Ece Doğantan / Meryem Akoğlan Kozak

Resilience capacity in different types of tourism businesses

Abstract

Tourism companies often experience vulnerabilities due to the crisis and adverse environmental conditions. Today, one of the ways to cope with vulnerabilities and gain superiority in competition is the development of resilience capacity. This research attempts to determine the effect of resilience capacity on vulnerabilities. In the research, the data has been obtained via survey technique from a total of 401 managers from 141 accommodation businesses, 137 travel agencies and 123 airline businesses. As a result, the tourism-specific resilience model, which consists of 'planning strategies', 'proactive posture', 'access to information', 'networks and relations', 'leadership' and 'business culture', has been developed. The results of the Path Analysis have exhibited that the resilience capacity in tourism businesses decreases the vulnerabilities. The research has also compared resilience capacities of accommodation, travel and airline businesses. The results revealed that in general there were no significant differences between different types of tourism establishments in terms of resilience capacity dimensions except the leadership dimension. Further, this study revealed that travel agencies performed significantly higher than the accommodation businesses in terms of leadership dimension of the resilience capacity.

Key words: resilience capacity; vulnerabilities; accommodation businesses; travel agencies; airline businesses; Turkey

Introduction

Certain crises, such as the Severe Acute Respiratory Syndrome (SARS) crisis (Lee, Vargo & Seville, 2005), the terrorist attack on September 11 (Lee et al., 2005), tsunamis (Jitpraphai, Arunotai & Tiangtrong, 2017), the Syrian civil war (Berti, 2015), the Egyptian revolution (Avraham, 2016), the Greece debt crisis (Papatheodorou & Arvanitis, 2014), Hurricane Katrina (Moss, Ryan & Moss, 2008), the Tohoku earthquake (Nguyen, Imamura & Iuchi, 2017), and the refugee crisis that Europe is currently experiencing (Pappas & Papatheodorou, 2017) have caused a sudden decrease in the number of tourists, resulting in serious environmental and socio-cultural problems as well as financial losses for tourism businesses and destinations. The research indicates that these problems encountered by the tourism businesses create an element of risk for the tourists in particular, which then continues to decrease the demand for the businesses in the region. For example, the global crisis that occurred in 1998 resulted in repercussions for Turkey, which experienced a 12% decline in the hotel occupancy rate (Küçükaltan, Tükeltürk & Çiftçi, 2015, p. 99). While trying to recover from the damage caused by the global crisis, Turkey began to experience negative effects of the severe earthquake that occurred in 1999. After the earthquake, hotel occupancy rates in the tourism sector decreased by 10% (Küçükaltan et al., 2015). Gezi protests in Istanbul in 2013 also affected the image of the country, and it was determined that the number of tourists, which was 1,058,771 in May 2013, decreased to around

Ece Doğantan, PhD, Res. Asst., Department of Hospitality Management, University of Anadolu, Turkey;
E-mail: edogantan@anadolu.edu.tr

Prof. **Meryem Akoğlan Kozak**, PhD, Department of Hospitality Management, University of Anadolu, Turkey;
E-mail: mkozak@anadolu.edu.tr

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950,000 in June and July of that year after the protests broke out (Küçükaltan et al., 2015, p. 100). Similarly, the political tension with Russia continued for more than a year, which negatively affected Antalya. As a result of the economic crisis of Russia in 2015, there was a 27% decline in the number of Russian tourists traveling to Antalya (Turkey Hoteliers Federation, 2015, p. 27). These adverse crises or conditions surrounding the business environment affect the tourist activities that are highly sensitive to environmental changes, leading to vulnerabilities in businesses. Seeing the vulnerabilities as a temporary situation and attempting to solve them with instant solutions makes the situation more difficult and causes further problems at the performance level while rendering the business unable to perform its functions (Kahn, Barton & Fellows, 2013, p. 377). Therefore, this research suggests that tourism businesses operating in today's rapidly changing environmental conditions should develop a resilience capacity to cope with the vulnerabilities created by the chaotic system and then use this capacity as a balance shield in difficult times.

Upon reviewing the resilience studies in the area of tourism, it is noteworthy that the concept and characteristics of resilience are largely unclear and that the subject is predominantly at the level of destinations, using conceptual, second data or a qualitative approach to determine the resilience of post-crisis destinations (Strickland-Munro, Allison & Moore, 2010; Orchiston, 2013; Calgaro, Lloyd & Dominey-Howes, 2014). Unlike other studies, this research examines the phenomenon of resilience by utilizing a quantitative approach with regard to tourism businesses. Moreover, it aims to determine what kind of resilience capacity should be developed in tourism businesses facing crises and adverse conditions and what effect this capacity will have on reducing the vulnerabilities of tourism businesses. In addition, this paper suggests that accommodation, travel, and airline businesses should compare the resilience capacity of their facilities and use the areas where they are strong before the crisis to overcome any weaknesses they may have. It is expected that the results obtained will guide the sector managers, who have to cope with crises frequently, about the measures to be taken in their business and the main issues to be handled.

Conceptual framework

Resilience capacity

"Resilience" is lexically explained as "recovery power," "reversal of adverse conditions," "ability to recover quickly," and "quick recovery" (Davidson, Payne, Connor, Foa, Rothbaum, Hertzberg & Weisler, 2005, p. 43). The concept, which is utilized in engineering studies to explain the durability and flexibility of materials such as steel (Alexander, 2013, p. 2710), has more recently been the research topic of different disciplines, including ecology (Holling, 1973), psychology (Turgut, 2015), and business administration (McManus, 2008; Burnard & Bhamra, 2011; Stevenson, 2014; Jones, 2015; Orchiston, Prayag & Brown, 2016). For scientists, resilience is acting toward resolving existing dilemmas as well as toward effective restructuring of business and the ability to continuously innovate, develop, and improve the resources of the business (Lengnick-Hall, Beck & Lengnick-Hall, 2011, p. 244).

In the business administration literature, some studies investigate the relationship between resilience and organizational factors such as abilities, leadership, organizational learning, resources, innovation, creativity, performance, and change (Lengnick-Hall et al., 2011, Pal, 2013, Börekçi, 2014, Richtnér & Löfsten, 2014, Akgün & Keskin, 2014, p. 6918, Jaaron & Backhouse, 2014, p. 2036). In addition to these studies, modeling studies related to resilience were also found. It is worth noting that the most important examples of these studies have been conducted by the Resilient Organisations (ResOrgs) research program in New Zealand. In this context, McManus (2008) conducted a case study to determine

resilience characteristics and developed the Overall Organisational Resilience Model, consisting of situation awareness, management of vulnerabilities, and adaptation capacity dimensions. From this research, Stephenson (2010) developed a new model consisting of two dimensions: adaptation capacity and planning. Although the model was found to be suitable for New Zealand with its homogenous culture, the researchers emphasized that it needed to be tested in different cultures as well (Lee et al., 2013, p. 35). ResOrgs' model is an up-to-date model developed by the research program (Resorgs. org.nz). The model identified three interdependent characteristics specific to resilience: leadership and culture, networks and relationships, and change readiness (McManus, 2008; Stephenson, 2010; Lee et al., 2013). The dimension of "leadership and culture" in the model consists of five sub-dimensions: leadership, situational awareness, innovation and creativity, decision-making, and staff engagement. These reflect the adaptation capacity of the organization. The dimension of change readiness looks into how organizations promote unity of purpose regarding the organization's mission. The dimension of networks and relations is the leverage that is fed and supported by both internal and external relations (Jones, 2015, pp. 30–31).

Upon reviewing the resilience studies in the area of tourism, it is observed that the researchers mainly focused on the destinations. The researchers suggested that the resilience of destinations was closely related to that of businesses since the growth and survival of businesses is a potential indicator of destination resilience as well as the measurement of resilience. The researchers focus on the adverse conditions faced by the destinations after disasters, such as epidemics, natural disasters, and terrorism, as well as adaptation and recovery power (Calgaro & Lloyd, 2008; Biggs, 2011; Sydnor-Bousso, Stafford, K., Tews & Adler., 2011; Orchiston, Seville & Vargo, 2012; Becken, 2013; Lew, 2014; Calgaro et al., 2014; Orchiston et al., 2016). Calgaro and Lloyd (2008) investigated the vulnerability of the Khao Lak region in Thailand to natural disasters (tsunami) depending on socio-political and environmental conditions. In another study that investigated the impact of climate change on tourism subsystems in New Zealand, a conceptual model of adaptation capacity and resilience in tourist destinations was developed (Becken, 2013, p. 506). Despite encountering research on resilience in other disciplines, there is little to no research in tourism literature on how an effective resilience capacity could be developed (Stevenson, 2014, p. 26, Orchiston et al., 2016). However, Orchiston et al. (2016) provide a quantitative comparison with the conceptual studies in the field of tourism. In this study, researchers determined resilience indicators in tourism businesses (accommodation, transport, and attraction/activity sector) and grouped them as "planning and culture" and "collaboration and innovation."

Vulnerability in tourism

The concept of vulnerability dates back to the 1950s (Taşkın, 2012). At that time, researchers mostly addressed the concepts of danger and risk issues. Vulnerability in tourism relates to the risk, leading to deterioration and displacement (Buultjens, Ratnayake & Gnanapala, 2014, p. 133). Tourism businesses face significant pressures, such as climate change, legal regulations, natural disasters, economic and political crises, terrorism, and lack of security. In addition tourism businesses prone to being affected by all kinds of adverse environmental conditions on a local, regional, and even global scale and are therefore vulnerable (Zeng, Carter & De Lacy, 2005; Calgaro & Lloyd, 2008; Sydnor-Bousso et al., 2011; Orchiston et al., 2012; Liu & Pratt, 2017).

Biggs (2011) found that sea and diving tourism is not only vulnerable to ecological factors such as climate change but also to economic stagnation and rising energy prices. In another study conducted to assess the vulnerabilities of winter tourism-focused businesses in northern Sweden against climate change, Brouder and Lundmark (2011) determined that climate change will not affect tourism businesses

severely over the next 10 years, according to entrepreneurs' perceptions (Brouder & Lundmark, 2011, p. 919). Baker and Coulter (2007) emphasized that the tourism industry has a vulnerable structure against external shocks that would damage the local economy in overly tourism-dependent destinations such as Bali. This paper determined that social capital plays an important role in ensuring sustainability in the face of the livelihood problem created by terrorism (Baker & Coulter, 2007, p. 249). Upon evaluating the research according to the subsectors, it is observed that the vulnerability problems experienced in travel and airline businesses are relatively less addressed compared to the accommodation business, and the studies evaluating the effects of crises on airline businesses are concentrated on the terror attacks of September 11. Lee et al. (2005) determined that although the attacks on September 11 caused a serious decline in airline demand in the United States, the attacks did not only affect the U.S. travel industry but was also reflected in the global economy as a whole, leading to a worldwide reduction in demand for airline freight.

In the literature, resilience and vulnerability research indicate some common parameters. These parameters include the shocks and stresses experienced by the social ecological system, the response of the system, and the capacity for adaptive action (Adger, 2006, p. 269). In his research on resilience and vulnerability, Proag (2014) points out that as the resilience of systems increases, the degree of vulnerability against intense danger decreases. Proag (2014) stresses that vulnerability is significant in terms of defining the resilience and determining its levels, and it is not possible to talk about the effectiveness of resilience capacity when there are no problems affecting the system. Based on this information, the following hypothesis has been developed in the research:

H: The resilience capacity of tourism businesses is effective in reducing vulnerabilities.

Methodology

In the research, a face-to-face survey method is used. It is noteworthy that the first examples of resilience modeling studies in various businesses were made by the Resilient Organisations Research Program (ResOrgs) in New Zealand (McManus, 2008; Stephenson, 2010; Lee, 2013). Since the 'Resilient Organisations Resilience Benchmark Tool' included the previous research dimensions and was a current tool developed in this field, it was based the 'ResOrgs tool's items' in the research.

Development of the scale and data collection tool

Lawshe's content validity technique has been used to establish the final scale in the study. For scale development process, in the first step, resilience capacity item pool was determined within the context of 'Resilient Organisations Resilience Benchmark Tool' (63 items, Appendix A). Literature has been utilized in the creation of the vulnerability scale: an 11-statement scale pool that consists of economic problems, political problems, security issues, natural disasters, global warming and climate changes, seasonality, sudden changes in tourists' preferences, competitive pressures, degeneration of natural assets, problems with laws and legislation, and use of cultural values without preservation. The CVR (content validity ratio) proposed by Lawshe (1975) is a linear transformation of a proportional level of agreement on how many "experts" within a panel rate an item "essential" calculated in the following way:

$$CVR = (n_e - n/2)/(n/2)$$

n_e: The number of panel members indicating an item "essential," n: The number of panel members (Ayre & Scally, 2014).

Created candidate item pool was presented for the review of 12 field experts to determine content validity using Lawshe method (Appendix A). Content validity test results showed that a total of 18 items were eliminated from the candidate item pool since they did not exhibit the required content validity points. As a result, a scale that included 56 items (47 on resilience capacities, and 9 on vulnerabilities) that possessed sufficient content validity points was obtained. In the third step, 56 items were transformed into a questionnaire and a pilot study was conducted by the researcher via face to face survey method with 50 tourism managers (8 hospitality businesses, 15 travel agencies, 1 airline company). The feedback on the comprehensibility of the items established the surface validity of the scale (Neuman, 2007). The reliability analysis conducted on the data collected from the pilot study revealed that the items of the scale (Cronbach's Alpha = 0.941) were desirable (Bland & Altman, 1997). At this stage, 3 items had low item-total correlation (<0.3), and these items have been removed from the 'resilience capacity scale'.

Research participants and sample design

Istanbul, which is the most developed province in tourism industry in Turkey, were selected as the field of study (556 accommodation facilities with tourism operation certificates and 3,256 A-group travel agencies in Turkey, yigm.kulturturizm.gov.tr, 2017; tursab.org.tr, 2017). Since the survey contains questions about management skills of the organization, lower, middle, and senior managers working in tourism businesses (accommodation, travel, and airline) are included in the sample. During December 2016 – March 2017, survey was conducted via face to face by the researcher. Via convenience sampling method a total of 401 valid questionnaires were obtained, 141 of which were four-star and five-star accommodation managers, 137 from A-group travel agencies, and 123 from private airline operators.

Analysis of data

Exploratory factor analysis (EFA) has been utilized to determine whether the dimensions of the Res-Orgs Model are formed within tourism businesses and to ensure the structural validity of the scale. Path analysis is a structural regression analysis approach used in the construction of causal analysis and is exploited in the determination of the direct and indirect effects of factors on the outcome (Özdamar, 2016, p. 218). In this context, the path analysis method has been used to determine the effect of resilience capacity on vulnerabilities. The model (i.e., the suggested model), which is assumed to explain the causality among the variables in structural equations models (Variance Based SEM), is tested with statistical approaches. In the research, R^2 values have been used as indicators of model fit and descriptive statistics have been used to determine and compare the level of resilience capacity of various tourism businesses.

Results
Sample demographics

The majority (66.7%) of the managers in the accommodation enterprises were male. The travel and airline establishments were found to have a relatively large number of female (travel 51.8% and airlines 54.5%). When the education status of the administrators is examined, undergraduate graduates come to the forefront in all three types of business (accommodation 41.8%, travel 53.3%, and airlines 43.1%).

Table 1
Managers by gender and level of education

	Business type					
	Accommo-dation		Travel		Airline	
Gender	f	%	f	%	f	%
Female	47	33.3	71	51.8	67	54.5
Male	94	66.7	66	48.2	56	45.5
Total	141	100%	137	100%	123	100%
Level of education	f	%	f	%	f	%
Elementry school	1	0.7	1	0,7	0	0
Middle school	11	7.8	0	0	1	0.8
High school	23	16.3	27	19.7	13	10.6
Associate's degree	37	26.2	30	21.9	43	35.0
Bachelor's degree	59	41.8	73	53.3	53	43.1
Graduate school	9	6.4	6	4.4	13	10.6
Missing value	1	0.7	0	0	0	0
Total	141	100%	137	100%	123	100%

In the study, the general manager includes assistants and the senior manager, department managers are the middle level, and chiefs and supervisors were evaluated as lower-level managers. In the hospitality establishments, the majority of the managers were from front office, food and beverage, and sales-marketing. In travel agencies, they were from accounting-financing and were general managers. In airline companies, ground services are the first place (cargo, technical, reservation, check-in, customer relations 50.4%).

Table 2
Managers by position and department

Accommodation			Travel			Airline		
Position	f	%	**Position**	f	%	**Position**	f	%
Low-level manager	43	30.5	Low-level	52	38.0	Low-level	67	54.5
Mid-level manager	67	47.5	Mid-level	57	41.6	Mid-level	46	37.4
Senior manager	26	18.4	Senior manager	27	19.7	Senior manager	10	8.1
Missing value	5	3.5	Missing value	1	0.7	Missing value	0	0
Total	141	100%	Total	137	100%	Total	123	100%
Accommodation			**Travel**			**Airline**		
Department	f	%	**Department**	f	%	**Department**	f	%
Front office	59	41.8	Accounting	26	19.0	Ground service	62	50.4
Food and Beverage	18	12.8	Operation	24	17.5	Cabin crews	14	11.4
Sales-marketing	17	12.1	General manager	18	13.1	Accounting	11	8.9
Accounting	13	9.2	Customer relations	18	13.1	Human resources	9	7.3
General manager	11	7.8	Reservation	16	11.7	Flight operations	5	4.1
Housekeeping	9	6.4	Human resources	9	6.6			
Human resources	4	2.8	Data processing	4	2.9			
Purchasing	4	2.8						
Technical services	3	2.1						
Missing value	3	2.1	Missing value	22	16.1	Missing value	20	16.3
Total	141	100%	Total	137	100%	Total	123	100%

Dimensions of resilience capacity

Principal components analysis and varimax rotation have been applied to 40 statements, which were determined in the resilience capacity scale as a result of expert opinions as well as a pilot study, and an exploratory factor analysis has been performed. It has been taken into consideration that the factor number is determined based on the Kaiser's eigenvalue >=1 rule (Hair, Anderson & Tatham, 1998, p. 103).

Table 3
Results of exploratory factor analysis of resilience capacity

Indicator	Resilience capacity dimensions	Eigenvalue	Explained variance	Cronbach alpha	Factor load	Commonalities	Item total correlation
	Planning strategies	3.778	11.45%	0.826			
Res15	Decisions are made quickly in difficult situations				0.703	0.529	0.588
Res3	Management always thinks and acts strategically to be ahead of their competitors				0.701	0.552	0.524
Res40	Strategies are planned before taking action				0.693	0.616	0.577
Res35	When the organisation is relieved of the crisis, this is used for self-assessment				0.631	0.582	0.655
Res32	The organisation focuses on being able to respond to the unexpected				0.563	0.453	0.523
Res5	Targets are regularly reassessed in the business.				0.522	0.464	0.499
Res38	Opportunities are sought for the organisation in the moment of a crisis				0.513	0.349	0.483
Res41	Effective planning is done with suppliers on how to manage the disruptions				0.462	0.389	0.439
Res11	Lessons learned from the past				0.450	0.404	0.476
	Proactive posture	3.054	9.25%	0.789			
Res39	Medium- and long-term plans are made in the organisation				0.795	0.679	0.612
Res29	The priorities of the actions to be taken during and after the crisis are clearly defined				0.775	0.725	0.682
Res30	In the event of crisis, the organisation has action plans to direct the employees				0.708	0.669	0.606
Res31	The businesses possess values that enable them to maintain their existence				0.588	0.463	0.464
Res43	It is predicted how a negative event affecting society will be reflected in organisation				0.538	0.444	0.441
Res28	Sufficient resources are available at any time in the organisation for an unexpected change				0.524	0.507	0.461
	Access to information	2.864	8.68%	0.656			
Res17	Employees are encouraged to develop themselves professionally				0.690	0.529	0.411
Res14	Employees can transfer problems to top management				0.677	0.488	0.432
Res24	There are different ways to access critical information from different points				0.601	0.439	0.471
Res22	The organisation has knowledge of how external factors can affect the ability to respond to crises				0.550	0.401	0.426
	Leadership	2.627	7.96%	0.768			
Res4	Management sets an example with behavior in crisis situations				0.597	0.570	0.625
Res2	Managers observe the workload of the employees and alleviate the workload when the limit is exceeded				0.588	0.461	0.468
Res19	Employees are rewarded for their creative ideas				0.569	0.548	0.498
Res9	Employees have high morale regarding their jobs				0.547	0.565	0.467
Res1	When faced with a sudden crisis in organisation, management exhibits good leadership				0.543	0.566	0.632

Table 3 **Continued**

	Resilience capacity dimensions	Eigenvalue	Explained variance	Cronbach alpha	Factor load	Commo- nalities	Item total correlation
	Business culture	2.512	7.61%	0.715			
Res37	Organisation quickly responds to the changes in the work environment				0.642	0.533	0.523
Res13	It is known that the success of a division in a organisation depends on the other				0.617	0.545	0.405
Res8	Organisation culture supports employees				0.568	0.562	0.450
Res27	There is a sense of team and friendship in the organisation				0.548	0.443	0.456
Res26	Employees are encouraged to work in different departments and take different roles for experience				0.542	0.353	0.406
Res34	The usual business processes can be changed quickly to respond to crises				0.475	0.367	0.438
	Networks and relations	2.441	7.40%	0.804			
Res20	There are well-established relationships with other businesses				0.826	0.727	0.664
Res21	The business possesses information about being able to actively manage connections to other businesses				0.808	0.723	0.697
Res33	Collaborations are made with other businesses in the sector to manage unanticipated challenges				0.707	0.632	0.589
KMO = 0.848; Barlett Sphericity Test p value=0.000		Total	52.35%	0.900			

Elements with a factor load higher than 0.45 have been considered in the selection of the items, and 11 factors without a sufficient factor load and item total correlation score have been removed from the scale. A 6-factor structure consisting of 33 items has been obtained. The results of the EFA determined that this structure with six factors explains 52.35% of the variance arising from resilience in tourism businesses. The Cronbach Alpha coefficient of 0.900 indicates that scale is desirable for this particular study.

Results of path analysis

In order to determine the effects of resilience capacity dimensions on vulnerabilities in the study, the path analysis method has been utilized (using the smartPLS software). Linear relationship have been defined from the resilience latent variable to the vulnerability latent variable. In this context, the direct effect of resilience capacity, on vulnerability variable have been examined. In the structural model resilience indicators (planning strategies, proactive posture, business culture, leadership, access to information, networks and relations) reflect the resilience. In the formative model the latent variable is calculated from the observable measures. In terms of directions of causality, in the formative model the direction of causality moves from the items to the construct (Mikulić & Ryan, 2018, p. 466). In this context, vulnerability variable is calculated from the observable measures.

Bootstrapping procedure reports significance of path coefficient values. The significance of path coefficients for the model as per bootstrapping statistics are shown in Table 4.
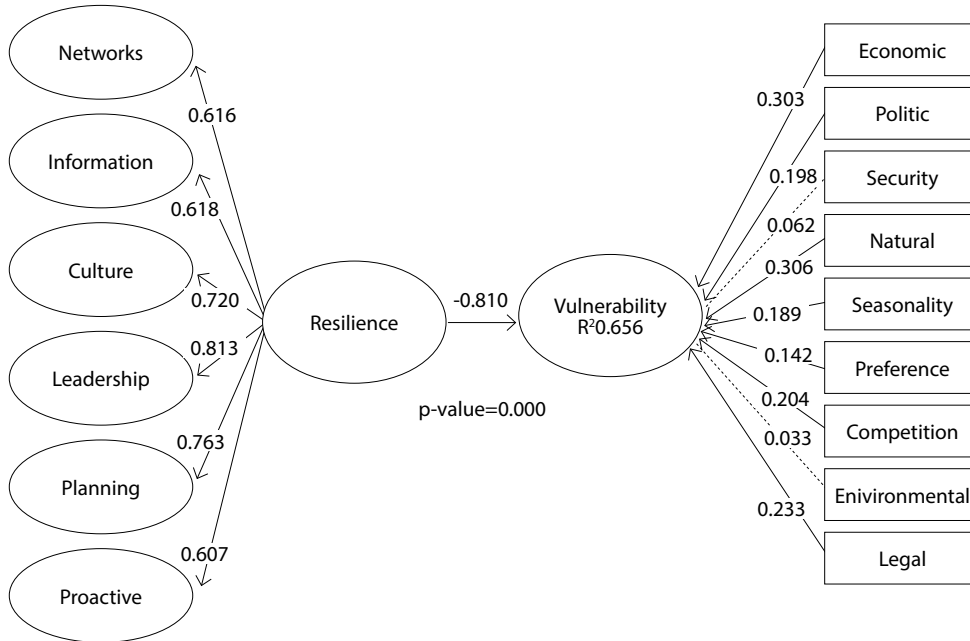
Figure 1
Structural model

Table 4
Outer test results of weights after bootstrapping

Relationships	Original sample	Sample mean	Std. deviation	T-statistics	P-value
Resilience → Vulnerability	-0.810	-0.815	0.017	48.268	0.000
Resilience ← Networks	0.205	0.205	0.014	14.202	0.000
Resilience ← Information	0.203	0.202	0.015	13.476	0.000
Resilience ← Culture	0.258	0.258	0.015	17.693	0.000
Resilience ← Leadership	0.284	0.285	0.015	18.477	0.000
Resilience ← Planning	0.261	0.262	0.013	20.477	0.000
Resilience ← Proactive	0.217	0.217	0.014	15.091	0.000
Economic → Vulnerability	0.303	0.300	0.036	8.394	0.000
Politic → Vulnerability	0.198	0.198	0.039	5.083	0.000
Security → Vulnerability	0.062	0.062	0.040	1.521	0.129*
Natural → Vulnerability	0.306	0.304	0.047	6.490	0.000
Seasonality → Vulnerability	0.189	0.189	0.039	4.833	0.000
Preference → Vulnerability	0.142	0.143	0.039	4.833	0.000
Competition → Vulnerability	0.204	0.206	0.043	4.783	0.000
Environmental → Vulnerability	0.033	0.033	0.041	0.795	0.427*
Legal → Vulnerability	0.233	0.230	0.045	5.128	0.000

*P-value have not been found to be significant.

In the structural model all paths are significant (t> 2.576), except Security → Vulnerability and Environmental → Vulnerability. These items have been removed from the structural model.

Resilience capacity levels according to different types of tourism businesses

In the study, we utilized descriptive statistics and ANOVA post hoc tests to determine the levels of resilience capacity and to compare the dimensions of various types of tourism businesses (using SPSS software program). When the levels of general resilience capacity of tourism businesses are examined, it is found that travel agencies (72.63%) have the highest percentage, followed by airline (72.35%) and accommodation businesses (71.61%).

Table 5
A comparison of resilience capacity of different types of businesses

Variable/Indicator	Mean (SD)			ANOVA	
	Accommodation (N=141)	Travel (N=137)	Airline (N=123)	F	p
Planning strategies Res3 Res5 Res11 Res15 Res32 Res35 Res38 Res40 Res41	3.68 (0.736)	3.60 (0.593)	3.74 (0.582)	1.537	0.216
Proactive posture Res28 Res29 Res30 Res31 Res39 Res43	3.61 (0.793)	3.55 (0.691)	3.58 (0.761)	0.192	0.826
Business culture Res8 Res13 Res26 Res27 Res34 Res37	3.69 (0.725)	3.53 (0.637)	3.63 (0.660)	2.021	0.134
Leadership Res1 Res2 Res4 Res9 Res19	3.39 (0.917)*	3.70(0.582)*	3.55 (0.769)	5.703	0.004**
Access to information Res14 Res17 Res22 Res24	3.62 (0.806)	3.67 (0.664)	3.52 (0.658)	1.443	0.237
Networks and relations Res20 Res21 Res33	3.46 (0.866)	3.71 (0.836)	3.60 (0.867)	2.847	0.059

* Since the assumption of equality of varince was not met groups mean differences were determined by Tamhane's T2 post hoc test.
** Difference significant at $p<0.05$.

Tamhane's T2 post hoc test at the 0.05 level was used to determine if significant differences exist in the resilience capacity of different types of tourism businesses. The results revealed that the travel agencies performed significantly higher (3.70) than the accommodation businesses (3.39) in terms of the leadership dimension of resilience capacity.

Discussion

The study primarily examines how the resilience capacity of tourism businesses has been created as well as the dimensions that create the resilience capacity in these businesses. Further, the study defined planning strategies, proactive posture, access to information, networks and relations, leadership, and business culture as the dimensions of resilience capacity in tourism businesses. ResOrgs' model, which has been taken as the basis of this research, is shaped around three main dimensions: leadership and culture, networks and relationships, and being change ready. When these dimensions are compared with the research findings, it is observed that leadership and culture are separated into two different dimensions. While leadership in research is seen as managers setting an example with leadership behavior in crisis situations, as well as being an effective dimension in terms of supporting the workers for the creation of resilience capacity and revealing the potential of creativity, it is noteworthy that the dimension of the business culture includes some dynamics that are especially important for tourism businesses. These dynamics are related to the creation of flexibility, agility, and adaptability that will enable tourism businesses that try to continue their operations to keep up with the changes in the turbulent environment. The statements related to adaptation, agility, and flexibility, as described by McManus (2008), are covered under the business culture dimension of resilience capacity in the study. In this sense, it can be said that these skills, which must be possessed by resilient businesses, constitute an important part of the business culture.

Orchiston et al. (2016) found that "planning and culture" and "collaboration and innovation" are the factors that play a key role in the formation of resilience capacity in tourism businesses. These dimensions exhibited by Orchiston et al. (2016) appear to align with the findings of the research. In their study, the researchers identified the dimensions of innovation within the context of planning strategies and leadership dimensions, including the search for opportunities for the business and rewarding employees for their creative ideas. The collaboration dimension, on the other hand, is observed to be met by the dimension of networks and relations that include relations and collaboration with stakeholders. Unlike the study by Orchiston et al. (2016), the dimension that emerged in this research is access to information. Gibson and Tarrant (2010) also revealed information dimension as a separate factor in their conceptual modeling studies about resilience.

The research determined that vulnerabilities decrease as the resilience capacity increases in tourism businesses. Mitroff (2004) suggests a "crisis leadership" approach that promotes a more proactive culture against crisis that predicts and effectively manages all phases of the crisis (Paraskevas, Altinay, McLane & Cooper, p. 2013). Biggs (2011) and Sydnor-Bousso et al. (2011) stated that human capital, such as tourism managers' leadership skills and proactiveness, are effective dynamics, especially against nature-based crises. Salman Sawalha, Eid Jraisat and Al-Qudah (2013) determined that hotel establishments are exposed to a wide range of risk factors and that disaster management-related planning is among the key tools to be used against disasters.

Conclusion

In terms of tourism enterprises which continue their activities in a turbulent environment, it is seen that it is more important to create a capacity that is far beyond the post-crisis recovery strategies, which increases the resilience to vulnerabilities. Thus the research is not only focused on risk reduction strategies in creating resilience capacity but also proposes a holistic and comprehensive model to cover the entire organization while taking into account other neglected dynamics. In many studies, the effectiveness of resilience capacity was examined on the basis of a single type of vulnerability (Zeng et al., 2005; Calgaro & Lloyd, 2008; Orchiston et al., 2012; Becken, 2013). In this study, all vulnerabilities were included in the model simultaneously. In the research, it was determined what the negative environmental conditions that caused the vulnerabilities were determined and the extent to which the businesses were affected by these adverse conditions in terms of sub-sectors in tourism.

As a result, the research found that resilience capacity has a negative effect on the vulnerabilities. And also this paper investigated the resilience capacity in different types of tourism businesses. In conclusion, no significant difference was found between different types of tourism businesses in terms of planning strategies, networks and relations, proactive posture, information access, and business culture dimensions. Since the travel agencies act as intermediaries that convey travelers' requests and needs to accommodation businesses so they can provide proper service and deliver a quality experience, it is expected that the leadership in a travel agency would be significantly stronger than in accommodation businesses. This situation is also reflected in the results of the research, and this paper determined that the leadership dimension in a travel agency is significantly higher than in accommodation businesses. These results not only provide clues about the weaknesses and strengths of the tourism businesses before the crisis but also provide important findings in terms of comparison between the sub-sectors. At this point, businesses should develop and implement a number of strategies so that they can survive and be less affected by these negative situations. This is, in fact, in line with the saying of the Greek philosopher: "When you cannot change the direction of the wind, you can adjust your sails to the wind" (xSentius, 2018). The environment is concerned not with the storms encountered but rather whether the ship has reached the dock or not. Research results reveal that tourism businesses should develop their resilience capacities to continue sailing with the wind, decreasing their vulnerabilities, and safely approaching the dock.

Limitions

The current research was limited to examining the dimensions of resilience capacity of the three main types of tourism businesses located in Istanbul. Therefore, the results can not be generalized to other tourism businesses in different destinations. The sample of the study only consisted of managers working in tourism businesses in Istanbul. Employees', investors', entrepreneurs', residents' and local authorities' perceptions on resilience capacity of tourism sector and businesses might be different. For the future research, it may be valuable to assess resilience capacity in different tourism destinations' contexts and from different points of view.

Future researches

Measuring the resilience capacity of businesses before, during and after the crisis and knowing the extent of its effect in reducing vulnerabilities will allow pre-assessment of the long-term effects of vulnerabilities on businesses. Thus, the differences between businesses where resilience capacity is

strategically addressed and institutionalized, and those that try to develop resilience capacity as a short-lived, tactical action, will be made clearer.

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Acknowledgments

Appendix A- Content evaluation panel form

In the first section, please evaluate 63 items in terms of the level of activity in providing resilience in tourism businesses and mark the required part. In the second section, please evaluate the 11 items in terms of the negative environmental conditions (vulnerabilities) in which tourism businesses can be affected or affected and mark the required part.

Please provide feedback on both scales (item correction, addition, deletion, general order etc.).

Thank you.

Resilience items		Essential	Not essential	Suggestion
Leadership: Strong crisis leadership to provide good management and decision making during times of crisis, as well as continuous evaluation of strategies and work programs against organisational goals.				
R1	There would be good leadership from within our organisation if we were struck by a crisis			
R2	In a crisis, staff accept that management may need to make some decisions with little consultation			
R3	Our managers monitor staff workloads and reduce them when they become excessive			
R4	Our management think and act strategically to ensure that we are always ahead of the curve			
R5	Management in our organisation lead by example			
R6	Our organisation regularly re-evaluates what it is we are trying to achieve			
Staff engagement: The engagement and involvement of staff who understand the link between their own work, the organisation's resilience, and its long term success. Staff are empowered and use their skills to solve problems.				
R7	People in our organisation feel responsible for the organisation's effectiveness			
R8	People in our organisation are committed to working on a problem until it is resolved			
R9	Our organisation's culture is to be very supportive of staff			
R10	Our organisation has high staff morale			
R11	Staff know what they need to do to respond to a crisis			
Situation awareness: Staff are encouraged to be vigilant about the organisation, its performance and potential problems. Staff are rewarded for sharing good and bad news about the organisation including early warning signals and these are quickly reported to organisational leaders				
R12	We proactively monitor our industry to have an early warning of emerging issues			
R13	We learn lessons from the past and make sure those lessons are carried through to the future			
R14	Staff interact often enough to know what's going on in our organisation			
R15	Our managers actively listen for problems			
R16	We are mindful of how the success of one area of our organisation depends on the success of another			
R17	Staff feel able to raise problems with senior management			
Decision making: Staff have the appropriate authority to make decisions related to their work and authority is clearly delegated to enable a crisis response. Highly skilled staff are involved, or are able to make, decisions where their specific knowledge adds significant value, or where their involvement will aid implementation.				
R18	Should problems occur, staff have direct access to someone with authority to make decisions			
R19	We can make tough decisions quickly			
R20	In our organisation, the most qualified people make decisions, regardless of seniority			

Appendix A- Continued

Innovation and creativity: Staff are encouraged and rewarded for using their knowledge in novel ways to solve new and existing problems, and for utilizing innovative and creative approaches to developing solutions.				
R21	Staff are actively encouraged to challenge and develop themselves through their work			
R22	We are known for our ability to use knowledge in novel ways			
R23	Staff are rewarded for "thinking outside of the box"			
Effective partnerships: An understanding of the relationships and resources the organisation might need to access from other organisations during a crisis, and planning and management to ensure this access.				
R24	In a crisis, we have agreements with other organisations to access resources from them			
R25	We have planned for what support we could provide to the community in a crisis			
R26	We build relationships with others we might have to work with in a crisis			
R27	We understand how we are connected to other organisations and actively manage those links.			
R28	We understand how Government actions would affect our ability to respond in a crisis			
Leveraging knowledge: Critical information is stored in a number of formats and locations and staff have access to expert opinions when needed. Roles are shared and staff are trained so that someone will always be able to fill key roles				
R29	Staff have the information and knowledge they need to respond to unexpected problems			
R30	If something out of the ordinary happens, staff know who has the expertise to respond			
R31	Critical information is available by different means and from different locations			
R32	If key people were unavailable, there are always others who could fill their role			
R33	We readily obtain expert assistance when there's a problem			
Breaking silos: Minimisation of divisive social, cultural and behavioural barriers, which are most often manifested as communication barriers creating disjointed, disconnected and detrimental ways of working.				
R34	Staff are encouraged to move between different departments or try different roles to gain experience			
R35	There is a sense of teamwork and camaraderie in our organisation			
R36	There are few barriers stopping us from working well with other organisations			
R37	We work with others regardless of departmental or organisational boundaries, to get the job done			
Internal resources: The management and mobilisation of the organisation's resources to ensure its ability to operate during business as usual, as well as being able to provide the extra capacity required during a crisis.				
R38	We have sufficient internal resources to operate successfully during business as usual			
R39	Our organisation maintains sufficient resources to absorb unexpected change			
R40	When a problem occurs, it is easier to get approval for additional resources to get the job done			
Unity of purpose: An organisation wide awareness of what the organisation's priorities would be following a crisis, clearly defined at the organisation level, as well as an understanding of the organisation's minimum operating requirements.				
R41	We have clearly defined priorities for what is important during and after a crisis			
R42	Our priorities for recovery would be sufficient to provide direction for staff in a crisis			
R43	We understand the minimum level of resources our organisation needs to operate			
R44	We are mindful of how a crisis in our organisation would impact others			
R45	Our organisation consistently demonstrates commitment to its value			
Proactive posture: A strategic and behavioural readiness to respond to early warning signals of change in the organisation's internal and external environment before they escalate into crisis.				
R46	We have a focus on being able to respond to the unexpected			
R47	We are able to collaborate with others in our industry to manage unexpected challenges			
R48	We are able to shift rapidly from business-asusual to respond to crises			
R49	Whenever our organisation suffers a close call, we use it for self-evaluation rather than confirmation of our success			
R50	We are regarded as an active participant in industry and sector group			
R51	Our organisation readily responds to changes in our business environment			

Appendix A- Continued

R52	In a crisis we seek opportunities for our organisation				
R53	We tend to be optimistic and find positives from most situations				
Planning strategies: The development and evaluation of plans and strategies to manage vulnerabilities in relation to the business environment and its stakeholders.					
R54	Our organisation plans for the medium- and hterm				
R55	We plan our strategy carefully before taking action				
R56	Given how others depend on us, the way we plan for the unexpected is appropriate.				
R57	We are mindful of how a crisis could affect us				
R58	We actively plan with our suppliers how to manage disruptions				
R59	We actively plan with our customers how to manage disruptions				
R60	We actively plan how to support our staff during times of crisis				
R61	We have a good understanding of how an event impacting the community may impact our ability to respond				
Stress testing plans: The participation of staff in simulations or scenarios designed to practice response arrangements and validate plans.					
R62	Our organisation is committed to practicing and testing its emergency plans to ensure they are effective				
R63	Staff can take time from their day to day roles to practice how to respond in a crisis				

	Vulnerability items	Neces-sary	Unneces-sary	Sugges-tion
V1	Economic problems such as high inflation, stagnation, unemployment, shortage of liquidity etc.			
V2	International political tensions, political problems related to refugees and internal conflicts			
V3	Security issues like terrorist attacks			
V4	Natural disasters such as earthquake, flood, storm, etc.			
V5	Global warming and climate changes			
V6	Seasonal fluctuations in the sector			
V7	Sudden changes in the preferences of tourists			
V8	Competitive pressures			
V9	Environmental degradations due to exceeding capacity			
V10	Problems with laws and legislation			
V11	Use of cultural values without preservation			

Appendix B- Content evaluation panel results

	Resilience items	n_e	n	n/2	CVR= $\frac{ne-n/2}{n/2}$	Deci-sion
R1	There would be good leadership from within our organisation if we were struck by a crisis	12	12	6	1.00	√
R2	In a crisis, staff accept that management may need to make some decisions with little consultation	7	12	6	0.17	X
R3	Our managers monitor staff workloads and reduce them when they become excessive	11	12	6	0.83	√
R4	Our management think and act strategically to ensure that we are always ahead of the curve	11	12	6	0.83	√
R5	Management in our organisation lead by example	10	12	6	0.67	√
R6	Our organisation regularly re-evaluates what it is we are trying to achieve	11	12	6	0.83	√
R7	People in our organisation feel responsible for the organisation's effectiveness	12	12	6	1.00	√
R8	People in our organisation are committed to working on a problem until it is resolved	12	12	6	1.00	√
R9	Our organisation's culture is to be very supportive of staff	11	12	6	0.83	√
R10	Our organisation has high staff morale	12	12	6	1.00	√

Appendix B- Continued

R11	Staff know what they need to do to respond to a crisis	9	12	6	0.50	χ
R12	We proactively monitor our industry to have an early warning of emerging issues	11	12	6	0.83	√
R13	We learn lessons from the past and make sure those lessons are carried through to the future	11	12	6	0.83	√
R14	Staff interact often enough to know what's going on in our organisation	11	12	6	0.83	√
R15	Our managers actively listen for problems	9	12	6	0.50	χ
R16	We are mindful of how the success of one area of our organisation depends on the success of another	11	12	6	0.83	√
R17	Staff feel able to raise problems with senior management	11	12	6	0.83	√
R18	Should problems occur, staff have direct access to someone with authority to make decisions	11	12	6	0.83	√
R19	We can make tough decisions quickly	11	12	6	0.83	√
R20	In our organisation, the most qualified people make decisions, regardless of seniority	10	12	6	0.67	√
R21	Staff are actively encouraged to challenge and develop themselves through their work	12	12	6	1.00	√
R22	We are known for our ability to use knowledge in novel ways	10	12	6	0.67	√
R23	Staff are rewarded for "thinking outside of the box"	11	12	6	0.83	√
R24	In a crisis, we have agreements with other organisations to access resources from them	9	12	6	0.50	χ
R25	We have planned for what support we could provide to the community in a crisis	5	12	6	-0.17	χ
R26	We build relationships with others we might have to work with in a crisis	10	12	6	0.67	√
R27	We understand how we are connected to other organisations and actively manage those links.	12	12	6	1.00	√
R28	We understand how Government actions would affect our ability to respond in a crisis	10	12	6	0.67	√
R29	Staff have the information and knowledge they need to respond to unexpected problems	11	12	6	0.83	√
R30	If something out of the ordinary happens, staff know who has the expertise to respond	9	12	6	0.50	χ
R31	Critical information is available by different means and from different locations	10	12	6	0.67	√
R32	If key people were unavailable, there are always others who could fill their role	12	12	6	1.00	√
R33	We readily obtain expert assistance when there's a problem	9	12	6	0.50	χ
R34	Staff are encouraged to move between different departments or try different roles to gain experience	11	12	6	0.83	√
R35	There is a sense of teamwork and camaraderie in our organisation	12	12	6	1.00	√
R36	There are few barriers stopping us from working well with other organisations	9	12	6	0.50	χ
R37	We work with others regardless of departmental or organisational boundaries, to get the job done	10	12	6	0.67	√
R38	We have sufficient internal resources to operate successfully during business as usual	12	12	6	1.00	√
R39	Our organisation maintains sufficient resources to absorb unexpected change	12	12	6	1.00	√
R40	When a problem occurs, it is easier to get approval for additional resources to get the job done	9	12	6	0.50	χ
R41	We have clearly defined priorities for what is important during and after a crisis	12	12	6	1.00	√
R42	Our priorities for recovery would be sufficient to provide direction for staff in a crisis	11	12	6	0.83	√
R43	We understand the minimum level of resources our organisation needs to operate	8	12	6	0.33	χ
R44	We are mindful of how a crisis in our organisation would impact others	7	12	6	0.17	χ
R45	Our organisation consistently demonstrates commitment to its value	10	12	6	0.67	√
R46	We have a focus on being able to respond to the unexpected	12	12	6	1.00	√
R47	We are able to collaborate with others in our industry to manage unexpected challenges	11	12	6	0.83	√
R48	We are able to shift rapidly from business-asusual to respond to crises	12	12	6	1.00	√
R49	Whenever our organisation suffers a close call, we use it for self-evaluation rather than confirmation of our success	10	12	6	0.67	√
R50	We are regarded as an active participant in industry and sector group	11	12	6	0.83	√
R51	Our organisation readily responds to changes in our business environment	10	12	6	0.67	√

Appendix B- Continued

		n_e	n	n/2	CVR	Decision
R52	In a crisis we seek opportunities for our organisation	12	12	6	1.00	√
R53	We tend to be optimistic and find positives from most situations	9	12	6	0.50	χ
R54	Our organisation plans for the medium- and hterm	11	12	6	0.83	√
R55	We plan our strategy carefully before taking action	11	12	6	0.83	√
R56	Given how others depend on us, the way we plan for the unexpected is appropriate	8	12	6	0.33	χ
R57	We are mindful of how a crisis could affect us	9	12	6	0.50	χ
R58	We actively plan with our suppliers how to manage disruptions	12	12	6	1.00	√
R59	We actively plan with our customers how to manage disruptions	9	12	6	0.50	χ
R60	We actively plan how to support our staff during times of crisis	10	12	6	0.67	√
R61	We have a good understanding of how an event impacting the community may impact our ability to respond	10	12	6	0.67	√
R62	Our organisation is committed to practicing and testing its emergency plans to ensure they are effective	10	12	6	0.67	√
R63	Staff can take time from their day to day roles to practice how to respond in a crisis	8	12	6	0.33	χ

Vulnerability items		n_e	n	n/2	CVR= $\frac{ne - n/2}{n/2}$	Decision
V1	Economic problems such as high inflation, stagnation, unemployment, shortage of liquidity etc.	12	12	6	1.00	√
V2	International political tensions, political problems related to refugees and internal conflicts	12	12	6	1.00	√
V3	Security issues like terrorist attacks	12	12	6	1.00	√
V4	Natural disasters such as earthquake, flood, storm, etc.	11	12	6	0.83	√
V5	Global warming and climate changes	9	12	6	0.50	χ
V6	Seasonal fluctuations in the sector	12	12	6	1.00	√
V7	Sudden changes in the preferences of tourists	12	12	6	1.00	√
V8	Competitive pressures	12	12	6	1.00	√
V9	Environmental degradations due to exceeding capacity	11	12	6	0.83	√
V10	Problems with laws and legislation	12	12	6	1.00	√
V11	Use of cultural values without protection	9	12	6	0.50	χ

CVR: Calculating the content validity ratio; n_e: Number of panelists indicating "essential"
√: Essential; χ: Not essential

Appendix C- Survey questionnaire

		(1) Strongly disagree	(2) Disagree	(3) Neither agree or disagree	(4) Agree	(5) Strongly agree
This section contains items on resilience of the business you are working with. Please read the items and indicate your status in each item by placing a sign (X) in the relevant box. Mark one (1) for your least agree item and five (5) for the item you most agree with.						
Res1	When faced with a sudden crisis in organisation, management exhibits good leadership					
Res2	Managers observe the workload of the employees and alleviate the workload when the limit is exceeded					
Res3	Management always thinks and acts strategically to be ahead of their competitors					
Res4	Management sets an example with behavior in crisis situations					
Res5	Targets are regularly reassessed in the business					
Res6	Employees feel responsible for the organisation's effectiveness					
Res7	Employees are committed to working on a problem until it is resolved					
Res8	Organisation culture supports employees					
Res9	Employees have high morale regarding their jobs					
Res10	Organisation proactively monitor industry to have an early warning of emerging issues					

Appendix C- Continued

Res11	Lessons learned from the past					
Res12	Employees interact often enough to know what's going on in organisation					
Res13	It is known that the success of a division in a organisation depends on the other					
Res14	Employees can transfer problems to top management					
Res15	Decisions are made quickly in difficult situations					
Res16	In the organisation, the most qualified employees make decisions, regardless of seniority					
Res17	Employees are encouraged to develop themselves professionally					
Res18	The organisation uses knowledge in an innovative way when necessary					
Res19	Employees are rewarded for their creative ideas					
Res20	There are well-established relationships with other businesses					
Res21	The business possesses information about being able to actively manage connections to other businesses					
Res22	The organisation has knowledge of how external factors can affect the ability to respond to crises					
Res23	Employees have the information and knowledge they need to respond to unexpected problems					
Res24	There are different ways to access critical information from different points					
Res25	If key employees were unavailable, there are always others who could fill their role					
Res26	Employees are encouraged to work in different departments and take different roles for experience					
Res27	There is a sense of team and friendship in the organisation					
Res28	Sufficient resources are available at any time in the organisation for an unexpected change					
Res29	The priorities of the actions to be taken during and after the crisis are clearly defined					
Res30	In the event of crisis, the organisation has action plans to direct the employees					
Res31	The businesses possess values that enable them to maintain their existence					
Res32	The organisation focuses on being able to respond to the unexpected					
Res33	Collaborations are made with other businesses in the sector to manage unanticipated challenges					
Res34	The usual business processes can be changed quickly to respond to crises					
Res35	When the organisation is relieved of the crisis, this is used for self-assessment					
Res36	The organization are regarded as an active participant in sector groups					
Res37	Organisation quickly responds to the changes in the work environment					
Res38	Opportunities are sought for the organisation in the moment of a crisis					
Res39	Medium- and long-term plans are made in the organisation					
Res40	Strategies are planned before taking action					
Res41	Effective planning is done with suppliers on how to manage the disruptions.					
Res42	It is planed how to support employee during times of crisis					
Res43	It is predicted how a negative event affecting society will be reflected in organisation					
Res44	It is practiced and tested its emergency plans to ensure they are effective					
In this section you will find some negative environmental conditions. Please evaluate whether your business affected by these conditions.		(1) No affect	(2) Minor affect	(3) Neutral	(4) Moderate affect	(5) Major affect
Vul1	Economic problems such as high inflation, stagnation, unemployment, shortage of liquidity etc.					
Vul2	International political tensions, political problems related to refugees and internal conflicts					
Vul3	Security issues like terrorist attacks					
Vul4	Natural disasters such as earthquake, flood, storm, etc.					

Appendix C- Continued

Vul5	Seasonal fluctuations in the sector					
Vul6	Sudden changes in the preferences of tourists					
Vul7	Competitive pressures					
Vul8	Environmental degradations due to exceeding capacity					
Vul9	Problems with laws and legislation					

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