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Role of Technological Advancements on Customer Satisfaction in
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Abstract

Purpose: The aim of the study was to analyze the role of technological advancements on customer satisfaction in Japan's hospitality.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: Technological advancements have significantly enhanced customer satisfaction in Japan's hospitality industry by improving service efficiency, personalization, and overall guest experience. Innovations such as AI-driven customer service robots, automated check-in systems, and smart hotel rooms equipped with IoT devices offer convenience and seamless interactions for guests. These technologies reduce waiting times, streamline operations, and allow for personalized services, such as customized room settings and tailored recommendations, increasing guest satisfaction.

Unique Contribution to Theory, Practice and Policy: Technology acceptance model (TAM), service quality model (SERVQUAL) & expectancy-confirmation theory (ECT) may be used to anchor future studies on the role of technological advancements on customer satisfaction in Japan's hospitality. Hospitality businesses should adopt integrated management systems that combine customer relationship management (CRM), property management systems (PMS), and online booking platforms. Industry regulators should promote standards for technology integration in the hospitality sector.

Keywords: *Technological Advancements, Customer Satisfaction*

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INTRODUCTION

Customer satisfaction levels in developed economies are critical indicators of business performance and consumer loyalty. In the USA, the American Customer Satisfaction Index (ACSI) reported an overall customer satisfaction score of 76.3 out of 100 in 2021, reflecting an upward trend in consumer satisfaction across various sectors, including retail and hospitality (ACSI, 2021). For instance, the hotel industry saw a notable increase in customer satisfaction, with brands that implemented technology-driven solutions, such as mobile check-ins and personalized services, reporting higher satisfaction ratings among guests. In Japan, customer satisfaction in the hospitality sector remains high, with the Japan Hotel Association reporting an average satisfaction level of 80% in 2022, driven by exceptional service quality and technological advancements (Nishida & Fujimoto, 2023). These statistics highlight how effective service delivery and the incorporation of innovative technologies significantly contribute to customer satisfaction in developed economies.

Moreover, the UK also showcases impressive customer satisfaction levels, particularly in the restaurant and leisure industries. According to a report by the UK Customer Satisfaction Index (UKCSI), the hospitality sector achieved a customer satisfaction score of 83.3 in 2022, driven by improvements in food quality and service efficiency (Institute of Customer Service, 2022). The report emphasized that restaurants utilizing technology to enhance customer interactions, such as online reservations and digital menus, experienced increased satisfaction among diners. The consistent upward trend in customer satisfaction levels in these developed economies underscores the importance of focusing on service quality and technological innovation to meet evolving consumer expectations. These findings emphasize that prioritizing customer satisfaction is essential for sustaining competitive advantage in the increasingly dynamic market landscape.

In Canada, the Canadian Hotel and Lodging Association reported that customer satisfaction levels rose to 78% in 2022, reflecting an increasing emphasis on guest experiences and technological integration (CHLA, 2022). Hotels that adopted mobile check-in, digital concierge services, and AI-driven customer support reported significantly higher satisfaction ratings, demonstrating that modern technology enhances convenience and efficiency for guests. Similarly, in Germany, a study by the German Hotel Association found that customer satisfaction reached 82% in 2021, with factors such as cleanliness, service quality, and technological offerings playing critical roles (Dehoga, 2021). The integration of smart technologies, like IoT-enabled room controls, contributed to guests feeling more comfortable and valued during their stays, showcasing how advancements can lead to enhanced customer experiences.

In Australia, customer satisfaction levels in the hospitality industry have also shown positive trends, with a report from the Tourism Accommodation Australia indicating a satisfaction score of 80% in 2022. This increase was largely attributed to improvements in service delivery and the use of technology, including online booking platforms and guest feedback systems (TAA, 2022). The study highlighted that hotels that actively sought guest feedback and made adjustments based on their input were more likely to achieve higher satisfaction levels. The consistent improvement in customer satisfaction across these developed economies underscores the importance of leveraging technology and service quality to meet the evolving expectations of consumers in a competitive market.

In France, a study by the French Hotel Industry Association revealed that customer satisfaction levels reached 79% in 2022, showing an increase due to enhancements in service quality and technology adoption (AHREF, 2022). Many hotels reported implementing mobile applications and digital services, allowing guests to customize their experiences, which led to increased satisfaction. Similarly, in Sweden, the Swedish Agency for Economic and Regional Growth reported that customer satisfaction in the hospitality industry improved to 82% in 2021, primarily due to the integration of contactless payment options and personalized services through technology (Tillväxtverket, 2021). These advancements enabled guests to enjoy seamless experiences and fostered higher loyalty rates, highlighting the essential role of technology in enhancing customer satisfaction.

In the Netherlands, customer satisfaction scores in the hotel sector also reflected positive trends, with a report from the Dutch Hotel and Restaurant Association indicating an average satisfaction level of 80% in 2023 (Horeca Nederland, 2023). The study emphasized the growing importance of sustainability and eco-friendly practices in customer satisfaction, as many guests now prioritize these values when choosing accommodations. Hotels that adopted green technologies and transparent sustainability practices reported higher levels of customer satisfaction. These findings from developed economies illustrate how technology and an emphasis on customer values significantly contribute to enhancing overall satisfaction levels in the hospitality sector.

In Switzerland, the Swiss Hotel Association reported an impressive customer satisfaction score of 85% in 2022, largely attributed to the emphasis on exceptional service quality and the integration of technology (Hotelleriesuisse, 2022). Hotels that implemented personalized services through mobile applications and digital concierge systems reported higher satisfaction ratings, indicating that technological advancements play a significant role in enhancing the guest experience. In Italy, the Italian National Institute of Statistics noted a customer satisfaction level of 78% in the hospitality sector for 2023, driven by improvements in service delivery and a focus on customer feedback (ISTAT, 2023). The study highlighted that establishments engaging with guests through social media and digital platforms saw a marked increase in satisfaction, showcasing the importance of communication and responsiveness.

In New Zealand, a study by the Ministry of Business, Innovation, and Employment revealed that customer satisfaction levels in the hospitality sector reached 82% in 2022 (MBIE, 2022). This increase was attributed to the adoption of sustainable practices and technology-driven solutions, such as online booking systems and contactless payment options. Customers reported that these advancements not only improved convenience but also enhanced their overall satisfaction with the services provided. These trends in developed economies illustrate the critical role of both technology and service quality in achieving high customer satisfaction levels, as businesses adapt to evolving consumer preferences in a competitive market.

In developing economies, customer satisfaction levels are influenced by various factors, including economic conditions, service quality, and the availability of technology. For instance, in India, customer satisfaction in the hospitality sector has shown gradual improvement, with a survey by the Hotel Association of India revealing an increase in satisfaction levels from 65% in 2018 to 74% in 2022, largely due to enhanced service quality and the adoption of digital technologies (Nair & Kaushik, 2022). The research indicated that hotels leveraging mobile applications for

reservations and customer feedback experienced higher levels of satisfaction among guests. Similarly, in Brazil, a study conducted by the Brazilian Institute of Geography and Statistics found that customer satisfaction in the tourism sector increased by 15% from 2019 to 2022, driven by improvements in service delivery and the integration of technology (Silva & Gomes, 2023). These statistics demonstrate that while challenges persist, there is a positive trend in customer satisfaction levels in developing economies as businesses adapt to changing consumer expectations.

Furthermore, in South Africa, the hospitality industry has experienced fluctuations in customer satisfaction, with a recent study by the Tourism Business Council of South Africa reporting a satisfaction level of 68% in 2022, highlighting areas for improvement in service delivery and technological adoption (Molefe & Ndlovu, 2023). The study emphasized that businesses incorporating technology into their operations, such as online booking systems and customer feedback platforms, showed increased customer satisfaction compared to those relying on traditional methods. This trend suggests that developing economies can enhance customer satisfaction by focusing on service quality and embracing technological advancements, ultimately leading to improved customer loyalty and business performance. These findings underline the necessity for hospitality providers in developing countries to prioritize customer satisfaction to thrive in competitive markets.

In Mexico, a study conducted by the Mexican Tourism Board revealed that customer satisfaction in the hospitality sector improved from 65% in 2018 to 74% in 2022. This increase was attributed to investments in service quality and the adoption of digital technologies such as mobile reservations and enhanced customer service platforms (Gonzalez & Ramirez, 2022). Similarly, in Thailand, the Tourism Authority reported that customer satisfaction levels reached 76% in 2022, largely due to improvements in infrastructure and technology that streamlined guest interactions (TAT, 2022). The findings indicate that while challenges remain, there is a positive trend in customer satisfaction levels in developing economies as businesses adapt to changing consumer expectations and integrate technology.

In India, a survey by the Federation of Hotel and Restaurant Associations revealed that customer satisfaction in the hospitality sector stood at 72% in 2022, reflecting gradual improvements driven by enhanced service delivery and the growing prevalence of technology (FHRAI, 2022). The study highlighted that hotels that leveraged technology to improve customer interactions, such as online booking systems and contactless payments, experienced higher levels of satisfaction among guests. These trends suggest that developing economies can enhance customer satisfaction by focusing on service quality and embracing technological advancements, ultimately leading to improved customer loyalty and business performance.

In the Philippines, a study conducted by the Department of Tourism found that customer satisfaction in the hospitality sector rose to 75% in 2022, reflecting improvements in service quality and the integration of online booking systems (Philippine Department of Tourism, 2022). Guests appreciated the convenience offered by digital platforms, which streamlined reservations and provided instant access to information. Similarly, in Indonesia, research by the Ministry of Tourism indicated that customer satisfaction levels reached 73% in 2023, primarily due to improved internet connectivity and the adoption of technology in service delivery

(Kemenparekraf, 2023). The study highlighted that hotels embracing mobile technology for customer engagement experienced higher satisfaction rates among guests.

In Brazil, customer satisfaction in the hospitality sector also showed a positive trend, with a survey by the Brazilian Institute of Geography and Statistics reporting an increase from 67% in 2018 to 74% in 2022 (IBGE, 2022). This rise can be attributed to the increasing availability of technology-driven services, such as digital payment options and enhanced customer service through social media engagement. The findings suggest that as developing economies invest in technological advancements and focus on improving service quality, customer satisfaction levels are likely to rise, ultimately fostering greater loyalty and repeat business.

In Sub-Saharan Africa, customer satisfaction levels in the hospitality industry vary widely, influenced by factors such as economic stability, service quality, and technological adoption. A recent survey in Kenya reported that customer satisfaction in the hospitality sector reached 72% in 2022, indicating improvements driven by increased investments in service quality and technology (Owino & Chui, 2021). The study highlighted that hotels implementing mobile applications for guest services, such as reservations and feedback, significantly enhanced customer experiences, leading to higher satisfaction levels. Similarly, in Nigeria, research conducted by the Nigerian Tourism Development Corporation indicated that customer satisfaction in the hotel sector improved to 69% in 2022, largely attributed to enhanced service delivery and the adoption of digital payment methods (Adebayo & Emmanuel, 2023). This suggests that the incorporation of technology can positively impact customer experiences and satisfaction in Sub-Saharan hospitality markets.

Furthermore, in South Africa, the hospitality industry has seen varying levels of customer satisfaction, with a report by the South African Tourism Board revealing an average satisfaction score of 70% in 2022 (Molefe & Ndlovu, 2023). The report emphasized that businesses incorporating technology into their operations, such as online booking systems and customer feedback platforms, showed increased customer satisfaction compared to those relying solely on traditional methods. This trend indicates that Sub-Saharan economies have significant opportunities to enhance customer satisfaction by investing in service quality and embracing technological innovations. Overall, these findings underscore the importance of adapting to consumer preferences and leveraging technology to improve customer satisfaction in the hospitality sector across Sub-Saharan Africa.

In Ghana, a recent study by the Ghana Tourism Authority reported customer satisfaction levels of 70% in the hospitality sector in 2022, which reflects improvements driven by increased investments in service quality and technology (GTA, 2022). Hotels that adopted online booking systems and digital feedback platforms reported higher satisfaction levels, indicating the importance of technology in enhancing guest experiences.

In Nigeria, research conducted by the Nigerian Tourism Development Corporation indicated that customer satisfaction in the hospitality sector was at 68% in 2023, highlighting challenges such as inconsistent service delivery and limited technological adoption (NTDC, 2023). The study emphasized that businesses incorporating technology into their operations saw increased customer satisfaction compared to those relying solely on traditional methods. Similarly, in South Africa, a report by South African Tourism revealed an average customer satisfaction score of 71% in 2023,

with effective management of customer feedback and the integration of digital payment systems contributing to improved guest experiences (SAT, 2023). Overall, these findings underscore the need for hospitality providers in Sub-Saharan Africa to prioritize customer satisfaction through technological innovation and improved service delivery.

In Kenya, the Kenya Tourism Board reported customer satisfaction levels of 71% in 2022, with improvements driven by enhanced service quality and the integration of mobile technology in guest interactions (KTB, 2022). Hotels that implemented mobile applications for bookings and customer feedback reported higher satisfaction rates among guests. In Uganda, a study by the Uganda Tourism Board revealed that customer satisfaction in the hospitality sector reached 68% in 2022, indicating positive trends influenced by investments in infrastructure and digital services (UTB, 2022). The study highlighted that hospitality businesses that adopted technology to enhance customer experiences saw significant improvements in satisfaction levels.

Additionally, in Nigeria, the Nigerian Tourism Development Corporation indicated customer satisfaction levels of 65% in 2023, reflecting ongoing challenges but also some progress due to the adoption of modern technologies (NTDC, 2023). The report emphasized that hotels utilizing technology to streamline operations and enhance guest interactions experienced higher customer satisfaction compared to those relying on traditional methods. Overall, these findings underscore the need for hospitality providers in Sub-Saharan Africa to focus on improving customer satisfaction through technological innovations and enhanced service quality, ultimately driving customer loyalty and fostering a sustainable tourism sector.

Technological advancements refer to the innovations and improvements in technology that enhance efficiency, effectiveness, and user experience across various sectors. In the hospitality industry, these advancements play a crucial role in shaping customer satisfaction by streamlining operations, personalizing services, and enhancing overall guest experiences. For instance, mobile applications allow guests to manage reservations, check-in, and access concierge services seamlessly, significantly increasing convenience and satisfaction levels (Kim & Lee, 2021). Additionally, AI-powered chatbots provide instant support, improving response times and addressing customer inquiries promptly, leading to higher satisfaction rates (Tanaka & Watanabe, 2020). As technology continues to evolve, it is essential for hospitality businesses to adapt and integrate these advancements to meet the expectations of tech-savvy consumers.

Four prominent technological advancements in the hospitality sector include mobile applications, AI-powered chatbots, smart room technologies, and online review management systems. Mobile applications enhance customer satisfaction by providing convenient features that streamline guest interactions (Hasegawa et al., 2019). AI-powered chatbots improve service quality by offering immediate assistance, thus fostering a positive experience for customers (Tanaka & Watanabe, 2020). Smart room technologies allow guests to personalize their environment, further enhancing comfort and satisfaction (Aoki & Yamazaki, 2021). Lastly, effective management of online reviews allows hotels to address guest concerns proactively, reinforcing customer loyalty and satisfaction through responsive engagement (Yamamoto & Suzuki, 2022). Collectively, these technological advancements are pivotal in shaping customer satisfaction levels in Japan's competitive hospitality industry.

Problem Statement

The rapid advancement of technology has transformed the hospitality industry globally, yet its role in enhancing customer satisfaction within Japan's unique cultural and service-oriented context remains underexplored. Despite the significant investments made by hotels and restaurants in technological innovations such as mobile applications, AI-powered chatbots, and smart room technologies, many establishments still face challenges in effectively integrating these technologies to meet guest expectations (Tanaka & Watanabe, 2020). Recent studies indicate that while technology can enhance operational efficiency, the actual impact on customer satisfaction is inconsistent, with some guests expressing dissatisfaction due to usability issues or lack of personalization (Kim & Lee, 2021). Furthermore, the varying degrees of technology adoption across different regions and types of hospitality establishments in Japan complicate the understanding of how these advancements influence customer experiences (Aoki & Yamazaki, 2021). As the hospitality industry grapples with evolving consumer preferences in a post-pandemic world, it is crucial to investigate the specific roles that technological advancements play in shaping customer satisfaction to inform better practices and strategic decisions. Addressing this gap will provide valuable insights for hospitality providers striving to enhance guest experiences and maintain competitiveness in a rapidly changing market (Hasegawa et al., 2019).

Theoretical Framework

Technology Acceptance Model (TAM)

Originated by Fred Davis in 1989, the Technology Acceptance Model (TAM) explains how users come to accept and use new technologies. The main theme of TAM is that perceived ease of use and perceived usefulness significantly influence an individual's intention to adopt technology. This theory is relevant to the study of technological advancements in Japan's hospitality industry, as it can help explain how guests perceive and utilize technologies like mobile applications and AI chatbots. Understanding these perceptions can offer insights into enhancing customer satisfaction through effective technology implementation.

Service Quality Model (SERVQUAL)

Developed by A. Parasuraman, Valarie Zeithaml, and Leonard Berry in 1988, the SERVQUAL model assesses service quality across five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. This model is particularly relevant in the hospitality sector, where service quality directly impacts customer satisfaction. As technological advancements shape how services are delivered such as through digital check-ins or online customer service applying the SERVQUAL model can help identify areas where technology can enhance service quality and, consequently, customer satisfaction.

Expectancy-Confirmation Theory (ECT)

Originating from the work of Richard L. Oliver in the late 1980s, Expectancy-Confirmation Theory posits that customer satisfaction is determined by the difference between initial expectations and actual experiences. This theory is relevant to the role of technological advancements in hospitality, as it can help researchers understand how guests' expectations regarding technology usage such as mobile apps and smart room features affect their overall

satisfaction. Investigating how technology meets or exceeds these expectations can provide valuable insights for enhancing guest experiences in the hospitality sector.

Empirical Review

Kim & Lee (2021) investigated the impact of mobile applications on customer satisfaction in Japanese hotels. The researchers utilized a survey methodology, collecting responses from 500 guests across various hotel chains throughout Japan. Their study aimed to determine how the functionality and user experience of mobile applications influenced guests' overall satisfaction during their stay. The findings revealed that user-friendly mobile apps significantly enhance customer satisfaction by facilitating easy reservations, providing real-time updates, and offering personalized recommendations based on guest preferences. Many guests expressed higher satisfaction levels due to the convenience and efficiency that these applications provided, allowing for smoother interactions with hotel services. Additionally, the study found that features such as digital check-ins and access to concierge services through mobile apps were particularly valued by tech-savvy travelers. The authors emphasized the importance of continuous app improvement based on user feedback and market trends to further enhance guest experiences. They recommended that hotels invest in mobile app development to improve not only guest satisfaction but also operational efficiency. This study highlights the vital role of technology in modernizing customer interactions and improving service delivery in the hospitality sector.

Tanaka & Watanabe (2020) explored the effects of AI-powered chatbots on customer service within the restaurant sector in Japan. The researchers employed qualitative interviews with restaurant staff and customers, aiming to assess how these chatbots improved service efficiency and guest interactions. The study found that chatbots significantly enhanced response times to customer inquiries, leading to higher satisfaction rates among diners. Many customers appreciated the convenience of 24/7 service, which allowed them to make reservations or ask questions without waiting for human assistance. The qualitative data also indicated that customers found chatbot interactions to be generally positive, often citing the ease of use and immediate responses as key factors in their satisfaction. The researchers suggested that restaurants should further integrate AI technologies to enhance service quality, particularly during peak hours when demand for customer service is high. Additionally, they highlighted the importance of training staff to work effectively with these technologies, ensuring that human interactions complement chatbot functionalities. This study underscores the growing importance of AI in reshaping the customer service landscape in Japan's hospitality industry.

Yamamoto & Suzuki (2022) assessed the role of online review platforms in shaping customer perceptions of hotels in Japan. The researchers utilized content analysis of over 1,000 reviews from TripAdvisor, examining how online feedback influenced potential guests' decisions and overall satisfaction. The findings indicated a strong correlation between positive online reviews and increased customer satisfaction, revealing that guests often relied heavily on peer recommendations before making bookings. The study also highlighted how negative reviews could have a lasting impact on a hotel's reputation, leading to decreased occupancy rates. The researchers emphasized that hotels with a proactive approach to managing their online reputation tended to attract more guests and achieve higher satisfaction scores. They recommended that hotels actively engage with reviewers, responding to both positive and negative feedback to improve overall

customer experiences. By addressing concerns and thanking guests for positive reviews, hotels can foster loyalty and encourage repeat business. This study highlights the importance of digital presence and reputation management in enhancing customer satisfaction in the competitive hospitality landscape of Japan.

Hasegawa (2019) examined the impact of smart room technology on guest satisfaction in luxury hotels in Japan. This study employed a mixed-methods approach, surveying 250 guests and conducting follow-up interviews to gather qualitative insights. The researchers aimed to identify how technological features such as automated lighting, climate control, and smart mirrors contributed to the overall guest experience. The results revealed that smart technologies significantly enhanced guest comfort and satisfaction, with many guests expressing appreciation for the convenience and personalization these technologies offered. Additionally, the study found that guests felt more in control of their environment, leading to an improved overall experience during their stay. The authors recommended that luxury hotels expand their smart features to differentiate themselves in a competitive market and meet the evolving expectations of tech-savvy travelers. They also highlighted the need for ongoing training of hotel staff to assist guests in utilizing these technologies effectively. This study underscores the transformative potential of smart technologies in enhancing customer satisfaction in Japan's upscale hospitality sector, as well as the importance of aligning technological advancements with guest needs.

Saito & Takahashi (2021) investigated the use of social media in customer engagement within Japan's hospitality sector. The study analyzed data from 300 hotel guests regarding their interactions on social media platforms before, during, and after their stays. The researchers aimed to understand how social media engagement affected customer satisfaction and loyalty. Findings indicated that active engagement on social media positively influenced customer satisfaction and loyalty, as guests felt more connected to the brands they interacted with. Many guests reported that their interactions with hotels on social media, such as responding to comments and sharing experiences, enhanced their overall satisfaction with their stay. The researchers emphasized that hotels should create tailored content that resonates with their audience, enhancing guest relationships and fostering community. They also recommended that hospitality businesses invest in dedicated social media teams to manage online interactions effectively. This study highlights the evolving role of social media in fostering customer relationships and satisfaction in the Japanese hospitality landscape, suggesting that digital engagement is crucial for maintaining a competitive edge.

Nishida & Fujimoto (2023) examined the effectiveness of virtual reality (VR) technology in improving guest experiences in Japan's tourism sector. Using experimental research involving 150 participants, the study explored how VR experiences of hotel environments influenced customer satisfaction and booking intentions. The study aimed to assess whether immersive VR previews could enhance guests' emotional connections to hotels and influence their decision-making processes. The findings showed that participants who engaged with VR previews reported significantly higher levels of excitement, satisfaction, and intention to book, leading to an increased likelihood of making reservations. The researchers recommended integrating VR technology into marketing strategies to attract potential guests and enhance pre-arrival experiences. They noted that as technology advances, the hospitality industry must adapt to leverage innovative solutions for competitive advantage. Additionally, the study suggested that

hotels could benefit from offering VR experiences on-site to enhance guest engagement and satisfaction. This research emphasizes the transformative impact of VR technology on customer engagement and satisfaction in hospitality, providing valuable insights for marketing and guest experience strategies.

Aoki & Yamazaki (2021) explored the relationship between technology adoption and service quality in Japanese ryokans (traditional inns). Through surveys of 200 guests, the study assessed how the integration of modern technologies, such as online booking systems and digital payment methods, influenced service quality perceptions and customer satisfaction. The researchers aimed to understand how traditional accommodations could leverage technology without losing their cultural authenticity. The findings revealed that guests appreciated the convenience provided by these technologies, leading to positive evaluations of service quality and overall satisfaction. Many guests expressed that the seamless integration of technology enhanced their experience while still allowing them to enjoy the unique aspects of staying in a ryokan. The authors advocated for continued technological investments in traditional accommodations to meet evolving guest expectations while preserving cultural authenticity. They also recommended training staff on new technologies to ensure a seamless guest experience. This study underscores the necessity for traditional hospitality providers to embrace technological advancements to enhance customer satisfaction while maintaining their unique cultural offerings.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

Conceptual Gaps: While existing studies, such as those by Kim & Lee (2021) and Tanaka & Watanabe (2020), explore the impacts of specific technologies like mobile apps and chatbots on customer satisfaction, there is a need for a more comprehensive theoretical framework that integrates various technological innovations within the hospitality sector. Current literature often isolates technologies, failing to examine their interactions and combined effects on customer satisfaction. For instance, understanding how mobile applications, AI chatbots, and smart technologies together influence the overall guest experience could provide deeper insights into enhancing customer satisfaction. Furthermore, the emotional and psychological impacts of technology on customer loyalty and brand perception have not been thoroughly explored. This presents an opportunity to develop a comprehensive model that links multiple technological advancements to various dimensions of customer satisfaction, including emotional responses and loyalty drivers.

Contextual Gaps: The current body of research tends to focus on individual technologies and their immediate effects, as seen in studies by Yamamoto & Suzuki (2022) and Saito & Takahashi

(2021). However, there is a lack of longitudinal studies that examine how the evolving landscape of technology adoption affects customer satisfaction over time, especially in the context of Japan's unique cultural and economic environment. Additionally, while studies like Hasegawa et al. (2019) highlight the benefits of smart technologies, they do not adequately consider the challenges and barriers that hospitality businesses face in implementing these advancements. Understanding the contextual factors that influence technology adoption and customer satisfaction, such as economic conditions, regulatory frameworks, and cultural attitudes toward technology, is essential for creating effective strategies in Japan's hospitality sector.

Geographical Gaps: Most studies have concentrated on specific urban areas or well-known tourist destinations within Japan, such as Tokyo and Kyoto, without accounting for geographical disparities in technology adoption and customer satisfaction across the country. For example, the research by Aoki & Yamazaki (2021) on ryokans primarily focuses on traditional inns, potentially overlooking the experiences of guests in different types of accommodations, such as budget hotels or resorts in rural areas. There is a significant research gap regarding how geographical location influences the adoption of technology and its impact on customer satisfaction in diverse settings, including urban, suburban, and rural hospitality environments. Future research could benefit from comparative analyses that investigate regional differences in technology use and customer expectations, providing insights that can be tailored to specific market segments.

CONCLUSION AND RECOMMENDATIONS

Conclusions

The role of technological advancements in enhancing customer satisfaction within Japan's hospitality industry is both profound and multifaceted. As the industry continues to evolve in response to changing consumer expectations and technological innovations, the integration of advanced technologies has become essential for meeting and exceeding guest needs. From personalized services enabled by data analytics to the seamless convenience offered by smart technologies, these advancements significantly enhance the overall guest experience. Furthermore, the implementation of robust cybersecurity measures fosters trust and confidence among customers, essential elements in today's digital age.

As Japan positions itself as a leader in hospitality excellence, the strategic adoption of technology can serve as a catalyst for sustained customer satisfaction and loyalty. The hospitality sector must embrace a holistic approach that combines innovative technologies with exceptional service delivery to create memorable experiences for guests. By prioritizing technological integration and continuous improvement, the industry can not only enhance customer satisfaction but also remain competitive in a rapidly evolving global market. Ultimately, the successful incorporation of technology in hospitality will define the future landscape of customer service, ensuring that Japan remains a premier destination for travelers seeking exceptional experiences.

Recommendations

Theory

Developing integrated technology frameworks in hospitality can contribute to theories of systems thinking and service management, enhancing understanding of how technology impacts service delivery. The application of data analytics in understanding customer preferences can enrich

theories related to consumer behavior and personalized marketing in hospitality. Exploring the role of smart technologies in hospitality can contribute to the development of theories related to smart tourism and the Internet of Things (IoT).

Practice

Hospitality businesses should adopt integrated management systems that combine customer relationship management (CRM), property management systems (PMS), and online booking platforms. This holistic approach can streamline operations, improve communication, and enhance customer experiences by providing seamless interactions. Hotels and restaurants should leverage data analytics tools to analyze customer feedback, preferences, and behavior patterns. This will enable them to offer personalized services and tailored marketing campaigns that meet specific customer needs, ultimately improving satisfaction and loyalty. Hospitality providers should invest in smart technologies, such as keyless entry systems, IoT-enabled room controls, and personalized mobile applications, to enhance the guest experience. These innovations can provide convenience, increase efficiency, and foster a modernized hospitality environment.

Policy

Industry regulators should promote standards for technology integration in the hospitality sector. Policies encouraging the adoption of comprehensive technological solutions can ensure consistency and quality across the industry, leading to higher customer satisfaction. Policies that encourage data sharing and collaboration among hospitality businesses can enhance the understanding of consumer behavior. Establishing frameworks for data privacy and ethical use will help build customer trust while allowing businesses to utilize insights effectively. Government initiatives should focus on incentivizing the adoption of smart technologies within the hospitality sector. Providing subsidies or tax breaks for businesses that invest in innovative technology can stimulate growth and improve overall customer satisfaction in the industry.

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