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Hotels in contexts of uncertainty: Measuring organisational resilience

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ABSTRACT

The tourism industry faces multiple changes (economic crises, climate change, technology innovation…). Because of this vulnerability, as evidenced by the COVID-19 pandemic, the study of hotel resilience is a key issue for the survival and competitiveness of organisations and destinations. Therefore, this paper proposes a holistic model to measure organisational resilience. To that end, it aims to analyse the determinants of organisational resilience, i.e. predictors of resilience (strategy and change), and to assess how they contribute to hotel resilience and performance. Finally, the proposed model is validated. Findings confirm that the strategy and change dimensions have a considerable effect on hotel resilience, which positively influences hotel performance. Discussion provides hotel managers with guidelines to improve organisational resilience and performance.

1. Introduction

The tourism sector is exposed to numerous changes (e.g., climate change, economic crises, political changes) (Calgaro, Lloyd, & Dominey-Howes, 2014; Dahles & Susilowati, 2015; Hall, 2010). In fact, tourism is one of the economic activities most affected by changing and uncertain conditions (Hall, 2010; Senbeto & Hon, 2020). This has been evidenced by the COVID-19 pandemic, which has reduced tourism and travel, thus declining hotel occupancy rates (e.g., Courtney, 2020; Gössling, Scott, & Hall, 2020; Jiang & Wen, 2020). Because of this vulnerability, tourism is almost always among the first industries affected by a crisis, even becoming an early warning indicator for other sectors, as Glaesser (2006) states. This exposure to numerous changes has awakened interest in resilience in the tourism industry, such as destination resilience and tourist organisation resilience (e.g., Filimonau & De Coteau, 2019; Orchiston, Prayag, & Brown, 2016; Prayag, 2018). On the one hand, as Prayag (2018) points out, resilient organisations (e.g., hotels) contribute to resilient communities (e.g., tourist destinations). In this regard, Lee, Vargo, and Seville (2013) explain that if organisations are not prepared to respond to crises and emergency situations, neither will the communities or supra-systems to which they belong. Specifically, this issue has an influence on the hotel sector given the importance of accommodation in shaping tourist destination offerings (Aitile, 2016). Accordingly, hotel managers must adopt a resilience-oriented management approach. Thus, hotels should be prepared not only to react when changes occur, but also to anticipate them in order to face challenges and maximise opportunities (Brown, Orchiston, Rovins, Feldmann-Jensen, & Johnston, 2018; Tibay et al., 2018). Moreover, organisational resilience not only contributes to organisational survival, but also to business competitiveness (e.g., Lee et al., 2013). Therefore, hotels can develop a competitive advantage by being agile and adaptive to change. However, although organisational resilience contributes to community resilience, there is an important gap in the tourism literature on organisational resilience, such as hotel resilience (e.g., Prayag, 2018; Prayag, Spector, Orchiston, & Chowdhury, 2019). Regarding the importance of the study of hotel resilience, as Jiang and Wen (2020) state, the COVID-19 crisis is generating unprecedented effects on hotels worldwide and researchers should analyse how hotels can be more resilient. This research aims to close this gap, examining the resilience of hotels to changes.

Academic literature analyses organisational resilience from different research disciplines and perspectives (Annarelli & Nonino, 2016; Baba, Nagata, Kawakubo, & Tanaka, 2020; Bec, McLennan, & Moyle, 2018), with the difficulty of reaching consensus on this matter. In this respect, Assadzadeh, Köfter, Salehi, and Birkmann (2017) point to the need for the conceptual debate on resilience to move towards developing a measurement model. Thus, the conceptualisation of resilience would determine how it should be measured, since resilience has...
different approaches depending on, among others, whether it is a process or an outcome. There is also an extensive debate in the literature about what the final purpose of organisational resilience is in the face of these changes (such as bounce-back or bounce-forward) (e.g., Lee et al., 2013). Other authors also discuss the relationship between resilience and performance, considering for example the change of the company profit as a resilience indicator (e.g., Afgan, 2010). In addition, as Rahi (2019) notes, resilience literature focuses on developing theories and approaches, with scarce empirical research. About that, there are some notable exceptions such as Lee et al. (2013). In this regard, the measurement of organisational resilience has also been little addressed in the tourism industry, as recognised by Orchiston et al. (2016). Moreover, organisational resilience has been scarcely analysed in the hotel sector, although there are academic researches which represent a significant advance in this field, such as Brown, Rovins, Feldmann-Jensen, Orchiston, and Johnston (2019) and Orchiston et al. (2016). In addition, there is a broad typology of changes to which tourism organisations must respond (e.g., Dahles & Susilowati, 2015) and different approaches for measuring changes (e.g., Santana, 2004). However, in the tourism literature, there is not consensus on changes that represent critical events to hotels.

On this basis, this paper aims to contribute to the understanding and scope of organisational resilience in tourism and especially in hotel management. Firstly, it is important to identify the organisational context to understand the extent of organisational resilience (Calgaro et al., 2014; McManus, Seville, Vargo, & Brunsdon, 2008). Based on literature review (i.e. Dahles & Susilowati, 2015; Rahi, 2019; Ritchie & Jiang, 2019), authors define a change as any critical situation that results in an organisational imbalance. Thus, a change is a challenging event (incremental or extraordinary situation) which can generate both threats and opportunities. This organisational imbalance would require a different management of resources and capabilities according to the previous planned state. In relation to the organisational context, this research analyses and classifies the changes affecting the tourism sector, in particular the hotel sector, in order to identify the most critical events to which organisational resilience should be developed. In this regard, there is not academic consensus on what situations influence tourism industry vulnerability and how to measure its criticality level (e.g., Moreno & Becken, 2009; Student, Lamers, & Amelung, 2019). For this reason, an important contribution is to evaluate hotel vulnerability to such changes, not only considering their impact on the organisation, but also their level of frequency and predictability.

Another contribution of this research is the proposal of a new holistic focus for measuring organisational resilience, considering three perspectives simultaneously: “predictors of organisational resilience”, “organisational resilience as a global construct”, and “organisational resilience and its influence on organisational performance”. Thus, this paper measures organisational resilience using a holistic approach: resilience as a process (i.e. resilience predictors) and resilience as a result, which includes the overall construct (i.e. hotel resilience), as well as the consequent effect on organisational performance (i.e. hotel performance). Therefore, the research model aims to analyse to which context organisations need to be resilient, how organisations should perform to be resilient, what status the organisation aims to achieve, and what organisations are resilient for. Hence, the research model provides a more complete view of hotel response to disruptions and opportunities in the new context. To achieve the research objectives, a scale of predictors or actions for organisational resilience is proposed and validated. In addition, an organisational resilience scale is presented and the impact on hotel performance is then evaluated. Thus, this paper sheds light on the conceptualisation and measurement of resilience.

To this end, the following section presents the key premises on organisational resilience. Next, the current context of the tourism sector is analysed to identify the main types of change faced by hotels. This shows the scenario in which the accommodation sector must act, respond and learn quickly and effectively, which requires hotels to be resilient. This section also summarises the main academic contributions on resilience in tourism. Based on the above, the research model and hypotheses are shown and explained. The methodology section presents the study sample, the measurement scales and the structural model. The discussion of the results obtained, as well as the main conclusions and implications are the final sections of this study.

2. Conceptual background

2.1. The role of resilience in challenging times

The debate on resilience is a hot topic in international academic literature and its various conceptual frameworks are still in progress (Asadzadeh et al., 2017; Lew & Cheer, 2018). The concept of resilience has been described from different research areas and approaches (Doorn, 2017; Manyena, 2006; Windle, 2011), with no widely accepted unique interpretation in the literature. In relation to this diversity, Sabatino (2016) gathers three different perspectives of resilience: from an engineering approach, resilience refers to the rapid return of a system, affected by an adverse situation, to its initial state of equilibrium; from an ecological perspective, resilience is the ability of a system to absorb an impact without changing its structure, identity and functions; and from an adaptive resilience approach, the system experiences the impact of changes without losing the ability to manage its resources. Brown, Rovins, Feldmann-Jensen, Orchiston, and Johnston (2017) interpret resilience from the context of systems, organisations, economics and communities. According to them, resilience in complex adaptive systems includes adaptation and change to a new functional state; organisational resilience involves having structures, resources and capabilities to cope with adversity; economic resilience refers to the system’s ability to cope with harm or loss; and community resilience focuses on designing adaptation strategies involving all stakeholders.

A growing line of research in the academic literature is precisely the relationship between organisational and community resilience (e.g., Halls, Prayag, & Amore, 2017; Prayag, 2019). Moreover, organisational resilience and community resilience are interlinked (McManus et al., 2008). This dyadic relationship between community and organisational resilience can be explained by the behaviour of complex systems. Thus, Folke (2006) analyses resilience from a social-ecological systems perspective, recognizing that resilience is based on, among others, ecosystem dynamics and social networks, such as stakeholder relationships. In addition, this author explains that there are multi-stability states, where uncertainty and variability are considered necessary for survival. Therefore, systems should learn to manage change continuously, rather than returning to a previous equilibrium point.

In this regard, Lee et al. (2013) point out that communities continually face emergencies and crises, requiring organisations’ participation to respond to and recover from such adversities. According to them, in order to improve community resilience, organisations must enhance their competitiveness and allocate resources to resilience. If organisations are not prepared to respond to change, communities may also lack response capability. Similarly, McManus et al. (2008) explain that continuous functioning of organisations, during and after the crisis, favours overall community recovery. Indeed, Williams, Gruber, Sutcliffe, Shepherd, and Zhao (2017) argue that the multilevel and multi-stage nature of resilience is key to understanding how it works and establishing future lines of research.

Based on the above, organisational resilience is essential for resilience of the higher order systems (e.g., regional area, economic sector) to which the organisation belongs. Hence, the object of study in this research is organisational resilience, which has been less researched in the academic literature, as Lee et al. (2013) recognise.

2.2. Organisational resilience: conceptualisation

From a conceptual point of view, there are different interpretations
of the scope and content of resilience. Among other questions that need to be answered, resilience can be understood as a desired outcome or as a process to reach a desired outcome. Duchek, Raetzke, and Schuech (2019) indicate that resilience as a result or outcome is related to the ability to recover, and it can only be evaluated after disruptive events; resilience as a process involves dealing effectively with adverse events not only after such situations but also before and during them. Thus, resilience as an outcome would be a target state, and resilience as a process refers to the organisational mechanisms that enable reaching that state. In this sense, the literature has increasingly paid attention on resilience as a process (e.g., Duchek, 2020; Manyena, 2006; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008).

On the other hand, concerning the commonalities between resilience definitions, there is also an evolution from “bouncing back” to “doing better than before”. Based on Manyena, O’Brien, O’Keefe, and Rose (2011), “bounce back” as returning to original position does not imply change, and could increase vulnerability and resistance to changes. In this regard, Seville et al. (2008) consider organisational resilience as the capability to survive, and potentially even grow and prosper, in times of crisis. Similarly, Ruiz-Martin, Lopez-Paredes, and Wainer (2018) argue that resilience means achieving continuous adjustment to the challenging conditions faced by the organisation, while being reinforced. In this way, they recognise that resilience is not only linked to bouncing back to the previous state of stability, but also to reaching the desirable level of stability. Indeed, Manyas and Pelling (2015) point out that organisational resilience implies learning and therefore not returning to the previous position.

A parallel debate is about considering resilience from a reactive or a proactive approach. As Kamalahmadi and Parast (2016) recognise, some research suggests that resilience is sometimes linked to reactive capabilities after a disruption, while other studies associate resilience with proactive capabilities to be prepared for disruptions. In this regard, Bouaziz and Hachicha (2018) explain that resilience is more than resistance or adaptation to change, thus adopting a proactive attitude, anticipating and taking advantage of change. They argue that resilience implies inside-to-outside organisational renewal, transformation and dynamic creativity. Moreover, Gilly, Kechidi, and Talbot (2014) point out that resilience can be considered both as an organisation’s reactive capability to resist external events and as an active capability to anticipate such events and develop new ways of acting. Therefore, as Giroux and Prior (2012) state, resilience moves on a continuum from a static or reactive resilience that seeks stability (“bounce back”) to a dynamic or proactive resilience of a system that learns (“adaptation”).

Another line of research involves the joint analysis of resilience with other similar concepts. In this regard, there is an important relationship between the concepts of resilience and vulnerability. Resilience faces disruptive events, such as crises, disasters, disturbances, threats, business failures, among others (Rahi, 2019). On the other hand, as Bec et al. (2018) state, the vulnerability of a community refers to its exposure or sensitivity to change, and resilience plans cannot be effectively implemented without an understanding of vulnerability. They indicate that a resilient system is not invulnerable to change, but can handle impacts and results. Thus, resilience cannot be understood without recognizing vulnerability (Calgaro et al., 2014). In addition, as noted by McManus et al. (2008), the study of organisational vulnerability must take a holistic and systemic approach, as vulnerability is context-dependent. This is due to the interdependencies of organisations with other communities, systems and networks (Calgaro et al., 2014; Folke, 2006). In sum, vulnerability would deal with the potential impact or damage in relation to a future event, although there are different approaches to measuring vulnerability (assessment of the potential impact or damage of an event, the capacity to reduce such impact, or both) (Wolf et al., 2013). Also, some authors consider vulnerability when measuring resilience, such as Kusumastuti, Husodo, Suardi, and Danarsari (2014)’s research, which measures resilience to disasters as the ratio between preparedness and vulnerability. Based on them, preparedness would be conceptualised as the capability to manage disasters, and vulnerability as the potential for loss.

With regard to the relationship between resilience and crisis management, Prayag (2018) states that resilience would be the organisational capability to cope with any event (whether extraordinary or incremental), while crisis management would be rather linked to changes resulting from extraordinary circumstances. From other perspective, Williams et al. (2017) identify synergies between crisis management and organisational resilience. They consider that resilience is a dynamic process to cope with changes, which operates prior to, during, and after disruptive events, which approaches the crisis-to-process perspective (i.e. how organisations respond to different stages of a crisis). Regarding the relationship between agility and resilience, Duchek (2020) notes that agility refers to the ability to cope with daily problems and changes, while resilience is linked to unexpected threats and crises. According to Bouaziz and Hachicha (2018), organisational resilience includes three dimensions: robustness, agility and integrity. However, Lengnick-Hall and Beck (2009) suggest that resilience may be an antecedent to strategic agility.

Based on literature review, Ruiz-Martin et al. (2018:15-16) provide an integrative approach to define organisational resilience, gathering a large part of the previous proposals, which reveals the broad scope of its analysis. Thus, they recognise resilience as a feature of an organisation, which includes several interpretations, among others: (a) resilience as an ability, capability or capacity to face changes, risks or opportunities, (b) resilience expressed with a specific adjectival (e.g., active/reactive capacity), (c) resilience explained by dimensions (e.g., strategic/operational resilience), and (d) resilience as a function of capabilities or predictors (e.g., responsiveness, flexibility, agility). In addition, their research describes resilience as an outcome of an organisation, referring to what a resilient organisation does. As an example, resilience could be the adaptation to changing situations, where the organisation is strengthened. They also outline resilience as a measure of the disturbance that an organisation can tolerate, i.e. the acceptable level of impact.

2.3. Organisational resilience in the hotel sector: tourism context and organisational actions

The tourism system is extremely vulnerable due to its great complexity derived from the involvement of different actors, such as hotel chains, airlines, tour operators or travel agencies, among others (Zach & Racherla, 2011). In addition, the global expansion of tourism firms increases the international dimension of its operations (e.g., Corfu & Nistoreanu, 2006). In such a context, tourism organisations become vulnerable and must respond to worldwide changes (Bhati & Pearce, 2016; Brown et al., 2017; Cayhanto & Pennington-Gray, 2017; Ivkov et al., 2019; Paraskevas & Altinay, 2013; Schroeder, Pennington-Gray, Kaplanidou, & Zhan, 2013). Indeed, based on literature review, this paper identifies nine types of changes that the tourism industry faces. These include changes related to competitors (appearance of new hotels, changes in the competitor’s offer, in its pricing policy…) (Faulkner, 2001; Johansen, Johansen, & Weckesser, 2016); customers (new types of tourists, changes in demand…) (Han, Lee, & Hwang, 2016; March, Sauri, & Lurdes, 2014); intermediaries (tour operator bankruptcy, mergers and/or alliances between travel agencies…) (Faulkner, 2001; Johansen et al., 2016); suppliers (new airlines, changes in laundry services…) (Faulkner, 2001; Johansen et al., 2016); other partners and/or external agents (creation of tourism clusters, changes in professional associations…) (Faulkner, 2001; Tsai & Chen, 2010, 2011); economic context (new economic alliances between countries, changes in currencies, changes in economic cycles…) (Faulkner, 2001; Hall, 2010); political-legal context (regulation of holiday homes, regulation for tourism rehabilitation, new taxes…) (Faulkner, 2001; Hall, 2010); technological context (social networks, hotel management software, online commerce…) (Carroll & Siguaw, 2003; Johansen et al., 2016), and environmental context (environmental impact, climate change,
disasters…) (Faulkner, 2001; Hall, 2010).

The vulnerability of the tourism sector justifies the growing interest in the literature on the topic of resilience (e.g., Chowdhury, Prayag, Orchiston, & Spector, 2019; Jones & Comfort, 2019; Prayag et al., 2019; Ritchie & Jiang, 2019; Tibay et al., 2018). In this regard, the tourism industry fits into the socio-ecological systems, considered as a reference for resilience studies. Thus, tourism is a complex system, affected by numerous changes, and tourist destinations are recognised as socio-ecological systems (Amore, Prayag, & Hall, 2018). From this perspective, Prayag et al. (2019) state that resilience is dynamic, multidimensional and multi-scale, and tourist destinations are socio-ecological systems. Becken (2013), who also recognises tourist destinations as socio-ecological systems, explains that destinations have an inherent resilience allowing them to cope with such changes and reorganise to maintain their core functions. Similarly, Holladay and Powell (2016) apply the socio-ecological approach to the tourism sector in order to analyse the conditions and characteristics of a destination's resilience. Based on a qualitative study of stakeholders, they provide information to identify mechanisms that generate actions to be developed at the individual, community or network level to promote resilient and sustainable tourism development.

In general, resilience in tourism has been approached from different perspectives. In terms of its scope, resilience has been studied at both the macro (i.e. industry or destinations) and micro (i.e. business) levels. Regarding the former, it is worth mentioning the works of Calgaro et al. (2014), Espiner and Becken (2014) and Filimonau and De Coteau (2019). Micro-level studies include Biggs, Hall, and Stoeckl (2012), which analyses the resilience of formal and informal tourism enterprises to disasters; Chowdhury et al. (2019), which explore the links between social capital, adaptive resilience and business performance of tourism organisations (e.g., accommodation, transport); and Rutzner (2019), which examines the socio-ecological resilience of tour operators, among others. In terms of the study issue, topics such as resilience to disasters (e.g., Ivkov et al., 2019), climate change (e.g., Dogru, Marchio, Bulut, & Suss, 2019) or economic crisis (e.g., Cellini & Cuccia, 2015) have been analysed. With regard to the research methodology, on the one hand, there are review and reflection papers that collect the main analysis perspectives or propose their own premises (e.g., Jiang, Ritchie, & Verreynne, 2019). On the other hand, some other studies empirically analyse organisational resilience, studying resilience predictors (e.g., Brown et al., 2018) or resilience as a multidimensional construct (e.g., Prayag, Chowdhury, Spector, & Orchiston, 2018). Other studies compute an index of resilience of tourist destinations, such as Cellini and Cuccia (2015).

Based on the above, the diversity of study approaches on organisational resilience (Ruiz-Martin et al., 2018) and the scarce literature on resilience in tourism in general (e.g., Chowdhury et al., 2019), and in tourism organisations in particular (e.g., Orchiston et al., 2016), open an interesting academic debate for future lines of research, such as hotel resilience. Indeed, the accommodation sector is key to the tourism experience and is therefore exposed to tourism industry vulnerability (Biggs et al., 2012; Brown et al., 2018). In this regard, a line of growing interest in literature is the search for organisational elements that enhance hotel resilience (e.g., Brown et al., 2017; Tibay et al., 2018). As a starting point, the influence of McManus (2008), which proposes a resilience management process, is noteworthy. This model assesses the relative overall resilience (ROR) for an organisation with three key attributes or factors: situation awareness, management of keystone vulnerabilities, and adaptive capacity. Furthermore, Lee et al. (2013) propose an adjusted model of organisational resilience, based on McManus's ROR model, adding one more factor (resilience ethos) to the previous three, although empirical results finally identify a two-factor solution (named adaptive capacity and planning). Orchiston et al. (2016:146) also examine organisational resilience in tourist industry, adapting thirteen resilience indicators from Lee et al. (2013), resulting in a two-factor structural model of organisational resilience (i.e. “planning and culture” and “collaboration and innovation”).

Other worthwhile considerations in improving organisational resilience can be found in Biggs et al. (2012), which discuss issues such as collaboration with competing enterprises or government support, among others. Brown et al. (2019) analyse hotel resilience for disaster management and suggest budgeting disaster management activities, involving staff in disaster planning, and increased information on hazards and protective actions for guests. Tibay et al. (2018) examine hotel resilience to any type of critical situation, identifying leadership and management, core competence of staff, market sensitivity, situational awareness, and having preparedness plans as key attributes. Brown et al. (2017) provide recommendations for improving hotel resilience, such as rapid decision-making and collaborative relationships with stakeholders. In addition, tourism literature also highlights that survival, adaptation and innovation are relevant strategies to business resilience (e.g., Dahles, 2018; Dahles & Susilowati, 2015). However, literature should expand this line of research to better understand hotel resilience in changing contexts.

2.4. Research model and hypotheses

This paper presents a research model (Fig. 1) that aims to contribute to literature with an advanced framework for measuring organisational resilience. This model combines different measurement and conceptualisation approaches of organisational resilience.

First, we examine the hotel context to identify disruptive situations, considering the aforementioned nine types of changes, and measuring three attributes of each: impact, frequency and predictability (e.g., Faulkner, 2001). Thus, this paper provides a more complete picture of the hotel context, going beyond change impact assessment that is widely cited in the literature (e.g., Kapiki, 2012; Scott, Hall, & Gössling, 2016). This phase of the research aims to analyse to which context or organisations need to be resilient. This will enable hotel managers to develop an agenda for addressing actual/future and disruptive/day-to-day changes. In this line, as Lee et al. (2013) state, resilient organisations can manage both challenging situations and day-to-day business problems. Therefore, this paper assesses the effect of changes in the hotel sector and, with it, its degree of vulnerability, which allows an understanding of the context of organisational resilience.

Following this, the research model proposes a two-factor structure for predicting organisational resilience (predictors of resilience), which explains hotel resilience (resilience as a global construct) and hotel performance. Predictors of resilience represent “resilience as a process” because these indicators describe factors that foster organisational resilience. They aim to respond to how organisations should perform to be resilient. Hotel resilience identifies “resilience as a result” and it analyses what status the organisation aims to achieve. Hotel performance also recognises resilience as a result, but it answers what organisations are resilient for. The three parts of the research model are described hereafter.

2.4.1. Predictors of resilience

Based on a review of resilience literature (e.g. Brown et al., 2017, 2019; Lee et al., 2013; Orchiston et al., 2016; Tibay et al., 2018), predictors of hotel resilience are identified, and thus the research model includes a process approach. Research on how companies deal with critical situations was also analysed in order to identify key organisational attributes to cope with changes. In this regard, studies on organisational agility (e.g., Mandal, Korasiga, & Das, 2017; Sharifi & Zhang, 1999) and proactive crisis management (e.g., Ritchie, 2004; Ritchie, Bentley, Koruth, & Wang, 2011; Ritchie & Jiang, 2019) are of relevant interest. As a result, the present research proposes an ad-hoc model of predictors of hotel resilience, consisting of two factors, i.e. strategy and change.

“Strategy” dimension refers to the hotel’s behaviour aimed at planning its future actions according to its current, future and past
context. De Oliveira Teixeira and Werther Jr (2013) recognise the strategic planning as a characteristic of resilient organisations, which allows continuous adaptation to environment circumstances. To this end, it is necessary to monitor the context in order to proactively identify changes and continuously update the strategy (e.g., Duchek, 2020; Lee et al., 2013; McManus et al., 2008; Patriarca, Di Gravio, Costantino, Falegnami, & Bilotta, 2018; Tibay et al., 2018). In this regard, Patriarca et al. (2018) differentiate between monitoring (identifying real threats and opportunities) and anticipation (detecting potential long-term changes). In relation to previous crises, organisations must learn from past experiences in order to make better decisions (e.g., Blackman & Ritchie, 2008; Brown et al., 2017). Thus, Patriarca et al. (2018) highlight the importance of learning from past failures and successes for organisational resilience. Moreover, they state that learning would improve creative knowledge to manage unexpected situations and use helpful indicators to interpret potential threats and opportunities. On the other hand, literature encourages employee participation in the decision-making process of plans and strategies in an uncertain context (e.g., Al-Ayed, 2019; Bouazzz & Hachicha, 2018; Brown et al., 2019; Lengnick-Hall, Beck, & Lengnick-Hall, 2011). As an example of the positive effect of employee involvement, Ivkov et al. (2019) find that managers’ previous experience of disasters and managerial experience duration have a positive effect on hotel resilience. Another key determinant of organisational resilience widely identified in the literature is cooperation with stakeholders (e.g., Brown et al., 2019; Orchiston et al., 2016). In this regard, Whipple and Russell (2007) note the importance of creating synergies between partners, joint planning and real information sharing. Similarly, Sellberg, Ryan, Borgström, Norström, and Peterson (2018) encourage collaboration with external agents for resilience success and state that resilience practice is a learning process involving internal and external actors. Specifically, Scholten and Schilder (2015) emphasise the role of cooperation in the supply chain resilience, the exchange of information among partners, the promotion of collaborative communication and the creation of joint knowledge. Likewise, Li, Dong, and Mostafavi (2019) highlight the importance of interorganisational relationships for improving the resilience planning process. Thus, concerning inter-organisational relations in the tourism sector in a post-disaster setting, Chowdhury et al. (2019) empirically demonstrate that relational capital (e.g., trust with partners) influences adaptive resilience.

“Change” dimension describes the organisation’s efforts to describe new paths to move forward and be competitive in uncertain environments. For this purpose and based on the literature, different actions can be suggested. Sabahi and Parast (2020) suggest that an innovative environment improves organisation resilience to disruptions, because innovation reinforces capabilities that positively influence risk management capability. Verreyne, Williams, Ritchie, Gronum, and Betts (2019) also emphasise the need to deepen the role of innovation in improving tourism organisations’ resilience. Similarly, Morais-Storz, Platou, and Norheim (2018) explain that innovation and effective change are necessary for organisations to progress, which includes identifying areas for improvement. They indicate that the organisation will proactively drive change through innovation, as effective change is a determining factor of resilience. Rahi (2019) also suggests culture innovation as a key factor to organisational resilience. In relation to continuous improvement and innovation, Marwa (2012) points out that the most advanced quality management models contribute to organisational resilience in the face of disruptive events such as economic crisis. In this line, Ates and Bittici (2011) note that resilient organisations offer innovative responses to the market through change and continuous improvement. They also explain that the change management framework provides organisational support and enables organisations to manage their own resources, activities and capabilities. Moreover, Marwa and Milner (2013) recognise that creativity has a positive role in organisational resilience and leaders should promote constructive conflicts that test the status quo and foster good decision-making. As a result, the organisation should stimulate debate and encourage employees feel confident in proposing and testing new ideas and creative solutions. In this regard, Rahi (2019) states that organisational resilience requires employees that adopt innovative and creative solutions. On the other hand, Ma, Xiao, and Yin (2018) state that the difference between resilience and other related concepts (e.g., flexibility, adaptability) is that resilience includes the component of change.

In relation to previous crises, organisations must learn from past failures and successes for organisational resilience. Moreover, they state that learning would improve creative knowledge to manage unexpected situations and use helpful indicators to interpret potential threats and opportunities. On the other hand, literature encourages employee participation in the decision-making process of plans and strategies in an uncertain context (e.g., Al-Ayed, 2019; Bouazzz & Hachicha, 2018; Brown et al., 2019; Lengnick-Hall, Beck, & Lengnick-Hall, 2011). As an example of the positive effect of employee involvement, Ivkov et al. (2019) find that managers’ previous experience of disasters and managerial experience duration have a positive effect on hotel resilience. Another key determinant of organisational resilience widely identified in the literature is cooperation with stakeholders (e.g., Brown et al., 2019; Orchiston et al., 2016). In this regard, Whipple and Russell (2007) note the importance of creating synergies between partners, joint planning and real information sharing. Similarly, Sellberg, Ryan, Borgström, Norström, and Peterson (2018) encourage collaboration with external agents for resilience success and state that resilience practice is a learning process involving internal and external actors. Specifically, Scholten and Schilder (2015) emphasise the role of cooperation in the supply chain resilience, the exchange of information among partners, the promotion of collaborative communication and the creation of joint knowledge. Likewise, Li, Dong, and Mostafavi (2019) highlight the importance of interorganisational relationships for improving the resilience planning process. Thus, concerning inter-organisational relations in the tourism sector in a post-disaster setting, Chowdhury et al. (2019) empirically demonstrate that relational capital (e.g., trust with partners) influences adaptive resilience.

“Change” dimension describes the organisation’s efforts to describe new paths to move forward and be competitive in uncertain environments. For this purpose and based on the literature, different actions can be suggested. Sabahi and Parast (2020) suggest that an innovative environment improves organisation resilience to disruptions, because innovation reinforces capabilities that positively influence risk management capability. Verreyne, Williams, Ritchie, Gronum, and Betts (2019) also emphasise the need to deepen the role of innovation in improving tourism organisations’ resilience. Similarly, Morais-Storz, Platou, and Norheim (2018) explain that innovation and effective change are necessary for organisations to progress, which includes identifying areas for improvement. They indicate that the organisation will proactively drive change through innovation, as effective change is a determining factor of resilience. Rahi (2019) also suggests culture innovation as a key factor to organisational resilience. In relation to continuous improvement and innovation, Marwa (2012) points out that the most advanced quality management models contribute to organisational resilience in the face of disruptive events such as economic crisis. In this line, Ates and Bittici (2011) note that resilient organisations offer innovative responses to the market through change and continuous improvement. They also explain that the change management framework provides organisational support and enables organisations to manage their own resources, activities and capabilities. Moreover, Marwa and Milner (2013) recognise that creativity has a positive role in organisational resilience and leaders should promote constructive conflicts that test the status quo and foster good decision-making. As a result, the organisation should stimulate debate and encourage employees feel confident in proposing and testing new ideas and creative solutions. In this regard, Rahi (2019) states that organisational resilience requires employees that adopt innovative and creative solutions. On the other hand, Ma, Xiao, and Yin (2018) state that the difference between resilience and other related concepts (e.g., flexibility, adaptability) is that resilience includes the component of change.
However, resilience can be analysed from another approach, which involves studying what a resilient organisation does or what it aims to achieve (e.g., Ruiz-Martin et al., 2018). Thus, as Andersson, Cäker, Tengblad, and Wickelgren (2019) suggest, resilience is both process and result. To this end, it is necessary to identify how a resilient organisation behaves, and the literature offers different answers to that question. Thus, organisational resilience can be understood in different ways, such as the ability to adjust to disruptions and unforeseen situations, to recover and survive in the face of uncertain contexts, or to transform and grow (Ma et al., 2018). In this line, Dahles and Susilowati (2015) note that the magnitude of adaptation can mean returning to the pre-crisis state, experiencing a gradual change after the recovery from the crisis, or generating a substantial business change (new working methods, new partners, new products...). Nevertheless, resilience is a dynamic condition, since returning to the state prior to disruptive events may be neither possible nor desirable (Brown et al., 2017). Consequently, in face to disruptive events, organisations must reach a new equilibrium point, which represents a better status than the previous stage.

### 2.4.3. Performance

This research provides a broader framework of organisational resilience by assessing its effect on hotel performance. As Ruiz-Martin et al. (2018) recognise, the measurement of organisational resilience based on its impact on organisational outcomes or performance is rarely addressed in the literature. Prayag et al. (2018) confirm the effect that organisational resilience as a second order construct, based on planned resilience and adaptive resilience as first-order dimensions, has on financial performance of tourism companies. According to them, when resilience and adaptive resilience are modelled separately, adaptive resilience shows a significant influence on financial performance. In this line, Chowdhury et al. (2019) evidence an empirical association between adaptive resilience and business performance post-disaster, considering levels of debt, cash flow or profitability. Also, De Carvalho, Ribeiro, Girani, and Cuntra (2016) suggest that innovative companies are more resilient and better able to withstand crisis situations, in terms of financial performance measured by economic indicators such as return on assets and return on equity. Dalziell and McManus (2004) propose a holistic approach suggesting that organisational resilience may be reaching stated objectives or mission statement areas, such as dividends for shareholders or reputation for quality products. In sum, based on Chowdhury et al. (2019), a resilient organisation develops the necessary resources and capabilities to make better decisions in uncertain environments and thus improve performance. Consequently, such resilient behaviour (e.g., a continuous improvement) favours organisational outcomes, i.e. hotel performance.

Considering the above arguments and theoretical premises about resilience predictors, organisational resilience and business performance, the following hypotheses are established, as displayed in Fig. 1:

- **H1:** Resilience predictors positively influence hotel resilience.
- **H1a:** “Strategy” dimension positively influences hotel resilience.
- **H1b:** “Change” dimension positively influences hotel resilience.
- **H2:** Hotel resilience positively influences hotel performance.

### 3. Methodology

#### 3.1. Sample and data collection

The study was carried out in Spain, which is an important international tourist destination. It is estimated that around a million travellers visited this country in 2017 (World Tourism Organization, 2018). The research was developed in the hotel sector in the Canary Islands, which is one of the Spanish regions most visited by international tourists. An online database was consulted to collect information on the four-star, five-star, and Great Luxury hotels in this region, such as the name, category, and e-mail. The choice of higher star grading hotels is due to the fact that literature shows that they have higher levels of crisis planning implementation and crisis preparedness (Ritchie et al., 2011). Furthermore, in the last ten years, the supply of higher star grading hotels in Spain has increased by almost 50%. The total population of the study consisted of 268 hotels.

An online questionnaire (please see Appendix 1) was designed, using hotel managers as key informants. The online questionnaire was tested by five hotel managers, then mailed to the target population. After several reminders to the non-respondents, 72 usable surveys were returned, representing a response rate of 26.9%, with a sampling error of 9.9% and a confidence level of 95%. Such a response rate is not uncommon in studies conducted at organisational level (Baruch & Holtom, 2008) and research in the tourism sector (Thomas & Wood, 2014). Furthermore, the sample size is similar to other studies on tourism and hospitality management (e.g., Chowdhury et al., 2019; Sainaghi & Baggio, 2014). Table 1 shows the general profile of the respondent hotels.

#### 3.2. Measures

Ad-hoc scales were developed in this research. The content validity of the scales is based on the literature review. In addition, experts’ feedback on changes in the tourism context and how hotels cope with these changes was considered. Specifically, five researchers and/or practitioners in the tourism industry were consulted considering their teaching experience, scientific publications, professional experience, consultancy work, and participation in collaborative projects in the tourism sector. In particular, three of these experts were university professors, with a level of experience in tourism research of more than five years. The other two experts were professionals from the tourism industry, with more than ten years of experience in hotel management.

**Tourism context.** The tourism sector has faced many significant challenges. This research analyses the nine types of change identified in the literature, i.e., changes related to competitors, customers, intermediaries, suppliers, other partners and/or external agents, economy, regulation policy, technology and environment (Faulkner, 2001; Hall, 2010; Han et al., 2016; Johansen et al., 2016; March et al., 2014). Each type of change is represented by a single item; therefore, there are nine items. For each type of change, the following attributes are evaluated: impact (Bhati & Pearce, 2016; Faulkner, 2001), frequency (Becken & Hughey, 2013; Faulkner, 2001), and predictability (Johansen et al., 2016; Laws, Prideaux, & Chon, 2007). In the questionnaire, hotel managers were required to assess on a seven-point Likert scale the impact, frequency and predictability of each of the nine changes, ranging from 1 (“very low level”) of impact, frequency or predictability to 7 (“very high level”). Thus, each type of change presents three scores.

**Predictors of resilience.** A two-factor model of predictors of hotel performance is proposed. The first factor represents strategy, which involves the ability of a hotel to adapt to unexpected changes and the second represents change, which indicates the extent to which a hotel is capable of changing its operating procedures. The total score for each of these factors includes three items. An example of a strategy-related item could be “the hotel actively seeks new markets” and an example of a change-related item could be “the hotel frequently changes its menu.”

#### Table 1

| Hotel characteristics | Categories                          | Percentage |
|-----------------------|-------------------------------------|------------|
| Age (years)           | 1–5                                 | 12.70      |
|                       | 6–10                                | 14.29      |
|                       | 11–15                               | 12.70      |
|                       | 16–20                               | 19.05      |
|                       | 21–25                               | 9.52       |
|                       | 26–30                               | 7.94       |
|                       | > 30                                | 23.81      |

**Table 1**

Sample profile.

- **Star rating**
  - 4-star: 80.56
  - 5-star and Great Luxury: 19.44
- **Size (number of employees)**
  - ≤ 100: 19.05
  - 101–150: 19.05
  - 151–200: 28.57
  - 201–250: 22.22
  - 251–300: 6.35
  - > 300: 4.76
- **Hotel characteristics Categories Percentage**

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resilience is developed, i.e. strategy and change. “Strategy” dimension (6 items) describes key actions to define future organisational plans and objectives under disruptive and challenging environments. This research proposes attributes related to sensemaking (Lee et al., 2013; McManus et al., 2008; Patriarca et al., 2016), continuous strategic planning (De Oliveira Teixeira & Werther Jr, 2013; Mensah & Merkuryev, 2014), collaboration with strategic partners (Chowdhury et al., 2019; Orchiston et al., 2016), employee involvement (Brown et al., 2019; Lengnick-Hall et al., 2011) and the reflection on past experiences (Brown et al., 2017; Patriarca et al., 2018). “Change” dimension (6 items) represents the stimulus and intention of the organisation for renewal, transformation and improvement in challenging environments. It embraces attributes related to quality management (Ates & Bititci, 2011; Marwa, 2012; Ögland, 2008), creativity and innovation (Marwa & Milner, 2013; Sabahi & Paras, 2020), organisational learning and knowledge management (Godwin & Amah, 2013; Ma et al., 2018), and change management (Ates & Bititci, 2011; Morais-Storz et al., 2018). All items of resilience predictors were measured on a seven-point Likert scale, ranging from 1 (“strongly disagree”) to 7 (“strongly agree”).

**Hotel resilience.** Based on literature review (e.g., Bhamra, Dani, & Burnard, 2011; Lee et al., 2013; Ruiz-Martin et al., 2018; Seville et al., 2008), this research proposes a construct to assess hotel resilience as a result. Hotel resilience measures the degree of operational and strategic organisational adaptation to new environmental conditions, reaching a new equilibrium point at which organisations emerge strengthened. The measurement scale consists of three items, measured on a seven-point Likert scale, ranging from 1 (“strongly disagree”) to 7 (“strongly agree”).

**Performance.** Based on literature review (e.g., Dalziell & McManus, 2004; De Carvalho et al., 2016; Rodríguez-Sánchez, Guinot, Chiva, & López-Cabrerales, 2019), this research evaluates hotel performance with both economic and intangible indicators. The developed scale includes five items such as return on investment, average sales growth, average market share growth, company image and reputation, and customer loyalty. Therefore, hotel managers evaluate not only the financial but also the non-financial performance. This improves organisational performance measurement and resolves the difficulty of obtaining objective data from hotel results, as Espino-Rodríguez and Gil-Padilla (2005) state. Furthermore, hotel managers were asked to score these items from a foresight of the last five years, which provided a retrospective assessment of organisational performance in times of major challenges (e.g., economic crisis, Icelandic volcanic eruption). All items of hotel performance were assessed on a seven-point Likert scale, ranging from 1 (“very low level”) to 7 (“very high level”).

### 4. Analysis and results

#### 4.1. Profile of respondents

- The sample is composed predominantly of four-star hotels (80.56%), while only 19.44% are five-star hotels. Considering the size of the hotels, 19.05% of the participants were general managers of hotels with 50–100 employees; 19.05% were hotels with 101–150 employees; 28.57% were hotels with 151–200 employees; 22.22% were hotels with 201–250 employees; and 11.11% were hotels with more than 250 employees. In terms of hotel age, about 27% of hotels are under 10 years old; 31.75% are between 11 and 20 years old; 17.46% are between 21 and 30 years old, and 23.81% are over 30 years old.

#### 4.2. Type of changes

As stated above, in this research hotel managers assessed the impact, frequency and predictability of the nine types of change analysed. Items were ranked on a 7-point scale ranging from “low level” (1) to “high level” (7). Therefore, they all rated the impact of changes related to competitors (i.e. the effect on the hotel), the frequency of such changes (i.e. the repetition of change), as well as the predictability of such changes (i.e. the possibility of forecasting). Then, the survey respondents made this assessment for the remaining types of change (e.g., changes regarding customers, intermediaries…). In summary, Table 2 shows the mean scores obtained in assessing the impact of each type of change (first numerical column), the frequency of such changes (second numerical column) and the predictability of changes (third numerical column). Considering the nine types of changes and the three attributes examined, a matrix analysis is applied (see Fig. 2). This approach is based on previous works on crisis management (e.g., Björck, 2016; Faulkner, 2001; Santana, 2004), which use a conceptual matrix to identify or classify crises. Focusing on the higher scores of impact, we analyse the top and bottom right-side panels in the matrix.

As shown in Fig. 2, changes in customers and changes in technology get the highest average impact and frequency scores. However, hotels consider such changes to have a high predictability, which is an advantage because it allows them to predict how they can influence hotel performance. In other words, they are frequent changes of great impact, which are common in the tourism industry. Hence, hotels should invest in technology to monitor the tourist preferences and demands. With regard to changes in competitors, they exhibit higher average scores than mean scores, but the predictability of these changes is lower than in previous types of changes. This is due, in some way, to the difficulty to check the numerous and complex changes in property forms and hotel structures. Another type of change with a great impact on hotels, even though they do not occur very often, are those related to the economic context, which are critical due to their low predictability. One reason for this poor predictability is the hotel’s difficulty in forecasting macroeconomic movements, even more, given the globalisation of markets. Something similar, although to a lesser degree, happens with the political-legal context and the environmental context. Its frequency is relatively low, but its impact is close to the general average and its low predictive power exposes hotels to greater vulnerability.

### Table 2

| Types of change | Attributes |
|-----------------|------------|
| Competitors (e.g., new hotels, changes in the competitor’s offer, new pricing policy) | 4.15 | 3.31 | 4.30 |
| Customers (e.g., new types of tourists, changes in demand) | 4.82 | 4.18 | 4.22 |
| Intermediaries: tour operators, travel agencies (e.g., tour operator bankruptcy, mergers and/or alliances between travel agencies) | 3.61 | 3.33 | 2.99 |
| Suppliers: transport companies, laundry, animation… (e.g., new airlines, changes in contract conditions) | 2.99 | 3.03 | 3.51 |
| Other partners and/or external agents (e.g., new tourism clusters, changes in professional associations) | 2.50 | 2.24 | 2.63 |
| Economic context (e.g., new economic alliances between countries, currency changes, changes in economic cycles) | 4.39 | 2.63 | 2.89 |
| Political-legal context (e.g., regulation of vacation homes, tourism rehabilitation policies, new taxes) | 3.85 | 2.79 | 2.58 |
| Technological context (e.g., social networks, hotel management software, online commerce) | 5.40 | 4.01 | 3.46 |
| Environmental context (e.g., torrential rains, fires, volcanic eruptions) | 3.91 | 2.31 | 2.31 |
| Mean | 3.96 | 3.09 | 3.21 |
4.3. Measurement model

Before testing the hypotheses, we examine the scales designed for this research, analysing their dimensionality. For this purpose, the principal component analysis with varimax rotation is used. The statistical adequacy of this model is verified with Bartlett’s sphericity test and the Kaiser-Meyer-Olkin measure (KMO index). Then, the dimensionality of the constructs is assessed: the predictors of organisational resilience, the hotel resilience, and the hotel performance. The results of this data reduction technique revealed the existence of two clearly differentiated components in the predictors of organisational resilience: “strategy”, with five items, and “change”, with six items. In addition, the factor analysis of hotel resilience and hotel performance showed that both constructs are one-dimensional, with three and four items, respectively. Some of the theoretically proposed items were removed due to low factor loadings.

After the exploratory analysis of the scales, Partial Least Square (PLS) path modelling was conducted to test the measurement models. This technique is suitable for small sample sizes in exploratory research (Hair, Ringle, & Sarstedt, 2011). Specifically, the SmartPLS 3 software (Ringle, Wende, & Becker, 2015) was used. The model was comprised of four constructs: strategy, change, hotel resilience, and hotel performance. The assessment of the model entails the evaluation of validity and reliability of the scales, which involves analysing the relationships between the latent variables and their items. Construct reliability was evaluated using composite reliability as an estimate of the internal consistency of the construct, whereas values above 0.70 indicate satisfactory reliability (Hair et al., 2011). In addition, each indicator’s reliability is measured through the indicator loadings, which should be higher than 0.70, although sometimes weaker indicators are maintained for their contribution to content validity (Hair et al., 2011).

Validity assessment includes convergent validity and discriminant validity. Convergent validity is tested using the average variance extracted (AVE), which should be higher than 0.50 (Hair et al., 2011). Furthermore, for discriminant validity, two measures are used: the Fornell-Larcker test and the Heterotrait-Monotrait Ratio (HTMT). According to the first criterion, the square root of the AVE should be superior to all the correlations of each latent construct with any other latent construct (Fornell & Larcker, 1981; Roldán & Sánchez-Franco, 2012). Considering the second criterion, the HTMT values should be under the conservative threshold value of 0.85 (Henseler, Ringle, & Sarstedt, 2015).

Table 3 shows the results of the measurement model evaluation. Firstly, all the constructs are reliable, reaching composite reliability values between 0.871 and 0.922, and, in general, indicator loadings higher than 0.70. Moreover, Cronbach’s alpha for each construct ranges between 0.806 and 0.899. The measurement model also exhibits convergent validity, since the AVE of all the constructs exceeds the threshold of 0.5, with values between 0.629 and 0.787. In addition, the scales show discriminant validity. Furthermore, as displayed in Table 4, the square root of the AVE exceeds the correlations between the constructs (Fornell-Larcker criterion), and the HTMT values are under 0.85.

4.4. Structural model

After validating the measurement model, the structural model was estimated. The results of PLS analysis are shown in Table 5. The path coefficients’ significance was evaluated by means of a bootstrapping procedure (5000 resamples) (Hair et al., 2011). To analyse the predictive capability of the structural model, the study considers the variance explained (R²). The model explains 22.5% of the variance in performance and 58.7% of the variance in resilience. Therefore, R² values are between relatively moderate and high (Chin, 1998). Also, the Stone-Geisser Q²-criterion is recommended for assessing the predictive relevance for the dependent variable. Q² values greater than zero means that the model has predictive relevance (Chin, 1998). Q² values obtained by blindfolding confirmed that explanatory latent constructs show predictive relevance. In addition, this study calculates effect sizes ($f^2$) for each of the antecedent causal factors. Values of 0.02, 0.15 and 0.35 indicate the predictor variable has a low, medium, or large effect on the criterion variable, respectively (Cohen, 1988; Roldán & Sánchez-Franco, 2012). Results show that strategy has a large effect on resilience, change has a medium effect on resilience, and resilience has a medium effect on performance.
Table 3
Evaluation of the measurement model.

| Construct Items | Loadings | t | rho | Composite reliability | AVE | Cronbach’s α |
|-----------------|----------|---|-----|------------------------|-----|--------------|
| **Strategy**    |          |   |     |                        |     |              |
| In the face of change, my hotel…   | 0.747    | 9.237 | 0.886 | 0.904 | 0.656 | 0.868 |
| Identifies the most important changes in the hotel environment (new needs of tourists, disappearance of tour operators, alliances between hotels…). | | | | | | |
| Maintains a continuous strategic vision (is managed from a continuous strategic vision). | 0.860 | 19.535 | | | |
| Designs and updates its business strategy to adapt to the changing environment. | 0.880 | 21.603 | | | |
| Reflects on past experiences (successes and failures) and gathers useful knowledge from lessons learned. | 0.710 | 12.907 | | | |
| Develops relationships based on trust with partners and/or external agents (sharing information, holding regular meetings…). | 0.838 | 13.673 | | | |
| **Change**      |          |   |     |                        |     |              |
| In the face of change, my hotel…   | 0.755    | 12.912 | 0.934 | 0.922 | 0.663 | 0.899 |
| Stimulates knowledge development and continuous learning | | | | | | |
| Provides high quality products and services to the customer | 0.832 | 25.916 | | | |
| Stimulates a strong commitment to quality management and stakeholder satisfaction (customers, suppliers, employees…) | 0.826 | 21.269 | | | |
| Continuously improves products, services and processes (control of activities, evaluation of system errors, improvement projects identification…) | 0.805 | 19.968 | | | |
| Stimulates creativity and idea development about products, services and processes (menu changes, new animation program…) | 0.838 | 36.016 | | | |
| Performs organisational changes facing both challenges and opportunities (new market niches, new product lines, new procedures, new departmental structures…). | 0.826 | 20.775 | | | |
| **Hotel resilience** |          |   |     |                        |     |              |
| In the face of change, my hotel…   | 0.894    | 22.279 | 0.867 | 0.917 | 0.787 | 0.864 |
| Achieves a new organisational equilibrium by adapting to changes in the environment (offering new products or services, incorporating new technologies, negotiating with tour operators…). | | | | | | |
| Recovers and strengthens at a strategic and operational level (recovering the hotel occupancy rate, improving its competitive position…). | 0.920 | 32.646 | | | |
| Adapts strategically and operationally to new environmental conditions | 0.847 | 25.021 | | | |
| **Performance** |          |   |     |                        |     |              |
| Average sales growth | 0.692 | 7.415 | 0.845 | 0.871 | 0.629 | 0.806 |
| Average market share growth | 0.832 | 16.886 | | | |
| Hotel image and reputation | 0.751 | 8.925 | | | |
| Customer loyalty | 0.885 | 29.226 | | | |

Table 4
Square root of the AVE and correlations matrix.

| Variables | Change | Strategy | Performance | Hotel resilience |
|-----------|--------|----------|-------------|-----------------|
| **Fornell-Larcker criterion** |        |          |             |                 |
| Change    | 0.814  |          |             |                 |
| Strategy  | 0.486  | 0.810    |             |                 |
| Performance | 0.448 | 0.345 | 0.793 |                 |
| Hotel resilience | 0.606 | 0.704 | 0.474 | 0.887 |
| **Heterotrait-Monotrait Ratio (HTMT)** |        |          |             |                 |
| Change    |        | 0.549    |             |                 |
| Strategy  |        | 0.502    | 0.415       |                 |
| Performance |        | 0.640 | 0.794 | 0.538 |

Note: The elements on the diagonal (bold) represent the square root of the AVE and the values outside the diagonal represent the correlations between the constructs.

Table 5
Structural model.

| Relations | β   | t-value | R² | Q² | f² | Hypothesis   |
|-----------|-----|---------|----|----|----|--------------|
| Strategy → Hotel resilience | 0.537*** | 5.788 | 58.7% | 0.426 | 0.533 | Supported   |
| Change → Hotel resilience | 0.344*** | 3.918 | 22.5% | 0.123 | 0.290 | Supported   |
| Hotel resilience → Performance | 0.474*** | 6.120 | 22.5% | 0.123 | 0.290 | Supported   |

GoF(0.001;4999) = 3.092.

*** p < 0.001.

Table 5 also presents the results of the analysis of net effects, revealing significant coefficient paths. The net effect analysis indicates a significant positive effect of strategy (β = 0.537, p < 0.001) and change (β = 0.344, p < 0.001) on resilience, supporting hypotheses H1a and H1b. In addition, the findings show that resilience has a significant effect on performance (β = 0.474, p < 0.001), supporting hypothesis H2.

Finally, we test the goodness of fit of the model. PLS does not provide an adequate global measure of goodness of model fit. Therefore, we followed the criterion proposed by Tenenhaus, Vinzi, Chatelin, and Lauro (2005), which consists of the geometric mean of the average of communalities by the mean of R². The Goodness-of-fit of the proposed structural model is above 0.36 (GoF = 0.527), indicating a model with good fit (Chin, 1998).

5. Discussion

The tourism industry is extremely vulnerable, due in part to its great complexity and the international dimension of its operations. Indeed, there are many changes, both positive and negative, that significantly affect the performance of tourism agents, including hotels. Among the
changes affecting the tourism sector (e.g., Carroll & Siguaw, 2003; Faulkner, 2001; Hall, 2016; Senbeto & Hon, 2020), critical situations that can influence hotel performance are related to, for example, competitors and customers, strategic partners, technological development, economic crises, political-legal issues, and environmental factors. Thus, a worldwide event has been the economic crisis emerged in 2007, which affected the tourism industry (Ritchie, Amaya Molinar, & Frechtling, 2011; Senbeto & Hon, 2020). More recently, the COVID-19 pandemic also has caused a severe impact on the tourism field in general, and on the hotel sector in particular (e.g., Güssling et al., 2020; Hoefer et al., 2020). In this context, hotel managers must be prepared not only to react when changes occur, but to anticipate them in order to meet challenges and maximise opportunities. In this scenario of uncertainty, a recent line of research in the tourism industry is the study of resilience (Orchiston et al., 2016; Prayag et al., 2019). In this sense, given the importance of hotels in tourism offer (Attila, 2016), they also play an important role in community resilience (Brown et al., 2018). Based on various works (e.g., Elgamal, 2018; Orchiston et al., 2016; Tibay et al., 2018), a hotel will be resilient if it has the capability to manage environment changes with a proactive and positive attitude, carrying out not only ad-hoc organisational modifications but also an important transformation of its business model if necessary. In this regard, given the need of social distancing derived from the COVID-19 crisis, Jiang and Wen (2020) emphasise the role of artificial intelligence and robotics in hotel management.

Because resilience has been addressed from different disciplines (Doorn, 2017; Sabatino, 2016), there is no consensus on its conceptualisation. Moreover, as Ruiz-Martin et al. (2018) state, there are different perspectives of conceptualisation and measurement of resilience. In this regard, resilience can be interpreted as a process and as a result. Other line of research is about changes that organisational resilience is coping with (Becken, 2013), although not agreed on the evaluation framework in the literature. On this basis, this paper proposes a research model that analyses organisational resilience from different perspectives, providing a more complete view of the topic of discussion. Therefore, it contributes to literature with a holistic model that measures different domains of organisational resilience: context of resilience (to which context organisations need to be resilient), predictors of resilience (process: how organisations should perform to be resilient), resilience as a construct (result: what status organisations aim to achieve), and its effect on performance (result: what organisations are resilient for).

5.1. Hotel context

Based on data obtained from a sample of four-star, five-star and Great Luxury hotels operating in the Canary Islands, the tourism context is studied to determine the types of changes that a resilience agenda should focus on. Based on the impact, frequency and predictability of the different types of change analysed (competitors, customers, intermediaries, suppliers, other partners and/or external agents, economic situation, political-legal issues, technological development and environmental factors), a matrix analysis is carried out. Results show that hotels undergo frequent changes related to customers and technological development, and such changes are perceived as having a high level of impact. However, customer changes exhibit higher predictability than technological changes. On the other hand, economic, political-legal and environmental changes present low levels of frequency and predictability, but a medium level of impact, although the economic changes evidence a higher impact than the others. In addition, competitor changes show a medium-high level of impact and high predictability, although a medium level of frequency.

These results suggest diverse managerial implications. As for the types of changes faced by the hotel sector, customer and technological changes rise to a significant level of impact, although the latter exhibits lower predictability. For instance, hotel managers may perceive a higher predictability in tourist arrivals because of the contracts between hotels and tour operators. On the other hand, the hotel industry faces rapid and diverse technological changes, which creates both opportunities and challenges (Law, Buhalis, & Cobanoglu, 2014), although difficult to anticipate. However, according to various studies (e.g., Buhalis & Law, 2008; Law et al., 2014), the hotels’ involvement in the application of new technologies in strategic and operational management requires them to continuously monitor technological advances. In this regard, in an effective resiliency agenda, hotels are suggested to participate in tourist cluster to create synergies and facilitate technological investments, mainly when hotels can use technological resources to monitor other types of changes. As an example, hotels could use new technologies to identify tourist behaviour trends (e.g., green tourism, digital nomad). In addition, hotels should choose the appropriate technology for their organisational strategy, as Ruiz-Molina, Gil-Saura, and Šerić (2013) state. Furthermore, technology adoption is an important antecedent to co-create value in hotel sector, which also promotes innovation and competitive advantage (Chen, Kerr, Chou, & Ang, 2017), improving hotel competitiveness. To this end, they suggest collaboration with partners to co-create service innovations in the hospitality industry.

Based on average scores, economic, political-legal and environmental changes exhibit a medium level of impact, although low frequency and predictability. As an example it can be noted the last economic crisis of 2007, which was difficult to predict (e.g., Makridakis, Hogarth, & Gaba, 2009), due to the intervention of numerous macro-economic variables that cannot be controlled at the micro-organisational level. In this regard, collaboration and networking are recommended to address diverse macro changes, such as Reed et al. (2015) suggested in the face of climate change.

Regarding competitor changes, hotel managers perceive that, although such changes have a significant impact and medium-high frequency, they show high predictability. In relation to the frequency of competitor changes, this is a logical response, especially considering the continuous changes in management and ownership arrangements in the tourism industry. This is the case of Sol Meliá hotels, as explained by Del Río and Tabales (2016). Relating to high predictability of competitor changes, to maintain this level of certainty, hotels are advised to participate in networks that facilitate access to information on changes in the tourism structure (tourism clusters, professional associations, trade fairs...), as well as online information sources (online magazines, online forums...). Examples include HOSTELTUR in Spain or the International Hotel and Restaurant Association (IH&RA).

5.2. Resilience predictors

This paper proposes and validates a scale of resilience predictors, with a two-factor structure (i.e. strategy and change). It displays a factorial structure similar to Lee et al. (2013) and Orchiston et al. (2016), though with variations in the attributes, which suggests that future academic research needs to advance along these lines. In this research, strategy dimension represents the organisational actions to proactively plan the business strategy, maximising the challenges and opportunities of future changes. Change dimension evaluates the organisation’s continuous search to improve its business model (processes, products and services) and make the necessary changes to adjust to the market before its competitors. Both dimensions must improve hotel resilience as a result, i.e. as the ultimate goal to be achieved. Also, this result supports Duchek et al. (2019)’s research that explain that organisational resilience can be understood as the ability to anticipate potential disruptive events, to deal effectively with unexpected events, and to learn from these events in order to develop a dynamic capability to facilitate organisational change. Thus, to improve hotel resilience, organisational management should be ambidextrous. In other words, it is necessary to plan for changes and, in turn, to bring about its own changes.
5.2.1. Strategy

Based on the above, this research proposes diverse managerial implications. In relation to the “strategy” dimension, hotels should develop a holistic and longitudinal approach to design their future business strategy. To this end, continuous monitoring of the changing environment is required and hotel managers are suggested to use information and communication technologies to market monitor, as Law, Leung, and Chan (2019) state. Likewise, learning from past experiences, sharing experiences and reflections with key partners, and continuously updating the business strategy are recommended actions. Therefore, the hotel sector needs to analyse past, present and future information and include the perspectives of key internal and external stakeholders during strategic planning. Also, different techniques related to strategic planning in uncertain environments can be deployed. Thus, Quenum, Thorisson, Wu, and Lambert (2019) apply scenario analysis augmented with multicriteria decision analysis to prioritise technology investments, and Ganji, Alimohammadi, and Miles (2019) develop simulation modelling for community resilience planning. In addition, hotels should engage alliances and networks with other tourism agents to cope with disruptive events and also formulate joint planning (Whipple & Russell, 2007).

Furthermore, hotels should develop strategic actions, as part of a corporate social responsibility plan, to improve the resilience of indirect tourism agents (i.e., taxi service and shopping malls) and the local community. This would be in line with McManus et al. (2008) who suggest that organisations should contribute to community resilience. In this regard, the hotel industry must be sensitive to its local community by activating tools to quickly detect critical changes. In this sense, the ongoing monitoring of the hotel context would need to include key indicators of community resilience (i.e., unemployment, public health and safety). Therefore, hotels should manage challenging situations with an open attitude to information sharing, collaboration and community integration to enhance organisational resilience. Consequently, the present research recognises the importance of inter-relationships among different tourism subsystems or stakeholders to improve not only destination resilience, but also organisational resilience. In relation to planning frequency in turbulent environments, organisations also need to plan on an ongoing basis, with shorter planning cycles, as suggested by Suomalainen, Kuusela, and Tihinen (2015).

5.2.2. Change

Regarding the “change” dimension, hotels should promote creativity, continuous improvement and a culture of innovation. To this end, it is suggested the incorporation of quality models that promote continuous improvement (e.g., Marwa, 2012) and a culture of innovation (e.g., Rahi, 2019). In this respect, the European Foundation for Quality Management (EFQM) Excellence Model (EFQM, 2012) recommends developing initiatives (e.g., learning and collaboration networks) in which key stakeholders share and use their collective knowledge in the generation of ideas, innovation and improvement. In this sense, online platforms are a useful channel for sharing and discussing in a collaborative environment, as Law et al. (2019) recognise. With regard to change management as an enabler for resilient organisations, Ates and Bitici (2011) recommend focusing on long-term planning and on soft aspects such as external communication (e.g., customers, suppliers and competitors) to drive change proactively. As an example, hotels could foster the co-creation of new products and services with tour operators and jointly manage the required changes in hotels. Indeed, hotels need to manage their business units in synchrony with the tourist destination to which they belong. Therefore, hotels are suggested to promote co-operation with tourism and non-tourism agents, who directly and indirectly influence their business model and organisational survival, and thus their organisational resilience, as well as the community resilience. Moreover, destinations need to involve the various tourism stakeholders, such as hotels, to improve community resilience. Thus, this research outlines the synchronisation among organisational resilience and destination resilience.

5.3. Hotel resilience

In the research model, hotel resilience measures the degree to which the hotel is in continuous equilibrium in a changing context. The scale of resilience predictors explains almost 60% of hotel resilience. This result supports the effect of resilience predictors on hotel resilience, which, to our knowledge, has scarcely been analysed in the literature. As managerial implications, this paper suggests that hotel managers should aim to reach organisational equilibrium on an ongoing basis. Changes disturb the organisational context and therefore the organisational status quo. Consequently, according to context characteristics, hotels need to identify the new equilibrium point and update their portfolio of resources and capabilities. To this end, based on literature review (e.g., Lee et al., 2013; Williams et al., 2017), this debate also requires analysing interrelationships with other actors in the community. In this regard, hotels are encouraged to identify potential collaborative initiatives (i.e., technological clusters) with different stakeholders (competitor hotels, tour operators, public organisations...) to cope with diverse changes. These actions would contribute to improve not only hotel resilience but also community resilience. Thus, this research recognises multiple synergies between organisational resilience and community resilience and, as Lee et al. (2013) state, organisational resilience would improve business competitiveness. For instance, in climate change literature, Becken (2013) notes that higher connectedness of tourism activity sub-systems in a tourist destination contributes to cope with adverse climate conditions and, consequently, that cooperation, and not competition, among tourism stakeholders enhances destination resilience.

5.4. Hotel performance

Results confirm the impact of organisational resilience on performance, by influencing both tangible (e.g., market share) and intangible indicators (e.g., customer loyalty). In this regard, organisational resilience has a positive influence on diverse performance indicators. As managerial implications, hotel managers are encouraged to identify key performance indicators that are affected by organisational resilience and define how to measure them. Moreover, hotels need to recognise direct and indirect effects of the new organisational equilibrium point on performance. As an example, the effects of climate change are leading to greater tourist awareness of the hotel’s behaviour in terms of sustainability. Consequently, hotels should review their corporate social responsibility to define new resources and capabilities in the new equilibrium point (e.g., green certification) and new performance results (e.g., environmental pollution indicators).

5.5. Limitations and future research

This paper has focused on the analysis of hotel resilience from the perspective of hotel managers in the Canary Islands, which is an important and consolidated international tourist destination. In this sense, the findings are considered significant, although not generalisable to tourist destinations with other characteristics (e.g., destination seasonality, types of hotels, size of hotels). On the other hand, although the confidence level of the sample is statistically acceptable, it would be desirable to work with a larger sample size that would allow for the application of other statistical techniques and the creation of more complex models. Furthermore, the hotels analysed in the study were four-star, five-star and Great Luxury hotels because the literature considers that these hotels have higher resources and capabilities to deal with changes. In this regard, it is suggested to analyse how other kinds of accommodation providers (e.g., three-star hotels) cope with changes. In addition, this research has created and validated ad hoc scales and it
would be recommendable to replicate them in future studies. For example, this investigation could be conducted in other regions or destinations, in order to examine organisational resilience in those geographical areas. Likewise, a suggested future line of research is to evaluate synergies and gaps between different study approaches to managing uncertainty (agility, crisis management...). Also, academic research could focus on identifying key capabilities and resources that foster organisational and community resilience to deal with each disruptive event. As an example, it is suggested to deepen the role of inter-organisational relationships to cope with climate change in the tourism sector, at both hotel and destination levels.

Author’s contributions

Lucía Melián-Alzola contributed to the literature review and conceptual model proposal, collected and analysed data, and wrote the manuscript. Margarita Fernández-Monroy contributed to the literature review and conceptual model proposal, collected and analysed data, and wrote the manuscript. Marisa Hidalgo-Peñaate contributed to the literature review and conceptual model proposal, collected and analysed data, and wrote the manuscript.

Declaration of Competing Interest

None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.tmp.2020.100747.

References

Afgan, N. H. (2010). Resilience of company management system. PICMET 2010 Technology Management for Global Economic Growth (pp. 1–8). IEEE.
Al-Ayed, S. I. (2019). The impact of strategic human resource management on organisational resilience: An empirical study on hospitals. Versalas: teoria ir praktika, 20(1), 179–186.
Amor, A., Prayag, G., & Hall, C. M. (2018). Conceptualising destination resilience from a multilevel perspective. Tourism Review International, 23(3–4), 215–250.
Anderson, T., Cäker, M., Tengblad, S., & Wickelgren, M. (2019). Building traits for organisational resilience through balancing organizational structures. Scandinavian Journal of Management, 35(1), 36–45.
Amarelli, A., & Nonino, F. (2016). Strategic and operational management of organisational resilience: Current state of research and future directions. Omega, 62, 1–18.
Asadzadeh, A., Kötter, T., Salehi, P., & Birkmann, J. (2017). Operationalizing a concept: A systematic review of composite indicator building for measuring community disaster resilience. International Journal of Disaster Risk Reduction, 25, 147–162.
Ates, A., & Bititci, U. (2011). Change process: A key enabler for building resilient SMEs. International Journal of Production Research, 49(18), 5601–5618.
Attila, A. T. (2016). The impact of the hotel industry on the competitiveness of tourism destinations in Hungary. Journal of Competitiveness, 8(4), 85–104.
Baba, K., Nagata, Y., Kawabuko, S., & Tanaka, M. (2020). A framework and indicators of resilience. In M. Tanaka, & K. Baba (Eds.). Resilient policies to Asian crisis (pp. 3–45). Singapore: Springer.
Baruch, Y., & Holton, B. C. (2008). Strategic crisis management and organizational learning: The role of reflection in developing effective DMO crisis strategies. Journal of Travel & Tourism Marketing, 23(2–4), 45–57.
Bouaziz, F., & Hachicha, Z. S. (2018). Strategic human resource management practices and organisational resilience. Journal of Management Development, 37(7), 537–551.
Brown, N. A., Ortonch, C., Rovins, J. E., Feldmann-Jensen, S., & Johnston, D. (2018). An integrative framework for investigating disaster resilience within the hotel sector. Journal of Hospitality and Tourism Management, 36, 67–75.
Brown, N. A., Rovins, J. E., Feldmann-Jensen, S., Ortonch, C., & Johnston, D. (2017). Exploring disaster resilience within the hotel sector: A systematic review of literature. International Journal of Disaster Risk Reduction, 22, 362–370.
Brown, N. A., Rovins, J. E., Feldmann-Jensen, S., Ortonch, C., & Johnston, D. (2019). Measuring disaster resilience within the hotel sector: An exploratory survey on Wellington and Hawke’s bay’s hotel and New Zealand hotel staff and managers. International Journal of Disaster Risk Reduction, 33, 108–121.
Buhallo, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the internet-the state of eTourism research. Tourism Management, 29, 609–623.
Cahyanto, L., & Pennington-Gray, L. (2017). Toward a comprehensive destination crisis resilience framework. Proceedings of the 51st Annual Travel and Tourism Research Association International Conference, Victoria, British Columbia, Canada.
Calvoro, E., Lloyd, K., & Domíne-Howes, D. (2014). From vulnerability to transformation: A framework for assessing the vulnerability and resilience of tourism destinations. Journal of Sustainable Tourism, 22(3), 341–360.
Carroll, B., & Siguaw, J. (2003). The evolution of electronic distribution: Effects on hotels and intermediaries. Cornell Hotel and Restaurant Administration Quarterly, 44(4), 38–50.
Celli, U. G., & Cucia, T. (2015). The economic resilience of tourism industry in Italy: What the ‘great recession’ data show. Tourism Management Perspectives, 16, 346–356.
Chen, J. S., Kerr, D., Chou, C. Y., & Ang, C. (2017). Business co-creation for service innovation in the hospitality and tourism industry. International Journal of Contemporary Hospitality Management, 29(6), 1522–1540.
Chin, W. W. (1998). The partial least squares approach to structural equation modelling. In G. A. Marcoulides (Ed.). Modern methods for business research (pp. 295–336). Mahwah, NJ: Lawrence Erlbaum.
Chowdhury, M., Prayag, G., Orštic, C., & Spector, S. (2019). Postdisaster social capital, adaptive resilience and business performance of tourism organizations in Christchurch, New Zealand. Journal of Travel Research, 58(7), 1209–1226.
Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Hillsdale, NJ: Erlbaum.
Corfu, A., & Nistoreanu, P. (2006). Insights in internationalization of tourism firms. The Amfiacreatic Economic Journal, 8(19), 46–51.
Courty, E. J. (2020). COVID-19 will cause a significant decline in global RevPar, cash flow, for rated lodging companies. Retrieved from. (2020). https://www.hotelglobal.com/ratings/en/research/articles/200311-covid-19-will-cause-a-significant-decline-in-global-revpar-cash-flow-for-rated-lodging-companies-11382396f1d4ab93 assessed on 10 June 2020.
Dahles, H. (2018). The sustainability of small business resilience: The local tourism industry of Yogyakarta, Indonesia a decade after the crisis. In J. M. Chee, & A. A. Lew (Eds.). Tourism, resilience and sustainability: Adapting to social, political and economic change (pp. 149–163). London: Routledge.
Dahles, H., & Susilowati, T. P. (2015). Business resilience in times of growth and crisis. Annals of Tourism Research, 51, 34–50.
Dalziel, E. P., & McManus, S. T. (2004). Resilience, vulnerability, and adaptive capacity: Implications for system performance. International Forum for Engineering Decision Making (IFED). Stubs. Switzerland, December 6–8.
De Carvalho, A. O., Ribeiro, I., Cirani, C. B. S., & Cintra, R. F. (2016). Organizational resilience: A comparative study between innovative and non-innovative companies based on the financial performance analysis. International Journal of Innovation, 4(1), 58–69.
De Oliveira Teixeira, E., & Werther, W. B., Jr. (2013). Resilience: Continuous renewal of competitive advantages. Business Horizons, 56(3), 333–342.
Del Rio, L. C. L., & Tabales, J. N. (2016). Desarrollo de la industria hotelería española: El grupo Meliá. International Journal of Scientific Management and Tourism, 2(4), 9–38.
Dorigu, T., Marchio, E. A., Buot, U., & Sues, C. (2019). Climate change: Vulnerability and resilience of tourism and the entire economy. Tourism Management, 72, 292–305.
Doorn, N. (2017). Resilience indicators: Opportunities for including distributive justice concerns in disaster management. Journal of Risk Research, 20(6), 711–731.
Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. Business Research, 13, 215–222.
Duchek, S., Raetze, S., & Schewe, I. (2019). The role of diversity in organizational resilience: A theoretical framework. Business Research, https://doi.org/10.1007/s40685-019-0084-8.
EFQM (2012). Modelo EFQM de Excelencia 2013. EFQM Publications.
Espino-Rodríguez, T. F., & Gil-Padilla, A. M. (2005). The relationship between leisure activities and future directions. International Journal of Disaster Risk Reduction, 25(8), 1139–1160.
Faulkner, B. (2001). Towards a framework for tourism disaster management. Tourist Review, 56(3), 333–342.
Filimonau, V., & De Coteau, D. (2019). Tourism resilience in the context of integrated destination and disaster management (IfDM). International Journal of Tourism Research, 22(2), 135–147.
Filimonau, V., & De Coteau, D. (2019). Tourism resilience in the context of integrated destination and disaster management (IfDM). International Journal of Tourism Research, 22(3), 396–418.
Faulkner, W. (2016). The systematic review of composite indicator building for measuring community disaster resilience. International Journal of Disaster Risk Reduction, 25, 147–162.
Franch, L., & Melián-Alzola, et al. doi.org/10.1016/j.tmp.2020.100747


Glanzer, D. (2006). Crisis management in the tourism industry. Oxford, UK: Butterworth- Heinemann.

Godwin, L., & Amah, E. (2013). Knowledge management and organizational resilience in Nigerian multinational organizations. Development Southern Africa, 30(4), 449–466.

Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: A rapid assessment of COVID-19. Journal of Sustainable Tourism, https://doi.org/10.1080/09669582.2020.1758708.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). Partial least squares structural equation modeling (PLS-SEM): A beta silver bullet. Journal of Marketing Theory and Practice, 19(2), 139–152.

Hall, C. M. (2010). Crisis events in tourism: Subjects of crisis in tourism. Current Issues in Tourism, 13(5), 401–417.

Halm, C. M., Prayag, G., & Amore, A. (2017). Tourism and resilience: Individual, organisational and destination perspectives. Channel View Publications.

Han, J., Lee, M., & Hwang, Y. S. (2016). Tourists’ environmentally responsible behavior in response to climate change and tourist experiences in nature-based tourism. Sustainability, 8(7), 655–675.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science, 43(1), 115–135.

Hoefer, A., Fampaker, D., Rippe, M., Kasten, A. A., Alonso, E. G. R., López-Perea, N., ... Gallo, D. N. (2020). Management of a COVID-19 outbreak in a Hotel in Tenerife. International Journal of Infectious Diseases, 96, 384–386.

Holladay, J. P., & Powell, R. B. (2016). Social-ecological resilience and stakeholders: A qualitative inquiry into community-based tourism in the Commonwealth of Dominica. Caribbean studies, 44(1–2), 2–38.

Ikvov, M., Blesić, I., Jančivić, S., Kovačić, S., Miljković, D., Lučić, T., & Saksuki, D. (2019). Natural disasters vs hotel industry resilience: An exploratory study among hotel managers from Europe, Open Access, 1(1), 359–369.

Jiang, Y., Ritchie, B. W., & Verreynne, M. L. (2019). Building tourism organizational resilience to crises and disasters: A dynamic capabilities view. Journal of Sustainable Tourism, 27(8), 1142–1166.

Law, R., Leung, D., & Chan, I. C. C. (2019). Progression and development of information technologies in hospitality and tourism. Annals of Tourism Research, 36(2), 511–534.

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for crisis management in tourism: Lessons for the accommodation industry. International Journal of Crisis Management, 20(2), 247–265.

Liang, J., & Prior, T. (2012). Developing a capacity for crisis management in tourism: Lessons for the accommodation industry. International Journal of Crisis Management, 20(2), 247–265.

Lew, A. A., & Cheer, J. (2018). Lessons learned: Globalization, change, and resilience in tourism communities. In J. Cheer, & A. A. Lew (Eds.). Tourism, resilience, and sustainability: Adapting to social, political and economic change (pp. 319–323). London: Routledge.

Li, Q., Dong, S., & Mostafavi, A. (2019). Modeling of inter-organizational coordination dynamics in risk planning of infrastructure systems: A multi-layer network simulation framework. Procedia ONE, 14(11), Article e022542.

Ma, Z., Xiao, L., & Yin, J. (2018). Toward a dynamic model of organizational resilience. Nankai Business Review International, 9(3), 246–263.

Matyas, D., & Pelling, M. (2015). Positioning resilience for 2015: The role of resistance, incremental adjustment and transformation in disaster risk management policy. In K. S. Ng (Ed.). Quality management and practices. InTech.

Marwa, S. M., & Milner, C. D. (2013). Underwriting corporate resilience via creativity: The pliability model. Total Quality Management & Business Excellence, 24(7–8), 835–846.

Mayston, L., & Pelling, M. (2015). Positioning resilience for 2015: The role of resistance, incremental adjustment and transformation in disaster risk management policy. In K. S. Ng (Ed.). Quality management and practices. InTech.

Mehn, P., & Merkuryev, Y. (2014). Developing a resilient supply chain. Procedia-Social and Behavioral Sciences, 110, 309–319.

Morais-Storz, M., Platou, R. S., & Norheim, K. B. (2018). Innovation and metamorphosis towards strategic resilience. International Journal of Entrepreneurial Behavior & Research, 24(7), 1181–1199.

Moreno, A., & Becken, S. (2009). A climate change vulnerability assessment methodology for coastal tourism. Journal of Sustainable Tourism, 17(4), 473–488.

Neve, A. H., Stevens, S. P., Wych, K., & Walsh, M. (2018). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. American Journal of Community Psychology, 41(1–2), 127–150.

Ogland, P. (2008). Resilience as a goal for quality management systems design. Systemic practice and action research, 21(2), 199–216.

Orchiston, C., Prayag, G., & Brown, C. (2016). Organizational resilience in the tourism sector. Annals of Tourism Research, 56, 145–148.

Prayag, G. (2018). Symbiotic relationship or not? Understanding crisis resilience and tourism crisis management. Tourism Management Perspectives, 25, 133–135.

Prayag, G. (2019). Building destination resilience through community and organizational resilience. In R. K. Isaac, E. Cakmak, & R. Butler (Eds.). Tourism and hospitality in conflict-ridden destinations (pp. 56–68). New York: Routledge.

Prayag, G., Chowdhury, M., Spector, S., & Orchiston, C. (2018). Organizational resilience and financial performance. Annals of Tourism Research, 73, 193–196.

Prayag, G., Spector, S., & Orchiston, C. (2019). Psychological resilience, organizational resilience and life satisfaction in tourism firms: Insights from the Canterbury earthquakes. Current Issues in Tourism, 23(10), 1216–1233.

Quensel, A., Thorsiton, H., Wu, D., & Lambert, J. H. (2019). Resilience of business in emerging and emerging markets. Institutions of Risk Management. https://doi.org/10.1093/jr/rim/1-18. Retrieved from http://www.smrplsc.com.

Rahi, K. (2019). Indicators to assess organizational resilience—a review of empirical literature. International Journal of Disaster Resilience in the Built Environment, 10(2/3), 267–340.

Reed, S. O., Friend, R., Jarvis, J., Hencerloth, J., Thinphanga, P., Singh, D., ... Sutarto, R. (2019). Resilience projects as experiments: Implementing climate change resilience in Asian cities. Climate and Development, 7(5), 469–480.

Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. Bönningstedt: SmartPLS. Retrieved from http://www.smartpls.com.

Ritchie, B. W. (2004). Chaos, crises and disasters: A strategic approach to crisis management in the tourism industry. Tourism Management, 25(6), 669–683.

Ritchie, B. W., Bentley, G., Koruth, T., Wang, J., & Potocnik, R. K. (2011). Proactive crisis planning. International Journal of Tourism Research, 13(4), 357–368.

Ritchie, B. W., & Jiang, Y. (2019). A review of research on tourism risk, crisis and disaster management: Launching the annals of tourism research curated collection on tourism risk, crisis and disaster management. Annals of Tourism Research, 79, Article 102812.

Ritchie, J. B., Amaya Molinar, C. M., & Frechling, D. C. (2010). Impacts of the world recession and economic crisis on tourism: North America. Journal of Travel Research, 49(4), 515–525.

Rodríguez-Sánchez, A., Guinot, J., Chiva, R., & López-Cabralés, Á. (2019). How to emerge stronger: Antecedents and consequences of organizational resilience. Journal of Business Research, 97, 243–253.

Roldán, J., & Sánchez-Franco, M. J. (2012). Variance-based structural equation modeling: Guidelines for using partial least squares in information systems research. In M. Mora, O. Gelman, A. Steenkamp, & M. Raisinghani (Eds.). Research Methodologies, Innovations and Philosophies in Software Systems Engineering and Information Systems (pp. 193–222). https://doi.org/10.4018/978-1-4666-0179-6.ch010 IGI Global.

Ruiz-Martin, C., López-Paredes, A., & Wainer, G. (2018). What we know and do not know about organizational resilience. International Journal of Production Management and Engineering, 6(1), 11–28.
Ruiz-Molina, M. E., Gil-Saura, I., & Šerif, M. (2013). The use of ICT in established and emerging tourist destinations: A comparative analysis in hotels. Journal of Hospitality and Tourism Technology, 4(2), 96–118.

Sabahi, S., & Parasuraman, M. M. (2020). Firm innovation and supply chain resilience: A dynamic capability perspective. International Journal of Logistics Research and Applications, 23(3), 254–269.

Sabatino, M. (2016). Economic crisis and resilience: Resilient capability and competitiveness of the enterprises. Journal of Business Research, 69(5), 1924–1927.

Sainz-Kirchhoff, R., & Baggio, R. (2014). Structural social capital and hotel performance: Is there a link? International Journal of Hospitality Management, 37, 99–110.

Santana, G. (2004). Crisis management and tourism. Journal of Travel & Tourism Marketing, 15(4), 299–321.

Scholten, R., & Schilder, S. (2015). The role of collaboration in supply chain resilience. Supply Chain Management: An International Journal, 20(4), 471–484.

Schroeder, A., Pennington-Gray, L., Kaplanidou, K., & Zhan, F. (2013). Destination risk perceptions among US residents for London as the host city of the 2012 Summer Olympic Games. Tourism Management, 38, 107–119.

Scott, D., Hall, C. M., & Gossling, S. (2016). A report on the Paris climate change agreement and its implications for tourism: Why we will always have Paris. Journal of Sustainable Tourism, 24(7), 933–948.

Selberg, M. M., Ryan, P., Borgström, S. T., Norström, A. V., & Peterson, G. D. (2018). From resilience thinking to resilience planning: Lessons from practice. Journal of Environmental Management, 217, 906–918.

Senbeto, D. L., & Hon, A. H. (2020). The impacts of social and economic crises on tourist behaviour and expenditure: An evolutionary approach. Current Issues in Tourism, 23(6), 740–755.

Seville, E., Brunsson, D., Dantas, A., Le Masurier, J., Wilkinson, S., & Vargo, J. (2008). Organisational resilience: Researching the reality of New Zealand organisations. Journal of Business Continuity & Emergency Planning, 2(3), 258–266.

Sharifi, H., & Zhang, Z. (1999). A methodology for achieving agility in manufacturing organizations: An introduction. International Journal of Production Economics, 62, 7–22.

Student, J., Lamers, M., & Amelung, B. (2019). A dynamic vulnerability approach for tourism destinations. Journal of Sustainable Tourism, 28(3), 475–496.

Suomalainen, T., Kusuela, R., & Thiinen, M. (2015). Continuous planning: An important aspect of agile and lean development. International Journal of Agile Systems and Management, 8(2), 132–162.

Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. (2005). PLS path modeling. Computational Statistics & Data Analysis, 48(1), 159–205.

Thomas, R., & Wood, E. (2014). Innovation in tourism: Re-conceptualising and measuring the absorptive capacity of the hotel sector. Tourism Management, 45, 39–48.

Tibay, V., Miller, J., Chang-Richards, A. Y., Egbelakin, T., Seville, E., & Wilkinson, S. (2018). Business resilience: A study of Auckland hospitality sector. Procedia Engineering, 212, 1217–1224.

Tsai, C. H., & Chen, C. W. (2010). An earthquake disaster management mechanism based on risk assessment information for the tourism industry—a case study from the island of Taiwan. Tourism Management, 31(4), 470–481.

Tsai, C. H., & Chen, C. W. (2011). Development of a mechanism for typhoon- and flood-risk assessment and disaster management in the hotel industry – A case study of the Hualien area. Scandinavian Journal of Hospitality and Tourism, 11(3), 324–341.

Vereecke, M. L., Williams, A. M., Ritchie, B. W., Gronum, S., & Betts, K. S. (2019). Innovation diversity and uncertainty in small and medium sized tourism firms. Tourism Management, 72, 257–269.

Whipple, J. M., & Russell, D. (2007). Building supply chain collaboration: A typology of collaborative approaches. The International Journal of Logistics Management, 18(2), 174–196.

Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational response to adversity: Fusing crisis management and resilience research streams. Academy of Management Annals, 11(2), 733–769.

Windle, G. (2011). What is resilience? A review and concept analysis. Reviews in Clinical Gerontology, 21(2), 152–169.

Wolf, S., Hinkel, J., Hallier, M., Bistaro, A., Lincke, D., Ionescu, C., & Klein, R. J. (2013). Clarifying vulnerability definitions and assessments using formalisation. International Journal of Climate Change Strategies and Management, 5(1), 54–70.

World Tourism Organization (2018). UNWTO World Tourism Barometer, 16 (March/April).

Zach, F., & Racherla, P. (2011). Assessing the value of collaborations in tourism networks: A case study of Elkhart County Indiana. Journal of Travel & Tourism Marketing, 28(1), 97–110.