Original Article

Adoption of ICT in Hotel Sector During COVID-19 Pandemic in Uganda: Case Study of Selected Hotels in Kigezi Sub Region

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ABSTRACT

During the COVID-19 pandemic, Information and Communication Technologies (ICT) transformed tourism and hospitality worldwide; however, few studies have been conducted to present local evidence on adopting ICT in the hotel sector. The study aimed to examine the effects of ICT on the hotel sector in the Kigezi region, the adoption of ICT in hotels during the COVID-19 Pandemic, and ICT trends in the hotel business for 2023. The study employed a case study design, utilising qualitative and quantitative approaches to provide relevant and accurate research information. Using simple random and purposive sampling techniques, 68 respondents were selected to participate from a total population of 250. Primary data was collected through questionnaires and interviews with the hotel participants. The ANOVA results show a significant effect of ICT on hotel guests and receipts since the P-value is between 0.00 and 0.05. This indicates that the impact of ICT adoption extended beyond hotel receipts and guests. This research demonstrates that many hotels have adopted ICT and improved service speed and quality through ICT adoption. Even still, ICT adoption by hotels in the Kigezi Sub-region is not at the anticipated level.

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INTRODUCTION

The hotel sector makes up more than one-third of all global services and the greatest vital service areas in the world (Elnasr et al., 2021). This sector is a subset of the tourism and hospitality service industry that includes dining establishments, hotels, theme parks, transportation, event planning, and others. This has affected the hospitality industry, notably as a consequence of the quick advancement of communications and information technologies (ICT). Worldwide, the manner in which hotels handle their visitors has changed as a result of new technological advancements in the sector, and this is due to the fact that customers have already become accustomed to high-end amenities in a technologically advanced environment and now anticipate the hotel business to offer them similar services (Sharma et al., 2021; Strickland and Williams, 2022).

The COVID-19 pandemic forced the hotel sector to reassess its strategies and embrace digital transformation to overcome the obstacles posed by the crisis (Soto-Acosta, 2020). ICT solutions have become vital tools for hotels to enhance their operations, maintain customer engagement, and implement safety measures (Bonfanti et al., 2021). In the context of the Kigezi Sub-region, where tourism plays a significant role in the local economy, understanding the extent of ICT adoption in the hotel sector became crucial. During and after the pandemic, hotels implemented various ICT tools and technologies to facilitate remote operations, including online booking systems, digital payment platforms, and virtual communication channels (Marques, 2023). These solutions have not only enabled hotels to adapt to changing customer preferences and safety requirements but have also contributed to maintaining customer satisfaction and loyalty. Furthermore, the adoption of ICT in

implementing safety measures, such as contactless check-in and check-out processes, digital menus, and automated temperature screening, has been crucial in safeguarding the health and well-being of guests and staff (Njau Florence et al., 2023).

The adoption of Information and communication technologies (ICT) in the hotel sector refers to a group of communication technologies that are all connected with the required hotel enterprise software, computers, middleware, storage, and audio-visual equipment (Yeo and Grant, 2019; Abir and Khan, 2022). For instance, voice-search commands for automatic blinds and window coverings, contactless check-in and check-out, automated lighting, air conditioners (ACs), fans, and other equipment that can be used in the hotel industry, a frictionless, safe experience is something every guest seeks while in a hotel, and the usage of a digital menu card while ordering, hassle-free Quick Response (QR) code scanning, and robot employees support this (Cameron et al., 2018). Today's visitors begin their searches for a high-end location on electronic media, relying on high-tech ICT products and equipment as well as wireless internet connectivity with quick speeds (Kapiki, 2021).

The current digital era has simplified the transportation of digital information from one location to another and to store, access, comprehend, and change that information (da Costa Liberato et al., 2018; Putri *et al.*, 2022). ICT now handles hotel tasks such as hotel selection and booking, ordering, acquisition, tracking payments, and report generation, among others. As a result, it makes the hotel's small workforce more productive. The adoption of ICTs in Hotels has enhanced direct interaction with visitors through the provision of tailored leisure and hospitality practices. This was a result of the COVID-19 pandemic that acted as the

driving force behind this shift in visitor behaviour, creating a demand for contactless technological revolutions (Poulaki and Nikas, 2021; Putri *et al.*, 2022).

In addition, ICT is used not just for information collection but also for accepting service orders placed online (Hasan, 2022). The hotel sector can be classified as an information business, notwithstanding the assertions of many authors that it must be considered an information-intensive industry (Jeon and Yang, 2021). The hotel sector needs a wide variety of information, which essentially encourages them to accept the technology because the Internet is widely used and the great majority of organisations have developed an online presence; ICT adoption in the industry is the result. Due to the fragmented nature of the hotel industry, Jeon and Yang (2021) and Poulaki and Nikas (2021) have proposed ICT as the best method for online inventory sales. The ICT revolution has gradually caused all operational procedures and different paradigms to shift, which has also affected the competitiveness of all the major market players in the hotel business.

In light of COVID-19, the United Nations Development Programme (UNDP) is currently assisting the government in developing an e-commerce strategy, which has resulted in new legislation being implemented with the goal of enhancing people's trust in online transactions. The United Nations also recognised e-commerce as a potent tool for fostering growth, expanding trade, and generating jobs. In the future, improving digital skills must be a top concern. The use of ICT in Uganda's hotel industry over the COVID-19 pandemic proved essential for allowing hotels to react to the changing environment, sustain operations, and guarantee the safety of both guests and workers. Contactless operations, virtual interactions, remote labour, improved communication, and adherence to safety and health regulations have all been made possible by these ICT solutions. Even after the pandemic, it is probable that ICT use in Uganda's hotel industry will increase as establishments see how these tools can enhance guest experiences as well as operational effectiveness. The study assessed the effects of COVID-19 on the hotel sector and examined the role of ICT adoption on hotel sector management during the COVID-19 Pandemic in the Kigezi region.

LITERATURE REVIEW

This section reviewed studies pertaining to the effects of the COVID-19 Pandemic on the hotel sector in the Kigezi Sub-region, ICT adoption in the hotel sector and continues with in-depth explanations of the role of ICT adoption in the hotel sector during pandemic times, and ICT trends in the hotel sector for 2023.

Effects of the COVID-19 Pandemic on the Hotel Sector in Kigezi Subregion

The COVID-19 pandemic's effects resulted in numerous flight delays in March 2020 and a significant decrease in traveller willingness due to the shuttering of all frontiers (Folinas and Metaxas, 2020). These effects had a significant negative impact on the global airline and hotel sector. The majority of countries experienced a severe decline in tourist numbers as a result, which had a negative effect on Uganda's hotel industry's profitability. In 2020, hotel RevPAR (revenue per available room) fell by 50% alone in North America and in other countries, it was a total closure. Between March and April 2020, 8.3 million jobs were lost as a result of hotel closures, layoffs, and unpaid leave.

Between March 2020 and June 2020, tour operators and travel agencies in Uganda reported a large number of booking cancellations (Ministry of Tourism, Wildlife, and Antiquities (Corbisiero & Monaco, 2021) Post COVID-19 many star-rated hotels had to adapt to ICT new technological advancements in the sector and since the tourism and hospitality industries are still re-establishing their brands following COVID, few of the small

hotel managers in the Kigezi sub-region claimed to have adopted innovative ICT technology in their establishments. Despite the fact that this practice is widespread in the West, some of the locals in Kigezi were unaware of it based on the findings of the study.

In a technologically advanced world, however, a lack of ICT may pose a problem in the future when attempting to attract tourists and hotel guests to the destinations (Guttentag, 2015). ICT has completely changed the hotel sector, and its effects on the tourist value chain are reflected in many areas (Kazandzhieva and Santana, 2019; Moreno-Izquierdo et al., 2022). All players in the sector have to address the significant opportunities and challenges that have emerged. However, the extent of e-tourism development differs throughout regions, nations, and continents (Milovanović et al., 2021). Through online environments, ICT has the ability to promote professional, reflective, and practice-based behaviour in business (Penkauskienė et al., 2019).

In the context of adopting new technologies, organisational preparedness had two dimensions: (1) the organisation's financial resources and (2) its technical skills (Chandra and Kumar, 2018; Hradecky et al., 2022). Financial resources refer to an organisation's ability to pay for the costs of acquiring, implementing, and maintaining a new technology (Ingaldi and Ulewicz, 2019). The ability and sophistication of an organisation's technology resources are referred to (Chandra and Kumar, 2018; Hradecky et al., 2022), and organisational readiness was one of the criteria that strongly influenced the adoption of technology (Molinillo and Japutra, 2017).

Since many businesses adapted to working remotely as staffing and business processes went digital and network bandwidth was stretched thin during the pandemic, network connectivity was disrupted (Ambrogio et al., 2022). These repercussions of the rise of technology will linger for a long time. Due to a lack of people to oversee network-related services, poor network connectivity has gotten worse (Guloba et al., 2021). This pattern highlights the pressing need to equip workers, especially young people, with digital skills so they can manage and use technology, including mobile devices, landlines with multiple switchboard buttons, and remote access controls like security cameras.

In-room controls, visitor communication systems, virtual interactions, facility maintenance systems (PMS), online Wi-Fi, internet sites, internet cafes in the hospitality industry, and computers are a few examples of new ICT trends that the managers had implemented that could be provided at a lower cost (Njau Florence et al., 2023). Other examples include the provision of a calming soundtrack, online registration numbers and bookings, an in-room control system, guest-staff communications, and virtual interactions. Since the hotel sector is still developing its brands following COVID-19 effects, none of the smaller hoteliers inside the Kigezi subregion reported having used any cutting-edge ICT technology during their operations. Despite being widespread in the West, many hotel workers in small hotels were ignorant of this practice because they mostly dealt with chance guests and referrals from relatives and friends within the region (Cobanoglu et al., 2021). This means that these hotels missed out on international guests. The use of ICT in small hotels was thought to be significantly hampered by a lack of finance.

The findings imply that cellular mobile subscriptions and interaction, computers, and fixed broadband subscriptions have notable and adverse effects on tourism receipts for countries with the greatest tourism receipts, while safeguarding Web servers, cellular mobile subscription services, and broadband internet memberships have positive effects on domestic tourism traveller arrivals. This is in line with the study conducted by Lee et al. (2021), who found that at various return quantiles, cellular mobile subscribers and elevated exports

have a positive impact on the returns of the travel and leisure industry.

Role of ICT Adoption in the Hotel Sector During COVID-19 Pandemic

According to the World Travel and Tourism Council (WTTC, 2021),

> *"1 in 4 of all new jobs created globally, 10.3% of all jobs (333 million), and 10.3% of the global GDP (US$9.6 trillion) were in the tourism and hospitality industries prior to the pandemic* (Vasconcelos et al., 2022; Yorkulov et al., 2022)".

Surprisingly, many businesses and individuals have adopted the use of ICT as a result of the COVID-19 pandemic (Tan, 2020; Tanković et al., 2021). ICT is essential for accelerating economic growth as well, particularly by fostering new levels of competitiveness in tourism management, destinations, and businesses (Yorkulov et al., 2022). As a result, neither industry representatives nor consumers can ignore the use of ICT to resurrect the tourism and hospitality field, especially the hotel sector (Alonso and Vidal, 2022).

ICT is a broad category that includes a number of instruments that facilitate the gathering, transforming, storing, and sharing of information. To be more precise, the hotel sector has embraced a number of technologies, including computer reservation systems, global distribution systems, customer relationship management (CRM) systems, knowledge management systems, mobile applications, websites, and social media platforms (such as Facebook, Twitter, YouTube, and Trip Advisor) (Wang et al., 2022).

One of the world's fastest-growing industries in the Kigezi sub-region is predominantly the hotel sector because of the many tourism sites within the region. The advancement of ICT encourages the hospitality and tourism sectors to maximise their company development decisions and improve the visitor experience. The development of the Internet, web applications, and other technology has now significantly accelerated and reduced the cost of travel for customers. Alonso and Vidal (2022) note that it is so commonplace that only 13% of travellers still use tour operators to make their travel plans, with 74% of vacationers planning their travels online.

Between 2016 and 2020, the Kigezi Sub-region and neighbouring regions saw an increase in the number of small, privately owned hotels and tour companies (Guloba et al., 2021). ICT is seen as a strategic resource and a key contributor to corporate value, competitive advantage, and enhanced organisational performance in the hotel industry (Hartani et al., 2021). However, depending on a number of factors, including the size of the necessary renovation expenditure, the high utilisation rate, and the relatively low operating costs, the extent of use of such technologies and the readiness of a hotel general manager to adopt ICT may vary. Today's international business travellers are paying more attention to luxury hotels (Kundu and Sarkar, n.d; Aradhana and Mohan, 2022). The majority of hotel guests from Western nations stay in the two- to three-star hotels, for example, in Kigezi, which are primarily situated around Lake Mbuyonyi and Kabale town. With improved ICT services and products, many hoteliers are attempting to adapt their information and communication technologies (ICT) in order to draw in new clients, raise the bar for quality, satisfy guests to a high degree, and expand their market share. (Loaiza et al., 2019).

According to Shanshan et al. (2023), ICT is essential to the hotel industry's development, and in the hotel industry, for instance, this entails maintaining reasonable prices, promoting goods and services, raising the standard of customer service, and responding to consumers right away, regardless of their location. However, Ahmed et al. (2022) assert that ICT adoption has an indirect positive impact on a hotel's financial performance through

other factors like differentiation, quality, or image rather than directly increasing hotel profitability.

ICT Trends in the Hotel Industry for 2023

Hotels have the opportunity to increase back-office productivity with minimal technology acquisition costs thanks to cloud communications or technologies. Although it makes sense for brand-new hotels, even the largest hotel chains are investigating how grid computing could expedite operations, reduce the need for staff, improve the guest experience, and ensure durability and security for people who seek it beyond 99%. Artificial intelligence-based service automation (AI) (Shahriar *et al.*, 2021). Hotels are looking at innovative methods to communicate with visitors online while freeing up hotel workers to perform other duties. As a result, language barriers can be removed, resulting in straightforward communication with tourists from any country (Patterson and Khamidova, 2022).

Smart Guest Experiences: For a few years now, smart technology has been transforming the hospitality sector by bringing about cost and energy savings. A well-designed application integrates everything, including hotel services, deal notifications, and reward programs (Hasan, 2022). You can use the app to wirelessly email attendees the events calendar, which incorporates an online version of the rooms where sessions will take place if you see that they registered for an event at a group price (Bersani et al., 2022). Visitors can speak with hotel staff, check out and in more easily, and even use a mobile app as a digital room key. If you have reliable Wi-Fi throughout the property, your visitors will be entirely satisfied and engaged, whether they are in the bar or the poolside. Going Touchless and Wireless Mobile Devices for Staff and Guests: the pandemic has made it clear that there is a need to rethink how visitors can interact with amenities (Pillai *et al.*, 2021; Stringam and Gerdes, 2021).

In the previous two decades, the travel and tourism sectors have undergone a revolution, revamped their operations and delivered a tailored guest experience. It is a simple concept that requires making all digital objects "smart" by connecting them to the Internet (Hasan, 2022). The Internet of Things (IoT) has helped the hotel and travel industries by enhancing customer experiences and reducing operating costs. It is possible to cater to the individual needs of guests by changing their room's temperature, regulating the TV, elevators, and heaters, turning on and off the lights, setting wake-up times, personalising meal options, and so forth. Hotels may give visitors' cell phones electronic key cards so they can check in and out, control the temperature in their room, and operate the television (Bersani *et al.*, 2022).

METHODOLOGY

The study was conducted in the Uganda-Kigezi sub-region. This study employed a case study design utilising both quantitative and qualitative approaches to provide research with relevant and accurate information (Creswell, 2017). The purpose of using a case study approach was to examine ICT adoption in tourism and hospitality management during the COVID-19 Pandemic, identify the impact of COVID-19 on the tourism industry, and identify the role of ICT adoption in tourism and hospitality management during the COVID-19 Pandemic in the Kigezi region. The qualitative technique supported the quantitative method by generating in-depth information, while the quantitative approach assisted in testing hypotheses to derive statistical inferences (Creswell, 2017). As a result, the researcher was in a position to make statistical assumptions and conduct a thorough analysis. The inductive approach to study, the emphasis on personal meaning, and the necessity of expressing the intricacy of a situation clearly were all backed by qualitative data. Using simple random and purposive sampling techniques, a total of 72 respondents were selected to participate from a total population of 250 using a marginal error of ten per

cent. Purposive sampling was conducted on hotel owners, and simple random sampling was done on hotel employees. In addition, the questionnaire method and interviewing methods of data collection were used in this study to get detailed information.

To calculate the sample size, the formula proposed by Israel (1992) was utilised to derive the sample size from the population.

$$n = \frac{N}{1+N(e)^2}$$

Where: n= Sample size, N= Population size, 1= constant, and e= Precession level on 10%

Therefore, N= 250=constant, and e= 10%. Ten per cent marginal error was varied for this to avoid a lot of respondents due to the limited number of hotels in the study area.

$$n = \frac{250}{1+250\,(0.1)^2} = 72$$

Quantitative data was cleaned, categorised, coded, and analysed using SPSS Version 26 software (Odongo et al., 2021). The descriptive data was graphically summarised as frequencies, mean, and standard deviation. To test the significance at 99% and 95% confidence levels, Pearson regression was used to further investigate the quantitative data. Qualitative data from the interviewees was collected through key informants' interviews. The analysis of qualitative data involved an immersion in the data to gain a broad view of the issues emerging from the data sets (Nowell *et al.*, 2017). The field recordings from the interviews were listened to multiple times and then verbatim transcribed. The margins of the data sets/transcript were filled in with initial comments that reflected observations and sentiments after becoming familiar with the data. Similar concepts were used to create codes based on the data familiarisation.

RESULTS

Response Rate

A total of 72 questionnaires were given out to the respondents; however, only four were not returned for analysis. This equals a 90% return rate for the surveys. Therefore, a response rate of at least 70% is required for a study. Thus, 68 people responded to the questionnaire in order to conduct a quantitative analysis.

Effect of the COVID-19 Pandemic on the Hotel Sector

It was discovered that the majority of participants 29% mentioned that COVID-19 resulted in fewer direct tourist activities, 26% caused a sharp decline in traveller demand, 13% said many local communities' means of subsistence were in peril due to the sharp decline in tourism demand, 10% the pandemic encouraged innovation and ICT use in the tourism sector, and 9% the pandemic encouraged stakeholders in the tourism industry to act more responsibly. Additionally, it was discovered that just 6% of participants overall claimed that there was an unemployment issue in the Kigezi subregion, while 9% of participants stated that the pandemic had caused the key players to focus more on quality management. Hence, 7% mentioned that the epidemic directed important stakeholders in the tourism industry to safety and quality control.

Role of ICT Adoption in Hotel Sector During COVID-19 Pandemic

Findings in *Table 2* revealed that 21 (30.9%) strongly disagreed, 19 (27.9%) disagreed, 4 (5.9%) were not sure, 10 (14.7%) agreed, and 14 (20.5%) strongly disagreed that the hotel administration is devoted to having all personnel use computers in their work during COVID-19 Pandemic, with a mean of 3.40 and a standard deviation of 0.993. With regards to adequate staff members in travel firms and hotel management who are skilled in using and creating electronic tourism sites, 12

(17.6%) strongly disagreed, 14 (20.6%) disagreed, 4 (5.9%) were not sure, 20 (29.4%) agreed, and 18 (26.5%) strongly agreed. With a mean of 3.71 and a deviation of 0.459, this indicates that, out of the responses, the majority (55.9%) disagreed with the statement. Additionally, it was discovered that 18 (26.5%) agreed and 16 (23.5%) disagreed that network security is a prime concern for travel agencies and hotels and that they have set up a network to protect the databases during COVID-19, with 15 (22.1%) strongly disagreeing, 13 (19.1%) disagreeing, 6 (8.8%) being unsure, and 18 (26.5%) agreeing. This implies that the majority (50%) of the respondents disagreed with the statement, with a mean of 3.54 and a standard deviation of 0.558.

Table 1: Effect of the COVID-19 Pandemic on the hotel sector in Kigezi Subregion

Items	f (n=68)	(%)
Fewer direct tourist activities	20	29
It caused a sharp decline in traveller demand	18	26
Many local communities means of subsistence were in peril due to the sharp decline in tourism demand	9	13
The pandemic stimulated creativity and use of ICT in the tourism industry	7	10
The pandemic triggered more responsible behaviour among tourism stakeholders	6	9
The pandemic shifted the tourism key players towards safety and quality management	5	7
Unemployment	4	6

Source: Survey Data, 2022

Table 2: Role of ICT adoption on the hotel sector during the COVID-19 pandemic

Statement	SD	D	N	A	SA	Mean	Std. Dev
The hotel administration is devoted to having all personnel use computers in their work.	21 (30.9)	19 (27.9)	4 (5.9)	10 (14.7)	14 (20.5)	3.40	.933
There are adequate staff members in travel firms and hotel management who are skilled in using and creating electronic tourism sites.	12 (17.6)	14 (20.6)	4 (5.9)	20 (29.4)	18 (26.5)	3.71	.459
Information security is a priority for travel firms and hotel management, and they have created a network to safeguard the databases.	15 (22.1)	13 (19.1%)	6 (8.8%)	18 (26.5%)	16 (23.5%)	3.54	.558
A portion of the revenues made by travel companies and hotel management were used to train and develop their staff members in electronic tourism.	12 (17.6)	17 (25%)	4 (5.9%)	16 (23.5%)	19 (27.9%)	3.57	.606
The management of hotels and travel firms works hard to constantly assess the benefits	24 (35.3%	19 (27.9%)	-	13 (19.1%)	12 (17.6%)	3.28	.730

Source: Field Data, 2022.

The study recognised that 12 (17.6%) strongly disagreed, 17 (25%) disagreed, 4 (5.9%) were not sure, 16 (23.5%) agreed, and 19 (27.9%) strongly agreed that a portion of the revenues made by travel companies and hotel management were used to train and develop their staff members in electronic hospitality during COVID-19 Pandemic. This means that the majority (51.4%) of the respondents (with a mean of 3.57) agreed with the findings. Lastly, the management of hotels and travel firms works hard to constantly assess the benefits and drawbacks of utilising and accessing various websites during the COVID-19 Pandemic; 24 (35.3%) strongly disagreed, 19 (27.9%) disagreed, 13 (19.1%) agreed, and 12 (17.6%) strongly agreed, with a mean of 3.28 and a standard deviation of 0.73.

Correlation Matrix on the effects of ICT on hotel guests

The aim was to determine the percentage variation in ICT delivery explained by hotel receipt. The results of the regression are portrayed in *Table 3*.

Table 3: Regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.745	.649	.552	.583529

a. Predictors: (Constant), domestic tourism receipt

Findings in *Table 3* reveal R Square of .649, indicating that 64.9% of the total variation of ICT is explained by hotel guests or receipts with the rest being explained by other factors. This means that improved ICT usage, like individuals using the Internet, internet servers, and mobile cellular subscriptions, contributes to hotel receipts and guests during the COVID-19 Pandemic.

Table 4: ANOVA

	Model	Sum of Squares	Df.	Mean Square	F	Sig.
1	Regression	21.848	1	16.532	180.266	.000
	Residual	19.754	67	.032		
	Total	40.602	68			

a. Dependent Variable: ICT
b. Predictors: (Constant), hotel guests or receipts

Table 4 illustrates the significant effect of ICT on hotel guests and receipt since P- value $(0.00) < 0.05$. This is an indication that the significance of ICT occurs over hotel receipts and guests.

DISCUSSION

The current findings on the adoption of ICT present a variety of prospects for the growth of the hotel sector, as in line with Salavati and Hashim (2015); Abir and Khan (2022). This is also in line with Yeo and Grant (2019) who reported that ICT adoption promotes output level, multi-factor productivity, and productivity that leads to superior performance and sustainability. Asadi et al. (2020) further demonstrate that ICT has a significant impact on the productivity and performance of the hospitality sector. ICT makes it possible to provide quick, effective services with minimal human touch, which is now acceptable or even required for a safer living situation during the outbreak of highly contagious diseases like coronavirus disease. By collecting expertise and the most recent information on market conditions and trends, which is required for making informed decisions, ICT also assists hospitality managers and employees in quickly responding to market developments.

ICT also help managers identify potential solutions or successful practices/activities for resolving unfavourable occurrences by monitoring and

emulating the reaction methods of the industry's top hospitality organisations, whether locally or globally. Last but not least, ICT assists hotel managers in staying in touch with patrons or visitors directly or closely and spotting any behavioural changes brought on by unfavourable events like COVID-19. Intelligent hotel rooms are the result of the widespread use of cutting-edge technologies by the hospitality sector to increase productivity and efficiency. Systems can now keep an eye on things like lighting, noise, air conditioning, television, and automatic door signs. Using a visitor's tablet or phone to unlock and monitor particular features, the temperature can be adjusted, the door can be opened using a unique code, or a 3-D room butler may be enabled on the TV (Citron, 2020). According to Zheng, Muthu, and Kadry (2021), using communication and information technology (ICT) to increase efficiency and offer customers high-quality services is a sensible business approach. Additionally, they stated that efficient Internet and ICT service rules, wireless Internet, and the use of smart technologies and PCs are expectations for hotel guests and implementing ICT will strengthen the brands of the hospitality and tourism industries and help differentiate them from their rivals (Abdelmoaty & Soliman, 2020).

From the qualitative data collected during the interview, one of the managers said, "Technical facilities must be maintained constantly." Another key respondent revealed that "Although smart tourism and cutting-edge technology were viewed as necessary to incorporate in the future, they were currently viewed as being too expensive, and most hotels were unable to afford them." According to several managers, it will take two to three years for demand to increase. The White Horse Inn's manager declared, "We want to incorporate the newest technology into our hotel, starting with check-in and ending with check-out, and room keys will be replaced by phones." To reduce energy consumption, everything in the hotel is turned off automatically when a visitor leaves.

All managers noted that

"They were aware of the latest technological trends and progress in the hotel sector, and they said that they would be instituting them progressively for the time being. This allowed researchers to find out whether the hotel has established new trends to attract tourists. Only the management of the expensive hotels brought up the worldwide quality standards, which they stated were critical to raising service standards and a way to avoid potential issues with client-staff relations".

With the adoption of new information and communication technology, they would also be able to maintain a greater degree of quality control, which would improve their ability to manage the supply chain and boost performance (Ammar et al., 2021).

Policy Implications

The usage of ICT as a communication and marketing tool is growing as a result of its quick uptake. The Kigezi sub-region, a popular tourist destination in Uganda, served as a good foundation for the study, which investigated the role and effects of ICT adoption in the hotel sector. Both at the regional and local levels, the study's findings offer significant input for the formulation of policies. It is now widely known that the hotel sector is becoming more and more dependent on information and communication technologies (Yeo and Grant, 2019; Yorkulov et al., 2022). ICT has increased service delivery efficiency, at least as it relates to the hotel industry. Additionally, as e-commerce becomes more widely used, hotels are becoming more autonomous from traditional channels of distribution like travel wholesalers and tour operators. Increased ICT use is an effective way to reduce the problem of guest leakage and

information asymmetry. The adoption of ICT will enable local-level hotel information to be made available to a global clientele, decreasing information asymmetry to some extent and promoting all hotels in the Kigezi sub-region.

CONCLUSION

Understanding the rapid drop in visitor demand and its detrimental effects on the viability of the tourism sector is vital for policymakers. It offers factual information to back judgments about economic recovery, financial aid, and the distribution of funds to support the suffering tourism sector. It emphasises how critical it is to address the sector's problems and create plans to re-energise it. To assist local firms that rely significantly on tourism, policymakers can allot resources like subsidies, loans, or training programs. This focused assistance can lessen the effects of decreased demand and possibly stop long-term harm to these towns' economies.

The results of the study can be used by local governments and officials to plan for local economic recovery. Decisions on economic diversification, job development, and assistance for impacted enterprises are influenced by an awareness of the danger that local communities are facing as a result of the pandemic's effects on tourism.

The study's focus on the connections between tourism and local livelihoods highlights how crucial it is to take the entire economic environment into account. This realisation can result in more comprehensive policy approaches that consider the indirect effects of tourism on neighbourhood communities, including the contribution of tourism to the maintenance of jobs and revenue outside of the immediate tourist-related enterprises. The pandemic's beneficial influence on innovation and ICT use in the tourism industry offers important insights into resilience and adaptation. By promoting efforts that develop tourist technology, policymakers may strengthen the sector's competitiveness and position it for potential disruptions in the future.

There is a significant effect of ICT on hotel customers and guests since the P-value is 0.00 and the alpha is 0.05. This is an indication that ICT has a significant effect on hotel receipts. It should be highlighted that some of the hotels in the Kigezi sub-region are rapidly adopting ICT and that this adoption is widespread. ICT use will transform how some services are provided, including bookings and marketing, even though it has not yet completely transformed some of the small hotels in the Kigezi sub-region.

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Data generated and analysed during the current study are included in the body of this paper.

Ethics Statement

In compliance with local law and institutional regulations, an ethical evaluation and approval were not necessary for the study involving human subjects. To take part in this study, the subjects gave their information.

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