

# The impact of COVID-19 on Italian accommodation: A supply-perspective

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## Abstract:

**Purpose:** The current COVID-19 pandemic has created an extremely dynamic and uncertain environment in which businesses find it very difficult to operate, particularly those in the hospitality industry. It is therefore very important to understand which actions hospitality businesses think the private and public sectors should adopt in order to cope with the pandemic and its impact. To facilitate this, this research adopted chaos theory to investigate Italian small and medium enterprises (SMEs) in the hospitality sector.

**Methods:** A mixed method approach, based on a convergent parallel design data validation variant, was adopted. A survey with open and closed questions was developed and sent to a sample of businesses. 1,040 completed questionnaires were collected and analysed through descriptive statistics; in addition to these usable surveys, 361 open-ended answers were analysed thematically.

**Results:** The results showed that Italian entrepreneurs and managers were over-relying on interventions from the public sector and that there was a lack of business actions being made, thus evidencing a deficit in terms of long-term strategic thinking and the innovation required during such turbulent times.

**Implications:** Although these results cannot be generalised to the whole of the hospitality industry, they shed light on important elements that industry associations should take into account.

**Keywords:** chaos theory, COVID-19, accommodation, mixed method, convergent parallel design, Italy

**JEL Classification:** H12, I15, L83

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## 1 INTRODUCTION

The Coronavirus (COVID-19) outbreak has resulted in a global crisis in which the hospitality industry has suffered like never before in comparison to other epidemic outbreaks (e.g., SARS, H1N1, Ebola) and the financial crisis of 2008. Indeed, the current pandemic has forced many tourism destinations to witness a decline in tourism due to lockdown measures and travel bans that resulted in booking cancellations, unemployment and, overall, lower travel confidence. The United Nations World Tourism Organisation (2020) has estimated that international arrivals

will decline by 20-30% in 2020, resulting in US \$300-450 billion in tourism receipt losses. In this context, the hospitality industry has been particularly affected, with several accommodation facilities ceasing their operations and/or significantly downsizing them due to the fact that this sector is seen as one of the most serious elements when it comes to transforming a local outbreak into a global pandemic (Hung et al., 2018). Several reports have revealed that a huge amount of hotel and accommodation employees have been either furloughed or laid off and that revenue per available room is significantly lower in comparison to normal times. The situation is even more severe for small and

medium enterprises (SMEs), which are the real backbone of the tourism economy in several European countries, such as Italy, Greece, and Spain.

In this context, academic research seeking to analyse the hospitality sector has been growing since the beginning of the pandemic (Spyridou, 2017; Gössling et al., 2020) but, so far, no academic study has been published regarding Italy, one of the countries most affected by the pandemic and one with a hospitality sector accounting for the biggest hotel portfolio in Europe: 33,200 hotels and 1.1 million rooms (HTL, 2018). More precisely, according to ISTAT (The Italian national statistical office, 2020a), in 2019, Italy had 1,092,758 rooms and 32,730 hotel facilities, attracting a total of 97,798,618 arrivals and 280,937,897 overnight stays (ISTAT, 2020b). In addition to this, the Italian hospitality sector is mainly made up of SMEs, which are commonly found in many countries. The research presented in this study can thus be considered beneficial to hospitality SMEs located in countries other than Italy. In particular, this study aims to answer to the following question: what actions do accommodation providers think should be taken by public and private sector organisations in order to overcome the current crisis? In answering this question, this research contributes to recent literature assessing the recovery actions of the hospitality businesses (e.g. Breier et al., 2021; Samy, 2016; Dube et al., 2020; Shao et al., 2020) and, in this way, helps us to understand how innovative Italian hospitality entrepreneurs and managers are in trying to overcome the impact of the pandemic.

This article is structured as follows: firstly, a review of existing literature on chaos theory, as well as on COVID-19 and the hospitality sector, is presented. Following this, the methodology is explained and, next, both quantitative and qualitative findings are analysed. The article concludes with a discussion, in which the results of the two strands of research are merged, and then conclusions, managerial implications, limitations of the research, and future research directions.

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## 2 LITERATURE REVIEW

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A crisis is an occasion that might create an insecure or risky environment, significantly influencing a community or an individual (Fotiadis & Huan, 2014; Webster et al., 2020). When this happens, the impact on the tourism and hospitality sectors can be devastating. For instance, when a terrorist attack happens at a destination, tourists' demands are affected as individuals may choose alternative destinations perceived as more secure and less risky (Reichel et al., 2007; Erdem et al., 2020). However, the crises that have been traditionally studied in tourism literature are limited both in time and space, in contrast to public health crises, which can impact people in one or more geographic regions and can rapidly spread across several countries (S raphin et al., 2019). Hence, these types of crises can bring about negative long-term effects to the industry, which may be particularly difficult for policy makers, public sector managers, and tourism and hospitality businesses' managers to manage (Novelli et al., 2018). As a result of its global spread and its time persistence, the current COVID-19 pandemic has significantly impacted consumption patterns of tourists who, for instance, choose less crowded destinations (Wen et al.,

2020), simultaneously impacting decision-making entrepreneurs exploring the use of technologies in service provision, such as the use of Artificial Intelligence and robotic service agents to limit face-to-face interactions (Seyitođlu & Ivanov, 2020).

However, as Zhang, Geng, Huang, and Ren (2020) state, the exceptional nature of the current crisis makes it extremely difficult to apply lessons learnt from previous crises; hence, considering the high unpredictability of the crisis, studying the impact of COVID-19 through the lenses of chaos theory is particularly useful, as this method is appropriate when analysing complex and non-linear systems, such as tourism (Boukas & Ziakas, 2014; Ritchie, 2004). Recent works have highlighted the usefulness of chaos theory compared to traditional models of crisis management based on the linearity of crises and on sets of steps seeking to managing them (Speakman & Sharpley, 2012; Chatzigeorgiou & Christou, 2020). Among the main tenets of this theory, it is recognised that, in a complex system, even a small event can cause a big consequence (Jaques, 2007), thus developing the so called 'butterfly effect' (Seeger, 2002). Furthermore, complex systems experience 'bifurcation', i.e. a radical change when a crisis happens. As a result of this, a system will find itself on a different path to the one that it was previously on before the crises happened. As such, a complex system, following bifurcation, may find itself on a path that could lead to its destruction or, alternatively, on one that could allow it to effectively develop again in future (Paraskevas, 2006). Following a bifurcation, a complex system will re-organise itself, thus reaching 'self-organisation', i.e. a new form or structure (Seeger, 2002) that can be facilitated by 'strange attractors'. This, for instance, may be represented by managers who, through effective communication and information sharing (Pearson & Clair, 1998; Fotiadis & Williams, 2018), marketing initiatives, and requests for public sector intervention, can support the system in reaching a new order and new stability (Speakman & Sharpley, 2012).

In light of these elements, the study of the impact of COVID-19 is well suited for analysis through the lens of chaos theory due to its unexpected and unpredictable nature and as a result of the fact that a similar crisis (i.e. AH1N1 influenza crisis) was previously analysed through this same theory (Speakman & Sharpley, 2012).

### 2.1 Impact of COVID-19 and interventions

Research on the impact of COVID-19 on the hospitality sector has been increasing significantly in recent months. However, a great deal of this has been centered around the consumers' perspective, with particular reference to the impact of perceived risk on travel behaviour (Bae & Chang, 2020; Neuburger & Egger, 2020; S nchez-Canizares et al., 2020). In contrast, the perspective of businesses, with particular reference to the hospitality sector, has been less studied. Among the studies published, some focus on the analysis of the impact that COVID-19 had on the hospitality industry, while others focus on the interventions that entrepreneurs and governments have put in place to contrast the effects of the pandemic.

With regards to the impact that the pandemic had on the hospitality industry, G ssling, Scott, and Hall (2020)

compared the impacts of previous epidemics/pandemics and those brought about by COVID-19 in the first quarter of 2020. They showed that the pandemic changed society and national economies and they concluded that hospitality businesses in low-income economies would suffer the most. Other studies, although carried out in different geographical settings, also highlighted the huge economic impact on the industry (Yang et al., 2020), with estimations showing bigger economic effects on countries with a higher contribution of tourism to the GDP (Welfens, 2020). Moreover, similar effects have been identified across different continents, such as Europe (Williams & Kayaoglu, 2020) and Asia (Foo et al., 2020; Hao et al., 2020). Although the impact of COVID-19 has been investigated, not only in academic research, more work is necessary with regards to the interventions that both governments and businesses can and should put in place to counteract the effects of the pandemic. Indeed, if the hospitality sector wishes to overcome the current crisis, it is essential that a range of interventions from the aforementioned stakeholders are put in place, ranging from health and safety to policy support to the sector (Breier et al., 2021; Shao et al., 2020).

With regards to actions put in place by governments, in their study, Yang, Zhang, and Chen (2020) proposed the use of tourism consumption subsidies, such as tourism vouchers for residents. The Malaysian government launched a set of incentives to tourism businesses, such as discounts on electricity bills, deductions for training expenses, financial relief for affected businesses through banks, and wage-subsidies to help employers to keep their employees (Foo et al., 2020), thus highlighting the need for a bundle of interventions to support the survival of businesses and, at the same time, promote innovation in the sector (Loi et al., 2020). From a business perspective, attention to the improvement of health and safety through the employment of risk-reduction strategies (Kaushal & Srivastava, 2021; Shin & Kang, 2020) has been deemed important; although, in this case, these actions can significantly affect the cost of a room and, as a result, the final price paid by travellers can increase accordingly. In any case, even if sanitations are carried out in accommodation establishments, this does not guarantee that visitors will have a positive response to it. Indeed, recent research has highlighted that consumers do not always trust the sanitation measures put in place by accommodation providers (Naumov et al., 2020; Van Truong et al., 2020). Aside from this, there seems to be consensus on the need for the hospitality sector to rethink their operations, with more attention paid to the provision of new and valuable accommodation experiences (Wen et al., 2020), sustainability (Dolnicar & Zare, 2020; Filimonau et al., 2020; Niewiadomski, 2020), employee care, and plans to compete in new ways in a more challenging environment (Dube et al., 2020; Huang et al., 2020). Recent research on the impact of the pandemic on the hospitality sector has shown that businesses' responses are quite varied. For instance, three approaches have been identified: active businesses that try to find alternative ways to obtain revenue and, in this way, survive; inactive businesses that focus on compliance to health and safety requirements in preparation for the restart of the business; and inoperative businesses which discontinue operations (Duarte Alonso et al., 2020). Similar to these findings, also in the peer-to-peer accommodation sector,

recent research has shown different approaches adopted by hosts, ranging from those that cease activity, to those that continue their activity and innovate their operations (Farmaki et al., 2020; Zhang et al., 2020).

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### 3 METHODOLOGY

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Due to the dynamic environment created by the pandemic, the researchers believed that the topic under investigation would have been better studied using a mixed method approach, which is well-suited when a phenomenon is better analysed through the collection and analysis of both qualitative and quantitative data. In order to do this, a pragmatist worldview was adopted, according to which researchers sought to solve real problems. For this reason, the consequences of the research were considered to be very important (Creswell & Plano, 2011; Teddlie & Tashakkori, 2003).

The research was carried out through a convergent parallel mixed method based on a data validation variant, through which researchers collected data using an online survey, including both closed- and open-ended questions. The results from the open-ended questions were used to enhance the results of the close-ended questions (Creswell & Plano, 2011).

The survey was developed based on a consultation with accommodation providers (hotel and non-hotel related accommodation) and their representative associations, thus allowing the researchers to follow a theory-in-use approach (Zaltman et al., 1982). Following this consultation, a set of items were developed (see Tables 2 and 3) and included in the survey. In addition to this, an open-ended question was included in order to collect respondents' opinions and, in this way, deepen the researchers' knowledge on the investigated topic.

The survey included four sections. The first section included general questions collecting information about the job position covered by the respondent and the specific type of accommodation in which he/she was working. The second section contained a list of statements that were developed through consultation with industry actors. These items referred to two areas: 1) response actions to booking cancellations; 2) actions from public sector institutions seeking to support businesses in coping with the crisis. Answers to these statements were collected through a 5-point Likert scale (1 = not important at all; 5 = extremely important). The third section of the survey included the following open-ended question: 'Could you please write in the box below what you think public organisations and private-sector businesses should do in order to overcome the COVID-19 outbreak and facilitate the recovery of the tourism sector once that this emergency comes to an end?', giving respondents the chance to describe any further action that they thought could be adopted by accommodation marketers and/or regional and national institutions to cope with the pandemic. Finally, the last section asked general information about the respondents' business profile: the type of accommodation facility in which they worked for (hotel, bed and breakfast, agritourism, etc.) and their role in the organization (owner, manager, receptionist/booking manager, etc).

For the purposes of the data collection, an e-mail invitation containing the link to the online survey was sent out to a database of 10,000 accommodation businesses located across different Italian Regions. This database was made up of e-mail addresses obtained from different Italian industry associations in the hospitality sector, containing both hotel and non-hotel establishments. Taking into consideration the fact that, in some cases (250), the contact details of accommodation facilities were not valid (due to several reasons, i.e., bankruptcy of the business, updating process not carried out, data entry error, etc.), the overall number of eligible participants was 9,750.

At the end of the data collection, a total of 1,086 surveys were obtained, of which 1,040 were complete and usable for the purposes of statistical analysis. The study thus registered a 10.67% response rate, which is consistent with prior studies acknowledging that response rates of around 10% (or less) are usually the norm for SMEs (Jay & Schaper, 2003; Mo et al., 2015). A series of descriptive analysis (percentage, means, and standard deviation) was run on the quantitative part of the survey. For the open-ended question, 361 answers were collected from the 1,040 usable surveys. Researchers initially read all 361 answers to the open-ended question to familiarise themselves with the data. The data were then analysed through thematic analysis (with the support of NVivo 12) to identify main themes describing business and institutional interventions to cope with the pandemic. The initial codes were reviewed by the research team. An independent person revised the coding and decided whether he/she agreed with the codes. If there was any disagreement, discussions took place until an agreement was reached and, following this, final coding was carried out.

## 4 RESULTS

### 4.1 COVID-19 in Italy: A chaos theory perspective

The events that unfolded in Italy from the end of January can be analysed using a chaos theory perspective (see Table 1 for a summary of events). The key starting point was 21st February 2020, in which the first case of COVID-19 in an Italian citizen was identified. This event can be considered the ‘butterfly event’ as, at this time, Italy was deemed to be a safe country, free from COVID-19. However, the number of cases and deaths rose dramatically in a few days and, on 11th March 2020, the nationwide lockdown was declared. From an event that seemed quite limited, the country found itself facing huge consequences in a short timeframe. It can be said that, at this point, the country and the Italian tourism industry had reached the ‘bifurcation’. Indeed, for the first time in the post WWII history of Italian tourism, the borders were closed, a growing number of airlines interrupted flights to Italy, and several foreign governments forbade trips to Italy. Others imposed quarantine to travellers who returned from Italy. From that time onwards, many businesses in the tourism sector found themselves trying to survive this unprecedented crisis, with industry associations (hoteliers, travel agents, etc.) requesting the intervention of the Italian government in order to support the businesses of their respective sectors. In other words, it was soon possible to note that there were attempts to achieve ‘self-organisation’. However, due to the non-linear crisis that the industry was

facing and the exceptional situation in which the whole sector found itself, it took time before ad-hoc interventions for the tourism and hospitality industries were developed.

Table 1: Timeline of COVID-19 events in Italy. Source: Self Structured

Date	Event(s)
30/01/20	First two cases of COVID-19 in Italy: two Chinese tourists from the Hubei province tested positive for COVID-19 while in Italy on holiday.
31/01/20	The World Health Organization declared the ‘public health emergency of international concern’. Following this, the Italian government declared 6 months’ worth of health emergency and blocked all flights to and from China.
21/02/20	First case of COVID-19 was identified in an Italian citizen in Codogno (Lombardy region).
23/02/20	Lockdown was declared in the towns of Codogno, Castiglione d’Adda, Casalpusterleno, Fombio, Maleo, Somaglia, Beronico, Terranova dei Passerini, Castelgerundo, San Fiorano (all located in the Lombardy region), and Vo’ (in the Veneto region).
From the end of February 2020	Several countries took action by imposing a quarantine for people arriving from Italy or forbidding their entrance into the country.
03/03/20	3,089 people tested positive for COVID-19; 107 people died.
04/03/20	All schools and universities in Italy closed.
08/03/20	The whole Lombardy region and 14 provinces (Modena, Parma, Piacenza, Reggio Emilia, Rimini, Pesaro e Urbino, Alessandria, Asti, Novara, Verbania-Cusio-Ossola, Vercelli, Padova, Treviso, and Venezia) were under lockdown.
11/03/20	All of Italy is placed into lockdown. People are allowed to leave their house only for groceries and medicines, work, and health reasons. The World Health Organisation declared the pandemic.
21/03/20	All economic activities that are not essential were closed.
04/05/20	Phase 2 started. Some activities were reopened, such as restaurants (only on a take-away basis) and beaches. Outdoor exercise was allowed, irrespective of the distance from home
03/06/20	Movements across regions started.
From 15/06/20	Italy reopened its borders. More businesses reopened, such as theatres and cinemas (but with a limited number of attendees).

### 4.2 Quantitative findings

On the whole, the majority of respondents reported that they were working in hotels (69.1%), followed by Bed and Breakfasts (13.9%), holiday apartments (5.6%), agri-tourism (1.6%), and other residual types of accommodation facilities (9.8%). When the hotel category is considered, 36.8% of responses were obtained from three star hotels, 21.6% from four star hotels, 4.7% from two star hotels, 2% from one star hotels, and 0.9% from five star hotels. Most individuals reported being the owners of the accommodation facility (63.6%), then managers (24.7%), receptionist/booking managers (3.8%), head of the marketing department (3.2%), or covering another residual organizational role in the business (4.7%).

From the analysis of the answers related to the actions needed to cope with guests’ booking cancellations (Table 2), we saw that the postponement of bookings with the offer of a discount on future rates ( $M=3.88$ ,  $S.D.=1.384$ ) and the conversion of reservations partially or totally paid for with a voucher usable by the end of 2020 ( $M=3.83$ ,  $S.D.=1.481$ ) were the two options that were the most preferred by respondents. The lowest level of importance was assigned to the action of shortening the timeframe within which clients could cancel their bookings for free ( $M=3.11$ ,  $S.D.=1.457$ ) and increasing discounts on early bookings, allowing free cancellations ( $M=2.65$ ,  $S.D.=1.404$ ). On the whole, these

findings suggest/confirm that accommodation marketers tend to largely favor any response actions that can help them to obtain/retain the cash flow needed to cope with the extremely severe financial crisis this pandemic is generating, thus implicitly relying on their customers' willingness to contribute to their economic survival.

Table 2: Response actions in sales: the accommodation providers' views

	Likert scale values (%)			M	S.D
	1-2	3	4-5		
To suggest to postpone the booking to another date and to apply a discount to future rates.	16.8	16.5	66.7	3.88	1.384
To convert payments already received into a voucher that could be used by the end of the year.	20	15	65	3.83	1.481
To reimburse payments already received without applying any cancellation fees to clients that request a cancellation for reasons outside of their control.	26.3	17.8	55.9	3.55	1.569
To fully reimburse bookings cancelled for reasons out of the clients' control.	28.7	16.8	54.5	3.47	1.591
To convert payments already received into a voucher that could be used at any time.	29	20.9	50.1	3.37	1.540
To shorten the time within which clients could cancel their booking for free.	33.3	23.9	42.8	3.11	1.457
To increase the discount given to clients who make early bookings and subsequently allow free cancellation.	46.3	25.1	28.6	2.65	1.404

M= mean; S.D= standard deviation.

With regards to the actions that public sector organisations should put into place to support the hospitality industry, Table 3 shows, in decreasing order of importance, the most relevant actions that accommodation marketers think should be adopted by regional/national institutions. The results show that the most important actions are related to the need to receive financial help in the form of suspending and/or increasing their time to repay loans and mortgages (M=4.65, S.D=.900) and suspending payment of financing (M=4.61, S.D=4.46), with a significant portion of respondents considering these two actions as important or extremely important. Specifically, the number of interviewees scoring 4 or 5 for the two aforementioned actions were reported to be respectively 89.7% and 88.4% of the sample.

Table 3: Response actions to be undertaken by the institutions: the accommodation providers' views

	Likert scale values (%)			M	S.D
	1-2	3	4-5		
To suspend and/or increase the time allowed for repaying loans and mortgages.	4.6	5.7	89.7	4.65	.900
To suspend payments of financing.	5.3	6.3	88.4	4.61	.947
Financing for communication campaigns seeking to communicate that your accommodation establishment and your destination are both safe and free from COVID-19.	6.3	10	83.7	4.46	1.024
Financing for adopting Personal Protective Equipment (PPE) such as face masks, disposable gloves, etc.	14.8	13.6	71.6	4.05	1.331
Financing for the Ozone sanitation of rooms and shared spaces.	14.6	17.2	68.2	4.01	1.347

M= mean; S.D= standard deviation

With slightly lower levels of importance, respondents scored the need to obtain financial help to plan and implement accommodation and destination-based promotion activities to reassure national and international tourism of the safety of the tourism offer (M=4.46, S.D=1.024), to finance their expenses to offer guests Personal Protective Equipment (M=4.05, S.D=1.331), and to adopt Ozone-based technologies to sanitize hotel rooms and public spaces (M=4.01, s.D=1.347).

Overall, in comparing the two tables, we can see that respondents tend to strongly favour actions requiring the intervention of public sector organisations.

4.3 Qualitative findings

In analysing the answers to the open-ended questions, it was possible to shed light on early 'self-organisation' and the possible 'strange attractors' that could allow the system to overcome the crisis. As far as 'self-organisation' is concerned, the results highlighted a broad range of interventions (Table 4) which have been distinguished as either interventions from public sector organisations or interventions from businesses.

Table 4: Summary of interventions (preliminary to self-organisation)

Origin of interventions	Type of interventions	Times cited*		
Interventions from public sector institutions	Financial	Mortgages	38	
		Non-refundable contribution	34	
		Facilitated public financing	23	
		Compensation	5	
		Contribution to sanitization	2	
		Minimum income guaranteed	1	
	Fiscal	Tax reduction/cancellation	91	
		Tourist tax reduction/cancellation	14	
		Tax credit	7	
	Health	Tax cancellation on profits	1	
		Health rules for businesses and guests	47	
		Demand	Support for tourist demand	46
		Welfare	Support for employees losing jobs	44
	Transport	Prices	33	
Increase in transportation		12		
Safety		2		
Destination management	Networking among destination stakeholders	14		
Interventions from businesses	Destination marketing	Communication	75	
		Digital tools (e.g. apps)	3	
	Expenses (e.g., utilities, rent)	33		
	Marketing	10		
	Sanitization and cleanliness	9		
	Daily activity	7		
	Pricing	7		
	Refunds	7		
	Cancellations	4		
	Employee training	3		
Booking	2			
Vague suggestions		52		
No ideas		30		
New types of tourism		3		

\* The number of times an intervention is mentioned may not coincide with the number of people who mentioned it. Indeed, several respondents included more than one intervention at each time in their answers.

As far as interventions from public sector organisations are concerned, financial and fiscal interventions were most frequently mentioned by respondents. For both, several respondents stressed the need to have these interventions in order to allow businesses to have the liquidity necessary for short-term survival. For instance, two respondents stated:

*'In this uncertain context, the only way to overcome the crisis is to request a suspension on mortgages and, subsequently, to extend the amortisation schedule because payments will not be paid in future since businesses are already using liquidity in order to survive' (Respondent 82)*

*'Providing financing at very low interest rate for introducing liquidity in the market!' (Respondent 188)*

Moreover, with regards to financial interventions, some of the respondents also mentioned that this financing would be useful for businesses to allow them to make the investments necessary to renewing their accommodation establishment or purchase sanitation equipment. For instance, one respondent stated:

*'They should give in part non-refundable financing and in part facilitated public financing to be repaid interest-free so that businesses can refurbish their establishments by purchasing tools and products that allow to sanitise these establishments and for promoting the sanitation to consumers by, for instance, the use of a certification/label reassuring consumers.'* (Respondent 320)

Another public-sector intervention discussed pertained to welfare, with particular reference to the cost of labour in the Italian market. As a result, several respondents mentioned the need to lower the cost of labour so that businesses could hire new employees once the tourist season started. Another action that was mentioned quite often was the launch of unemployment benefits to those employees who lost their jobs during the lockdown. In general, it is possible to note that the aforementioned interventions that can be put in place when a general crisis happens are quite broad. More specific to the current pandemic were health-related actions (47 times). In particular, the need for a clear set of rules that businesses in the accommodation sector should comply with was mentioned. In this case, the need for the Italian hoteliers association and the Italian institutions to work together in creating these guidelines was emphasised. The following quote exemplifies this:

*'It is necessary that Federalberghi [the Italian hotelier association], together with the public sector organisations, set national guidelines for clients in hotels, with particular reference to the shared rooms such as the breakfast room, restaurant, TV room, etc. [...]. These guidelines should be easy to put in place and easy to be accepted by owners/managers and clients. These guidelines should also be communicated through the media to future visitors. This is in the hope that everybody feels safe and thus willing to travel again.'* (Respondent 104)

Another intervention from the public sector referred to destination marketing, with particular reference to communication campaigns aimed at promoting the safety of the destination, as well as at the attraction of domestic travellers rather than international travellers due to the closure of borders at the time of data collection. On the contrary, destination management actions were mentioned less frequently, although respondents who mentioned them referred to the need to develop networking between stakeholders. Finally, transportation interventions were also mentioned, but this by respondents from Sardinia, who suffer from transport issues to their island, suggesting that recovery strategies from a crisis can be specific in the case of island-based tourism destinations.

In terms of actions that businesses should put in place to counteract the effects of the pandemic, there were actions seeking to reduce a variety of expenses, such as utilities, establishment rent, etc. Aside from this, there were also some interventions pertaining to cleaning and sanitising rooms and

shared spaces, as well as promotion activities centred around communicating these protocols to guests. Moreover, increased flexibility from an operational point of view was recognised as important, such as the introduction of systems allowing faster check-in and check-out, changes to the breakfast service by abolishing buffet breakfasts, and only allowing breakfast to be served at the table. Along with these changes, the need to be more flexible with regards to booking cancellations (i.e. allowing free cancellations) and refunds when bookings are cancelled was recognised.

## 5 DISCUSSION

As requested by mixed method studies (Creswell & Plano Clark, 2011), the results of the two strands of research were merged and compared in a summary table during the interpretation stage (Table 5).

Table 5: Comparison of quantitative and qualitative results

<i>The actions that accommodation providers think should be taken by public and private sector organisations in order to overcome the current crisis</i>	
Qualitative strand	Quantitative strand
<p><i>Most cited business actions (number of times a theme was mentioned):</i></p> <ul style="list-style-type: none"> <li>• Expenses (e.g., utilities, rent): 33</li> <li>• Marketing: 10</li> <li>• Sanitization and cleanliness: 9</li> <li>• Daily activity: 7</li> <li>• Pricing : 7</li> <li>• Refunds: 7</li> </ul>	<p><i>Most chosen business actions (% of respondents who found these important/extremely important):</i></p> <ul style="list-style-type: none"> <li>• Booking postponement and discounts on future rates: 66.7%</li> <li>• Voucher to be used by the end of the year: 65%</li> <li>• Reimbursement of payments and no cancellation fees to clients cancelling for reasons out of their control: 55.9%</li> <li>• Full reimbursement for cancellations out of clients' control: 54.5%</li> <li>• Voucher to be used at any time: 50.1%</li> </ul>
<p><i>Most cited public-sector organisation actions (number of times a theme was mentioned):</i></p> <ul style="list-style-type: none"> <li>• Financial: <ul style="list-style-type: none"> <li>○ Mortgages: 38</li> <li>○ Non-refundable contribution: 34</li> <li>○ Facilitated public financing: 23</li> </ul> </li> <li>• Fiscal: <ul style="list-style-type: none"> <li>○ Tax reduction/cancellation: 91</li> <li>○ Tourist tax reduction/cancellation: 14</li> </ul> </li> <li>• Health interventions: 47</li> <li>• Support to tourist demand: 46</li> <li>• Welfare: 44</li> <li>• Destination management (networking): 14</li> <li>• Destination marketing (communication): 75</li> </ul>	<p><i>Most chosen public-sector organisation actions (% of respondents who found these important/extremely important):</i></p> <ul style="list-style-type: none"> <li>• Suspension of loans/mortgages or increase in time for repayment: 89.7%</li> <li>• Suspension of financing: 88.4%</li> <li>• Financing for communication campaigns on safety: 83.7%</li> <li>• Financing for adopting Personal Protective Equipment (PPE): 71.6%</li> <li>• Financing for Ozone sanitation: 68.2%</li> </ul>

With regards to similarities, the results demonstrated the need for cancellation and refund flexibility, as recognised by respondents. However, with a different frequency between the two strands, respondents seemed to acknowledge the importance of flexibility, which is one of the components deemed necessary when overcoming a crisis (Boukas & Ziakas, 2014; Paraskevas, 2006; Speakman & Sharpley, 2012; Ma et al., 2017). Another similarity that was identified in the two strands of research referred to actions seeking to suspend or extend the payment of financing and mortgages, brought about by the liquidity issues that owners and managers were experiencing, which complies with the results of previous research (Williams & Kayaoglu, 2020). In addition to this, the need to receive financing for purchasing PPE and for the sanitation of establishments was also present

in both strands of research. However, contrary to the quantitative results, the qualitative findings did not highlight the need for financing for communication campaigns made by accommodation establishments to reassure guests of their safety. Perhaps this is an intervention that respondents did not feel to be essential to them, maybe due to the fact that they were carrying out this type of communication anyway, either directly (via the official communication channels of the business), or indirectly (via informal communication exchanges between owners/managers and the clients contacting them, reassuring them with regards to their health, perhaps related to friendship connections that may have already existed between them).

Furthermore, when comparing the two strands of research, it was interesting to note that the qualitative strand of research identified a set of interventions that would not have been considered if the research was undertaken only quantitatively. This could be explained by the fact that, since the start of the data collection, respondents may have acquired more knowledge and consciousness with regards to certain interventions, based on the extent to which they were familiarising themselves with the very dynamic and chaotic situation caused by the pandemic and/or based on what regional and national institutions were considering doing in order to cope with it. In this vein, for instance, fiscal interventions were mentioned, along with communication regarding the safety guidelines that need to be introduced in establishments and should be obeyed by both employees and customers.

Moreover, from some of the qualitative responses, the need to have a destination-wide marketing activity was shown to be necessary in ensuring that the tourist season could restart. Indeed, several respondents mentioned the fact that visitors needed to be reassured about the safety of the destination so that they would start travelling again. However, contrary to previous research highlighting how the existence of network links between destination stakeholders and information sharing between them (Paraskevas, 2006; Sigala & Christou, 2006; Pearson & Clair, 1998) are among the prerequisites for successfully creating a new self-organisation and, in this way, successfully overcoming a crisis, the former has been mentioned very few times in this research, while the latter has never been stated. This suggests that respondents assumed a short-term orientation and were not considering the potential benefits arising from collaboration.

Finally, quite surprisingly the qualitative strand of research showed, in general, how infrequently respondents identified business actions that could be put into place to counteract the impact of the pandemic. Although support from public sector organisations is essential for overcoming crises, attention must be paid to future business development and innovation so that businesses can survive and subsequently thrive in this dynamic environment (Farmaki et al., 2020; Zhang et al., 2020). Instead, from the results of this research, it seems that the vast majority of respondents delegated their survival to public sector organisations and did not fully understand the need to develop innovative solutions themselves for implementation alongside more insitutional actions.

Overall, we can deem from the aforementioned interventions that the 'self-organisation' of the tourism industry is at a very embryonic stage, with a focus on short-term perspectives. This is also supported by the fact that, in only few cases,

respondents demonstrated an understanding of the need to change their industry and move towards a new model of tourism that differs from the traditional model of mass tourism. This leads us to believe that the vast majority of respondents were not in a position to make radical changes and place their business in a path that could lead to success and to effective crisis management in case a similar crisis might take place in the future.

In addition to this, from the suggested interventions, we can identify some of the stakeholders that could act as 'strange attractors'. Representatives of industry associations, DMO managers, and public sector representatives are the main stakeholders that can facilitate the transition of the industry towards a more sustainable future if a similar crisis happens again.

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## 6 CONCLUSIONS

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The aim of this study was to broaden our knowledge regarding the types of interventions that accommodation providers think should be taken by public and private sectors to cope with, and recover from, the current crisis caused by the pandemic. This would enable us to understand how innovative Italian hospitality entrepreneurs and managers are. Considering the lack of similar research conducted, due to the nature and scope of this unprecedented crisis, a convergent parallel design (data validation variant) grounded on chaos theory was carried out.

Our findings demonstrated that the Italian entrepreneurs and managers operating in the hospitality sector were focusing primarily on interventions from public sector organisations, with a lack of attention paid to actions implemented on a business-level, thus suggesting a deficit in the innovativeness and long-term orientation necessary to operate in the current dynamic environment in which businesses find themselves.

From a theoretical point of view, in focusing our research on Italy - a country that, so far, has not been investigated in academic research on COVID-19 in the hospitality sector - our findings contribute to scientific debates on the actions that businesses from different countries are adopting to counteract the impact of the COVID-19 pandemic.

Furthermore, to the best of the authors' knowledge, this is the one of the first studies to examine this topic adopting the lens of chaos theory, which is useful in analysing the extremely dynamic environment in which we find ourselves. Tourism is a complex system and is very vulnerable to the 'butterfly effect' (i.e. a small event, a single 'infection', causing a big consequence) and rapid change (i.e. 'bifurcation') when a crisis happens. This rapid change can take the tourism and hospitality sector either down a path that could lead to its destruction or one that might allow the sector to re-organise itself, thus reaching 'self-organisation' (through intervention from the public sector and the businesses themselves) and, in this way, start a new path of development facilitated by 'strange attractors' (e.g. industry associations, national and regional institutions, etc.). Furthermore, our results also show that, in this very chaotic and dynamic situation, in which it is also hard to understand when (and to what extent) the crisis will really be over, businesses find it really hard to envision the future of hospitality. Indeed, our findings seem to suggest that hospitality marketers are mostly driven by an

individualistic view of their business and by a short-term strategic horizon, which prevents them from: 1) thoroughly understanding the role that networking among stakeholders may have in coping with the current crisis; and 2) envisioning the future of the industry and, more broadly, that of the tourism development that may lead to the establishment of new forms of tourism (such as niche tourism and sustainable tourism).

From a managerial point of view, this paper offers hospitality industry associations important insights that could be used to develop future training, aimed specifically at entrepreneurs and managers of SMEs. For instance, shifting strategic orientation from short-term to long-term objectives, strategies, and plans, as well as fostering innovative business thinking could be established in future training. This could increase the extent to which businesses are resilient in times of crisis. In addition to this, industry associations should plan training and events to promote a collaborative culture that could express itself in co-marketing activities (e.g. joint promotional activities) and, more broadly, in joint initiatives in which businesses collaborate with each other in an attempt to further develop their local sector.

### 6.1 Limitations and future research

Similar to other studies, this research has some limitations. Firstly, it is highly site-specific (i.e. Italy), based on a convenience sample derived from a web-based survey with a snowball sampling technique. As such, it is not fully representative of the overall population under investigation (i.e. accommodations facilities in Italy). For this reason, the findings are less generalizable. Another limitation is related to the cross-sectional timeframe that could have somehow affected the data collection. In this regard, it is worth noting that chaos theory stresses the need for longitudinal studies that allow for the assessment of the effectiveness of actions put in place when overcoming a crisis (Jaques, 2007). In this vein, future research should focus on longitudinal studies that would allow for the detailed analysis of a crisis and the study of the extent to which actions against it are effective. Finally, this research was carried out in April and, at that time, the Italian National Government was still planning the array of interventions to be used to sustain the tourism and hospitality sector. Because of this, the study was not able to collect the accommodations marketers' views towards the effectiveness of the actual set of institutional interventions. These aspects would merit attention in future studies that seek to pool together - possibly relying on a longitudinal approach - a wide array of information in order to evaluate the extent to which business and institutions effectively listen to each other, thus increasing their ability to co-evolve and co-exist on the new path of tourism development that the pandemic seems to be delineating.

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