

## Research Article

# The Effects of COVID-19 on Restaurant Industry: A Perspective Article.

Fadi Alkawasbeh

Entrepreneurship Institute, King Saud University, Riyadh, Saudi Arabia

**ABSTRACT**

This paper aims to discuss the impacts of COVID-19 on restaurant marketing and management practices and outlines a three-pronged research agenda to stimulate knowledge development in the restaurant sector. This paper is based on an overview of the relevant literature on social media in food advertising. The authors also investigated trends in hospitality services to suggest a research agenda. This paper presents a research agenda in three dimensions - Artificial Intelligence (AI) and digital media ads and the importance of social media ads during Covid-19. First, different types of artificial intelligence (mechanical, thinking, and feeling) may open distinct research streams at the intersection of health crises and restaurants, in light of the COVID-19 pandemic. In addition, this paper recommends that researchers move beyond typical perspectives on precedents and the results of restaurant cleanliness and cleanliness to delve into. Moreover, to help restaurants recover from the COVID-19 pandemic. The proposed research streams are expected to provide actionable insights to promote development and sustainability in the restaurant sector. Authenticity / Value- This paper appears to be a frontier study, looking critically at the potential impacts of the COVID-19 pandemic, the impacts of COVID-19 on the restaurant industry, and how restaurant owners can respond to such post-pandemic recovery challenges.

**KEYWORDS**

Social media, digital media ads, artificial intelligence, restaurant sector, COVID-19 Pandemic

**ARTICLE HISTORY**

Accepted: 9 October 2020

**I. Introduction**

Corona viruses depicted as a dark swan occasion and compared to the financial scene of World War II; the predominance of COVID-19 had a negative impact on worldwide well being care frameworks with a multiplier impact on each perspective of human life as we know it. Pareek et al. (2020) COVID-19 as propelled in December 2019 in Wuhan, which is in Hubei Territory, China. The infection proceeds to spread all through the world. Even though the episode was at first in China, with cases too detailed in China or nation travelers, cases are presently detailed in numerous other

nations. Whereas a few nations have overseen to viably report the detailed cases, dubious where and when modern cases will develop (Bai et al., 2020). During an imperative gathering of people, the wellbeing dangers COVID-19 presents to the world, the World Wellbeing Organization (WHO) has pronounced open wellbeing crises of worldwide concern to arrange internationalism, the impacts of the illness surpassing passing (those who pass on) and dreariness (those who cannot work for some time) are getting to be apparent Since the episode. During the Chinese lull of the economy with the intrusion of generation, the work of world-

wide supply chains has been suspended (Razai et al., 2020).

From late January 2020 to July 2, 2020, the COVID-19 widespread spread quickly to the United Kingdom, the result was those 283,757 affirmed cases and 43,995 affirmed passing (Our world in information 2020), which has driven to a few open wellbeing measures planned to contain its spread, such as social break, that briefly decrease financial action since companies and families are incapable to create and spend as they more often than not do. Powerless worldwide financial movement includes these impacts, diminishes trade requests, and disturbs worldwide supply chains (Pareek et al., 2020). As a result, corporate and family pay has diminished. Expanded instabilities, decreased certainty and fixed money related and credit conditions can open up beginning decreases in investing and generation. For illustration, families may offer more as a safeguard, and a few companies may lay off specialists and offer capital hardware. Whereas the movement must recuperate with the lifting of social prohibition measures, there may be long-term impacts of “scarring” on the economy, even though extraordinary measures by governments and central banks to medium flattening will offer assistance to diminish this. According to Mulyanegara et al. (2009), these effects on supply and demand will partially determine the effect of Covid-19 on inflation. The impact is largely uncertain, given the sharp changes in demand, the partial closure of some industries, and the significant differences in experience across sectors. Excess capacity may be less than usual. During periods of weak demand, the recession increase may not be fully reflected in the lower costs of companies, if some fixed costs such as rent remain unchanged, and external cost pressures, such as movements in the exchange rate and commodity prices, will affect inflation. GDP growth is expected to decline to -6.5% in 2020. On the other hand, with events around the world still being cancelled or postponed, hotel occupancy rates dropping, and quarantines, the COVID-19 pandemic is taking a heavy toll on restaurant owners around the world. For example, in March 2020, Revenue for all reservations at Marriott hotels decreased by about 90 percent in Greater China

and decreased by 25% in other parts of the Asia-Pacific region compared to the same period last year, which had a significant impact on the restaurant sector (Wallis, 2020). Room yield is expected to be available in the USA, Europe, and Asia it will continue to decline as a leisure travel and work are postponed or cancelled due to fear of COVID-19 (Courtney, 2020).

The restaurant industry is vulnerable to threats posed by unforeseen disasters such as epidemics, natural disasters, and terrorist attacks (Chan & Lam, 2013; Chen, 2011; Hung et al., 2018; Lo et al., 2006; Min et al., 2009; Paraskevas, 2013; Racherla & Hu, 2009). Different types of disasters lead to distinct industrial consequences and induce restaurant owners to take measures to face the different challenges caused by crises. For example, restaurant owners in Hong Kong introduced increased security measures by modernizing CCTV systems and intensifying safety training for restaurant employees after the 9/11 attacks (Chan & Lam, 2013). After the outbreak of severe acute respiratory syndrome (SARS), the Korean restaurant industry installed new hygiene equipment and provided employees with health awareness educational programs (Kim et al., 2005). According to Nguyen et al. (2017). In this paper, we focus on epidemics: with increasing tourist concerns about security and health risks, epidemics can directly affect individuals' travel behavior (Mao et al., 2010). Hence, restaurant owners must address changes in consumer demand in the wake of the unexpected COVID-19 pandemic and restore travellers' confidence. As the COVID 19 crisis is likely to have unprecedented impacts on restaurants around the world, researchers must work to advance theory and knowledge in this important hospitality sector to help restaurants become more resilient and achieve effective post-disaster recovery.

Based on a review of the literature on the impacts of large-scale public health crises (such as SARS in 2003) and current trends in the restaurant industry, this paper details specific areas to provide insights for academics and practitioners to navigate the restaurant industry's commercialization and following the COVID-19 pandemic. First, restaurant operators are beginning to pay more attention to the potential

benefits of artificial intelligence (AI) and its applications, such as robotics, in restaurant management practices (Zabin, 2019). An increasing number of studies have focused on the restaurant-related impacts of AI and robotics at the individual and organizational level (Li et al., 2019; Lu et al., 2019; Tussyadiah, 2020). Additionally, given the role of social distancing as an effective preventive strategy against COVID-19, the adoption of artificial intelligence and robots in restaurants - especially in high-contact scenarios - can help protect guests and frontline service personnel. Therefore, we focus on artificial intelligence and robotics as a topic in restaurant management and marketing after COVID-19.

## 2. Artificial intelligence in the restaurant sectors

In the wake of the COVID-19 pandemic, there is ample room for researchers to advance the understanding of AI-driven robots and AI and advance literature in the field (Davenport & Ronanki, 2018; Huang & Rust, 2018; Mariani et al., 2020). COVID-19 is severe. Infection by person-to-person transmission (Chan et al., 2020) and people have been urged to reduce personal contact and increase physical distance (World Health Organization (2020)). Thus, the COVID-19 outbreak is expected to accelerate the penetration of artificial intelligence and robotic technology in restaurants. Specifically, more restaurants are likely to use "unmanned" devices and use robots to provide a completely contactless service. Robot receptionists, face checks, guest voice control, robot deliveries, robotic concierge assistants, and other contactless services are expected to begin replacing human communication services in the near future.

Moreover, the changing restaurant service landscape provides an opportunity for restaurant owners to better serve and delight guests in innovative ways through artificial intelligence and robotics (Huang & Rust, 2018). The application of AI and robotics in hotels represents a new service concept (Kuo et al., 2017) and an emerging area of research (Tuominen and Ascensão (2016)). Studies have discussed the use of artificial intelligence and robots in restaurants from different perspectives. For example, Kuo et al.

(2017) indicated that service innovation using robots can improve restaurants' sustainability and competitiveness. They also identified six factors that could influence the development of service robots for the restaurant industry: government support, market development, and robotics industry development, as well as hotel capabilities for technology development, fundraising, and talent development (Kuo et al., 2017). Lee (2019) deal with this phenomenon through a microscope by focusing on restaurant employees. They found that workers' awareness of AI and robotics had a significant positive effect on employee turnover intent; This relationship was managed through perceived organizational support and a competitive psychological climate (Li et al., 2019).

Despite recent achievements, researchers must dive deeper into applications of mechanical AI and think about artificial intelligence and the sense of artificial intelligence for service delivery, service creation, and service interaction in restaurants (Huang and Rust (2018)). More specifically, different types of AI (mechanical, thinking, and feeling) may open distinct research streams at the intersection of health crises and hotel management, in light of the COVID-19 pandemic. This paper recommends researchers investigate how mechanical artificial intelligence is using restaurants to transform routine and repetitive human services into frontline contactless services for restaurants. In the context of COVID-19 and similar health crises, mechanical AI can be adopted in hotels to complete cleaning and sanitizing tasks or to aid restaurant employee duties.

For instance, robots can monitor the cleanliness of high traffic areas, such as the amount of dirt or debris in driveways and elevators, to alert cleaning personnel to locations that need attention. From this perspective, it will be helpful to uncover the thoughts and feelings of restaurant guests as they receive more contactless services with fewer opportunities for access to human-based services. Areas that must be addressed in the future also include how cleaning and disinfection procedures for restaurant properties can be effectively implemented with AI-driven robots and

how to develop robotic-friendly hospitality facilities for AI-driven robots to perform their tasks. Given the increasing complexity of traveler demand after the COVID-19 outbreak (Wen et al., 2020), upcoming research could investigate why deep learning is important to personalize restaurant services and how big data and analytical AI can be used to capture an individual. Differences in service preferences (Mariani, 2019; Mariani et al., 2018; Huang & Rust, 2018), for example, regarding sterilization and hygiene standards. Restaurant owners must strive to harness the power of big data to create or maintain competitive advantages through personalized customer service (Mariani, 2019; Mariani et al., 2018, 2020). With the expansion of the use of AI thinking in the restaurant sector, the field of business intelligence and big data-based analysis should be developed in the hotel sector because data is the raw material on which AI is built (Mariani et al., 2018, 2020). One research direction in the specific context of epidemics is the way hotels can generate real-time data to develop an infectious disease prediction and warning system based on big data and analytical artificial intelligence in collaboration with computer and data scientists. And between specific customer segments. Since AI applications can be viewed as either facilitating or complicating service interactions (Mariani et al., 2020), the success of these innovations depends heavily on the individual customer's relationship with the technology (Wen et al., 2020). Moreover, given that the COVID-19 pandemic and its consequences have created fears, anxieties, and anxieties among the guests, it is especially important to demonstrate sympathy and understanding in catering and customer happiness (Jiang et al., 2019) during this challenging period. Therefore, a new area of research is to explore the role that AI sense will play in nurturing customers in restaurants, as well as how AI can help the sense of human service personnel to provide customized services and develop personal relationships with catering. Given that positive and negative possibilities may coexist around AI in catering services, scientists should evaluate restaurants' return on investment in terms of developing service robots (Kuo et al., 2017), restaurant resilience in the robot-based economy, and the ethics of using robots that rely on On artificial

intelligence and artificial intelligence to provide hotel service. The current paper also calls for research into the impact of AI on the dynamic capabilities of restaurants when faced with a public health crisis such as the COVID-19 pandemic. Regarding the effects of AI on hotel guests, the subtle effects of these technologies on guest experiences in restaurants in the wake of a public health crisis, such as border conditions that can shape the value of a guest's co-creativity and shared destruction, deserve more attention.

### 3. Digital Media Advertising

Today's new trends in marketing and advertising have revolutionized the entire world. Social media enabled marketers to reach and persuade potential audiences effectively. The possibility of person-to-person communication around the world also enabled the audience to choose the content of choice. They seek out information, act on it and stay informed (Nadaraja & Yazdanifard, 2013). Moreover, traditional means of marketing and advertising were expensive with limited access (Alghizzawi et al., 2018) They were focusing on old strategies, and reaching the vast audience was difficult (Alnawafleh et al., 2019) due to the social media, approach. Marketing has changed, introducing many new technologies that are very effective and convincing to the public Hajli (2015). A study conducted by Gilbody (2005) examined how consumers access health care advertisements and to what extent they follow healthy lifestyle guidelines. The researcher used an influenza sponsorship-based banner ad and preferred a Qualtrics survey using Amazon Mechanical Turk (MTurk). The results revealed that advertising on social media was significantly associated with positive healthcare behavior. Respondents revealed that these ads had a potential impact because the message was direct, simple, and compelling

With them. Moreover, Habes et al. (2020) investigated the effectiveness of social media ads on potential customer behavior in India. The researchers n = 504 used well-structured questionnaires and used an appropriate sampling method. The results revealed that the use of certain digital marketing strategies helped attract many consumers from all over the country. These strategies may include: choosing

better distribution channels, training the marketing team and using opinion leaders, convincing the public of the appropriate decision. This is because social media has become an influential source of information exchange and behavioral changes. Due to the rapidly increasing number of technologies, the audience can actively access various social networking sites. Here we can assume the role of social media ads as being very compelling and appealing to the potential audience which keeps them updated on the various phenomena (Hughes et al., 2012).

Another study examining the effectiveness of social media advertising was conducted by Habes et al. (2020) in which they investigated the main determinants of the effectiveness of social media advertising in India. The researcher selected Twitter, Facebook, and other social network platforms for the study. Moreover, they used n= 504 structured questionnaires using an appropriate sampling technique. The results revealed that the use of more technical and strategic tactics made social media ads effective for audiences. Moreover, good planning and economic measures were the two main factors that added effectiveness of social media advertising.

Marketing allowed the audience to reach the idea and products. They also collect information and make the appropriate decision accordingly (Saura, 2020). To further validate this, the researcher selected Facebook, Instagram, Google, and YouTube users from Bangladesh. Data collected using n = 306 questionnaires indicated that social media affected the behavior of the majority of respondents. In this regard, the researchers also found that social media marketing also influenced the opinion-making and decision-making process of potential consumers. As also witnessed by Kathiravan (2019), social media marketing and advertising are well planned, organized, and based on effective strategies. Because of its wide reach, social networking sites are preferred at both private and government levels. To further study the effectiveness of social media advertising, the researcher selected a sample of n = 400 participants from Tamil Nadu, India. The results indicated that the majority of respondents held a very positive opinion

of the effectiveness, objectivity, and relevance of the ads. Moreover, they have also considered Facebook as one of the most credible sources of information regarding advertised products.

#### **4. Importance of Social Media Advertisements during COVID-19**

It emerged as the primary mechanism for assisting and spreading advertising to customers around the world Vikram (2010). According to Cash (2012), social media marketing today includes the improvement of advertising policies related to health awareness, products, and campaigns around the world. New media later took over traditional advertising trends that were relatively expensive and limited. To confirm this, the researcher analyzed relevance, impacts, and audience in response to an online advertisement in New Jersey, United States. Data collected from an in-depth interview, content analysis of social networking sites, and field surveys showed that study participants highly recognized social media as a source of spreading advertisements. The majority of respondents, often prefer digital networking platforms to obtain information about foods, and thus it also greatly helps them to adopt a healthy lifestyle, so many research studies have tried to explore

The relationship between the disease awareness campaigns for many restaurants. The importance of disease awareness advertising cannot also be seen by gathering the response of health professionals about these healthcare announcements on various media platforms. For this purpose, Banerjee (1988) examined the opinion of various healthcare professionals about disease awareness announcements in India. The primary objective was to document the opinion of medical professionals regarding the quality of online communication activities. The results indicated that the majority of healthcare professionals deemed online healthcare awareness campaigns positive as a constructive step to promoting a healthy lifestyle. However, they also suggested that this awareness should be sponsored campaigns jointly by different non-profits to increase their effectiveness apart from gaining commercial interests. Also, if the awareness campaigns are adopted by the celebrities, it will achieve more

improved results. This is because people today are very concerned about ongoing health issues. For most of them, health issues are an ongoing phenomenon and they want to stay updated about news trends to take advantage of a healthy lifestyle. Besides traditional media platforms, social networking sites also contain ad campaigns that motivate people to adopt a healthy lifestyle. For this purpose, advertisers spend their time and effort on social media and promote masistas who value their health (Sacks & Looi, 2020). For this reason, we assume healthcare advertising is a need today. Especially, through digital media, it is now possible to communicate with people from all over the world. Interactive healthcare marketers are using new media features and sharing healthcare ideas and suggestions. To further validate this, Li et al. (2016) investigate audience behavior and banner ads by MU HealthCare for "influenza season ads." Data were collected using the Qualtrics survey by recruiting respondents from eleven notable American countries. The results revealed that the announcement of the influenza season had strong positive effects on the behavior of potential respondents. Participants expressed that they saw the advertisement first and subsequently made decisions to follow the advertising message for influenza prevention. Moreover, Parrott et al. (2015) also examined the effects of randomized controlled trials (RCTs) concerning adopting a healthy lifestyle with appropriate food and exercise. The results revealed that ads were posted for  $n = 265,279$  times and  $n = 1,024$  times clicked by users. Total  $n = 505693$  users saw these ads and the majority of them revealed that the ads were very compelling.

## 5. Conclusion

The global panic associated with COVID-19 could have lasting consequences for advertising. Effective strategies are essential to boost customer confidence and help restaurants recover in time after this public health crisis. The resilience of the restaurant industry Sustainability can be anchored by addressing diverse consumer needs and by taking steps to turn adversity into opportunity on social media platforms. These efforts are in line with expected trends in market demand, such as customer wellness, contactless services, and environ-

mental stewardship. Restaurant business paths related to this pandemic and dynamic market demand reveal several areas where professional knowledge must be developed. By reflecting on evolving customer expectations and industry restoration programs, academia can contribute to developing theory in restaurant marketing and management to foster positive changes in industry practices after this pandemic. The research agenda proposed in this article is not exhaustive but rather points to the many ways in which COVID-19 is expected to affect the restaurant industry, including social media, digital media ads, artificial intelligence, it is important for scholars

Taking a critical view and developing insights about the opportunities and challenges in each of these areas. Availability of big data and technologies on social media platforms such as text mining and image analytics can lead to new methods of capturing data from stakeholders, especially restaurant customers. Future studies should consider the use of big data and analytics concerning AI practices, hygiene, and healthcare in restaurants and other hospitality contexts to address the ongoing digital transformation in the industry Mariani et al. (2020). Moreover, upcoming research should take advantage of the power of social media platforms to highlight the many issues at an intersection

The three identified areas, namely social media, digital media ads, artificial intelligence. Big data applications show promising results in many settings but also pose challenges (Davenport & Ronanki, 2018). Therefore, it would be feasible to study how technology-based approaches should be introduced in restaurants to minimize potential interruptions to service and avoid service.

A failure that might damage the guest's loyalty. Aside from the topics discussed above, crisis management is another important topic that requires further investigation. Since restaurants are prominent victims of epidemics, they are also essential to examining how restaurants create contingency plans for infectious diseases. The effects of COVID-19 are monitored. There is also a need for future research to assess the different ways in which restaurants can work with government agencies to develop coordination mech-

anisms and comprehensive crisis management plans. The COVID-19 outbreak has disrupted neighboring restaurants and even the world's survival.

### Funding statement

The author received no financial support for the research, authorship, and/or publication of this article.

### Cite as

Alkasasbeh, F. (2020). The Effects of COVID-19 on Restaurant Industry: A Perspective Article.. *Journal of Innovations in Digital Marketing*, 1(1), 20-27. <https://doi.org/10.51300/jidm-2020-16>

### References

- Alghizzawi, M., Salloum, S.A., & Habes, M. (2018). The role of social media in tourism marketing in Jordan. *International Journal of Information Technology and Language Studies*, 2(3), 59-70.
- Alnawafleh, H., Alghizzawi, M., & Habes, M. (2019). The impact of introducing international brands on the development of Jordanian tourism. *International Journal of Information Technology*, 3(2), 30-40.
- Bai, Y., Yao, L., Wei, T., Tian, F., Jin, D.Y., Chen, L., & Wang, M. (2020). Presumed asymptomatic carrier transmission of COVID-19. *JAMA - Journal of the American Medical Association*, 323(14), 1406-1407.
- Banerjee, U. (1988). *Dependence Analysis for Supercomputing*. Boston: Kluwer Academic Publishers.
- Cash, T.F. (2012). Cognitive-behavioral perspectives on body image. *Encyclopedia of body image and human appearance*, (pp. 334-342).
- Chan, E.S., & Lam, D. (2013). Hotel safety and security systems: Bridging the gap between managers and guests. *International Journal of Hospitality Management*, 32, 202-216. <https://doi.org/10.1016/j.ijhm.2012.05.010>
- Chan, J.F.W., Yuan, S., Kok, K.H., To, K.K.W., Chu, H., Yang, J., ... Tsoi, H.W. (2020). A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *The Lancet*, 395(0223), 514-523.
- Chen, M.H. (2011). The response of hotel performance to international tourism development and crisis events". *International Journal of Hospitality Management*, 30(1), 200-212.
- Courtney, E.J. (2020), COVID-19 will cause a significant decline in global RevPAR, cash flow, for rated lodging companies.
- Davenport, T.H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard business review*, 96(1), 108-116.
- Gilbody, S. (2005). Benefits and harms of direct to consumer advertising: a systematic review. *Quality and Safety in Health Care*, 14(4), 246-250. <https://doi.org/10.1136/qshc.2004.012781>
- Habes, M., Alghizzawi, M., Ali, S., Salihalnaser, A., & Salloum, S.A. (2020). The Relation among Marketing ads, via Digital Media and mitigate (COVID-19) pandemic in Jordan. *International Journal of Advanced Science and Technology*, 29(7), 12-48.
- Hajli, N. (2015). Social commerce constructs and consumer's intention to buy. *International Journal of Information Management*, 35(2), 183-191. <https://doi.org/10.1016/j.ijinfomgt.2014.12.005>
- Huang, M.H., & Rust, R.T. (2018). Artificial Intelligence in Service. *Journal of Service Research*, 21(2), 155-172. <https://doi.org/10.1177/1094670517752459>
- Hughes, D.J., Rowe, M., Batey, M., & Lee, A. (2012). A tale of two sites: Twitter vs. Facebook and the personality predictors of social media usage. *Computers in Human Behavior*, 28(2), 561-569. <https://doi.org/10.1016/j.chb.2011.11.001>
- Hung, K.K.C., Mark, C.K.M., Yeung, M.P.S., Chan, E.Y.Y., & Graham, C.A. (2018). The role of the hotel industry in the response to emerging epidemics: a case study of SARS in 2003 and H1N1 swine flu in 2009 in Hong Kong. *Globalization and Health*, 14(1), 117-117. <https://doi.org/10.1186/s12992-018-0438-6>
- Jiang, Y., Balaji, M.S., & Jha, S. (2019). Together we tango: Value facilitation and customer participation in Airbnb. *International Journal of Hospitality Management*, 82, 169-180. <https://doi.org/10.1016/j.ijhm.2019.05.004>
- Kathiravan, C. (2019). Effectiveness of advertisements in social media. *Asian Academic Research Journal of Multi-disciplinary*, 4(7), 179-190.
- Kim, S.S., Chun, H., & Lee, H. (2005). The effects of SARS on the Korean hotel industry and measures to overcome the crisis: a case study of six Korean five-star hotels". *Asia Pacific Journal of Tourism Research*, 10(4), 369-377.
- Kuo, C.M., Chen, L.C., & Tseng, C.Y. (2017). Investigating an innovative service with hospitality robots. *International Journal of Contemporary Hospitality Management*, (5), 29-29.
- Lee, A.J. (2019). *U-statistics: Theory and Practice*. Routledge.
- Li, J., Monroe, W., Ritter, A., Galley, M., Gao, J., & Jurafsky, D. (2016). Deep Reinforcement Learning for Dialogue Generation. In and others (Ed.), *2016 Conference on Empirical Methods in Natural Language Processing* (pp. 1192-1202). . Austin, Texas: Association for Computational Linguistics Association for Computational Lin-

- guistics.
- Li, J.J., Bonn, M.A., & Ye, B.H. (2019). Hotel employee's artificial intelligence and robotics awareness and its impact on turnover intention: The moderating roles of perceived organizational support and competitive psychological climate. *Tourism Management*, 73, 172-181. <https://doi.org/10.1016/j.tourman.2019.02.006>
- Lo, A., Cheung, C., & Law, R. (2006). The survival of hotels during disaster: A case study of Hong Kong in 2003. *Asia Pacific Journal of Tourism Research*, 11(1), 65-80. <https://doi.org/10.1080/10941660500500733>, Retrieved from <https://dx.doi.org/10.1080/10941660500500733>
- Lu, L., Cai, R., & Gursoy, D. (2019). Developing and validating a service robot integration willingness scale. *International Journal of Hospitality Management*, 80, 36-51. <https://doi.org/10.1016/j.ijhm.2019.01.005>
- Mao, C., Ding, C., & Lee, H. (2010). Post-SARS tourist arrival recovery patterns: an analysis based on a catastrophe theory. *Tourism Management*, (6), 855-861.
- Mariani, M. (2019). Big data and analytics in tourism and hospitality: a perspective article. *Tourism Review*, 75(1), 299-303.
- Mariani, M., Baggio, R., Fuchs, M., & Höepken, W. (2018). Business intelligence and big data in hospitality and tourism: a systematic literature review. *International Journal of Contemporary Hospitality Management*, 30(12), 3514-3554. <https://doi.org/10.1108/ijchm-07-2017-0461>
- Mariani, M.M., Vega, P., & R (2020). Beyond the hype: psychological mechanisms enabling the acceptance, adoption, and engagement with artificial intelligence technology in marketing. *Psychology and Marketing*.
- Min, H., Min, H., Joo, S.J., & Kim, J. (2009). Evaluating the financial performances of Korean luxury hotels using data envelopment analysis. *The Service Industries Journal*, 29(6), 835-845.
- Mulyanegara, R.C., Tsarenko, Y., & Anderson, A. (2009). The Big Five and brand personality: Investigating the impact of consumer personality on preferences towards particular brand personality. *Journal of brand management*, 16(4), 234-247.
- Nadaraja, R., & Yazdanifard, R. (2013). Social media marketing: advantages and disadvantages. *Center of Southern New Hampshire University*, (pp. 1-10).
- Nguyen, D.N., Imamura, F., & Iuchi, K. (2017). Public-private collaboration for disaster risk management: A case study of hotels in Matsushima, Japan. *Tourism Management*, 61, 129-140. <https://doi.org/10.1016/j.tourman.2017.02.003>
- Paraskevas, A. (2013). Aligning strategy to threat: a baseline anti-terrorism strategy for hotels. *International Journal of Contemporary Hospitality Management*, 25(1), 140-162. <https://doi.org/10.1108/09596111311290264>
- Pareek, M., Bangash, M.N., Pareek, N., Pan, D., Sze, S., Minhas, J.S., ... Khunti, K. (2020). Ethnicity and COVID-19: an urgent public health research priority. *The Lancet*, 395(10234), 1421-1422. [https://doi.org/10.1016/s0140-6736\(20\)30922-3](https://doi.org/10.1016/s0140-6736(20)30922-3)
- Parrott, R.L., Worthington, A.K., Smith, R.A., & Chadwick, A.E. (2015). Communicating about genes, health, and risk. *Oxford Research Encyclopedia of Communication*.
- Racherla, P., & Hu, C. (2009). A Framework for Knowledge-Based Crisis Management in the Hospitality and Tourism Industry. *Cornell Hospitality Quarterly*, 50(4), 561-577. <https://doi.org/10.1177/1938965509341633>
- Razai, M.S., Doerholt, K., Ladhani, S., & Oakeshott, P. (2020). Coronavirus disease 2019 (covid-19): a guide for UK GPs. *BMJ*, (pp. m800-m800). <https://doi.org/10.1136/bmj.m800>
- Sacks, G., & Looi, E.S.Y. (2020). The Advertising Policies of Major Social Media Platforms Overlook the Imperative to Restrict the Exposure of Children and Adolescents to the Promotion of Unhealthy Foods and Beverages. *International Journal of Environmental Research and Public Health*, 17(11), 4172-4172. <https://doi.org/10.3390/ijerph17114172>
- Saura, J.R. (2020). Using Data Sciences in Digital Marketing: Framework, methods, and performance metrics. *Journal of Innovation & Knowledge*.
- Tuominen, P.P., & Ascensão, M.P. (2016). The hotel of tomorrow: A service design approach. *Journal of Vacation Marketing*, 22(3), 279-292.
- Tussyadiah, I. (2020). A review of research into automation in tourism: Launching the Annals of Tourism Research Curated Collection on Artificial Intelligence and Robotics in Tourism. *Annals of Tourism Research*, 81, 102883-102883. <https://doi.org/10.1016/j.annals.2020.102883>
- Vikram, V. (2010). Transforming Healthcare through Social Media. Retrieved from [http://www.ehealthnews.eu/images/stories/pdf/impact\\_of\\_social\\_media\\_in\\_healthcare.pdf](http://www.ehealthnews.eu/images/stories/pdf/impact_of_social_media_in_healthcare.pdf)
- Wallis, G. (2020), COVID-19 Impact Deepens. Retrieved from [www.hotelbusiness.com/covid-19-impact-deepens/](http://www.hotelbusiness.com/covid-19-impact-deepens/)
- Wen, J., Liu, X., & Yu, C. (2020). Exploring the roles of smart services in Chinese senior tourists' travel experiences: an application of psychological reactance theory. *Anatolia*, 31(4), 666-669. <https://doi.org/10.1080/13032917>
- World Health Organization (2020), Q & A on coronaviruses



(COVID-19).

Zabin, J. (2019), Artificial Intelligence: Working Hand in Hand with Hotel Staff. Retrieved from

<https://hoteltechnologynews.com/2019/07/artificial-intelligence-working-hand-in-hand-with-hotel-staff/>

LUMINOUS  
INSIGHTS



© 2020 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

*Share* – copy and redistribute the material in any medium or format.

*Adapt* – remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

*Attribution* – You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

*No additional restrictions* – You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.