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COVID-19 crisis and resilience of tourism SME's: a focus on policy responses

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ABSTRACT

Government policy responses play a significant role in increasing the resilience of small and medium-sized tourism enterprises during crisis periods. Proper selection and implementation of these policies is one of the major challenges facing tourism policy makers. The aim of this article is to propose a systematic framework for selecting government supportive policies that contribute effectively to resilience improvements of tourism SMEs during the COVID-19 disaster. After reading the international reports of the COVID-19 disaster carefully and using similar research findings in past disasters as the preliminary stage of framework development, a comprehensive list of country-based recovery policy responses as well as the critical success factors (CSFs) of tourism SMEs in the crisis recovery phase was extracted and then finalized in an expert-oriented process. In the next stage, the Z-SWARA was applied to weigh the CSFs. Then, four Z-MADM methods were implemented to rank the alternatives, and finally, the results were compounded with BORDA technique. The results of implementing the proposed framework in Iran's tourism industry show that Disaster management planning capability, as well as Marketing management are the most important CSFs. Also, financial support including direct lending and grants and subsidies to SMEs have been identified as the most effective governments' supportive policies to recover tourism SMEs in the post-disaster phase. Generally, these results have valuable implications for different stakeholders such as policymakers, practitioners and researchers in the tourism industry.

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1. Introduction

COVID-19 pandemic has triggered the worst global crisis and the greatest challenge we have faced since World War II. The pandemic is unprecedented in its global reach and impact. For instance, as of 31 December 2020, with nearly 85 million cases and

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over 1.8 million deaths worldwide, the COVID-19 outbreak has become one of the most significant pandemics since Spanish influenza (Hall et al., 2020; World Health Organization (WHO), 2020). Tourism industry has been hardest hit by this pandemic (Gössling et al., 2020) with a massive fall in international demand in the wake of global travel restrictions with the WTTC estimating that the pandemic led to a 72% drop in international tourists in the first half of 2020 (Gössling et al., 2020). Nevertheless, tourism industry has proven to be more resilient to different crises (Hall, 2010).

Small and medium-sized enterprises are of great importance in the tourism economy due to their vital role in the development of countries (Martínez-Román et al., 2015; Motta & Sharma, 2020). During the COVID-19 disaster, many tourism SMEs have been impacted the most by pandemic and are now facing significant declines in revenue (Lu et al., 2020). This is especially significant as SMEs are particularly at much higher risk from prolonged COVID-19 lockdown measures, and account for around 75% of all job sectors that are indirectly affected (Organization for Economic Co-operation and Development (OECD), 2020).

Undoubtedly, resilience planning can be a significant help in recovering tourism SMEs in the face of disaster by developing their capacity (Orchiston, 2013). Although the experience of previous crises has shown that resilience approaches have been very effective in planning to cope with and recover from crises and disasters in the tourism industry (Lew, 2014); a look at the previous tourism crisis and disaster management frameworks shows that majority of these models involve various limitations (Hirudayaraj & Sparkman, 2019).

The first limitation is that due to the complex nature of resilience planning in the tourism contexts, it is necessary to determine the policies and programs related to resilience from various economic, social, cultural, political, environmental and institutional aspects (Bhati et al., 2016). However, most studies have considered only the economic aspects of resilience (Lew, 2014).

Conversely, the occurrence of major crises always creates complex and unpredictable conditions that make it more difficult to decide on ways to get out of it (Kramer, 2016). In addition to the chaotic nature of crises, there are some other factors that significantly increase the uncertainty in the decision-making environment in critical conditions including: lack of information as well as lack of timely access to required information (Ritchie, 2008; Ritchie & Jiang, 2019; Williams & Baláž, 2015), the unpredictability of the crisis expansion process (Zenker & Kock, 2020) and the impact of policies and events in other related sectors and industries (Ritchie, 2008). However, previous researchers have not paid enough attention to uncertainty in their researches.

In addition, lack of time to make the right decisions, as well as their urgency, cause the decision-making and policy-making frameworks used under normal circumstances not to be efficient enough (Faulkner, 2001; Ritchie, 2004) and robust (Bhati et al., 2016; Ritchie, 2004; Ritchie & Jiang, 2019; Williams & Baláž, 2015) in crisis.

Given that COVID-19 poses special circumstances, it is very important to pay attention to the above features during this global pandemic.

In general, tourism policymakers face three major challenges in dealing with crisis. First, determining how large the crisis is and what impact it will have on the tourism economy. Second, duration of the crisis, because types of policies in the face of long-term versus short-term crises can definitely be different. Finally, the choice of policies to implement (Blake & Sinclair, 2003).

A look at the policies that different countries have taken to improve the resilience of their businesses in the face of the COVID-19 crisis reveals the high diversity and breadth of these policies. Conversely, the challenges faced by the tourism industry in each region are different. Tourism policymakers in different countries have to choose and implement their own policies due to their specific challenges as well as capabilities and resources at their disposal.

In such conditions, policymakers, researchers and practitioners are highly interested in having frameworks to help them choose the most effective and robust supportive policies (Lew, 2014).

In this study, we try to provide a framework for selecting appropriate policy responses based on Multi-Attribute Decision-Making (MADM) methods that can cope with the shortcomings of previous methods. In this framework, in order to select policies, the critical success factors (CSFs) of tourism SMEs in the crisis recovery phase have been used as the decision criteria. Given the capability of MADM methods in the face of similar conditions (Estiri et al., 2021; Fu et al., 2020; Mardani et al., 2015), it will be possible to choose the best policy from a finite set of possible policies according to various criteria, which are sometimes inconsistent and even contradictory. Due to the need for simultaneous attention to speed and accuracy in the decision-making process in these circumstances, the SWARA method has been used to calculate the importance of each identified CSF. Finally, in order to select the best policy, a combination of four MADM methods has been introduced.

The proposed framework has general applicability because our case study describes how to use this framework to select the most effective policy responses to promote the resilience of tourism SMEs.

In particular, this study has several contributions: First, a set of the most important policies to support tourism SMEs during the COVID-19 crisis has been identified. Second, a set of effective decision criteria for the selection of supportive responses has been presented in the form of critical indicators of the success of tourism SMEs. In fact, strengthening these indicators by supportive policies can improve the resilience of these businesses. Third, a framework has been developed based on which local policymakers will be able to use the most effective supportive responses to strengthen the resilience of tourism SMEs through various stages while considering their policy requirements.

Finally, the proposed framework has been examined as a real example in the case of small and medium enterprises of Iran's tourism industry. The majority of previous research and studies in the field of tourism crisis management have been conducted as case studies for a limited number of countries. However, the diversity and breadth of the challenges of the tourism industry in the face of various crises demands to conduct studies in a wide range of contexts (Aliperti et al., 2019).

Second section of the study reviews the literature on tourism resilience and crisis and disaster planning and explains the gaps in previous research in this area. Methodology and the procedure of the study have been explained in the third section of the study. The fourth section introduces the case study and results divided by the stages explained in the research method. Then final results are analysed and discussed. Eventually, a summary of the study as well as its contributions, limitations and recommendations for further research are presented in the final section.

2. Literature review

2.1. Tourism resilience

The term resilience was first used as a descriptive ecological term as a 'measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables' (Holling, 1973, p. 14). Resilience is also defined formally in various ways, for instance, Walker et al. (2004, p. 3) define it as: 'the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks — in other words, stay in the same basin of attraction'. The concept of resilience has gradually evolved and has been adopted by other disciplines (such as psychology, ecology and economics) and applied to different objects (individuals, ecosystems, urban systems, etc.) (Hall et al., 2017).

The increasing number of disasters and crises affecting tourism industry worldwide has brought forth the importance of resilience building in the tourism industry (Prayag, 2018; Sobaih et al., 2021). Resilience strategies that can help ensure the longevity of tourism destinations in times of crisis or adversity as well as slow onset changes have attracted attention in recent years (Fang et al., 2020; Gretzel & Scarpino-Johns, 2018; Jiang et al., 2019; Paraskevas & Quek, 2019; Sobaih et al., 2021).

Remaining resilient is a goal sought by any territory that has built its strategy on tourism. Exploring how tourism industry recovers from a crisis, including small tourism businesses, particularly in developing economies and their ability to find an alternative solution is of great importance for the vulnerability of tourist destinations to the crisis. Dauphiné and Provitolo (2007) highlight resilience as a strategic support tool that is also seen as a dimension of organizational performance. Their work focuses on three positive factors that increase the resilience of a system undergoing a disruption, namely diversity, self-organization and learning. Based on the synoptic approach, Altintas and Royer (2009) see resistance as the ability of an organization to resist a threat or to regain a state of stability after suffering it. While Vickers and Kouzmin (2001) argued that a system is resilient if it persists despite shocks and disruptions from the internal and external environment.

In recent years resilience, as a theoretical concept, has also received limited attention from some tourism researchers (Hamzah & Hampton, 2013). The application of this concept in the tourism industry has been discussed in the form of various approaches (Lew, 2014) such as: 'Turbulence Studies' (Faulkner, 2001), 'Complex

Adaptive Tourism' (Farrell & Twining-Ward, 2004) and 'Engineering Resilience' (McManus et al., 2007).

A look at previous research shows that in tourism industry, resilience approach has been often aimed at recovering the industry in the face of crisis (Ranasinghe et al., 2021). It also has been dedicated to issues related to managing various past crises and disasters, such as the Asian economic crisis of the late 1990s, the SARS epidemic in 2002–2003, the Indian Ocean tsunami in 2004, the earthquake threats in New Zealand's Southern Alps and the Southeast Asia crisis (Lew, 2014). This means that a resilience-based approach can help to better understand effective response mechanisms and how industry and subsidiaries operating in the tourism industry are adapting in the face of unpredictable environmental conditions and various crises such as COVID 19 (Bhaskara & Filimonau, 2021; Ranasinghe et al., 2021; Sharma et al., 2021; Sobaih et al., 2021).

Although various researches have investigated tourism resilience in the context of disaster management, the correct understanding of the concept of resilience in the tourism field is definitely associated with various challenges related to the complex nature of the industry. Therefore, there is still a need for further studies in order to recognize and clarify the nature of resilience in the tourism industry.

2.2. Tourism crisis and disaster

A review of theoretical literature on crisis management shows that there is no clear, accessible and agreed upon definition of crisis and disaster yet (Leta & Chan, 2021). Prideaux (2004) defined the crisis in the tourism industry as any unpredictable event that causes sudden emergencies which in most cases is poorly managed.

Karagiannis et al. (2006) divided tourism crises into three categories according to the role of the human factor in crises: crises without human intervention, crises with indirect human intervention and crises with direct human intervention. Peters and Pikkemaat (2006) categorized crisis factors into manageable crises and unmanageable crises. Manageable crises, which are predictable and can be planned for beforehand, occur for various reasons such as financial miscalculations, failure to meet customer needs, no safety and security precautions, unqualified employees and no reaction to changes. Conversely, there are crises called unmanageable due to their nature, the extent of their impact and also the fact that organizations can have little impact on them. These crises can have a lot of negative effects on the tourism industry. They can occur because of various reasons such as wars, religious conflicts, terrorism, political instability, pandemics, natural and environmental disasters, recession and decreasing income levels.

Before COVID-19 pandemic, limited number of researches were conducted on a structured or strategic crisis or disaster management in tourism. The literature seeks to examine the consequences of natural disasters or political commotion on tourism places (Öberg, 2021). However, after this pandemic, many tourism researchers have paid close attention to the crisis management framework (Zhong et al., 2021) and it has become a popular topic for organizations active in the tourism industry (Wut et al., 2021).

2.3. Tourism crisis and disaster frameworks

Given the importance of disaster and crisis management in the tourism sector, many researchers have tried to present appropriate frameworks, and thus, provide other researchers with practical tools to analyse the effects of various disasters and crises on tourism businesses.

The first attempts to develop crisis management models in the tourism industry were made in the 1980s (Lehrman, 1986), and other researchers have tried to follow this path. In one of the famous researches in this field, Faulkner (2001) introduced six steps of crisis management in the tourism industry as preparation, prodromal, the acute stage during the disaster, short term needs handled, long-term recovery and re-establishment. Many subsequent frameworks have emerged from this framework (Speakman & Sharpley, 2012).

With a focus on risk management, Ritchie (2004) proposed a strategic response framework for crisis management in the tourism industry in three main phases: prevention planning, strategic implementation and evaluation feedback. Page et al. (2006) introduced a crisis management model to deal with the flu epidemic with an emphasis on scenario planning including various approaches and actions in three stages: pre-crisis, crisis and recovery.

Like Page et al. (2006), Ritchie (2009) suggested that disaster management can include three consecutive stages: pre-disaster, disaster and post-disaster.

Pauchant and Mitroff (1992) categorized crisis management into proactive and reactive stages. The proactive phase of crisis management is pre-crisis and includes the necessary preparations and predictions to deal with possible crises. The reactive phase deals with post-crisis management and various programs, actions and policies to deal with its effects during and after the crisis. Although, the combination of two approaches in crisis management can undoubtedly lead to higher effectiveness, the nature of some crises limits the focus on proactive approaches.

In a recent study, Le and Phi (2021) presented the pandemic integrated crisis management framework for the hotel sector based on global hotels' strategic responses. The proposed crisis management model analyses the key crisis management strategies in four main phases of the COVID-19 crisis including pre-event and early symptom, emergency, crisis and recovery.

Regarding the shortcomings of the literature, various cases can be mentioned. A review of previous studies shows that the level of attention to crisis planning strategies in tourism organizations is still far from the desired situation, especially in SMEs with the aim of promoting resilience and recovery. Thus, identifying the critical success factors of tourism enterprises in the crisis recovery phase is very important, considering the characteristics of each crisis in particular, and through providing a higher understanding of crisis management (Campiranon & Scott, 2014). This issue has received less attention in previous studies.

Based on studies on the recent disaster, the COVID 19 outbreak, one can find cases that specifically address policy frameworks that enable market players and governments around the world to deal with tourism industry challenges during the outbreak of the pandemic (Assaf & Scuderi, 2020; Ioannides & Gyimóthy, 2020; Sharma et al., 2021).

However, there are few studies that have specifically examined the role of government supportive policies in the tourism industry during the COVID-19 Crisis. Considering the important role of government in the tourism economy (Sharma et al., 2021) and the supportive policies that governments can have during this crisis towards tourism organizations, especially SMEs, there is a great need for more research in this area.

Hence, in this study, more focus has been on identifying CSFs in crisis management of tourism SMEs as well as identifying and prioritizing government supportive policies that can improve the resilience of these enterprises through influencing the identified CSFs.

In addition to the shortcomings mentioned earlier in this study, the lack of a real case study is another important shortcoming that we seek to address. Reviews show that majority of previous research and studies in the field of tourism crisis management have focused on a limited number of areas. Therefore, the investigation made on Iran's tourism industry as one of the cases that have been less considered in previous research can enrich the crisis management literature of the tourism industry, especially for developing countries in the Middle East (Aliperti et al., 2019).

3. Research method

This article aims to provide a framework to assist decision-makers and policy-makers of the tourism industry in identifying, ranking and selecting supportive government policies to promote SMEs' resilience in the face of the COVID-19 disaster. To achieve this goal, in the first stage, a scientific-executive working group was formed to make decisions in this area so that the results of their decisions are available to the decision-makers in the field of tourism for finalization and implementation. The members of this working group consisted of seven university professors and experts in the tourism fields who, while having academic knowledge and at least 15 years of experience in the country's tourism sector (especially SME businesses), also have the experience of facing similar crises and disasters in the past. The following is a preliminary list of country-based recovery supportive policies that have been considered to support SMEs operating in the tourism industry in various countries in the face of COVID-19 disaster, according to the OECD (2020) report.

The list was completed and finalized based on research on government policies in similar past disasters and crises, as well as the views of working group members. In addition, considering that the decision to select supportive policies should be aimed at strengthening the capabilities of tourism SMEs in the recovery phase during and after the COVID-19 pandemic, the initial list of these factors was obtained in the form of CSFs by reviewing the relevant literature. This list was also finalized after obtaining the opinions of the members of the working group. The members of the working group were then asked to determine the importance and role of each of the identified CSFs in promoting tourism SMEs' resilience during COVID-19 disaster recovery phase. For this purpose, a questionnaire was provided based on the Z-

SWARA method. Then, it was given to each of them and they were asked to determine the degree of importance of each criteria and their degree of certainty in the evaluation.

In another questionnaire, members of the working group were asked to represent the impact of each of the identified policies on these CSFs using Z numbers. As mentioned earlier, Z numbers simultaneously use both ambiguity and certainty degree and therefore are very effective in the face of issues with insufficient knowledge and information and conditions involved with unpredictability and time constraints in the decision-making process. In order to increase the robustness of the final ranking of policies, we took the advantage of combining MADM methods. For this purpose, the primary ranking was performed using four MADM methods including Z-TOPSIS, Z-COPRAS, Z-MULTIMOORA and Z-WASPAS, and then, the results of these rankings were aggregated using the BORDA method.

Figure 1 shows the research steps.

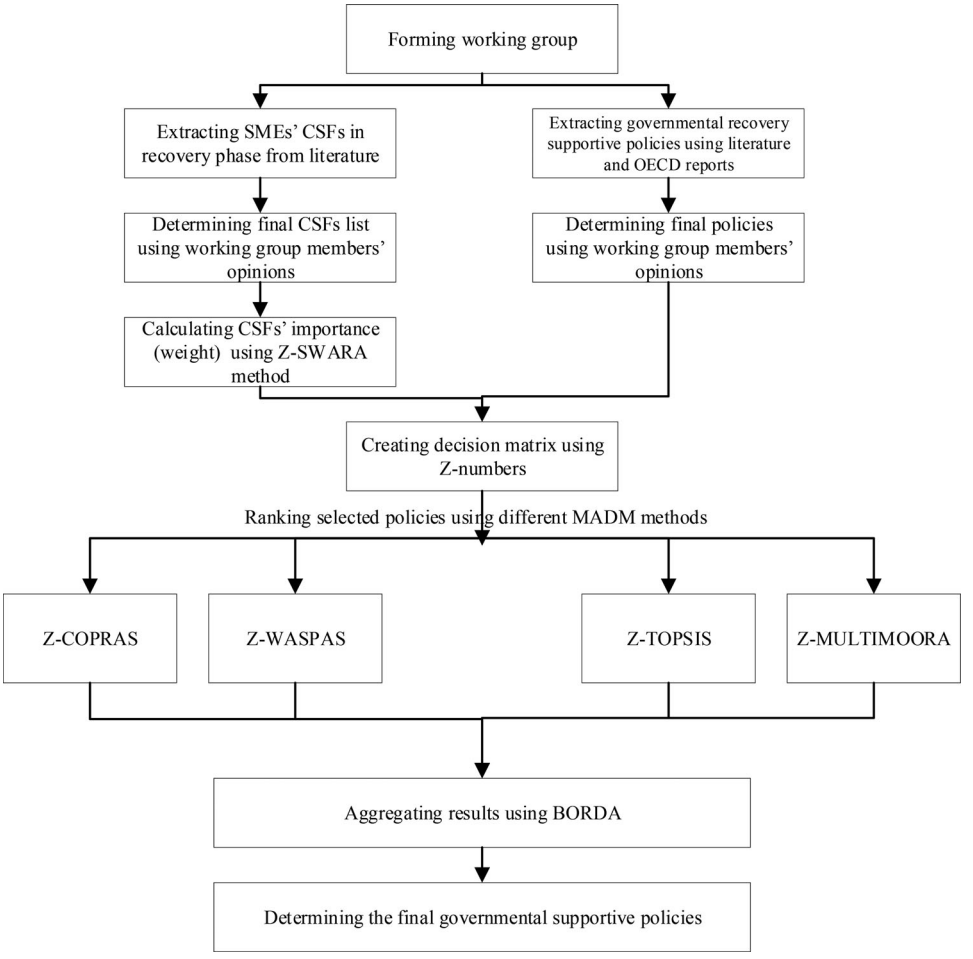

Figure 1. Research framework steps.
Source: created by the authors.

3.1. Z-number theory

Extensive changes in today's world and increasing environmental complexity have caused organizations to face new challenges that in turn have led to uncertainty in decision-making (Baykasoğlu & Gölcük, 2019; Dahooie et al., 2019). This uncertainty has arisen for a variety of reasons including non-quantitative information, defective information, non-obtainable information and reliance on the knowledge and personal preferences of experts (Anagnostopoulos et al., 2008). The theory of fuzzy sets was first introduced by Zadeh in 1965 to manage the uncertainty of knowledge and information (Bellman & Zadeh, 1970). Due to the limitations of this approach in dealing with real-world issues, several developments of fuzzy sets have been presented over the past few decades such as intuitive fuzzy sets (Atanassov, 1986), type 2 fuzzy sets (Zadeh, 1975), fuzzy multisets (Yager, 1986) and hesitant fuzzy sets (Torra, 2010; Torra & Narukawa, 2009). Although the presented developments have brought many benefits, they are not able to examine the reliability of the presented information well (Kang et al., 2012). Therefore, Z-numbers were presented by Zadeh (2011).

A Z-number is displayed as a pair of fuzzy numbers$(\tilde{A},\ \tilde{R})$, where $\tilde{A}$, $\tilde{R}$ are the constraints of the Z behavior. $\tilde{A}$ represents the fuzzy set and $\tilde{R}$ is used to describe the degree of certainty (Soroudi & Amraee, 2013).

Definition 1. The fuzzy set $\tilde{A}$ in the reference set X is defined as relation (1) (Jafarzadeh et al., 2019).

$$\tilde{A} = \left\{\left(x,\ \mu_{\tilde{A}}(x)\right)|x\epsilon X\right\} \tag{1}$$

where $\mu_{\tilde{A}} : X \to [0.1]$ is called the membership function for $\tilde{A}$ and $\mu_{\tilde{A}}(x)$ is the membership degree of $\tilde{A}$.

Definition 2. The Z-number is a pair of fuzzy numbers represented as $Z = \left(\tilde{A},\ \tilde{R}\right)$. The first part $\tilde{A}$ *is* the constraint on the values that indicate the uncertainty of the variable X. The second part $\tilde{R}$ shows the reliability of the first part (Yazdi et al., 2020).

Definition 3. Assuming that Z-number, $Z = (\tilde{A},\ \tilde{R})$, $\tilde{A} = \left\{\left(x,\ \mu_{\tilde{A}}(x)\right)|x\epsilon X\right\}$ and $\tilde{R} = \left\{(x,\ \mu_{\tilde{R}}(x))|x\epsilon X\right\}$ are triangular membership functions, the second part of the Z-number can be converted to a definite number using Equations (2) and (3) (Yazdi et al., 2020).

$$\alpha = \frac{\int x\mu_{\tilde{R}}(x)dx}{\int \mu_{\tilde{R}}(x)dx} \tag{2}$$

$$\tilde{Z}^{\alpha} = \left\{(x, \mu_{\tilde{A}^{\alpha}})|\mu_{\tilde{A}^{\alpha}}(x) = \alpha\mu_{\tilde{A}}(x),\ x \in [0,\ 1]\right\} \tag{3}$$

where α represents the reliability degree weight, $\mu_{\tilde{B}^{\alpha}}(x)$ indicates the degree of dependence of x∈X on $\tilde{R}$ and $\mu_{\tilde{A}^{\alpha}}(x)$ indicates the degree of dependence of x∈X on $\tilde{A}^{\alpha}$(Yazdi et al., 2020).

Definition 4. The triangular fuzzy number $\tilde{A}$ can be represented as$(l,\ m,\ u)$, and membership is defined as the following (Jafarzadeh et al., 2019):

$$\mu_A(x) = \begin{cases} 0 & for\ x<l. \\ \dfrac{x-l}{m-l} & for\ l \le x \le m \\ \dfrac{u-x}{u-m} & \text{for}\ m \le x \le u \\ 0 & \text{for}\ x>u. \end{cases} \tag{4}$$

Each triangular fuzzy number can be converted to a crisp number. The following equation shows how to defuzzify a triangular fuzzy number:

$$\text{BNP} = \frac{(u + 4{*}m + l)}{6} \tag{5}$$

For details of the main algebraic operations see Jafarzadeh et al. (2019).

3.2. Z-SWARA

To date, several multi-attribute decision-making methods have been proposed to determine the importance and weight of criteria, some of which have received less attention due to their high complexity or low accuracy (Heidary Dahooie et al., 2018). Keršulienė et al. (2010) proposed a method called stepwise weight assessment ratio analysis (SWARA) in order to calculate the weight of the criteria.

In addition to the ability to aggregate expert opinions and accurately calculate the weight of the criteria, this method has a simple execution process due to low complexity. Also, due to the small number of required pairwise comparisons compared to methods such as AHP and BWM, it requires less time allocation by experts (Hashemkhani Zolfani et al., 2018). According to special features and conditions of the Corona crisis such as the need for quick and accurate decision making, this method seemed more appropriate.

Based on the mentioned features, several developments have been made on this method, including the development of the SWARA method based on Z-numbers. In this study, the Z-SWARA approach developed by Jafarzadeh Ghoushchi et al. (2020) has been used.

3.3. Z-TOPSIS

Hwang and Yoon (1981) first introduced the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) (Hwang & Yoon, 1981). This technique applies the Euclidean distance between the ideal point and the anti-ideal point. Its desired answers have the minimum and maximum distance to the ideal point, respectively.

So far, several developments have been proposed using the TOPSIS method. Yaakob and Gegov (2016) developed the TOPSIS method to use in the form of Z numbers.

3.4. Z-WASPAS

Weighted Aggregated Sum Product Assessment (WASPAS) is an innovative approach for decision making. Zavadskas et al. (2012) first introduced this technique. This method ranks alternatives by combining the weighted sum model (WSM) and weighted product model (WPM).

In this article, the Z-WASPAS version developed by Yazdi et al. (2020) is used.

3.5. Z-COPRAS

The Complex Proportional Assessment (COPRAS) method, first introduced by Zavadskas et al. (1994), ranks alternatives through calculating the optimal solution in proportion to the ideal positive and negative solution.

Among the many developments made on this method, Z-COPRAS method has been used in this research. For details of its steps see Chatterjee and Kar (2018).

3.6. Z-MULTIMOORA

Multi-objective optimization based on the Ratio Analysis method, MOORA, was first introduced by Brauers and Zavadskas (2006). This technique originates from the research made by Brauers (2004). MOORA is formed by two sub-methods: ratio analysis method and reference point method. By adding a Full Multiplicative form to the MOORA method, Brauers and Zavadskas (2010) presented a new capable multi-criteria decision method. Brauers and Zavadskas (2011) introduced a theory called dominance theory in order to combine the results of these three methods. Jafarzadeh et al. (2019) extended this method in order to apply it to the Z environment.

3.7. BORDA method

The BORDA method is one of the most well-known and practical techniques used to identify consensus in the ranking process (Borda, 1781). For each ranking, this method determines the score of each alternative on the basis of its place. BORDA count is the overall score to which individual ranking scores are added. In the last step, the alternatives are arranged in descending order (Xiao et al., 2017). See Zavadskas et al. (2017) for a description of the steps involved in this technique.

4. Case study

Decisions to develop supportive recovery policies for tourism SMEs in times of the COVID-19 disaster are among the most important concerns of tourism policy-makers in Iran and other involved countries. In this regard, a scientific-executive working group was formed to make decisions. Members of the committee, who had a stable

composition during the implementation of the proposed methodology, were responsible for finalizing the list of ranking criteria (CSFs and capabilities required by tourism SMEs in the recovery phase during and after the disaster). They were responsible for determining the list of proposed policies in the face of the COVID-19 pandemic, comparing the identified CSFs and determining the relative importance of each of them, and finally assessing each policy based on the final CSFs. Members were also provided with final findings and approved them.

In the following section, we have described the findings of using the developed framework separately for the methodological phases.

4.1. Identifying tourism CSFs in the recovery phase during and after the COVID-19 disaster

As mentioned in the methodology section, in order to decide on the selection of appropriate policies, the basis is the impact of each policy on the critical factors of SMEs' success in recovery during and after the disaster which in some way reflects their capabilities. It is very important to identify the critical factors for the success of firms operating in the field of tourism in the crisis and disaster recovery phase by creating a higher understanding of crisis management (Campiranon & Scott, 2014). In this regard, first, a preliminary list of CSFs was obtained based on the literature review, and then, the identified items were discussed by the members of the relevant working group. After reviewing the prepared list, members of the working group reviewed and modified some items, and finally selected six CSFs including CSF1: The tourism SMEs' ability in disaster Planning (By & Dale, 2008; Campiranon & Scott, 2014; Lamanna et al., 2012; Mair et al., 2016; Orencio & Fujii, 2013); CSF2: The tourism SMEs' ability in Marketing management (Campiranon & Scott, 2014; Cochrane, 2010; Mair et al., 2016); CSF3: The tourism SMEs' ability in recovery collaboration and communication (By & Dale, 2008; Campiranon & Scott, 2014; Cochrane, 2010; Mair et al., 2016); CSF4: The tourism SMEs' ability in human resource management (By & Dale, 2008; Campiranon & Scott, 2014; Lamanna et al., 2012); CSF5: The tourism SMEs' ability in learning and development (By & Dale, 2008; Cochrane, 2010); and CSF6: The tourism SMEs' ability in adaptability and flexibility (By & Dale, 2008; Cochrane, 2010; Orencio & Fujii, 2013).

4.2. Preparing a list of policy responses in the face of the COVID-19 disaster

In the present study, considering the very important role of the government in supporting tourism organizations, especially SMEs (Sharma et al., 2021), the main focus is on government policies and supports to help tourism SMEs deal with COVID-19 disaster.

During this challenging time, policymakers from various governments have taken immediate steps to support and strengthen SMEs in the face of the current COVID-19 outbreak (OECD, 2020; World Tourism Organization (UNWTO), 2020). The initial list of priorities and policies was set based on the OECD report (2020), and then,

Table 1. Policy measures in times of COVID-19 pandemic disaster to improvement SME resilience.

Category	Policies
Labor	*Redundancies*
Supporting SMEs to effectively manage human resources, especially in terms of payments and working hours	*Wage support/ subsidies*
	Sick leave
Deferral	*Income / corporate tax*
Supporting SMEs with financial support tools such as tax deferrals, social security payments, support in debt repayment and support in rental payments and companies' consumption costs.	*Social security and pension contributions*
	Rent/utilities/local tax
	Debt payment moratorium
	Public procurement and payment
Financial instruments	*Loan guarantees*
Supporting SMEs by Government guarantees to banks / Central Bank's incentive policies for banks such as reducing or removing legal reserves to increase banks' lending capacity / Increasing the amount of current loans with government guarantees/	*Direct lending to SMEs*
Granting loans with easy and convenient conditions, new projects, facilities to specific sectors / Increasing the budget of existing facility projects / Reviewing and facilitating the processes and procedures of providing facilities to companies/ Direct subsidy or tax exemption	*Grants and subsidies*
Structural policies	*New markets*
Supporting SMEs to review work processes / increase the speed of digitalization / organizational innovation, remote work facilities and find new markets	*Teleworking/ digitalization*
	Innovation
	Training and redeployment

Source: created by the authors.

it was made available to the members of the working group, and finally, the list of policy responses was proposed as shown in Table 1.

4.3. Calculate the importance of CSFs in the recovery phase

After the list of CSFs was prepared, it was made available to the members of the working group. First, they were asked to rank the criteria from their own point of view. Then, members were asked to evaluate the relative importance of each CSF relative to the previous criterion based on the Z-numbers. In the next step, z-numbers were converted to triangular fuzzy numbers. Table 2 shows the converted numbers.

Finally, according to the steps described in the Z-SWARA method (Jafarzadeh Ghoushchi et al., 2020), the weight of each CSF was determined separately for each expert.

Table 3 shows, the steps for calculating the weight of each CSF based on the opinions gained from the first expert.

After calculating the weight of CSFs for each expert, their comments were aggregated using the arithmetic mean method. In order to compare the weights of the CSFs with each other, the final values of the weights were defuzzified using Equation (5), and then, the calculated weights were normalized (each weight was divided by the sum of the weights so that their sum was equal to one). The final results are presented in Table 4.

4.4. Evaluating the identified policies separately for each CSF (decision matrix formation)

According to the method steps, the policies should be prioritized after determining the weight of each of the CSFs. To this end, each expert was asked to provide an

Table 2. Transformation rules for Z-number linguistic variables to TFNs for Z-SWARA (Jafarzadeh Ghoushchi et al., 2020).

Linguistics terms	Membership function	Linguistics terms	Membership function
(EI, VL)	(1, 1, 1)	(LI, H)	(0.32, 0.4, 0.54)
(EI, L)	(1, 1, 1)	(LI, VH)	(0.38, 0.47, 0.63)
(EI, M)	(1, 1, 1)	(VLI, VL)	(0.1, 0.11, 0.14)
(EI, H)	(1, 1, 1)	(VLI, L)	(0.17, 0.2, 0.24)
(EI, VH)	(1, 1, 1)	(VLI, M)	(0.21, 0.23, 0.28)
(MOL, VL)	(0.23, 0.35, 0.52)	(VLI, H)	(0.23, 0.27, 0.32)
(MOL, L)	(0.4, 0.59, 0.89)	(VLI, VH)	(0.27, 0.31, 0.38)
(MOL, M)	(0.47, 0.71, 1.06)	(MUL, VL)	(0.08, 0.09, 0.1)
(MOL, H)	(0.54, 0.81, 1.21)	(MUL, L)	(0.13, 0.15, 0.17)
(MOL, VH)	(0.63, 0.94, 1.41)	(MUL, M)	(0.16, 0.18, 0.21)
(LI, VL)	(0.14, 0.17, 0.23)	(MUL, H)	(0.18, 0.2, 0.23)
(LI, L)	(0.24, 0.3, 0.4)	(MUL, VH)	(0.21, 0.23, 0.27)
(LI, M)	(0.28, 0.35, 0.47)		

Table 3. Calculating the weight of each of the CSFs based on the steps of the Z-SWARA method for the first expert.

Criteria	Expert's opinions	$\tilde{S}_j$	$\tilde{k}_j = \tilde{S}_j + 1$	$\tilde{q}_j$	Weight ($\tilde{w}_j$)
CSF1	–	–	(1.00,1.00,1.00)	(1.00,1.00,1.00)	(0.45,0.45,0.47)
CSF2	(EI, VH)	(1, 1, 1)	(2.00,2.00,2.00)	(0.50,0.50,0.50)	(0.22,0.23,0.23)
CSF4	(LI, H)	(0.32, 0.4, 0.54)	(1.32,1.40,1.54)	(0.32,0.36,0.38)	(0.14,0.16,0.18)
CSF5	(EI, H)	(1, 1, 1)	(2.00,2.00,2.00)	(0.16,0.18,0.19)	(0.07,0.08,0.09)
CSF6	(EI, H)	(1, 1, 1)	(2.00,2.00,2.00)	(0.08,0.09,0.09)	(0.04,0.04,0.04)
CSF3	(MUL, M)	(0.16, 0.18, 0.21)	(1.16,1.18,1.21)	(0.07,0.08,0.08)	(0.03,0.03,0.04)

Source: created by the authors.

assessment of the impact of each policy on improving the enterprise capability level (CSFs) to deal with the COVID-19 outbreak in the form of Z numbers. Table 5 shows the converted numbers.

The assessments made by the experts are shown in Table 6. Then, the opinions of the experts were combined using the arithmetic mean method and the final decision matrix was created.

4.5. Ranking final policies

MADM has been one of the areas of research in recent decades that has attracted the attention of researchers in a number of fields (Heidary Dahooie et al., 2020). The purpose of this decision-making process is to select the best alternative from a limited set of alternatives, considering a limited number of criteria (Büyüközkan & Göçer, 2017; Zavadskas et al., 2014). So far, various methods have been proposed in this field with goals such as weighting criteria or ranking alternatives, etc. (Brugha, 1998). But the important point is that each of these methods has distinctive features and qualities, and when used to solve the same problem, they may produce different results (Mousavi-Nasab & Sotoudeh-Anvari, 2017).

Conversely, previous studies have shown that using a combination of MADM methods increases the accuracy and robustness of results (Akhavan et al., 2015; Varmazyar et al., 2016). Numerous studies have tried to use this approach to increase the accuracy and robustness of their decision results (Barak & Dahooei, 2018).

Table 4. Aggregation of weights calculated for experts and calculation of final weight of CSFs.

CSFs	DM1	DM2	DM3	DM4	DM5
CSF1	(0.45,0.45,0.47)	(0.05,0.07,0.08)	(0.45,0.45,0.47)	(0.22,0.23,0.23)	(0.45,0.45,0.47)
CSF2	(0.22,0.23,0.23)	(0.45,0.45,0.47)	(0.22,0.23,0.23)	(0.45,0.45,0.47)	(0.05,0.07,0.10)
CSF3	(0.03,0.03,0.04)	(0.22,0.23,0.23)	(0.01,0.02,0.02)	(0.01,0.02,0.02)	(0.20,0.25,0.30)
CSF4	(0.14,0.16,0.18)	(0.01,0.02,0.03)	(0.05,0.06,0.08)	(0.05,0.06,0.08)	(0.10,0.13,0.15)
CSF5	(0.07,0.08,0.09)	(0.03,0.03,0.04)	(0.03,0.03,0.04)	(0.10,0.13,0.15)	(0.02,0.03,0.05)
CSF6	(0.04,0.04,0.04)	(0.11,0.11,0.12)	(0.10,0.13,0.15)	(0.03,0.03,0.04)	(0.02,0.03,0.04)

CSFs	**DM6**	**DM7**	**Final weight (Aggregated)**	**Final weight (Defuzzified)**	**Final weight (Normalized)**
CSF1	(0.22,0.23,0.23)	(0.45,0.45,0.47)	(0.33,0.33,0.35)	0.33	0.35
CSF2	(0.45,0.45,0.47)	(0.20,0.25,0.30)	(0.29,0.31,0.33)	0.31	0.32
CSF3	(0.01,0.02,0.04)	(0.05,0.07,0.10)	(0.08,0.09,0.11)	0.09	0.10
CSF4	(0.09,0.12,0.14)	(0.15,0.20,0.25)	(0.09,0.11,0.13)	0.11	0.11
CSF5	(0.02,0.03,0.05)	(0.08,0.10,0.12)	(0.05,0.06,0.08)	0.06	0.06
CSF6	(0.05,0.06,0.07)	(0.03,0.04,0.05)	(0.05,0.06,0.07)	0.06	0.06

Source: created by the authors.

Table 5. Transformation rules for Z-number linguistic variables to TFNs for ranking methods.

Linguistics terms	Membership function	Linguistics terms	Membership function
(VL, VL)	(0.32, 0.32, 0.95)	(M, H)	(2.51, 4.18, 5.86)
(VL, L)	(0.55, 0.55, 1.64)	(M, VH)	(2.85, 4.74, 6.64)
(VL, M)	(0.71, 0.71, 2.12)	(H, VL)	(1.58, 2.21, 2.85)
(VL, H)	(0.84, 0.84, 2.51)	(H, L)	(2.74, 3.83, 4.93)
(VL, VH)	(0.95, 0.95, 2.85)	(H, M)	(3.54, 4.95, 6.36)
(L, VL)	(0.32, 0.95, 1.58)	(H, H)	(4.18, 5.86, 7.53)
(L, L)	(0.55, 1.64, 2.74)	(H, VH)	(4.74, 6.64, 8.54)
(L, M)	(0.71, 2.12, 3.54)	(VH, VL)	(2.21, 2.85, 2.85)
(L, H)	(0.84, 2.51, 4.18)	(VH, L)	(3.83, 4.93, 4.93)
(L, VH)	(0.95, 2.85, 4.74)	(VH, M)	(4.95, 6.36, 6.36)
(M, VL)	(0.95, 1.58, 2.21)	(VH, H)	(5.86, 7.53, 7.53)
(M, L)	(1.64, 2.74, 3.83)	(VH, VH)	(6.64, 8.54, 8.54)
(M, M)	(2.12, 3.54, 4.95)		

Source: created by the authors.

Given the sensitivity of the decision-making results regarding the governmental policies in the face of the problems caused by the COVID-19 outbreak, it can certainly be very important to use approaches that have more robustness, and for this reason we have combined different methods in this article.

According to the methodology steps, different policies were prioritized using four different decision methods including Z-TOPSIS, Z-COPRAS, Z-MULTIMOORA and Z-WASPAS. The calculated score for each method as well as the final ranking is presented in Table 7.

Finally, the rankings obtained from these methods are aggregated in the form of the BORDA method. The final column of Table 7 shows the final rank of each policy from the viewpoint of the members of the working group.

4.6. Analysis of the results

This study is one of the first efforts to provide a framework for prioritizing supportive practices at the level of government policies to support tourism SMEs in order to improve their resilience in the face of the COVID-19 Pandemic disaster. According to the findings of this study, among all the key indicators of success that can play a

Table 6. Evaluating the policies identified in each of the CSFs separated for each expert.

	DM1						DM2						DM3						DM4					
Policies	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6
P1	(L,H)	(L,H)	(M,H)	(H,H)	(M,H)	(M,H)	(M,M)	(M,M)	(VL,M)	(H,M)	(M,M)	(VL,M)	(M,H)	(L,H)	(M,H)	(H,VH)	(H,H)	(M,H)	(H,H)	(M,H)	(L,H)	(VH,VH)	(M,H)	(L,H)
P2	(VL,H)	(VL,H)	(H,H)	(H,H)	(M,H)	(VL,H)	(VH,H)	(VH,H)	(M,M)	(VH,H)	(M,M)	(M,M)	(H,H)	(M,H)	(M,H)	(VH,VH)	(VH,H)	(M,H)	(M,H)	(M,VH)	(M,VH)	(VH,VH)	(H,VH)	(M,H)
P3	(VL,H)	(VL,H)	(M,H)	(H,H)	(M,H)	(L,H)	(H,H)	(H,H)	(M,M)	(H,H)	(H,H)	(M,M)	(H,H)	(M,H)	(M,H)	(VH,H)	(H,H)	(L,H)	(H,H)	(M,H)	(M,H)	(VH,VH)	(H,H)	(L,H)
P4	(H,H)	(M,H)	(VH,H)	(H,H)	(H,H)	(H,H)	(VH,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(H,H)	(M,H)	(M,H)	(M,H)	(M,H)	(H,H)	(H,H)	(M,H)	(M,VH)	(M,H)	(M,H)	(H,H)
P5	(L,H)	(L,H)	(H,H)	(H,H)	(H,H)	(M,H)	(H,H)	(H,H)	(M,M)	(H,H)	(M,H)	(M,M)	(H,H)	(M,H)	(M,H)	(H,H)	(H,H)	(M,H)	(H,H)	(M,VH)	(M,H)	(VH,H)	(VH,H)	(L,H)
P6	(VL,H)	(VL,H)	(H,H)	(M,H)	(M,H)	(L,H)	(H,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(H,H)	(M,H)	(L,H)	(M,H)	(L,H)	(H,H)	(H,H)	(M,H)	(L,H)	(M,H)	(L,H)	(VH,VH)
P7	(L,H)	(L,H)	(H,H)	(M,H)	(H,H)	(L,H)	(VH,H)	(H,H)	(M,M)	(VH,H)	(M,H)	(H,H)	(H,H)	(H,H)	(M,H)	(M,H)	(L,H)	(H,H)	(VH,VH)	(VH,VH)	(M,H)	(VH,H)	(M,H)	(VH,VH)
P8	(L,H)	(L,H)	(H,H)	(M,H)	(M,H)	(M,H)	(VH,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(H,H)	(M,H)	(M,H)	(M,H)	(M,H)	(VH,VH)	(H,H)	(H,H)	(M,H)	(M,H)	(L,H)	(VH,VH)
P9	(L,H)	(L,H)	(H,H)	(H,H)	(H,H)	(H,H)	(VH,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(H,H)	(M,H)	(M,H)	(M,H)	(M,H)	(VH,VH)	(H,H)	(H,H)	(L,H)	(L,H)	(L,M)	(VH,VH)
P10	(L,H)	(L,H)	(VH,H)	(M,H)	(L,H)	(H,H)	(VH,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(H,H)	(H,H)	(M,H)	(H,H)	(M,H)	(VH,VH)	(VH,VH)	(H,H)	(L,H)	(H,H)	(H,H)	(VH,VH)
P11	(L,H)	(L,H)	(H,H)	(H,H)	(M,H)	(H,H)	(H,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(H,H)	(H,H)	(M,H)	(H,H)	(M,H)	(VH,VH)	(VH,VH)	(H,H)	(L,H)	(H,H)	(H,H)	(VH,VH)
P12	(VL,H)	(VL,H)	(M,H)	(M,H)	(L,H)	(L,H)	(H,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(H,H)	(VH,VH)	(H,H)	(M,H)	(L,H)	(M,H)	(H,H)	(H,H)	(H,H)	(M,H)	(M,H)	(H,H)
P13	(VL,H)	(VL,H)	(M,H)	(M,H)	(L,H)	(H,H)	(H,M)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(M,H)	(H,H)	(M,H)	(H,H)	(M,H)	(M,H)	(H,H)	(H,H)	(H,H)	(H,H)	(M,H)	(L,H)
P14	(VL,H)	(VL,H)	(M,H)	(M,H)	(VL,H)	(L,H)	(VH,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(M,H)	(H,H)	(M,H)	(M,H)	(H,H)	(L,H)	(H,H)	(H,H)	(H,H)	(H,H)	(VH,VH)	(M,H)
P15	(L,H)	(L,H)	(H,H)	(M,H)	(L,H)	(VL,H)	(VH,H)	(H,H)	(M,M)	(H,H)	(M,H)	(H,H)	(M,H)	(M,H)	(M,H)	(H,H)	(H,H)	(L,H)	(H,H)	(H,H)	(H,H)	(VH,VH)	(VH,VH)	(L,H)

	DM5						DM6						DM7					
Policies	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6
P1	(VL,H)	(VL,H)	(VL,H)	(M,H)	(L,H)	(VL,H)	(M,H)	(L,M)	(L,H)	(VH,VH)	(M,H)	(L,H)	(H,H)	(H,H)	(H,H)	(H,VH)	(M,H)	(H,M)
P2	(L,H)	(VL,H)	(VL,H)	(H,H)	(VL,H)	(VL,H)	(M,H)	(M,H)	(L,H)	(VH,VH)	(M,H)	(L,H)	(VH,H)	(H,H)	(M,H)	(VH,VH)	(M,H)	(M,H)
P3	(H,H)	(VL,H)	(VL,H)	(H,H)	(VL,H)	(VL,H)	(M,H)	(L,H)	(L,H)	(H,H)	(M,H)	(L,H)	(H,H)	(M,H)	(M,H)	(H,VH)	(H,VH)	(M,H)
P4	(VL,H)	(VL,H)	(VL,H)	(VL,H)	(VL,H)	(VL,H)	(H,H)	(H,H)	(L,H)	(L,H)	(M,L)	(H,H)	(VH,VH)	(H,H)	(VH,H)	(M,H)	(M,H)	(H,H)
P5	(L,H)	(VL,H)	(L,H)	(M,H)	(VL,H)	(VL,H)	(H,H)	(L,H)	(L,H)	(H,H)	(H,H)	(L,H)	(H,H)	(M,H)	(M,H)	(VH,H)	(VH,H)	(M,H)
P6	(M,H)	(VL,H)	(VL,H)	(L,H)	(VL,H)	(L,H)	(H,H)	(M,H)	(L,H)	(M,H)	(L,H)	(VH,VH)	(VH,H)	(VH,H)	(M,H)	(M,H)	(M,H)	(M,H)
P7	(H,H)	(VL,H)	(M,H)	(L,H)	(VL,H)	(VL,H)	(H,H)	(L,H)	(L,H)	(M,H)	(L,M)	(H,H)	(VH,VH)	(H,H)	(M,H)	(H,H)	(M,H)	(H,H)
P8	(M,H)	(VL,H)	(L,H)	(VL,H)	(VL,H)	(L,H)	(H,H)	(H,H)	(L,H)	(M,H)	(M,H)	(VH,VH)	(VH,H)	(M,H)	(M,H)	(M,H)	(M,H)	(VH,VH)
P9	(M,H)	(VL,H)	(VL,H)	(VL,H)	(VL,H)	(L,H)	(H,H)	(H,H)	(L,H)	(M,H)	(L,H)	(VH,VH)	(VH,VH)	(VH,VH)	(M,H)	(M,H)	(M,H)	(VH,VH)
P10	(H,H)	(L,H)	(L,H)	(H,H)	(VL,H)	(M,H)	(VH,H)	(H,H)	(M,H)	(H,H)	(M,H)	(VH,VH)	(H,H)	(H,H)	(H,H)	(H,H)	(M,H)	(VH,H)
P11	(H,H)	(L,H)	(L,H)	(H,H)	(VL,H)	(M,H)	(VH,H)	(H,H)	(L,M)	(M,H)	(M,H)	(VH,VH)	(VH,H)	(H,H)	(H,H)	(VH,VH)	(M,H)	(VH,H)
P12	(H,H)	(H,H)	(H,H)	(VL,H)	(VL,H)	(L,H)	(H,H)	(H,H)	(M,H)	(M,H)	(L,M)	(VH,VH)	(VH,H)	(VH,VH)	(VH,H)	(H,H)	(H,H)	(H,H)
P13	(H,H)	(H,H)	(L,H)	(M,H)	(L,H)	(H,H)	(M,H)	(H,H)	(L,H)	(M,H)	(L,H)	(H,H)	(M,H)	(H,H)	(H,H)	(H,H)	(M,H)	(H,H)
P14	(H,H)	(H,H)	(L,H)	(M,H)	(L,H)	(H,H)	(H,H)	(H,H)	(L,H)	(L,H)	(L,M)	(H,H)	(VH,H)	(VH,H)	(H,H)	(H,H)	(M,H)	(VH,H)
P15	(H,H)	(L,H)	(M,H)	(M,H)	(H,H)	(L,H)	(H,H)	(M,H)	(M,H)	(H,H)	(H,H)	(L,H)	(H,H)	(H,H)	(M,H)	(VH,H)	(VH,H)	(M,H)

Source: created by the authors.

Table 7. Final policy ranking based on four selected MADM methods.

					Z-MULTIMOORA										
	Z-TOPSIS		Z-COPRAS		Z-ratio method		Z-reference point		Z-full multiplicative form		DT	Z-WASPAS		BORDA	
Policies	CC i	Rank	Ki	Rank	Yi	Rank	Si	Rank	Ui	Rank	**Final rank**	Qi	Rank	Aggregation	**Final rank**
P1	0.0917741	15	0.729138	15	0.067262	15	0.01539	15	2.7881 E – 12	15	15	0.077735	15	60	15
P2	0.1061247	11	0.850704	11	0.079564	11	0.00991	11	4.6145 E – 12	12	11	0.084738	12	45	11
P3	0.1029032	14	0.822184	14	0.075961	14	0.01407	14	4.2496 E – 12	13	14	0.083501	14	56	14
P4	0.1138911	8	0.916912	8	0.085094	8	0.00754	7	5.9944 E – 12	8	8	0.089031	8	32	8
P5	0.1054248	12	0.844197	12	0.077988	12	0.01264	13	5.3182 E – 12	11	12	0.085123	11	47	12
P6	0.1034393	13	0.827927	13	0.076526	13	0.01038	12	3.7157 E – 12	14	13	0.083520	13	52	13
P7	0.1183981	4	0.951440	4	0.088435	5	0.00725	6	6.5351 E – 12	6	5	0.090986	5	18	5
P8	0.1109732	9	0.890628	10	0.082459	10	0.00894	9	5.7794 E – 12	10	10	0.087569	10	39	10
P9	0.1147139	7	0.921187	7	0.085621	7	0.00586	5	5.8396 E – 12	9	7	0.089220	7	28	7
P10	0.1245265	1	1.000000	1	0.093333	1	0.00520	3	1.0412 E – 11	2	1	0.094218	1	4	1
P11	0.1244893	2	0.998699	2	0.093245	2	0.00520	3	1.0440 E – 11	1	2	0.094129	2	8	2
P12	0.1221312	3	0.987045	3	0.092231	3	0.00497	2	7.3444 E – 12	4	3	0.093228	3	12	3
P13	0.1108629	10	0.890818	9	0.082843	9	0.00954	10	6.5070 E – 12	7	9	0.087968	9	37	9
P14	0.1179418	5	0.950152	5	0.088692	4	0.00450	1	6.9717 E – 12	5	4	0.091043	4	18	4
P15	0.1154969	6	0.929774	6	0.086322	6	0.00798	8	7.4709 E – 12	3	6	0.090320	6	24	6

Source: created by the authors.

vital role in the recovery of SMEs in the tourism industry in the post-disaster stage, two indicators of disaster management program and marketing management are the top priority indicators with a significant difference compared to others.

The ability of tourism SMEs to plan and manage crises with the aim of better adapting to the crises facing them is one of the most important CSF's of crisis management (Faulkner & Vikulov, 2001; Lamanna et al., 2012; Mair et al., 2016; UNWTO, 2020). Having a crisis management program can ensure the survival of tourism businesses (Campiranon & Scott, 2014). A crisis management program reinforces positive change and nullifies negative changes caused by a crisis (Faulkner & Vikulov, 2001). According to the results of the previous studies in the hospitality context, the written disaster program is introduced as one of the indicators of effective disaster planning in crisis management (Lamanna et al., 2012). Accordingly, the existence of crisis response programs can undoubtedly play an important role in the recovery of firms during the crisis. Due to the experiences gained for future crises, it also plays an important role in the readiness of these businesses (Mair et al., 2016). UNWTO has also focused on creating disaster and crisis management mechanisms and strategies in its latest report, which is one of the most important recommendations it has made for the recovery of tourism organizations in the COVID-19 pandemic.

However, based on the other results of this study, effective marketing management can be considered as another indicator of the success of tourism organizations during and after the disaster. This is in line with previous research (Campiranon & Scott, 2014; Faulkner & Vikulov, 2001; Mair et al., 2016; UNWTO, 2020). In other words, paying attention to lucrative markets can play an important role in the faster recovery of tourism enterprises in the face of crisis.

The importance of marketing strategies in the recovery of tourism SMEs to cope with the COVID-19 pandemic has been emphasized by World Tourism Organization (UNWTO, 2020). Accordingly, after the current COVID-19 outbreak, tourism SMEs

should focus on the parts of the market that have suffered less from this disaster as the main priorities. It is very important to pay attention to the proper segmentation of the market and customers as well as marketing planning appropriate to each sector in order to recover the competitiveness and survival of tourism SMEs after the crisis.

However, the main findings of the current research is dedicated to identifying and prioritizing government supportive policies in order to promote resilience and recovery of tourism SMEs in the post-crisis phase. With an overview of the prioritization results of this study (Table 7), we conclude that financial support is one of the highest levels of importance for these enterprises in the COVID-19 disaster recovery phase. We have seen extensive practices in various countries around the world in terms of direct lump-sum subsidies such as the Chilean program from April 2020 and granting a direct loan in order to support SMEs during the recent pandemic. These policies are designed to both increase lending resources and facilitate lending conditions in cases such as faster payment, fewer processes, longer repayment periods and lower interest rates for SMEs.

It is reasonable to provide financial resources based on the characteristics of SMEs. This is because SMEs suffer from limited resources and are always looking for ways to deal with the problem of resource shortage (Partanen et al., 2008). However, the attention of government supportive policies to the restrictions of tourism SMEs such as economic scale and resource size and limitations can point to an important key factor that has supported these businesses in the face of disaster and improved their resilience.

There is no doubt that the governments' financial support for tourism SMEs can significantly help them to recover by facilitating the liquidity of companies as well as providing financial stimulus for tourism investment and operations. In addition, financial supports can also be applied indirectly, for example through a debt payment moratorium.

In addition to the financial supports that governments provide for SMEs to deal with the disaster, the government supports to strengthen marketing management programs in these companies in the post-disaster phase are also very important as one of the main CSF's of tourism businesses during and after the disaster. Accordingly, the findings of this study are in line with the recommendations of the UNWTO on the importance of marketing and promotion of tourism SMEs recovery during post-COVID-19 period, which emphasizes the revision of marketing and promotion strategies, the development of marketing programs to identify target markets for accelerating company recovery, the differentiation of products and services and the revision of pricing policies (UNWTO, 2020).

Based on the experiences gained through previous disaster and crises, after a disaster occurs, domestic and interregional tourism are the first sectors of tourism that begin to work as the first phase. How to pay attention to each of these markets and the necessary planning to identify the target tourists can be one of the key factors in the success of tourism organizations in disaster recovery that can be strengthened through government supports. These include government supportive mechanisms for participation and integration of various stakeholders in order to strengthen domestic tourism after the disaster.

The development of digital marketing is confirmed as an applicable strategy for tourism SMEs to access new markets. Government supports in providing infrastructure to implement such strategies, in addition to helping to effectively manage the marketing of these enterprises, lead to the strengthening of organizational innovations that provide a competitive advantage for SMEs. Also, providing recommendations and practices concerning market segmentation, developing traditional and digital products, promotional tools and the necessary advice on how to allocate resources to each market segment can be other supports that governments can provide to SMEs.

5. Conclusion

This article is the first attempt to provide a framework for selecting and prioritizing governmental policies to support tourism SMEs in order to improve their resilience in the face of the outbreak of new coronavirus pneumonia. For this purpose, a new combined approach was used due to the capability of MADM methods in the face of similar conditions.

This study argues that governments' supportive policies to support tourism SMEs to improve their resilience against the current COVID-19 disaster can be effective when they are commensurate with key indicators of disaster management success. It is very critical to apply practical frameworks that can help local policymakers to adopt the most appropriate policy responses during and after a disaster.

The results of this research provide several important practical implications for different stakeholders in the tourism industry. The proposed research framework provides government tourism policymakers with a useful tool to have a clear understanding of the supportive policies and have valuable data for their short-term and long-term planning to support tourism MESs purposefully and meaningfully.

Furthermore, the results of such studies can have important implications for managers of tourism enterprises. The major achievements of such research for tourism practitioners is to identify CSFs that can strengthen their resilience to recover their business after the disaster as well as to facilitate the receipt of the most important policy measures that can have the highest impact on strengthening these key disaster management indicators.

Finally, other researchers in the field of disaster and crisis management in the tourism fields can also use the combined approach presented in this study to evaluate and rank items in other similar fields.

As in any research, there are some limitations that should be taken into account in the interpretation of these results. The context of this study may limit the generalizability of the findings. Future research may lead to different results by applying the proposed framework in different contexts and comparing the results. Also, the study hypothesized that CSFs, as well as policy responses, are independent, so that other researchers can consider the relationships between these factors and model them using methods such as DEMATEL. Also, considering these interdependencies and using a method such as analytical network process (ANP), the relative importance of each of these CSFs can be determined. Also, a scenario-based approach will make it possible to consider the different conditions of progress in the decision-making and

policy-making process. This can be done by methods such as fuzzy cognitive map (FCM) or stratified multi-attribute decision-making (MADM) method.

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