New Technological Interventions Pertaining to Hospitality Industry to gain Competitive Advantage during Covid-19 Pandemic.

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Abstract

The world is on the threshold of recovering from the pandemic COVID-19. The pandemic has put the safety and security of the guests as a prime focus for every industry. The Hospitality industry is all geared up to welcome the guests while adapting to the newer technological trends which assure guest safety and security to handle crisis. The industry has realised the value of technology which acts as a catalyst in providing guest satisfaction while reducing the operational inefficiency. The Hotels which are quick to adapt to the technology would be ahead in the business as compared to the ones which are late. The reassurance of the technological applications at various touch points will add value and satisfaction from the customer's perspective. The industry has been quick to adapt strategies for efficient management of the crisis. Implementation of safe and hygienic practices to handle guests with inclusion of technology has increased. The staff has undergone systematic training sessions to handle any crisis situation. In this paper we would explore the new technological interventions which the Hotels have adapted to enhance value perception while assuring health safety and confidence. The adaption to the new technology is increasing the expectations of the guests and even the hospitality operators to add competitive advantage. The paper will carry a qualitative research to understand how the hotels adapt the new ways to deal with crisis which impacts the industry in the adverse manner. A study of literature from articles and papers in Scopus Journals, Web of science, Google Scholar, UGC Care journals, Previously publishes articles in leading Hospitality Magazines will be reviewed for the completion of the paper.

Key Words: Technology, Crisis Management, Hospitality, Competitive advantage, Pandemic, COVID-19.

Statement of objectives:

- To understand the impact of COVID-19 Pandemic on the Hospitality
- To analyse the advancements of technology to provide touch less service and the use of technology for effective crisis management.

Introduction:

In December 2019, the world woke up to a virus which actually changed human beings drastically. The disease was described as an infectious disease that is caused by severe acute respiratory syndrome coronavirus (Adim, et al 2020). The spread of the virus was very quick and soon the virus had spread to 196 countries in the world. The disease has greatly slowed down economic activities across the world, with many countries coming under partial or total lockdown (Oruonye, & Ahmed, 2020). Human being is a social animal, it is really difficult for a human to not indulge in activity which includes his/her close people, be it family, friends. Due to the Covid-19 pandemic, the world's economy was shut down almost overnight (UNWTO, 2020). In only a few months, the coronavirus (COVID-19) impacted the world, both socially and economically. Hospitality, Aviation, Sports, Transportation and Tourism, as a "high-touch" industries, have come to a grinding halt under social distancing guidelines and

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travel bans (Jamal & Budke, 2020). As the hospitality sector thrives on international and domestic tourism, got affected severely due to the lock down which was imposed by many countries. The industry is known for its grandeur glamour and service which is given to people by people. The pandemic changed the way the Hospitality Business would operate. Hospitality businesses are expected to make substantial changes to their operations in the COVID-19 business environment in order to ensure employees' and customers' health and safety, and enhance customers' willingness to patronize their business (Gössling et al., 2020). This actually has paved a way for newer ways of service and bring the confidence in guest. History has shown that a crisis can bring about technological innovation and development (Colombo, Shikha, Hasanat, Arif & Hamid, 2016). Due to advances in artificial intelligence (AI), miniaturization, and other technologies, robotics have grown increasingly more viable in hospitality and tourism industry settings to provide concierge, housekeeping, food, and other service tasks (Yu, 2020). The service industries have come to recognize their potential for delivering an automated service to increase productivity, service capacity, provide consistent service quality, improve competitiveness, to cut costs, and improve financial results (Belanche, Casaló & Flavián, 2019; Ivanov & Webster, 2019c). For example, after the current pandemic (COVID-19) people may desire to have physically distant service which may not be possible with receiving service from human employees. Thus, robotics may increasingly gain importance in terms of providing physically distant hospitality and tourism services (Seyitoğlu & Ivanov, 2020). The hospitality industry is a dynamic environment in a constant state of movement and evolution. Through technology, the last several years have witnessed the industry change at an unprecedented pace (https://tisoh.edu/).

Hypothesis:

- H1 The Pandemic, COVID-19, has had an immense and adverse impact on the hospitality sector.
- H0 There has been no significant impact of the Pandemic, COVID-19 on Hospitality
- H2 Hospitality sector has adapted the technology for better service and experience of the guests.
- H0 Technology does not affect the hospitality sector as it works on the principles of human touch and technology hasn't developed in the sector.
- H3 Hotels have adapted technology in the testing times to manage crisis and also sustain the business.
- H0 Hotels have no clear strategy to handle crisis.

Research Methodology.

This study uses the evaluative research methodology to analyse the effectiveness of the technology in the crisis situations to make recommendations for the future of the Hospitality Industry. The basis of this paper is on the secondary data and the outcomes are qualitative in nature. Scholarly articles from reputed journals are reviewed and assessed for compilation of the data. 34 scholarly articles from reputed journals and authors from national and international repute have been reviewed. The work is also an outcome of articles and e newsletters published online. All the referred work is recent and most of the articles referred are published in the year 2020 which adds validity and recency to the work. A detailed questionnaire has been circulated to gain a clear understanding of the situation and the impact of technology in these crisis times. Responses from 45 industry experts and guests have been recorded and analyse for the purpose of this research.

Review of Literature

The outbreak of the new coronavirus infection, COVID-19 was initiated from the Hunan seafood market in Wuhan city of China in December 2019, and within a couple of months it turned out to be a global health emergency (Adim, et al 2020). This caused the countries to call a nationwide lock down, close national and international borders. As the situation is still recovering, travel restrictions are being observed at national and international levels. These travel bans, border closures, events cancellations, quarantine requirements and fear of spread, have placed extreme challenges on tourism and hospitality

sectors (Gössling et al., 2020a, b). Air travel, for instance, has been regarded as an amplifying and accelerating factor for influenza (Browne et al., 2016) and this segment has witnessed significant curtailments as the need of personal safety and survival has become pivotal (Nicola et al., 2020). A good and accurate information and communication system helps the hotel to communicate with their guests about all the safety measures the hotel is taking to minimize the risk of contamination. Improvement of information and communication technologies can optimize the innovation performance, brand awareness, and reduce the safety risks. (Arthur, L.2020). Social media is playing a huge role in today's world to connect with the guest and provide a clear and up to date information about their favourite brand, and the status of operations. According to DeLone and McLean (2003), the content of an information system should be personalized, complete, relevant, and easy to understand. The hotels are also using live promotions in many live streaming platforms to help their guests to get reliable, timely, accurate and reliable information about the hotel. The experience of the Covid-19 pandemic shows that robotic technology could be efficiently and effectively used for cleaning, disinfection, delivering food and medicines, or providing information related to the pandemic to people (Marr, 2020; Yang et al., 2020), because robots are not affected by the virus. The service of the food or any small housekeeping requirements can be delivered by robots to curb any contact of the human being and to spread the feared virus. To provide a suitable example, in February 2020 the food delivery giant Meituan Dianping introduced robots in some of its partners' restaurants in Beijing that helped in taking food from kitchens to delivery employees and customers waiting for takeout orders (Toh & Wang, 2020). If a guest is infected and is obliged to remain under quarantine in the room, a hotel may use robots to deliver food, linen, and other items, without risking the health and safety of the staff (Guzzo, 2020; Kent, 2020). Covid-19 changes the cleaning routines in hotels, and some of them have started to provide "social distancing seclusion" service to their guests (Glusac, 2020). Utilisation of artificial intelligence and robotics in the industry was also recommended, which falls in line with various scholarly recommendations (Ivanov and Webster, 2018; Webster and Ivanov, 2020; Yang et al., 2020). In the post-viral world, the use of robotics may be widespread as people would be more concerned about their safety; safety and security may be one of the main factors that influence tourists' choice of a destination and particular tourism/hospitality service provider (Hall, Scott & Gössling, 2020). Hotel operators are beginning to pay closer attention to the potential benefits of artificial intelligence (AI) and its applications, such as robotics, in hotel management practices (Zabin, 2019). Although the hospitality industry is known for its human touch, such a development in technology will take some time to actually come in to existing at least in Indian business situation. The robotics would also require a huge investment from the Hotels end to be fully operational. Apps, such as Hilton's Digital Key app, allow hotel guests to choose their guest room, check in, and unlock their door using their mobile device (Comcast Business, 2018) Such apps can be developed to increase guest convenience and confidence.

Discussion

Due to the Covid-19 pandemic, the world's economy was shut down almost overnight (UNWTO, 2020). The hospitality industry has slowly started to come on track by opening their doors. International travel is becoming more difficult with the closure of borders, airlines suspending flights, airports closing, exit bans and further restrictions being introduced daily (FCO (The Foreign & Commonwealth Office),2020). The international tourism is still at far, the hotels have to depend upon the domestic tourists to get back to business as usual. Early ideas to cope with crisis situations were established by Mansfeld (1999) and consisted of increased marketing efforts to target local customers, the dismantling of infrastructure, and the call for governmental support. Further investigations of Israeli and Reichel (2003). However this is still a challenge even when the vaccine is around the corner and India might begin its biggest vaccination by January Second week. The hotels have adapted the best possible technology to build guest confidence and to keep its competitive advantage. It is anticipated that robot receptionists, facial scan check-ins, voice guest control, robot delivery, robot concierge assistants, and other contactless services will begin to replace human-to-human contact services in the near future (Adim, et al 2020). Hotel operators are beginning to pay closer attention to the potential benefits of artificial intelligence (AI) and its applications, such as robotics, in hotel management practices (Zabin, 2019). The studies have indicated that AI and robotics impact the hotels at the individual and organizational level (Tussyadiah, 2020). By having up to date technology at its disposal, any hotel can

keep itself ahead in the race of competition. Improved guest service to ensure safety and security in these testing times have become vital. In the busiest times, the guests would have to wait for their turn to check in to a hotel, but these days, the technology has allowed the guests to pre-register themselves even before they have checked in to the rooms, there are kiosks which enable self-check in and check out, and furthermore there are mobile apps which the guests can download and check in as they enter the hotel. These also allow a faster, smoother and safe check out processes. All these are on the guests mobile or tablets so becomes safer to handle. Findings indicate that a large proportion of restaurant customers (64.71%) and the majority of hotel customers (70.42%) believe that the use of various technologies in service delivery will be necessary in the COVID-19 environment in order to minimize human-to-human contact (examples: service robots, contactless payment such as Apply pay or contactless bank cards, digital menus that can be viewed on personal mobile devices via QR codes, contactless digital payments, keyless entry, touch less elevators, etc.) (Gursoy et al., 2020). Recent developments in artificial intelligence (AI) and social service robot technologies have enabled the use of AI technologies in service delivery and the Covid-19 pandemic may precipitate the popularity of such technology for public safety reasons. Therefore, it is crucial for hospitality researchers to investigate how AI device use in service delivery will impact operations, employees, and customers (Gursoy st al., 2020) Hotels, conference centres and other hospitality locations, therefore, must continually be one step ahead in providing the right technologies that will "wow" their guests—and some that simply provide an extra level of convenience that guests will appreciate. (Comcast Business 2018) Consider, for example, hotel rooms that measure the body temperature of guests as they enter and automatically adjust the room temperature for maximum comfort. Or the ability for guests to begin a call using their in-room desk phone and seamlessly switch to their mobile devices mid-conversation. Or connected rooms with Siri-like interfaces that enable guests to request extra towels, order room service or call up a movie on Netflix simply by asking. Marriott International's Aloft Hotel group is using a technology called ChatBotlr, which the company says has a 5-second response time to customer queries. Using ChatBotlr, guests can request services, receive information about the hotel, listen to music playlists curated by the hotel and connect with the front desk team from any location, even off-property. (Marriott International, Sept. 28, 2017) Following are the few examples of how the hotels are using technology to handle the crisis and unprecedented situations that may arise.
Social Media and Websites.

The social media is a very powerful tool in today's world, people can connect with several other people and know a particular hotels service and standards. It acts as a digital marketing tool for the hotels to create a positive image. Developments about the norms, hygiene standards, and safety measures can all be easily shared on the social media in a timely manner to keep the potential guests informed.

Virtual Reality

It is a kind of technology that provides guest a real time view of the hotel and the room that they would be staying in. This can be used to show the guest the hygiene and sanitation standards that the hotel follows which will assure safety to the guest.

Chatboats

It is a service which allows the guest to interact with a person or artificial intelligence. These are very handy tool to communicate to the hotel. This can be used from the guest's own gadget to curb any risk of contamination. The guest can choose services or request for cleaning of rooms, ask for laundry assistance, extra towel or any other requirement.

IOT

Internet of things is a commonly used technology these days to enhance guest living experience. Through this technology the rooms can become smarter to enable guests to be comfortable. A room which is fitted with automatic temperature control, gauges the temperature of the guest as soon as they enter the room and changes the room temperature accordingly, switching the music on or off by voice, adjusting the lights according to the requirements. Furthermore these could be customized according to the guest need and can be saved for the guest convenience whenever they check in next time.

Smart Keys

Smart room keys use near field communication technology (NFC), which is, essentially, the technology used for mobile payments. Through NFC, two devices can communicate with each other and exchange information at close proximity. (Chalimov, A. 2019)

This technology enables to open the hotel door with a smart key. This card comes with added feature of security which can restrict the access to the required floor only, this card may also get connected to the guest mobile through Bluetooth, can be used to add personalized experiences to the guest, with addition of loyalty points on guest name.This is being widely used by many hotels nowadays to curb any additional contact and to keep the access limited to the guests only.

Technology is turning to be a boon for the hospitality industry in these testing times. The hotel is operating efficiently with these interfaces to ensure guest safety and security. Technology also helps the hotel to be ahead in the competition and attract new client base. This also helps the hotel to provide personalized service to the guest as per the guest's requirement. Additionally, hospitality firms can recognize opportunities during crises and charge more from customers through added value. Studies also indicate that cost reductions play an important role for surviving a crisis (Kraus et al., 2020; Wenzel et al., 2020).

Data Analysis

According to the survey conducted for the specific research to understand the technological interventions in the Hospitality Industry, the respondents believe that the Technology does play a major role in the Industry.

A total of 45 respondents participated in the survey and almost 70 percent of the people feel that COVID-19 has been one of the longest Pandemic in the History of other pandemics in the world. There have been other Pandemics like the Plagues, SARS etc. but Corona has been one of the longest which has affected many lives across the world.

One of the most severely affected industry by the COVID-19 is clearly the Hospitality Industry. As this industry is clearly dependent on the domestic and international tourism, the lockdown and travel ban due to the Pandemic. Also the hospitality industry mostly depends on human beings for much of the service part. With number of people involved the risk of the infection is much higher and hence the industry had to pause its operations to ensure the virus does not spread due to the industry's characteristics of Human Touch. It is very clear that the industry must be very cautious in resuming the business and bringing it back on track due to the nature of the Industry. The Industry has always been known for its service and human touch, and hence it becomes more important for the Hospitality to be more careful to resume business. Even though the Hospitality thrives on the Human touch and services offered are personalised, the technology has started playing a major role in the hospitality. Many of the services are now technologically enabled and provide a better option for the sector to decide the exact nature of the service which is required or would be required for the guests. This will further become necessary post the pandemic as many of the services required would be touch less, to add value addition and safety for the guests. The change in service delivery from manual to digital is slowly taking place in the Hospitality sector, which allows the sector to provide assurance of safety and security to the guests availing the services. The industry is taking steps to adapt technological interventions wherever possible. Self-check ins, check out kiosks, chat boats, smart key cards, access through guest mobiles are some of the key examples of the touch less precautions taken by the industry. Social media has been playing a major role in today's world. The Hotels too, are using these social media platforms to inform the guests about the timely updates of the protocols guided by the local governments, the social distancing practices being practiced at the hotels, the hygiene and sanitation measures taken, the common areas of the hotels, adaption of technology, special rates etc. The social media influencers too have a role to play in these times as the ones who have already witnessed the services by a specific hotels may put information about the hotels efforts to ensure safety and security may also help the hotels

in big way. The technology would only add value when it comes to guest satisfaction and security. The guest would become more confident when the technological interventions would help him enjoy a seamless, happy and safe stay.

Technology will add confidence in guest to avail services in a hotel in the post pandemic world. Digitization of the processes will also help hotels to manage their own resources effectively and help maintain the costs. Technological advancements like sensor motion lights, temperature control enables the hotels to save energy. The guest services can be customized and can be served at the guest's convenience and need. The guests can use their own gadgets and use them whenever they need the services. Addition of technological interventions will only add value to the guest service. The hospitality sector will gain more advantage of security, safety and control with the advancements of technology. The advancements which are applicable in these testing times, will continue providing better experiences and guest safety even in the post pandemic world as the guests would become habitual to the technology.

The hotels which adapt technology at a faster rate will remain ahead in the market as compared to the ones which do not adapt the technology as the services will become redundant and will need a upgrade. The information received by the guests can actually help the hotel to design the services as needed by the guests. It also becomes important that this data is carefully used to share information about the hotel and the upcoming events and offers etc. Providing guest satisfaction by anticipation of the service need would actually be easy through technology. The technology can be very useful in handling crisis where human beings can do little. Touch less services, sensor lighting, robot concierge, mobile and gadget apps will enable the seamless service and will be able to sail through the crisis situations. Decision making through artificial intelligence would ensure accurate and effective measures are undertaken by the hotel, to assure safety and security for the guests and also for the staff of the hotel in testing times. The pandemic has had severe impact on the hospitality services. The hospitality has been quick to realise the need for the technological interventions for providing seamless guest service and deliver satisfaction. The technology also helps curb costs and allow the managers to take a better control of the crisis situations as and when they arrive.

Conclusion

COVID-19 pandemic has certainly affected the world. The Hospitality industry was the worst hit the tourism industry came to stand still and the operations became close to zero. With the hope of the vaccination, the hospitality started the operations with domestic guests. Technology was actually not new to the hospitality industry, but in this crisis situation, it became imperative for the hotel operators to adapt to newer trends in technology with clear intention of bringing the customer confidence back. In the past decade, the technology has evolved and has played a key role in the development of the hospitality and tourism sector. Adaption of technology has become mandatory due to the pandemic and there have been many innovations and development in the technology. Technology does add value and experience to the guest but in these conditions it adds sense of security and adds confidence in the guest mind. Technology has proved to be efficient, and accurate when it comes to providing guest service and satisfaction. Many touch less services were introduced, to ensure no or minimum human touch. The customers' expectations also increase as the newer technologies evolve and this clearly create a demand for new innovations in the field of technology in hospitality sector. The customer is now dependent on virtual services and requires a higher bandwidth, a simple wi-fi system is no more sufficient and the hotel must invest in a good broadband bandwidth to suffice the load it would carry due to the virtual services. The menus are now easily accessible from guest mobiles or tablets enabling them to order directly. This will reduce any human touch and even any human error. Guest demands are becoming more sophisticated with increased use of technology in the hotels. The trend will just keep growing with more additions and newer ways of contact less service. In China, the hotels are even considering the use of robotics to provide service and the trials are on too, the face of hospitality will be changing over the decade. This pandemic has changed many things and people will have to now start living with the newer ways of life. The technology not only help tackle crisis but also improve and create new guest experiences that anticipate and meet evolving guest expectations.

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