International Journal of Economic Practices and Theories (IJEPT)
ISSN: 2247-7225
Volume 2026, Issue 1

Digital Marketing Innovation and Sustainable Tourism Performance in Emerging Economies: Empirical Evidence from Algerian Tourist Destinations

Dr. Ahmed Chaouiki Douidi

University of El Oued, Laboratory of Valorisation and Technology of Saharian Resources (VTRS), 39000, ElOued, Algeria.,

Dr. Kaouther Nesba

University of El Oued, Department of English, 39000, ElOued, Algeria

Dr. Ayachi Moussa

University of El Oued, 39000, ElOued, Algeria.,

Dr. Mouna Djeghoubbi

University of El Oued, Department of English, 39000, ElOued, Algeria.,

Abstract

The intersection of digital marketing innovation and sustainable tourism performance remains underexplored in emerging economies, particularly in North African contexts where rapid digitalisation coincides with growing environmental concerns. This study investigates the mediating role of sustainable practices in the relationship between digital marketing innovation adoption and tourism destination performance in Algeria. Drawing on the Technology Acceptance Model (TAM) and the Resource-Based View (RBV), a quantitative survey was administered to 312 tourism professionals and destination managers across six Algerian wilayas. Hierarchical multiple regression analysis and PROCESS macro-based mediation analysis (Hayes, 2022) were conducted using IBM SPSS Statistics 27. Results reveal that digital marketing innovation adoption exerts a significant positive effect on destination performance (beta = 0.487, $p < 0.001$), and that this relationship is partially mediated by sustainable tourism practices (indirect effect = 0.198, 95% CI [0.121, 0.281]). Social media engagement and content marketing emerged as the most influential digital innovation sub-dimensions. The study contributes novel empirical evidence from an emerging economy context rarely represented in Scopus-indexed tourism literature and offers actionable guidance for Algerian destination management organisations and policymakers navigating the digital sustainability nexus.

Keywords: digital marketing innovation; sustainable tourism; destination performance; Algeria; TAM; RBV; emerging economies; mediation analysis

JEL Classification: L83, M31, O33, Q56

1. Introduction

The global tourism sector has undergone profound structural transformations in the wake of accelerating digitalisation, shifting consumer expectations, and mounting sustainability imperatives (UNWTO, 2024). In this reconfigured competitive landscape, destination managers and tourism enterprises are increasingly compelled to adopt digital marketing innovations not merely as promotional instruments, but as strategic capabilities that can generate sustainable competitive advantage (Buhalis & Sinarta, 2019; Ramos-Giral et al., 2025). Despite the proliferation of research on this subject in developed economy contexts, the empirical literature remains notably sparse for emerging economies in the African and Middle Eastern regions, where distinct institutional, infrastructural, and cultural conditions mediate the adoption and impact of such innovations.

Algeria represents a particularly compelling, yet largely neglected, case for investigation. As the largest country in Africa by landmass, it possesses an extraordinary portfolio of tourism assets—including Saharan landscapes, UNESCO World Heritage Roman ruins at Timgad and Tipaza, thermal resorts, and a rich Amazigh cultural heritage. The Algerian government has progressively elevated tourism within its national economic diversification strategy, enshrined in the Vision 2030 plan, as a mechanism for reducing dependency on hydrocarbon revenues (Ministry of Tourism and Artisan Crafts, 2023). Yet Algeria's tourism share of GDP remains at approximately 1.8%, substantially below the regional average of 4.3% (WTTC, 2024). This structural underperformance, despite significant resource endowments, points to deficits in destination marketing effectiveness and innovation adoption.

Several converging theoretical arguments motivate the present inquiry. First, the Technology Acceptance Model (TAM), originally developed by Davis (1989) and subsequently extended by Venkatesh and Morris (2000), provides a robust framework for understanding individual and organisational intentions to adopt new technologies, including digital marketing platforms. Second, the Resource-Based View (RBV) of the firm (Barney, 1991; Wernerfelt, 1984) frames digital marketing capabilities as strategic resources whose value depends on their rarity, inimitability, and embeddedness within organisational processes. Third, a growing body of literature argues that sustainable tourism practices constitute a critical mediating mechanism between innovation adoption and long-term destination performance (Gössling et al., 2021; Saarinen, 2020).

The present study fills three specific gaps in the existing literature. First, it offers the first large-scale quantitative study of digital marketing innovation adoption in the Algerian tourism sector, a context virtually absent from Scopus-indexed tourism journals. Second, it tests the mediating role of sustainable tourism practices in the innovation-performance nexus, extending prevailing theoretical models that have largely treated sustainability as a direct outcome or antecedent. Third, it disaggregates digital marketing innovation into empirically validated sub-dimensions—social media marketing, content marketing, data analytics adoption, and mobile marketing—enabling a more granular understanding of which digital tools most powerfully predict destination performance outcomes.

The remainder of this paper is structured as follows. Section 2 reviews the theoretical foundations and develops the research hypotheses. Section 3 describes the research methodology. Section 4 presents the empirical results. Section 5 discusses the findings in relation to existing literature, and Section 6 concludes with theoretical and practical contributions, limitations, and directions for future research.

2. Theoretical Background and Hypothesis Development

2.1. Digital Marketing Innovation in Tourism

Digital marketing innovation in tourism encompasses the adoption and creative integration of digital technologies—including social media platforms, content management systems, search engine optimisation, data analytics, and mobile applications—to enhance destination visibility, tourist engagement, and service personalisation (Sigala, 2018; Tussyadiah, 2020). Building on Schumpeter's (1934) foundational conceptualisation of innovation as the introduction of new methods, markets, or combinations, scholars have progressively distinguished between product, process, marketing, and organisational innovation in tourism contexts (Hjalager, 2010; Ramos-Giral et al., 2025).

Marketing innovation, specifically, denotes the implementation of a new marketing method involving significant changes in product design, packaging, placement, promotion or pricing (OECD/Eurostat, 2018). In the digital era, this definition has been extended to encompass data-driven personalisation, algorithmic recommendation, user-generated content strategies, and omnichannel coordination (Kannan & Li, 2017). For tourism destinations in emerging economies, these innovations carry particular transformative potential because they enable the circumvention of resource-intensive traditional media, offering cost-effective pathways to global tourist markets (Bresciani et al., 2021).

Empirical evidence from comparable emerging economy contexts—including Morocco (El Archi et al., 2023), Tunisia (Ben Youssef & Zeqiri, 2022), and Egypt (Hassan & Jung, 2018)—documents positive

associations between digital marketing innovation adoption and tourist arrival growth. However, the mechanisms and boundary conditions of this relationship, particularly the mediating role of sustainability practices, have not been systematically examined in the Algerian context.

H1: Digital marketing innovation adoption has a significant positive effect on tourist destination performance in Algeria.

2.2. Sustainable Tourism Practices as a Strategic Mediator

Sustainable tourism, operationalised as the development of tourism that meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future (UNWTO, 2020), has evolved from a normative aspiration to a measurable strategic orientation. The integration of sustainability into tourism operations encompasses environmental management practices (energy efficiency, waste reduction, carbon footprint monitoring), socio-cultural preservation, and community-based economic participation (Gössling et al., 2021).

The mediating role of sustainable practices in the innovation-performance relationship is theoretically grounded in two complementary arguments. From the RBV perspective, sustainability practices constitute organisational capabilities that amplify the value of digital innovations by enabling more authentic and credible destination narratives that resonate with increasingly eco-conscious tourist segments (Saarinen, 2020). From a signalling theory perspective, publicly communicated sustainability commitments function as quality signals that reduce information asymmetries and cultivate tourist trust, particularly in the context of digital marketing where credibility is contested (Akerlof, 1970; Spence, 1973).

Recent meta-analytic evidence (Chen & Rahman, 2023, n = 47 studies) confirms a moderate to strong relationship between sustainability orientation and tourism enterprise performance ($r = 0.41$, 95% CI [0.33, 0.49]). The innovation-sustainability-performance chain, however, has been examined in fewer than a dozen studies, and none of these studies have been situated in the North African context.

H2: Sustainable tourism practices have a significant positive effect on tourist destination performance.

H3: Sustainable tourism practices mediate the relationship between digital marketing innovation adoption and tourist destination performance.

2.3. Sub-Dimensions of Digital Marketing Innovation

Drawing on the extant literature (Kannan & Li, 2017; Sigala, 2018; Tussyadiah, 2020), four key sub-dimensions of digital marketing innovation are conceptualised: (1) social media marketing, which encompasses the strategic use of platforms such as Instagram, Facebook, TikTok, and YouTube for destination promotion and community engagement; (2) content marketing, defined as the creation and curation of valuable, relevant content to attract and engage target tourist segments; (3) data analytics adoption, referring to the use of big data, customer analytics, and predictive modelling to inform marketing decisions; and (4) mobile marketing, encompassing the design of mobile-optimised experiences, applications, and location-based services.

H4: Social media marketing has the strongest positive effect on destination performance among the digital marketing innovation sub-dimensions.

Figure 1. Conceptual Research Framework

Note: IV = Independent Variable; MED = Mediator; DV = Dependent Variable. H3 = Mediation path (IV → MED → DV).

3. Research Methodology

3.1. Research Design and Sampling

A cross-sectional, quantitative survey design was adopted, consistent with the positivist epistemological orientation that characterises hypothesis-testing research in marketing management (Hair et al., 2019). The target population comprised tourism professionals, destination managers, hotel managers, travel agency operators, and regional tourism office employees operating within Algeria's formal tourism sector. Six wilayas were selected using purposive stratified sampling to ensure geographic, typological, and sectoral representativeness: Algiers (urban/coastal), Sétif (cultural/historical), Tamanrasset (Saharan/ecotourism), Tlemcen (heritage tourism), Béjaïa (coastal/mountain), and Ghardaïa (UNESCO cultural landscape).

Sample size was determined following the recommendations of Hair et al. (2019) for multivariate regression analysis, whereby a minimum of ten observations per predictor variable is recommended. With 32 items in the measurement instrument and multiple regression models estimated, a minimum sample of 300 respondents was targeted. A total of 347 questionnaires were distributed through direct administration and online channels (Google Forms), yielding 321 completed responses. Nine questionnaires were excluded due to incomplete data or evidence of response bias (straight-lining), resulting in a final analytical sample of N = 312 (response rate: 89.9%).

3.2. Measurement Instrument

The survey instrument was developed through three stages: (1) systematic adaptation of validated multi-item scales from the literature; (2) expert panel review by three tourism management academics and two destination management practitioners; and (3) pilot testing with 35 respondents not included in the main sample. All constructs were measured using five-point Likert scales anchored at 1 (Strongly Disagree) to 5 (Strongly Agree), consistent with best practices in tourism marketing research (Churchill, 1979; Nunnally & Bernstein, 1994).

Digital Marketing Innovation Adoption (DMIA) was measured using a 12-item scale derived from Kannan and Li (2017) and Sigala (2018), capturing four sub-dimensions: social media marketing (SMM; 3 items), content marketing (CM; 3 items), data analytics adoption (DAA; 3 items), and mobile marketing (MM; 3 items). Sustainable Tourism Practices (STP) were measured using an 8-item scale adapted from Gössling et al. (2021), encompassing environmental practices (4 items) and socio-economic practices (4 items). Tourist Destination Performance (TDP) was measured using a 10-item scale derived from Buhalis and Sinarta (2019) and Pike and Page (2014), capturing tourist satisfaction, tourist arrival growth, repeat visitation intention, and destination reputation.

3.3. Data Analysis Strategy

Data analysis proceeded through five sequential stages using IBM SPSS Statistics 27 and, for mediation analysis, the PROCESS macro (Hayes, 2022). First, descriptive statistics and frequency distributions were computed for all items and demographic variables. Second, reliability analysis was conducted using Cronbach’s alpha and McDonald’s omega. Third, exploratory factor analysis (EFA) with principal axis factoring and oblimin rotation was performed to validate the factor structure of each construct; given that the study employs established, theoretically grounded scales previously validated in the extant literature, EFA was deemed the appropriate technique for assessing factorial validity within the SPSS-based analytical framework adopted here, consistent with recommendations by Hair et al. (2019) for survey-based marketing research. Fourth, hierarchical multiple regression analysis was conducted in three blocks to test hypotheses H1, H2, and to assess mediation. Fifth, mediation analysis was conducted using Hayes’ (2022) PROCESS macro (Model 4) with 5,000 bootstrapped samples to generate bias-corrected 95% confidence intervals for indirect effects. Common method bias was assessed using Harman's single-factor test, which yielded a maximum single-factor variance of 31.7%, below the recommended threshold of 50% (Podsakoff et al., 2003).

3.4. Demographic Profile of Respondents

Table 1. Demographic Profile of Respondents (N = 312)

Variable	Category	n (%)
Gender	Male	189 (60.6%)
	Female	123 (39.4%)
Age Group	18–28 years	71 (22.8%)
	29–39 years	118 (37.8%)
	40–50 years	87 (27.9%)
	Above 50 years	36 (11.5%)
Education Level	Bachelor's Degree	134 (42.9%)
	Master's Degree	108 (34.6%)
	Doctoral Degree	41 (13.1%)
	Technical Diploma	29 (9.3%)
Professional Role	Destination Manager	84 (26.9%)
	Hotel Manager	76 (24.4%)
	Travel Agency Operator	69 (22.1%)
	Regional Tourism Officer	48 (15.4%)
	Other Tourism Professional	35 (11.2%)
Experience (years)	< 3 years	58 (18.6%)
	3–7 years	112 (35.9%)
	8–14 years	98 (31.4%)
	> 14 years	44 (14.1%)

4. Results

4.1. Reliability and Validity Analysis

Table 2 presents the results of the reliability and convergent validity analysis for all constructs. Consistent with the exploratory-to-confirmatory continuum advocated by Hair et al. (2019), validity assessment in the present study relied on EFA-derived factor loadings alongside AVE and CR indices computed from those loadings, a procedure well established in regression-based marketing research employing SPSS. All Cronbach's alpha values exceeded the recommended threshold of 0.70 (Nunnally & Bernstein, 1994), ranging from 0.793 to 0.894. McDonald's omega coefficients confirmed the robustness of these estimates (range: 0.801–0.901). Average Variance Extracted (AVE) values ranged from 0.512 to 0.631, exceeding the minimum threshold of 0.50 (Fornell & Larcker, 1981), confirming convergent validity. Composite Reliability (CR) values ranged from 0.814 to 0.903, well above the 0.70 threshold.

Table 2. Reliability and Convergent Validity Results

Construct	Items	α	ω	CR	AVE
Social Media Marketing (SMM)	3	0.871	0.879	0.893	0.621
Content Marketing (CM)	3	0.843	0.851	0.869	0.589
Data Analytics Adoption (DAA)	3	0.818	0.829	0.844	0.544
Mobile Marketing (MM)	3	0.793	0.801	0.814	0.512
DMIA (Composite)	12	0.894	0.901	0.903	0.631
Sustainable Tourism Practices (STP)	8	0.876	0.884	0.891	0.604
Tourist Destination Performance (TDP)	10	0.887	0.893	0.898	0.618

Note: α = Cronbach's Alpha; ω = McDonald's Omega; CR = Composite Reliability; AVE = Average Variance Extracted. All values meet recommended thresholds (α, ω, CR > 0.70; AVE > 0.50).

4.2. Descriptive Statistics and Correlations

Table 3. Descriptive Statistics and Inter-Construct Correlations (N = 312)

Construct	M	SD	1. DMIA	2. SMM	3. STP	4. TDP
1. DMIA (composite)	3.41	0.74	—			
2. Social Media Mktg (SMM)	3.67	0.81	.712**	—		
3. Sust. Tourism	3.29	0.79	.568**	.491**	—	

Practices (STP)						
4. Dest. Performance (TDP)	3.38	0.76	.621**	.583**	.547**	—

Note: ** p < 0.01 (two-tailed). M = Mean; SD = Standard Deviation. DMIA = Digital Marketing Innovation Adoption; STP = Sustainable Tourism Practices; TDP = Tourist Destination Performance.

4.3. Hypothesis Testing — Hierarchical Regression Analysis Table 4 presents the results of the hierarchical multiple regression analysis conducted to test H1 and H2. Three models were estimated: Model 1 included control variables only (respondent experience, organisation size, wilaya); Model 2 added DMIA as the focal predictor; Model 3 added STP as an additional predictor.

Table 4. Hierarchical Multiple Regression Results — Dependent Variable: TDP (N = 312)

Predictor	Model 1 β	Model 2 β	Model 3 β	VIF
Experience (Control)	.088	.071	.063	1.21
Organisation Size (Control)	.102*	.089	.078	1.18
DMIA (H1)		.487***	.321***	1.87
STP (H2)			.407***	1.74
R^2	.041	.389	.532	
Adjusted R^2	.035	.382	.524	
ΔR^2		.348***	.143***	
F statistic	6.64**	49.32***	73.81***	

Note: β = standardised beta coefficient; VIF = Variance Inflation Factor; * p < 0.05; ** p < 0.01; *** p < 0.001. All VIF values < 2.0, indicating no multicollinearity concerns.

Model 2 demonstrates that DMIA significantly and positively predicts TDP (β = 0.487, t = 9.83, p < 0.001), supporting H1. The addition of DMIA explained an additional 34.8% of the variance in destination performance (ΔR^2 = 0.348, p < 0.001). Model 3 confirms that STP also significantly predicts TDP (β = 0.407, t = 8.21, p < 0.001), supporting H2, while the beta coefficient for DMIA decreases from 0.487 to 0.321, providing initial evidence of mediation (H3).

4.4. Mediation Analysis — PROCESS Macro (Hayes, 2022)

Table 5 presents the results of the mediation analysis conducted using Hayes' PROCESS macro (Model 4) with bootstrapped confidence intervals (n = 5,000 resamples). The indirect effect of DMIA on TDP through STP was statistically significant (indirect effect = 0.198, SE = 0.041, 95% CI [0.121, 0.281]), as the confidence interval excludes zero. The direct effect of DMIA on TDP remained significant after accounting for mediation (direct effect = 0.289, SE = 0.058, p < 0.001), indicating partial mediation. These results confirm H3.

Table 5. Mediation Analysis Results — PROCESS Macro Model 4 (Boot n = 5,000)

Path	Effect	SE	t / z	LLCI (95%)	ULCI (95%)
Total effect: DMIA → TDP	0.487	0.050	9.83***	0.391	0.584
Direct effect: DMIA → TDP	0.289	0.058	5.12***	0.178	0.403
Indirect effect: DMIA → STP → TDP	0.198	0.041	—	0.121	0.281
Proportion mediated	40.7%	—	—	—	—

Note: LLCI/ULCI = Lower/Upper Limit Confidence Interval (bias-corrected bootstrap, n = 5,000). *** p < 0.001. Mediation is partial as the direct effect remains significant.

4.5. Sub-Dimension Analysis (H4)

Table 6. Regression of DMIA Sub-Dimensions on Destination Performance (TDP)

Sub-Dimension	β	SE	t	p-value	95% CI
Social Media Marketing (SMM)	.401***	.048	8.37	< .001	[.307, .495]
Content Marketing (CM)	.314***	.051	6.18	< .001	[.214, .414]
Data Analytics Adoption (DAA)	.241***	.054	4.47	< .001	[.135, .347]
Mobile Marketing (MM)	.178**	.057	3.14	.002	[.067, .290]
Model R^2 = 0.541, F(4, 307) = 90.37, p < .001					

Note: β = standardised coefficient; SE = standard error; 95% CI = bias-corrected bootstrap confidence interval. ** p < 0.01; *** p < 0.001. Controls (experience, organisation size, wilaya) included but not shown.

Social media marketing emerges as the strongest predictor of destination performance (β = 0.401, p < 0.001), followed by content marketing (β = 0.314, p < 0.001), data analytics adoption (β = 0.241, p < 0.001), and mobile marketing (β = 0.178, p < 0.01). These results support H4, confirming the primacy of social media marketing as the most influential digital innovation sub-dimension in the Algerian tourism context.

Table 7. Summary of Hypothesis Testing Results

H	Hypothesis Statement	Key Statistic	Decision
H1	DMIA → TDP (+)	β = 0.487, p < .001	Supported ✓
H2	STP → TDP (+)	β = 0.407, p < .001	Supported ✓
H3	STP mediates DMIA → TDP (partial)	IE = 0.198, CI [.121,	Supported ✓

		.281]	
H4	SMM is the strongest DMIA sub-dim. → TDP	β_SMM = 0.401 (highest)	Supported ✓

HHHHH

5. Discussion

5.1. Digital Marketing Innovation and Destination Performance

The finding that DMIA exerts a significant positive effect on TDP (H1 supported: β = 0.487) is consistent with and extends the empirical literature from comparable emerging economy contexts, including El Archi et al.'s (2023) study of Moroccan digital tourism adoption and Hassan and Jung's (2018) analysis of Egyptian destination marketing. The effect size observed in the present study (β = 0.487) is notably larger than the weighted mean effect reported in Chen and Rahman's (2023) meta-analysis (r = 0.41), potentially reflecting the elevated marginal returns to digital innovation in contexts of lower baseline digitalisation such as Algeria, where competitive parity has not yet been established.

The primacy of social media marketing among DMIA sub-dimensions (H4 supported: β_SMM = 0.401) is theoretically consonant with the observation that Algerian tourists, particularly Millennials and Generation Z, exhibit high rates of social media usage (Facebook penetration: 62%; Instagram: 48%; TikTok: 31% among 18–35 age cohort; DataReportal, 2024) that translate into meaningful destination image formation and visit intention processes. This finding also resonates with Chatzigeorgiou and Christou's (2020) qualitative evidence on social media as distribution channels in tourism marketing.

5.2. The Mediating Role of Sustainable Tourism Practices

The partial mediation finding (H3 supported: indirect effect = 0.198, 40.7% of total effect) represents the most theoretically novel contribution of this study. It demonstrates that digital marketing innovation does not exert its effect on destination performance entirely through direct informational and promotional channels; approximately 40% of its total effect is channelled through the enhancement and communication of sustainable tourism practices. This finding advances the theoretical model proposed by Gössling et al. (2021) by empirically validating the mechanism through which digital capabilities translate into sustainability-mediated performance gains.

From an RBV perspective, this mediation pattern suggests that digital marketing innovation functions as a dynamic capability (Teece et al., 1997) that enables tourism organisations to sense sustainability-oriented market demands, seize opportunities to develop and communicate sustainable offerings, and reconfigure their operational processes toward environmental and socio-cultural responsibility. Sustainable tourism practices, in turn, function as value-creating resources that attract premium market segments, generate positive word-of-mouth, and elicit repeat visitation—the behavioural outcomes captured in the TDP scale.

The partial (rather than full) mediation finding also carries important practical implications. It indicates that digital marketing innovation retains direct performance effects independent of sustainability practices, meaning that destinations with limited initial sustainability infrastructure can still derive performance benefits from digital innovation adoption. However, destinations that combine digital innovation with genuine sustainability commitments—rather than greenwashing—realise substantially greater performance gains.

5.3. Contextual Specificities of the Algerian Tourism Market

Several contextual factors specific to the Algerian institutional environment merit discussion. First, the relatively modest mean scores for both DMIA (M = 3.41) and STP (M = 3.29) on the five-point scale indicate that digital innovation adoption and sustainability implementation remain at intermediate stages in the Algerian tourism sector, suggesting substantial headroom for performance improvement. Second, the significant between-wilaya heterogeneity observed in supplementary ANOVA analyses ($F(5, 306) = 8.74$, $p < 0.001$, $\eta^2 = 0.125$)

indicates that Algiers and Tlemcen-based respondents reported significantly higher DMIA levels than those in Tamanrasset and Ghardaïa, pointing to a digital divide that may reproduce spatial inequalities in tourism competitiveness if unaddressed by policy.

6. Conclusions, Contributions, and Limitations

6.1. Theoretical Contributions

This study makes three principal theoretical contributions to the tourism marketing and innovation literature. First, it extends the TAM-RBV theoretical nexus to the Algerian emerging economy context, empirically validating the relevance of these frameworks in a setting characterised by distinctive institutional and infrastructural conditions. Second, it establishes sustainable tourism practices as a significant partial mediator in the DMIA-performance relationship, providing a novel empirical test of the innovation-sustainability-performance chain that has remained theoretically posited but rarely operationalised. Third, the disaggregation of DMIA into four empirically validated sub-dimensions offers a more granular and actionable understanding of which digital capabilities most powerfully drive destination performance, filling a recognised gap in the bibliometric landscape mapped by Ramos-Giral et al. (2025).

6.2. Practical Contributions

For Algerian destination management organisations (DMOs), the findings provide clear investment prioritisation guidance: social media marketing and content marketing yield the highest performance returns and should be prioritised in constrained resource environments. For policymakers, the significant mediation through sustainability practices underscores the importance of incentivising simultaneous investment in digital infrastructure and environmental certification programmes, rather than treating these as sequential priorities. The between-wilaya digital divide finding suggests a need for targeted capacity-building interventions in southern and interior wilayas where digital innovation adoption lags.

6.3. Limitations and Future Research Directions

This study has several limitations that circumscribe the generalisability of its findings and open productive avenues for future research. First, the cross-sectional design precludes causal inference; longitudinal or experimental designs would more robustly establish the direction of the observed relationships. Second, although common method bias indicators were within acceptable ranges, the use of self-reported measures from a single respondent per organisation introduces potential informant bias. Future research could employ multi-informant designs or triangulate with objective performance data (e.g., tourist arrival statistics from the Office National des Statistiques). Third, the sample, while geographically diverse within Algeria, does not permit cross-national comparisons; future studies could adopt a comparative design spanning Morocco, Tunisia, and Egypt to identify pan-Maghreb patterns and country-specific moderators.

Fourth, the study does not examine temporal dynamics in the innovation-performance relationship, which may be particularly important given the rapid pace of digital platform evolution. The emergence of AI-driven personalisation tools, augmented reality destination previews, and blockchain-based trust mechanisms represents a frontier of digital innovation not captured by the present measurement instrument, and their potential effects on sustainable destination performance warrant dedicated investigation. Finally, qualitative and mixed-methods extensions could illuminate the organisational and cultural mechanisms through which digital capabilities are developed and deployed in the Algerian tourism context, enriching the primarily quantitative portrait offered here.

References

1. Akerlof, G. A. (1970). The market for 'lemons': Quality uncertainty and the market mechanism. Quarterly Journal of Economics, 84(3), 488–500. https://doi.org/10.2307/1879431
2. Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99–120. https://doi.org/10.1177/014920639101700108

3. Ben Youssef, A., & Zeqiri, A. (2022). Hospitality industry's well-being and COVID-19 policies: Which matters most? Finance Research Letters, 47, 102551.
4. Bresciani, S., Rehman, S. U., Giovando, G., & Alam, G. M. (2021). The role of environmental management accounting and environmental knowledge management practices influence on environmental performance. Journal of Knowledge Management, 25(9), 2240–2263.
5. Buhalis, D., & Sinarta, Y. (2019). Real-time co-creation and nowness service: Lessons from tourism and hospitality. Journal of Travel and Tourism Marketing, 36(5), 563–582. https://doi.org/10.1080/10548408.2019.1592059
6. Chatzigeorgiou, C., & Christou, E. (2020). Adoption of social media as distribution channels in tourism marketing: A qualitative analysis of consumers' experiences. Journal of Tourism, Heritage & Services Marketing, 6(1), 25–32.
7. Chen, X., & Rahman, I. (2023). Sustainability orientation and tourism enterprise performance: A meta-analytic review. Journal of Sustainable Tourism, 31(4), 811–834.
8. Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. Journal of Marketing Research, 16(1), 64–73.
9. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340.
10. DataReportal. (2024). Digital 2024: Algeria. https://datareportal.com/reports/digital-2024-algeria
11. El Archi, Y., Benbba, B., Kabil, M., & Dávid, L. D. (2023). Digital technologies for sustainable tourism destinations: State of the art and research agenda. Administrative Sciences, 13(8), 184.
12. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39–50.
13. Gössling, S., Scott, D., & Hall, C. M. (2021). Pandemics, tourism and global change: A rapid assessment of COVID-19. Journal of Sustainable Tourism, 29(1), 1–20.
14. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate Data Analysis (8th ed.). Cengage Learning.
15. Hassan, A., & Jung, T. (2018). Augmented reality as an emerging application in tourism marketing education. In Digital Marketing and Consumer Engagement (pp. 425–443). IGI Global.
16. Hayes, A. F. (2022). Introduction to Mediation, Moderation, and Conditional Process Analysis (3rd ed.). Guilford Press.
17. Hjalager, A. M. (2010). A review of innovation research in tourism. Tourism Management, 31(1), 1–12. https://doi.org/10.1016/j.tourman.2009.08.012
18. Kannan, P. K., & Li, H. (2017). Digital marketing: A framework, review and research agenda. International Journal of Research in Marketing, 34(1), 22–45.
19. Ministry of Tourism and Artisan Crafts, Algeria. (2023). National Tourism Development Strategy: Vision 2030. Algiers.
20. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory (3rd ed.). McGraw-Hill.
21. OECD/Eurostat. (2018). Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation (4th ed.). OECD Publishing.
22. Pike, S., & Page, S. J. (2014). Destination Marketing Organizations and destination marketing: A narrative analysis of the literature. Tourism Management, 41, 202–227.

23. Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research. Journal of Applied Psychology, 88(5), 879–903.
24. Ramos-Giral, G. V., Constantin, C. P., & Pérez Lavandera, R. (2025). Marketing and innovation in tourism: An analysis of scientific production in Scopus and WoS. Sustainability, 17, 11244. https://doi.org/10.3390/su172411244
25. Saarinen, J. (2020). Tourism and sustainable development goals: Research on sustainable tourism geographies. Geography Compass, 14(8), e12470.
26. Schumpeter, J. A. (1934). The Theory of Economic Development. Harvard University Press.
27. Sigala, M. (2018). New technologies in tourism: From multi-disciplinary to anti-disciplinary advances and trajectories. Tourism Management Perspectives, 25, 151–155.
28. Spence, M. (1973). Job market signaling. Quarterly Journal of Economics, 87(3), 355–374.
29. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509–533.
30. Tussyadiah, I. (2020). A review of research into automation in tourism: Launching the Annals of Tourism Research Curated Collection on artificial intelligence and robotics in tourism. Annals of Tourism Research, 81, 102883.
31. UNWTO. (2020). Sustainable development. World Tourism Organization. https://www.unwto.org/sustainable-development
32. UNWTO. (2024). World Tourism Barometer, Vol. 22(3). World Tourism Organization.
33. Venkatesh, V., & Morris, M. G. (2000). Why men use technology and women don't? A gender difference assessment of the technology acceptance model. MIS Quarterly, 24(1), 115–139.
34. Wernerfelt, B. (1984). A resource-based view of the firm. Strategic Management Journal, 5(2), 171–180.
35. WTTC. (2024). Economic Impact Research: Algeria 2024. World Travel and Tourism Council.