

The Impacts of Information Technology in Tourism and Hospitality Industry – A Review

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Abstract: *The effects of information technology on the hospitality and tourist sectors were the main focus of this study. The modern tourism and hospitality sectors are undergoing tremendous change as a result of daily updates to their core and strategic operations. Therefore, it is inevitable that information technology will change and cause disruption. The goal of the multidisciplinary field of hospitality management is to prepare individuals with greater certainty, experience, and operational, marketing, and management skills for the industry's growth and development into the global economy. Hotels, eateries, casinos, resorts, travel agents, and airlines might be included. In order to evaluate the most recent developments and applications of IT in the sector, this study draws from earlier research on the subject. According to the report, the most popular uses of IT in the hotel and tourism sectors are for meeting information needs, analyzing performance and behavior, and managing operational and innovative processes. Although the publications provide valuable guidance for hospitality operators and a plethora of opportunities for future academic research, a concerning trend in hospitality research is highlighted by the low quality and lack of relevance seen throughout the evaluated periodicals. Technology has aided in cost reduction, increased operational effectiveness, and improved client satisfaction and services. Improved reservation, guest service, and communication systems assist the company and its clients. The hotel sector has benefited from advancements in teleconferencing and telecommunications, as well as front office information processing technologies like reservation, guest accounting, and room management*

Keywords: Information Technology, Communication Technologies, Hospitality, Tourism, Innovation, Business process, Information, Competitive Advantage, Hotels, Technology trend, Distribution and Internet

I. INTRODUCTION

The hospitality sector encompasses a wide range of occupations within the service sector, such as hotel management, food and beverage operations, event planning, theme parks, travel and tourism, and in a similar vein, travel agencies, restaurants, and bars. IT is currently used at both the individual and corporate levels in every one of our sectors. The tourism sector is ignorant of the latest developments or societal trends. Technology is evolving quickly in all sectors of the economy. The information technology distraction is causing the tourism and hospitality industries to grow at a faster rate as well. Technology has altered both the supply and demand for travel. Continuous advancements in the world of technology enable professionals to accomplish their goals quickly. When it comes to pre-trip planning and ticket purchase, consumer websites are crucial. Adoption of ICT (Information and Communication Technologies) is also providing tools for collaboration and grouping in support of globalization and the establishment of critical mass methods that broaden the scope of competition. ICT technologies bridge the gap between the travel and hotel industries. Thus, it is a clear component of the tourism and hospitality sectors that is used by many tourist destinations, lodging facilities, transportation companies, and other related service providers. E-tourism and other digitalized tourism and hospitality practices are becoming more commonplace these days. Examples of these practices include online booking, flash packing, travel blogs, e-tour guides, and online service platforms. Both the tourism industry and hotel management, in particular, rely heavily on information and communication technologies. Hotels are known for their extensive information sharing. The study of information systems is an exciting and quickly developing topic. When compared to other industries, the hospitality sector often performs less well, but in recent years, this has improved because to greater research application. High-tech services are in high demand in many hotels, and guests are completely delighted and leave happy. Technology empowers hotel managers to seize additional opportunities and then

incorporate fresh, varied offerings into daily operations. Effective uses of technology in restaurants by expanding available technical resources to maximize customer happiness while simultaneously improving performance.

The modern tourist and hospitality sectors must work hard to maintain smooth operations and grow their competitiveness in light of the internet's widespread use. A company's capacity to get and apply the most recent data to support its marketing and management procedures plays a part in its success. There is a significant phenomenon that is primarily application-oriented that links hospitality and tourism. As the first scenario presents challenges for IT system investment, IT adoption has become essential to the travel and hospitality sectors. The tourist and hospitality sectors need to be aware of the contemporary developments in IT and how they relate to customer service. Industrial practitioners, educators, and policy makers may encounter increased challenges in choosing, evaluating, putting into practice, and managing new IT systems as the field of IT development advances. In the view of vital importance of IT application in the tourism and hospitality sectors and the absence of published papers that attempt to assess the industry about the content of IT articles predominantly published in the tourism and hospitality business. This effort will improve knowledge of the most recent updates to IT innovation applications in hospitality and tourism from many angles.

1.1 Objective:

- To understand the most recent developments in information technology as they relate to the hospitality and tourism sector.
- To determine if advancements in information technology have had a beneficial effect on this sector.
- To understand the uses, requirements, and significance of information technology in the travel and hospitality sector.

II. REVIEW OF LITERATURE

The travel and tourism sector is fighting to survive the coronavirus pandemic. While Wi-Fi 6 and 5G technology are installed to improve system quality, live-stream promotion and live-stream conferences are introduced largely to improve information quality. To improve service quality, facial recognition, artificial intelligence, and robots are integrated into daily operations. The global tourism sector has been greatly impacted by the coronavirus COVID-19 outbreak. Travel restrictions, quarantines, and transportation system closures have resulted in a 22% decrease in foreign visitor arrivals in the first quarter of 2020 compared to 2019 and potentially a 60-80% fall for the entire year. Brick and mortar establishments like eateries, lodging facilities, shops, and tour agencies have suffered as a result of lockdowns and quarantines.

New commercial opportunities have, nevertheless, also surfaced. Hotels can have live-stream conferences instead of in-person ones since they have 5G networks, hardware, and expertise. The hotel business will benefit from quicker speed and coverage in conference rooms, lobby areas, and restaurants thanks to Wi-Fi 6, which is optimized for high density applications. Multiple industries are implementing "contactless" options as a result of the pandemic.

Information technology (IT) has been enthusiastically embraced by the travel and hospitality sectors in an effort to cut expenses, increase operational effectiveness, and—most importantly—improving consumer satisfaction and service quality. The way that technological advancements affect the traditional hotel service process is twofold: first, they alter the role that consumers play in the process, and second, they change how hotel managers and service workers behave and perform their duties. Phones that function as key cards, mobile self-check-in, mobile booking, self-service check-in kiosks, lobby media panels, electronic luggage tags, BYOD (bring your own device) policies, smartphone boarding passes, hotel service optimization systems, and guest device connectivity tools are some examples of innovations.

Information technology advancements have drawn more travelers to our region and created a link with airport channels to share ideas and offers, as well as new developments in the tourism industry that are making the region more globally recognized. The new wave of information technology outsourcing services that caters to small and medium-sized businesses is the application service provider of today. Improving e-commerce also gives businesses a competitive edge in the technology sector.

Process redesign: Making adjustments to the procedure to maximize value.

Information technology brought about a shift in the long-standing arrangement between hotels and travel agencies. Customers find it to be a dependable service even for e-banking transactions. Travelers can obtain information from smart technology provided in tourist kits. Customer relationship management systems are being addressed by the development of effective client profiling through big data techniques.

New service delivery methods in the tourism sector are introduced as a result of the rapid advancements in technology. Light detection and ranging data, geographic information system mapping analysis, and the unique form of electronic lineation utilized for alienation in ICT are all used.

The developing class of IT outsourcing services that offer a full range of small and medium sized businesses is the current application service provider.

This includes the social and legal aspects; IT makes it easier to comply with social and legal requirements.

Value creation primarily focuses on cutting costs in a way that is customer-friendly by hiring fewer people and using new, creative techniques.

Technology's involvement in the hotel industry has grown significantly in terms of efficiency management, customer pleasure, and ultimately increased income. All of these aspects benefit the company and its clients equally. The advancement of technology in the healthcare and tourist sectors has resulted in a number of operational changes. For example, clients can now easily choose where to stay, reserve a room, compare prices, and evaluate amenities, infrastructure, and guest experience.

A company in the tourism sector uses digital marketing to do the following: produce eye-catching digital content to increase brand awareness; develop targeted advertisements to draw in target consumers; and maintain constant contact with clients to keep them happy and loyal to the company. In contrast to traditional marketing, digital marketing allows clients to ask questions or submit inquiries. On the other hand, conventional marketing, including billboards, TV commercials, and print ads, is one-way. Thus, digital marketing offers clients a customized experience.

Since the tourist and hotel management industries are highly competitive, effective consumer advertising is necessary as a solution. In order for the industry's creative marketing and promotion to draw in more consumers. It is also necessary to build, administer, and promote the destination. By disseminating information, tourism promotion aims to entice both current and prospective travelers to a certain location. One of the best marketing mix components for promoting a travel product is promotion.

The use of many websites for travel, lodging, and information access is made better by mobile phones and other devices. Not only has the tourism industry benefited from the increased usage of mobile devices, but new technology and the creation of new applications have drastically altered processing. Without a doubt, the protagonist of the new modes of transportation is this. Our cell phone has evolved into a map, the best restaurant finder, travel agency, tour guide, and more. It is with us the entire time we make the transaction.

Technology is integrated into the travel and hospitality sectors to support related service activities. Among the essential tasks could be communication, lodging, and transportation. Both service providers and tourists will benefit from the support system that information technology offers. It is employed to enhance communication between travelers, travel agents, and travel service suppliers. As a result, it is a clear component of the travel and hospitality sector that is used by lodging facilities, hotels, transportation companies, and other related service providers.

For information search, sharing, and exchange, social media, mobile devices, and information technology are widely employed in the tourism and hospitality industries. Research indicates that trade exhibitions serve as the main information source for both business hotels and consumers when it comes to information sharing. Without a question, the key player in the new travel methods is the cell phone, which serves as our map, finest restaurant finder, tour guide, and more. A TripAdvisor research states that 45% of consumers do all of their trip planning on their smartphones. For this reason, business communications and services must be adjusted for these devices.

The following are some of the key new technologies that the hotel and tourism sector uses:

WIFI: In the hotel industry, both guests and employees are able to charge a high fee for using the service. It can be utilized as a means of collecting excessive rent from tenants, who are increasingly drawn to live in areas with strong Wi-Fi connections these days gains even more strength with the assistance of 5G networks. They provide greater coverage, more consistent connections, and significantly faster loading and downloading times. Beyond 20 times higher

download speeds than previously, 5G opens up new technological possibilities for us that were not possible with 4G. This implies that we will be able to start enjoying the Internet of Things (IoT) to its fullest extent and that connections between smart devices will be more effective.

Accurately identifying client behavior requires an understanding of the psychological elements influencing them. The psychological research will focus on how tourists use the internet to organize their trips. The data that the smartphones supplied demonstrated the value, usability, social impact, and contentment of travel websites. Workers in the hospitality industry are emotionally taxed laborers because, in order to deliver exceptional client service, they must exhibit the proper emotions. Employees that possess emotional intelligence (EI) are better able to control their emotions and express them in suitable ways, which should improve the quality of service that hospitality professionals offer. However, there was a significant variation in the strength of the association between EI and the job performance of hospitality workers across different studies. Thus, the current study aims to shed light on the contradictory results and investigate whether emotional intelligence (EI) might enhance the performance of hospitality employees.

The use of information technology in the hospitality sector has changed procedures, increased competitiveness in travel and tourist location booking, and even altered the code of conduct. Large desktop computers have been largely superseded by mobile tablets and smartphones. This is useful because a lot of travelers bring a mobile device along for the ride. This enables hospitality organizations to use GPS monitoring to advertise, offer promotions, and notify clients of changes or delays to their reservations. Computer systems facilitate communication between larger hotel chains that have several locations. They also facilitate information access and staff coordination, which enhances the overall experience for your visitors. Reservations, cleaning details, and guest requests are all accessible on a single system.

Restructuring of the hotel and tourism industries, as well as dissemination through channels of information and communication. The hotel system's use of electronic data interchange and management's support for IT are crucial. Self-service technology based on the internet is being used in many different industries. In order to properly oversee the hospitality product as a whole, operations managers must gain a comprehensive awareness of the whole planning, implementation, and control process, including familiarity with the design and development phases. The introduction of new items has a significant impact on operations. New product development is simultaneously limited by current processes and technological capabilities.

Among these are the incorporation of Internet-connected sensors within vehicles, buildings, and other objects. The travel and tourism sector has been greatly impacted by the digitalization of locations. Travel agencies may now create and utilize mobile applications to reach out to consumers at specific times, giving them the chance to engage with a particular hotel, attraction, or leisure area. Utilize technology to identify the top services that are easily accessible to you so that your trip might become the vacation of your dreams. With the aid of technological innovations, modern travelers seek out personalized and distinctive travel experiences.

RFID is used by companies in the hotel sector to track employees, manage vehicles, and handle laundry and linens, among other things. Knowing how many rooms are empty, partially occupied, or occupied is helpful to the managers. Digital Conference: Meeting spaces with Wi-Fi are available for corporate users to access visual aids and digital conferences. Automation and mobile communication: guests now demand digital interactions for all procedures, which will be quicker and less labor-intensive. They also expect specific applications, software, or websites to be available for their usage.

Smart room keys: This is another recent technological advancement that has made it easier for customers to access their rooms by swiping their phones through a keyless entry system, fingerprint recognition technology, and retina scanning devices. The most common problem that customers face when using these devices is misplacing their room keys.

The next generation of short range, high frequency wireless communication technology that allows data exchange between devices is called near field communication, or NFC. Up to 424 kilobits per second of data can be transferred between NFC devices, enabling card and smartphone payments. Cloud services offer a broad platform for connecting customers and the hospitality sector to stay up to date with emerging trends. Comments on social media: Currently, the hospitality industry's numerous websites allow users to leave comments and report violations on social media. Technology, thus, combined with the hospitality and tourism industries to create rapid changes in the field despite the industry's competitiveness. The introduction of modern technologies facilitated the field's increased economic visibility and easy growth.

Hotels may challenge online intermediaries by using CRM tactics to increase customer loyalty and happiness. CRM is a global solution that works with nearly every business and is not exclusive to hotels. Any sector should be able to use a CRM platform to store customer data, track service requests, find sales possibilities, and manage marketing campaigns in one easy-to-access area. Email, text messaging, and other modes of communication are integrated into many CRM systems. This method is more crucial than ever because automation and personalization are becoming popular trends in the CRM industry. While marketing teams are concentrated on attracting new leisure travelers, hotel sales teams are attempting to secure new group business.

In the end, one-on-one relationship management is the focus of a group sales CRM, whereas segmentation and profiling are critical components of a marketing CRM. Stated differently, hotel sales CRMs must possess the ability to customize one-on-one discussions, while hotel marketer CRMs must ensure that large datasets are accurate and useful.

Five connections are formed: channel, which permits a business to utilize another's distribution network; collaboration, in which rivals work together to accomplish a goal; Infomediaries' reciprocal content enhances and adds value to partner websites: Products that are cross-related and complementing are combined: Talk, distribute irrelevant merchandise.

Technological advancements have caused a shift in the hospitality and tourism industries. This shift can be seen in how customers book rooms, how they are distributed, and how economic concerns are pressuring hotels to raise the amount of money that is invested by a third party. The latter are progressively taking control of the selling price as well as the hotel product's sales through the use of economic scale and scope. Changes in the intermediary-supplier relationship can be brought about via the merchant model. Commoditization, carefully crafting terms and conditions to successfully fence prices, and hotels striving to attract business to their own websites are ways to mitigate the stress that merchant channels experience.

The strategic challenge provided by online intermediaries, the risks associated with relying too much on the merchant model, the necessity of developing a rational pricing plan, taking direct control of the shopping experience, and the need to collect customer data are highlighted. One of the most important players in the distribution chain for tourism is the travel intermediary. The travel and tourist sector is one of the fastest-growing in the world, in part because of tourism intermediaries.

III. FINDINGS

It is possible to see a bright future for both IT applications for tourism and hospitality management. The hospitality sector integrates with the IT sector to boost quality improvement and raise awareness of the various IT applications' benefits.

The primary goals of information needs and behavior and performance studies are most frequently served by IT study. Information technology studied the customer management process as part of the internal business process design. The competitive advantage of information technology in value creation is growing.

The main advantages of information technology's impact on the hospitality and tourism business are concentrated in the areas of online booking and payments, mobile communication, in-room technology, and reservation systems.

More advancements in IT are required to fully realize the promise for new developments in the hospitality sector.

The use of technology has improved operating efficiency, cut costs, and improved customer service.

IT substitutes technical labor for human labor. Online reservation systems, cloud services, mobile automation and communication, IN room technology, redesigned Wi-Fi infrastructure, digital conference spaces, NFC technology, robotics and infrared sensors, smart room keys, and on-demand entertainment are only a few examples of the technical advancements.

IV. CONCLUSION

Technology has accelerated operations and made travel far more efficient and pleasurable for the hospitality and tourist sectors. Technology benefits not just big chain hotels but also smaller businesses in the sector and businesses to businesses. Since the tourism sector is highly competitive, success in the marketplace depends on the sector's ability to modify its offerings to outperform competitors and best suit shifting travel trends via innovative marketing techniques. Information technology contributes significantly through managing and redesigning business processes. The implementation of tourism management strategies opens up novel and difficult study directions. According to the

report, the primary uses of IT are for behavior and performance analysis as well as information needs. Customer management is the primary emphasis of information technology when researching internal business process design. Since there is a new field of research for the tourist and hospitality business to fully utilize prospective technologies, the value creation and competitive advantage are growing. In order to create value and obtain a competitive edge, this focuses on the adoption and spread of information technology. As a result, information technology and ICT increased competitiveness across the economy's sectors and aided in the development of the hospitality sector.

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