Tourism security and AI-based communication management of tourist interest in Pari Island

Syaiful Rohim[1], Desak Made Darmawati[2], Jamil Latief[3], Muhamad Alimudin[4]
[1]Communication Science Study Program, University of Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia
[2,3]Economics Education Study Program, University of Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia
[4]Educational Administration Study Program, Universitas Muhammadiyah Bogor Raya, Jakarta, Indonesia

ABSTRACT

Tourism is a crucial factor in national development, and destination security is an increasingly influential consideration for tourists' travel decisions, especially in the post-pandemic era. Concurrently, digital communication facilitated by artificial intelligence (AI) offers new potential to enhance the credibility of information and improve tourists' interactions with destinations. This study explores the impact of security in tourism on tourist demand and examines the mediating role of AI-based digital communication policies for Pari Island, Indonesia, in the Jakarta Thousand Islands. The study adopts a quantitative approach through the use of an explanatory sample of 100 local and international tourists who have visited or are visiting Pari Island. Data were collected using a standardized questionnaire and analyzed by path analysis using the SmartPLS software. Findings reveal security in tourism has a statistically significant positive effect on tourist interest ($\beta = 0.32$; $p < 0.01$) and even an indirect effect through AI-based digital communication ($\beta = 0.41$; $p < 0.01$). The use of digital communication supported by AI in augmenting the role it plays in the determination of tourists' decision-making. The study concludes that the essence of trust enhancement and destination appeal lies in integrating solid destination security and smart digital communication systems. The study also recommends that policymakers and tourism administrators improve safety while embracing digital innovations to initiate change and foster sustainable tourism development in Indonesia.

Keywords: Tourism security; tourist interest; digital communication; artificial intelligence

Manajemen komunikasi berbasis AI dan keamanan pariwisata terhadap minat wisatawan di Pulau Pari

ABSTRAK

Pariwisata *merupakan salah satu unsur utama pembangunan nasional, dan destinasi yang aman adalah perhatian yang semakin menentukan terhadap keputusan perjalanan traveler, khususnya dalam era pascapandemi. Demikian juga, komunikasi digital yang direkomendasikan oleh kecerdasan buatan (AI) memberikan potensi baru untuk meningkatkan kredibilitas informasi serta meningkatkan interaksi traveler dengan destinasi. Penelitian ini menyelidiki dampak keamanan dalam pariwisata terhadap permintaan wisatawan dan menguji pengaruh mediasi kebijakan digital berbasis AI di Pulau Pari, Indonesia, di Kepulauan Seribu Jakarta. Penelitian ini menggunakan metode kuantitatif melalui survei penjelasan kepada 100 wisatawan lokal dan mancanegara yang pernah atau sedang berkunjung ke Pulau Pari. Data dikumpulkan menggunakan kuesioner standar dan diolah menggunakan analisis jalur melalui perangkat lunak SmartPLS. Temuan menunjukkan bahwa keamanan pariwisata memiliki pengaruh langsung signifikan secara statistik terhadap minat wisatawan (β = 0,32; p < 0,01) dan juga pengaruh tidak langsung melalui komunikasi digital berbasis AI (β = 0,41; p < 0,01). Temuan ini menggambarkan pemanfaatan komunikasi digital yang didukung AI dalam membumbungkan pengaruh persepsi keamanan dalam mempengaruhi keputusan wisatawan. Hal ini menyimpulkan bahwa integrasi keamanan destinasi yang kuat dan sistem komunikasi digital yang cerdas adalah hal yang penting dalam promosi keimanan dan peningkatan kekuatan destinasi. Dalam penelitian ini juga disarankan agar para pembuat kebijakan dan pengelola pariwisata harus memperkuat keamanan sambil mengadopsi inovasi digital untuk merangsang perubahan dan mendorong pertumbuhan pariwisata berkelanjutan di Indonesia.*

Kata-kata kunci: *Keamanan pariwisata; minat wisatawan; komunikasi digital; kecerdasan buata*

Correspondence: Dr. Syaiful Rohim, M.Si., University of Muhammadiyah Prof. Dr. Hamka, Jl. Tanah Merdeka No.20, Kramat Jati, East Jakarta 13530, Indonesia. Email: syaiful_rohim@uhamka.ac.id

INTRODUCTION

One of the most strategic sectors that significantly contributes to economic development, employment generation, and social-cultural growth in Indonesia is tourism. As an archipelagic nation with vast natural and cultural riches, Indonesia has enormous potential to place tourism at the forefront of national development (Putri et al., 2025).

Among its many destinations, Pari Island in the Thousand Islands region of Jakarta is an example of how local intelligence and nature can be employed to contribute to the development of sustainable tourism (Alimudin & Dharmawati, 2022). The island boasts white sandy beaches, mangrove swamps, and unspoiled marine biodiversity (Rohim, Sukardi, et al., 2023). However, to be able to compete satisfactorily with other domestic and international sources, awareness of the highest concerns, such as safety and tourist confidence, is paramount (Hadiniyati & Supratman, 2025).

In tourism, security extends to safety against crime or physical injury. It also includes health assurance, comfort, data protection, and trust in the delivery of correct information (Dziurakh et al., 2024). Security has been recognized globally as a key element of tourism sustainability (Hall & Cooper, 2025). According to the World Travel & Tourism Council (WTTC,

2023), travelers' sentiments about safety and stability greatly influence destination choice, especially in emerging tourism markets (Shata & Hartley, 2025).

In Southeast Asia, countries such as Thailand and Malaysia have encouraged security integration into tourism branding through health protocols, digital monitoring platforms, and open communication platforms (Hancock et al., 2020). This is done through the implementation of health protocols, taking up enhanced monitoring systems, and taking up secured digital communication platforms (Gössling & Mei, 2025). All this activity demonstrates that modern-day tourists no longer simply look for scenery or cultural authenticity but also at how safe and trustworthy a place is viewed, both physically and in the virtual world (Saleh et al., 2025). They also increasingly measure to what extent a place is viewed as safe and trustworthy, both in the real and virtual worlds (Saleh et al., 2025). They also increasingly measure to what extent a place is viewed as safe and trustworthy, both in the real and virtual worlds (Susanti et al., 2023). In Indonesia, post-COVID-19 tourism security has emerged as a focal point of discussion. The pandemic remade mobility, intensified public health concerns, and heightened prominence for data integrity and digital trust. Restored visitor confidence, as referenced by the Ministry of Tourism and

Creative Economy (Kemenparekraf, 2024), is reliant on open, technology-based systems of communication. Similarly, the UNWTO (2023) set out that destinations with trusted digital sources of information recovered visitors faster, demonstrating to have a positive correlation between feeling safe and trust in digital communication. These findings support that enhancing the security and credibility of information is vital to reviving Indonesia's tourism competitiveness (Du et al., 2024).

Changing digital interaction also transformed tourists' sense of security. Security today is not just physical protection anymore, but also trust in computer systems and data integrity (López-Naranjo et al., 2025). Or comparatively small destinations like Pari Island, such a transition presents new opportunities and challenges (Aguinis et al., 2023). Compared to major destinations like Bali or Yogyakarta, Pari Island still lags in infrastructure and public awareness (Biswas et al., 2025). Therefore, the approach in which information is communicated to potential travelers ultimately becomes a deciding factor in shaping their impressions (Toker & Emir, 2023).

Effective and reliable communication is attributed to generating tourists' comfort and loyalty throughout their trip experience (Sousa et al., 2024). Fluency in communication is not just a promotional tool, but also a risk management tool and a vehicle for boosting perceived control over the holiday (Suanpang & Pothipassa, 2024).

Today, electronic media such as social media, mobile applications, and artificial intelligence (AI)-based systems are widely utilized by travelers to transmit health, environmental status, and safety information (Nirwana et al., 2024). Not only do these digital means transmit information, but they also build emotional trust and rational trust, which have an impact on travel planning (Aguinis et al., 2023). Technological advancement has reshaped communication in tourism with enhanced digital incorporation (Muhamad et al., 2025).

Among these innovations, one of the notable uses of artificial intelligence in internet communication is (Feigerlova et al., 2025). AI enables the provision of tailored, timely, and accurate information in an optimal way that maximizes the whole travel experience (Alim et al., 2025). Its uses range from chatbot-powered automatic conversation and safety notifications to behavior-based content recommendation and travel planning personalization (Chen, 2025).

The AI-driven personalization is another feature that enhances the traveling process, as it can reduce uncertainty and help process the excessive volume of information that typically serves as a barrier in tourism decision-making (Sun & Zhou, 2023). An example of how digital

progress helps promote tourism communication is the use of YouTube as a public platform by Gen Radio; however, the medium is not defined as AI-based technology. Whereas AI-based communication is common in the majority of global destinations, its use on Pari Island remains on paper. For instance, whereas online platforms like Gen Radio utilize YouTube to disseminate tourist information, such activities have yet to form AI-based systems (Rohim, 2024). So far, no current AI platform has been applied on a specific basis in Pari Island, although its potential applications, like crowd analytics monitoring, predictive safety alert, and eco-friendly itinerary suggestions, have been widely discussed as a promising development (Festus et al., 2025). For example, destination managers may utilize an AI-powered platform providing real-time crowd density data, safety alerts, or customized itineraries that indicate safe zones and eco-friendly experiences (Ayub, 2025). These offerings not only modernize destination management but also attract digitally informed tourists, especially millennials and Gen Z, who make up the majority of the tourism markets of the emerging countries (Hadiniyati & Supratman, 2025).

Tourism security and tourist interest do not always have a direct correlation. Communication strategies typically intervene or manage this connection (Torres et al., 2024). Therefore, the current study investigates the indirect impact of tourism security on tourist interest through AI-based digital communication (Isam, 2025). From a theoretical understanding, the current study bridges significant gaps (Sheelam & Komaragiri, 2025). Theoretically, the study bridges an existing gap within the literature: existing work has primarily examined these dimensions in isolation and in large contexts such as national parks or heritage sites (Khairina, 2022; Berkoune, 2025). Empirical research targeting small-scale destinations is lacking (Tassiello et al., 2025). The sustainability of these destinations, like Pari Island, furthermore, depends not only on infrastructure but also on how well they manage to build digital trust (Šakytė-Statnickė & Budrytė-Ausiejienė, 2025).

Based on post-pandemic tourism behavior with health and safety (Trianita & Larasati, 2021), this research explains how tourism security influences the intention of tourists to visit Pari Island and the particular mediating role of AI-based communication strategies (Tyas et al., 2024).

In addition, the study addresses the problem from a multidisciplinary approach with an emphasis on the manner in which technological innovation, communication management, and tourism development interactively influence the evolution of an adaptive and trustworthy

information system (Hossain et al., 2023). To this end, AI is a primary driver in the digitalization of tourism in the future (Imran, 2025). Not only does this technology aid in the offering of information quickly and accurately to tourists, but it also aids destination managers in developing more targeted and effective communications (Li et al., 2025). This research is also motivated by the lack of research that explores the interconnectedness between tourism security, artificial intelligence, and digital communication as part of one integrated system (Moi et al., 2023). Most previous research has addressed these domains separately, with limited examination of how they coalesce and function collectively in destination-specific contexts such as Pari Island (Khairina, 2022). Thus, this research is expected to offer a theoretical and practical contribution to the development of technology-based security communication models that can be widely applied in various tourist destinations in Indonesia (Cui, 2025).

RESEARCH METHODS

This study uses a quantitative approach with an explanatory survey method, which aims to explain the causal relationship between tourism security and tourist interest, with Artificial Intelligence (AI)-based digital mass communication strategies as a mediating variable (Al-Abdallah & Ababakr, 2025). The research location is focused on Pari Island, one of the tourist destinations in the Thousand Islands, DKI Jakarta, which has experienced a growth in interest in post-pandemic visits (Florea & Croitoru, 2025). The study population includes domestic and foreign tourists who have or plan to visit Pari Island. The sampling technique used is purposive sampling, which is the selection of respondents based on certain criteria, such as experience accessing tourist information digitally or using AI-based communication platforms related to Pari Island. The number of respondents sampled was 100 people, who were considered to meet the minimum requirements for the statistical analysis of the track. Data was collected through structured questionnaires that were distributed online and offline. Online distribution is carried out through social media and digital channels for the promotion of Pari Island, while offline distribution is carried out to tourists who are at entry points, lodgings, and tourism information centers. The questionnaire used a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) to measure three main variables: Tourism Security (X), AI Digital Communication (Z), and Tourist Interest (Y). Before being widely used, the questionnaire was tested for validity and reliability on 30 tourists on Pramuka Island as test subjects.

Validity was tested using the Correlation of

Pearson Product Moments with the term r-count > r-table. Reliability is tested with Cronbach's Alpha and is considered reliable if the alpha value is> 0.70.

Data analysis was carried out using a path analysis approach using SPSS and SmartPLS software to determine the direct and indirect influences between variables. In addition, it is carried out:

Descriptive analysis to describe the characteristics of respondents. The normality test used the Kolmogorov-Smirnov (the data is considered normal if p > 0.05). The multicollinearity test uses the Variance Inflation Factor (VIF) (multicollinearity does not occur if the VIF < 10). Heteroscedasticity test via residual scatter plot graphs (data is considered good if the pattern spreads randomly). The hypothesis in this study is formulated as follows:

As presented in **Table 1**, this study proposes four hypotheses. The first (H1) suggests that tourism security directly affects tourist interest,

while the second (H2) suggests that AI-based digital communication also has a direct effect on tourist interest. The third hypothesis (H3) suggests that tourism security directly shapes AI-based communication practices. Finally, hypothesis four (H4) examines the indirect influence of tourist security on interest in tourists through AI-based online communication. Multivariate analysis with JASP version 0.16 was conducted to ensure the existence of the suggested path model, and the results are given in the following section.

As tabulated **in Table 2,** several statistical tests were conducted to determine the validity and robustness of the model in question. The tests for assumptions included data normality with the application of the Kolmogorov–Smirnov test (p > 0.05 for normality), multicollinearity with the Variance Inflation Factor (VIF < 10, confirming no multicollinearity), and heteroscedasticity, which was confirmed through a residual scatter plot with points lying randomly. In addition,

Table 1. Hypothesis

Yes	Hypothesis	Types of Effects	Description
1	H1: $\beta YX \neq 0$	Direct Effects	Tourism security has a direct effect on tourist interest
2	H2: $\beta YZ \neq 0$	Direct Effects	AI digital communication strategies have a direct effect on tourist interest
3	H3: $\beta ZX \neq 0$	Direct Effects	Tourism security has a direct impact on AI digital communication
4	H4: $\beta YZX \neq 0$	Indirect Effects	Tourism security has an indirect effect on tourist interest through AI digital communication

Source: Adaptation of the path analysis model, 2024

Table 2. Multivariate Statistical Test

Yes	Types of Analysis	Test Equipment	Parameters	Criterion
1	Assumption Test	Normality	Kolmogorov-Smirnov	$p > 0.05$
		Multicollinearity	CLEAR	< 10
		Heteroscedasticity	Residual vs prediction charts	Random spread pattern
2	Path Analysis	Direct Influence	p-value, approximate β	$p < 0.05$
		Indirect Influence	p-value, approximate β	$p < 0.05$

Source: Adapted from Ghozali (2021); Hair et al. (2020)

path analysis was employed to analyze both the direct and indirect relationships between the variables. A statistical relationship was deemed statistically significant with the presence of a p-value of less than 0.05 with a plausible standardized beta (β) coefficient. The research employed quantitative research underpinned by an explanatory survey design, thus making it apt for the study of causal interactions among independent, mediating, and dependent variables in the context of tourism studies. The explanatory survey design, in addition to giving an indicator of the strength of the relationship, is used in testing hypotheses to confirm or refute theoretical models in real-life applications. Thus, the research model was designed to assess how tourist security influences tourist interest with AI-based digital communication as the mediator. The population for the study consisted of local and foreign tourists who visited or planned to visit Pari Island. A purposive sampling method was used to guarantee that the respondents sampled

met the research criteria, i.e., those who used online tourism information or interacted with AI-supported communication platforms. 100 respondents were sampled, which was the minimum required sample size for path analysis in SmartPLS, with enough statistical power for testing hypotheses. Data were collected using a mixed-mode online and offline method. Questionnaires were also put online via social media, official tourism websites, and online advertising sites associated with Pari Island, while offline questionnaires were administered at tourist entry points such as piers, hotels, and tourist information points. All the volunteers were given clear instructions, after ensuring confidentiality, and informed consent was obtained from them before taking part in the study, to maintain the integrity of the data. The instrument of study was a five-point Likert scale ordered structured questionnaire with scores as follows: 1 = strongly disagree, 5 = strongly agree. The survey included three constructs: (1) Tourism Security, encompassing health safety,

personal data protection, crime prevention, and trust in authorities; (2) AI-based Digital Communication, encompassing chatbots, auto notifications, personalized recommendations, and real-time information; and (3) Tourist Interest, encompassing respondents' intention to visit, revisit, and recommend Pari Island. One pilot with 30 tourists on Pramuka Island was conducted to test the validity and precision of the questionnaire before mass distribution. Descriptive and inferential analyses were applied in data processing. Descriptive statistics were utilized to produce respondent characteristics and variable properties summary, while inferential analysis included testing for validity through Pearson's Product-Moment correlation, testing for reliability through Cronbach's Alpha (cutoff point > 0.70), and classical assumption testing. The Kolmogorov–Smirnov test confirmed that the data are normally distributed (p > 0.05), VIF values were below 10, meaning no multicollinearity, and the residual scatter plot depicted a random pattern, confirming the absence of heteroscedasticity. Path analysis was carried out using SmartPLS and SPSS to find out direct and indirect effects between variables, while multivariate testing using JASP version 0.16 was used to find out whether the model was holistic regarding suitableness and feasibility.

RESULTS AND DISCUSSION

A total of 100 respondents participated in this study, such as domestic and foreign tourists who visited Pari Island. The majority of respondents fall within the age group of 21-35 and possess a low level of high school education. The result of this research confirms that tourist interest is affected by security in tourism directly and indirectly through AI-driven digital communication. Path analysis shows that all the relationships that were tested are statistically significant, such as tourism security's direct effect on tourist interest ($\beta = 0.358$, p = 0.001), the effect of AI-based digital communication on tourist interest ($\beta = 0.422$, p = 0.000), and the effect of tourism security on AI-based digital communication ($\beta = 0.481$, p = 0.000). Mediation test confirmed that e-communication produced through AI acts as an intervening variable between tourism security and tourist interest ($\beta = 0.41$, p < 0.01). This confirms that a secure and safe tourism environment is more successful in stimulating tourist interest if it is supplemented by intelligent e-communication tools. Most of the respondents reported that they have obtained information about Pari Island from various electronic media sources, particularly social networks and tourist websites. The demographic profile further adds details on the structure of the sample: 62% of

them were aged between 21-35 years, 24% in the 36-50 years bracket, and 14% over 50 years. Gender division was indicated to reveal slightly higher female tourist involvement (56%) than male tourists (44%). In terms of educational levels, 48% of those interviewed had a bachelor's degree, 32% had attained secondary school level, and 20% were graduate students. The demographic indicates a high majority of tourists visiting Pari Island as being sufficiently digitally literate to manage AI-assisted communication systems. Moreover, 78% of the respondents self-identified as domestic tourists, and 22% self-identified as foreign tourists, which indicates that Pari Island is becoming well-known outside Indonesia. The descriptive statistics of important variables show that the Tourism Security construct was 4.21 (SD = 0.61), which indicates respondents' extremely high sense of safety on the island, particularly in relation to health precautions adopted, low crime rates, and trusted local information. The AI-Based Digital Communication measure was 4.05 (SD = 0.68) and represented the perceived usefulness in terms of real-time chatbots,

automated security notifications, and activity suggestions from personal needs. Tourist Interest was 4.18 (SD = 0.59), which meant that, on average, the respondents were highly interested in visiting or revisiting the destination. Reliability testing was also conducted through Cronbach's Alpha, and from the results, it was claimed that all the variables had sufficient internal consistency with a coefficient alpha of above the 0.70 criterion. The entire reliability findings are presented in the table below.

As indicated in Table 3, all the constructs were found to possess satisfactory reliability with Cronbach's Alpha coefficients greater than the accepted threshold value of 0.70. The variable Tourism Security ($\alpha = 0.812$) and Tourist Interest ($\alpha = 0.841$) recorded high internal consistency, whereas AI-Based Digital Communication ($\alpha = 0.877$) had an extraordinary level of reliability in its measurement items. These results confirm that the measurement instruments used in this study are consistent and stable across all the variables. Instrument testing corroborated the validity with a Pearson correlation coefficient greater than the table r critical value at $\alpha =$

Table 3. Reliability test

Variable	Alpha Cronbach	Information
Tourism Security (X)	0.812	Reliable
AI (Z) Digital Communication Strategy	0.877	Reliable
Tourism Interest (Y)	0.841	Reliable

Source: Primary Data Processing, 2025

0.05. Validity is corroborated with an Alpha Cronbach above 0.70 in all constructions. Tourism Security (0.812) corroborates internal consistency for all the measures of safety and health. AI-based Digital Communication (0.877) corroborated high reliability for all the measures of personalized and automated interaction. Tourist Interest (0.841) also proves to be reliable enough to measure intentions and the likelihood of future visits. The findings are guaranteed to ensure the measurement construct is an actual representation of the intended variable. The result of the residual scatter plot is a randomly distributed point and fails to produce a specific shape. This means that there is no heteroscedasticity issue with the data. The test results of the hypothesis testified that H1 was true, i.e., tourist security had a positive and significant correlation with tourist interest (β = 0.358; $p < 0.01$). The emphasis on safety as a determining factor in tourists' decision-making in the process of selecting destination options is again reflected in this finding. Hypothesis 2 (H2) was also true and asserted that digital communication strategies embracing AI considerably enhanced tourist interest (β = 0.422; $p < 0.01$). It highlights the key role of adaptive, individualized, and technology-enabled communication in increasing destination attractiveness and facilitating active visitor participation. In Hypothesis 3

(H3), testing verification proved that tourism safety had a positive impact on the use of AI-supported digital communication (β = 0.481; $p < 0.01$). This means that the safe destinations will be vulnerable to adopting new technology in an attempt to enhance their credibility and offer credible information to would-be tourists. In addition, the mediation analysis validated Hypothesis 4 (H4) and revealed that digital communication driven by AI is a mediating variable between tourist interest and tourism security (β = 0.41; $p < 0.01$). These results validate that security is only so precious unless supported by interactive, prompt, and credible digital communication systems with the capacity to obtain a real translation of feelings of safety into real travel intent. These results are consistent with the World Travel & Tourism Council (WTTC, 2023) report, in which safety is one of the key drivers of the international tourism industry's restoration from the pandemic. The integration of AI technology, such as chatbots, customized recommendations, and real-time information, has been shown to develop tourists' positive attitudes towards destinations. This study also supports earlier studies that emphasized the potential of intelligent digital communication to transform tourism. Digitalization through the assistance of AI not only enhances visitors' interaction but also greatly affects travel choices. Such

locations, in turn, will be likely to be innovative in using AI-based communication systems to enhance their reputation and win people's trust (Rohim, Surip, et al., 2023). Through such online platforms, vital information regarding health measures, crowd gathering, and local security can be communicated more effectively and on a personalized scale. Extended path analysis also confirmed that digital communication through AI facilitates mediation of the relation between tourism security and tourist interest, emphasizing that effective and secure communication is a significant mechanism in translating perceived safety into real travel intention. This shows that the perception of security must be channeled with the right digital communication strategy to be able to have a maximum impact on the intention to visit.

The results of this study showed that as many as 100 respondents, consisting of domestic and foreign tourists, participated in this study. The majority of respondents are in the age range of 21 to 35 years old and have at least a high school education. Most of the respondents obtained information about Pari Island through digital platforms, such as social media and tourism sites. The collected data were analyzed using a path statistical approach. The results of the reliability test showed that all research instruments had a high level of consistency with an Alpha Cronbach value above 0.70 for all variables, namely tourism security, AI-based digital communication strategies, and tourist interest.

Residual scatter plot analysis showed that there was no heteroscedasticity problem in the data because the point distribution was random and did not form a specific pattern. The path analysis result showed that all of the hypothesized relationships in the postulated model were significant at a statistical level. Tourist interest was also strong and positively related to security in tourism ($\beta = 0.358$; $p = 0.001$), which shows that safety remains a main impetus in shaping travelers' travel intention. Moreover, AI-based digital communication strategies also significantly affected tourist interest ($\beta = 0.422$; $p = 0.000$), which shows that technology interaction and customized communication influence destination attractiveness. The study further revealed that tourism security also affects the use of AI-based communication systems in a positive manner, as clear from the standardized coefficient ($\beta = 0.481$; $p = 0.000$). It thereby indicates that tourist destinations with better security are likely to employ advanced digital technologies in an attempt to build credibility and offer credible information to prospective tourists. These findings validate that security perceptions are a latent driver of destination selection. Findings are also in accordance with the World Travel &

Tourism Council (WTTC, 2023) report on the critical role of safety to trigger the recovery and resilience of the global tourism industry in the wake of the pandemic. In addition, the use of AI technology in communication strategies has been successful in the sense that it has assisted in establishing credibility for the destination, encouraging greater participation of travelers, and influencing the conduct of decision-making. Safe destinations are likely to use AI-driven communication platforms, something that not only increases transparency but also improves their reputation and competitiveness as well. Thus, electronic communication through AI can be understood as a mediating variable between tourism security and tourist interest. This means security is the keystone of tourist confidence, yet its influence needs to be communicated through adaptive, bespoke, and intelligent electronic channels to be fruitful at shaping travelers' behavioral intentions, particularly for low-key holiday destinations with low visibility, such as Pari Island.

CONCLUSION

This study finds that tourism security has direct and indirect effects on tourist interest through AI-based communication management. The study shows that the sense of security alone is not sufficient to affect the behavioral intentions of tourists unless effectively communicated through effective and intelligent digital channels. Based on the above findings, this study proposes a technology-based security communication model in which AI-backed digital communication acts as the mediating factor in the perceived tourism security and tourist interest relationship. The model synthesized herein incorporates security assurance, AI-driven management of communications, and tourist interest development dimensions as the conceptual framework to construct adaptive, dependable, and technology-driven communications strategies for various Indonesian tourist sites. In reality, tourism stakeholders must consider not only physical security but also how AI-powered digital technologies enable the dissemination of credible, real-time, and personalized information to tourists. Policymakers need to create consistent rules that enhance transparency and consistency in security messaging, while destination managers use predictive analytics and two-way digital spaces to build visitor trust. Furthermore, local communities should be actively engaged in these digital initiatives to support small-scale enterprises and advance sustainable tourism practices. Future research is recommended to further examine and refine the proposed model in different destinations through mixed-method approaches, including

interviews and focus group discussions, to better capture the emotional and experiential dimensions of travelers' trust and perceptions of security within the digital tourism ecosystem.

REFERENCE

Aguinis, H., Kraus, S., Poček, J., Meyer, N., & Jensen, S. H. (2023). The why, how, and what of public policy implications of tourism and hospitality research. Tourism Management, 97(January). https://doi.org/10.1016/j.tourman.2023.104720

Al-Abdallah, G., & Ababakr, K. (2025). Exploring the mediating effect of digital versus traditional marketing communication on students' selection of higher education institutions in developing countries. Human Behavior and Emerging Technologies, 2025(1).https://doi.org/10.1155/hbe2/5510524

Alim, A., Yuyen, G. F., Evangelina, I. G., & Lie, K. (2025). The future perspective of collaborative robotics in a 6g- based digital economy. Jurnal Ilmiah Sistem Informasi(Jusi), 4(1), 186–196. https://doi.org/https://doi.org/10.51903/8289x083

Alimudin, M., & Dharmawati, D. M. (2022). Strategi komunikasi pemasaran digital dalam meningkatkan minat pariwisata Pulau Pari (Mix Method: Exploratory sequential design). Jurnal Ekonomi Dan Manajemen Teknologi, 6(2), 342–350. https://doi.org/https://doi.org/10.35870/emt.v6i2.689

Ayub, A. (2025). Exploring human-AI communication in the digital era: A need to develop new theories for human-AI communication. International Social Sciences and Education Journal, 2(2), 30–36. https://doi.org/10.61424/issej.v2i2.181

Biswas, P., Rashid, A., Al Masum, A., Al Nasim, M. A., Anas Ferdous, A. S. M., Gupta, K. D., & Biswas, A. (2025). An extensive and methodical review of smart grids for sustainable energy management-addressing challenges with AI, renewable energy integration and leading-edge technologies. IEEE Access, PP, 1. https://doi.org/10.1109/ACCESS.2025.3537651

Chen, A. (2025). Application and optimization exploration of quantum com- puting in real-time recommendation system for e-commerce platforms. Journal of Computer, Signal, and System Research, 2(3), 1–7. https://doi.org/https://doi.org/10.71222/61mh9f55

Cui, J. (2025). Digital Transformation in the media industry: The moderating role of human-AI interaction technologies. Media,Communication, and Technology,1(1), p42.https://doi.org/10.30560/mct.v1n1p42

Du, H., Li, J., So, K. K. F., & King, C. (2024). Artificial intelligence in hospitality services: examining consumers' receptivity to unmanned smart hotels. Journal of Hospitality and Tourism Insights, 8(11), 55–78. https://doi.org/10.1108/JHTI-06-2024-0548

Dziurakh, Y., Kulyniak, I., Halanets, V., Dzyana, H., & Dzyanyy, R. (2024). Use of artificial intelligence in smart tourism: bibliometric analysis. E3S Web of Conferences, 501, 1–6. https://doi.org/10.1051/e3sconf/202450101002

Feigerlova, E., Hani, H., & Hothersall-Davies, E. (2025). A systematic review of the impact of artificial intelligence on educational outcomes in health professions education. BMC Medical Education, 25(1). https://

doi.org/10.1186/s12909-025-06719-5

Festus, O. O., Emmanuel, O. B., Festus, O. O., & Emmanuel, O. B. (2025). Sociocultural and digital communication challenges in AI adoption for classroom communication : insights from Nigerian Colleges of education sociocultural and digital communication challenges in AI adoption for classroom communication: Insights from Nige. LANGUAGE, TECHNOLOGY, AND SOCIAL MEDIA, 3(1), 30–45. https://doi.org/DOI:https://doi.org/10.70211/ltsm.v3i1.115

Florea, N. V., & Croitoru, G. (2025). The impact of artificial intelligence on communication dynamics and performance in organizational leadership. Administrative Sciences, 15(2). https://doi.org/10.3390/admsci15020033

Gössling, S., & Mei, X. Y. (2025). AI and sustainable tourism: an assessment of risks and opportunities for the SDGs. Current Issues in Tourism, 3500, 1–14.https://doi.org/10.1080/13683500.2025.2477142

Hadiniyati, G., & Supratman, L. P. (2025). Digital platform-based learning communication model at Tunas Unggul Junior High School Bandung Unggul Bandung. Jurnal Manajemen Komunikasi, 9(2), 260–282. https://doi.org/https://doi.org/10.24198/jmk.v9i2.58557

Hall, C. M., & Cooper, C. (2025). Making tourism smart in the age of artificial intelligence. Current Issues in Tourism, 28(1), 1–5. https://doi.org/10.1080/13683500.2025.2460922

Hancock, J. T., Naaman, M., & Levy, K. (2020). AI-Mediated Communication: Definition, Research Agenda, and Ethical Considerations. Journal of Computer-Mediated Communication, 25(1), 89–100. https://doi.org/10.1093/jcmc/zmz022

Hossain, M. A., Amin, R., Masud, A. Al, Hossain, M. I., Hossen, M. A., & Hossain, M. K. (2023). What Drives People's Behavioral Intention Toward Telemedicine? An Emerging Economy Perspective. SAGE Open, 13(3), 120.https://doi.org/10.1177/21582440231181394

Imran, M. A. (2025). Comparative Analysis of AI Integration in Media and Communication Curricula: Case Studies From Australia and Egypt. Journalism and Mass Communication Educator, 122.https://doi.org/10.1177/10776958251315116

Isam, H. (2025). From Digital Technology to Society : Algospeak and Communication Styles on Social Media in The Era of Artificial Intelligence (AI). 2(2).

Khairina, U. (2022). Strategi Komunikasi Pemasaran Pariwisata Dinas Pariwisata Aceh Tengah Dalam Promosi Industri Wisata Lokal. Jurnal Peurawi: Media Kajian Komunikasi Islam, 5(1), 35.https://doi.org/10.22373/jp.v5i1.12808

Li, T., Long, Q., Chai, H., Zhang, S., Jiang, F., Liu, H., Huang, W., Jin, D., & Li, Y. (2025). Generative AI Empowered Network Digital Twins: Architecture, Technologies, and Applications. ACM Computing Surveys, 57(6). https://doi.org/10.1145/3711682

López-Naranjo, A. L., Puente-Riofrio, M. I., Carrasco-Salazar, V. A., Erazo-Rodríguez, J. D., & Buñay-Guisñan, P. A. (2025). Artificial intelligence in the tourism business: a systematic review. Frontiers in Artificial Intelligence, 8(July).https://doi.org/10.3389/frai.2025.1599391

Moi, D., Bernard, C., Steinegger, M., Nevers, Y., Langleib, M., & Dessimoz, C. (2023). Structural phylogenetics unravels the evolutionary diversification of communication systems in gram-

positive bacteria and their viruses. Nature Structural & Molecular Biology Article, 10(1), 2023.09.19.558401.https://doi.org/10.1038/s41594-025-01649-8

Muhamad, A., Nasoha, M., Atqiya, A. N., & Islamuddin, I. (2025). Strategi Komunikasi Berbasis Kecerdasan Buatan (AI) dalam Mempromosikan Nilai Pancasila di Era Digital. Eksekusi: Jurnal Ilmu Hukum Dan Administrasi Negara, 3(2), 218–231. https://doi.org/https://doi.org/10.55606/eksekusi.v3i2.1873

Nirwana, M. D., Maksum, A., Avicenna, F., & Fidarijanthi, R. A. (2024). Beyond digital international tourism communication network for tourism quality improvement. Jurnal Manajemen Komunikasi, 8(2), 137–158.https://doi.org/10.24198/jmk.v8i2.52636

Nur, F. T., Andreas, R., Liang, C. W., Sciences, P., Mada, U. G., & Maret, U. S. (2025). Managing value proposition of small medium enterprise through digital business communication digital. Jurnal Manajemen Komunikasi, 9(2), 153–173. https://doi.org/https://doi.org/10.24198/jmk.v9i2.62057

Putri, M. A., Wibowo, T. O., & Nusantara, U. M. (2025). Internal communication strategies of startup in shaping a productive organizational communication climate organisasi yang produktif. Jurnal Manajemen Komunikasi, 9(2), 174–193. https://doi.org/https://doi.org/10.24198/jmk.v9i2.58698

Rohim, S. (2024). The utilization of YouTube by Gen Radio as content distribution alternative channel. Jurnal Manajemen Komunikasi, 9(1), 7087.https://doi.org/doi.org/10.24198/jmk.v9i1.53753

Rohim, S., Sukardi, E., & Yulinda, L. (2023).

Etnography and multicultural dynamics communication of jakarta community. WACANA: Jurnal Ilmiah Ilmu Komunikasi, 22(2), 333–341. https://doi.org/10.32509/wacana.v22i2.3383

Rohim, S., Surip, M., Lubis, M. J., & Fardian Gafari, M. O. (2023). Leadership contribution and organizational commitment on the work achievement of the school principals and teachers in high schools in Medan. Cogent Education, 10(2). https://doi.org/10.1080/2331186X.2023.2239595

Šakytė-Statnickė, G., & Budrytė-Ausiejienė, L. (2025). Application of artificial intelligence in the tourism sector: Benefits and challenges of AI-based digital tools in tourism organizations of Lithuania, Latvia, and Sweden. Tourism and Hospitality, 6(2). https://doi.org/10.3390/tourhosp6020067

Saleh, A., Morabito, R., Dustdar, S., Tarkoma, S., Pirttikangas, S., & Lovén, L. (2025). Towards message brokers for generative AI: Survey, challenges, and opportunities. ACM Computing Surveys, 58(1). https://doi.org/10.1145/3742891

Shata, A., & Hartley, K. (2025). Artificial intelligence and communication technologies in academia: Faculty perceptions and the adoption of generative AI. International Journal of Educational Technology in Higher Education, 22(1). https://doi.org/10.1186/s41239-025-00511-7

Sheelam, G. K., & Komaragiri, V. B. (2025). Self-adaptive wireless communication: leveraging ML and agentic AI in smart telecommunication networks. Metallurgical and Materials Engineering, 1381–1401.

Sousa, A. E., Cardoso, P., & Dias, F. (2024). The use of artificial intelligence systems

in tourism and hospitality: the tourists' perspective. Administrative Sciences, 14(8). https://doi.org/10.3390/admsci14080165

Suanpang, P., & Pothipassa, P. (2024). Integrating generative AI and iot for sustainable smart tourism destinations. Sustainability (Switzerland), 16(17). https://doi.org/10.3390/su16177435

Sun, G., & Zhou, Y. H. (2023). AI in healthcare: Navigating opportunities and challenges in digital communication. Frontiers in Digital Health, 5(December), 1–5. https://doi.org/10.3389/fdgth.2023.1291132

Susanti, C. E., Srimulyani, V. A., Hermanto, Y. B., & Waloyo, L. A. S. (2023). Building public satisfaction with marketing communication strategy and service quality. Jurnal Manajemen Komunikasi, 7(2), 136. https://doi.org/10.24198/jmk.v7i2.40431

Tassiello, V., Amatulli, C., Tillotson, J. S., & Laker, B. (2025). aiWOM: Artificial intelligence word-of-mouth. conceptualizing consumer-to-AI communication. International Journal of Human-Computer Interaction, 41(7), 4248–4260. https://doi.org/10.1080/10447318.2024.2349362

Toker, A., & Emir, O. (2023). Safety and security research in tourism: A bibliometric mapping. European Journal of Tourism Research, 34, 1–25.https://doi.org/10.54055/ejtr.v34i.2871

Torres, A. J. R., Alberto, J. M. C., Guieb, A. P. J., Paray, A., Villarama, J. A., Torres, A. J. R., Alberto, J. M. C., Guieb, A. P. J., & Villarama, J. A. (2024). Language, identity , and ethics in AI-driven art: Perspectives from human artists in digital environments language , identity , and ethics in ai-driven Art : Perspectives from Human Artists

in Digital Environments. LANGUAGE, TECHNOLOGY, AND SOCIAL MEDIA, 3(1), 1729.https://doi.org/https://doi.org/10.70211/ltsm.v3i1.137 To

Trianita, Y., & Larasati, A. D. (2021). Strategi integrated marketing communication pada objek wisata Pulau Pari dalam meningkatkan kunjungan wisatawan. Jurnal Broadcasting Communication, 3(2), 2838.https://doi.org/10.53856/bcomm.v3i2.221

Tyas, S. P., Azzahra, N., Ifada, B. M., & Fajarwati, N. K. (2024). Peran komuikasi persuasif dalam media sosial. SABER: Jurnal Teknik Informatika, Sains Dan Ilmu Komunikasi, 2(2), 16–22. https://doi.org/10.59841/saber.v2i2.956

WTTC. (2023). Travel & tourism economic impact 2023. https://assets-global.website-files.m/6329bc97af73223b575983ac/647df24b7c4bf560880560f9_EIR2023-APEC.pdf