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# Digital Transformation in Osun State's Tourism & Hospitality: A Path to Sustainable Growth

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**Abstract: This study investigates the digital transformation within Osun State's tourism and hospitality sector, examining the implications of technology adoption for sustainable tourism development. Employing a mixed-methods research design, quantitative data were collected via a questionnaire administered to 300 tourists using a simple random sampling technique, focusing on their digital tool utilization and attitudes towards adoption. Another questionnaire set was administered to 150 employees randomly selected in tourism and hospitality firms. Concurrently, qualitative data were gathered through in-depth interviews with stakeholders from 30 tourism and hospitality firms, using a stratified sampling technique, to explore the availability, adoption, impacts, and challenges of digital tools. Findings reveal that 26.3% of tourists actively use digital platforms like hotel websites and mobile apps for booking. Regression analysis was used to test for the adoption of digital tools by staff of the tourism and hospitality sector and shows that gender significantly affects the attitude of the respondents to digital tool adoption, with a p-value of 0.037. Qualitative insights from firms indicate a strong embrace of digital transformation, leading to enhanced competitive advantages. However, firms consistently face challenges such as limited capital, insufficient infrastructure, and technical difficulties. The study concludes that strategically fostering tech-driven solutions is paramount for Osun State to fully leverage its tourism potential, thereby promoting both economic growth and sustainable tourism objectives. Recommendations include investment in digital literacy programs for tourists and tourism and hospitality personnel and fostering public-private technology. Policy frameworks should also actively integrate and promote sustainable tourism practices alongside technological advancements.**

***Keywords:*** *Digital Transformation, Tourism and Hospitality, Technology Adoption, Sustainable Tourism, Osun State.*

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## I. INTRODUCTION

The global tourism and hospitality industry is experiencing an unprecedented digital transformation, fundamentally altering business operations and customer interactions. Recent technological advancements, ranging from sophisticated online booking systems to advanced in-room technologies, have significantly boosted operational efficiency and guest satisfaction (Anwar et al., 2024). In this information-intensive sector, the proliferation of online resources provides a vital foundation for effective marketing strategies and enhanced information accessibility for travelers.

The contemporary era is characterized by the pervasive influence of social media, which has emerged as a cornerstone of promotional strategies for tourism and hospitality businesses (Berhanu and Raj, 2020). Platforms like Facebook, YouTube, and WhatsApp, with billions of users globally (Global Web Index, 2019), serve as primary information channels for prospective customers. Meanwhile, dedicated hotel websites and online travel agencies (OTAs) such as Airbnb, Hotel.ng, and Booking.com have revolutionized the booking experience, allowing customers to conveniently browse, compare prices, and secure accommodations from home (Dada et al., 2020). Mobile applications provided by many hotels now facilitate seamless check-ins, check-outs, and even room service orders (Torres, 2018).

The integration of cutting-edge technologies is also enhancing the in-destination experience. Innovations like smart doors, smart TVs, mobile app-based check-ins, and widespread Wi-Fi connectivity are increasingly becoming standard in modern hospitality firms. Moreover, advanced digital tools such as voice-activated virtual assistants and Internet of Things (IoT) systems are reducing service barriers, allowing hotel staff to focus on personalized guest experiences (Buhalis & Moldavska, 2021; Buhalis et al., 2019). For instance, voice commands can handle guest

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requests, while IoT connects in-room devices to optimize comfort (e.g., smart sensors adjusting temperature) and streamline operations (e.g., real-time inventory management). These technological enhancements boost efficiency and quick responsiveness to guest needs.

Integration of technology in tourism has been recognized to lead to superior operational outcomes, enriched visitor experiences, and improved accessibility to services (González et al., 2021). Adopting technology is no longer optional but a strategic imperative for maintaining competitiveness in the sector (Buhalis & Sinarta, 2019). The recent COVID-19 pandemic further underscored this necessity, accelerating the adoption of remote services and virtual tourism, thereby demonstrating technology's resilience and adaptability (Khan et al., 2022).

In Osun State, Nigeria, a region rich in cultural heritage and natural attractions (e.g., Osun-Osogbo Grove and Erin-Ijesa Waterfall, to mention a few), this technological shift presents significant opportunities. Digital transformation can not only enhance the economic sustainability of the tourism and hospitality sector but also promote environmentally friendly practices by streamlining operations and reducing paper-based processes. Despite the evident advantages and pervasive influence of digital communication, many tourism and hospitality sectors in regions like Osun State still struggle to fully leverage its potential. There appears to be an underutilization of readily available internet facilities and digital tools. This hinders their ability to capitalize on the benefits of digital connectivity. This gap in adoption and effective utilization can constrain the sector's growth and its contribution to the state's sustainable development goals.

Therefore, this study aims to assess the current state of digital transformation within Osun State's tourism and hospitality sector. Specifically, it seeks to

- Evaluate the extent of digital tool utilization and adoption by tourists for booking and in-destination services.
- Examine the attitudes of tourists towards using and adopting digital technologies in tourism.
- Investigate the availability, adoption, and impacts of digital tools within tourism and hospitality firms.
- Identify the key challenges hindering the effective implementation and use of digital technologies by both tourists and firms.
- Propose recommendations for stakeholders to foster sustainable tourism development through enhanced digital transformation in Osun State.

## II. LITERATURE REVIEW

➢ *Theoretical Framework*

This study is primarily guided by the Technology Acceptance Model (TAM), a widely recognized framework developed by Fred Davis (1986; Davis, 1989; Ma and Liu, 2004). TAM provides a robust lens for understanding and predicting user acceptance and usage of information technology. It posits that an individual's decision to adopt a technology is primarily influenced by two cognitive beliefs: perceived usefulness (PU) and perceived ease of use (PEOU).

Perceived Usefulness (PU) refers to the extent to which an individual believes a system improves their job performance, productivity, or effectiveness. In tourism, this implies that if tourists perceive a digital tool (e.g., a booking app or a digital guide) as making their travel planning or in-destination experience more efficient, convenient, or rewarding, they are more likely to accept it. For tourism and hospitality firms, PU would relate to how digital tools improve operational efficiency, customer service, or competitive standing.

The concept of Perceived Ease of Use (PEOU) centers on the extent and belief that a system requires little effort to operate. For tourists and hospitality staff, an intuitive, simple-to-navigate digital platform with a minimal learning curve significantly boosts its chances of being adopted, often even overriding initial doubts about its utility. This means staff will integrate digital tools like voice-activated virtual assistants and IoT systems (such as those for room status or cleaning schedules) when these technologies are straightforward to use and staff are confident, they won't be disengaged from their core duties. Also, when customers experience technology as requiring little effort to operate, they're more inclined to recognize its value and readily embrace it. Such as finding it easy to book flights, accommodations, and tours through social media, mobile apps, and the like. In this study, the model posits a causal chain where PEOU and PU influence an individual's attitude toward using the technology, which subsequently shapes their behavioral intention to use it. This ultimately leads to actual system use**.** External variables (such as system characteristics, training, social influence, or organizational context) are understood to influence both PEOU and PU. In this study, TAM is particularly significant for understanding tourist behavior, which helps to explain the reason a tourist adopts or resists digital tools for booking, check-in, and in-destination experiences by assessing their perceptions of usefulness and ease of use. The reported "fear of using and adopting digital tools" among tourists can be analyzed through the lens of low perceived ease of use or even negative attitudes influencing behavioral intention. Furthermore, it helps in informing firm-level challenges. Since TAM is user-centric. Its principles can indirectly inform the challenges faced by firms. For instance, "insufficient infrastructure" and "technical difficulties" could be external variables negatively impacting the perceived ease of use for both staff and customers. Thereby hindering the firm's successful implementation and leveraging of digital tools. "Capital" could be a barrier to acquiring systems with high perceived usefulness and ease of use.

➢ *Hypothesis:*

- $H_1$: Demographic characteristics (age, gender, and educational level) significantly affect the attitude of the respondents to the adoption of technological tools in tourism and hospitality sectors.

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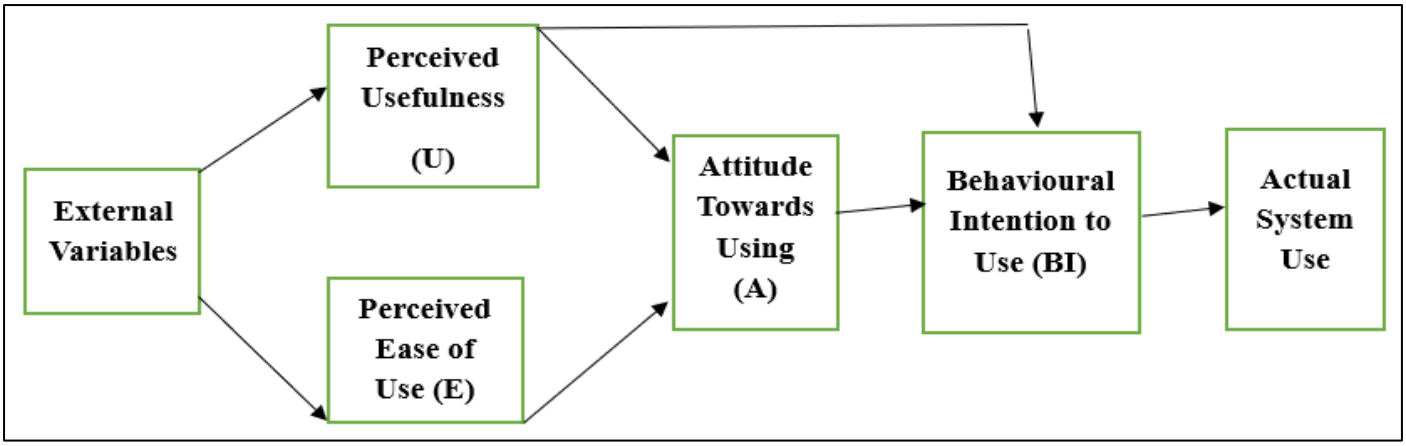


Fig 1 Factors Influencing the Use of Technology
Source: Adapted from Davis, Bagozzi, and Warshaw 1989, p. 985

## III. METHODOLOGY

➢ *Study Area*

The study was conducted in Osun State, Nigeria, a geopolitical entity covering 14,875 km² within the tropical rainforest zone. With an estimated population of 4.7 million in 2020 and a GDP of ₦1.43 trillion (approximately $3.7 billion USD) (National Bureau of Statistics, 2020), Osun State is economically diverse, with significant activities in agriculture, manufacturing, mining, and services, including a growing tourism and hospitality sector. The state is bordered by Ogun, Kwara, Oyo, Ekiti, and Ondo States and experiences a tropical climate (Olajire et al., 2019). It is administratively divided into three senatorial districts. Key urban centers include Osogbo (the state capital), Ile-Ife, Ede, Iwo, Ikirun, Iragbiji, and Ilesha. Osun State boasts notable tourist attractions such as the UNESCO World Heritage Site Osun-Osogbo Sacred Grove, Erin-Ijesa Waterfall, Ayikunugba, Ife Museum, and the Oranmiyan statue, all supported by a network of hospitality services.

➢ *Material and Method*

This study adopted a concurrent mixed-methods research design to provide a comprehensive understanding of digital transformation in Osun State's tourism and hospitality sector. This approach involved the simultaneous collection and analysis of both quantitative and qualitative data in a single research study, allowing for triangulation of findings and a richer interpretation of the phenomena under investigation.

The quantitative method encompassed the use of a questionnaire survey. The questionnaire was in two sets: one for the tourists and the other set for the staff within the selected tourism and hospitality sectors. The questionnaire was administered to 300 tourists. A simple random sampling technique was employed to select participants. This was achieved by approaching tourists at major tourist attractions and hospitality establishments across the selected cities (Ede, Ilesa, and Osogbo) during peak visitation times, usually 10 am to 2 pm for tourist establishments and 4pm to 8pm for hospitality firms. This was done daily, ensuring each tourist had an equal chance of being selected. Participants were briefed on the study's purpose, and their informed consent was obtained before administering the questionnaire. The questionnaire was in sections covering the socio-economic characteristics of respondents, utilization patterns of various digital tools for tourism and hospitality services (e.g., booking, information gathering), and attitudes towards the adoption and use of digital tools, assessed using a 4-point Likert rating scale. The second set of questionnaires was administered to 150 randomly selected tourism and hospitality firms' staff. This was to obtain information about the impacts and factors affecting the adoption of digital tools. For the qualitative data collection method, in-depth interviews were conducted with key stakeholders in tourism and hospitality firms to gather qualitative insights. The interview guide focused on the availability and types of digital tools currently utilized by firms, the extent and patterns of digital tool adoption and utilization within their operations, the economic benefits of digital transformation on service delivery, competitive advantages, customer engagement, and the community at large, and the challenges encountered in the implementation and effective use of digital tools. A total of 30 tourism and hospitality firms (including hotels and tour agencies) were selected using a stratified sampling technique. Osun State was initially stratified into its three senatorial districts (Osun West, East, and Central). Subsequently, one prominent city was purposively selected from each district based on its significant commercial capacities and presence of diverse tourism and hospitality establishments. Therefore, Ede (Osun West), Ilesa (Osun East), and Osogbo (Osun Central) were selected. From each selected city, 10 firms were randomly selected to ensure representation across the sector. Interviews were conducted with senior management officers or owners who possessed direct knowledge of their firm's technological strategies and operations.

Quantitative data collected from tourists were analyzed using descriptive statistics (frequencies and percentages). This was used to summarize the socio-economic characteristics of respondents, describe the utilization patterns of digital tools, and present the distribution of attitudes towards digital tool adoption. These results were presented in tables. The inferential statistic adopted was regression analysis. Qualitative data from the in-depth interviews were analyzed using thematic analysis. Interview

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transcripts were meticulously reviewed to identify recurring themes, patterns, and key insights related to digital tool availability, adoption, economic benefits, and challenges faced by firms. The process involved familiarization with the transcripts to gain an overall understanding of the themes; initial codes from the data were generated, codes were grouped into broader potential themes, the themes were refined and redefined, and clear definitions and names for each theme, often supported by illustrative quotes from the interviews, were included.

## IV. RESULTS AND DISCUSSION

This section presents the findings from both the quantitative survey of tourists and the qualitative in-depth interviews with tourism and hospitality firms.

➢ *Socio-Economic Characteristics of Tourists*

Table 1 shows the socio-economic characteristics of the 300 tourist respondents. The majority of respondents were male (62.3%) compared to female (37.6%). A significant proportion of tourists fell within the 26-45 age range (75.0%), with the largest group being 36-45 years old (40.3%), indicating a relatively mature tourist demographic. Educational attainment was notably high, with 57.0% holding a tertiary education certificate. In terms of marital status, 54.0% were married, followed by single individuals (35.0%). The dominant occupation among respondents was self-employment (75.0%), with civil servants comprising 25.0%.

Table1 Socio-Economic Characteristics of Respondents

| Variable | Category | Frequence | Percentage |
|---|---|---|---|
| Gender | Male | 187 | 62.3 |
| | Female | 113 | 37.7 |
| Age | 18- 25 | 18 | 6.0 |
| | 26- 35 | 104 | 34.6 |
| | 36- 45 | 121 | 40.3 |
| | 46- 55 | 42 | 14.0 |
| | 56- Above | 15 | 5.0 |
| Level of Education | Non-formal | 21 | 7.0 |
| | Primary | 48 | 16.0 |
| | Secondary | 60 | 20.0 |
| | Tertiary | 171 | 57.0 |
| Marital Status | Single | 105 | 35.0 |
| | Married | 162 | 54.0 |
| | Divorced | 10 | 3.3 |
| | Widow | 15 | 5.0 |
| | Widower | 8 | 2.7 |
| Occupation | Self employed | 225 | 75.0 |
| | Civil servant | 75 | 25.0 |

➢ *Digital Booking Platforms Preferred by Tourists*

Table 2 illustrates the preferences of tourists regarding booking platforms. The most frequently adopted platforms for travel and accommodation booking were hotel websites and mobile applications (26.3%), including popular services like Airbnb, Hotels.com, and Expedia. Social media platforms were also significantly utilized for booking purposes by 24.8% of respondents. Online travel agents (OTAs) were preferred by 19.1%, while more traditional methods such as making inquiries from family and friends (10.5%), consulting travel blogs and guides (10.0%), and engaging with local tourism boards (9.2%) accounted for smaller shares. This indicates a clear shift towards self-service digital booking channels among tourists.

Table 2 Booking Platform Adoption Preferred by Tourists

| Platforms | Frequency | Percentage |
|---|---|---|
| Social media | 265 | 24.8 |
| Online travel agency | 204 | 19.1 |
| Family and friends | 112 | 10.5 |
| Hotel websites and Mobile Apps | 281 | 26.3 |
| Travel blog and guides | 107 | 10.0 |
| Local Tourism Board | 98 | 9.2 |
| Total | 1067 | 100.0 |

➢ *Digital Tool Accessibility and Adoption by Tourists*

Table 3 presents the accessibility and adoption of various advanced digital tools by tourists for different services. The table reflects a varied level of exposure and use. Notably, social media demonstrated the highest level of

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accessibility, usage, and adoption, with 95.7% of respondents indicating having used it for various tourism-related activities. While Smart TV usage in destinations was exceptionally high at 91.7%, indicating widespread access to this common amenity, other advanced technologies showed lower adoption. For instance, blockchain for transactions and information management was accessed by 43.7% of tourists, and similarly, artificial intelligence (AI) for information and bookings was accessed by 42.7%.

For Internet of Things (IoT) tools (e.g., smart room settings), 42.0% of the respondents have accessed them, whereas virtual tours had 36.3% of respondents who have accessed them. In contrast, 29.7% have accessed smart tourism applications (such as digital guides and integrated ticketing).

Table 3 Digital Tool Accessibility and Adoption by Tourists

| Variables | Yes | | No | |
|---|---|---|---|---|
| | F | % | F | % |
| 1. Blockchain: for easier transaction and management of travel-related information | 131 | 43.7 | 169 | 56.3 |
| 2. AI: providing information on destinations, activities, etc., based on the traveler's preferences, flight booking, hotel reservations, and answering travel-related queries. | 128 | 42.7 | 172 | 57.3 |
| IoT: for room setting control (e.g., lighting and temperature using a smartphone) and wearable devices for tracking travel activities and providing location-based information. | 126 | 42.0 | 174 | 58.0 |
| 4. Smart tourism, such as digital guides that offer interactive maps, audio guides, and integrated ticketing systems. | 89 | 29.7 | 211 | 70.3 |
| 5. Smart TV. | 275 | 91.7 | 25 | 8.3 |
| 6. Smart Door. | 172 | 57.3 | 128 | 42.7 |
| 7. Elevator. | 93 | 31.0 | 207 | 69.0 |
| 8. Free WIFI access. | 139 | 46.3 | 161 | 53.7 |
| 9. Virtual tours: allowing tourists to explore locations remotely. | 109 | 36.3 | 191 | 63.7 |
| 10. Social media. | 287 | 95.7 | 13 | 4.3 |

➢ *Attitude of Tourists to Usage and Adoption of Digital Tools*

Table 4 details the attitudes of tourists towards the utilization and adoption of digital tools. A significant 66.0% of tourists "strongly agreed" to being afraid of using new technology, contrasting sharply with only 6.6% who were not afraid. This indicates a major psychological barrier to adoption. Furthermore, a substantial majority (60.3%) of the respondents "strongly agreed" that using digital tools for booking trips is expensive, while only 5.0% "strongly disagreed."

Technical difficulties emerged as a pervasive concern, with 69.0% "strongly agreeing" that technical issues prevent them from using and adopting digital tools. Regarding perceived availability and adequacy, 52.0% "Strongly Disagreed" that digital tools were available and adequate in all destinations, suggesting an infrastructural gap. Similarly, 47.3% "Strongly Disagreed" that these tools are easy, convenient, and efficient to use, indicating issues with perceived ease of use.

While 24.6% "Strongly Agreed" to being satisfied with digital tools, the high levels of fear and technical barriers suggest satisfaction may be limited to specific, easier-to-use tools. Interestingly, a large proportion, 79.3%, "Strongly Disagreed" with preferring face-to-face interactions over digital communication, suggesting a preference for traditional service models, while 70.3% "Strongly Agreed" to being worried about sharing personal data or being tracked, highlighting significant privacy and security concerns. The finding also indicates a high reluctance to adopt new digital technologies, as 49.3% of the respondents strongly agreed to be reluctant.

Table 4 Attitude of Tourists to Usage and Adoption of Technological Tools

| Attitudes of tourists to the usage and adoption of digital tools, tools, | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| | F (%) | F (%) | F (%) | F (%) |
| I like using they because they are available and adequate in all destinations. | 58 (19.3) | 45 (15.0) | 41 (13.6) | 156 (52.0) |
| 2. They are easy, convenient, and efficient to use. | 38(12.6) | 61(20.3) | 59(19.6) | 142(47.3) |
| 3. I'm highly eager to try new technology. | 70(23.3) | 34(11.3) | 83(27.6) | 113(37.7) |
| 4. I'm afraid of using them. | 198(66.0) | 10(3.3) | 72(24.0) | 20(6.6) |
| 5. Using digital tool in booking trips is expensive. | 181(60.3) | 23(7.6) | 81 (27.0) | 15 (5.0) |
| 6. I am always satisfied when using digital tools. | 74(24.6) | 68(22.7) | 134(44.7) | 24(8.0) |
| 7. Technical difficulties prevent the use. | 207 (69.0) | 62 (20.7) | 10 (3.3) | 21 (7.0) |
| I prefer face-to-face interactions to digital communication. | 238 (79.3) | 46(15.3) | 05(1.6) | 11 (3.6) |
| 9. I'm reluctant to adopt new digital technologies. | 148 (49.3) | 49 (16.3) | 57 (19.0) | 46 (15.3) |

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| | | | | |
|---|---|---|---|---|
| 10. I worried about sharing personal data or being tracked. | 111 (37.0) | 51(17.0) | 58(19.3) | 80(26.7) |

Likert Rating Scale: 1—Strongly Agreed, 2 – Agreed, 3 – Disagreed, 4 – Strongly Disagreed

➢ *Regression Analysis of Attitude of Respondents (Staff towards Digital Tool) in the Tourism & Hospitality Sector Using Anova Table*

A regression analysis was used to test the hypothesis for 30 randomly selected staff of tourism and hospitality sectors across the three purposively selected regions in Osun State. The alternative hypothesis was that demographic characteristics (age, gender, and educational level) significantly affect the attitude of the respondents toward the adoption of technological tools in tourism and hospitality sectors. The result shows a p-value of 0.052. This is just above the conventional significance level of 0.05. This means that the model is marginally significant. This means that the independent variables (age, gender, and level of education) collectively approach statistical significance in predicting the attitude of respondents to digital tools.

Table 5 Anova [a]

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 1.814 | 3 | .605 | 2.633 | .052[b] |
| 1. Residual | 33.526 | 146 | .230 | | |
| Total | 35.340 | 149 | | | |

a. Dependent Variable: Attitude of Respondents to Digital Tools

b. Predictors: (Constant), Level of Education, Gender of the Respondents, Age of the Respondents

➢ *Explanation of Regression Analysis with the Coefficients Table*

- $H_1$: Demographic characteristics (age, gender, and educational level) significantly affect the attitude of the respondents to the adoption of technological tools in tourism and hospitality sectors.
- $H_0$: Demographic characteristics (age, gender, and educational level) do not significantly affect the attitude of the respondents to the adoption of technological tools in tourism and hospitality sectors.
- *Age of the Respondents:* With a p-value of 0.460, which is higher than the 0.05 significance level, there is no sufficient evidence to reject the null hypothesis for age of the respondents. Therefore, age does not have a statistically significant effect on the attitude towards digital tool adoption in this study.
- *Gender of the Respondents:* with the p-value 0.037, which is below the significance level (0.05), then the null hypothesis is rejected and the alternative hypothesis is accepted. This means that the gender of the respondents has a statistically significant effect on the attitude of respondents toward digital tool adoption.
- *Level of Education:* With a p-value of 0.259, which is higher than the 0.05 significance level, there is no sufficient evidence to reject the null hypothesis. Therefore, level of education does not have a statistically significant effect on the attitude towards digital tool adoption in this study.

This analysis means that the age and level of education of the respondents are not statistically significant predictors of "Attitude of Respondents to Digital Tools" in this study. The unique contributions are not significantly different from zero. Meanwhile, gender of the respondents in this study is a statistically significant predictor.

Table 6 Coefficients

| Model | Unstandardized coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|
| | B | St. Error | Beta | | |
| (Constant) | 1.433 | .271 | | 5.281 | .000 |
| 1Gender of the Respondent | .168 | .080 | .171 | 2.102 | .037 |
| Age of the Respondent | .030 | .041 | .063 | .741 | .460 |
| Level of Education | -0.58 | .051 | -.097 | -1.133 | .259 |

a. Dependent Variable: Attitude of Respondents to Digital Tools

➢ *Qualitative Findings: Insights from Tourism and Hospitality Firms and Sustainable Tourism Development*

The thematic analysis of in-depth interviews with 30 tourism and hospitality firms revealed several key themes regarding their engagement with digital transformation.

- *Availability and Utilization of Digital Tools by Firms:*

While firms acknowledged the importance of digital tools, the extent and type of adoption varied. A clear majority of the interviewees mentioned integration of common digital tools utilized, such as online booking systems (either through their own websites or via OTAs), social media marketing with active presence on platforms like Instagram and Facebook for promotion and direct engagement of customers, and property management systems (PMS), in which only larger hotels reported using it for reservations, guest management, and operational efficiency, and basic communication tools such as email and WhatsApp were widely used for internal and external communication. Less prevalent, especially among smaller firms, were advanced technologies like AI-driven

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chatbots, sophisticated IoT systems for smart rooms, or comprehensive data analytics platforms.

- *Embracement of Digital Transformation and Perceived Benefits:*

A clear majority of the interviewed firms indicated an active embrace of digital transformation, recognizing its strategic importance for modern operations. It was stated by the majority that digital tools, particularly online presence and booking platforms, allowed them to reach wider markets and compete more effectively**.** ***As one hotel manager stated, "Without a strong online presence, we simply cannot compete with bigger chains. Digital marketing is our lifeline."***

- *Improvement in Service Delivery:*

The majority of the interviewees mentioned that digital tools have improved service delivery, such as faster check-ins/check-outs, more efficient communication with guests, and personalized services. ***A tour agency owner noted, "Our new online itinerary builder has significantly reduced manual errors, and clients love the instant confirmations."*** And it has increased customer engagement, in which social media and review platforms were highlighted as crucial for direct interaction with customers, managing feedback, and building brand loyalty**.** ***"We get so much direct feedback through our social media, which helps us improve our services constantly," a hospitality firm representative shared.***

➢ *Challenges Hindering Effective Digital Tool use:*

The majority of the interviewees indicated that despite the benefits, firms consistently faced several significant challenges hindering their digital transformation journey, such as

- *Capital Investment:* That initial cost of acquiring and implementing advanced digital infrastructure and software was a major barrier. ***A small hotel owner, aged 47, lamented "The technology is great, but the capital outlay for proper systems is just too high for us right now,"***
- *Insufficient infrastructure: was* another challenge mentioned by some of them, such as inadequate reliable internet connectivity and consistent power supply. ***"Even if we invest in the best systems, unreliable internet makes them useless," said a tour operator aged 55.***
- *Technical difficulties and skill gaps* were mentioned by a clear majority. Firms reported challenges related to software compatibility, technical malfunctions, and a lack of adequately skilled personnel to manage and troubleshoot digital systems.

## V. RECOMMENDATIONS

The following recommendations were suggested as a path to sustainable tourism development:

Online presence and marketing are needed through the establishment of a well-dedicated tourism portal. The portal should be user-friendly and must be mobile-responsive and multilingual. This will enhance the visibility and accessibility of the firms.

Online booking and payment systems should improve through the integration of online booking engines for hotels, guesthouses, tour operators, and event tickets. This streamlines the reservation process and provides convenience for both domestic and international travelers. This enabled secure online payment gateways, supporting various payment methods to facilitate transactions.

Staff training is crucial. Investment in training hospitality staff on digital literacy, the use of new technologies, and digital customer service protocols will enhance sustainable tourism development. This will foster public-private technology. The introduction of PEOU (perceived ease of use) is also important. This will foster greater adoption among both tourists and firms.

Partnerships with educational institutions and technology companies are important. This is to provide digital skills training for local youth and hospitality professionals, creating a digitally literate workforce.

Collaboration platforms among tourism stakeholders, including hoteliers, tour operators, artisans, local communities, and government agencies, to share insights and coordinate efforts will go a long way in tourism development.

## VI. CONCLUSION

The study focused on digital transformation in Osun State's tourism and hospitality: A Path to Sustainable Growth. It was concluded that strategically fostering tech-driven solutions is paramount for Osun State to fully leverage its tourism potential. This will thereby promote both economic growth and sustainable tourism objectives.

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