

Technology Usage for Crisis Management in the Hospitality Industry

Abstract

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Crises have negative effects on companies and lower demand for hospitality services worldwide. The purpose of this study was to determine how technology can be used by the hospitality industry to manage crises. A qualitative research methodology was used to assess the impact of crises in the hospitality industry. Purposive sampling was used to select 13 hospitality managers participants within Johannesburg and semi-structured interviews were conducted. Transcribed interviews were analysed using thematic analysis. Despite their lack of preparation for COVID-19, managers in the hospitality industry were able to effectively manage the effects well due to their knowledge, skills, and experience. Since there had never been a crisis like COVID-19 before, managers responded to it reactively and put plans in place to mitigate its impact. Furthermore, the research revealed that hospitality managers reduced their costs by laying off workers and temporarily closing businesses. Owners in the industry requested financial support from the government to maintain their operations and to introduce innovations. The management implications of this research will encourage a greater awareness of preparations for future pending crises. Owners of hospitality businesses will find this study helpful because it offers improved technical techniques and recovery preparations.

Keywords: Technology, crisis management, hospitality, crises, strategy implementation, recovery strategies

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Introduction

Potential economic prospects are presented to African nations by the tourism and hospitality (T&H) industry. In Africa, T&H was expected to rise by 55% between 2017 and 2027 before the COVID-19 pandemic (United Nations World Tourism Organisation [UNWTO], 2020). Nevertheless, T&H's potential growth and major contributions to the Continent's economy have been impeded by several crises, including natural disasters, political unrest, health issues, and economic recessions. For instance, there was a decline in international tourist arrivals as a result of the COVID-19 outbreak and national reaction measures such as border closures, social distancing, travel restrictions, and city lockdowns (Bama & Nyikana, 2021; Rogerson & Baum, 2020; UNWTO, 2020). COVID-19 stopped the growth of the T&H business in Africa, which was already hindered by socioeconomic issues such as load shedding, conflicts, underdevelopment, corruption, and droughts. Since COVID-19 was a novel pandemic, earlier research tended to focus on how it affected the T&H business. However, not much has been done to consider technological measures to reduce the crisis. Even though this study recognises the importance of past studies, more effort needs to be made to lessen these effects and keep the sector growing if similar disasters happen in the future. Based on earlier research, the T&H sector aimed to be better prepared for pandemics in the future (Lo et al., 2006; Wilder-Smith, 2006). Therefore, it is considered necessary to research how new technologies can help the T&H sector during uncertain times. Considering this, the purpose of this study was to determine the effects of various current crises have had on the T&H sector and investigate how technology can be used to reduce those and improve sustainability in the sector. Early signs suggest that innovation has been widely applied to address several T&H crises to boost resilience; as a result, technologies have become essential (Hall et al., 2020). The research determined how hotels around the world could deploy the use of technology for crisis management intelligence and skills to combat the modern economic stagnation and poor performance of typical hospitality businesses (Baum & Hai, 2020). In addition to attempting to pinpoint technological recovery solutions, this study aimed to comprehend and analyse the effects of the crisis on the T&H sector. This study aimed to answer the following research questions; 1) What technologies are used in T&H to prepare for a crisis and strategies? 2). How to use technology to determine the effects of a crisis and plan the contingencies? 3). How can hospitality establishments adopt technology to remain sustainable after a crisis?

Literature review

Hospitality industry

Being friendly to visitors is what is meant by the term hospitality (Brotherton, 2016). Another definition of hospitality is the act of entertaining and extending a warm welcome to guests or visitors (Brotherton, 2016). Furthermore, companies like hotels, pubs, and restaurants that provide food, beverages, or a place to sleep are included in the definition of the hospitality industry (Brotherton, 2016). Most people typically think of hotels and restaurants when they think of the hospitality sector. However, there are connections between the hospitality sector and a wider variety of various sectors (Pizam, 2020). Pizam (2020) defines hospitality as encompassing any industry that offers lodging and/or meals to guests. Since certain companies in the hospitality industry are open twenty-four hours a day, seven days a week, while others have irregular hours, the industry is thought to be unique. Weekends and evenings are also included in the work schedule (Brotherton, 2016). The primary aim of the industry is to increase customer satisfaction as it leads to both repeat business and earnings, but since most of the services are intangible, it is not possible to sample them before making a purchase (Pizam, 2020). The global economy depends heavily on the



hospitality sector. It is among the most dynamic industries in the world (Selisho, 2020). Additionally, a thriving hospitality sector can improve infrastructure and local economies. Travelers who make purchases at hotels and restaurants immediately support the regional economy. Additionally, because visitors purchase retail goods, the hotel sector indirectly affects the economy (Selisho, 2020). The cornerstones of the hospitality industry are the consumer's disposable income and free time (Pizam, 2020).

Crises in the T&H industry

Alves et al. (2020) stated that crises can be extremely damaging since they lower brand value, undermine customer trust, put pressure on executives by giving them little time to respond, and even generate company losses. A crisis affects the business, not only damaging economic growth but also many T&H businesses' financial prospects (Chokoe et al., 2023; Coombs, 2021). It is important to keep an eye on crises to stop harm from happening since travellers prioritise safety when choosing their destinations and because crises can reduce arrivals, hotel room demand, and occupancy percentages (Sio-Chong & So, 2020). The T&H industry can be badly disrupted by crises because it can take more than a year for regular travel patterns to return (Alves et al., 2020). Every crisis has the potential to affect a destination's attractiveness and reputation, as well as its ability to succeed and endure (Coombs, 2021). The T&H industry can be significantly impacted by a wide range of crises, including terrorism, disease outbreaks, natural disasters, and political unrest (Department of Tourism, 2020). The sector's operations, reputation, and financial stability may suffer long-term effects because of these crises. Among the most dangerous problems facing the T&H sector are hurricanes, floods, and fires. These disasters have the potential to gravely damage the infrastructure supporting tourism, disrupt transportation systems, and risk visitor and staff safety. For example, Hurricane Maria in 2017 caused significant damage to Puerto Rico's tourism infrastructure, leading to a substantial decline in tourists and the closure of many hotels and attractions (Best & González, 2021). Terrorism poses a major threat to the T&H industries. Terrorist attacks can cause fear, disrupt transportation, and damage infrastructure associated with tourism. Diseases like COVID-19 have also had a major influence on the sector (Sucheran, 2021). Travel restrictions, flight disruptions, and a decline in demand for tourism were the outcomes of these outbreaks (Department of Tourism, 2020). According to estimates from the World Tourism Organisation, COVID-19 severely reduced global tourism, with foreign visitor arrivals dropping by 73% in 2020 (UNWTO, 2020). Civil unrest and protests provide a significant challenge to the T&H industry since they disrupt operations, damage infrastructure, and endanger the safety of both workers and visitors. For example, the 2019 protests in Hong Kong drastically decreased the number of tourists visiting the city, with hotel occupancy rates dropping as low as 50% (Poon & Koay, 2021).

According to Pappas (2018), Paraskveas & Quek (2019), Poon & Koay (2021), and other scholars, managers' desire and readiness to alter long-standing procedures and to plan for future crises will have a significant impact on how well a hospitality company manages its crises. But hotel managers do not spend as much time planning and managing crises as they should (Wang & Ritchie, 2013; Wang & Wu, 2018). Evidence suggests that hotel executives are reluctant to devote budgetary and financial resources to crisis preparation, despite the negative effects that various crises can have on the industry (Ghaderi et al., 2021; Wang & Wu, 2018). Various justifications have been given for this unwillingness; a few scholars feel that crises cannot be forecast and that giving money and resources for an action that may not occur is inappropriate in hotel financial management (Ghaderi et al., 2021). The best method to cope with a crisis in a T&H business is to plan ahead of time to avoid the situation in the first place (Paraskevas & Quek, 2018). According to various professionals, the negative effects of crises can be minimised or avoided if businesses plan ahead of time (Pappas, 2018). As a result, T&H businesses might avoid negative outcomes by wisely preparing themselves (Pappas, 2018). Therefore, technology can be a helpful tool for T&H industries to improve crisis management. To lessen the effects of these crises, crisis management strategies that work are required.

Technology

Technology has become more widely used in the hospitality industry, which has led to the development of new tools and methods for improving customer satisfaction, boosting operational efficiency, and boosting revenue. One of technology's biggest impacts on the hospitality industry has been the creation of smartphone apps and online reservation platforms. These systems enable clients to book and manage hotel, airfare, rental car, and other travel-related services online, saving time and effort for hotel staff and giving customers more convenience and flexibility. Hotels are utilising technology to improve the experience of booking and staying for their guests. For instance, hotels are adopting smart room technologies like voice-activated assistants and in-suite tablets to provide guests with more personalised experiences and control over their stay. Many hotels are using virtual reality (VR) and augmented reality (AR) technologies to provide virtual tours of their facilities and nearby attractions to enhance the visitor experience (Israel et al., 2019). Technology plays a major role in increasing operational efficiency which benefits the hospitality industry. To improve resource allocation, reduce waste, and maximise price and inventory, hotels are implementing cutting-edge analytics and revenue management systems (Hall et al., 2020). Moreover, hotels are using automation and robotics to reduce labour costs and increase productivity in departments like food service and housekeeping (Buhalis et al., 2019). Furthermore, technology is taking on a bigger role in the hospitality industry's crisis management as hotels use digital communication tools, like social media and messaging apps to quickly inform clients and staff during a crisis (Buhalis et al., 2019). In addition, hotels are utilising machine learning and artificial intelligence to identify possible crises and develop effective crisis management strategies (Law et al., 2022).

Recently, technology has been widely utilised in the T&H industry (Gössling, 2021). As a new area of study, technology is inspiring fresh ideas on crisis management in the modern world (Wut et al., 2021). COVID-19 and the economic slowdown that many nations are currently experiencing have renewed interest in crisis management studies (Gössling et al.,



2020). T&H has changed along with society and how services are delivered because of technology (Gössling, 2021). Today, technology plays a crucial role in the T&H industry's marketing, delivery, and attractiveness (Xiang et al., 2021). New technologies that are fostering innovation in the T&H sector include augmented reality, virtual reality, and artificial intelligence (Stankov & Gretzel, 2020; Valeri & Baggio, 2021). Emerging technologies, like artificial intelligence, virtual reality, and augmented reality systems continue to promote innovation in the T&H industry (Stankov & Gretzel, 2020; Valeri & Baggio, 2021). COVID-19, which earlier increased the implementation of technology, requires customers and hospitality businesses to properly engage with one another (Gössling, 2021). Since COVID-19 has impacted people everywhere, 4IR technologies have been employed to lessen the virus's effect on the T&H industry's performance. When people were remaining at home and isolating themselves from others, several 4IR technologies were utilised to replace the physical activities of the T&H business (Yallop & Seraphin, 2020).

Methodology

Qualitative research was crucial to the study to fully understand the attitudes and behaviours of T&H managers towards technological innovation and crises in the business (Korstjens & Moser, 2018). Managers of different hospitality businesses were approached to find out what they felt about technology, how crises affected the industry, and how the innovations might help their establishments. The main method of gathering data was semi-structured interviews, which gave the researcher the freedom to ask any relevant questions about the topic. To broaden the understanding of the effects of crises, crisis management, technological innovation, and strategies for maintaining the hospitality industry, ATLAS.ti, a computer-assisted qualitative data analysis tool, was utilised in conjunction with an exploratory content analysis approach (Creswell & Poth, 2018). To identify and document connections between different sides of the phenomenon under study, an exploratory methodology was used (Creswell & Poth, 2018). Purposive sampling, also known as non-probability sampling, was utilised in this study to choose 13 hotel managers in the Johannesburg area. It made it possible to divide participants into groups based on a set of standards relevant to a particular study issue (Yacoub & El Hajjar, 2021). The participants were managers or owners of different Johannesburg-based hospitality businesses. Semi-structured interviews are typically conducted using this study method (Davahli et al., 2020). Interviews have several benefits, such as their ability to accurately screen candidates, their ability to capture expressions and behaviours, and their concentration and directness (Denzin & Lincoln, 2018). The University of Johannesburg's Ethics Committee granted ethical clearance before the start of data collection. The interviews were conducted in English, with participants who were at least 18 years old and employed in the hospitality industry (Davahli et al., 2020). In-person interviews took place between May and August 2023. Trustworthiness was used as a measure of validity and reliability (Lincoln, 2018). Validity and dependability are measured using trustworthiness (Denzin & Lincoln, 2018). The four criteria of trustworthiness: credibility, transferability, dependability, and confirmability were first presented by (Lincoln & Guba, 1985). A single pilot interview was carried out to enhance the study's quality. The interviews were coded, and transcriptions were made when they were completed. Thematic analysis, which produces brief overviews and interpretations in terms of themes and patterns from a data set, was used to analyse the data (Braun & Clarke, 2023).

Findings and discussion

The thirteen hotel managers that participated in the study were allocated a unique number from P1 to P13 that matched a different feedback count for confidentiality to aid in the process of coding the data analysis. The respondents were all service providers in the hospitality industry with appropriate T&H qualifications. See Table 1 for the demographic information provided by the participants.

Table 1: Demographic information of participants

Item	Category	Interviewees
Age group in years	<29	5
	30-39	7
	60-69	1
Qualification	National Diploma	6
	Advanced Diploma	2
	Bachelor's degree	5
Industry	Hospitality (Hotels)	All
Business legal status	Private company	All

Following a thematic analysis, several themes and subthemes about crisis management in the hospitality industry were identified. The findings identify potential tactics for other hospitality businesses and are shown in Table 2 below.

Table 2: Summary of themes and comments

Main themes	Comments
Effects of COVID-19 on businesses	Closure of businesses, financial limitations, future uncertainty, revenue losses, loss of livelihood, decline in travel
Load shedding effects on businesses	Running business at a loss due to buying petrol and diesel
Predictions for the future of the hospitality sector	The crisis prompted businesses to reconsider
The future of the hospitality industry without the use of technology	Time-consuming, the industry will be limited
Government intervention for COVID-19, load shedding and transformation	The government relief fund, policies and regulations, the transformation of innovations
Planning and crisis management to recover	Lack of disaster management and contingency planning systems, training for staff
Strategies in advance for a crisis	Best to react to what we are facing, collaborate and work together
Impact on business operations	Difficulties in operations
Technology implementation in the hospitality industry	Technology makes operations easier, but worry of job loss and an increase in crime

COVID-19's effect on businesses

Questions about the participants' experiences with COVID-19 were made to learn what they were thinking about the pandemic



at the time of the interview. In response to this question, two themes emerged: future uncertainty and financial constraints. "The industry faced numerous challenges during this difficult period, including hotel closures, job losses, and low occupancy" (P3). The other participants agreed (P1, P2, P6, P7, P9, P10, P11, and P12) and this is supported by Charles (2020) by stating businesses were expected to fail and of which most did fail during the COVID-19 period. Hospitality providers indicated that the COVID-19 epidemic has put them at risk of financial difficulties, and for others, it has resulted in business failure (P2). Due to the crisis, a few hotels expressed concern about how long they could stay in business. Participants P1, P2, and P3 all agreed, but P2 added, "They struggled to stay alive and keep their employees employed." Managers had done their best to keep on running but they had to follow government regulations to close down the hotel". The Department of Tourism (2020) supported the statements made by P1, P2, and P3 highlighting that a national lockdown was introduced to try to contain COVID-19. The question that followed asked how the hotel group managed the large number of cancellations and financial loss. This is a crucial question since it reflects the physical, mental, and emotional responses to the effects of the crisis. "Without warning, our incomes were cut by 50% in March 2020" (P4). "There was a huge decline in salary, and several hotels closed" (P8). "Salary was dramatically reduced with heavier effort than previously" (P13). "It affected my way of life, and I had to adjust" (P8). The nationwide lockdown resulted in income cuts or job losses. Some staff were allowed to keep their positions, but their compensation was cut in half, and personnel working in operational hotels were at a higher risk of infection (Department of Tourism, 2020).

P5 stated that "the hotel had to be closed; they had a couple of security officers running the facility and one manager answering phone calls at reception. They ran the hotel with no guests for security reasons, and all lights were turned off, including the generator, which had no water" (P5). According to P10, "no one was permitted to enter the hotel, and because the building was not maintained, a lot of water damage was done, and they had to cut off items and 25% of salary" (Buhalis et al., 2019). "We were affected, and even when the guest coughed a bit, our crew would feel it was COVID-19," (P10). COVID-19 benefited hotel managers in terms of learning and gaining experience. All of the participants indicated that they learned from the crisis; P1 stated, "We learned how it should be not to catch a crisis like this suddenly again, that there should always be a saving and capital aside." P9 stated that the crisis had contributed to hygiene and cleanliness, stating, "This process has contributed to customers and staff paying more attention to cleaning and hygiene requirements." P13 remarked that the usage of technology during the crisis was beneficial and that they discovered how quickly they could move. According to P11, "the feedback from guests was positive as guests commented on their hygiene." Regarding the COVID-19 inferences made by hotel managers, P9 stated that "they believe one of the best lessons given by this process is that one should have a strong financial background before investing in fragile sectors like the hospitality industry." Participants expressed concern about their company's decreasing consumer spending and bad cash flow. Uncertainty about a crisis was also mentioned, as they were unsure how long COVID-19 would be in effect or if lockdown measures would be enforced again (Department of Tourism, 2020).

Predictions for the future of the hospitality sector

The exercise of asking participants what they felt the future held was subject to interpretation; it also demonstrated how managers' plans and perceptions on the path to recovery differed. This could be due to their various circumstances and organisational culture types. P5 predicted that "everything should be back to normal by the end of the second quarter of 2023, and of which all is well today from COVID-19". Luxury hotels according to the findings, are always the first to recover faster than smaller hospitality enterprises. According to hotel managers' experience, strong brands will survive a crisis and be sustainable after the pandemic (P7), whereas inferior brands would invariably close down during a crisis. "A crisis drove businesses to reconsider their strategies and customer behaviour has evolved substantially since COVID-19" (P4). "People choose promotions and discounts, putting even greater strain on hotels due to the economic downturn," (P7). However, as stated by P7, we must reengineer our supply chains, offer new engagement norms to our employees and consumers, and adhere to new ways of doing things utilising technology. A crisis triggers a shift in the industry, prompting it to begin using artificial intelligence to develop and give outstanding service. The industry now has methods and strategies in place to deal with crises in the future. The notion that hospitality managers should value planning and devote more time to preparing for potential risk conditions (Pappas, 2018; Sao Joao, 2021), whereas the study of Wut et al. (2021) supported the participants' comments about technology innovation within the industry is the way forward and the industry's future.

Pre-crisis strategies

The question was asked if the hospitality managers had strategies in advance, ready for any crisis. From the findings, managers have or had no strategies. Participants 1 to 13 all agreed that COVID-19 resulted in great uncertainty which stalled other plans. "We may have certain safeguards in place, only to discover that they are not appropriate for what we will face tomorrow. It is best to always react to what we are confronted with" (P7). This is supported by Pappas (2018) by stating that as long as we don't know what future crises are, it is always best to act when facing a crisis. "One way is teamwork and working together to find measures and opportunities to get to inform each other," said P6 and P7 commented that "For example, discovery keeps our groups informed of any crises that may arise, so that if all other hotels or businesses in the T&H industry collaborate with the discovery, we can manage the problem". P5 revealed that "there was no strategy to avoid a crisis, and if one occurred, it occurred." P5 also stated that "in May 2023, one of their guests tested positive for COVID-19, and they had to close him down because there was no way they could have allowed him to stay for free in the hotel." The hotels lacked effective crisis



management plans that may have contributed to the safety, and satisfaction of both guests and workers. The results of the study have clarified the significance of planning and organising.

Technology implementation in the hospitality industry

The question about hotel technology adoption served numerous purposes and provided valuable information about various aspects of hotel operations. As indicated by P1, P2, and P8, the significance of a proper crisis plan must be highlighted in the context of technological disaster preparedness and its consequences for the hotel business. “Technology makes our lives easier since we utilise Property Management System (PMS) to operate the operation; it is easier and faster to use, and we can follow our guests' records using it” (P8). P5 mentioned “having a contactless menu where visitors use a phone to scan the bar menu to order, as well as being in the process of going green to minimise costs”. Participants P1, P3, and P9 were concerned about the application of technology because they were concerned about job losses due to technology. They also predicted an increase in crime because it is much easier to defeat technology by conducting crimes such as hacking. Hospitality is all about human interaction; if self-service robots are deployed, hotels may lose some customers. Implementing robotics may not be suitable for everyone, as some elderly people are unable to use technology for self-service (Gössling, 2021).

Furthermore, P2, P9, and P10 indicated that technology can be used in a variety of ways, such as mobile apps allowing visitors to check in and depart. McDonald's has implemented the employment of robots at one of its restaurants, as well as self-service screening. The sector is significantly reliant on technology since it can handle crises by employing communication means such as emails and mobile apps to efficiently inform guests and employees of any changes in hotel operations and emergencies. P3 and P4 went on to say, “Technology can be used in hotels to improve the guest experience, speed up operations, and boost productivity. We are using smartphone check-in and check-out for self-service to reduce long lines and encourage a straightforward guest experience, and our visitors can place food orders via smart devices in their rooms or by scanning the menu”. This was supported by Gössling (2021) by stated technology has altered society and the way services are provided in the industry. Participant 5 expressed concern about the use of technology such as robotics, claiming that “they are highly unprofessional to use for a cup of coffee, as an example”. He went on to say that “guests will visit hotels with robotics just to experience the robot and not return because they are unable to communicate with them.” Some guests prefer to interact with people rather than machines. P6, P7, and P12 mentioned having physical and QR scanners to accommodate everyone. “We have the group application to help with destination specifics, showcasing all the surrounding locations and all the sites of interest” (P7). Technology is playing an important role in making life easier and more cost-effective (Hall et al., 2020). The findings demonstrate how technology integration in the hotel industry has progressed from a luxury to a necessity. Technology is critical in building a new hospitality sector, revolutionising visitor experiences, and adapting by enhancing operations and increasing revenue. Hotels that intentionally employ and adopt these technological innovations are better prepared for inventory increases in a more competitive field (Buhalis et al., 2019; Hall et al., 2020). Table 3 summarises the advantages and challenges of technology usage that have been identified from the study.

Table 3: Advantages and challenges of technology usage

Advantages	Challenges
Enhance operations	High energy consumption
Cut cost and increase revenue	Lack of finances
Private and secured	Lack of government support
Improve the knowledge	Increases crime

According to the findings, the government failed the majority of the hospitality establishments during COVID-19. Furthermore, it continues to underfund the industry in terms of transition subsidies. Most hospitality businesses lacked contingency plans, and technology should be utilised to help with operations. The table below summarises the highlights of the positive and negative effects of the impact of crises on hospitality establishments.

Table 4: Effects of crises on the hospitality industry

Positive effect	Negative effect
Revision of marketing plan	A decline in revenue or cash flow
New strategic decisions to streamline businesses	Decline in occupancy
Technology adoption	Revised business model
Infrastructure development	Travel uncertainty
Brings stakeholders together	Shutdown of businesses
Implementation of efficient hygiene measures	Loss of livelihood

Managerial implications

To expand and succeed over the long run, innovation is now universally acknowledged (Sharma, Shin, Santa-Mara & Nicolau, 2021) as a crucial component for T&H businesses, organisations, and destinations. Innovations might take the form of a new service, management, and managerial decision. Sharma et al. (2021) describes innovations as anything that shifts from business-as-usual or that in some way indicates a withdrawal of prior practice for the innovating company. Innovation in T&H has recently drawn more attention than before (Cao, Shi & Bai, 2022). As a result, it is acknowledged as a highly significant tool, particularly for the T&H industry and small and middle-sized enterprises (SMEs) within the industry (Filimonau & Naumova, 2020). Some researchers believe that the size of the business has a negative link with innovative activities. T&H, as a member of the service sector, must deal with emerging technologies, new clients, and changing customer preferences. Innovation offers a valuable opportunity to influence the sector's ongoing developments in the future. Many other industries are closely related



to tourism. This confronts numerous challenges, in addition to a few opportunities (Filimonau & Naumova, 2020). Given the importance of loyal and local customers in crisis recovery (Breier et al., 2021), it is crucial to remember that customers value hospitality business innovations (Filimonau & Naumova, 2020). The hospitality industry is also aware that its clients want continuous innovation (Cao et al., 2022), and as a result, they strive to continuously develop a form of technology to compete in the market (Breier et al., 2021) as mentioned below.

The recommendations are based on the data collected, the analysis performed, and the conclusions reached during this research. However, some conclusions are also drawn from the theory applied to the data collected. Crisis management is an effective method for mitigating the effects of a crisis. The following are some critical aspects of crisis management that deserve special attention. Training of staff as the employees in this sector should be well-trained to use innovations and deal with crises and emergencies. Understand the necessity to have contingency measures in place so that the establishments can respond to any crisis they encounter. Businesses can learn from past crises and strengthen their preparedness for future disasters by utilising crisis management processes. Conducting post-crisis assessments aids in the identification of areas for improvement and the refinement of response measures. Recovery measures should be clearly communicated, especially important for cash flow management, loss reduction, and long-term planning. These efforts could include getting emergency funding, renegotiating contracts, or implementing cost-cutting measures. The study is original in that it adds to the discussion about crisis management in the hospitality industry, which has previously focused on COVID-19, financial crises, and natural disasters. The literature shows that government aid is critical for crisis resolution. The findings confirm the consequences of a crisis in the hospitality business, as well as the importance of technology in the industry. The findings of this study add to past knowledge by indicating that technology can be used to overcome a crisis in the hospitality industry.

Conclusion

Managers and owners devised strategies such as cost-cutting, like stopping operations and laying off employees, to keep their businesses afloat in the face of a crisis. Managers and owners-maintained health standards, hygiene, and technology implementation to keep the business running. The study used a qualitative technique to investigate the significance of views in understanding their experiences. The current study aimed to look at how the crisis affected the industry and the usage of technology for crisis management in the hospitality industry. It was discovered that the hospitality establishments in the Johannesburg area failed to achieve financial stability because of the crisis; with few having contingencies in place to deal with the low occupancies. The study discovered that the hospitality sector has seen an increase in the use of technology, which has given rise to new tools and approaches for enhancing the customer experience, increasing operational effectiveness, and increasing income by utilising technologies such as digital communication tools, like social media, messaging apps and emerging technologies, like artificial intelligence, virtual reality, and augmented reality systems to remain sustainable. This study looked at the managerial answers of hospitality providers to the crisis issue, as well as prospective technical future strategic options that the business could follow. The study had some limitations as only hotel managers were contacted for interviews while a greater variety of management employees may contribute a broader perspective. The study was limited only to hotels in Gauteng, not the hospitality industry, such as event companies, casinos, and cruise ships. The study only focused on 13 hotels in Gauteng. If managers from varying parts of South Africa and varying types of hotels were included, broader perspectives may have been obtained. Some participants were hesitant to share the required details because they were suspicious even though the researcher assured them that their personal information would remain confidential. The difficulties faced during the research were participants who were distrustful and refused to offer the necessary facts while other participants repeatedly postponed being interviewed. In terms of recommendations for future research, this study investigated the use of technology for crisis management in the hospitality industry by interviewing hotel managers in Johannesburg. More research is needed to identify how technologies might be employed as a crisis management approach in the hospitality industry. This will enable identifying some of the challenges and benefits of using technology in the hospitality industry more easily. Further research is needed to assess the extent of load shedding's effects, as well as the steps the sector may take to reduce epidemic vulnerability, natural disasters, and other future crises.

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