. Researchers of cultural and heritage tourism who have less knowledge of ML and its use for text mining can also learn how to use the tools to explore patterns, topics, and keyword clusters in future studies. Here we review 109 articles from tourism indexed by the Web of science to demonstrate the text analysis. This analysis is done with the help of AI's ML tools, which are slowly capturing the researchers' logical minds rapidly. We are sure they will contribute significantly to the existing studies in the future. Our research will add more food for thought to tourism research and bring more opportunities to researchers in various related fields.

2 OVERVIEW OF TEXT MINING WITH ML AND AI

The recent developments in various research databases, web technologies, and digital documentation techniques due to AI and ML advancements attract the attention of researchers. Various researchers use text mining (TM) to explore hidden research trends in a particular area (Indurkhya, 2015). But TM techniques face the biggest obstacle in meeting the standards of natural language processing (NLP). Researchers consider text mining with the ever-growing demand to extract information from texts stored in digital resources (Haq et al., 2019). Manually it isn't easy to remove and analyze the texts. The availability of textual information from various research databases makes the analysis difficult manually or with software like Vosviewer. Though Vosviewer helps in network analysis for bibliometrics, it cannot determine the trend of research and keywords pattern (Salloum et al., 2017). It is now common to assume that AI can be the best alternate replacement for all human activities (Pi & Fan, 2021). Theoretically, researchers argue that a considerable amount of data can be analyzed by ML tools, but the complexity of interpretation can only be productive with human orientation (Zanzotto, 2019). Machines in the near past showed that they are catching up with the complex cognitive process of humans, like playing chess and making routing decisions. So, soon, machines may catch up with the decision-making ability of humans and more effectively perform a better analysis of massive data (Zuluaga et al., 2016). Due to rapid advancements in computation and data analysis, AI technologies with ML tools are better equipped to analyze, understand, and predict human textual language (Blanco-Ruiz et al., 2020). Despite a dynamic application in medical imaging literature studies, AI still finds itself in nascent social science and tourism (Watanabe et al., 2020). NLP and ML can significantly apply to systematic review studies (Porciello et al., 2020). NLP helps extract relevant academic studies from databases, and ML uses its tools for topic trend analysis. So, AI always helps study the trends of topics and keywords by text mining with tools like NLP and ML.

2.1 Text mining literature tools

a. Extraction of Information

It is the first step where researchers extract relevant information from the unstructured research articles (Linn, 1996). This step follows pre-defined text arrangements by matching the pattern. Here, researchers will select appropriate articles and link them with cooperative association with the terms (Waqas et al., 2018). Here researchers discover and collect information by differentiating relevant text, extracting the pertinent data, and converting them into functional forms (Krótkiewicz, 2018).

b. Discovery of Suitable Text

The Discovery of suitable text (DoscoText) is the most critical aspect of text mining. It gathers structured data from unstructured texts (Clifton et al., 2004). Authors use tools of knowledge discovery from databases of research (KDD) to get structured, relevant data that can help in analysis ("Information Extraction from Text Using Text Mining," 2020). Authors use keyword extraction to classify text, make cluster terms, summarize topics, and give a pattern of the used terms ("Text Mining Technique for Driving Potentially Valuable Information from Text," 2020).

c. Text Analytics

Text analytics is an automated process that helps to interpret a large amount of unstructured text into qualitative data, especially for uncovering insights, trends, and patterns (Lakshmi & Baskar, 2021). The amalgam of text analytics and visualization tools better understands the problem and accommodates fruitful decision-making (Ren & Han, 2018). In this work, we apply text analytics to generate the word cloud and plot the most frequent terms used in the abstract and title (Yusuf et al., 2017). The word cloud is the visual representation of the words associated with the text data. It is also used to highlight the words as per their frequency and relevance (Shivakumara et al., 2021). The steps of text analysis follow the specific steps mentioned below.

I. Fetch word count from title and abstract: After successfully importing the dataset, both the words in the abstract and title must be counted. A lambda function is used to count the number of words. A lambda function is a small function that contains single expressions and can also act as an anonymous function where it doesn't need any name (Porter et al., 2020). The Lambda function consists of three parts: 1) keyword, 2) bound variable 3) expression. In this study, this function is deployed to fetch the number of words in every abstract and title (Lehr, 2019).

II. Stopwords: Stopwords are a filter-out technique for natural language processing (Rüdiger et al., 2017). It is a technique that is used to pre-process the collected text. It helps to remove the most common words, such as prepositions and articles that do not have significant meaning in the text (Antons et al., 2020). In this step, we created a list of customs stopwords such as using, show, large, one, one, two, new, previous, and shown to set up a dictionary (Sarica & Luo, 2021).

III. Remove the punctuations and special characters: The next step of text pre-processing initially converts all lower cases and removes the punctuations and characters. Afterward, tokenization is applied to convert strings into a list and remove the stopwords (Jatain, 2020). Stemming and lemmatization help remove the -ing, -ly and reclaim the word into root words. Again, in the final step, convert lists into strings (Sohrabi & Khalilijafarabad, 2018).

IV. Word Cloud: It is a technique of visual representation of keywords depending on their structured frequency (Jayashankar & Sridaran, 2016). It is a prevalent method and is primarily acceptable by researchers. It is used to extract words from texts and help in detailed analysis. It also provides text and structured information (DePaolo & Wilkinson, 2014). It is more statistical than linguistic, allowing for summarization and providing little correlation among data (Sinclair & Cardew-Hall, 2007).

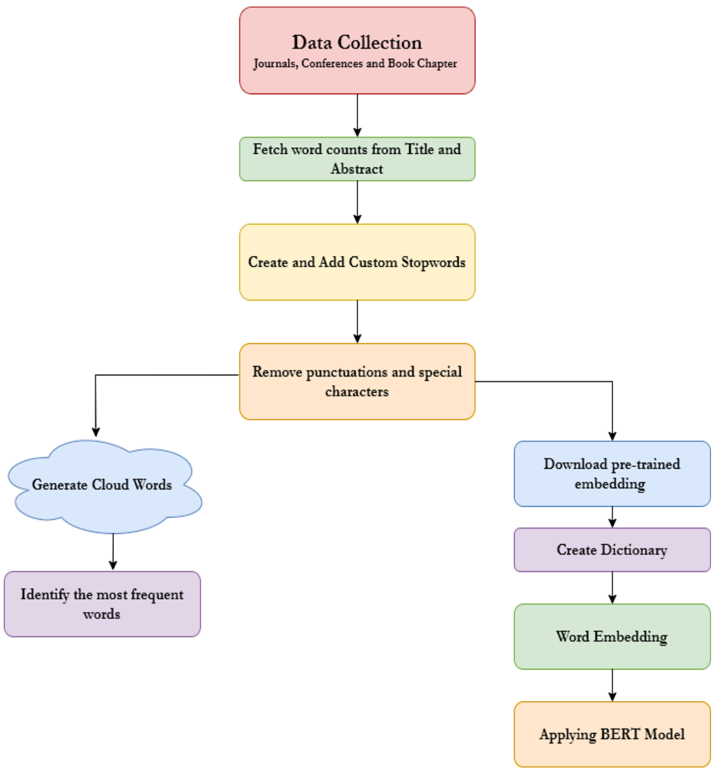
Here in this study, the authors observed that collecting and extracting information from the database has a limited scope with Vos Viewer-based literature review research papers. So, here we tried to employ text mining and some ML tools to extract patterns in keywords and project a holistic output (Albashir et al., 2020). Tourism and hospitality research has shown many enhancements in the last two decades. Many research articles are published, and journals have an upward journey for their impact and popularity. But in the scope of tourism, relics tourism has minimal research. Mostly they are related or embedded in culture or dark tourism. So, here we focus on relics tourism to extract more unexplored areas where researchers and journals can explore more. After carefully analyzing the available articles and literature in the Web of Science database for this study, the researchers assume that extraction of information and text mining tools were not applied to tourism. It demands a requisite effort where all the articles need to undergo text mining to explore published topics and trends which can help industrial practitioners. Researchers want to explore the following research questions:

RQ1: What is the Word Cloud for titles & abstracts of all extracted publications?
RQ2: What high-frequency keywords are used in all extracted publications collected from Web of Science in their titles and abstracts?
RQ3: What are the MLM (Masked language modeling) & Next Sentence Prediction (NSP) in relics tourism?
RQ4: Who are the prominent authors, and how does network analysis relate to them?
RQ5: What are the co-citation and citation networks among prominent researchers?

3 METHODOLOGY

For this study, researchers adopted the following architecture to identify the most frequent words used in the published relics tourism indexed in the Web of Science database. We use a combination of text analysis, text extraction, and text classification using AI models (Kabir et al., 2018). Two different approaches are used in this study: 1) Text Analytics and 2) BERT-based Text Classification.

Figure 1: Architecture of the proposed text miningsSolution



Source: Authors' conception

3.1 Data collection

Researchers accumulated all the research publications from the Web of Science. We found 143 articles with the keyword "relics tourism." Out of 143 papers, we exclude 34 from physical science backgrounds to reduce linguistic noise using the RapidMiner tool. Most search tools use text classification, an unsupervised learning technique that enables them to sort documents into different categories. For instance, they can create a vector representation of a document that contains a set of unique words. For example, if a paper has a value of 0.5, it has a better chance of being categorized into a specific category. Through its algorithm, RobotAnalyst learns to classify each article according to its coefficients.

The screening process aims to recommend relevant academic literature based on the interaction between humans and the documents they encounter. This process uses text classification techniques to classify the articles according to their coefficients. A logistic regression model analyzes the results to predict new papers' relevance with the information collected. An example of this process is Rayyan, a tool researchers use to find relevant documents. Rayyan learns by analyzing the data it has collected. Once it has enough data to learn about the topic, it can recommend the most relevant papers based on the researcher's initial selection. Data extraction is a process utilized by machine learning programs to find and understand the text in documents. ML techniques then add tags to the words extracted from the papers. This process is referred to as data extraction. Aside from searching, robotreviewer also provides various tools for data extraction.

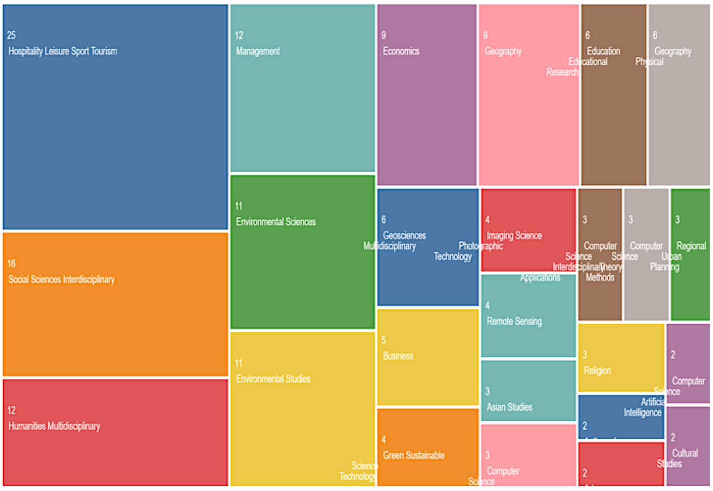
Table 1: All categories of publications considered for this study

Serial No.	Web of Science Categories	Record Count	% Of 109
1	Hospitality Leisure Sport Tourism	25	22.936
2	Social Sciences Interdisciplinary	16	14.679
3	Humanities Multidisciplinary	12	11.009
4	Management	12	11.009
5	Environmental Sciences	11	10.092
6	Environmental Studies	11	10.092
7	Economics	9	8.257
8	Geography	9	8.257
9	Education Educational Research	6	5.505
10	Geography Physical	6	5.505
11	Geosciences Multidisciplinary	6	5.505
12	Business	5	4.587
13	Green Sustainable Science Technology	4	3.67
14	Imaging Science Photographic Technology	4	3.67
15	Remote Sensing	4	3.67
16	Asian Studies	3	2.752
17	Computer Science Information Systems	3	2.752
18	Computer Science Interdisciplinary Applications	3	2.752
19	Computer Science Theory Methods	3	2.752
20	Regional Urban Planning	3	2.752
21	Religion	3	2.752
22	Anthropology	2	1.835
23	Art	2	1.835
24	Computer Science Artificial Intelligence	2	1.835
25	Cultural Studies	2	1.835

Source: Web of Science

Finally, after cleaning the data, we got 109 articles. Here, researchers limit all the irrelevant characters to increase data quality. In this study, the authors first used tokenization to divide documents into tokens. In the next step, researchers apply the transformation process by creating the title of articles in lowercase. In the third step, authors filter stopwords. Each token signifies a single English word. Authors remove similarities between token and stopwords with the operator's help by arranging one-stop word per article line. In the final step of the text mining process, researchers filter tokens as per length, where the minimum characters for a token are four and the maximum is twenty-five. Table 1 and figure 2 represent all the publication categories considered for this study.

Figure 2: Tree diagram of considered publications



Source: Web of Science

4 EXPERIMENTAL FINDINGS

After applying various text mining tools to all the extracted research publications, we got our desired results. Nevertheless, their tools have not yet been used in the publications concerned with relics tourism. So this reason makes this study and its findings unique and gives much value to the tourism research fraternity.

RQ1: What is the Word Cloud for titles & abstracts of all extracted publications?

A cloud is a collection of numerous words based on the frequency or importance of every expression referred to as a word cloud. Some literature points mainly to tourism, relics, and culture are more significant than the other words in the cloud. We can generate the word cloud for the "Abstract" and "Title" based on affiliation. Figure 3 and Figure 4 represent the word cloud for the "Title" and "Abstract," respectively. The keywords cloud is substantial because the frequency of the word in the text is either in "Title" or "Abstract." It is directly proportional to the size of the word in the cloud.

Figure 3: "Title" word cloud

Source: Analysis of data

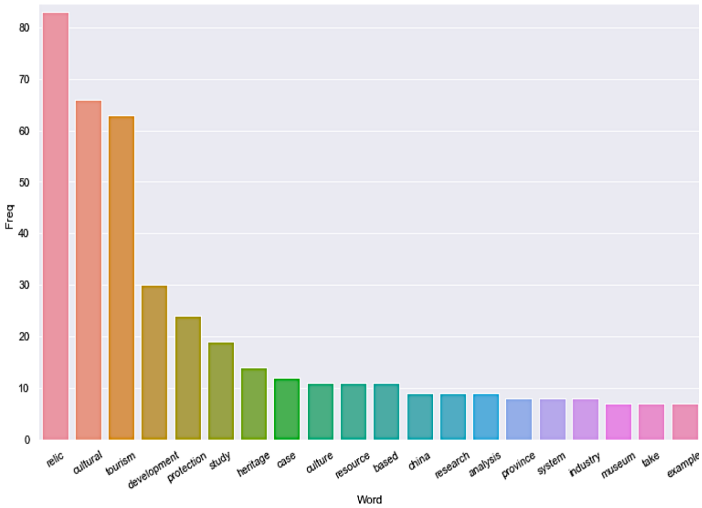
Figure 4: "Abstract" word cloud

Source: Analysis of data

RQ2: What high-frequency keywords are used in all extracted publications collected from Web of Science in their titles and abstracts?

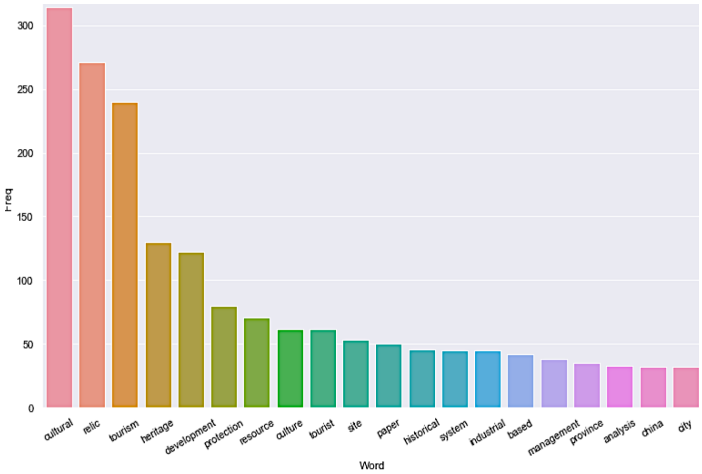
To identify the most frequent words, researchers used N-gram for this study. The N-gram model predicts the occurrence of a word based on its N-1 previous work (García et al., 2021). Figures 5 and 6 represent the word frequency analysis. Figure 5 illustrates the most frequent words in the "Title" section. The most frequent terms in the Titles are relic, culture, and tourism, and then is heritage and development.

Figure 5: Most frequently, words occur in the "Title" section



Source: Analysis of data

Figure 6: Most frequently, words occur in the "Abstract" section



Source: Analysis of data

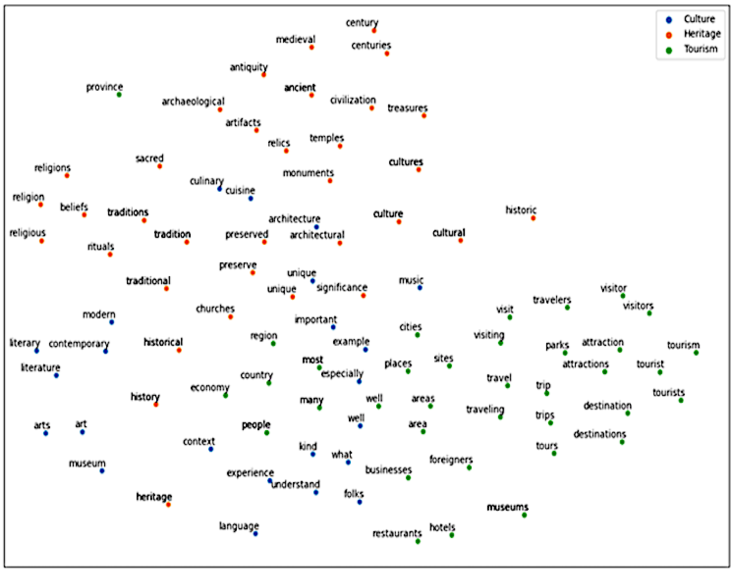
Like in figure 6, the most frequently used in the abstracts are cultural, relic, and tourism. Although in figure 5 and figure 6, there is a minor difference in the frequency of words used. In the analysis, the words are almost similar for title and abstract; only the frequency of the expression is shuffled.

RQ3: What are the MLM (Masked language modeling) & Next Sentence Prediction (NSP) in relics tourism?

We used Bidirectional Encoder Representation from Transformer (BERT) for the text classification via machine learning. BERT is an architecture based on the transformer. The transformer model was introduced by Google and employs the mechanism of self-attention that is suitable for understanding languages (Ho et al., 2021). In general language, models work on the one-directional training to the next word prediction, but in the case of BERT, it utilizes the bidirectional movement (Devlin et al., 2018). The ability of the BERT model is limited as an encoder that can be used for reading text input and processing. Two methods enable the BERT to become the bidirectional modal: 1) MLM (Masked language modeling) and 2) Next Sentence Prediction (NSP). In this study, the process for the Bert-based classification is as follows:

- Load Pre-Trained Embedding: After the dataset analysis, three categories are decided "Culture," "Heritage," and "Tourism." Next, pre-trained data is downloaded through the Gensim API and checks similar words to the categories mentioned above (Gensim: Topic Modelling for Humans, 2021).
- Create Dictionary: Three different clusters are created with the categories of "Culture," "Heritage," and "Tourism." Every set consists of 30 similar words.
- Word Embedding: Word Embedding is a learned representation from the provided text where the highlighted words have related essence with similar characterization (Park et al.,2018).

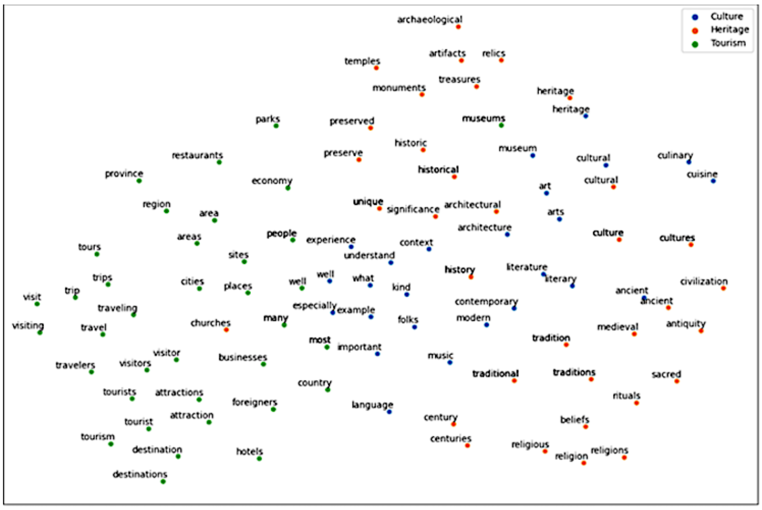
Figure 7: Word embedding for abstract



Source: Analysis of data

Moreover, it is also a class of methods representing every word's real-valued vector in a built-in vector space. For the visualization of the word embedding, there are standard reduction techniques such as t-distributed stochastic neighbor embedding (t-SNE) and principal component analysis (PCA). This study used the t-SNE technique to visualize the word vector. t-SNE is a helpful way to visualize the similarities between multiple objects. The working principle behind the visualizing word vector is to take features of high-dimensional vocabulary word vectors, then squeeze them into two-dimensional pairs with similar words together and dissimilar words far away. Figures 7 and 8 represent the word embedding for the abstract and title.

Figure 8: Word embedding for title



Source: Analysis of data

Our proposed solution has three clusters: culture, heritage, and tourism for the word embedding.

4.1 Model deployment and prediction

Bidirectional Encoder Representations from Transformer (BERT) is a deep learning model. Every input element is attached to the output element, and weight is calculated based on connections between the components. Traditionally, language models are designed to read the data unidirectionally, either left to right or right to left. However, BERT can read the input data in both directions. It is generally pre-trained on the text corpus and then fine-tuned for some distinct tasks. In addition, BERT employs the Transformer encoder architecture to process every input text token in overall tokens before and after the implementation. The steps for the proposed study are as follow:

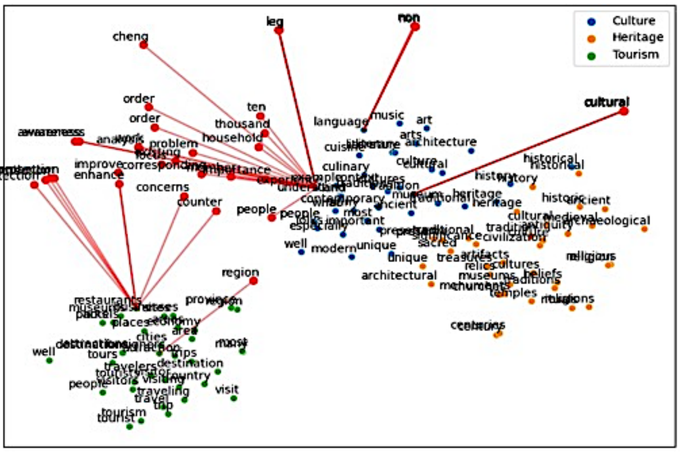
1. Import the Pre-Trained Model: In the first step, we import the pre-trained BERT tokenizer and pre-trained BERT model for the natural language processing (NLP).
2. Word Embedding for the BERT model: After importing pre-trained models, tokenize sentences into the token in the integer form. Convert the tokens in the array form and generate embedding from every token, and the result is a tuple. Next, the researchers select the tuple's first member, remove the first dimension, and create the feature matrix.
3. Similarity Score: We put the output matrix into the shape to compute the cosine similarities. Every row acts for articles and consists of a single similarity score for every target cluster and classifies the listed labels with the

highest similarity score.

4. Output Prediction: The final step predicts the final model through the similarity check.

Figures 9 and 10 represent the model's similarity computation with "Abstract" and "Title."Figure 9 shows a certain similarity in using particular words by authors in the abstract. In this study, researchers found that the words in abstracts and titles have three clusters: culture, heritage, and tourism. Authors have used words like "cultural," "history," and "architecture" under the cluster culture. Researchers have used words like "protection", "religion", "belief", and "place" under heritage. Similarly, the cluster tourism has "place", "ancient", "sites", "travel", and "destination". These words have greater similarity and high frequency in their use inside the abstracts by various authors.

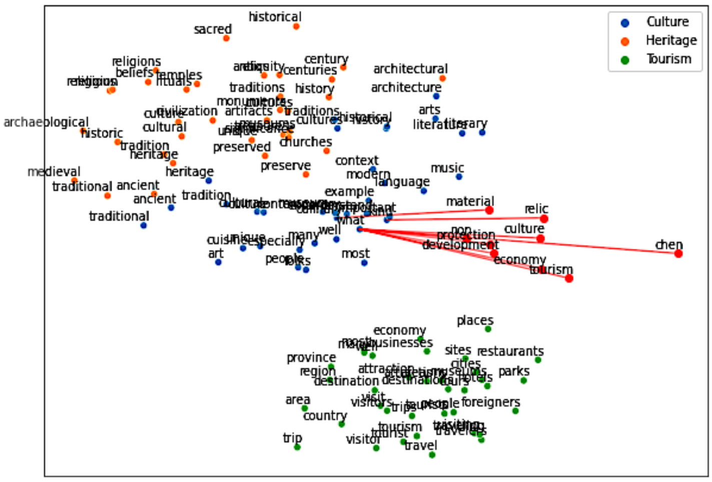
Figure 9: Similarity nodes of words used by authors in "Abstract"



Source: Analysis of data

Figure 10 represents the three clusters of words in all the titles. Authors used these words or similar ones primarily in their titles and restrained themselves from using words from the tourism cluster. Researchers prefer to use words from culture clusters more than heritage. So, we can say authors prefer to use words from culture as they might think the words are more related to relics.

Figure 10: Similarity nodes of words used by authors in "Title"

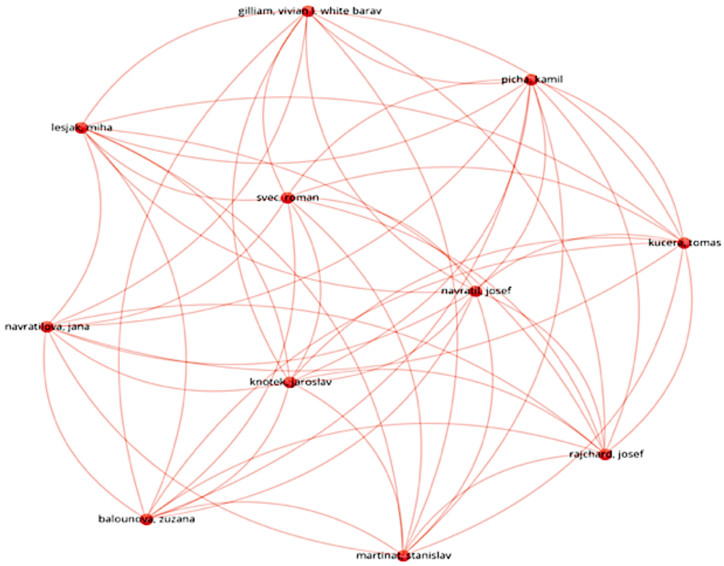


Source: Analysis of data

RQ4: Who are the prominent authors, and how does network analysis relate to them?

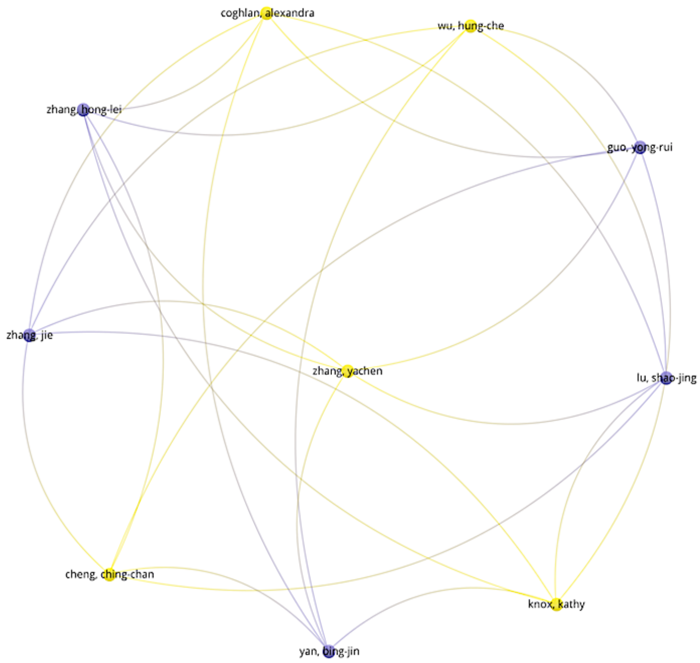
In these years (2002-2021), co-authors publish and have a strong network. Eleven Authors show strong weighted strength among themselves, as shown in figure 11. They are geographically distributed in five countries: Ghana, Spain, the People's Republic of China, Taiwan, and Slovenia. All these co-authors have 40 papers among them. Citation-wise, if we see, then Ghana and Spain co-authors have 39 citations, Taiwanese authors have 79, and Slovenia authors have 11 citations. Chinese authors are having maximum citation of 124. It shows that Chinese researchers are active in this subject and have a robust network among themselves, enhancing their total output.

Figure 11: Network of prominent researchers



Source: Analysis of Data

Figure 12: Authors and their citations



Source: Analysis of Data

RQ5: What are the co-citation and citation networks among prominent researchers?

Figure 12 represents the citation network of prominent authors on this subject of relics tourism. We can see there are 2 clusters (yellow and blue) of authors and their citation network. Yellow clustered authors have maximum strength, especially "zhang, y," "zhang, j," and "Huo, x." The blue clustered authors have more minor citations than the yellow ones. We can say yellow ones are popular in this field.

5 DISCUSSION AND CONCLUSIONS

We can see how the keywords revolve around three clusters of culture, heritage, and tourism from the analysis. Mainly the words in the title and similar and present in the abstract. Interestingly, some words like sacred and religion are also used with protection, value, and belief. Also, some words like the Internet of things (IoT) and sensors are present with protection. So, we can say there may be a slow trend developing which points towards modern technology use for relics tourism domain by researchers.

Similarly, for heritage studies, many recent papers are exploring a new trend post-2019. Words like the place and destinations are now linked with heritage directly, which were previously associated with tourism (Rezaei et al., 2021; Duy et al., 2020). So, we can say the marketing of places is now exploring relics tourism. And for tourism, the words do not have a drastic change. They are the same throughout the years of consideration (2002-2021).

Authors of prominent publications are very much strongly interrelated with each other. They have an excellent connection in the field of cultural tourism. Relics tourism is directly represented under cultural topics. But authors explore new technology applications when we consider publications and protection words in the title and abstract. Generally, authors have used the terms culture, relics, and tourism in the abstracts more. Culture has a maximum frequency in abstracts. Similarly, the term relics has a maximum frequency in titles than culture and tourism.

Here, we find that relics certainly rally for cultural tourism in all the selected articles. Researchers signify relics with culture and religion. Relics connect with tourism with words like destination, place, and religion (Van et al., 2020). The findings of this research help future scholars in terms of guidance in employing ML in text mining (Singh et al., 2020). This technique will help in enhancing their research ability. As several research publications are published in various streams, conventional research for literature review is fast becoming more impractical and complex, which requires a lot of time and effort from the researcher (Sharma & Das, 2021). Data extraction and a reduction will be smoother and more technical with text mining by ML tools. The ability to review the title, abstract and full texts of an article within the same ML tools will undoubtedly save valuable time than other contemporary methods (Das et al, 2022).

Consequently, applying ML tools for text mining brings a semi-automatic alternative to the systematic literature review research repertoire. It is a fact that ML will undoubtedly decrease the human effort in the systematic literature review, but still, human interventions are required. So, ultimately, we can hope one day, the features of ML will be upgraded, which will make the process fully automated and limit human efforts ultimately. So, the scope of performing text analysis of various databases will undoubtedly increase the possibility of a more reliable, complete systematic review. These will surely contribute to future research endeavors not only in tourism disciplines but also in others too.

5.1 Practical implications

In this novel study, the researchers found the trend of relics tourism study that different researchers can use to form their titles and abstracts more effectively. Journals can use this research to propose special issues for bringing out more concerning research in relics tourism. Researchers generally venture out for cultural and heritage studies. They are not so keen on relics tourism. However, they go for dark tourism research, a different domain. Though dark tourism is related to this scope of relics, it is other than relics. So, authors can now mainly be precise in their research of these areas. Like cultural, heritage, or dark tourism, relics tourism attracts many future researchers.

The technique of text mining and its machine learning applications can also attract systematic literature review researchers for better exploration. Here the researchers do believe that the future is for machines. So, ML will slowly venture into tourism research, and researchers will benefit from this technology intrusion. Most contemporary researchers use hybrid methods and Vos viewer software for bibliography studies which are command-based. But text mining and BERT are Programme based and more accurate. So, we think future researchers can explore different topics for educational use and practically explore more ML tools.

This paper aims to help general management and tourism scholars put ML into practice. It will provide them with the necessary characteristics to make informed decisions. We summarize these points as follows.

1. The type of literature review an ML system can perform differs depending on the software used. There are three main types of literature reviews that it can perform: searching, data extraction, and screening.
2. To choose the right tool for a particular type of review analysis, choose a set of tools with the necessary features.
3. Free and paid tools are also available. However, the choice should be based on the scope of the research.
4. Before using a free tool, make sure that it has a trial period. Doing so will allow you to try it out and see if it works well. Some free tools might not allow you to add more data to your project.

5.2 Limitations and future research

We have considered 109 articles for this study, whereas Web of Science has 143 papers on relics tourism search. So, there may be some analytical output we may miss. But that will be another scope of research where researchers can study social and physical science in relics tourism. We have considered text mining and keyword word cloud for our study with BERT. There are other tools available in ML. But we are not conversant with other devices, so researchers can explore different mechanisms that may give more in-depth analysis in the future. Also, the citation and authorship analysis have not included the journal's prestige or popularity, which can be a limitation.

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Twenty-five years of SMEs in tourism and hospitality research: A bibliometric analysis

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Abstract:

Purpose: *Small and Medium Enterprises (SMEs) have been grabbing the attention of tourism and hospitality academicians. However, the fragmented and scattered research makes it difficult for upcoming researchers to identify the major thematic areas. Thus, this study maps the evolution of SME research in tourism and hospitality.*
Methods: *The study adopts a bibliometric protocol to carry out the desired analysis. The literature is retrieved from the Scopus database using the desired search string and analysis is conducted on 385 documents. The study uses VOSviewer, the Science of Science tool, Gephi, and Inkscape to carry out the bibliometric and network analysis.*
Results: *The results from network analysis helps in the identification of five major thematic areas such as strengthening SMEs' performance, transformational leadership, building SME resilience, entrepreneurship and sustainability, and building competitiveness in SMEs. The dynamic co-citation analysis helps in identifying the evolution of these themes. The content analysis of the literature provides future research direction and the need for methodological advancement in SMEs' performance and growth.*
Implications: *The study offers implications for future researchers by summarising the literature, identifying the gaps and suggesting future directions of the research. The study limits itself to data retrieval from a single database.*

Keywords: *SMEs, tourism, bibliometrics, competitiveness, innovation, resilience.*

JEL Classification: *L83, Z00, Z30*

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1 INTRODUCTION

Small and medium enterprises (SMEs) have become an important channel in economic development (Fiseha & Oyelana, 2015; Kongolo, 2010). By removing the regional imbalances, SMEs have been able to channelise the market at the 'bottom of the pyramid', fostering economic growth (Varga & Rosca, 2019). The focus on establishing SMEs to empower the local economy has not been limited to a particular country or industry. Since the cost of setting up and running is less, these small businesses often mushroom up in quick succession. However, since the cost of winding up is also less, small businesses do tend to switch in case of hardships in the sector. As SMEs grew globally, academicians also started acknowledging the role of SMEs in their research. Academicians have researched several aspects of small businesses including their role and importance in economic development, their ability in employment generation (Al-Haddad et al., 2019; Dennis et al., 1994), their benefit in socialising the rural areas (Kumar & Shekhar, 2020a), and the need to make SMEs supply chain resilient (Alshahrani & Salam, 2022; Manathunge et al., 2021). There is a vast literature pool that highlights the growing need for SMEs globally. Therefore, there also exist several literature reviews that focus on literature related to SMEs. For instance, Zamani (2022) carried out a systematic review of the literature to understand why small businesses adopt technology and observed that technology adoption is highly influenced by infrastructure, regulations, strategy and resources. Focusing on the innovation aspect in SMEs, de Carvalho et al. (2021) conducted a literature review and observed that innovation builds competitiveness and enhances the sustainability and information exchange mechanism. Smit & Watkins (2012) conducted the review to map the potential risk management abilities of the SMEs in South Africa, while Alkhoraif et al. (2019) reviewed the lean management practices in SMEs. Thus, it is evident that SMEs have been an interesting research topic for academicians.
SMEs have a particular likeness to the Tourism and hospitality industry because of the ease of doing business, but their development also encounters several challenges

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(Akbaba, 2012; Rogerson, 2008). Since the industry has immense potential for market development, small businesses often try to test their waters before establishing themselves in the industry. These businesses are often found engaged in running food and lodging, acting as tour guides and travel agents, or providing ancillary services in the hospitality industry.

An overview of the literature on SMEs in tourism and hospitality suggests that researchers have studied it from several research domains such as Business, Management and Accounting, Social Sciences, Economics, Econometrics and Finance, Environmental Science, Computer Science, Energy, Engineering, Decision Sciences, Arts and Humanities, and Mathematics. For instance, Pike (2018) focused on the application of global marketing principles for tourism SMEs and criticised academicians and practitioners for often overlooking the importance of small businesses in tourism marketing. Studies also highlighted that there is a need for diverse action plans from the governments to protect the interest of small businesses in the tourism sector (Hu et al., 2021). The literature points out that small business development will play a significant role in helping the tourism industry reach pre pandemic level. However, research on SMEs in tourism and hospitality is still in the infancy stage as compared to other industries such as manufacturing or a few service industries. In addition, like other aspects of SMEs, research on tourism SMEs are scattered. There is an absence of any comprehensive literature review that focuses solely on research on SMEs in the context of tourism and hospitality and groups the study constructs concerning the theme.

Because of the importance of small businesses in redeveloping the tourism industry, there is a need to move beyond what is obvious in tourism research. The upcoming researchers need to focus on developing frameworks for rejuvenating tourism through small business development. The focus should not only be on the short-term development of the industry rather SMEs should be engaged within the industry to create sustainable long-term development. To suggest new research ideas, there is a need to look into what has already happened and what is currently happening in the research.

A literature review on SMEs in the context of tourism and hospitality will help in summarising the past and current literature and suggest new themes, directions, and methodologies for future research. Based on the findings, the review will also help in the identification of research gaps that future studies may study and seek answers to. The identification of thematic areas and gaps using a systematic protocol and software will also help in eliminating any bias that often creeps into systematic review studies. Thus, this study seeks answers to the following research questions that are commonly used in bibliometric studies: RQ1. What are the top contributors, most impactful publications, top publications sources, and leading institutions and countries in SMEs in tourism and hospitality research? RQ2. What are the current and past thematic areas in SMEs in tourism and hospitality research? RQ3. What is the future direction of research in SMEs in tourism and hospitality research?

Answering these research questions would help the upcoming researchers by saving their time in screening and summarising the already existing literature. It will help them in identifying the probable reputed journals that they could target for publishing their work. It will also help them in identifying the most common themes and avoiding researching these constructs. It will help them in modelling a framework for SME performance enhancement by identifying the basic building blocks in SME operations in tourism and hospitality research. And lastly, future directions in the study will serve as gaps for the new studies which could be undertaken by new researchers.

2 BACKGROUND LITERATURE

2.1 SMEs and tourism: A mutualism relationship

The tourism business offers people to earn an alternate livelihood by venturing into a small business (Fleischer & Pizam, 1997). Small tourism businesses have played a significant role in poverty alleviation globally (Mshenga & Richardson, 2013; Zhao, 2009). The development of small businesses also pave way for women's empowerment as in developing regions, women entrepreneurs are found to be in plenty running such businesses (Koutsou et al., 2009; Shekhar, 2022). The tourism industry provides small businesses opportunities to innovate and increase their managerial and operational capacities (Rodríguez et al., 2020). These dynamic capabilities enhance their chances of survival in case of adverse events.

The relationship between small businesses and tourism is not commensalism, rather it is mutualism. It means, the tourism industry also benefits from the existence of small businesses. Supporting the argument, Berry & Ladkin (1997) observed that small businesses play a pivotal role in extending the policy effects to the micro level for the tourism industry. Small businesses also act as a source of innovation in the tourism industry (Kumar et al., 2021; Tejada & Moreno, 2013). As the small businesses are run primarily by the locals, they have a sense of attachment to the place and therefore engage in sustainable tourism practices and community development (Hallak et al., 2013). Small businesses often engage in sharing of knowledge between themselves, which generates value for the development of the tourism industry (Kim & Shim, 2018). Thus, small businesses and the tourism industry both complement each other and share a very strong relationship. Since there exists a sizeable amount of literature on SMEs in tourism, there also exists a need for synthesizing the existing knowledge base. Thus, a literature review focusing on the major themes in the SMEs and tourism research will prove to be fruitful for upcoming researchers.

2.2 Bibliometric studies in tourism

The use of bibliometrics as a technique for a systematic review of literature is gaining attraction to researchers in the last few years. The use of bibliometrics in tourism research is not uncommon (Hall, 2011). Few studies limit themselves to a particular region or study source while conducting the analysis. For instance, Benckendorff & Zehrer (2013) applied network analysis and using the co-citation analysis offered insights into the increasing interdisciplinary research in tourism. Omerzel (2016) conducted the bibliometric analysis and uncovered the theoretical foundations of innovation research in tourism and hospitality. Ruhanen et al. (2015) studied the twenty-five years of trends and patterns in sustainable tourism research through bibliometrics and found that though the publications are increasing, theory and methodology have reached a maturity stage. Comerio & Strozzi (2019) studied tourism and its economic impact using bibliometric analysis and suggested that upcoming researchers can target the emerging themes identified in the study. Similar bibliometric studies were conducted to study tourism crisis and risk management (Jiang et al., 2019), tourism supply chain research (Alkier et al., 2022), and health tourism evolution (Sun et al., 2022). In the latest research, Guan & Huang (2022) conducted a bibliometric analysis using VOSviewer and CiteSpace to study the research on rural tourism experience in the last twenty-five years.

Most of the studies applying bibliometrics identify the top contributions and contributors in the studied theme. In addition, they apply network analysis to study the co-authorship between authors and institutions. Keyword co-occurrences and citation analysis are often used in the bibliometrics to study the common research themes. The dynamic co-citation analysis has been applied in the bibliometrics to study evolution of themes and identify future themes. Since a lot of researchers have applied bibliometrics in understanding the thematic evolutions of several tourism aspects, the study justifies the application of bibliometrics in the present study. The research questions framed in our study are coherent with the questions applied by the previous bibliometric studies in tourism industry.

3 METHODOLOGY

There exist several methods to review the literature such as structured review, systematic literature review, meta-analysis, bibliometrics, etc. Bibliometric as a literature view technique has been often used by researchers across domains (Comarú et al., 2021; Rovelli et al., 2021; Shekhar et al., 2021; Small, 1973). It is defined as the statistical analysis of bibliographic data. There exist various protocols for conducting the bibliometrics analysis (Donthu et al., 2021; Khanra et al., 2020; Paul et al., 2021). These protocols are complete in their ways, yet leave scope for improvement. For a long, researchers have used PRISMA as an approach to identify literature as it follows a series of inclusion and exclusion steps.

However, seeking improvement, several scholars developed their scientific approach to conducting bibliometric analysis. Some commonly used analyses carried out in bibliometrics are Keyword co-occurrence, Bibliographic coupling, co-citation (including dynamic analysis), and Prestige analysis. The present study carried out Bibliographic coupling, citation, keyword co-occurrence, and co-citation analysis using the VOSviewer (Version 1.6.18) and Science of Science Tool (Sci2) software packages. The two software have been termed fit-for-purpose as their algorithms are more reliable and accurate than their counterparts (Sci2 Team, 2009; Van Eck & Waltman, 2011). Studies suggest that fractional counting provides more reliable results than full counting in VOSviewer (Perianes-Rodriguez et al., 2016). Thus, the study relies on the fractional counting method. To visualise the network drawn in Sci2, Gephi (Bastian et al., 2009) is used. Statistics such as PageRank (Brin & Page, 1998) and modularity class (Blondel et al., 2008; Lambiotte et al., 2008) have been calculated using the Gephi software for its suitable algorithms. The networks are modified using Inkscape and data refining, if any, was conducted using the Open Refine software.

The literature published in the Scopus-indexed journals is retrieved and bibliometric analysis is carried out to answer these RQs. Bibliometrics has shown immense potential in summarising the literature and identifying thematic areas (Shekhar, 2022). The study uses a bibliometric protocol developed by Khanra et al. (2020) to answer our RQ1. The descriptive data retrieved from the database are tabulated using Ms Excel to identify the top contributors in terms of author, institute, and organization. Then bibliographic coupling, citation analysis and prestige analysis are applied to the data to identify the top contributors using several approaches, each complementary to the other. Then, to answer RQ2, the keyword co-occurrence and co-citation analysis (including dynamic co-citation) is carried out using VOSviewer, Sci2 and Gephi.

Through the co-citation analysis, studies that are related to a common theme are clustered and dynamic co-citation analysis helps in understanding the life-cycle of these themes. The emerging themes are ones that have been studied recently and upcoming researchers could benefit from them. Also, if researching an already well-researched theme, upcoming researchers can identify the gaps in the clusters for their study. Next, RQ3 is answered by content analysis of the identified clusters and themes. Content analysis helps in the identification of gaps related to theory building, concept determination, and methodology used. The identified gaps act as future research actions.

4 LITERATURE SELECTION

This study adopts the bibliometric protocol developed by Khanra et al.(2020) to carry out the desired analysis. As per the adopted protocol, there are three stages in carrying out literature selection; Scanning, Curating and analysing the sample. The study limits to the studies published in the Scopus database because of their stringent quality checks and peer review mechanism. The Title-Abstract-key feature in the Scopus database is used to retrieve the literature using a reliable search string. The Topic searches for the given string in the Title, abstracts, and keywords field and provides results that match the string.

4.1 Scanning

A prior search of the documents suggests that researchers have used the terms small and medium enterprises, SME, SMEs, small business, and tourism and hospitality. Thus, the search string: TITLE-ABS-KEY (SME AND (Tourism OR Hospitality) was finalised. A search with this string resulted in 592 documents (on 1st May 2022) including articles, conference papers, review articles, book chapters, and editorials published in several research domains including management, computer science, economics, econometrics, and social sciences.

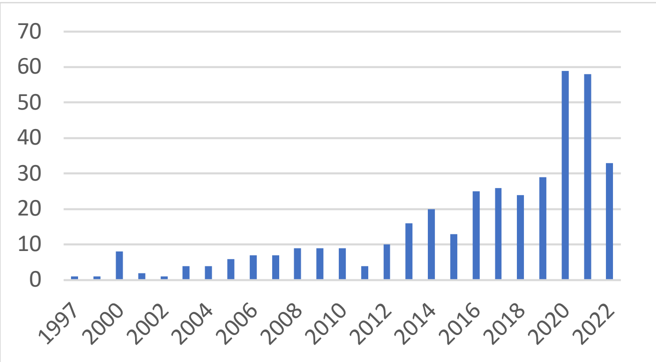
4.2 Curating

In the next stage, the results obtained in the previous stage are refined using some pre-determined filters. These filters are existing in the Scopus database. Bibliometrics studies tend to rely only on journal articles while carrying out the analysis because of the quality assurance due to peer review. Thus, the study limits to the articles published in the journals and excluded conference papers, proceeding articles, editorials, and reviews. Then, to ensure that all the articles have consistency, only articles published in the English language are retrieved. Thus, the search string was modified to TITLE-ABS-KEY (SME AND (Tourism or Hospitality) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (LANGUAGE, "English")). The filters resulted in the retrieval of 385 documents which formed our sample for the bibliometric analysis.

4.3 Analysing

The first article in our sample published in 1997 indicates that small and medium enterprises have been researched in tourism and hospitality for the last twenty-five years. The trends in SME and Tourism and hospitality research, as suggested in Figure 1, indicates that the interest of academicians in this field is still growing. There has been a sudden increase in the publication count since 2019. It is because the small tourism businesses were the worst affected and researchers investigated the impact of the pandemic on their businesses. The interest is still growing as there is an argument that small businesses will eventually help in getting the industry back on track. The interest of academicians is visible in the growing publications and an h-index of 41 of the analysed publications. Not only the publication count, but the diversity of publications across the domains has increased in the last two decades.

Figure 1: Trends in papers



The sample of the present study is 385 articles, 953 authors, 81 countries, and 733 organizations. Table 1 lists the top 10 authors, organizations, countries, and Publication Titles based on the number of publications (TP). Among the authors, J. E Núñez-Ríos is the top contributing author followed by J.Y Sánchez-García and G Hoang. Authors from the University of Johannesburg and Universidad Panamericana have the most publications on the topic. Among the countries, the United Kingdom and Indonesian authors have the most publications.

Table 1: Top authors, organizations, countries, and publication titles based on publication count

Author	TP	Organization	TP	Country	TP	Publication Title	TP
Núñez-Ríos, J.E.	7	University of Johannesburg	8	United Kingdom	64	Sustainability (Switzerland)	21
Sánchez-García, J.Y.	6	Universidad Panamericana	7	Indonesia	36	Tourism Management	12
Hoang, G.	4	Victoria University	6	Spain	33	African Journal of Hospitality, Tourism and Leisure	11
Ngo, V.M.	4	University of Surrey	6	Australia	31	International Journal of Hospitality Management	9
Soto-Pérez, M.	4	Universiti Putra Malaysia	6	Italy	27	Tourism	8
Tejada, P.	4	Leeds Beckett University	6	Malaysia	26	International Journal of Contemporary Hospitality Management	8
Vu, H.M.	4	Universidad de Sevilla	6	South Africa	18	Journal of Environmental Management and Tourism	8
Awang, K.W.	3	University of Primorska	5	United States	16	Journal of Sustainable Tourism	6
Domi, S.	3	Universität Innsbruck	5	Austria	13	Tourism Economics	6
El-Gohary, H.	3	Griffith University	5	Germany	11	Tourism Management Perspectives	6

5 BIBLIOMETRIC ANALYSIS

5.1 Bibliographic coupling (BC)

As per bibliographic coupling, when two or more papers cite a paper, then these papers are related to a common theme (Kessler, 1963). Bibliographic coupling, despite its drawback of neglecting older papers, is a widely used bibliometric analysis method to identify the top contributions to the theme. In our sample, results suggest (Table 2) that J.E. Núñez-Ríos is the most influential author based on the total link strength (TLS), followed by J.Y Sánchez-García, and M. Soto-Pérez. In terms of organizations, Griffith University, the University of Johannesburg, and Victoria University are the top contributors to the theme. In terms of countries, authors from the United Kingdom are the most impactful authors followed by authors from Australia and the United States.

Table 2: Top authors, organizations, and countries based on bibliographic

Author	TLS	Organization	TLS	Country	TLS
Núñez-Ríos J.E.	485.6	Griffith University	215.65	United Kingdom	1436.5
Sánchez-García J.Y.	428.51	University Of Johannesburg	120.46	Australia	1096.65
Soto-Pérez M.	320.16	Victoria University	112.24	United States	854.11
Rojas O.G.	227.95	Universiti Malaysia Kelantan	88.14	Spain	645.02
Ngo V.M.	178.67	Van Lang University	65.02	Italy	570.22
Vu H.M.	178.67	University Of Ludwigshafen	49.24	South Africa	554.25
Peters M.	141	Rey Juan Carlos University	44.97	Germany	502.01
Zehrer A.	135	Bournemouth University	27.21	Austria	450.59
Romero I.	109.27	University Of Kwazulu-Natal	25.34	Viet Nam	298.67
Tejada P.	106.77	Manchester Metropolitan University	20.06	Canada	272.6

5.2 Citation Analysis

Citation analysis is also one of the commonly used bibliometric approaches where a paper's worth or importance is judged by its ability to generate citations. Despite its limitations of favouring older publications and articles published in journals with high cite scores, citation analysis has been used in previous bibliometric studies. The results (Table 3) suggest that S. Wanhill is the most impactful author followed by P. Tejada and A. Kasim. In terms of organizations, authors from Bournemouth University generate the highest citations followed by authors from the University of Johannesburg and Manchester Metropolitan University. In terms of country, authors from the United

Kingdom have the highest citations followed by authors from Australia and Spain. The results of BC and citation analysis show stark differences for all the categories highlighted. It is because BC gives more weightage to the articles published recently while citation analysis favours older articles. Nevertheless, results from both analyses indicate the top contributors.

Table 3: Top authors, organizations, and countries based on citation analysis

Author	TLS	Organization	TLS	Country	TLS
Wanhill S.	175	Bournemouth University	157	United Kingdom	1916
Tejada P.	119	University Of Johannesburg	72	Australia	496
Kasim A.	100	Manchester Metropolitan University	64	Spain	482
Zehrer A.	77	University Of Surrey	64	Italy	462
Romero I.	71	Victoria University	40	Austria	397
Hallak R.	52	Griffith University	24	Canada	285
Peters M.	52	Rey Juan Carlos University	18	Malaysia	203
Domi S.	36	University Of Ludwigshafen	16	France	191
Núñez-Ríos J.E.	32	University Of Kwazulu-Natal	12	Denmark	189
Sánchez-García J.Y.	29	Van Lang University	11	United States	182

5.3 Prestige Analysis

It is common for some of the papers to be valued more than others. It is because these papers are published in journals with high repute and their ability to generate citations is more than the others. A paper might be valuable if it establishes a theory or is regarded as a seminal work in their field. In addition, the drawbacks of BC and citation analysis make it necessary to find an alternate measure for determining valuable contributions. Prestige analysis is one such analysis used in bibliometrics. PageRank helps in determining the worth of an article in the sample. The analysis was carried out using the Gephi software Prestige analysis indicator. The results (Table 4) list the top articles based on their PageRank. As per the results, Kim & Shim (2018), Rastrollo-Horrillo & Rivero Diaz (2019), and Domi and Domi (2021) are the most prestigious article in the sample. from the results is evident that an article does not need to have a high citation count only to be valuable. In Table 4, LC refers to the citations gathered by the publication from the total sample articles while the global citation is the citation count of an article from all the Scopus articles. Thus, prestige analysis act as a compliment to the citation analysis to identify top publications.

Table 4: Top articles as per PageRank

Article	PageRank	Local Citation Count	Global Citation Count
(Kim & Shim, 2018)	0.01639	95	174
(Rastrollo-Horrillo & Rivero Díaz, 2019)	0.015141	11	23
(Domi & Domi, 2021)	0.014742	2	2
(Nguyen et al., 2021)	0.01445	3	6
(Martínez-Román et al., 2015)	0.012534	74	143
(Seilov, 2015)	0.012379	34	69
(Hallak et al., 2013)	0.012307	29	48
(Tamajón & Aulet, 2013)	0.00994	67	124
(Deku et al., 2022)	0.00981	1	1
(Verreynne et al., 2019)	0.009691	47	98

5.4 Co-word analysis

Keywords indicate the main theme of the article. There are two types of keywords: author provided and journal indexed. The author provided suggests the major constructs used by the authors in their study or the main findings. They also highlight the major methodologies used by them. Journal indexed keywords are used by the journals when they publish these articles. these keywords are broader and are also modified as per journal themes. On running the keyword co-occurrence analysis on the author keywords in VOSviewer, the authors selected only those keywords that had a link strength of more than 4. It resulted in 53 keywords out of 1268. Running the same analysis on indexed keywords with the same parameters, resulted in 41 keywords out of 520. Table 5 lists the frequent author and indexed keywords used in the studies in our sample. Both author and indexed keywords have innovation, sustainability, Covid-19, and entrepreneurship as common words. These keywords have been ranked based on their Total Link Strength (TLS).

Table 5: Most frequently used author and indexed keywords

Author keywords	TLS	Index keywords	TLS
Innovation	26	Innovation	20
Covid-19	15	Tourism Development	19
Entrepreneurship	13	Sustainability	17
Sustainability	11	Tourism Management	16
Malaysia	9	Tourism Economics	15
Performance	9	Tourist Destination	14
Corporate Social Responsibility	8	Spain	12
Competitiveness	7	Europe	10
Resilience	7	Sustainable Development	10
Sustainable Tourism	7	Business Development	8
Crisis Management	6	Competitiveness	8
Social Media	6	Ecotourism	8
Sustainable Development	6	Entrepreneur	8
Climate Change	5	Tourism Market	8
Competition	5	Covid-19	7

Figure 2: Network diagram of author keywords

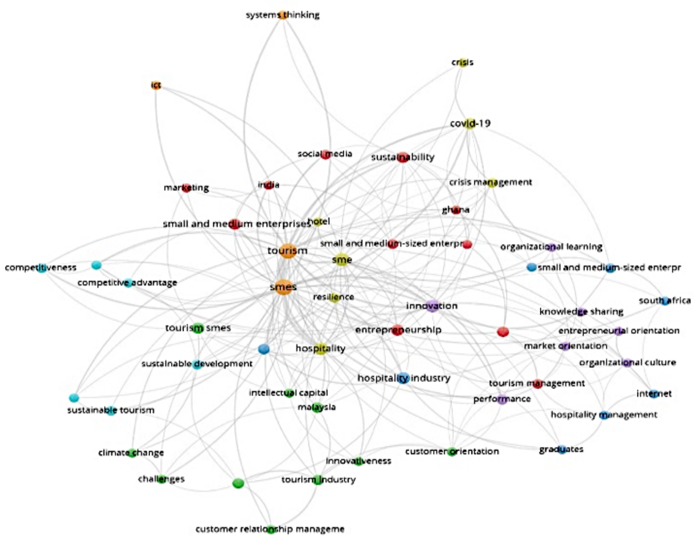
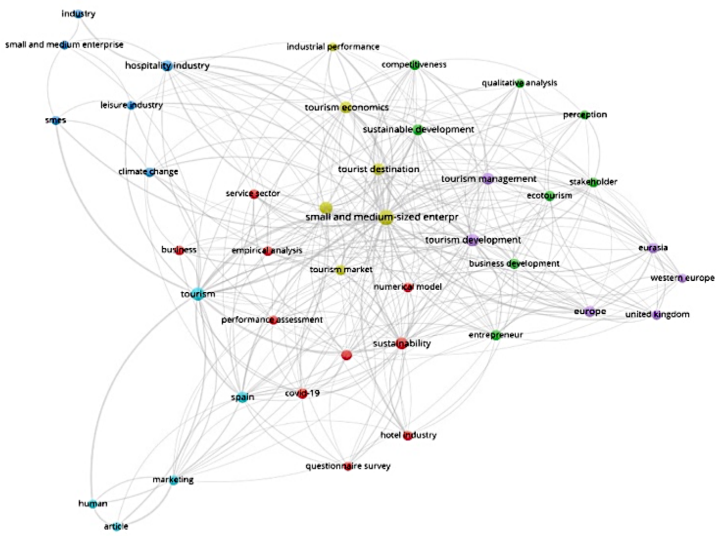


Figure 2 represents the co-occurrence network of author-given keywords and figure 3 is the network of journal-indexed keywords. Both the network diagrams highlight that SMEs in tourism and hospitality have been associated with harbouring innovation, entrepreneurship, and corporate social responsibility. They generate sustainable development and create a tourism market.

A strong emphasis has been placed in the recent research on building resilience and handling crisis management because of the impact of Covid-19. Studies in the European context focus on the challenges for SMEs in the wake of climate change. In a nutshell, both indexed keywords and author keywords highlight similar aspects. Indexed keywords, owing to the journal themes, use keywords that specify the domain of the research article such as tourism management, tourism economics, tourism development, and tourism market.

Figure 3: Network diagram of indexed keywords

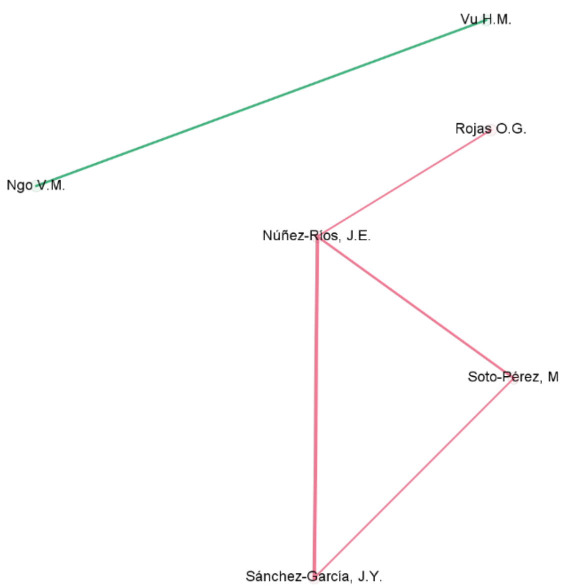


6 NETWORK ANALYSIS

6.1 Co-authorship

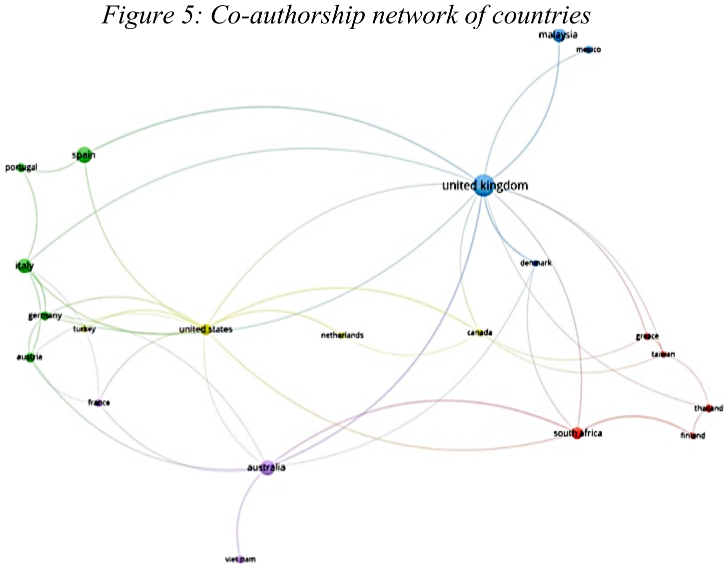
Research collaboration is significant for the topic to develop. It helps in moving the research across the globe and helps unearth topics and methodologies that help in the advancement of the tourism industry. In our study, a co-authorship analysis was performed for the authors who have published three or more studies together. The results (Figure 4) suggest that there were only two author groups that collaborated for three or more studies. In the first group there are four authors; Rojas O.G. (3 links), Núñez-Ríos, J.E. (7 links), Sánchez-García, J.Y. (6 links), and Soto-Pérez, M (4 links). In the second group, there are two authors; Vu H.M. (4 links) and Ngo V.M. (4 links).

Figure 4: Co-authorship network of authors



The smaller number of authorship collaborations and the presence of limited publications and author count in the network highlight the scope for collaboration among interdisciplinary researchers. Further, researchers from nations that lag in the studied topic can collaborate with researchers in other institutes and nations for knowledge transfers on concepts and methodologies. Also, authors need to engage with each other more frequently for in-depth study of the topics.

Figure 5: Co-authorship network of countries

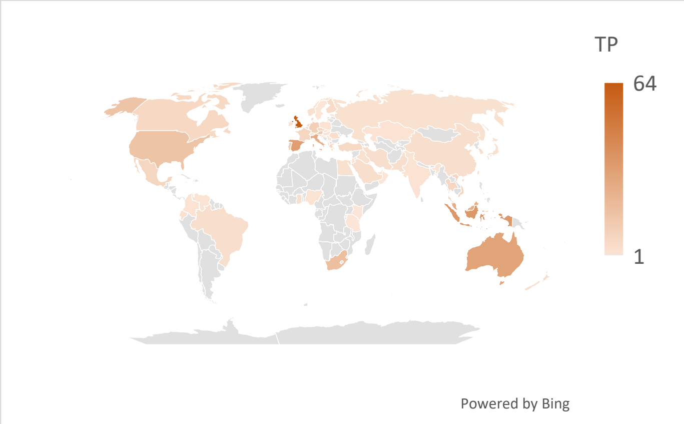


In terms of countries, there are five clusters in co-authorship analysis (Figure 5). In the first group, authors from Finland, Greece, South Africa, Thailand, and Taiwan collaborated on the topic. In the second group, there are authors from Austria, Germany, Italy, Portugal, and Spain. In the third group are authors from Denmark, Malaysia, Mexico, and United Kingdom. In the fourth group, authors from Canada, the Netherlands, Turkey, and the United States collaborated. In the last and fifth groups, there are authors from Australia, Vietnam, and France.

The co-authorship network of countries highlights that researchers from developing nations have tried to collaborate with authors from European and developed nations. However, not much progress has been identified as the co-authorship results suggest that cross-country co-authorship is limited to a few papers. There is also generated a heatmap (Figure 6) to identify which countries have the most authors. the data for the map was collected from the Scopus database and the map was generated using the Ms-Excel add-in of the heat map.

The results indicate that most of the research on the theme has been undertaken in the European and Southeast Asian nations. There is limited research in African, South American, and South Asian nations on the theme. The limited research in these nations provides the opportunity for upcoming researchers to collaborate with the giants in their research theme, study their work, identify suitable study regions, collaborate with them, and share new knowledge for the industrial development in their region.

Figure 6: Country count of the corresponding authors



6.2 Dynamic co-citation

The dynamic co-citation analysis in Gephi helps in identifying the evolution of these research themes and clusters. In the co-citation analysis, when two documents are cited together by a third document, they are said to be related as they pertain to a common theme. These studies are then clustered based on their common underlying theme. Extending the co-citation analysis, dynamic co-citation analysis helps in identifying the evolution of these study clusters over their lifetime. It helps to identify which of the topics are emerging and which have matured over the studied period. The emerging topics can act as potential future research topics for upcoming researchers. Also, in the countries where the research is yet to progress, matured topics from other countries can act as future study areas. Table 6 lists the evolutionary phase of these clusters. The total article included in the analysis was 320 (83.11% of the sample). The results suggest that Cluster 2 and Cluster 5 are the largest clusters meaning most of the studies in SMEs in tourism and hospitality focus on these themes. While Cluster 2 is the oldest, Cluster 3 is the latest cluster to evolve in the theme. Results also highlight that all the clusters are still relevant to the theme, which means that there is a lot to explore in each of the themes. The evolution of the clusters along with the content analysis will help us in identifying the research gaps and scope for future research on the theme.

Table 6 Evolution of the themes

Year	Cluster					Total
	C1	C2	C3	C4	C5	
2008	5					**5**
2009					5	**5**
2010					5	**5**
2011			10			**10**
2012	5		5			**10**
2013	5				10	**15**
2014				5		**5**
2015	5			5		**10**
2016	5			10	15	**30**
2017				5	5	**10**
2018	10			10	5	**25**
2019		5	15	5	10	**35**
2020	35	5	10	20	15	**85**
2021	10	15		15	10	**50**
2022	5	5		10		**20**
Total	**85**	**30**	**40**	**85**	**80**	**320**

7. MAJOR THEMATIC AREAS

The co-citation analysis in VOSviewer helps in clustering the articles that have a similar theme. The results found 320 articles (83.11%) and clustered them into five major themes. The results suggest that the theme of strengthening SME performance is the oldest while recovery and resilience-building is the latest theme to originate in the research. Academicians have paid equal focus to promoting entrepreneurship and sustainable tourism (sustainability and sustainable development) through SMEs in tourism and hospitality and building competitiveness in recent years. The themes are discussed in the following sub-section.

7.1 Conceptualization and strengthening SME's performance

Strengthening financial performance has been the most researched theme in SMEs and tourism and hospitality topics. Since the research was conceptualized, this topic has retained its importance in academia. Post-pandemic and in the recent literature also, researchers have examined how to further boost the performance of SMEs so that they recover from external shocks. Setting up small businesses in the hospitality industry is an interplay of several push and pull factors (Chan & Quah, 2011). The use of IT and allied infrastructure has an impact on the SME's performance. It is observed that tourism SMEs have a relative disadvantage in using technology and IT to boost their performance (Brown & Kaewkitipong, 2009).

The tourism and hospitality industry is dominated by strategic alliances between small businesses. The commitment of alliance partners positively influences the performance of SMEs (Pansiri, 2008). A highly skilled workforce led by experienced entrepreneurs makes SMEs profitable (Georgiadis & Pitelis, 2012). Local community support also improves the performance of a tourism SME (Hallak et al., 2013). It has been observed that revenue management through a professional revenue manager is in the best interest of the SME (Foggia & Lazzarotti, 2014). Innovativeness also improves the profitability of tourism SMEs (Martínez-Román et al., 2015). Rekarti & Doktoralina (2017) proposed a theoretical model for SME performance by investigating the relationship between capabilities and performance. Since 2020, the literature evolved to enhance the performance of tourism and allied SMEs. Studies began to assess the importance of building knowledge competencies and innovation in improving performance (Domi et al., 2019; Lita et al., 2020; Wahyuni & Sara, 2020). Digital literacy and entrepreneurial skills also have a significant and positive influence on SME performance (Sariwulan et al., 2020).

7.2 Building SMEs' resilience and recovery

Small businesses at tourist destinations have suffered a lot globally due to the travel restrictions placed by the governments. Most of the businesses closed because they were unable to bear the losses. Those that remained also suffered economically. Thus, since the pandemic, academicians started strategizing recovery strategies for small tourism businesses. More focus was placed on building resilience so that future shocks could be handled better. Suriyankietkaew et al. (2022) studied how sustainable leadership in a community-based enterprise could help in the development of resilience in tourism SMEs. Tourism operators not only suffer economically, but these disasters also impact the mental attitude of SME owners (Lindsay-Smith et al., 2022). Future studies should focus on building a network of SMEs for sharing emotional support during such disasters.

Innovation and company networks also influence the resilience of the SME (Dias et al., 2022). Núñez-Ríos et al. (2022) suggested that an organization can improve its resilience by incorporating autonomy in its operations and developing a feedback mechanism. government policies have been a major source of building resilience in tourism SMEs. However, the implementation of these policies has always been challenging (Estiri et al., 2022). During adverse conditions, adaptive performance and institutional orientation directly influence entrepreneurial resilience (Elshaer & Saad, 2021). Psychological capital has been found to influence organizational resilience (Fang et al., 2020). Technology has shown positive signs in making SMEs tackle the challenges posed by the pandemic. It helps in better risk management and acts as a catalyst in the recovery process (Kumar & Shekhar, 2020a).

7.3 Leadership and innovative behaviour in SMEs

Leadership plays a pivotal role in the long-run survival of small and medium enterprises. Leaders (or managers in some cases) promote a work culture and influence the behaviour of their team in achieving organizational goals. It is very important that a leader promotes a culture of intrapreneurship within the organization and encourage workers to use innovative practices. Leaders promote a climate of innovation by influencing workers' tasks, interpersonal relations and role-related processes (Hoang et al., 2019). A suitable reward system also helps in developing an innovative climate in SMEs (Hoang et al., 2021).

Studies suggest that ethical leadership and entrepreneurial leadership also influence the service innovative behaviour of the employees (Hoang et al., 2022). A leader must strive for the trust of their workforce. The studies highlight that trust in leadership also stimulates innovative service behaviour in employees (Hoang et al., 2022). Leaders in SMEs should integrate value-based practices and competencies in business. Improving stakeholder relationship, fostering social responsibility, and developing human capital also promotes an innovative work climate in the SME (Suriyankietkaew et al., 2022). Studies argue that leadership development programs are a must for SMEs and support agencies have failed to provide market-driven leadership models (Morrison, 2003). Thus, researchers must try to build a leadership program using the modelling that keeps on updating as per the market needs. Researchers must implement advance statistical analysis to develop and measure the leadership extent in their SMEs. One such scale has been developed by Idris et al. (2022) to measure the blue ocean leadership in hotels.

7.4 Entrepreneurship through SMEs and sustainability

One of the most sought benefits from SMEs is the promotion of an entrepreneurship attitude. Since they are easier to start, budding and young entrepreneurs find it easier to taste the fruits of entrepreneurship. SMEs not only generate value, but through their responsible business models, they can share the value with their stakeholders (Dubruc et al., 2017). Not only at the individual level, but tourism SMEs have also been found to promote collective entrepreneurship (Gundolf et al., 2009). Entrepreneurship supported by the government will also help SMEs become more creative and better tackle the challenges posed by the covid-19 (Thukral, 2021). Entrepreneurship through SMEs has also been studied critically. For instance, work addition in tourism SMEs has been linked to the abandonment of entrepreneurship (Sánchez-Medina et al., 2020).

Small and medium business entrepreneurs have concerns over sustainability and business development. For instance, high investment costs and uncertainty of recovery prohibit small businesses from adopting sustainable tourism behaviour (Fotiadis et al., 2013). In addition, Foley (2014) suggested that SMEs have to sacrifice economic gains to achieve environmental goals. Linking sustainability and entrepreneurship in their framework, Crnogaj et al. (2014) suggested evidence-based policymaking that aimed at promoting holistic behaviour and innovation in the organization. Studies also suggest that tourism SMEs implement sustainable practices, but do include sustainability in their vision (Vrenegoor et al., 2020).

7.5 Competitiveness building for SMEs

By making SMEs competitive, it is believed that they would be able to tackle the environment dynamics with more strength. Studies suggest that sustainable competitive advantages not only help in differentiating from competitors but also provide a basis for enhanced customer satisfaction and long-run survival (Kumar & Shekhar, 2020b). Organizational learning capacities will also influence the development of its competitiveness. Service innovation and government support are also important sources for building competitiveness (Ounarat et al., 2019). The Internet has also shown potential for strategic positioning and competitiveness building for SMEs (Favre-Bonté & Tran, 2015). SMEs are found to have underused social media to their advantage (Nakara et al., 2012).

It is advisable that SME managers must promote themselves on SME and help in developing a brand for themselves. The SMEs need to strategically follow and monitor the changing customer needs and competition (Seilov, 2015). Coopetition has shown promise in building the competitiveness of SMEs. But to do so, there is a need for enhanced trust between the involved partners (Corte & Aria, 2016). Studies suggest that an increase in competition promotes learning throughout the organization (Khoshkhoo & Nadalipour, 2016). SMEs must evolve themselves into learning organizations where competition is seen as an opportunity to learn and grow together.

In addition, SMEs should also identify ways in which they could outperform their competitors. For instance, Iraldo et al. (2017) investigated how pro-environment strategies could be utilised to outperform the competition. In a nutshell, to build their competitiveness, tourism SMEs must implement organizational strategies to support open innovation (Musiello-Neto et al., 2021).

8. DISCUSSION AND RESEARCH GAPS

8.1 Advances in methodologies and study regions

Around 65% of the total studies in our sample have adopted a qualitative analysis in their study. The keyword analysis highlights that questionnaire-based data collection is the primary method for collecting data and numeric modelling is used to analyse the data. Thus, the study suggests that more qualitative analysis is required for the theme. The case study method is the most used study methodology adopted by the researchers. The researchers must broaden the scope of qualitative and quantitative methodology in the theme.

More review studies for literature on themes published in other databases could be conducted to provide insights into the themes and methodologies. Advanced statistical tools to predict the crisis pattern for SMEs could be developed by the researchers that track real-time crisis and resilience patterns. Similarly, 51% of the studies in our sample had SMEs from Europe or the western hemisphere. Even in the eastern hemisphere, the studies from Australia take a lead. The researchers from developing nations of Africa and South Asia must research how SMEs contribute to the development of the tourism and hospitality industry in their region. By borrowing the knowledge concepts and methodological advancement from the already researching regions, the studies from here could help in uncovering learnings for SME performance enhancement. More focus of the researchers should be on collaborating with researchers from such nations. It will further boost the theoretical framework on the role of SMEs in the tourism and hospitality industry.

8.2 Future research themes in SME and tourism research

SMEs in tourism and hospitality has been studied mostly through economic and business management lenses. In the present study, the results highlighted five themes in the literature on SMEs in tourism and hospitality. The first theme focused on improving the performance of SMEs. The second theme focused on developing SMEs' resilience and crisis management. The third theme highlights the leadership aspects of SMEs. In the fourth theme, the focus shifts to entrepreneurship and sustainability. The fifth theme focuses on the competitiveness building and learning orientation of SMEs.

In the first theme, it is suggested that future researchers should focus on the role of technology in enhancing SME performance. Technology and its related aspects were not observed in either author-provided or journal-indexed keywords. Digitalization and technology can improve the operational efficiencies of small and medium enterprises. In the second theme, it is suggested using social media to tackle crisis management. To better mitigate the crisis, the study suggests that researchers could look for business diversification opportunities for SMEs. Researchers can also test how more dimensions of psychological capital can help SMEs in building organizational resilience and coping post-disaster. For the third theme, it is recommended that researchers can explore the role of managers and leaders in improving SME performance and develop a leadership style or theory for the SME leader.

The development of organizational culture can also be an area of academic interest. The role of vision and mission and the leadership style in SMEs could further be studied through psychological and behavioural sciences. To promote entrepreneurship in SMEs, researchers could explore the role of the source of financing and branding options for the entrepreneurship culture in SMEs. To ensure that SMEs could survive in the long run and engage in sustainable behaviour, researchers could identify the enablers of sustainability in SMEs and model a framework for future reference. To improve the competitiveness of SMEs it is recommended that researchers must look at matching the resources of SMEs to their vision and mission. Future research could be undertaken in striking a balance between the economic, social, and environmental objectives of tourism SMEs.

8.3 Future directions in SME and tourism research

The evolution of the clusters indicates that there is a lot yet to be explored in each of the identified themes. Future researchers could borrow the concepts from other management domains to have an understanding of the issues of SMEs in tourism and hospitality. For instance, the 'sustainable competitive advantage' required to sustain SME's business and build its resilience could be explored from the operations and strategic management domain. This would pave way for efficient leadership and management strategies for SMEs. Using blockchain and big data analytics in predicting the upcoming crisis and developing resilience strategies for SMEs can be the direction of future research on the theme. Studies can also explore the impact of the pandemic on the learning of SMEs and their future journey using the experience. The impact of the pandemic on SMEs' performance and the need to recover and further strengthen the business will continue to be studied by researchers in the near future. The study also recommends that future studies could study ways to make work more enjoyable in tourism SMEs, to reduce tourism entrepreneurship abandonment.

9. CONCLUSIONS

The vast literature scattered geographically on SMEs' role in tourism and hospitality makes it necessary that it is summarised and suggest future research actions. The current study contributes to the literature in the following ways.

9.1 Identifying top contributions and prestigious articles

To answer RQ1, which aimed at identifying the top contributions to the research on SMEs' role in tourism and hospitality, the study applied bibliometric analysis using a robust protocol. Tables 1-3 suggest that Núñez-Ríos, J.E., Sánchez-García, J.Y., Hoang, G., and Wanhill S. are the top contributing authors to the researched theme. In terms of organizations, the University of Johannesburg, Universidad Panamericana, and Victoria University have made top contributions to the theme. In terms of countries, authors from the United Kingdom, Spain, Australia, and Spain have made a top contribution to research on the theme. Table 4 lists the prestigious articles in the theme. It is observed that these articles are published in the last ten years. It means that there is a positive intent of the researchers towards the theme and novel ideas are being tested by the researchers and published in highly reputed journals.

9.2 Identifying major thematic areas

The RQ2 aimed at identifying the major thematic areas present in the existing literature. This question is answered by performing a keyword co-occurrence and co-citation analysis. It is observed that the literature can be categorized into five major themes. Theme 1 focused on strengthening and improving SMEs' performance through innovation. Studies in theme 2 focused on improving the resilience of the SMEs and making them able in handling the crisis because of the impact of the covid-19 pandemic. Theme 3 had a focus on the role of transformational leadership in the development of SME performance. Theme 4 had a focus on entrepreneurship opportunities because of the advent of SMEs and their role in promoting sustainability. Studies in theme 6 had a focus on developing destination competitiveness through SMEs and Theme 6 was concerned with the learning orientation of the SMEs.

9.3 Suggesting future research avenues

The RQ3 in the study aimed at suggesting future research directions for the role of SMEs in the tourism and hospitality industry. Through the dynamic co-citation analysis the evolution of these clusters and their importance is identified. The results suggested that all the identified themes are still relevant in academia since there have been increasing publication trends and the studies are being cited by the recent studies in the cluster. However, the cluster on building resilience and crisis management is gaining traction in the last few years. Based on the findings it is suggested that SMEs in tourism and hospitality must be viewed from a more multidisciplinary angle by incorporating strategies and operations management domain in the research. Second, studies must focus on developing a rare, relevant, and valuable competitive advantage for the SME. Third, the organizational culture must foster intrapreneurship within the organization to strengthen its capabilities. In addition, the study stresses that researchers must identify several new tourism avenues where SMEs could play a pivotal role. Further, stakeholder engagement must be promoted in the SMEs as it could be a value-generating point for the tourism industry. The study also recommends the use of novel methodologies in identifying the building blocks for the performance of small and medium enterprises.

The study aimed to map the twenty-five years of research on small and medium enterprises in tourism and hospitality. The study retrieved the articles published in the Scopus database and performed a bibliometric analysis using a structured and scientific protocol developed by scholars. The study answered three questions: the top contributing authors, organizations, countries, and journals in theme; the most prestigious articles and major thematic areas; and, suggested future research actions based on research gaps. The keyword co-occurrence and co-citation analysis helped in unearthing six research themes and dynamic co-citation helped in tracing the evolution of these themes. The study observes that recent literature heaps focus on building SMEs' resilience in the wake of climate change and Covid-19. The trend analysis shows positive signs for the researchers as all the clusters are still relevant in the literature.

The study recommends the use of advanced methodological techniques in developing frameworks and for future research recommends exploring the SME's performance in developing countries. The study also suggests employing a more multidisciplinary approach while studying the role of SMEs in tourism and hospitality. The study limits itself to a single database for data retrieval. It also suffers from the inherent limitations of bibliometrics. The interpretation of the clusters and future directions have been the viewpoint of the authors and may differ from others. Despite the limitations, the author’s believe that the current study will help future researchers in their work.

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An evaluation of the new tourist behavior model based on the extended theory of planned behavior

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Abstract:

Purpose: *The current study aims to evaluate and validate travel intention through the extended theory of planned behaviour (TPB) and overall image of the destination, e-WOM, that travel intention linked to actual tourist behavior.*
Methods: *A sample of 389 domestic tourists was empirically exaimined, and analysed by using the partial least squares structural equation modelling (PLS-SEM) technique in order to demonstrate that the new conceptual model has a power to an insight understanding of tourist behaviour.*
Results: *The major findings of the study identified that the influence of e-WOM on the original TPB and overall destination image constructs was statistically confirmed. In addition, destination image is as mediating variable linking between e-WOM and travel intention, which in turns lead to increasing actual tourist behavior.*
Implications: *The major findings of the current study are useful for local authority in enhancing positive image of the destination and particularly e-WOM to increase travel intention and lead to better predicting tourist behaviour. This study further provides some theoretical and managerial implications to comprehensive understand travel intention*

Keywords: *Destination image, e-WOM, travel intention, actual tourist behaviour, TPB.*

JEL Classification: *L83, Z00, B16*

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1 INTRODUCTION

According to Chan, Do (2017), 87% travellers tend to use the internet sites to search for online hotels, 83% for the tour land services and 94% for booking flight ticket via internet platform. Li, Liu (2014) pointed out that tourist prefered to use internet to search travel information to make final decisions, in order to share, review the experience with others via internet platform. Siang et al., (2020) indicated that e-WOM referred to one of the most significant and influential information sources in tourist decisions; Litvin et al., (2008) agreed that e-WOM has an extremely significant role in predicting the tourist visit intention behaviors. Additionally, destination image is considered as a one of important tool for greatly increasing the number of arrival tourists to a particular destination (Kanwel, 2019); and image of the destination is great important factor that positively and significantly impacts on tourist behaviour (Abbasi et al., 2021). In the tourism literatures, the combination of several constructs with TPB model consisting of overall destination image will help to better improve the previous models as well to comprehensive evaluate and predict tourist behavior intention (Sahli et al., 2015, 2). This view is supported by Kanwel (2019) who wrote eWOM, overall destination image are essential predictors of the likelihood to travel a certain tourism place.

Additionaly, there is a limited empirical research based on the original TPB model in Viet Nam specifically in Dong Thap province to comprehensive predict the behavioral intention of domestic tourist. The empirical study of tourist behaviour intention is not something new, there still remains a large gap of knowledge in predicting actual tourist behaviour, the causal relationship between tourist intention and actual tourist behavior need to be more exaimed in tourism destionation context (Hsu, Lee, 2010). However, there is still lack of the studies show the causal relationship between the extending TPB model and overall image of the destination, e-WOM based on domestic tourist's view. Specifically, the actual behavior was inserted to the original TPB model, which enriched the TPB (Hsu, Huang, 2010). Thus, the current study is to bridge the above research gaps, and to propose a new tourist behavior intention model to contribute theorical and managerial implications for local authorities. Consequently, the current study aims to (1) propose a new tourist behavior intention model based on the

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original theory of planned behaviour (TPB), and the extended TPB framework by inserting e-WOM, and overall destination image constructs; (2) examine the positive influence of overall image of the destination constructs on travel intention; (3) explore the causal relationships between the original TPB constructs, and evaluate the mediating role of TPB constructs positively impact on travel intention, in turn leads to increasing actual tourist behaviour.

This paper has been divided into four sub-groups. The first section deals with the literature review on the extended TPB consisting of eWOM, overall image of destination and hypothesis development. The second, the study presents a type of the empirical research, and the third section presents the findings and discussions. Finally, the conclusion, managerial implications and limitations in the research are given.

2 LITERATURE

2.1 The theory of planned behaviour

The theory of planned behaviour (Ajzen, 1991) is the extended version of the theory of reasoned action (Ajzen, 1985) because of the limitations of original model in predicting behaviours in which individuals may have not full complete volitional control (Ajzen, 1991, 1981); a significant construct in the theory of planned behaviour is the tourist behavior intention which performs a particular behaviour (Ajzen, 1991). The key factors of the TPB are the tourist attitude behavior, subjective norms, perception of behavioural control, travel intention, and actual tourist behaviour (Ajzen, 1991). AL Ziadat (2105) found the original TPB model helps to comprehensive explain, evaluate and understand tourist behaviour. The tourist behaviour intention is generally understood to mean the likelihood to visit the certain place, and the intention to suggest a specific destination to other potential tourists (Nechoud, et al., 2021). Anantamongkolkul, Kongma (2020, 128); Ajzen, (1985, 1991); Lam, Hsu, (2004) confirmed that tourist attitude behavior, subjective norms, perception of behavioural control have a positively and significantly influent on the likelihood to travel; as well perception of behavioural control has a directly and positively impact on the tourist behavior intention to travel.

2.2 The extended theory of planned behaviour

The original TPB commonly referred to as a flexible model, which opens to insert extra constructs into the original TPB model that can enhance the predictive power (Shi et al., 2021). The original TPB has also proved a significant theoretical in explaining, predicting tourist behavioural intention, however, this model needs to be further expanded by adding new valuable constructs or by modifying cause-effect relationships under certain situations (Ajzen, 1991; Meng, Choi, 2019; Meng, Cui, 2020). The empirical study of Soliman (2019) shown that the original TPB model should be further expanded to increase the powerfull prediction of tourist behavior in tourism destination context. Abbasi et al., (2021) pointed out that the extended TPB model has an insight to predict, explain tourist behavior than original TPB model by inserting additional constructs. Previous studies have reported that TPB is better predicted by inserting new valuable constructs as antecedents may contribute to study travel intention; actual tourist behaviour is caused by travel intention (Bayramov, 2022)

Meng, Choi (2019); Meng, Cui (2020) confirmed that the extended TPB has an insight unsderstanding of tourist behavior than the original TPB model; also, better in explaining travel intention. E-WOM has been identified as a significant predictor impacting travel intention (Jalilvand et al., 2013). Additionally, recent evidence suggests that the significant influence of e-WOM on the likelihood to travel is a powerful predictor of the tourist behavior (Jalilvand et al., 2012; Le, Bui, 2022). Further, A number of studies have found that overal image of the destination is one of the significant predictors impacting tourist behavior (Soliman, 2019) because the tourists depend heavily on overall image of the destination when choosing a specific destination (Bayramov, 2022).

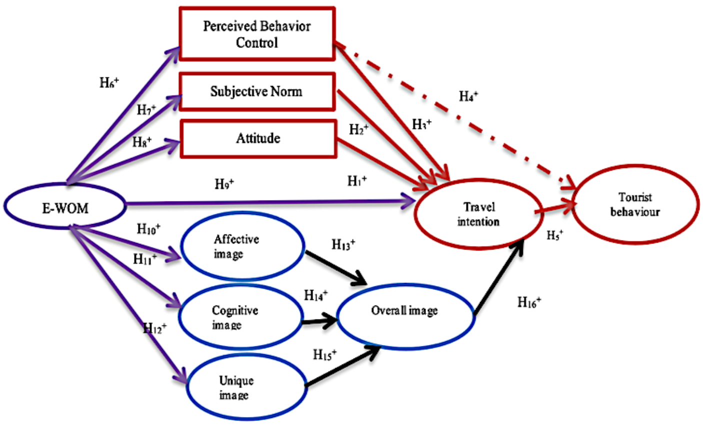
Jalilvand, Heidari (2017) found that the overall image of the destination is positively and significantly influenced by e-WOM. Finally, Soliman (2019) modified the original TPB model consisting of tourist attitude, subjective norms, perceived behavioural control by integrating some significant variables consisting of e-WOM, overall destination image to an insight understand the factors that positively influence travel intention. Thus, the current study attempted to evaluate and validate the causal effect of all influencing factors within the extended TPB model by inserting the significant variables consisting of e-WOM, destination image constructs which are consistent with the previous studies of Jalilvand, Heidari, (2017); Soliman (2019) to comprehensive predict travel intention and in turns, lead to increasing tourist behaviour; as well as to evaluate and validate the mediating role of e-WOM because e-WOM in the tourism industry especially strong influenced on the intent to travel a particular tourism site (Jalilvand et al., 2012).

3 RESEARCH METHODS

3.1 Proposed model and hypotheses

Nowadays, little evidence has been found associating e-WOM, destination image with travel intention, in turn leads to increasing actual tourist behavior. Rauniar et al. (2014) also pointed out that a positively relationship between travel intention and actual tourist behavior. Jalilvand et al., (2012) attempted to expand the original TPB in the tourism destination context by inserting the variable constructs consisting of e-WOM, destination image; further claimed that e-WOM construct has a positively and directly affected tourist attitude behavior toward a specific destination, subjective norms, perception of behaviour control, and the likelihood to travel to the tourist destination. The current study has attempted to evaluate and validate the applicability of the extended TPB with the new additional variables consists of the overall image of destination, e-WOM including of a sample of domestic tourist who might choose Dong Thap province as a trip and the current study developed the new conceptual model (Figure 1) by the combination of the e-WOM, overall image of destination constructs and the original TPB in order to comprehensive predict tourist behaviour.

Figure 1:The research model and hypotheses



Source: Author, 2021

Ajzen (1991) and Han & Kim (2010) identified that travel intention has positively associated with the core variable constructs of the original TPB model consisting of tourist attitude behavior, subjective norm, perception of behavioural control. Specifically, Lee, Hwang (2022) evaluated the significant of tourist attitude behavior, subjective norms and perception of behavioral control increase travel intention. Dalziel (2019) found that tourist with a higher positive attitude behavior, will have stronger likelihood to perform the actual behavior. However, which is constract with the previous research of Hsu, Huang (2010) who identified that the positve relationship with the key factors of TPB constructs and the actual behavior was not established. Ajzen, (1991) argued that once a tourist has an intent to travel, also has a perform to directly predict actual behaviour. This indicated there remains a research gap in the previous study between travel intention and actual tourist behavior. Thus, the current study attempted to evaluate and validate the causal relationship between tourist intention and actual tourist behaviour, the author proposes the following hypotheses:

H1+: Attitude will impact on travel intention.
H2+: Subjective Norm will impact on travel intention.
H3+: Perceived Behaviour Control will impact on travel intention.
H4+: Perceived Behaviour Control will impact on tourist behaviour.
H5+: Travel intention will impact on tourist behaviour.

3.2 Electronic Word-of-Mouth

Hennig-Thurau et al., (2004, 39) was the first to use the term "electronic word-of-mouth (e-WOM)" as any positive or negative comments or evaluations made by tourists about specific destination that is suggested available to various destination via the online chanel. In destination context, Litvin et al., (2008, 461) used the term "e-WOM" to refer to all informal communications via internet directly addressed to tourists, which is related to the usage or features s of particular destination. E-WOM is considered as a significant preditor in enhancing travel intention, building or improving a favourable image of the destination, as well as decreasing promotional expenditures or costs (Jalilvand et al., 2012). E-WOM has a positively and statistically impact on overall image of the destination because the higher tourists can share photos, travel experiences on the website or social media which will make positive overall image of the destination (Setiawan et al., 2014). E-WOM can take place in many ways via the internet platform (Hennig-Thurau et al., 2004, 39). Therefore, both the image of destination, and travel intention is also positive influenced by e-WOM (Abubakar, Ilkan, 2016; Jalilvand et al., 2012). However, Kanwel et al., (2019) argued that the image of destination had positively and statistically impact on e-WOM because mostly tourists express their knowledges or emotion beliefs regarding the destination image via e-WOM. This still has a research gap of the existant studies or research. However, Abubakar, Ilkan (2016); Siang et al., (2020); Soliman (2019) revealed that e-WOM construct has a positively affect overall image of the destination, but also tourist attitude toward the image of destination and the intention to travel (Jalilvand et al., 2013). Doosti et al. (2016); Soliman (2019) concluded that e-WOM has a positively and significantly affected travel intention through the TPB core constructs and overall destination image constructs.

Moreover, Winarta et al., (2017) confirmed that e-WOM has a statistically and positively affected the tourist attitude behavior to a specific destination, subjective norms, perception of behavioural control, as well as the intention to travel. Jalilvand, Heidary (2017) also pointed out that e-WOM was strong positively related to the components of overall image of the destination consisting of three key constructs including as cognitive image, affective image, and unique image. The current study attempted to propose a new conceptual model of tourist behavior, and to better explore the affect of e-WOM on overall image of the destination and TPB constructs. Thus, thw author proposes the following hypotheses:

H6+: EWOM will impact on Tourist Attitude.
H7+: EWOM will impact on Subjective Norm
H8+: EWOM will impact on Perceived Behaviour Control
H9+: EWOM will impact on Travel intention
H10+: EWOM will impact on Cognitive Image
H11+: EWOM will impact on Affective image
H12+: EWOM will impact on Unique image

3.3 Destination image

Milman & Pizam (1995: 21) defined the overall image of destination as the perceptual or Imagination images or holistic impression of a specific destination, a particular product, also an experience held by tourists. The broad use of the term destination image is sometimes equated with an interactive system of thinking, feelings, opinions, emotions, beliefs, visualizations, and the likelihood to travel toward a specific tourist site (Tasci, 2007, 200). The term "destination image" will refer to "the total of emotions, beliefs, attitudes, feelings and holistic impressions that tourist has about a specific tourist site" (Chiu, Lee, & Chen, 2014, 877).

Qu et al., (2011) identified that overall image of the destination may be divided into three core components consisting of (1) affective which refers to tourist's feelings and attitudes about the tourist place or service as well as implies judgement on basis of emotion (Moutinho, 1987, 19), (2) cognitive which is used to refer to the emotions, belief, and feelings which are grounds mainly on some evidences, that tourist has about a certain tourist site (Moutinho, 1987); and (3) unique image is different from other competing destinations by tourist; is uniquely related to specific destination (Qu et al., 2011). Both cognitive images and affective images generally indicate tourists' subjective associations which are linked with a certain destination (Stylos et al., 2016, 7). Moreover, Qu et al., (2011, 474) claimed that overall image destination construct is formed by the cognitive image, unique image, and affective image, and tourist destination image has a statistically and positively affected the likelihood to travel (Stylidis, Shani, & Belhassen, 2017, 186). Additionally, Qu et al., (2011) claimed that the overall image of the destination commonly referred to a sum of feeling based on the three destination image constructs, which impacts on tourist intention. Artuger et al., (2017) revealed that overall destination image has a significantly and positively affected the likelihood to travel. This view is supported by Kusumawati et al., (2019) who concluded that overall image of the destination as a mediating variable linking between e-WOM and travel intention. Thus, author proposes the following hypotheses:

H13+: Unique image will impact on Overall image
H14+: Cognitive Image will impact on Overall image
H15+: Unique image will impact on Overall Image
H16+: Overall Image will impact on Travel intention

4 RESEARCH METHODOLOGY

4.1 Scales of the study

The survey questionnaire has developed to determine exactly how the studied constructs impact on travel intention and in turns, leads to increasing tourist behaviour. The surey questionnaire were divided into two main sections. The first category deals with demographic information which is used in the current study consisting of age, gender, education background and average monthly income of the participants. The second part includes the scales for this study consisting of tourist attitude behavior consisting of four statements mainly was adapted from the researches of Abbasi et al., (2021); AL Ziadat (2015); Soliman (2019), Subjective norms consisting of four statements mainly was adopted in the studies of Abbasi et al., (2021); AL Ziadat (2015), Perception of behavioural control including of four statements mainly was adopted in the studies of Abbasi et al., (2021); AL Ziadat (2015); Soliman (2019); Winarta et al., (2017), Cognitive Image including of four statements mainly was adopted from the studies of Februadi (2014); Jalilvand et al., (2017); Soliman (2019); Affective image including of four items mainly was accepted from the researches of Artuger et al., (2017); San Martín et al., (2008), Unique image consisting of four items mainly was adopted in the studies of Jalilvand et al., (2017); Qu et al., (2011), Overall image of the destination including of four statements mainly was adopted in the work of Sultan et al., (2021), e-WOM consisting of four items mainly was adopted in the studies of Jalilvand et al., (2012); Soliman (2019); Winarta et al., (2017); travel intention consisting of four items mainly was accepted from the studies of Abbasi et al., (2021); AL Ziadat (2015); Winarta et al., (2017), tourist behaviour consisting of four items mainly was accepted from the studies of AL Kim et al., (2016); Ziadat (2015).

These measurement scales were adapted and adjusted from previously literature and published studies. Henseler et al., (2016) claimed that the factor loadings are acceptable with higher than 0.700. The factor loadings valued from 0.732 to 0.906, which showed the statistically relationship between the observable and latent variables (table 1)

All of the measurement items were employed with a five-point Likert type response. Each statement is required to ask the level of agreement, in which from 1 to 5 refer to range from strongly disagree response to strongly agree response, respectively. All of the statements were required to evaluate and validate the reliability and statistical validity of the measurement scales in the current study. In this study, data analysis was performed using the SmartPLS 3.3.3 which allowed the new proposed conceptual framework to prove the positive hypothesis, significantly influence of the studied constructs.

Table 1: Measurement scales and literature sources

Code	Measurement scales	Authors	Outer loading
	EWOM		
EWOM1	I read online reviews of other tourists every time to travel Dong Thap province	Jalilvand et al., (2012); Winarta et al., (2017)	0,838
EWOM2	I usually choose to read the tourist's online reviews to be aware of Dong Thap province make good feelings on others.	Soliman (2019)	0,872
EWOM3	The positive tourists' online reviews will bring me great confident in visiting to Dong Thap province	Soliman (2019)	0,893
EWOM4	I frequently read positive comments from other online reviews before I travel to Dong Thap province	Jalilvand et al., (2012); Soliman (2019)	0,860
	Attitude		
ATT1	Visiting Dong Thap province to me is pleasant	Abbasi et al., (2021); AL Ziadat (2015)	0,880
ATT2	Visiting Dong Thap province to me is a good idea	Abbasi et al., (2021); AL Ziadat (2015)	0,844
ATT3	Visiting Dong Thap province to me is an enjoyable	Abbasi et al., (2021); AL Ziadat (2015)	0,846
ATT4	Visiting Dong Thap province to me is favourable	Soliman (2019)	0,881
	Subjective Norm		
SN1	My friends and relatives advise me should visit Dong Thap province	Abbasi et al., (2021)	0,842
SN2	My friends and relatives support my decision to visit Dong Thap province	Abbasi et al., (2021)	0,863
SN3	My friends and relatives advise me would consider the importance of visiting Dong Thap province	Abbasi et al., (2021)	0,886
SN4	People who influence my behaviour will visit Dong Thap province at least once in the near future	AL Ziadat (2015)	0,848
	Perceived Behaviours Control		
PBC1	I would have visited Dong Thap province	Abbasi et al., (2021)	0,873
PBC2	I am able to fully control the fact that I visit Dong Thap province at least once in the near future.	AL Ziadat (2015)	0,875
PBC3	I have opportunities to visit Dong Thap province	Soliman (2019)	0,893
PBC4	I will be easy to visit Dong Thap province	Winarta et al., (2017)	0,840
	Travel Intention		
TI1	I am willing to accept more pay for vacationing in Dong Thap province in the future	AL Ziadat (2015)	0,732
TI2	Dong Thap province would be my first choice over other destinations	Abbasi et al., (2021)	0,888
TI3	I am willing to visit Dong Thap province more frequently	AL Ziadat (2015)	0,875
TI4	I plan to travel Dong Thap province in near future.	Winarta et al., (2017)	0,828
	Cognitive Image		
COG1	Dong Thap has a peaceful and beautiful scenery	Februadi (2014).	0,849
COG2	Dong Thap has a rich diversity of local food	Jalilvand et al., (2017); Soliman (2019)	0,855
COG3	Dong Thap is considered as a peaceful scenery with a great reputation of lotus flower	Februadi (2014).	0,864
COG4	Local people in Dong Thap are hospitable and very friendly	Jalilvand et al., (2017); Soliman (2019)	0,792
	Affective Image		
AFF1	Dong Thap is an exciting province	Artuger et al., (2017)	0,809
AFF2	Dong Thap is a pleasant province	Artuger et al., (2017)	0,893
AFF3	Dong Thap is an interesting destination	Artuger et al., (2017)	0,881
AFF4	Dong Thap is an arousing destination	San Martin et al., (2008)	0,844
	Unique Image		
UNI1	Dong Thap has tourist scenery and natural attractions	Jalilvand, et al., (2017); Qu et al., (2011)	0,769
UNI2	Dong Thap has cultural/historical attractions	Artuger et al., (2017); Jalilvand, et al., (2017); Qu et al., (2011)	0,888
UNI3	Dong Thap has restful and relaxing atmosphere	Artuger, et al., (2017); Qu et al., (2011)	0,864
UNI4	Appealing of Dong Thap is as a travel destination	Jalilvand, et al., (2017); Qu et al., (2011)	0,808
	Overall, Image		
OVR1	Dong Thap province will be environmentally favourable.	Sultan et al., (2021)	0,772
OVR2	Dong Thap province will be very positive towards travellers.	Sultan et al., (2021)	0,906
OVR3	Dong Thap province will be very satisfactory to the community.	Sultan et al., (2021)	0,902
OVR4	Dong Thap province will be a suitable vacation choice.	Sultan et al., (2021)	0,841
	Tourist Behaviour		
TB1	I find visiting of Dong Thap province is useful and enjoyment for me.	AL Ziadat (2015)	0,885
TB2	I believe that traveling Dong Thap province is a great way to visit.	AL Ziadat (2015)	0,900
TB3	I feel fast, convenient and easy access to the services and transportation during visiting Dong Thap province	AL Ziadat (2015)	0,892
TB4	I will have to make an effort to travel Dong Thap in the near future.	Kim et al., (2016)	0,870

Source: Author, 2021

4.2 Sampling and descriptive analysis

4.2.1 Research context

Dong Thap is a peaceful country in the Mekong Delta Region, Viet Nam where has famous scenic spots that still retain the pristine features and long-standing historical traditions, many cultural and revolutionary relics including the tomb of Nguyen Sinh Sac were the great father of President Ho Chi Minh; the historical and cultural values site of Go Thap– a special national-level relic site closely related to Oc Eo Culture where to learn about the vestiges of Funan kingdom, the well-known of Oc Eo culture left on archaeological relics. Tram Chim National Park – the fourth biosphere reserve site of Vietnam with diverse ecosystems is considered as the largest wetland area of Dong Thap Muoi, in which is an interested place for enjoying flavorable cuisine, experiencing the hospitality of local people.

Dong Thap is also well known as the "land of pink lotus" where tourist can admire the beautiful of vast lotus fields while enjoying the most popular and the old-fashioned Vietnamese dishes have been made from lotus flowers such as lotus seed sweet soup, steamed sticky rice with lotus leaves, grilled fish wrapped with lotus leaves. Additionally, tourist have the great opportunity to admire the vast beautiful lotus flowers and emerald-green rice fields, the peaceful, calm, green islet and fruit gardens are surrounded by Tien and Hau rivers, listen to the rhythms of folklore (Dong Thap Department of Culture, Sports and Tourism, 2021). Due to the significant of tourism industry, local government is branding the tourism destination as "safe and friendly environment, high service quality" with the lotus flowers as symbol, iconic, is considered to represent purity (Vietnam National Administration of Tourism, 2018). In 2019, Dong Thap welcomed 3.9 million tourists, including 3.0 million domestic tourists. Furthermore, the local gorvernment set the targets to increase the average length of guest stays from 1.5 day (in 2020) to double this by 2030 (Vietnam National Administration of Tourism, 2018). By understanding the factors that influence tourist intention and actual tourist behavioral, local authority can motivate tourist travel to province sustainablity. This study attempted to predict tourist behaviour by the combination of TPB model and e-WOM, overall image of the destination.

4.2.2 Research Design

The surveys were performed in Dong Thap from February to April 2021, this is also the period time the most domestic tourists travel to Dong Thap. The sample respondents of the study are domestic travellers and the questionnaire survey was sent randomly to domestic travellers visit Dong Thap province through the tour guide after clearly explaining the objective of the research; and directly send to domestic tourist at some tourist sites at Dong Thap province. This indicated the convenience approach in the current study. By using the ration of observation to independent variables is 5:1 which indicated by Hair et al., (1995), the number of 36 observed items was developed in the current study; thus, the reasonable sample size must be at least 180 respondents. Additionally, as recommended by Burn, Bush (1995) who indicated that a reasonable sample size of the model is at 385 at 95% confidence level with 95% desired accuracy. A total of 389 valid responses (41 of them were invalids because of too many uncompleted items) is taken from 430 respondents (rate of return: 90.46%) is suitable for exploratory data analysis and for estimating complex causal relationships (Hair, et al., 2011). Additionally, Sarstedt, et al., (2021) claimed that PLS-SEM technique is used to identify important factors and analysis the vital target constructs consisiting of tourist satisfaction, tourist loyalty, tourist behavioral intentions. Thus, the PLS-SEM was used in this study is considered as a popular prediction-oriented analyses.

4.2.3 Descriptive analysis

There are four questions asked about the respondents's demographic profile consisting of gender, age group, income, as well as educational background. The the resulft of demographic information are presented in table 2.

Table 2: Demographic analysis

	Characteristics	Frequency	Percent
Gender	Female	203	52.2
	Male	186	47.8
Age group	18 to 25 years old	71	18.3
	26 to 35 years old	131	33.7
	36 to 45 years old	71	18.3
	46 to 55 years old	51	13.1
	> 55 years old	65	16.7
Income (VN Dong)	< 10 mil/mth	101	26.0
	10 – 15 mil/mth	188	48.3
	15 - 20 mil/mth	95	24.4
	20 - 25 mil/mth	5	1.3
Educational Background	College	86	22.1
	Bachelor	239	61.4
	Post-Graduation	25	6.4
	Other	39	10.0

Source: Author, 2021

Based on this survey, the sample size consisting of 186 male participants (approximately 47.8% of total respondents) and 203 female participants (approximately 52.2 % of total respondents). In terms of the age group, the majority of participants fall into the age group of 18 to 25 years old (18.3 %), the age group of 26 to 35 years old (33.7 %), the age group of 36 to 45 years old (18.3 %), from 46 to 55 years old (13.1 %) and above 55 years old (16.7 %). The majority of the participants in the current study have a bachelor's degree holders (61.4%) followed by college certification (22.1 %), a post-graduation (6.4 %), and other degree holders (10.0 %).

5 ANALYSIS OF RESULTS AND DISCUSSION

5.1 Analysis of results

The current study attempted to examine the reliability coefficient of the individual items, convergent validity of the theoretical model and the criterion of discriminant validity to evaluate the measurement model for formative and reflective constructs (Hair et al., 2019). The acceptable value of composite reliability (CR), and the average variance extracted (AVE) value of a variable should be higher than 0.70, and the well-established reliability and the assessment of convergent validity should exceed 0.50 respectively to perform the reliability as well the convergent validity of the theoretical model (Hair et al., 2019). The value of the reliability analysis was indicated by using the Cronbach's α coefficient was good with a value of 0.823; all the calculation of the composite reliability value are acceptable (more than 0.883) (Henseler, Hubona, & Ray, 2016). Lastly, the values of AVE were the minimum required level of 0.654 and above are acceptable (Hair et al., 2010). Therefore, the table 3 is presented for the composite reliability value of variables are more satisfactory, reliable and valid to conduct further tests.

Table 3: Composite

	Cronbach's α	Composite Reliability	AVE
Affective Image	0.885	0.921	0.744
Attitude	0.898	0.929	0.766
Cognitive Image	0.866	0.909	0.715
EWOM	0.885	0.920	0.743
Overall Image	0.899	0.930	0.768
Perceived Behaviors Control	0.823	0.883	0.654
Subjective Norm	0.888	0.922	0.749
Tourist Behavior	0.893	0.926	0.757
Travel Intention	0.883	0.919	0.741
Unique Image	0.854	0.902	0.697

Source: Author, 2021

Two most conservative approaches are required to establish the criterion of discriminant validity. Firstly, the criterion of Fornell-Larcker has been used to evaluate and validate the proportion of covariance between unobserved or latent variables of the proposed model.

The Fornell-Larcker criterion results are presented in Table 4 which indicated that the bold variable square root of the AVE of each construct should be higher than other correlation values (off-diagonal) with other variables indicated there is no discriminant issue.

Table 4: Discriminant validity

	AVE	AFF	ATT	COG	EWOM	OVR	PBC	SN	TB	TI	UNI
AFF	0.744	**0.863**									
ATT	0.766	0.351	**0.875**								
COG	0.715	0.404	0.418	**0.845**							
EWOM	0.743	0.427	0.550	0.458	**0.862**						
OVR	0.768	0.541	0.390	0.585	0.463	**0.877**					
PBC	0.654	0.201	0.317	0.314	0.491	0.373	**0.809**				
SN	0.749	0.277	0.291	0.312	0.473	0.282	0.301	**0.865**			
TB	0.757	0.350	0.474	0.503	0.607	0.553	0.548	0.377	**0.870**		
TI	0.741	0.392	0.489	0.463	0.602	0.561	0.524	0.405	0.793	**0.861**	
UNI	0.697	0.292	0.177	0.357	0.415	0.476	0.265	0.292	0.351	0.340	**0.835**

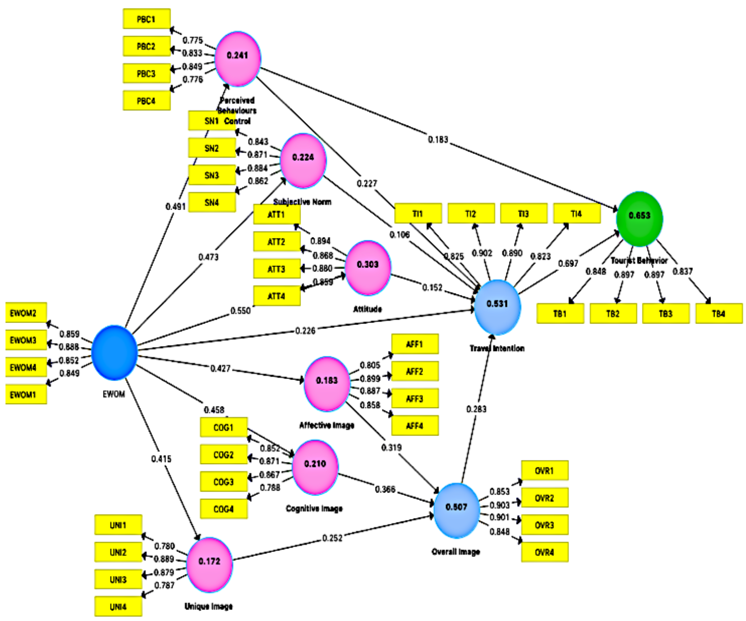
Note: AFF: Affective image; ATT: Attitude; COG: cognitive image; OVR: Overall Image; PBC: Perceived behavior controls, SN: Subjective Norms, TB: Tourist behavior, TI: Travel intention, UNI: Unique image)

Source: Author, 2021

The second is the heterotrait-monotrait (HTMT) ratio. The ratio of Heterotrait-Monotrait correlations should be smaller 0.90 is considered as acceptable to establish discriminant validity (Henseler et al., 2015). The calculated critical values are smaller than the cut-off value of 0.900 so the discriminant validity was accepted (table 4), representing that all useful constructs in the current study are Statistical validity and reliability (Henseler et al., 2015). The major findings of current paper indicated that the new proposed model was supported; and the causal relationships between the variables constructs were statistically significant (figure 2).

The value of R-squared for an estimated equation was indicated in figure 2 is level of 0.653, which is significantly and statistically at a 0.01 level of probability. The R2 adjusted shows that 65.1 percentage of variation in tourist behaviour is positively explained by e-WOM, tourist attitude behavior, subjective norms, perception of behavioural control, overall image of the destination as well as travel intention while the remaining 34.9% was influenced by other variables. Additionally, the R2 values of each the endogenous latent variables constructs was set to 0.75, 0.50, or 0.25 in the structural model are respectively considered as strong effect, significant, moderate correlation, or low correlation (Hair, et al., 2011). The result of this study indicated the high predictive power for the new proposed model.

Figure 2: Structural Equation Modelling (PLS- SEM)



Source: Author, 2021

Table 5: Hypothesis testing

Hypothesis		β	Standard Deviation	T Statistics	P Values	Decision
H_1^+	Attitude->Travel Intention	0.152	0.055	2.739	0.006	Accept
H_2^+	Subjective Norm->Travel Intention	0.106	0.042	2.512	0.012	Accept
H_3^+	Perceived B. Control->Travel Intention	0.227	0.059	3.835	0.000	Accept
H_4^+	Perceived B. Control->Tourist Behavior	0.342	0.062	5.558	0.000	Accept
H_5^+	Travel Intention->Tourist Behavior	0.697	0.052	13.285	0.000	Accept
H_6^+	EWOM->Perceived B. Control	0.491	0.047	10.442	0.000	Accept
H_7^+	EWOM->Subjective Norm	0.473	0.053	8.953	0.000	Accept
H_8^+	EWOM->Attitude	0.550	0.048	11.542	0.000	Accept
H_9^+	EWOM->Travel Intention	0.587	0.045	13.023	0.000	Accept
H_{10}^+	EWOM->Affective Image	0.427	0.054	7.917	0.000	Accept
H_{11}^+	EWOM->Cognitive Image	0.458	0.048	9.537	0.000	Accept
H_{12}^+	EWOM->Unique Image	0.415	0.052	8.030	0.000	Accept
H_{13}^+	Affective Image->Overall Image	0.319	0.056	5.657	0.000	Accept
H_{14}^+	Cognitive Image->Overall Image	0.366	0.057	6.406	0.000	Accept
H_{15}^+	Unique Image->Overall Image	0.252	0.062	4.099	0.000	Accept
H_{16}^+	Overall Image->Travel Intention	0.283	0.059	4.803	0.000	Accept

Source: Author, 2021

Table 5 revealed that the detailed results of bootstrap resampling techniques with 5000 resamples to evaluate the thesis statements. The bootstrapping technique generates the significant of the path coefficients between the latent variables constructs. The statistical results indicated that the e-WOM, tourist behavior attitude, subjective norms, perception of behaviour control, overall destination image, travel intention have a positively affected tourist behaviour at the significant level. As shown in table 5, of sixteen path coefficients identified in the measurement model, are found to be significantly and statistically validity. These path coefficients reflect the influence of e-WOM on tourist attitude behavior toward a certain destination (β= 0.550, p= 0.000), e-WOM on subjective norm (β = 0.473, p= 0.000), e-WOM on perceived behavioural control (β= 0.491, p= 0.000), e-WOM on affective image (β= 0.427, p= 0.000), e-WOM on cognitive image (β= 0.458, p= 0.000), e-WOM on unique image (β= 0.427, p= 0.000), destination image on travel intention (β= 0.283, p= 0.000), travel intention on actual tourist behaviour (β= 0.697, p= 0.000). Additionally, the travel intention was significantly influenced by e-WOM in the proposed model (β= 0.587, p = 0.000). The results confirmed that e-WOM has a positively and directly affected tourist attitude and behavior, subjective norm, perceived behavioral control, overall image of the destination consisting of affective, cognitive, unique image and travel intention. The tourist attitude and behavior, subjective norm, and perception of behavior control have a positively, significantly and directly impact on travel intention. Finally, travel intention have a positively and directly impact on actual tourist behavior. Consequently, the results revealed that all proposed hypothesis in the current study were respectively confirmed.

Either the variance inflation factors (VIF) or tolerance (TOL) was used to diagnose the degree of multicollinearity. If the VIF value is greater than 4.0 or tolerance is smaller than 0.2 indicate that the problem of multicollinearity exists (Hair et al., 2014, 197). The results indicated that the values of VIF were less than 2.0, this means no multicollinearity impacts among the studied variables (in Table 6).

Table 6: The collinearity statistics

	OVR	TB	TI
AFF	1.232		
ATT			1.485
COG	1.291		
EWOM			2.012
OVR			1.366
PBC		1.378	1.375
SN			1.305
TI		1.378	
UNI	1.181		

Source: Author, 2021

6 DISCUSSION

The major finding identified that the new proposed model comprehensive predicts and evaluates tourist behaviour toward visiting Dong Thap province. Particularly, these two addtional variables are likely to positive impacts on travel intention, which is an important antecedent of tourist behaviour. All the relationships associated with travel intention to visit Dong Thap province are also proposed to be moderated by age which refers to a group aged 26 to 35 years old with a certificate of bachelor and the average monthly income from 10 -15 mil/month, respectively.

The significant relationship between perception of behaviour control and travel intention is a strong positive which also accords with previous findings of AL Ziadat (2015); Soliman (2019). Thus, a positive inter-relationship between perception of behaviour control and the likelihood to travel will positively increase travel intention. The major finding revealed that e-WOM has a strongly and positively affected the overal image of the destination components which is consistent with the studies of Jalilvand et al., (2017), Soliman (2019). The major findings of the current study also suggest that e-WOM has a statistically and significantly affected perception of behavioural control, tourist attitude behavior, subjective norms and travel intention which is consistent with the study of Jalilvand et al., (2012). According to this result, e-WOM has a statistically and significantly influent on overall image of the destination and the likelihood to travel. The major findings of the current study accords with the past studies of Abubakar, Ilkan, (2016), Jalilvand et al., (2012); Winarta et al., (2017); Jalilvand et al., (2017); Soliman (2019) who claimed that overall image of the destination is positively influenced by e-WOM. In addition, the current study revealed that the overall image of destination is formed by the cognitive image construct, affective image construct and unique image construct and then consequently intention to travel which has similar to the previous study of Han, Kim (2010). Lastly, the findings confirmed that the travell intention positively influences the actual tourist behavior which is in agreement with the study of Hsu, Huang (2010).

6.1 Managerial implications

Based on the original TPB model, the study aims to evaluate and validate the tourist behaviour by the extended the theory of planned behaviour with two additional variables constructs to comprehensive explain, evaluate and predict tourist behaviour to Dong Thap province. In particular, this new model involves the original TPB with the core constructs (tourist attitude behavior, subjective norms, perception of behavioural control), and inserts some significant factors consisting of e-WOM, overall image of the destination. The finding result has proven that the new model of tourist behavior has a positively and significantly affected the likelihood to visit Dong Thap province and in turn, lead to increasing tourist actual behaviour.

The major findings of the current study highlighted the significant role of e-WOM as a chanel for tourist who are in the age group from 26 to 35 years-old with a certificate of bachelor and the average monthly income is from 10 to 15 mil/month, who prefer to use internet to seek important sources of information about tourism destination and to have an ability financial to travel to Dong Thap province. More specifically, local government should further attempt to improve the social media platforms so that travellers can obtain vital and favourable information of overall image of destination which will positively influence final decision to travel. This can attract more tourists to use social media sites it for planning a travel. The result of this study helps the local authority to an insight understand both the important role of e-WOM, and its link to destination image as well the relation to the orginal TPB model and how to increase the travel intention. Thus, the local government should improve the favourable overall destination image and particularly positive e-WOM to increase intention to travel Dong Thap province.

Thus, the new model of tourist behavior has provided an important guideline for increasing tourist behaviour in tourism destination context. Specifically, in order to increase tourist behaviour, the local government should first pay attention to increase tourists attitude behaviour because of the most important factor with β = 0.303, second build positive image of destination with β = 0.507 via e-WOM and then increase actual tourist behaviour through travel intention with β = 0.653.

7 CONCLUSIONS

In conclusion, both theoretical and practical findings in this study contribute to an insight understand tourist behaviour. First, the study contributed to the theoretical development of the extended TPB model for comprehensive evaluation tourist behaviour and well explanation the interrelationships between these studied constructs. Second, the managerial implications of this study are meaningful for local authorities who seek to reach and influence travel intention, and actual tourist behaviour of domestic tourists to Dong Thap province can use the e-WOM as online chanel for recommendations. Third, the new model of tourist behavior has a significantly and positively affected travel intention, and consequently increase tourist behaviour, while e-WOM plays a significant role to create an impressive image and increase the likelihood to travel from tourist. Accordingly, the new proposed model integrated e-WOM, overall image destination into the original TPB model to an insight predict travel intention and actual tourist behavior. Finally, all of the sixteen proposed hypotheses in this study were accepted, respectively.

7.1 Limitations

Current study has some research limitations. First of all, the current study used a convenience sample that data were collected from respondents directly by using a self-administrated questionnaire survey. Future research should therefore concentrate on the other sample techniques to get the results from the entire population as well on the investigation of the different between online and offline survey to an insight understand tourist behaviour in online context. The second, this study focused on domestic's visitors only in Dong Thap province. A further study could assess inbound tourist to compare the different tourist behaviour between domestic and inbound tourists; and further research might explore with more tourist sample. Finally, there still has other factors could also influence tourist behavior intention. Further research would also consider more other latent variables constructs to provide an insight understanding of behaviour intention.

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BOOK REVIEW

The Practical Guide to Wedding Planning

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Reviewed by: Hugues Séraphin
University of Winchester Business School, UK

JEL Classification: *L83,F52, H12*

Biographical note: Hugues Séraphin (hugues.seraphin@winchester.ac.uk) is a Senior Lecturer in Event/Tourism Management Studies and Marketing. Hugues Seraphin holds a PhD from the Université de Perpignan Via Domitia (France) and joined The University of Winchester Business School in 2012.

1 BOOK REVIEW

This book could be assimilated to a 'one-stop-shop' that conveys to scholars, students, and practitioners alike, all the information they require to plan and deliver a successful wedding. At the moment, there is no guide on the market, doing so, and yet weddings as a family event is celebrated across the world, and in all communities (Dawson & Bassett, 2018; Duncan, 2016; Getz, 2012). Additionally, in almost all communities there is the expectation that individual should get married at one stage or another of their life (Ahuvia & Adelman, 1992).

The book is articulated around twelve chapters, but not clustered into sections. As a result, this review is not only providing a critical analysis and discussion of the book, but also suggesting a thoughtful articulation around two sections: The wedding industry and its stakeholders (section 1), which would include: chapter 1 (Weddings and the event industry), chapter 2 (The wedding planner), chapter 4 (Your clients), chapter 7 (The venue), chapter 10 (Food and drink) and chapter 11 (The wedding team). The second section (section 2), which is the operation side of weddings, would include chapter 3 (Where to start?), chapter 5 (The wedding budget), chapter 6 (The vision), chapter 8 (The ceremony), chapter 9 (The stationery), and finally, chapter 12 (The wedding day).

The first section of the book proposes a very detailed and specific overview of the genesis of weddings (as a family and social construct), followed with an overview of how weddings are celebrated in different country, alongside the growth and weight of the industry (chapter 1). This section of the book also focuses on one of the key stakeholders of wedding planning, namely the wedding planner and her/his team (chapter 2 and 11). An emphasis is placed on how its importance and relevance varies from one culture to another, while also offering caveats in terms of how to become a wedding planner, and skills and qualities to get to that point (chapter 2). Because chapter 2 and 11 are discussing the same topic, and because chapter 11, is rather brief, both chapters could have been merged into one. The other key stakeholder this guide to wedding focuses on, are the clients. Reading this section, it becomes apparent that being a wedding planner is quite a challenging job as it involves liaising with a wide range of stakeholders involved in the wedding industry ecosystem. The main challenge being to manage the expectations of the bride/groom and their family (chapter 4). The venue which is a central element in the success of any event (Nolan, 2018), as contributing to the experience, ambiance, memories, etc (Powell, Dosquet & Séraphin, 2015), is given a central place in this book, while also shedding light on one of the key industry actors within the wedding industry ecosystem. The author provides readers with all the steps to follow until their dream venue is booked (chapter 7). When talking about weddings and venues, catering (food and drink) is the next topic on the list. Chapter 10 is covered rather briefly. As a result, this chapter and chapter 2 could have been covered together. Additionally, the quality of the chapter could have been enhanced by adopting the same approach adopted with chapter 1, i.e., by providing a genesis of the type of food served at weddings in different communities.

The second section of the book as mentioned earlier is the bespoke, operational section. Indeed, in this section, the author is suggesting ways for anyone planning to become a professional wedding planner, to proceed (chapter 3). As for section 5, it discusses an important aspect of wedding, which is the budget. This parameter is determining the framework of the wedding planner. However, in this section, the author mainly discussed working with smaller budgets, and short notice wedding. What about wedding with unlimited budget, and with long notice? As for chapter 6, despite its relevance and importance, it is mainly providing complementary information, as opposed to adding something new to the

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discussion, subsequently, it could have been covered alongside chapter 5. Indeed, despite the fact the budget determines the framework of the wedding planner, it is very important for the planner to have a vision of what the final version of wedding should be, bearing in mind the budget. Chapter 8, 9, 12 are very informative. The information provided in these chapters are also very useful for couples, particularly the section on the type of wedding ceremony, and the type of wedding stationery they can choose from, and equally important when invitations should be sent. Chapter 12, which is the conclusion chapter should ease the nerves of any nervous couples, as this chapter clearly shows that the wedding planner is looking after them until the very end. These three chapter (8,9, and 12) are relevant to both wedding planner and the couples getting married.

All in all, the content of the book, the writing style, the illustrations (pictures), the activities, the resources provided in the appendix section, and the stories shared by the authors make this book highly appropriate for practitioners, couples, academics, and students alike. In short, The Practical Guide to Wedding Planning represents an important source for readers seeking to deepen their understanding of the role, importance, and relevance of wedding planners. Having said that, with an academic aspect (even if limited), this guide would have been even more appealing to academics/researchers and students.

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Aims & Scope

AIMS

The *Journal of Tourism, Heritage & Services Marketing* is an open-access, international, multi-disciplinary, refereed (double blind peer-reviewed) journal aiming to promote and enhance research in all fields of marketing in tourism, heritage and services management. The journal is intended for readers in the scholarly community who deal with different marketing sectors, both at macro and at micro level, as well as professionals in the industry. The *Journal of Tourism, Heritage & Services Marketing* provides a platform for debate and dissemination of research findings, new research areas and techniques, conceptual developments, and articles with practical application to any tourism, heritage, and services marketing segment. Besides research papers, the journal welcomes book reviews, conference reports, case studies, research notes and commentaries. The *Journal of Tourism, Heritage & Services Marketing* aims at:

- Disseminating and promoting research, good practice and innovation in all aspects of marketing in tourism, heritage and services to its prime audience including educators, researchers, post-graduate students, policy makers, and industry practitioners.
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- *For papers published in conference proceedings:* Jackman, F. (2008). Adoption of innovations on hospitality. *Proceedings the 26th EuroCHRIE Conference.* Dubai, United Arab Emirates.
- *For unpublished works:* Gregoriades, M. (2004). The impact of trust in brand loyalty, *Unpublished PhD Thesis.* Chios, Greece: University of the Aegean.
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