DIGITAL INFORMATION'S INFLUENCE ON FORMING TOURISM EVENT IMPRESSIONS: THE INTERPLAY OF GENDER AND TOURISM TYPES

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Abstract: Digital information plays a crucial role in shaping tourists' expectations and impressions of potential destinations and activities. This study explores how perceptions of digital information vary across different tourism experience types (adventure, leisure, cultural) and examines the complex interactions between digital information perception and tourism engagement. A survey was conducted among tourists actively participating in various tourism types to collect data on their digital information consumption habits and their influence on their overall perceptions. The findings reveal that leisure and adventure tourists demonstrate a stronger initial reliance on digital information compared to cultural tourists. However, all tourism types exhibit negative interaction effects, suggesting diminishing returns of digital information as engagement increases. Specifically, leisure and adventure tourism show stronger positive main effects on digital information perception compared to cultural tourism. Interestingly, leisure and adventure tourism also display more pronounced negative interaction effects than cultural tourism. These insights suggest that destination marketers should employ nuanced, personalized strategies catered to specific tourism types, considering the varying levels of digital information reliance and the changing needs of tourists as their engagement progresses. For leisure and adventure tourism, this may involve front-loading comprehensive digital information, while cultural tourism may benefit from a more consistent information flow throughout the experience. These tailored approaches could enhance destination brand affinity and improve the overall tourist experience across different tourism segments.

Keywords: digital information, adventure tourism, cultural tourism, leisure tourism, information adequacy, visitor experience

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INTRODUCTION
The availability of digital information has become a critical factor in destination event management, shaping tourists'

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impressions and experiences (Benckendorff et al., 2019). In today's digital age, tourists rely heavily on online sources and digital platforms to gather information about events, attractions, and destinations before and during their travels. This information plays a pivotal role in influencing tourists' perceptions and decision-making processes (García-Milon et al., 2020). Digital information influences not only the practical details about events but also tourists' judgments and interpretations of these experiences (Adeola and Evans, 2019).

The way information is presented, its accuracy, and comprehensiveness can significantly impact how tourists perceive and evaluate events (Wang et al., 2016). Visually appealing and informative digital content can create more positive impressions and heighten anticipation, while misleading or incomplete information can lead to disappointment and negative attributions (Saleh, 2023). Thus, understanding the interplay between digital information and tourists' attribution processes is crucial for effective destination event management. However, the influence of digital information on tourists' impressions may vary based on individual characteristics, such as gender and the type of tourism experience sought. Gender differences in information processing and decision-making have been documented in various fields, including consumer behavior and marketing (Kempf and Palan, 2006; Lin et al., 2018). When it comes to digital information perception, research suggests that men and women may process information differently (Wang et al., 2016). Women tend to pay more attention to details and are more comprehensive information processors, while men are more selective in their information processing. As a result, the way digital information is framed, organized, and presented may resonate differently with male and female tourists, shaping their impressions and attributions in distinct ways (I Agustí, 2021).

While previous studies explored tourists' overall evaluations of destination events, there is a gap in understanding how different themed tourism experiences (leisure, adventure, and cultural) lead to differential attribution judgments regarding tourism event types (Janowski et al., 2021; Liu et al., 2022). The type of tourism experience sought may influence the way digital information is perceived and processed. For instance, adventure tourists may be more drawn to visually stimulating and experiential digital content that conveys excitement and thrill (Buckley, 2007; Ponte et al., 2021), while cultural tourists may prioritize historical and contextual information presented in a more informative manner (Chang and Hung, 2021). Leisure tourists, on the other hand, may respond better to digital information that highlights relaxation, comfort, and entertainment aspects of the destination events (Kim et al., 2015). These differential preferences and information processing styles can shape tourists' impressions and attributions regarding the various tourism event types they encounter.

By understanding how digital information perception differs based on gender and tourism experience types, destination managers can tailor their digital strategies and content to better align with the unique needs and preferences of different tourist segments, enhancing the overall visitor experience. To address these gaps, this study proposes two research questions: 1) How does the perception of digital information shape tourists' impressions and attribution judgments across different tourism experience types (leisure, adventure, and cultural)? 2) How does the perception of digital information influence tourists' impressions and attribution judgments regarding tourism events, and how does this differ between males and females? Investigating these questions is important for several reasons.

First, it will provide insights into the role of digital information in shaping tourists' impressions and experiences, crucial for effective destination event management. Second, it will contribute to a better understanding of gender differences in information perception, informing more targeted marketing and communication strategies. Finally, by exploring the interplay between digital information, gender, and tourism experience types, this study will shed light on how to tailor information delivery and event management approaches to cater to diverse tourist preferences and expectations.

LITERATURE REVIEW
1. Digital Information and Tourist Perception
The widespread availability of internet access has completely changed how people learn about and plan their travel experiences (Adeola and Evans, 2019; Ho et al., 2012; Li et al., 2017). Travellers can now easily access reliable and up-to-date information about potential destinations, activities, and cultural options through websites, apps, and social media, which provides great details to help them design custom itineraries matching their interests (García-Milon et al., 2020; Ho et al., 2012; Li et al., 2017). Even before they set out on their travels, travellers' impressions and expectations about tourism events are greatly influenced by their access to digital information (García-Milon et al., 2020).

According to transaction cost theory, digital information reduces the expenses of obtaining and assessing data, empowering travellers to make well-informed choices and lowering uncertainty about their travel experiences (Kim and Li, 2009; Saleh, 2023). The quality and sufficiency of digital information have a big impact on how travellers interpret and understand different tourism experiences (Saleh, 2022; Wang et al., 2016). Travellers are better able to create accurate and favorable perceptions, reasonable expectations, and an appreciation of the distinctive qualities of various tourism events when they have access to sufficient, trustworthy, and insightful information (Wang et al., 2016). As a result, visitors are more likely to associate the activities they attend with favorable meanings and feelings, which improves their overall happiness and experience (Wang et al., 2016). Digital information is available from a number of sources, such as social media influencers, smartphone applications, destination websites, and online travel platforms (García-Milon et al., 2020). In the travel business, social media influencers in particular have become important informational and perception-shaping tools. With their large followings and established credibility, these influencers have the power to sway travellers' opinions by offering their firsthand knowledge, advice, and perspectives on popular tourist spots and events (Saleh, 2022). Their genuinely accessible material, frequently enhanced by eye-catching images and videos, can affect travellers' decision-making processes and help shape their expectations and views even before they set out on their voyage.

While digital information plays a pivotal role in shaping tourist perceptions of tourism events, it is important to recognize that the way this information is perceived and processed can vary based on individual characteristics, particularly gender. Extensive research in consumer behavior and marketing has documented gender differences in information processing and decision-making. These differences can influence how men and women perceive and interpret digital tourism information, potentially leading to differential attributions and impressions regarding tourism events.

2. Tourist Gender and Information Perception

Females actively seek more information than males (Kempf and Palan, 2006) to ensure a high degree of stability and controllability of events (Wilson and Little, 2008). Consequently, they are more likely to evaluate destination initiatives that enhance the destination's image than males (Wang et al., 2016). In the case of positive events, female tourists are more inclined to spread stronger positive perception toward tourism events than males (Saleh, 2022). This result of females exhibiting positive perception tendencies compared to males contradicts Akinci and Aksoy's (Akinci and Aksoy, 2019) findings, which suggested that males sometimes have stronger WOM than females in cases of high income. While females actively seek more information than males to ensure control and stability of events, they also tend to have more positive perceptions based on that digital information compared to males. Not only are females more likely to evaluate and spread positive word-of-mouth for destination initiatives and events, research shows they also rely more heavily on digital sources to form their impressions. Studies have found that females consult travel blogs, review sites, and social media more often than males when planning trips and experiences. This points to females placing greater trust and value in the digitally available information when shaping their expectations and satisfaction levels.

There are a few key reasons why females tend to have more positive perceptions based on digital information. First, research shows that females have a stronger propensity for social comparison and seek outside validation to a greater extent than males (Kempf and Palan, 2006; Lin et al., 2018). By extensively researching reviews and recommendations online, females are able to gauge social norms and compare their potential experiences to those of others. This helps reduce uncertainty and assuage any concerns based on the perspectives of their peers. Secondly, gender socialization teaches females to place higher importance on relationship-building and connecting with others on a personal level (Xu and Zhang, 2021). By immersing themselves in travel narratives and reviews, females feel a sense of companionship and can better empathize with the experiences of other travelers. This fosters positive sentiment and rapport with destinations. In contrast, males have been shown to be more self-reliant in their decision making and less influenced by others' perspectives (X. Lin et al., 2018). Without as much external validation from online reviews, their expectations remain more uncertain compared to females. Additionally, males tend to adopt a problem-focused coping style when presented with ambiguous situations rather than emotion-focused appraisals (Kempf and Palan, 2006). As a result, any negative reviews or criticisms are less likely to negatively impact males' perceptions. They maintain a more pragmatic outlook based on factual feasibility rather than sentimental connections formed through online exchanges. Based on these gender differences in information-seeking behaviors and processing styles, we hypothesize that:

H1: "Females will tend to develop more positively skewed perceptions after exposure to digital travel information compared to males. Further research is required to directly test this proposition".

3. Tourism types and Information Perception

The tourism industry offers intangible products, with utilities derived from memories and experiences during travel. While no consensus exists on defining travel experiences, researchers have attempted to conceptualize them. For instance, Yang, Mao, and Zhang, 2021 described tourist experiences as comprising interactions, emotions, and judgments during tourism service encounters. Experience is also defined as what tourists obtain from engaging with a destination's tourism goods and services (Chang and Hung, 2021). Tourists' experiences can be shaped by various factors, including their characteristics (e.g., demographics, culture, health, prior visits), interactions with service providers and residents, attractions (e.g., landscapes, sea, museums), natural conditions (e.g., weather), and destination infrastructure and superstructure (e.g., accommodations, transportation) (Saleh, 2022; Yang et al., 2021). Service-based experiences are crucial for tourists to evaluate the service encounter, and the type of experience influences their subjective feedback about tourism events (Chang and Hung, 2021; Saleh, 2022).

For instance: adventure tourism activities are typified by a high degree of uncertainty, unpredictability, and lack of control (Wengel, 2020). These activities, such as caving, whitewater rafting, skydiving, and mountain biking, require specialized skills, equipment, and physical and mental preparedness (Buckley, 2007; Houge Mackenzie and Raymond, 2020; Ponte et al., 2021). Adventure tourists often find themselves in challenging situations, facing unpredictable weather conditions and environmental factors that necessitate significant mental and physical effort (Jackson, 2019). The inherent risks and uncontrollable elements of adventure tourism experiences make it difficult for tourists to plan and control their activities based on digital information (Buckley, 2007; Lin et al., 2022; Ponte et al., 2021; Wengel, 2020). The highly dynamic and uncertain nature of adventure tourism means that even the most detailed digital information may quickly become outdated or irrelevant once the activity begins (Ponte et al., 2021; Wengel, 2020). Additionally, many adventure tourism activities take place in remote or wilderness areas with limited internet connectivity, further reducing the usefulness of digital information during the experience (Wengel, 2020).

As a result, adventure tourists may rely less on digital information and have lower perceptions of its usefulness in shaping their experiences (Lin et al., 2022; Ponte et al., 2021). Instead, they may place greater emphasis on their skills,

preparation, and ability to adapt to changing circumstances (Mackenzie and Raymond, 2020; Jackson, 2019; Lin et al., 2022). The unpredictable and dynamic nature of adventure tourism experiences means that tourists must be prepared to make decisions and adjustments in the moment, rather than relying solely on pre-planned information or itineraries (Lin et al., 2022). Furthermore, the thrill and excitement of adventure tourism often stem from the sense of risk and lack of control, which may be diminished if tourists feel they can fully plan and control every aspect of their experience through digital information. Based on the previous argument we hypothesize that:

H2: "Adventure tourists are likely to have lower perceptions toward digital information due to the unpredictable and challenging nature of their experiences, which may limit their ability to control and plan their activities based on digital information."

In contrast, tourists engaging in leisure and cultural activities are more likely to have a higher degree of control over their experiences. Cultural tourism involves visiting historical attractions (e.g., museums, temples, exhibitions, palaces) that represent the destination's identity and learning about local traditions (Chang and Hung, 2021; Vena-Oya et al., 2021). Cultural tourists can plan their itineraries, schedules, and activities based on digital information, such as opening hours, exhibition details, and guided tour availability. They can leverage digital resources to enhance their understanding and appreciation of the cultural heritage they encounter (Vena-Oya et al., 2021). Leisure tourism, on the other hand, focuses on relaxation, rejuvenation, and escaping daily routines by enjoying the destination's atmosphere (Chen and Huang, 2020; Saleh, 2023). Leisure tourists can use digital information to find suitable accommodations, restaurants, recreational activities, and entertainment options that align with their preferences for a relaxing and enjoyable experience (Peng et al., 2023). They can also access information about local events, festivals, and attractions to tailor their leisure activities. Both cultural and leisure tourists are less likely to encounter significant physical or mental challenges, as destination managers strive to prevent harmful incidents (e.g., safety concerns, traffic, sanitation issues, environmental problems) that may affect their experiences (Kim et al., 2015; Liu, 2020; Liu et al., 2022).

Cultural and leisure tourists have greater control over their experiences, as they can plan and schedule their activities in advance using digital information (Peng et al., 2023; Vena-Oya et al., 2021). This ability to plan and prepare can shape their expectations and perceptions, leading to a more satisfying and enjoyable experience (Hansen et al., 2023). Additionally, cultural and leisure tourism often involves visiting well-maintained and organized attractions, facilities, and services, which further enhances the tourists' sense of control and predictability (Peng et al., 2023).

As a result, digital information is likely to play a more significant role in shaping the experiences of cultural and leisure tourists, as they can use it to make informed decisions and create accurate expectations (Hansen et al., 2023). With a higher degree of control and predictability, these tourists can rely more on digital information to plan, customize, and enhance their cultural and leisure experiences. Based on the previous argument we hypothesize that:

H3: "Cultural and leisure tourists are likely to have higher perceptions toward digital information as they have more control over their activities and can leverage digital information to plan and enhance their experiences in a more predictable and controllable environment."

MATERIALS AND METHODS
1. Survey measures and pre-test validity
The survey included questions about respondent demographics such as gender, age, income level as well as their travel history and preferences. Respondents also indicated their perceptions of different tourism types (leisure, adventure, cultural) and levels of information adequacy regarding destinations on several scales. For information adequacy, we adapted three items from García-Milon et al., 2020, and Akinci and Aksoy, 2019 to measure the perceived amount, usefulness and reliability of information available about potential travel destinations. Sample items included some items that explore the feeling that there is enough information available online about places to visit.

To assess preferences for different tourism types, we used questions developed by Saleh (Saleh, 2023) and Jackson (Jackson, 2019) on adventure, cultural and leisure tourism activities. Respondents indicated the extent to which statements such as enjoy engaging in physically challenging outdoor activities during trips and/or visiting historic sites and learning about local traditions is very interesting to them, representing their interests and motivation for travel. They also self-reported the tourism type that best matched their most recent travel experiences. Additionally, we measured positive perception through positive word of mouth by adapting three items from Saleh (Saleh, 2023) that assessed respondents' likelihood to recommend a destination to others, share positive experiences, and encourage others to visit. This provided insight into both stated preferences and revealed behaviors regarding each tourism category. Participants indicated their level of agreement on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

2. Data collection
To achieve rigour in the originality, validity and verification of the collected data according to the recommendations of Sánchez et al., 2021, a thorough process was followed. Clear definitions of all concepts measured in the study were provided to participants upfront through an introduction that outlined the aims and objectives of the research. To minimize memory effects and inaccurate recall as discussed by Denstadli, 2000, the survey was dispersed through the Couchsurfing platform to travellers who had taken trips within the last month to get more current experiences. This helped improve the data validity and reduce potential bias. The target sample size was determined through Couchsurfing in a way that provided a clear segmentation of participants as advised by Dolnicar et al., 2013 to avoid issues collecting data without properly defining groups. The online

survey was administered through Couchsurfing group events and activities. Couchsurfing is a rapidly growing alternative to hotels that provides more authentic cultural engagement through a verification and review process among its members according to Kuhzady et al., 2020. The survey was aimed at Couchsurfing users who had recently participated in leisure, cultural or adventure tourism. This ensured the data collected was relevant while providing insight into how such initiatives impact these different types of activities. A total of 327 valid responses were acquired to conduct the analysis.

RESULTS
1. Sample profile, study reliability and validity

The survey respondents were predominantly female, representing 58.1% of the total sample compared to 41.9% who were male. The largest age group was 19-30 years old, making up 72.2% of participants which aligns with Couchsurfing being mainly utilized by younger travellers. Over half of respondents at 51.7% indicated their highest level of education was an undergraduate degree, while 33.6% had earned a master's degree and 12.5% completed senior high school. More than half of the sample identified as students at 54.1%, along with 24.8% reporting full-time employment and 9.2% as self-employed. Smaller portions worked part-time or had retired. In summary, the majority of participants were young, highly educated females who classified themselves as students, indicating Couchsurfing as a platform appeals most to this demographic profile. This overview provides context on the characteristics of those who responded to questions about their tourism preferences, experiences and perspectives. Regarding the study reliability, the research items of information adequacy and tourism types with factor loadings exceeding 0.5 were retained to refine the measurement model and improve reliability and validity. Model validation then examined discriminant and convergent validity. Convergent validity was supported; Cronbach's alpha, composite reliability and average variance extracted values met or exceeded the common thresholds of 0.7 and 0.5 respectively according to Hair et al., 2010 and Fornell and Larcker, 1981.

2. Gender differences in digital information

This table presents the findings of an independent samples t-test comparing males and females on their perceptions of digital information adequacy regarding tourism events. The digital information adequacy perception construct measures respondents' views around the usefulness, sufficiency and trustworthiness of online information sources for trip planning purposes. The results indicate there was a statistically significant difference in scores for males (M=3.29, SD=0.99) and females (M=3.55, SD=0.76) with a p-value of 0.000, which is highly significant at the 0.001 level. Specifically, the mean score for females was higher than for males. This suggests females perceived digital information sources as more adequate and helpful when evaluating tourism events compared to males. The moderate effect size also demonstrates a meaningful practical difference between the genders in terms of how positively they gauge the utility of online reviews, recommendations and travel narratives. The findings provide initial support for the proposition that females tend to hold more favorable views of digital information in shaping their impressions and decision-making regarding tourism-related activities and destinations.

Table 1. Independent sample t-test Statistics of genders variances (Note: ***p < .001, **p < .01, *p < .05.)

Sig.	Std. deviation	Mean	Gender	Construct
.000***	.99	3.29	Male	Digital Information Adequacy
	.76	3.55	Female	Perception to Tourism Events

3. Tourism types and digital information perception

The study treated tourism types as moderators to determine whether the relationship between tourists' positive perception, represented by word-of-mouth (WOM), and information adequacy regarding digital information about tourism events depends on the tourists' engagement in different activity types. To test the hypotheses, the study established the following equations:

- WOM = $\beta 0$ + $\beta 1$(INFO) + $\beta 2$ (cultural tourism) + $\beta 3$ (INFO * cultural tourism) + $\epsilon 1$
- WOM = $\beta 0$ + $\beta 1$(INFO) + $\beta 2$ (leisure tourism) + $\beta 3$ (INFO * leisure tourism) + $\epsilon 1$
- WOM = $\beta 0$ + $\beta 1$(INFO) + $\beta 2$ (adventure tourism) + $\beta 3$ (INFO * adventure tourism) + $\epsilon 1$

The results present a comparative analysis of how different types of tourism – leisure (Figure 1), cultural (Figure 2), and adventure (see Figure 3) - interact with the perception of digital information. All three models show statistically significant relationships, as evidenced by their p-values of 0.0000, indicating that the models are robust in explaining the variance in the dependent variable. The R-squared values for leisure (0.4022), cultural (0.3864), and adventure (0.4046) tourism suggest that these models explain approximately 40%, 39%, and 40% of the variance in the perception of digital information, respectively. A key difference among the three types of tourism lies in their interaction effects with digital information perception. Leisure tourism shows the strongest negative interaction effect (-0.1986), followed closely by adventure tourism (-0.1974), while cultural tourism exhibits a comparatively weaker negative interaction (-0.1136).

This suggests that as engagement in leisure or adventure tourism activities increases, the positive relationship between digital information and its perception decreases more sharply compared to cultural tourism. Additionally, the main effects of tourism types on information perception vary, with leisure (0.8440) and adventure (0.8792) tourism having stronger positive influences than cultural tourism (0.6283). These findings imply that while all forms of tourism positively affect the perception of digital information, leisure and adventure tourism have a more pronounced impact but also a stronger moderating effect on how digital information is perceived and utilized by tourists.
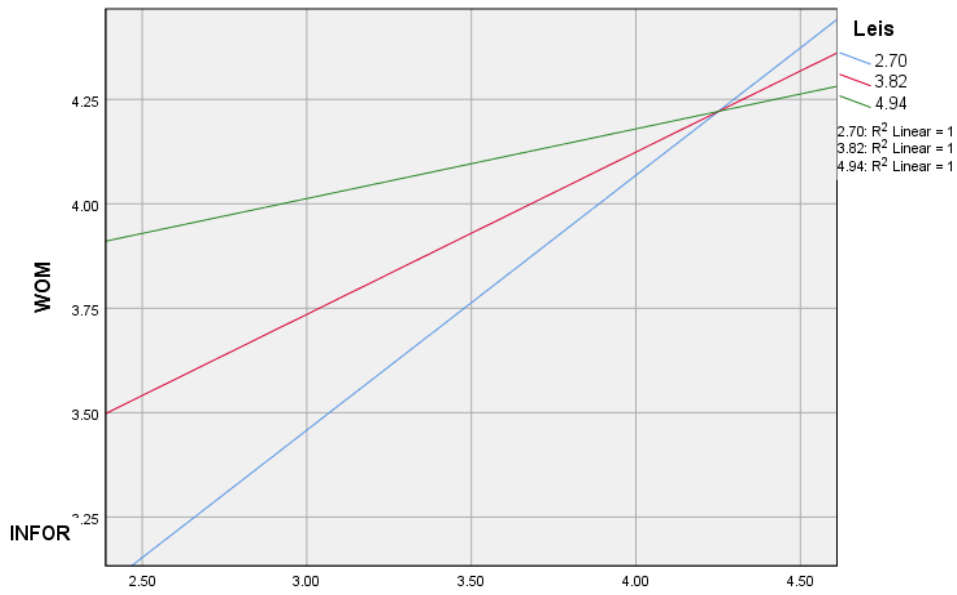
Figure 1. Interaction between leisure tourism, information, and positive perception
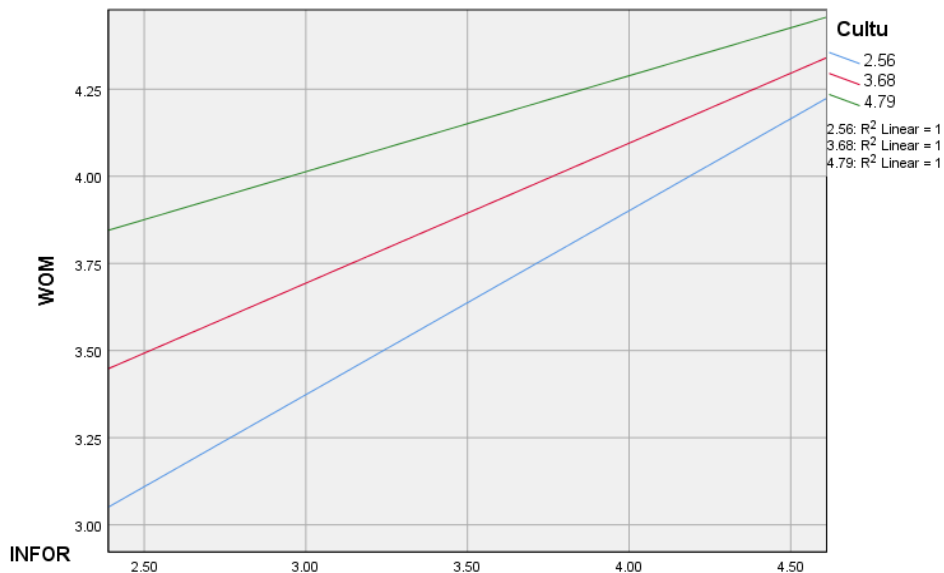

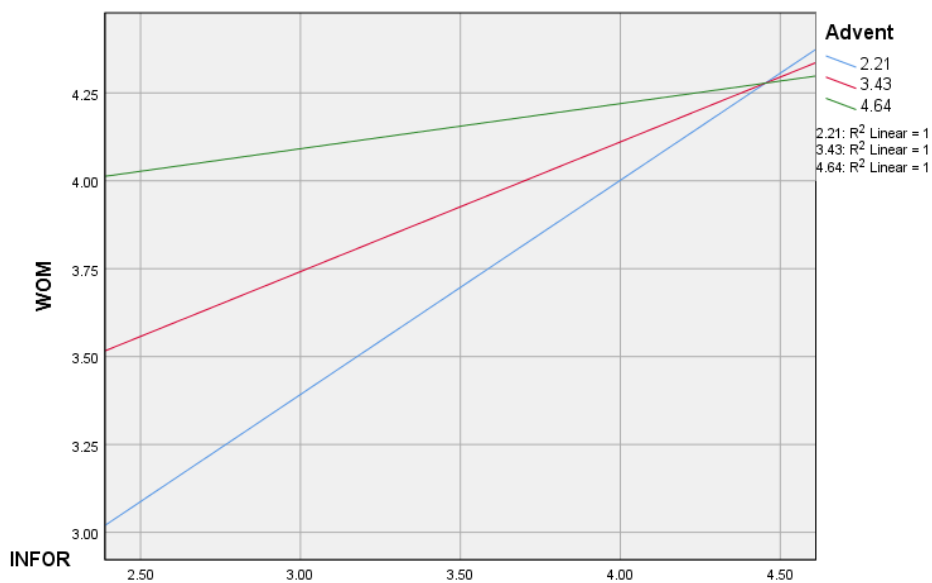Figure 2. Interaction between cultural tourism, information and positive perception

Figure 3. Interaction between adventure tourism, information and positive perception

DISCUSSION AND CONCLUSION

The study's findings reveal significant disparities between female and male tourists in their information seeking behaviors, which contradicts Jackson's (Jackson, 2019) assertion that genders do not differ in their information seeking behaviors. According to the results, female tourists exhibit a stronger tendency to seek out information and engage in information search activities compared to their male counterparts (Brown and Osman, 2017; I Agustí, 2021). These findings align with the notion that female tourists tend to be more emotionally invested in planning their travel experiences, leading them to place greater emphasis on gathering information to shape their overall experience (Brown and Osman, 2017; Kalisch and Cole, 2022). Furthermore, the study's findings suggest that female tourists are more inclined to seek out information and engage in information search activities, which can be linked to their desire for stability, control, and predictability in their travel experiences (I Agustí, 2021). By gathering more information, female tourists can better prepare themselves, manage their expectations, and mitigate potential risks or uncertainties associated with their travel plans (I Agustí, 2021; Lin et al., 2018). The study's findings reveal that the perception of digital information has varying degrees of influence across different types of tourism, with leisure and adventure tourism showing stronger relationships compared to cultural tourism. This nuanced interaction between tourism types and digital information perception challenges previous assumptions about information adequacy's role in fostering positive word-of-mouth (WOM) across different tourist segments (Benckendorff et al., 2019; Janowski et al., 2021; Saleh, 2023).

In the realm of leisure tourism, the results indicate the strongest positive main effect (coefficient: 0.8440) on the perception of digital information. This aligns with the notion that leisure tourists, presented with a wide range of alternatives and options for activities, heavily rely on digital information to make informed choices (Quinn, 2009; Saleh, 2022). The strong positive relationship suggests that as engagement in leisure tourism increases, so does the perceived value of digital information. However, the significant negative interaction effect (-0.1986) implies that at higher levels of leisure tourism engagement, the marginal impact of additional digital information decreases. This could indicate a saturation point where leisure tourists feel overwhelmed by excessive information, potentially leading to decision fatigue (García-Milon et al., 2020; Peng et al., 2023).

Adventure tourism shows a similarly strong positive main effect (coefficient: 0.8792) and a comparable negative interaction effect (-0.1974) to leisure tourism. This supports the idea that adventure tourists, facing various challenges and risks, initially place high value on digital information for preparation and risk management (Janowski et al., 2021; Ponte et al., 2021). The strong positive relationship reinforces the crucial role of information in building tourists' self-control and confidence to tackle challenges and manage perceptions of potential risks (Benckendorff et al., 2019; Ponte et al., 2021; Saleh, 2023). However, the negative interaction effect suggests that as engagement in adventure tourism intensifies, the perceived value of additional digital information diminishes. This could indicate that experienced adventure tourists rely more on their skills and experiences rather than digital information alone (Wengel, 2020).

Interestingly, cultural tourism exhibits a weaker positive main effect (coefficient: 0.6283) and a less pronounced negative interaction effect (-0.1136) compared to leisure and adventure tourism. This suggests that while digital information is still important for cultural tourists (Liu et al., 2022), its impact on their overall experience and perception is less dramatic. The weaker interaction effect implies that cultural tourists maintain a more consistent appreciation for digital information across varying levels of engagement, possibly due to the ongoing desire for in-depth knowledge and context in cultural experiences. These findings suggest that tourism managers may need to adopt more nuanced strategies for providing digital information across different tourist segments.

For leisure and adventure tourism, the focus should be on providing high-quality, targeted information early in the tourist's journey, recognizing that there may be diminishing returns as engagement increases. For cultural tourism, a steady stream of in-depth, contextual information may be more appropriate throughout the entire experience. This differentiated approach to digital information provision could lead to more effective management of tourist expectations, enhanced experiences, and ultimately, more positive word-of-mouth across all tourism segments. Based on the results of our study, we find that our hypotheses regarding tourists' perceptions of digital information across different tourism types are not fully supported, revealing a more nuanced relationship than initially anticipated. Contrary to our expectation in H2, adventure tourists do not exhibit lower perceptions toward digital information.

Instead, they show the strongest positive relationship (coefficient: 0.8792) with digital information perception among all tourism types examined. This suggests that adventure tourists highly value digital information, possibly due to its crucial role in preparation and risk management for their challenging and unpredictable experiences. H3 is partially supported by our findings. As hypothesized, leisure tourists indeed demonstrate a high perception of digital information, with a strong positive main effect (coefficient: 0.8440). This aligns with our expectation that leisure tourists can effectively leverage digital information to plan and enhance their experiences in more controllable environments. However, our hypothesis for cultural tourists is not fully supported. While cultural tourists do show a positive perception of digital information, the effect is notably weaker (coefficient: 0.6283) compared to both leisure and adventure tourism. This indicates that although cultural tourists value digital information, their perception is not as high as we initially postulated, especially when compared to adventure tourists. These findings highlight a more complex interplay between tourism types and digital information perception, suggesting that the nature of the tourism experience influences information utilization in ways that are not solely dependent on the predictability or controllability of the environment. Based on the previous findings, the study has several theoretical contributions and managerial implications:

1. Theoretical contribution

This study makes several important theoretical contributions to the field of tourism research. First, it investigates how different tourism types (leisure, adventure, and cultural) influence tourists' perception of digital information. This contribution addresses a gap in the literature by exploring how the unique characteristics of each tourism type shape the way tourists perceive and utilize digital information during their experiences (Benckendorff et al., 2019; Janowski et al., 2021; Ponte et al., 2021; Saleh, 2023; Wengel, 2020). Our findings reveal that leisure and adventure tourism have stronger positive relationships with digital information perception compared to cultural tourism.

This builds upon previous research by Jackson (Jackson, 2019) on how different activities lead to different attributions. Specifically, we found that leisure (coefficient: 0.8440) and adventure (coefficient: 0.8792) tourists show a higher initial reliance on digital information compared to cultural tourists (coefficient: 0.6283) (Janowski et al., 2021; Peng et al., 2023; Ponte et al., 2021; Quinn, 2009; Saleh, 2021, 2023; Wengel, 2020). Interestingly, our study also uncovers significant negative interaction effects between tourism types and digital information perception. This suggests that as engagement in tourism activities increases, the impact of additional digital information decreases, with this effect being more pronounced in leisure (-0.1986) and adventure (-0.1974) tourism compared to cultural tourism (-0.1136). This nuanced understanding contributes to the literature by highlighting the complex relationship between tourism engagement and digital information utilization (García-Milon et al., 2020; Peng et al., 2023).

Second, the study contributes to the understanding of gender differences in the perception of digital information within the tourism context. It examines how male and female tourists may differ in their processing and interpretation of digital information, thereby influencing their impressions and attributions toward tourism events (Brown and Osman, 2017; I Agustí, 2021; Lin et al., 2018). This contribution aligns with previous research highlighting gender differences in information processing and decision-making (Kempf and Palan, 2006). The study introduces a vital analysis to contribute to the current tourism literature about tourist demographic factors. Thus, in terms of tourism gender, the study contributes to previous studies investigating gender behavioral outcome differences (I Agustí, 2021; Wang et al., 2016; Xu and Zhang, 2021). Our results found that females (vs. males) have strong attribution toward digital information (Brown and Osman, 2017; I Agustí, 2021; Lin et al., 2018).

2. Managerial implication

The study offers valuable insights for tourism destination managers to tailor their digital information strategies according to tourists' preferred tourism types. By investigating how leisure, adventure, and cultural tourists perceive and utilize digital information during their experiences, the study highlights the necessity for customized digital content and delivery approaches. For managers catering to leisure and adventure tourists, who show a stronger initial reliance on digital information, it's crucial to provide comprehensive, accurate, and real-time digital information early in the tourist's journey. This should include details about specific activities, safety protocols, potential risks, and equipment requirements. However, managers should be mindful of the diminishing returns of information as tourist engagement increases, suggesting a need for more targeted and concise information delivery as the tourist's experience progresses.

Cultural tourism managers, while still needing to provide quality digital information, may focus on maintaining a steady stream of in-depth, contextual information throughout the entire experience. The weaker negative interaction effect for cultural tourism suggests that these tourists maintain a more consistent appreciation for digital information across varying levels of engagement. By understanding these nuanced differences in how digital information is perceived and utilized across different tourism types, destination managers can tailor their digital information strategies to better align with the unique needs and preferences of each tourist segment. This approach can potentially lead to enhanced guest satisfaction, promote positive perceptions, and ultimately contribute to the overall success of tourism experiences across different types of tourism activities.

Moreover, the study's findings on gender differences in digital information perception offer valuable guidance for more targeted marketing and communication strategies. Female tourists exhibit stronger attributions towards digital information, with a higher likelihood of attributing information adequacy to external factors, suggesting that tourism managers should ensure digital information platforms cater to the preferences and tendencies of female tourists, who tend to be more comprehensive in their information processing and decision-making. By understanding these gender-specific differences, tourism destination managers can tailor their digital information strategies to resonate better with both male and female tourists, including tailoring content, presentation, and delivery channels to align with the unique preferences and information processing styles of each gender. Thus, the study's theoretical contributions emphasize recognizing the heterogeneity within tourist segments and tailoring digital information strategies accordingly to address the unique needs and attributional tendencies of different tourist groups based on their preferred tourism type and gender, thereby enhancing guest satisfaction, and promoting positive perception.

3. The study limitation

Although the study provides novel contributions by examining the interplay between digital information perception, tourism types (leisure, adventure, and cultural), and gender, it is important to acknowledge its limitations and suggest directions for future research. The study's focus on these three specific tourism types and the gender demographic may limit the generalizability of its findings to other tourism contexts or demographic segments. Future research could explore how digital information perception influences attributions and experiences within different tourism types, such

as medical tourism, religious tourism, or sports tourism. Additionally, expanding the demographic scope beyond gender to include factors like age, cultural background, or socioeconomic status could provide further insights into the role of individual characteristics in shaping digital information perception and attribution processes. Despite these limitations, the study offers a valuable foundation for understanding the heterogeneity within tourist segments and the importance of tailoring digital information strategies accordingly. By highlighting the unique needs and attributional tendencies of different tourist groups, the study paves the way for more personalized and effective digital marketing approaches in the tourism industry, ultimately enhancing guest satisfaction and fostering sustainable tourism practices.

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