



The financial resilience model of the hotel industry in crisis using structural equation modeling

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ABSTRACT

Recent crises have faced the hotel industry with many financial risks, so that due to the lack of income, it has led to the closure of some hotels and the unemployment of their employees. Therefore, the hotel industry's financial resilience was taken into account in crisis. In this research, the financial resilience model of the hotel industry is presented in crisis, using a quantitative approach (structural equation modeling). After reviewing the literature review, the employees' attitude (a 137 random sample) was examined by a researcher-made questionnaire. The participants were selected among 1448 Iranian hotels in the spring of 1401. The research method is descriptive-correlative. In order to data analysis, structural equation modeling was used. The results indicated that from the participants' opinions, although most of the components of the model are approved, Environmental protection as an intervening factor has a positive but non-significant effect on the hotel industry's financial resilience in crisis. Therefore, the country's hotel industry can provide the contexts for financial resilience in crisis through applying the strategies, so that it can become financially resilient and continue its life.

Keywords:

The Financial Resilience, Crisis, Hotel Industry, Tourism, Structural Equation Modeling.

1. Introduction

In today's era, the hotel industry is facing many risks. Therefore, the ability of this industry to face the shock caused by crises and natural disasters and the amount of reduction in performance and the time to return to normal performance (which is referred to as financial resilience) is of considerable importance. Since the jobs of the hotel industry are strongly affected by different crises, the issue of financial resilience of the hotel industry in crisis conditions is studied. Currently, the coronavirus crisis has made the service sectors, including the tourism and hotel industry, vulnerable. According to the statistics of the World Tourism Organization, the application of travel restrictions caused a 97% decrease in the arrival of international tourists around the world. According to the investigations of the World Travel and Tourism Council, more than 75 million jobs in the tourism industry are at risk due to the spread of Corona. If the Corona crisis is not controlled, the amount of damage in the international tourism economy will reach 80% (organization for economic co-operation and development, 2020). The above statistics show that the human resources working in hotels are exposed to a lot of damage due to crises like Corona, which has led to the loss of their jobs. Also, the financial outflows of many chain hotels in the world, which had a favorable situation in terms of financial statements before the Corona crisis, show that the economy of this industry is in a very unfavorable situation (Koirala & Acharya, 2020). On the other hand, society's understanding of increasing uncertainty and insecurity as well as economic and environmental turbulence and stressors has led to an increase in the feeling of vulnerability in many regions of the world (Hudson, 2010). To better understand how to effectively achieve sustainable development, some researchers studied the financial resilience of industries (Sheppard & Williams, 2016). The meaning of financial resilience for an economic enterprise (such as a hotel) is the ability and capacity to deal with crisis¹ and shock conditions and a flexible

response in the face of risks². According to the explained problem and in order to reduce the vulnerability of the hotel industry from the consequences of crises, it is necessary to carry out research to strengthen the financial resilience in the hotel industry and to promote resilience as part of the design and planning and strategies to achieve sustainable development.

Although studies such as Keats (1977), Briguglio et al. (2008), Schoon and Bynner (2009), Hallegatte (2014), Ghiasvand and Abdolshah (2015) and Barbhuiya and Chatterjee (2020) examined resilience in various fields such as the tourism industry, but very few studies specifically investigated financial resilience in the hotel industry. Recently, Abolhasani Komle et al. (in press) have conducted a research with a qualitative approach on the financial resilience of the hotel industry in crisis conditions; but so far, no structural model has been prepared for the financial resilience of the hotel industry in crisis conditions in Iran. Therefore, presenting the financial resilience model of the hotel industry in crisis conditions with a quantitative approach is one of the most important aspects of innovation in this study. Considering that in recent years, the covid-19 pandemic has caused a lot of damage to the hotel industry in Iran and has led to the deactivation of hotels and the unemployment of their employees; therefore, examining the financial resilience in the hotel industry with a quantitative approach, significantly contributes to the continuity of the hotel business. Also, this industry is one of the most vulnerable industries affected by the Corona crisis, and examining the financial resilience of this industry in order to prevent financial bankruptcy can be a model for similar industries.

In order to examine the opinions of hotel industry activists and provide a conceptual model about financial resilience in the hotel industry in crisis conditions, a researcher-made questionnaire was prepared electronically and asked the expert hotel employees in the spring of 2022. The answer time for each respondent was 15 minutes on average. Then, the findings obtained from the data were analyzed and financial resilience model of the hotel industry in crisis conditions were designed. Finally, the discussion and the results of the research were stated. Therefore, the main question of this study was considered as follows:

¹. From Clark's point of view, a crisis is an unplanned event that causes damage or even death to employees, customers, or society members, and causes bankruptcy or interruption in the operation of an organization, resulting in physical or environmental damage, and threaten the organization's financial position or the public's perception of agents or organizations (Kash and Darling, 1998).

². www.ehyacenter.com

What is the appropriate model of financial resilience for the hotel industry in crisis conditions?

Research background

The review of the related studies of the researchers showed that some studies have been done separately in the field of financial resilience, financial resilience in the tourism industry and also the hotel industry in crisis conditions. A summary of these studies is given below.

Financial resilience

Resilience means the ability of households, societies and nations to absorb external shocks and recover from them, as well as the ability to adapt and change structures and devices against long-term changes. The principles of resilience to design a resilient system include readiness, responsiveness, self-regulation, diversification and redundancy, learning and innovation, thresholds and connectivity (Organisation for Economic Co-operation and Development (2014) quoted by Chavoshi and Kabirian, 2019). The components of resilience in the research of Briguglio et al. (2006) include macroeconomic robustness, efficiency of micro markets, good governance and social development. Later (2009), he added the environmental component to the components of economic resilience. Briguglio et al. (2008) provided the general framework of national risk resulting from deducting vulnerability from national resilience of a country. According to his research (2014), small countries are economically prone to be exposed to external economic shocks to a very high extent, and the macroeconomic robustness and the flexibility of the retail market are policies that lead to increasing the economic resilience of these countries. Briguglio et al. (2008) considered financial resilience as the ability of an economic enterprise to prevent economic shocks and quickly recover to its original performance. This definition refers to socio-economic shock, which is an unexpected event and has a great effect on the economic enterprise. Schoon and Bynner (2009) define financial resilience as the ability of a person to achieve and use internal capabilities and external appropriate, acceptable and accessible resources and support in difficult financial conditions. Research on finance resilience provides a basis for strengthening this concept and improving the security and robustness

of the economy against various crises (Cabezon et al., 2019). The World Economic Forum (2013)³ has considered a framework for the resilience of countries, which for areas such as finance has five main components: Robustness, Redundancy, Resourcefulness, Response and Recovery, the first three components of which are called “resilience characteristics” and the next two components are considered as “resilient performance”. In the research of Berry et al. (2015), the resilience of the financial system is defined as the capacity of the financial system to adapt in response to short-term shocks and long-term economic, social and environmental changes, while continuing to perform tasks against the real sector of the economy. The results of their research showed that the proposed financial system resilience index consists of 7 factors affecting resilience, including: diversity, the connection structure of the financial system network, the size of the financial system relative to the national economy, the composition of assets, the composition of debts, the transparency, complexity and leverage ratio of the financial system is formed. Rezaei Soufi et al. (2022) provided a detailed method for enhancing resilience based on agent-based simulation. Their proposed model also reduces the costs of facing financial crises, which have sometimes caused banks to go bankrupt. In the following, some studies related to the financial resilience and crisis in the tourism industry are examined.

Financial resilience and crisis in the tourism industry

The tourism industry is one of the most profitable and low-cost industries in the world, and one out of every 15 people working in the world are active in this sector. Therefore, the policy makers and planners of every country should plan to increase revenue through tourism, but they should note that this increase should not endanger the sustainable development of tourism (Sadeghi and Jodeiri Abbasi, 2014). Ertas et al. (2021) showed that the stressful work environment and increased costs often affect maintenance, human resources, government assistance, advertising, and product and pricing strategies. Fountain and Cradock-Henry (2020) believe that tourists play an important role in the social and economic recovery of a

³ <https://www.weforum.org>

destination after a crisis, reducing risk in the future and increasing resilience. Sheppard and Williams (2016) stated that the expansion of the concept of resilience reflects the growing interest of people who want to know how societies can better adapt to changes. They presented a comprehensive model for resilience. Girish (2018) indicate that although the two concepts of resilience and crisis management are intrinsically linked, most existing studies prioritize the first concept. The Chavoshi and Kabirian (2019) showed that resilience has a significant relationship with financial institutions, financial instruments, regulatory bodies, laws and regulations, markets, and publishers, and the positive effect of financial institutions and the negative effect of financial instruments are significant. The Yarahmadi and Salehi (2018) stated that the most important components of the crisis in the tourism industry include: Natural disasters, internal conflicts, epidemics, technological failures, security, economic crises, cultural-social crises, environmental crises, health crises, etc. Security is considered as the most basic principle in developing tourism development strategy in the world. There is a defined relationship between tourism, robustness, development and security (Rahimpour, 2005).

Digital technologies will play a special role in the crisis situation, under the influence of which the performance of many companies has been put at risk due to remote activities. However, a large number of resilient technologies (including data collection, automated risk analysis, and automated risk mitigation actions) can be created through digital connectivity. There are several solutions that increase the robustness, resilience, and competitiveness of production in the long term (Breque and Petridis, 2021). Nepal (2020) considers it necessary to move towards smart tourism to minimize face-to-face interactions between tourists and hoteliers in crisis conditions. According to the proposal of the European Commission, in order to invest in key value chains that are necessary for the resilience and future strategic independence of Europe in the field of digital and green developments, new Strategic Investment Facility were considered. In addition, risk mitigation strategies can be developed and implemented in the industry to serve as the foundation for the resilient performance of the industry in the future (Breque and Petridis, 2021).

Financial resilience and crisis in the hotel industry

The hotel industry is an important part of the tourism industry. The hotel industry is somehow related to the concept of hospitality, which can be defined as friendly and generous behavior towards visitors and guests (Ariffin and Maghzi, 2012). Hotels are a financial-interactive organization where there is a high level of social interaction between tourists, and tourists with employees, and on the other hand, there is a kind of financial interaction between the hotel and tourists, hotel and employees, stakeholders and external suppliers. A hotel can have a mutual relationship with the elements and factors outside its environment, but it can be preserved and remain as an entity isolated from the outside environment (Qorbani et al., 2019). Hotels and organizations similar to them, such as guesthouses, due to the severe drop in revenue affected by the Corona crisis, to reduce their fixed and variable costs, take measures such as not fulfilling financial obligations and shutting down many departments, which were a source of more and more revenue for these royal hotels (Netawate, 2020). The Hoque et al. (2020) showed that after Corona, many of the weakly active companies related to tourism cannot continue their activities. In addition, the Patel et al. (2020) indicates that tourism sector activists who cannot adapt to the new conditions will be eliminated due to the financial shock resulting from the spread of Corona. Tourism and hotel industry are service-based industries and have capable human resources, more knowledge and a clearer vision to provide optimal services (Zargham, 2011). Therefore, in order to achieve their goals and implement their strategies, hotels should take effective measures in the field of human resources management, and in addition to identifying themselves and the effective environmental factors, they should acquire the ability to adapt to changes in the external environment and manage the conditions. Therefore, quick reaction of human resources managers in crises, continuous identification of existing challenges and efforts for innovation and creativity at this time are very important (Shahwazian and Hashemi, 2020). Faez et al. (2019) designed a model to control the financial shock in the conditions of the spread of the Corona virus in the hotel industry in the holy city of Mashhad. Their proposed model includes: internal dimensions (emotional-psychological knowledge, leadership knowledge,

environmental knowledge, human resource planning knowledge and explicit and implicit knowledge) and external dimensions (reassuring marketing, appropriate socialization, forward-looking financial structure, financial flexibility and multi-field operation). The country of Iran, despite having the capabilities of tourism in terms of history and culture, as well as in terms of natural attractions and attracting ecotourism in all seasons, has problems such as not having facilities and infrastructure facilities and welfare facilities, transportation, tourism services, accommodation and reception centers and so on at the standard level (Sobhani and Shadi, 2016). The Malazizi et al. (2020) show that the tourism service providers in the destination should continuously educate their employees about environmental health and health issues in order to reduce the risk of tourists traveling to the destination and using the hotel and so on. The Keller (2020) indicate that virologists and epidemiologists suggested the governments to take extensive emergency measures to control the epidemic and the economic shock of tourism. Government health measures may paralyze the performance of tourism; therefore, their international tourism system will suffer a shock. The Ranasinghe et al. (2020) in the study of the ways out of the crisis conditions in tourism and hotel industry showed that the reservation of many hotels has been canceled by groups of tourists and the hotels are in financial shock. Therefore, in order to get out of the financial shock conditions, extensive structural changes must be made in this industry to regain the trust of tourists. According to Setiadi (2019), in addition to creating new business models for relationships with customers, employees, investors and other stakeholders, hotels use social networks to improve efficiency in supply chains and create self-confidence. In order to increase the possibility of survival, take advantage of upcoming opportunities and reduce threats in the post-corona period, the government should support the investors and workers in this area by developing and strengthening and maintaining the tourism and hotel industry (Sijanivandi et al., 2021). Manthiou (2020) stated that improving the mentality of tourists towards royal tourism services (such as royal hotels) requires designing a model in all areas of marketing and service delivery, so that it provides conditions different from the past to tourists. Qorbani et al. (2019) stated that moving towards a smart organizational and financial structure can protect hotels and tourism organizations from the

environment and its events. Li and Singal (2019) studied the use of an asset-light and fee-oriented strategy and its relationship with capital structure, i.e. debt ratio and equity financing in hotel companies. They showed that this strategy has been widely used in the hotel industry and the cost-to-revenue ratio and franchise level have increased, but the tangibility of assets and capital intensity have decreased. Marketing helps hotel managers analyze their customers and in this way identify their loyal customers and try to satisfy their other customers and make them loyal by using their opinions (Sobhani and Shadi, 2015). The intensity of competition in Iran's hotel industry is due to the higher employment rate, higher revenue and higher financial benefit, and there is no competition between providing quality services to travelers and competition in customer satisfaction and providing services according to their needs and preferences (Rangbarian et al., 2014).

Research hypotheses

According to the research background as well as the research question, the research hypotheses were determined as follows:

- **Hypothesis 1:** Causal conditions have a positive effect on the financial resilience of the hotel industry in crisis conditions.
- **Hypothesis 2:** The financial resilience of the hotel industry in crisis conditions has a positive effect on strategies.
- **Hypothesis 3:** Context conditions have a positive effect on financial resilience strategies of the hotel industry in crisis conditions.
- **Hypothesis 4:** Intervening conditions have a positive effect on financial resilience strategies of the hotel industry in crisis conditions.
- **Hypothesis 5:** Strategies have a positive effect on the consequences of financial resilience of the hotel industry in crisis conditions.

Conceptual model of research

According to the different theories, the researcher developed a conceptual model for the financial resilience of the hotel industry in crisis conditions, including dimensions: Causal conditions, Core phenomenon, Contextual conditions, Intervening conditions, Strategies and consequences (based on the grounded theory) as described Fig. 1:

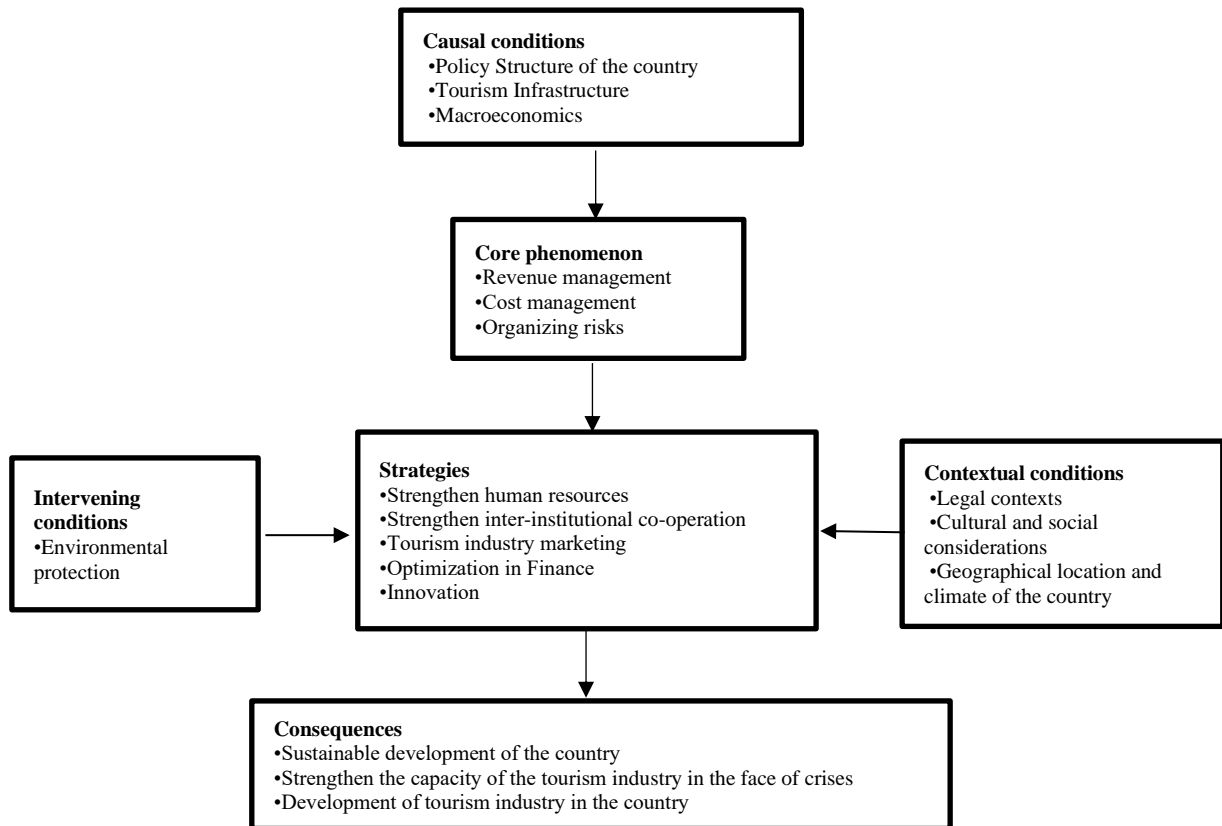


Figure 1- Conceptual model of the financial resilience of hotel industry in crisis (source: researcher's findings)

In the following, the attitude of financial employees regarding financial resilience of the hotel industry in crisis conditions is examined.

Method

The present research is practical in terms of purpose, and descriptive-correlation. According to the questions of this study, a questionnaire was prepared according to the standards and the results of the conceptual model of financial resilience of the hotel industry in crisis conditions (Abolhasani et al, in press). The purpose of designing this questionnaire is to measure the opinions of hotel financial employees about the financial resilience of the hotel industry in crisis conditions. The statistical population is employees related to financial affairs in hotels in Iran. The data collection tool is a researcher-made questionnaire; and its questions (items) were determined based on the research background as well as the conceptual

modeling of financial resilience in crisis conditions (Abolhasani et al, in press). In the conceptual model of this research, the independent variables are causal conditions, Contextual conditions and intervening conditions and the mediating variables are financial resilience of the hotel industry and strategies and the main dependent variable is consequences. The structure of the questionnaire is shown in Table 1. The financial employees were asked to answer an anonymous questionnaire that contained 86 short and useful questions with a 5-point Likert scale- two of which were considered as controls. The validity of the content of the questions was confirmed by several expert professors of finance and tourism (14 people) using the Lawshe test. Then the reliability of the test questions was checked by Cronbach's alpha method with 28 participants and its values for all questions were more than 0.7. According to the method of Barkolay et al. (1995), the minimum sample size was

determined to be 80 samples. However, this questionnaire was provided electronically in the spring of 2022 to a group of hotels in the country, and finally, in order to increase the accuracy of the model, 137 acceptable items were analyzed. The demographic characteristics of the sample members show that 64% of the participants were male and 36% were female. In terms of job rank, 28% were in the managerial category, 70% were employees, and 2% were unspecified. Half of the participants worked in

recreational hotels and the rest worked in commercial, pilgrimage, traditional hotels and apartment hotels. In the present study, the collected data were analyzed using PLS software based on partial least squares method. Cronbach's alpha and composite reliability (CR) were used to measure reliability. To measure convergent validity, the confirmatory factor analysis (CFA) method of factor loading criteria and average variance extracted (AVE) was used. PLS software was also used to test the hypotheses.

Table 1- The structure of the questionnaire

First-order structure	Second-order structure	Symbol	Questions (items)
Causal conditions	Policy Structure of the country	POS	constructive interaction with the world, facilitating the process of issuing visas, creating a positive mental image of Iran at the international level, providing security, political ideology ruling the country, reducing internal tensions and riots.
	Tourism Infrastructure	TOI	equipping roads, ports and railway networks, securing the aviation industry, developing institutions and health centers, the level of public health, the variety and extent of accommodation, standardization of accommodation, providing international banking services, easy access to financial markets.
	Macroeconomics	MAE	price robustness, household revenue, exchange rate robustness, macroeconomic ability to adapt to changes
Financial Resilience	Revenue management	REM	existence of revenues, capital mobility, savings of financial resources, optimal pricing
	Cost management	COM	optimizing the cost of activities, reducing fixed costs, saving variable costs, budgeting, matching costs with revenue, allocating prevention costs.
	Organizing risks	ORR	identification and assessment of risks, management of emergency responses, ability to adapt to conditions, passing through a crisis with the lowest financial cost, continuity and improvement of current performance.
Contextual conditions	Legal contexts	LEC	economic, social and cultural development programs of the country, laws related to tourism, laws related to crisis management of the country, laws related to labor and social security laws.
	Cultural and social considerations	CSC	customs and beliefs, religion and religious beliefs, the level of democracy in the society, the cultural relations of the country's ethnic groups with each other, the degree of social acceptance of tourism
	Geographical location and climate of the country	GLC	climate diversity, geographical connection with other countries, neighborhood with rich countries
Strategies	Strengthen human resources	SHR	developing hospitality education in scientific centers of the country, strengthening the skills of human resources, creating the ability of people to adapt activities to the conditions, creating support funds for hoteliers.
	Strengthen inter-institutional co-operation	SIC	the interaction of other government bodies with the tourism organization, promotion of tourism capabilities at the international level, help of radio and television to inform and create tourism discourse.
	Tourism industry marketing	TIM	finding the target market, market segmentation, tourist retention rate, branding
	Optimization in Finance	OPF	financial support by the government, attraction of foreign investment in the form of partnership agreement, capital market, crowdfunding, creation of investment funds, risk management of financial resources.
	Innovation	INN	using new technologies (artificial intelligence,...), providing digital services to customers, using today's knowledge and experiences of successful countries in the tourism industry, holding various events
Intervening conditions	Environmental protection	ENP	protection of natural resources, protection of biodiversity, reduction of environmental pollution

First-order structure	Second-order structure	Symbol	Questions (items)
Consequences	Sustainable development of the country	SDT	economic growth, creation of new job opportunities, earning foreign currency and prevention of foreign currency outflow, national solidarity and cohesion, expansion of international exchanges and co-operation, social security
	Strengthen the capacity of the tourism industry in the face of crises	SCT	the ability to predict future demand, quickly identifying shocks, reducing the level of vulnerability, preventing shocks from turning into crises, achieve a favorable financial structure, and achieve profitable opportunities in the future.
	Development of tourism industry in the country	DET	increasing return on investment, increasing investment returns, tourist satisfaction, increasing the productivity of the hotel industry, improving competitiveness in the hotel industry.

Findings

In order to get more familiar with the opinions of the employees participating in this study, their responses to the questionnaire were examined.

Measurement of the normal and non-normal distribution of data

In order to test the normality of the data, the Kolmogorov-Smirnov test was used; because if the data distribution is normal, parametric tests can be used to test the hypotheses, and if it is not normal, non-parametric tests can be used. This test is used at the 5% error level to select the appropriate statistical method for data analysis. In the interpretation of the test results, if the significance level is greater than 0.05, then the obtained distribution is normal, and if the significance level is less than 0.05, then the distribution is not normal and structural equation modeling (SEM) and smart PLS software is the most suitable method. The results of the Kolmogorov-Smirnov test showed that in all the variables, the significance level has not reached the considered error level, so the data distribution is not normal, and SEM and smart PLS software were used to test the final research model.

Validity and reliability

Reliability was measured through Cronbach's alpha (Internal Consistency of the instrument) and composite reliability index (correlation of questions with the underlying structure). Convergent validity and construct validity have been used to measure validity⁴.

⁴ The aforementioned questionnaire is researcher-made and designed based on a qualitative paradigm model, therefore, since the questions (items) are extracted based on a

The criterion of the appropriateness of this statistic for the reliability of a component is that the value of alpha is higher than 0.7 (Cronbach, 1951). The reliability results of questions using Cronbach's alpha method showed that Cronbach's alpha values for all structures of the research conceptual model were greater than 0.7.

Convergent validity is a criterion that measures the AVE of a structure by its questions. Fornell and Larcker (1981) have introduced the appropriate value for the AVE for 0.5 and higher. In order to measure the convergent validity in CFA, two criteria of factor loading and AVE should be considered. On the other hand, Magner et al. (1996) considered a value of 0.4 and higher to be sufficient for the AVE. The AVE for all structures of this model was greater than 0.4.

Werts et al. (1974) introduced the composite reliability (CR) criterion to determine the reliability of structures. The superiority of this criterion compared to Cronbach's alpha is that the reliability of the structures is calculated according to the correlation of their structures with each other, as a result, this criterion is also used to better measure the reliability in the PLS method. If the value of CR for each structure is above 0.7, it indicates the internal consistency suitable for measurement models (Davari and

qualitative paradigm model in which the factor structure is clear, therefore, there is no need to perform exploratory factor analysis in order to rediscover the factor structure. In addition, since the said questionnaire was created by the researcher, the validity of the structure is examined. In other words, according to the existence of the primary factor structure, it is necessary that this factor structure reaches the confirmation of the data based on CFA. In general, the application of the tool compiled based on research based on grounded theory, without conducting structural validity in order to measure the state of the statistical population, is void of external validity and the results will not be generalizable.

Rezazadeh, 2014). The calculations of the composite reliability method of the questions showed that these values are more than 0.7 for all the structures and this is another proof of the reliability of the research tool.

Measurement of convergent validity (factor loading) and development of a structural model

To measure the convergent validity of the structures of the research conceptual model, CFA was used. The CFA method is one of the valid scientific methods for measuring construct validity, which estimates the factor loading and relationships between a set of indices and factors. Factor loading represents the correlation of indices with the relevant factor and is interpreted like any other correlation (Homan, 2012). The factor loading should be greater than 0.4 and items with a factor loading less than 0.4 should be removed (Hulland, 1999). In fact, factor loadings above 0.4 indicate the appropriate relationship of each item or component with its own sub-component or infrastructure dimension. The t-statistic value is the criterion for measuring the significance of the relationship between two structures in regression models such as structural equations. If the t-statistic values are greater than the critical value of 1.96, it can be said with 95% confidence level that the influence coefficient is significant and the factor has a significant effect on the desired structure.

Since the designed model has 2 layers, first-order factor analysis and second-order factor analysis were measured for these structures. In the following, the factor analysis of the structures of the conceptual model of the research was done simultaneously. Also, to test the hypotheses of the research, SEM⁵ was designed with software from the second generation of structural equations under the title of partial least squares (PLS)⁶ method, as shown in Fig. 2. The value of factor loading of visible variables (dimensions) is shown above the arrow of each latent variable⁷.

The results of Fig. 2 showed that all factor loadings are greater than 0.4 and are statistically significant (at the error level of 0.05, their t-statistic value is greater than 1.96). Therefore, it can be concluded that the components of the model in the first and second layer are appropriate or, as the so-called questions (items), measure the desired structures well.

Model fit

In order to validate the model of financial resilience of the hotel industry in crisis conditions, in addition to the values of path coefficients and factor loadings, other important indices of model fit (coefficient of determination R² and Goodness of Fit (GoF)) were measured. A researcher should use different criteria to evaluate the fit of the model, because there is no single index that can be definitely evaluated for testing the model (Kalantari, 2013).

R² criterion: It shows the effect of an independent variable (a factor) on a dependent variable. The evaluation criterion is such that R² values smaller than 0.19 are considered weak fit, between 0.19 and 0.33 as moderate fit, and above 0.33 as strong fit (this criterion is calculated only for dependent (endogenous) variables) and it indicates the amount of determination of the independent variables from the variance of the dependent variable). The findings showed that all the R² values related to the endogenous variables of the model, except for innovation, are greater than 0.612, which indicates the appropriate fit of the structural model.

Finally, the general fit of the model has been examined. Here, both measurement and structural parts are evaluated together as a single model. The GoF is obtained based on the average of common values and R² values and indicates the general state of model fit. And if it is higher than 0.36, it generally indicates the general fit of the model (Aiken et al, 2008). The value of GoF was calculated with the following formula:

$$Gof = \sqrt{\text{communalities} \times R^2} = \sqrt{0.771 \times 0.514} = 0.630$$

As can be seen, this value is equal to 0.603, which is more than 0.36 and shows that the model has a strong fit with the data.

Therefore, in general, it can be said that the financial resilience model of the hotel industry in crisis conditions has a good fit with the data of the statistical population.

⁵. Structural Equation Modeling (SEM)

⁶. Partial Least Square (PLS)

⁷. After the potential extraction of the model in the qualitative stage, in order to compile and develop the model, a quantitative stage based on a quantitative tool (questionnaire) was performed. Since we are looking for the development of the model, we have used the second type of structural equations or the PLS method.

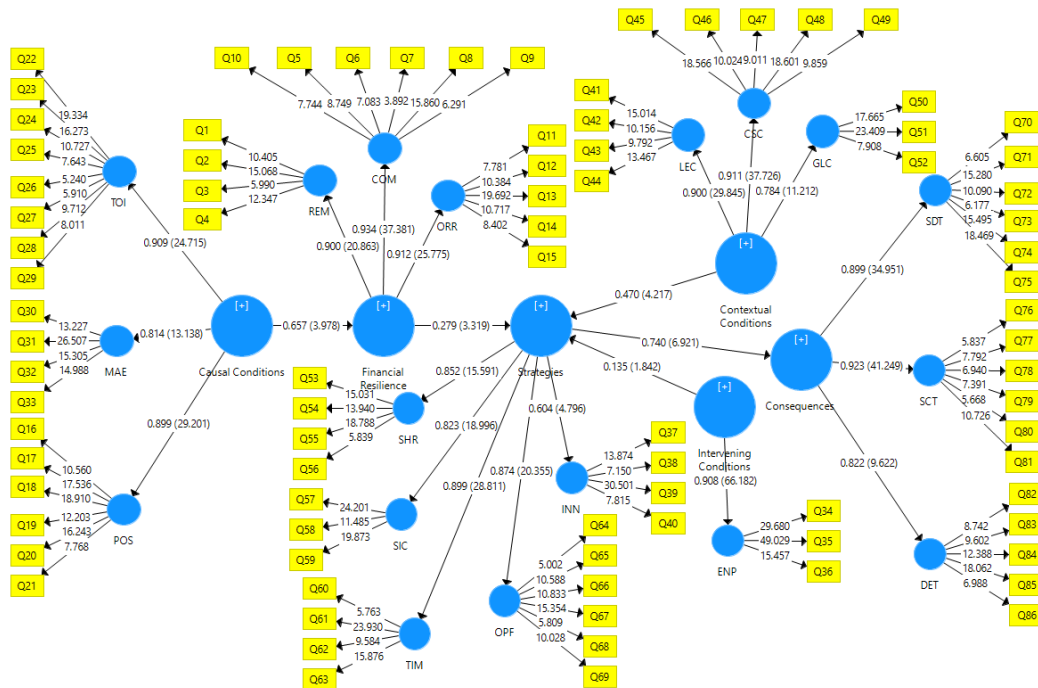


Fig. 2. Factor loadings and path coefficients of the financial resilience model of the hotel industry in crisis conditions

Table 2. The results of the hypotheses

hypotheses	Path	Path coefficient	T-value	Support
Hypothesis 1	Causal conditions on the financial resilience of the hotel industry in crisis conditions	0.657	3.978	Supported
Hypothesis 2	Financial Resilience of the hotel industry in crisis conditions on strategies	0.279	3.319	Supported
Hypothesis 3	Contextual conditions on strategies	0.470	4.217	Supported
Hypothesis 4	Intervening conditions on strategies	0.135	1.842	rejected
Hypothesis 5	Strategies on consequences	0.740	6.921	Supported

Based on the data in this table (hypothesis 1), Causal conditions (Policy Structure of the country, Tourism Infrastructure, Macroeconomics) have a positive effect on the financial resilience of the hotel industry in crisis conditions (Revenue management, Cost management and Organizing risks) (0.66) and this effect is statistically significant (t-statistic value = 3.98). In addition, the data listed in row 2 of this table (hypothesis 2) shows that the financial resilience of the hotel industry in crisis conditions has a positive (0.28) and significant (t-statistic value= 3.32) effect on strategies (Strengthen human resources, Strengthen inter-institutional co-operation, Tourism industry marketing, Optimization in Finance, Innovation). Also,

the data listed in row 3 of this table (hypothesis 3) shows that the context conditions (Legal contexts, Cultural and social considerations, Geographical location and climate of the country) have a positive (0.47) and significant (t-statistic value=4.22) effect on strategies. The data listed in row 4 of this table (hypothesis 4) show that the intervening conditions (Environmental protection) have a positive (0.14) effect on strategies, but this effect is not statistically significant (t-statistic value= 1.84). The data listed in the row 5 of this table (hypothesis 5) indicates that the strategies have a positive (0.74) and significant (t-statistic value= 6.92) effect on the consequences (Sustainable development of the country, Strengthen

the capacity of the tourism industry in the face of crises, and Development of tourism industry in the country).

The above analysis showed that the participants believe that the desired strategies have the greatest effect on the consequences of financial resilience of the hotel industry in crisis conditions. They believe that Causal conditions have a great effect on the financial resilience of the hotel industry in crisis conditions. Also, from the perspective of the participants in the research, the financial resilience of the hotel industry in crisis conditions has little effect on the strategies. Also, from their point of view, the considered context conditions have a good effect on the financial resilience strategies of the hotel industry in crisis conditions. In addition, the above analysis implies that from the point of view of hotel employees, the intervening conditions do not have much effect on the desired strategies in crisis conditions.

Discussion and conclusion

In this study, the Causal conditions, Contextual conditions, Intervening conditions, Core phenomenon, strategies and consequences of financial resilience of the hotel industry in crisis conditions were identified and confirmed from the point of view of the financial employees in the hotel industry. From the point of view of hotel industry employees, although most of the components of the model of financial resilience of the hotel industry in crisis conditions are consistent with the existing background, Environmental protection as an intervening factor does not have much effect on the financial resilience of the hotel industry in crisis conditions. Therefore, this finding is inconsistent with the findings of researchers such as Yarahamdi and Salehi (2019); Lajvardi et al. (2016); Briguglio (2009) and Safi and Moghadam (2014) about the role of Environmental protection on resilience. The results show that from the point of view of hotel employees: 1. Causal conditions (Policy Structure of the country, Tourism Infrastructure, Macroeconomics) have a positive and significant effect on the financial resilience of the hotel industry in crisis conditions (Revenue management, Cost management, Organizing risks); 2. The financial resilience of the hotel industry in crisis conditions has a positive and significant effect on strategies (Strengthen human resources, Strengthen inter-institutional co-operation, Tourism industry marketing, Optimization in Finance, Innovation); 3.

Context conditions (Legal contexts, Cultural and social considerations, geographic location and climate of the country) have a positive and significant effect on the financial strategies of the hotel industry in crisis conditions; 4. Intervening conditions (Environmental protection) have a positive effect on the financial resilience strategies of the hotel industry in crisis conditions; but this effect is not statistically significant; 5. The strategies have a positive and significant effect on the consequences of financial resilience of the hotel industry in crisis conditions (Sustainable development of the country, Strengthen the capacity of the tourism industry in the face of crises, Development of tourism industry in the country). Finally, the model of financial resilience in the hotel industry in crisis conditions was presented based on the opinion of hotel employees. The hotel industry of the country can provide the basis for financial resilience in crisis conditions, according to the causal conditions, Contextual conditions and intervening conditions, through the use of identified strategies, to achieve the results and consequences desired by the researcher.

The results of this study provide users with useful information about the factors affecting the financial resilience of the hotel industry in crisis conditions, and these results can be used in planning for hotel activities, especially in financial crises. It seems that the financial resilience of the hotel industry in a crisis situation is an issue that must be addressed seriously so that hotels can continue their business and hotel employees can be prevented from becoming unemployed and as a result lead to the Sustainable development of the country and increase the productivity of the hotel industry in the country. This study suggests appropriate strategies to the authorities and supervisory institutions of the hotel industry in a way that leads to the reduction of costs and the increase of revenue in the hotel industry. Also, this study provided a basis for future research to strengthening the capacity of the hotel industry in facing crises and to make the hotel industry prosper. As a result, we can witness the increasing satisfaction of tourists and the increase of revenue for the beneficiaries of the hotel industry. It is suggested that future researchers try to study the different dimensions identified in this research in detail by using qualitative and quantitative research methods. For example, Causal factors alone can be the subject of a research,

or the constituent variables of each stage can be researchable subjects for researchers in the field of financial resilience in the hotel industry. It is also suggested to examine financial resilience in other businesses in crisis conditions and compare its results with this study.

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