

# **Tourism crises and impacts on destinations: A systematic review of the tourism and hospitality literature**

## **Abstract**

Tourism crises are important events affecting the development of destinations. However, the academic community lacks adequate knowledge from the accumulated literature on the classification attributes, spatial distribution, and impact structure of global tourism crises. This research analyzed 302 articles related to tourism crises from 1991 to 2020 drawn from the Social Sciences Citation Index database. Bibliometric and content analyses were conducted to identify the event types, regional distribution, impact structure, and synergistic factors of tourism crises. The results showed that the extant research on tourism crises has event-driven characteristics. The types of tourism crises are diverse and have multiple sub-categories. The tourism crises featured in academic research are mainly events affecting Asia, Europe and North America, reflecting their real-world distribution. The impacts of tourism crises on destinations are at three levels: macro, meso, and micro. Synergistic factors can enhance or weaken the degree of crisis impacts, which include positive, negative and interactive factors. Research on tourism crises has substantial future scope and this investigation puts forward an agenda for this work.

## **KEYWORDS**

Tourism crisis; regional distribution; crisis impacts; synergistic factors; globalization; bibliometric analysis; content analysis

## **Introduction**

Tourism is one of the most economically important sectors in the world (World Travel & Tourism Council, 2019), but it is also one of the most vulnerable to crises (Pforr, 2009). This

is not only because of the complex interactions within the hospitality and tourism industry, but also because tourism is an open system and greatly dependent on and influenced by many external factors (Morrison, Lehto, & Day, 2018; Ritchie, Crofts, Zehrer, & Volsky, 2014). The COVID-19 pandemic in 2020 is stark evidence of the disastrous effects of a global crisis on hospitality and tourism. Hall (2010) suggested that various tourism crises beginning in the 1970s posed a major challenge to global tourism, and with the passage of time, crises have become increasingly unavoidable (Faulkner, 2001; Hall, 2010; Ritchie, 2004). Recently, global tourism has experienced numerous crisis events, including terrorist attacks, natural disasters, wars, political instability, economic recessions, disease outbreaks, and biosafety and food safety threats (Alegre & Sard, 2015; Chen, 2011; Cro & Martins, 2017; Sawalha, Jraisat, & Al-Qudah, 2013). With the expansion of tourism worldwide and industrial growth, crises occur more frequently such that "tourism destinations in every corner of the globe face the virtual certainty of experiencing a disaster of one form or another at some point in their history" (Faulkner, 2001). Therefore, it is important for the industry and its stakeholders to recognize and understand the regional distribution of tourism crises to more effectively respond to these events when they occur.

The sensitivity and vulnerability of destinations to crises have aroused the interest of many scholars and tourism crisis management has become an important field of tourism research (Cruz-Milan, Simpson, Simpson, & Choi, 2016; Ghaderi, Mat Som, & Henderson, 2012; Ghaderi, Som, & Wang, 2014; Pennington-Gray, Schroeder, Wu, Donohoe, & Cahyanto, 2014). However, Faulkner (2001) and Ritchie (2004) argued that the impact of tourism crises on destinations and the industry has not been systematically studied. Although

many works have explored the consequences of tourism crises (Alegre & Sard, 2015; Handler, 2016; Pappas & Papatheodorou, 2017; Samitas, Asteriou, Polyzos, & Kenourgios, 2018), the impacts on destinations are complex and the academic community has not yet formed a clear map and structural understanding of crises. From a theoretical point of view, the effects of crises on destinations need to be further analyzed.

Over the past 30 years, scholars have conducted varied and in-depth academic exploration of tourism crises. The cases reflected in these studies form a series of crisis event maps that span the globe. Due to the persistence of crises, several literature reviews focusing on specific aspects of tourism crises have been conducted. Destination recovery management is the main research topic of the reviews (Backer & Ritchie, 2017; Blackman, Kennedy, & Ritchie, 2011), and there is a lack of analysis on the classification attributes, distribution characteristics, and impact structure of tourism crises. In addition, Mair, Ritchie, and Walters (2016) presented the results of a review of the literature concerning post-disaster and post-crisis recovery for tourist destinations, but their time scale of literature selection was short, resulting in insufficient representativeness of the sampled works. In terms of research methods, Jiang, Ritchie, and Benckendorff (2017) confirmed the application potential of bibliometric visualization in tourism crisis and disaster management research; however, the method was limited to a macro presentation of related topics and their research development, and did not provide detailed micro-reviews of specific articles and contents. Pennington-Gray (2018) and Ritchie and Jiang (2019) presented key critiques and future directions of tourism crisis management by using the traditional review approach. This method generates knowledge by integrating the existing research, but mainly proposes a research agenda or a

framework according to the author's personal point of view to portray the evolution and development of a given topic. Hence, this technique is subjective. This research was designed to compensate for the deficiencies of previous review articles. The procedures followed a reproducible, scientific, transparent, and systematic process to retrieve, extract, read, and analyze the tourism crisis literature for the past 30 years. On this basis, this analysis discusses the literature characteristics and the evolution and development of research on tourism crises with bibliometric software. Finally, this research adopted content analysis for each information dimension in the literature summary to identify the event types and geographical distribution of tourism crises, determine the vertical and horizontal scope of the impact of tourism crises, and extract the synergistic factors that enhance or weaken the degree of crisis impacts.

The contribution of this review is three-fold. First, in view of the frequency of crisis events and the severity of their impacts on the tourism industry, as well as the limitations related to scope and depth of the existing reviews on tourism crises, a systematic review of the literature is necessary and timely in the midst of the COVID-19 pandemic. This research analyzed the evolution and development of research on tourism crises with the help of bibliometric software, and outlined the existing research content to form a holistic understanding of tourism crises. This provided a solid foundation and identified gaps and opportunities for guiding future related research. Second, the research topics of the existing reviews tend to be mostly on response and recovery management of crises or disasters, while ignoring the nature, type, and scale of tourism crises. This investigation systematically synthesized the individual cases of crisis events in the literature, classified the types of

tourism crises and their sub-categories, and revealed the spatial distribution of tourism crises. The findings could play an important role in furthering the basic theoretical research on tourism crises and help destination managers to identify and manage tourism crises more effectively. Third, many scholars have discussed the impacts and consequences of tourism crises, but have usually conducted research based on individual cases. In addition, the impact of tourism crises on destinations can be viewed as a chaotic system. There are complex and dynamic connections among influential factors in crises that interact to cause impacts. However, the academic community has not yet formed a clear structural understanding of these impacts in tourism. This research explored the impact structure of crisis events on destinations and identified the synergistic factors for the impacts of tourism crises. It aimed to determine the vertical and horizontal scope of the impacts of tourism crises and identify synergies that enhance or weaken the degree of crisis impacts, thereby enhancing the predictability of this complex system. The findings compensate for the lack of a holistic understanding of the impact system for tourism crises in the academic literature, which will assist destinations to better evaluate the overall complex impacts of crisis events.

## **Methodology**

### *Systematic quantitative review*

Literature reviews evaluate fields of knowledge and promote knowledge development. The research methods for these reviews can be divided into three categories, namely meta-analysis, traditional narrative reviews, and systematic quantitative reviews (Pickering & Byrne, 2014). This study employed the quantitative approach to analyze the literature on tourism crises and their impacts, following a systematic process to literature retrieval,

extraction, and synthesis (Yang, Khoo-Lattimore, & Arcodia, 2017). Literature statistics and research contents are viewed in an interdisciplinary context, which extends and broadens the boundaries of knowledge to reveal potential knowledge content (Pickering, Grignon, Steven, Guitart, & Byrne, 2015). There is a substantial literature on tourism crises, often based on interdisciplinary research and cross-regional in scope. The research topics involved are rich and complex and, therefore, the systematic quantitative approach was an appropriate tool for this task.

#### *Systematic review process*

A systematic review process was followed (Figure 1) (Pettigrew & Roberts, 2006; Pickering & Byrne, 2014), which comprised identifying research topics, establishing retrieval rules, searching and extracting literature, evaluating and reading literature, and synthesizing research findings. The ISI Web of Knowledge was the data collection platform and the Social Science Citation Index (SSCI) in the Web of Science (WoS) Core Collection was the scope for literature collection. There was no timeframe for literature collection (the default time for the database system started in 1985). The search terms applied were: "tourism" and "safety", "tourism" and "security", "tourism" and "disaster", "tourism" and "crisis", "crisis" and "destination". The first three sets of terms were searched within literature topics; "tourism" and "crisis" were searched within literature topics and titles; "crisis" and "destination" was searched within literature titles. The UNWTO definition of a tourism crisis was used to determine whether the event discussed in the literature was a tourism crisis event, that is, “any unexpected event that affects travelers' confidence in a destination and interferes with the ability to continue operating normally” (UNWTO, 2003). The three criteria for literature

selection were: the term "crisis" or a certain type of crisis was found in the title, abstract and keywords; an individual crisis case was included in the contents of the work; and the crisis event conformed to the UNWTO definition. Only original research articles published in peer-reviewed English journals were included in the review. Book reviews, conference papers and book chapters were not analyzed.

[Insert Figure 1. Systematic review process]

As of April 2020, a literature search based on the SSCI in the WoS Core Collection produced 1,280 bibliographic items that were imported into NoteExpress software for data management. Some 159 items were deleted through the duplicate checking procedure. The titles, abstracts, and keywords of all articles (involving the full text if necessary) were assessed for eligibility according to the flowchart of literature retrieval and evaluation in Figure 2, and a further 761 articles unrelated to tourism crises and their impacts were excluded. The reference lists of the eligible studies were cross-checked to identify articles that may have been overlooked, and 10 additional articles were discovered. As a result, 302 articles met the selection criteria and were included in the final analysis.

[Insert Figure 2. Flowchart of literature retrieval and evaluation]

The evolution and development of research on tourism crises were analyzed with CiteSpace bibliometric software (Chen, 2006), which showed the relationships among the central constructs in studies in the form of visualization. Through cluster, citation and burst detection analyses of highly cited references, the focus of research, mature research fields, and emerging research directions were displayed. A summary table in Microsoft Excel software was created to display the basic article information (author, year, topic, journal, etc.)

Content analysis produced information on crisis types, destinations, impacts, and synergistic factors.

## **Findings**

### *Literature characteristic analysis*

*Descriptive analysis.* The tourism crises literature was distributed from 1991 to 2020, and generally showed an upward growth trend (Figure 3). In 1998, 2001, 2004, 2010, and 2013, the growth rate was higher than that of other years. The corresponding crisis events included the Asian financial crisis of 1997, the September 11th terrorist attack of 2001, the SARS outbreak of 2003, and the world economic and financial crisis during 2008-2009. Therefore, it can be seen that research on tourism crises has event-driven characteristics.

[Insert Figure 3. Annual distribution of articles]

Based on the WoS categories (Figure 4), the research on tourism crises and their impacts was mainly concentrated in Hospitality, Leisure, Sport & Tourism (39.3%), Management (16.4%), and Environmental Studies (11.4%). Other categories with more than 2% were Sociology, Economics, Business, Geography, Environmental Sciences, and Green & Sustainable Science & Technology.

[Insert Figure 4. Literature category statistics for WoS]

The journals publishing research on tourism crises were diverse (Table 1), covering hospitality, tourism and leisure, business and services, and security and risk. Tourism Management (17.2%), Annals of Tourism Research (8.9%), Current Issues in Tourism (8.9%) and Journal of Travel Research (4.6%) had the most articles, followed by the Journal of Travel & Tourism Marketing, Journal of Destination Marketing & Management and Tourism



Management Perspectives, each with approximately 3.5%.

[Insert Table 1. Distribution of articles by journal]

*Network cluster analysis.* The network of co-occurring keywords (Figure 5), showed that, in addition to tourism, terrorism, disasters, economic crises, political instability, and other types of crises, crisis impact and crisis management were the keywords with the highest co-occurrence frequency. The keywords with high co-occurrence frequency included: (1) risk, safety, and perception associated with tourism crises; (2) industry, demand, behavior, international tourism, and destination image associated with crisis impacts; and (3) resilience, models, and recovery associated with crisis management. These keywords reflected the main subject areas of concern in the study of tourism crises.

[Insert Figure 5. Cluster of network of co-occurring keywords]

A timeframe analysis of keyword clustering analyzes the chronological development of related research. The early (2004 and before) studies on tourism crises focused on types of events such as terrorism and disasters, many of which were based on the perspectives of safety and security. The mid-term (2005-2011) research concentrated more on the impacts of tourism crises, demand, behavior, risk perception, and management, and the construction of frameworks. From 2012 to 2020, there were more research issues related to tourism crises. Tourism crises events result from economic crises, climate change, and health issues. The impacts of tourism crises are on communities, attitudes, and perspectives. Also, issues such as resilience, dark tourism, and vulnerability have attracted attention from scholars.

*Citation analysis.* Based on the top 50 representative articles in each year, a map containing citation nodes of 302 articles was obtained after optimization by the Pathfinder algorithm

(Figure 6). The sizes of nodes represent the citation frequencies of the articles. The changes in color of nodes means that the article was referenced in the corresponding year, and the thickness of the connection indicates the strength of the association between the nodes. The three clusters of references in the citation map suggest the connectivity of article contents and the adoption of academic viewpoints, in which the highly-cited references (circular nodes) have been the focal points of tourism crisis research.

Table 2 shows the top 13 highly-cited references. Hall (2010) systematically analyzed the subjects of crises in tourism. Faulkner (2001) constructed a framework for tourism disaster management and on that basis, Hystad and Keller (2008) proposed a tourism disaster management framework at the destination level. Ritchie (2004, 2008, 2009) outlined a strategic and holistic approach to crisis management for tourism. Mair, Ritchie, and Walters (2016) presented the results of a review of the literature concerning post-disaster and post-crisis recovery for destinations. Papatheodorou et al. (2010) reported on the consequences and perspectives of the global economic crisis and the tourism industry. Smeral (2010) and Song and Lin (2010) drew on an analysis of the macroeconomic effects of the financial and economic crisis and its impact on tourism demand for inbound and outbound travel. Rittichainuwat and Chakraborty (2009) and Kozak, Crotts, and Law (2007) analyzed the impacts of perceived risks triggered by crisis events on travel decisions. Cioccio and Michael (2007) examined how small tourism firms prepared for, dealt with, and recovered from crisis events. Saha and Yap (2013) analyzed the moderation effects of political instability and terrorism on tourism development. Therefore, the research scope of these highly-cited articles principally covered the types of crises, crisis management, tourism demand, risk perceptions,

and tourist behavior.

[Insert Figure 6. Network of co-cited articles]

[Insert Table 2. Top 13 of highly-cited articles by author and journal ]

*Burst detection analysis.* The citation burst technique is used to detect explosive growth of cited articles, and it reveals the ‘hotspots’ of research on tourism crises. The articles with faster growth in citation rates from 2004 to 2020 were identified. The red blocks in the citation column (Table 3) represent periods of rapid growth in citations. The articles with a strength greater than five in citation bursts included a generic model for tourism disaster management strategies (Faulkner, 2001), a strategic approach to crisis management in the tourism industry (Ritchie, 2004; Ritchie, 2009), the subjects of crisis in tourism (Hall, 2010), a tourism disaster management framework at the destination level (Hystad & Keller, 2008), the results of a literature review concerning post-disaster and post-crisis recovery for destinations (Mair, Ritchie, & Walters, 2016), and the moderation effects of political instability and terrorism on tourism development (Saha & Yap, 2013). Articles with a strength from four and five in citation bursts included the effects of September 11 and actual policy responses (Blake & Sinclair, 2003), the impact of risk perception triggered by crisis events on the intentions and behaviors of international travelers (Kozak, Crotts, & Law, 2007; Reisinger & Mavondo, 2005), the impacts of the economic crisis on the tourism industry (Papatheodorou, Rossello, & Xiao, 2010; Song & Lin, 2010), destination image repair during crisis (Avraham, 2015), and organizational recovery and resilience in the tourism sector (Cioccio & Michael, 2007; Orchiston, Prayag, & Brown, 2016). Articles with a strength less than four in citation bursts included the impacts of the financial and economic crisis on

tourism demand and tourism expenditure (Eugenio-Martin & Campos-Soria, 2014; Smeral, 2009), and a comprehensive insight into the consumption of post-disaster destinations (Biran, Liu, Li, & Eichhorn, 2014).

[Insert Table 3. Top 19 articles with strongest citation bursts]

### *Types of tourism crises*

Many scholars define tourism crises based on the general concept of a crisis (Coombs, 1999; Glaesser, 2006; Pauchant & Mitroff, 1992); however, the perspectives they took were different. Allen, Backman, and Sönmez (1994) defined tourism crises from the negative consequences for the industry, such as the threat of business interruption, damage to reputation, and the decline of the tourism economy. Beirman (2003) defined a tourism crisis in terms of management features such as emergency management, destination marketing, and operations. UNWTO (2003) offered a clear definition from the point of information interference and operational status, combining a description of the consequences and the nature of events. These works suggest classifying tourism crises according to occurrence stage (before and after), duration (short-term, long-term), geographical scope (local, regional, national, or international), and the extent of damage to life and property (Beirman, 2003; Tse, 2006; Hall, 2010).

However, there is no clear consensus on the classification of tourism crises within academic circles. Adopting the official multi-governmental viewpoint, this research used the UNWTO definition as the conceptual basis for literature searching and assessment. Accordingly, the types of crisis events were natural disasters, security, economic and financial crises, health safety crises, environmental safety crises, accident calamities and public

opinion crises. The specific classification and its sub-categories developed by this review are shown in Table 4. It is obvious that the types of tourism crises described in the literature are complex and diverse.

[Insert Table 4. Classification of tourism crisis]

Security crises (42.7%) was the type of crisis with the most studies, including seven sub-categories, in which terrorist attacks (17.7%) and political instability (10.1%) accounted for a relatively high proportion, while refugee crises scored lowest, at 1.3%. The number of studies on natural disasters (27.0%) ranked second, including nine sub-categories, with earthquakes (7.8%), typhoons/hurricanes (4.7%) and tsunamis (4.4%) being the most frequent, while slope disasters (0.5%) and tornadoes (0.3%) accounted for the lowest percentages. Economic and financial crises (13.0%) ranked third, including two sub-categories of economic and financial crises, ten of which were associated with the Asian financial crisis in 1997 and the remaining 67 studies focused on the relationship between tourism and the global economic/financial crisis for 2007-2009. Health safety crises (12.5%) had the fourth largest number of studies, including two sub-categories of disease outbreaks and food safety, in which disease outbreaks were represented as epidemics (e.g., SARS, MERS, HINI, bird flu), infectious diseases (e.g., mad cow disease, foot-and-mouth disease, HIV/AIDS, Ebola), and foodborne diseases (illness outbreaks caused by such pathogens as Salmonella and E. Coli.). Food safety is a major issue in travel (Reichel, Fuchs, & Uriely, 2016). The numbers of studies on environmental safety crises (2.7%), accident calamities (1.3%), and public opinion crises (0.8%) were relatively low. Public opinion crises were mostly news events resulting from social media postings.

### *Regional distribution of tourism crises*

As shown in Figures 7 and 8, Asia (37.3%) was the region with the most studies on tourism crises on an intercontinental scale, and mainly in Southeast Asia (12.6%), East Asia (11.1%), West Asia/Middle East (10.3%) and South Asia (3.2%). The types of crises in Southeast Asian countries were mostly natural disasters, security and health safety crises, manifested in tsunamis, earthquakes, volcanoes, terrorist attacks, political instability, and epidemics. The types of crises in East Asian countries and regions were primarily natural disasters and health safety crises, in which the sub-categories of natural disasters in Taiwan were characterized by diversity, including earthquakes, typhoons/hurricanes, floods and slopeland disasters. The studies of health safety crises were dominated by disease outbreaks, and the negative impact of SARS on destinations received attention (Wang, 2009; Li, Blake, & Cooper, 2010). In addition, the impact of air pollution in China on tourists' intention to visit and travel decision-making was also studied (Becken, Jin, Zhang, & Gao, 2017; Li, Pearce, Morrison, & Wu, 2016). The crises in the West Asia/Middle East countries were concentrated in the security category, being terrorist attacks, political instability, and wars. The crises in this region were characterized by long durations, frequent occurrences, and easy transfer of influence (Morakabati, 2013), while intense media attention also readily led to reputation crises in destinations (Yousaf & Samreen, 2016). The types in South Asian countries were mostly security crises. For example, Chaudhary (2000) felt that India was lacking a positive image due to infrastructure and safety, which are major obstacles to the development of its tourism industry.

[Insert Figure 7. Regional distribution of tourism crises articles]

[Insert Figure 8. Geographical distribution of tourism crises and impacts]

The crises articles with a focus on Europe (15.3%) ranked second and were mainly in Greece, Spain, UK, Croatia, and Finland. The most frequent types were security and economic and financial crises, in which security problems were manifested in terrorist attacks and political instability. Economic and financial crises were predominant, accounting for 37.7% of all articles. The number of articles concerning North America (9.6%) ranked third, and the types of crises were largely security ones. The terrorist attacks at the World Trade Center in New York, USA on September 11, 2001 had the highest profile, and the negative and continuing impacts of the crisis on government and policy, urban economies and life were topics studied (Eisinger, 2004; Goodrich, 2002; Blake & Sinclair, 2003). The study of tourism crises in the United States also involved the release of hazardous substances, such as the spillover effect of the 2010 BP oil spill in the Gulf of Mexico on tourism image and regional lodging demand (Huang, Tseng, & Yiap, 2013; Ritchie, Crofts, Zehrer, & Volsky, 2014). The numbers of studies for Africa (3.5%), Oceania (3.0%), and South America (1.5%) were relatively low. The types of tourism crises in African countries focused on crimes in the sub-category of security crises. South Africa had the largest number of case studies, and the relevant research emphasized perceptions and attitudes of tourists towards crime and safety (George, 2003, 2010). The tourism crises for Oceania had a focus on natural disasters, with the largest number of studies being on bushfires in Australia (Walters & Clulow, 2010; Walters & Mair, 2012; Walters, Mair, & Lim, 2016). The crises in South American countries were mostly related to security crises, manifested as political instability and social unrest. Brown (2015) analyzed public opinion crises caused by murders and crime and confirmed

that the decline in the number of American tourists visiting Aruba was at least partly due to long-term negative media coverage.

In addition, the reviewed articles also included inter-country and cross-regional studies, as well as research on unspecified tourist destinations. The inter-country and cross-regional studies had four parts - research on security in the Middle East (Morakabati, 2013), the impact of terrorism in multiple countries and destinations worldwide (Liu & Pratt, 2017), the influence of economic and financial crises on the development of communities within different countries (Campos-Soria, Inchausti-Sintes, & Eugenio-Martin, 2015), and the combined effects of multiple tourism crises on specific regions (Zopiatis, Savva, Lambertides, & McAleer, 2018). There were some purely theoretical studies on tourism crises that did not specify destinations.

#### *Impact structure of tourism crises on tourist destinations*

According to the scope and objects affected, the impacts of crises on destinations can be summarized into three levels, including macro, meso, and micro (Figure 9).

[Insert Figure 9. Impact structure of tourism crises]

*Macro impact.* Macro (16.3%) refers to the comprehensive impact of tourism crises on the macro-development environment of destinations including the natural (0.9%), economic (14.0%), and social environments (1.4%). Studies on macro impact had the lowest proportion of articles. The impact of tourism crises on natural environments was identified in the destruction of ecosystems and the release of harmful substances. The impacts of crises on economic environments had many aspects, such as income reduction or wealth loss, rising unemployment, economic slowdowns or recessions, declines in GDP or its growth rate, and



decreases in investment or financing. The impacts from economic and financial crises were the most covered because they have a profound negative effect on the tourism economy worldwide (Page, Song & Wu, 2012; Ritchie, Molinar, & Frechtling, 2010; Song & Lin, 2010). Natural disasters, security and health safety crises also affect the economic environment in destinations (Novelli, Burgess, Jones, & Ritchie, 2018; Yousaf & Samreen, 2016). Tourism crises related to security, such as terrorist attacks, wars, political instability, regional conflicts and social unrest, influence the social environments in destinations, mainly by undermining social stability, paralyzing governments or countries, and interrupting public or private services.

*Meso impact.* Meso (49.9%) reflects the comprehensive impact of crises on tourism and its operations, including the tourism environment (6.5%), tourism industry (6.6%), tourism image (5.1%), tourism markets (22.4%), and tourism losses (9.2%). Natural disasters and security crises cause visible damage to tourist sites and facilities (Khazai, Mahdavian, & Platt, 2018; Kiliclar, Usakli, & Tayfun, 2018). Terrorist attacks are one of the major crises suffered by destinations, which prompt them to strengthen security controls. For example, the September 11th incident led to a significant increase in monitoring activities worldwide and dramatic changes in travel, trade, and security policies in the United States. Some countries have attempted to address security issues through more stringent policies and measures such as increasing surveillance at border checkpoints (Torabian & Mair, 2017). The impact of these crises on tourism is sudden, continuing, destructive, and universal, often causing the destruction of the normal operating capacity of destinations, contraction of tourism flows or interruption of tourism, and the closure of tourism enterprises. Tourism is a service industry

that relies heavily on image (Morakabati, 2013) and crises have a major negative impact on the image and reputation of destinations (Ghaderi, Saboori, & Khoshkam, 2017; Rittichainuwat, Nelson, & Rahmafritria, 2018; Woosnam, Shafer, Scott, & Timothy, 2015). Scott (1988) held that the impact of terrorist attacks was most destructive to the image of countries developing tourism, especially when terrorists specifically targeted Western tourists (Sönmez, 1998). This statement has been validated by relevant studies on conflict areas in the Middle East, which focused on the vulnerability of tourism, tourists' risk-perception, and strategies for image restoration. It is also worth noting that social media have emerged as a critical communication tool in crisis events (Hajibaba, Gretzel, Leisch, & Dolnicar, 2015).

The impact of crises on the market in destinations is mainly reflected in tourism investment, competitiveness, demand, and supply. Morakabati (2013) said that crises such as continuous conflicts, terrorist activities, and political instability affect the long-term investment prospects of destinations. The relationship between economic crises and tourism competitiveness has also attracted the attention of scholars. Perles-Ribes, Ramon-Rodriguez, Moreno-Izquierdo, and Sevilla- Jimenez (2017) found that economic crises influenced the dynamics of tourism performance and provoked disturbances that affect the market positions of destinations to a greater extent than expected. In addition, the impact of economic shocks on tourism competitiveness is not neutral, and the negative impact of a highly intensive crisis is more durable (Perles-Ribes, Ramon-Rodriguez, Sevilla- Jimenez, & Rubia, 2016). Tourism demand is particularly sensitive to safety and health issues (Blake & Sinclair, 2003) and elastically responds to economic and financial crises (Song, Lin, Zhang, & Gao, 2010). Many scholars have analyzed the negative effects of crises on tourism demand, reflected in the

decline of the number of tourists, hotel occupancy rates, and airline passenger loads. The impacts of tourism crises are not limited to tourism demand. In terms of tourism supply, crisis events force destinations and operators to implement strategies to maintain competitiveness, such as diversification and quality improvement of tourism products, or implementation of price difference strategies based on customer heterogeneity. The tourism losses caused by crises include not only the income losses for hotels and airlines due to the decline of tourism demand, but also the economic or financial losses to the tourism industry, which include the increase in related costs such as rescue and clean-up, equipment maintenance, restoration and reconstruction, and insurance compensation.

*Micro impact.* Micro (33.8%) refers to the impacts of tourism crises on individuals (physical casualties accounting for 6.9%) such as tourists (19.9%), community residents (6.7%), and tour operators (0.4%). The number of such studies ranked second. The travel decisions of international tourists are seriously affected by external events (Seabra, Dolnicar, Abrantes, & Kastenholz, 2013), and personal safety risks are the primary factors affecting the destination choices of tourists (Madhavan & Rastogi, 2013). Tourism crises can also affect the consciousness and behavior of tourists. It is worth noting that tourists from different regions have reacted heterogeneously (Eugenio-Martin & Campos-Soria, 2014), and the tourism decision-making and behavior of crisis-resistant tourists are not affected by crisis events (Hajibaba, Gretzel, Leisch, & Dolnicar, 2015). Franke, Hofstede, and Bond (1991) suggested that cultural or ideological differences originating from different cultural backgrounds characterized by different value systems might lead to varied response patterns for tourists. The impacts of tourism crises on community residents are in the instability of tourism-related

jobs and salaries, destruction of community life, decline of public well-being, and the impairment of mental health, which further affect the attitudes of community residents towards the development of local tourism (Stylidis & Terzidou, 2014). Cavlek (2002) elaborated on the impact of tourism crises on tour operators. He argued that crisis events force tour operators to stop operating in a specific country for a period of time, or that tour operators would significantly reduce their ability to reach the destination in order to minimize operational risks while keeping the destination in operational plans.

#### *Synergistic factors for the impacts of tourism crises*

Synergetic theory holds that small changes in environmental conditions will lead to changes in the outcome of an impact, and these minor changes are the key order parameters that affect the system (Haken, 1985; Zhao, Wu, Xi, Na, & Liu, 2018). Accordingly, the impact process of tourism crises is also affected by synergistic factors. As shown in Figure 10, the synergies for the impacts of crises on destinations are positive (12.7%), negative (17.5%), and interactive (69.9%).

[Insert Figure 10. Synergistic factors for impacts of tourism crises]

*Positive synergy factors.* A positive synergy is a factor that has a positive effect on a tourism crisis and its impacts, encompassing tourist-related factors such as familiarity with destinations (3.5%), past travel experiences (1.7%), information search (1.7%), and adaptability to the environment (1.7%). Familiarity is an important factor affecting the safety or risk perceptions of tourists (Tasci & Boylu, 2010). It is also an important factor affecting tourists' judgment of destination image and follow-up tourist behavior (Baloglu, 2001; Kim & Richardson, 2003; Prentice, 2004). Its synergy with the impacts of tourism crises has been

discussed by many scholars (Schroeder, Pennington-Gray, Kaplanidou, & Zhan, 2013; Liu, Schroeder, Pennington-Gray, & Farajat, 2016). The past travel experiences of tourists are considered to be related to low-risk perceptions (Lepp & Gibson, 2003), and there is a positive correlation between past travel experiences and future travel intentions (Chen & Gursoy, 2001). Information search has the potential to reduce the risk perceptions of destinations and improve the safety perceptions of tourists (Bjork & Kauppinen-Raisanen, 2011), because the dissemination of positive information guides visitors to the expected benefits rather than losses (Wang, 2009). Yeung and Yee (2013) argued that it was helpful to improve destination image and attract visitors to return by maintaining a reputation for food safety and by providing adequate and reliable health information. The positive synergy of adaptability to the environment is not common in research. George (2010) found that the attitudes of tourists visiting Table Mountain National Park (TMNP) in Cape Town towards risk did not affect their intentions to revisit or recommend because of public attitudes of patriotism and a sense of national pride in their city's iconic tourist attractions, which indicated that the host population was well adjusted to living in a society with a high crime rate. This is consistent with the findings of Ivanov and Stavrinoudis (2018), whose statistics showed that Turkish tourists were unaffected by the Greek refugee crisis, which was the result of the environmental adaptability of tourists.

*Negative synergy factors.* Negative synergy factors have a negative effect on tourism crises and their impacts, including official travel warnings or advisories (7.0%), dependence on tourism (4.8%), limited geographic knowledge of tourists (2.6%), crisis experiences (2.2%) and globalization or integration (0.9%). Travel warnings or advisories issued by government

for places where crisis events have taken place tend to create negative images of these destinations (Sayira & Andrews, 2016). They can have a strong psychological impact on potential visitors and become a major obstacle to visiting and recommending destinations (Akama & Kieti, 2003). For destinations that are over-dependent on tourism revenues, the economic impacts of tourism crises are devastating (Brown, 2015). The state of fragility caused by a tourism crisis may weaken the possibility of tourism recovery in the crisis aftermath (Novelli, Burgess, Jones, & Ritchie, 2018). Also, a crisis event is exaggerated if potential visitors' geographic knowledge of the affected area is limited, leading to unrealistically distorted concerns about the country or neighboring countries (Eagles, McCool, & Haynes, 2002). For example, the knowledge gap depleted Greece's US market because many Americans apparently confused the Greek island of Kos with the capital of Kosovo (Cavlek, 2002). Prior direct experiences with tourism crises tends to make people have a special fear of similar events (Seabra, Dolnicar, Abrantes, & Kastenholtz, 2013), which influences willingness to revisit and recommend (Wu, Zhang, Lu, & Rahman, 2017). The impact of economic and financial recessions, political instability, or natural disasters on tourism appears to have expanded, not because of the increase in crisis events, but because of the growing integration of the world economy, transport systems, and media and communication networks. Thus, when a destination country or region is affected, the impact reverberates throughout the system (Hall, 2010). Li et al. (2010) indicated that tourism crises can influence one or several countries at the same time and globalization has increased the linkages among countries, so the impacts of crisis events can be spread on an international scale.

*Interactive synergy factors.* Interactive synergy factors may have positive or negative effects on tourism crises and their effects. Some have both positive and negative synergies, and mechanisms of action depend on different interactive scenarios. There is a large number of studies on interactive synergy factors, mainly related to media coverage (22.3%), personal characteristics of tourists (20.9%), destinations (15.8%), characteristics of tourism products (10%), and tour operators (0.9%). Media coverage is a critical factor that can greatly influence visitor perceptions of the safety of destinations (Avraham & Ketter, 2017). After a crisis, extensive media coverage of the event may trigger a knock-on effect and have a destructive impact (Ghaderi, Saboori, & Khoshkam, 2017; Ritchie, Crofts, Zehrer, & Volsky, 2014), and may even become part of a man-made crisis (Sayira & Andrews, 2016). Some media coverage may be biased and misleading, which may prevent potential visitors from traveling to affected areas (Hammett, 2014). Positive media exposure is conducive to the restoration of destination image and reputation (Mair, Ritchie, & Walters, 2016); however, because negative stories are more attractive to reporters and the public, positive information does not receive the attention it deserves (Frisby, 2003). Individual tourist characteristics such as age, gender, occupation, income, type, cultural background, and travel motivations affect risk perceptions and tourism decision-making. For example, tourists with high risk tolerance are more willing to continue to travel to destinations where terrorist attacks and acts of violence have occurred (Korstanje & Clayton, 2012). Also, curiosity about death, violence, and political insecurity can make 'forbidden' and liminal spaces attractive, thereby promoting the emergence and development of dark, war, border, and conflict heritage tourism (Mansfeld & Korman, 2015).

The security measures taken by destinations have synergistic effects on tourism crises and their influence. Too strict and abrupt security measures (clearly communicated to the public) may cause tourists to worry more about the negative events that occur in the destination (Rittichainuwat, 2013; Rittichainuwat & Chakraborty, 2012). Heightened anxiety levels may prevent people with low emotional attachment from visiting a destination (Cruz-Milan, Simpson, Simpson, & Choi, 2016). Thus, there is a subtle balance between improving security and increasing risk perceptions and upsetting the balance may 'scare away' some visitors (Schroeder, Pennington-Gray, Kaplanidou, & Zhan, 2013). The characteristics of tourism products, such as travel distance, price, length of stay and substitution cost have complex synergistic effects on tourism crisis outcomes. For example, when the degree of substitution between tourism products is low, the impact of crisis events on destinations is not obvious (Arana & Leon, 2008). Tour operators may play a crucial role in creating destination images and have a synergistic effect on the flow of international tourists who are significantly affected by tourism crises (Cavlek, 2002). Tour operators with real or symbolic capabilities enjoy the trust of visitors, so potential tourists will regard the tour operator's action plan (cancellation or omission of a specific destination) as a strong signal of travel safety (Cavlek, 2002).

### **Conclusions**

This research set out to identify the regional distribution of tourism crises based on cases in academic articles and to analyze the impact structure of crisis events on destinations. To this end, 302 articles related to tourism crises were selected from 1991 to 2020 from the SSCI database. Using bibliometric and content analysis, several conclusions were reached. First,



the research on tourism crises has event-driven characteristics. A series of tourism crises around the world since 1991 have attracted large numbers of scholars to engage in their analysis. The research themes are mainly on the types of tourism crises, crisis impacts, risk perceptions, response behavior of tourists, and destination crisis management. Second, there is no uniform classification of tourism crises in academic circles. According to the existing literature on tourism crises, the types of crisis events include natural disasters, security crises, economic and financial crises, health safety crises, environmental safety crises, accident calamities, and public opinion crises. These crisis types have diverse sub-categories, and the proportion of research on security crises, natural disasters, and economic and financial crises are the largest. Third, tourism crises covered in academic articles approximate their real-world distribution. The number of articles based on a single tourist destination was about 70%. Asia, Europe, and North America were the regions with the largest number of articles. The individual areas with most analyses were China, the United States, Turkey, Malaysia, Indonesia, Thailand, and the UK. Security crises, natural disasters and health safety crises were more frequently investigated for Asia; economic and financial crises were more predominant for Europe. The most high-profile tourist crisis for North America was the September 11th terrorism incident. Fourth, the crisis impacts on destinations can be summarized into three levels; including macro (impact on the development environment of destinations); meso (impact on the operational status of tourism businesses), and micro (impact on tourists and other individuals). Fifth, tourism crisis impacts are affected by many synergistic factors. These can be divided into positive, negative, and interactive synergies. Positive synergy factors encompass tourist-related factors such as familiarity with

destinations, past travel experiences, information search, and adaptability to the environment. Negative synergy factors include official travel warnings or advisories, economic dependence on tourism, tourists with limited geographical knowledge, tourist prior crisis experiences, and globalization. Interactive synergy factors comprise both positive and negative impacts and are personal characteristics of tourists, media coverage, tourism destinations, tourism product characteristics, and tour operators.

The main contribution of this investigation is to provide a systematic review of the literature on tourism crises in the past 30 years and generate new knowledge on the classification attributes, regional distribution, impact structure, and synergistic factors associated with tourism crises. However, there are limitations that must be acknowledged. First, this work did not report on the methodologies applied or provide detailed authorship statistics. Second, the SSCI database was chosen for article selection. Other databases including Scopus, Science Direct, and Google Scholar may have yielded additional references; however, they were not searched by the researchers. Third, it is known that regions such as Africa, South America, and the Middle East are under-represented in SSCI and Scopus journals in terms of articles related to tourism. As crises are frequent in these regions, the distribution statistics yielded by this research could be misleading. Fourth, only journals in English were searched. Thus, eligible articles in other languages, notably in Chinese, Spanish, Arabic, German, and French were not identified and analyzed.

### **Future research directions**

The study of tourism crises is still a field with great future research potential. Figure 11 supplies a suggested framework for future research directions.

First, most studies still focus on individual, discrete crises. There is still much scope to explore the effects of the coexistence of multiple crises, comparisons of variations in different crisis impacts, as well as the interrelationships among crises and combined impacts on destinations. Second, there are few studies on the diachronic exploration of tourism crises, which could systematically clarify the emergence and development of crises and their gradual impacts. In addition, multi-country or multi-regional investigations are needed to sharpen the focus on spillover, ripple or contagion effects based on geographical locations. Third, scholars have explored the persistence of the impacts of tourism crises (Kosova & Enz, 2012; Perles-Ribes, Ramon-Rodriguez, Rubia-Serrano, & Moreno-Izquierdo, 2016; Solarin, 2016). However, the findings are not completely unified, so it is necessary to address this problem with a wider range of cases. The negative aspects of crisis impacts on destinations have been recognized by many scholars, but the positive attributes such as the transformation of tourism development (Mansfeld & Korman, 2015) have been ignored by most scholars. In addition, tourism destinations with different levels of development have an asymmetric impact structure when suffering tourism crises (Palaskas, Psycharis, Rovolis, & Stoforos, 2015), but the outcomes and mechanisms of the asymmetric impacts still lack rich empirical case analysis. Fourth, the expressions of synergistic factors mostly appear in the research literature in the form of theoretical viewpoints. However, there is a lack of sufficient empirical data on the application scope, impact extent, and quantitative results of synergistic factors. Therefore, these synergistic factors remain a tourism research "black box" waiting to be found and opened.

[Insert Figure 11. Future research directions]

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