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Harnessing ICT for Strategic Advantage in Tourism: Evidence from Enterprises in Albania

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Abstract: As the global tourism industry becomes increasingly shaped by digital transformation, the strategic role of Information and Communication Technologies (ICTs) has gained particular significance, especially in emerging economies. Albania, with its growing appeal as a tourist destination and its economic reliance on tourism, presents a compelling context in which to examine the digital maturity of tourism enterprises. This study investigates the adoption of ICT tools—particularly websites and e-marketing practices—among Albanian tourism businesses and assesses the impact of managerial attitudes and digital infrastructure on perceived business performance. Grounded in the Technology Acceptance Model (TAM) and the Resource-Based View (RBV), the research employs a quantitative survey methodology, collecting responses from 208 enterprises across five key tourism regions. The findings reveal that 81% of these enterprises maintain an active website, with adoption rates significantly higher in coastal areas such as Durrës and Sarandë. Hierarchical regression analysis demonstrates that a favorable perception of ICTs is positively associated with ICT-based marketing strategies ($r = 0.243$, $p < 0.01$) and reported profit growth ($R^2 = 0.291$). Although high initial website development costs are acknowledged as a barrier, they are also correlated with long-term profitability, reflecting a growing recognition of ICT as a strategic asset rather than a cost burden. The results support the dual theoretical lens: TAM explains the behavioral inclination toward digital tools, while RBV underscores their value as inimitable resources for sustained competitive advantage. The study highlights the need for targeted government policies, including digital upskilling programs, infrastructure investment, and support for small enterprises lagging in digital readiness. Future research could expand this inquiry through longitudinal and cross-country analyses, exploring how emerging technologies—such as AI-driven personalization, immersive media, and data analytics—reshape destination competitiveness in the digital age.

Keywords: ICTs; Tourism enterprises; Digital transformation; Website adoption; Managerial perception; TAM; RBV; Albania

JEL Classification: L83, M15, O33, L86

1. Introduction

International visitors reached 1.4 billion in 2024, based on the latest data from UNWTO (2025) World Tourism Barometer, marking an 11% increase from 2023 levels nearly reaching pre-pandemic levels. Tourism is still a main source of foreign exchange for most developing countries. In 2024 it contributed to international global GDP of approximately 10% and directly supported 357 million global jobs, playing an important role for economic integration and development within least-developed countries (World Bank, 2024).

The tourism sector is composed by a wide range of economic activities, including accommodation services, travel agencies, restaurants and bars, transportation for tourism purposes, handicraft production, cultural and sporting activities, as well as the operation of various types of parks—archaeological, natural, and national—alongside museums and related attractions.

In line with broader international trends, Albania has had a significant increase in the number of non-resident visitors over the past several years (Table 1). The tourism sector has consistently created opportunities for both private enterprises operating in the industry and for the state, which has benefitted from the sector's growing

contribution to the national budget. Albania's geographic position—offering easy access to European markets—further strengthens its appeal as a tourism destination.

Ensuring continued growth, the sector requires ongoing investment in innovative tourism products and broader market outreach. In this context, ICTs play an important role. ICTs refer to the broad array of digital tools, systems, and infrastructures that facilitate the transmission, creation, storage, and exchange of information. This includes hardware such as computers and mobile devices; software platforms and applications; communication infrastructure like broadband, internet, and satellite systems; as well as related digital services that enable efficient information flow and management across stakeholders.

Although previous research has acknowledged the growing presence of ICTs in Albania's tourism industry (Gjika & Pano, 2020; Muça et al., 2022), there remains limited insight into which specific technologies are being used by enterprises and how these tools have impacted business performance.

Table 1. The number of foreign visitors 2019-2024

	2019	2020	2021	2022	2023	2024
Nr of visitors	6,406,038	2,657,818	5,688,649	7,543,817	10,155,640	11,696,111
Increase in %	7.4	-58	53	25	26	13

Source: General directorate of state's police, INSTAT calculations

1.1 ICTs in the Tourism Industry

Globally, tourism remains one of the main industries, while ICTs stand as a development and management force behind the sector. ICTs help customers to directly approach service providers, supporting exploration and satisfaction of changing travel demand, while encouraging providers to efficiently handle increasing customer demand variety and complexity (Bekele & Raj, 2024).

Over the last years, an increasing number of tourism service providers in developing countries have used ICTs to virtually inform, promote, and sell their products and services internationally resulting in greater economic and temporal efficiency. They tend to use their own websites as primary platforms of e-commerce along with complementary sites, such as intermediary portals, where they can exchange information and transact with potential customers. Corporate websites are therefore serving as main sales channels for products of tourism, reinforced by online shops and intermediary portals such as: Booking.com and Expedia—enabling data exchange, payment, and interaction. The evolution belongs to a broader pattern of tourism to shift toward digital advertising, with website interactive multimedia elements replacing to some extent classic paper printed product brochures, offering dynamic, downloadable products that support potential customers as well as sustainable advertising methods (Raji et al., 2024). Digital storytelling, social media campaigns, and online branding initiatives are essential in transmitting Albania's cultural identity to wider audiences. In this context, cultural branding becomes inseparable from ICT-driven tools, as online visibility and digital engagement determine the effectiveness of branding strategies (Noti et al., 2024).

Not long ago, customers were not able to interact or find information about tourism enterprises, other than word-of-mouth, and they were rarely able to conduct online purchases. Now they are able to find, edit, add comment as well as pay for products/services etc. Web 2.0 has strengthened the relationship between tourists and tourism products by enhancing both dissemination and functionality. A set of Web 2.0 tools such as blogs, forums, ratings, podcasts, wikis, and social networking sites has significantly redefined tourism marketing. Through user-generated content (UGC), consumers themselves create reviews, photos, and place stories that influence other consumers' perceptions and choices (Aboalganam & Tarabieh, 2025). This trend has transferred authority to peer-led platforms such as TripAdvisor and destination Facebook sites where real-life testimonials build brand image and influence travel choices to a larger extent than traditional marketing channels do. Kola et al. (2024) provide empirical evidence on how digital marketing strategies directly enhance the performance of tourism enterprises, enabling them to compete more effectively in international markets.

This increasing reliance of the tourism sector on ICTs is transforming organizational and managerial practices. Digital platforms such as online booking systems, email communication, and social networking sites have become integral to the coordination of meetings and travel, enabling access to competitive, real-time pricing structures. Technological advancements, including the provision of high-speed internet connectivity and a wide range of digital services by hotels, are now perceived by business travelers as essential baseline requirements rather than value-added amenities. In parallel, the rapid expansion of video conferencing technologies, supported by satellite transmission and digital media, has prompted leading hotel chains to invest in sophisticated hybrid conferencing infrastructures, thereby reinforcing their competitive advantage in the global market (Deloitte, 2023). Following Porter's idea, technology contributes to the competitive advantage of an enterprise by minimizing costs and distinguishing its service provision (Mashingaidze et al., 2024).

Llazo & Neza (2023) explore the success of the e-Albania platform, showing how digital services increase efficiency, transparency, and accessibility. Their findings underline how ICT-driven infrastructure contributes to a supportive environment for tourism development.

1.2 Word-of Mouth vs ICTs: An Evolving Landscape

Recent trends among internet services show a general priority toward being customer-focused. Concepts like "UGC" and new developments that relate to social media are critical examples of innovations focused on the end-user. One significant outcome of trends seen among those services includes becoming more independent in a case where customers are making travel-related decisions (Hysi et al., 2015; Veseli-Kurtici & Ruci, 2023).

While earlier studies argue that tourism is an intangible activity, information rich service whose consumption is heavily dependent upon word-of-mouth and virtual distribution channels to reduce consumers' uncertainty (O'Connor et al., 2008) more recent studies show that excellent UGC and travel information via social media tend to reduce travelers' perceived risk significantly while travel trust and intention are enhanced (Wang & Yan, 2022). With additional innovations by tourism organizations and hotels particularly by utilizing short videos to make destinations less abstract, suppliers need to be adaptable to adopt these technologies to sustain customer confidence as well as order competitiveness (Han et al., 2022).

According to the 2011 Flash Eurobarometer, 52% of European tourists relied on recommendations from friends, colleagues, or relatives, while 40% used websites to decide where to spend their holidays (European Commission, 2012). A decade later—Flash Eurobarometer 499 (Winter 2021)—there are slight shifts in information sourcing: 56% of EU respondents still rely on personal recommendations, 34% depend on websites with reviews, and 21% use the service provider's own website or social media page to inform travel decisions.

The data highlights that word-of-mouth remains the dominant influencer among EU travelers, increasing from 52% in 2011 to 56% in 2021. Online review sites (e.g., TripAdvisor) are a growing source, at 34%, while only 21% of travelers use providers' own digital channels. This trend indicates that third-party platforms and peer opinions now outweigh both personal networks and direct websites in guiding travel decisions. Tourism businesses should prioritize enhancing content and presence on review platforms, as well as engaging authentically on social media.

1.3 Theoretical Framework

The theoretical framework of this study draws upon two complementary models: the TAM and the RBV. TAM, originally proposed by Davis (1989), emphasizes the role of perceived usefulness and perceived ease of use in shaping users' acceptance of new technologies. Within the context of Albanian tourism enterprises, TAM provides insights into how managers and customers perceive and adopt ICT tools, such as websites, online booking systems, and social media platforms, as part of their decision-making and communication processes. Tartaraj et al. (2024) explore the impact of advertising and the mediating role of consumer awareness in shaping purchase attitudes toward sustainable tourism. Their findings illustrate how ICT-driven marketing campaigns, when aligned with sustainability values, can influence consumer preferences and foster responsible tourism practices.

On the other hand, the RBV (Barney, 1991; Wernerfelt, 1984) offers a strategic perspective by arguing that firms achieve sustained competitive advantage through valuable, rare, inimitable, and non-substitutable (VRIN) resources. Applied to the tourism sector, ICT adoption can be understood not only as a technological necessity but also as a strategic resource that enhances competitiveness by improving efficiency, customer interaction, and market reach. Together, TAM and RBV enable a comprehensive analysis: while TAM explains the behavioral drivers behind technology adoption, RBV highlights the organizational and strategic benefits that ICT resources bring to tourism enterprises, reinforcing their capacity to compete in a rapidly digitalizing industry.

1.4 Aim and Objectives of the Study

The overall aim of this paper is to assess the level of use of ICTs by tourism enterprises in Albania, and the factors that influence their higher/lower use. The specific objectives of the research are:

- To explore how the type of tourism enterprise and location affect the use of ICTs in business processes;
- To evidence the role of managerial attitudes in the level of ICTs use for business processes.

Research Question 1: What is the level of ICTs use from Albanian tourism enterprises? What factor influence their use?

Research Question 2: How do the attitudes of entrepreneurs/managers influence the scale of use of ICTs?

The hypotheses of this paper are linked to the main aim of the study, namely the use of ICTs and the impact it has on tourism enterprises. Specifically:

H1: Positive attitudes toward ICTs are associated with greater use of ICT-based marketing.

H2: Positive attitudes toward having a website are associated with higher self- reported profit growth.

2. Methodology

The research employed a quantitative approach, using a questionnaire as a tool used for data gathering to assess the scale of use and effectiveness of ICTs among tourism enterprises across Albania.

2.1 Sampling and Sample Sites

The research took place in five major touristic areas of Albania: Tirana, Vlora, Durrës, Saranda, and Shkodër. The areas were selected due to their major contribution to national tourism development, based on present data signaling that tourism projects and investments are focused in these areas.

The sampling was based on a list of tourism enterprises provided by the Albanian Tourism Association (ATA), an umbrella organization for accommodation units, travel agencies and restaurants. The end sample included 208 representatives of enterprises ($N = 208$). Non-probability quota sampling was applied, by a pre-selection of certain characteristics, called quotas, within a population, thus ensuring sufficient representation of respective characteristics within a sample by proper proportions. In this case, the only quota used is the equal percentage of the participating enterprises from each of these sites, specifically 50%.

As seen in Table 2, the total number of registered enterprises in ATA was 416. In the district of Tirana, although a larger number of questionnaires would have been required to reach 50%, this target could not be reached due to the high number of refusals. In the other cities, refusals were not as frequent, possibly because a significant part of the questionnaires was conducted during a non-touristic period. Nevertheless, it should be emphasized that one of the main reasons for the impossibility of applying random sampling were the initial refusals of several enterprises (the criterion of ordinal number in the respective list was used instead). At the same time, the existing databases are based on the voluntary registration of enterprises, and from the experience of previous studies, such registration does not always occur in the early years of a business, therefore even a random sampling would not ensure the potential to generalize the results.

Table 2. Albanian tourism associattion, number of registered enterprises and quotas

Sites	Number of Enterprises	50% of the Number
Tirana	140	49 (instead of 70)
Vlora	66	33
Saranda	120	60
Durrës	72	36
Shkodra	60	30
Total	416	208

Inclusion Criteria

At the participant level, the criteria were: (a) Age 18 or older and (b) Holder of a key management or deciding position within the organization (such as owner, chief manager, or, in certain situations, long-service employee or experienced ICT professional).

At organizational levels, they were (a) The enterprise should operate in the field of tourism, such as travel agencies, hotels, or restaurants and (b) The enterprise should have used ICTs during the last 12 months.

2.2 Research Tool

The main tool for collecting data was a 72-question structured questionnaire, divided in four parts with a thematically ordered structure, based on literature review. The questionnaire was administered through face-to-face interviews conducted by trained field researchers. This method of administration achieved better response levels and offered direct explanations for any unclarities from the participants.

The questionnaire was initially consulted with experts in the field of tourism and ICT and it was administered to three enterprise representatives in Tirana, in order to receive their feedback. After reflecting the changes, based on all reviews, it was piloted with 20 participants (four from each study site). Cronbach's Alpha from the piloting was a = 0.83, which was satisfying for this research.

The questionnaire's first section, which included 10 questions, collected general information about the

enterprise, such as location, year of establishment, type of activity and enterprise, the number of full-time and part-time employees during the last six months, the composition of the clientele, and similar data. The second section, consisting of 4 questions, assessed attitudes toward information technology, with items such as: "I believe that the use of ICTs in my company can provide valuable information, which may lead to better decision-making." This section employed a Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). The third section was related to ICTs' infrastructure and included 4 general questions regarding this infrastructure, such as internet access and the technology used for connection, as well as 16 questions addressing the attributes of computer systems, also measured on a Likert scale. The same section continued with questions on the level of use of computer software relevant to all enterprises, particularly finance and accounting programs, along with additional specific questions tailored to the respective activities of accommodation units, restaurants, and hotels. The fourth section focused on the adoption of the ICTs in tourism enterprises and was divided into several subsections. Initially, it contained questions about the existence and management of a website, followed by items addressing enterpreneurs/managers' perceptions regarding websites, marketing, and communication with customers. The latter were measured using a Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Variables were assessed using a single or multiple questions. Another subsection referred to the skills required to manage a website, followed by items on beliefs about the use of the internet as a marketing tool. Only part of the questionnaire will be used for this paper.

The collected data were coded and analyzed using SPSS version 16, using descriptive and inferential statistical techniques to identify key trends and associations relevant to ICTs adoption in the tourism sector.

3. Results

The enterprises' representatives that participated in this study were: 56% accommodation units, 22% travel agencies and 22% restaurants. Half of them were small-size enterprises, whereas the other half were large enterprises (> 25 employees, according to Albanian legislation), with an average of m = 16 employees (M = 16.9, SD = 23.8).

3.1 Scale of ICTs Use

In accommodation units computer programs were most widely used for reservations (85.6%), reception (72%), and bar services (65.3%). Moderate usage appears in room status, payments, and client check-in/out (around 58–59%), while restaurant operations (55.9%) and report generation (47.5%) lag behind. Very few enterprises use software for other services (2.5%), and only 5.1% report not using any programs. Overall, ICTs adoption is strong in core functions but remains limited in more advanced applications.

Restaurants mainly used computer programs for orders (75.9%) and reservations (60.8%). Usage is moderate for payments (59.5%) and menu management (57.0%), while table management shows the lowest adoption (50.6%). Only 6.3% reported using programs for other services, and the same share (6.3%) declare not using any software.

Among travel agencies, the most widely used central reservation system was Amadeus (70.2%), followed by Galileo (42.6%), while Sabre was not used at all. A small share reported using other systems (4.3%) or none (6.4%). Of all the tourism enterprises 81% of them had their own website, while the remaining 19% didn't have any. In most of the cases (69%) this was managed from their internal staff.

Table 3 shows notable variation in website ownership across cities. The highest adoption rates were reported in Durrës (97.2%) and Saranda (91.7%), followed closely by Tirana (89.8%). In contrast, Vlora (51.5%) and Shkodra (56.7%) displayed much lower levels of website ownership, with nearly half of enterprises in these cities lacking an online presence. Overall, four out of five tourism enterprises (80.8%) reported having a website, confirming the importance of digital platforms in the sector, though regional disparities remained significant.

Table 3. Website ownership in different cities

City	Yes (%)	No (%)
Tirana	89.8	10.2
Vlora	51.5	48.5
Saranda	91.7	8.3

Most tourism enterprises reported strong engagement with online marketing tools. A large majority used social networks (81.8%) and external booking portals (68.3%), while 87% stated they can distribute services both online and offline. Attention to consumer needs showed the highest agreement (94.2%). In contrast, fewer enterprises share information internally about competitors' advantages, with only 46.6% responding positively. Overall, the findings highlight widespread adoption of ICTs for marketing, though knowledge-sharing practices within companies remain limited (Table 4).

Table 4. Marketing of tourism services through the Internet and ICT

Statement	No	Yes
We have observed what other companies have done regarding the use and models of websites	31.7%	68.3%
Our enterprise has a page where it promotes its activity on social networks such as Facebook, Twitter, etc.	18.3%	81.8%
Our enterprise is listed on external online portals that perform booking and sales of services (e.g., *Booking.com, Albania-hotel.com, TripAdvisor*)	31.8%	68.3%
We are able to distribute our services both online (via the internet) and offline (without the need for internet)	13.0%	87.0%
We pay great attention to consumer needs	5.8%	94.2%
Within our company we share information about the competitive advantages of services offered by our competitors	53.4%	46.6%

3.2 Attitudes Towards ICTs and Their Impact on Using Them as a Marketing Tool

As shown in Table 5, managers and entrepreneurs reported generally positive attitudes toward the use of ICTs in their enterprises. The vast majority agreed or strongly agreed that ICTs provide valuable information that support better decision-making (94.2%) and that it enhances their managerial image (96.7%). Similarly, most respondents endorsed the belief that ICTs allows easier access, collection, and distribution of information (94.0%). In contrast, attitudes were more divided regarding the time-consuming nature of ICTs: while 55.2% disagreed or strongly disagreed that ICTs take too much time on mechanical tasks, 23.1% agreed with this statement, and 9.1% remained neutral. Overall, these findings suggest that respondents perceived ICTs as a strategic tool for decision-making, communication, and image-building, though some concerns persist about its potential to create operational inefficiencies.

Table 5. Attitudes of managers/entrepreneurs toward ICTs and their use

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I believe that the use of Information and Communication Technologies (ICTs) in my company can provide me with valuable information, which may lead to better decision-making.	0.5%	3.8%	1.4%	38.9%	55.3%
I believe that the use of ICTs takes too much time in performing mechanical tasks (programming, data entry), and does not allow sufficient time for other work.	13.9%	41.3%	9.1%	23.1%	12.5%
I believe that the use of ICTs gives me the opportunity to enhance my managerial image.	0.0%	0.5%	2.9%	45.7%	51.0%
I believe that the use of ICTs allows me to access, collect, and distribute information more easily.	0.5%	1.9%	3.8%	37.5%	56.2%

As shown in Table 6, a statistically significant positive correlation was identified between managerial attitudes toward ICTs and the extent of ICT-based marketing adoption, $r(208) = 0.243$, $p < 0.01$. This suggests that managers who hold more favorable views toward ICTs are also more likely to implement digital marketing tools within their enterprises. While the strength of the correlation is modest, the association underscores the influence of managerial perceptions on the integration of digital technologies into marketing strategies.

All variables were measured using a five-point Likert scale, and the analysis employed Pearson's r to assess linear correlation.

Table 6. Relationship between attitudes toward ICTs and marketing through ICTs

Variables	Correlation Coefficient (r)	Sig. (2-tailed)	N
Attitudes toward ICTs Marketing through ICTs	0.243**	0.000	208

Note: Correlation is statistically significant at the 0.01 level (2-tailed)

3.3 Website Ownership and Business Profits

A hierarchical regression analysis was conducted to examine the relationship between having a website and business profit growth (see Tables 7 and 8). To assess multicollinearity, variance inflation factors (VIFs) were

examined for all predictors in Models 2 and 3. All VIF values were below 2.0, well under the threshold of 5, indicating that multicollinearity was not a concern.

Table 7. Relationship between business profit growth and having a website

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.477a	0.228	0.223	0.76718	0.228	48.962	1	166	<0.001
2	0.512b	0.262	0.253	0.75222	0.034	7.665	1	165	0.006
3	0.539c	0.291	0.278	0.73955	0.029	6.701	1	164	0.010

a. Predictors: (Constant), the website is a way to increase business profits. b. Predictors: (Constant), the website is a way to increase business profits; the website allows us to have better communication with international clients. c. Predictors: (Constant), the website is a way to increase business profits; the website allows us to have better communication with international clients; the initial cost of creating a website is high for our company

Table 8. Relationship between business profit growth and having a website – coefficients

	Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95% Confidence Interval for B (Lower Bound)	95% Confidence Interval for B (Upper Bound)
1	(Constant)	1.561	0.381		4.095	<0.001	0.808	2.314
	The website is a way to increase business profits	0.600	0.086	0.477	6.997	<0.001	0.431	0.769
2	(Constant)	0.834	0.457		1.826	0.070	-0.068	1.736
	The website is a way to increase business profits	0.462	0.098	0.367	4.720	<0.001	0.268	0.655
	The website allows us to have better communication with international clients	0.294	0.106	0.215	2.769	0.006	0.084	0.504
3	(Constant)	1.043	0.456		2.286	0.024	0.142	1.945
	The website is a way to increase business profits	0.514	0.098	0.409	5.228	<0.001	0.320	0.707
	The website allows us to have better communication with international clients	0.277	0.105	0.203	2.649	0.009	0.071	0.484
	The initial cost of creating a website is high for our company	0.119	0.046	0.174	2.589	0.010	0.028	0.209

Dependent Variable: Use of website has contributed to the company's profit growth

In the first model, the perception that ICTs and specifically website ownership, is a way to increase profits significantly predicted profit growth, $R = 0.477$, $R^2 = 0.228$, $F(1, 166) = 48.96$, $p < 0.001$. In the second model, the addition of the predictor "The website allows us to have better communication with international clients" accounted for a significant increase in explained variance, $R^2 = 0.262$, $\Delta R^2 = 0.034$, $\Delta F(1, 165) = 7.67$, $p = 0.006$. The third model further improved explanatory power with the inclusion of "The initial cost of creating a website is high for our company," resulting in $R = 0.539$, $R^2 = 0.291$, $F(3, 164) = 22.39$, $p < 0.001$, with a significant ΔR^2 of 0.029, $\Delta F(1, 164) = 6.70$, $p = 0.010$.

The coefficients presented in Table 8 confirm the belief that the website enhances profits was a consistent and strong predictor across all models ($\beta = 0.477$, $p < 0.001$ in Model 1; $\beta = 0.367$, $p < 0.001$ in Model 2; $\beta = 0.409$, $p < 0.001$ in Model 3). The predictor concerning better communication with international clients also had a significant positive effect ($\beta = 0.215$, $p = 0.006$ in Model 2; $\beta = 0.203$, $p = 0.009$ in Model 3). Although weaker, the perception of high initial website costs was also positively associated with profit growth in the final model ($\beta = 0.174$, $p = 0.010$). Overall, these findings suggest that the presence of a website is strongly related to improved

profitability, particularly by enhancing international communication, while concerns over initial costs appear less influential.

4. Discussion

The results of this study provide important insights into the extent to which Albanian tourism enterprises have adopted ICTs, particularly websites and digital communication tools, as mechanisms to strengthen marketing and enhance engagement with international tourists. Findings indicate that ICTs use is widespread across accommodation units, restaurants, and travel agencies, and is significantly associated with business performance outcomes, including improved communication, brand visibility, and profitability.

A key finding is the role of business websites in driving profitability and supporting interaction with foreign clients, based on the perceptions of participant entrepreneurs/managers. This aligns with earlier studies that focus in the contribution of online presence to competitiveness, efficiency, and customer satisfaction in the tourism sector. Respondents who perceived websites as profit-enhancing tools and as instruments for effective communication with international customers also reported stronger performance. The regression analysis confirmed these perceptions, with website-related variables emerging as consistent predictors of business outcomes ($R^2 = 0.291$), thereby supporting the hypothesis that favorable attitudes toward websites are linked with enhanced profitability.

From a theoretical standpoint, the TAM provides a useful framework to interpret these results. Managers expressed strong agreement that ICTs deliver valuable information, facilitate better decision-making, and strengthen managerial image—all of which reflect TAM's constructs of perceived usefulness and ease of use (Davis, 1989). The RBV further complements this perspective by positioning ICTs as strategic resources. When effectively deployed, ICT systems function as valuable, rare, and difficult-to-imitate assets that enable firms to gain competitive advantage (Barney, 1991). The evidence from Albanian tourism enterprises demonstrates that ICTs adoption is increasingly being perceived not only as an operational necessity but also as a core capability that sustains market competitiveness.

The findings also highlight the dual role of cost perceptions in ICTs adoption. Although high initial website development costs were reported as a barrier, they nonetheless proved to be a significant predictor of profitability. This suggests that businesses regard website creation as a long-term investment, where short-term financial burdens are offset by future gains in competitiveness. This dynamic reflects the digital divide discussed by Buhalis & Law (2008), who argued that resource-rich and resource-scarce firms experience divergent paths in digital adoption, a pattern that continues to shape the tourism sector globally (Mashingaidze et al., 2024).

Another important insight is the positive correlation between managerial attitudes toward ICTs and the use of ICT-based marketing strategies ($r = 0.243$, $p < 0.01$). Although modest, this relationship emphasizes the importance of managerial perceptions in driving adoption. Similar to findings in other contexts, managerial readiness and attitudes appear to be decisive factors in whether ICTs are integrated effectively into marketing practices (Bekele & Raj, 2024). In this sense, the human dimension of adoption is as essential as infrastructural readiness.

Finally, these findings mirror broader infrastructural and policy developments in Albania. The steady increase in broadband and mobile internet penetration (World Bank, 2022) and the implementation of the national Digital Agenda (UNDP, 2022) have created enabling conditions for ICTs adoption. Nonetheless, survey responses also revealed persistent challenges related to digital skills, website maintenance, and content quality. These results suggest that while ICT adoption is advancing, additional support in terms of training and capacity building is necessary for enterprises to maximize the benefits of digital transformation.

5. Conclusions

This study demonstrates that ICTs adoption—particularly through business websites and online communication tools—plays a significant role in strengthening the competitiveness of tourism enterprises in Albania. The findings confirm that websites are not only perceived as a means to increase profitability but also as instruments for enhancing communication with international clients and improving managerial image. Despite concerns about initial costs, businesses that invest in ICTs consistently report improved outcomes, which means that digitalization is a critical factor for growth in the tourism sector.

The results note the need for targeted policies to support tourism enterprises, especially SMEs, in their digital transition. Policy makers should consider:

- Subsidies or tax incentives to alleviate the burden of initial website development costs, which was reported as one of the concerns of the managers, even though they believed that the higher costs contributed to the profit of the enterprises.
- Capacity-building programs focused on digital skills, website management, and online marketing to ensure effective use of ICT tools. Also, they should target mindset shifts as well as technical skills (e.g., SEO,

analytics, online reputation management) because positive perceptions translate into higher adoption and profitability.

- Training and support should emphasize multilingual content, online booking, chatbots, and customer service tools to attract and retain foreign tourists.
- Strengthening digital infrastructure in less-developed regions to reduce disparities in ICTs adoption between leading destinations and lagging areas.
- Public–private partnerships aimed at promoting Albania's digital tourism brand internationally, leveraging collective platforms for visibility and competitiveness.
- Encourage exploration of AI-driven personalization, big data analytics, and virtual/augmented reality for destination promotion, as these align with global tourism competitiveness trends.

Future studies should extend this analysis by incorporating longitudinal data to assess the long-term impacts of ICTs adoption on profitability and competitiveness. Qualitative research could further explore managerial perceptions and barriers to adoption, while comparative studies with other countries in the Western Balkans would offer a broader regional perspective. Additionally, investigating the role of emerging technologies—such as artificial intelligence, big data analytics, and virtual reality—would provide valuable insights into the next phase of digital transformation in tourism.

5.1 Limitations

While this study provides valuable insights into ICT adoption in Albanian tourism enterprises, several limitations must be acknowledged. The research is based on a cross-sectional survey, which restricts the ability to establish causal relationships between ICT adoption and business performance. The sample, although representative of key tourism regions, may not fully capture enterprises operating in smaller or less-developed areas. In addition, the study relied primarily on descriptive statistics and regression analysis, without the inclusion of more advanced techniques such as multiple regression with control variables or structural equation modeling, which could have provided deeper insights into confounding factors. Finally, self-reported data may carry risks of bias, as responses reflect managerial perceptions rather than objective performance measures. These limitations should be addressed in future research to strengthen the generalizability and robustness of the findings.

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Data Availability

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The authors declare no conflict of interest.

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