

Digital Marketing Tools and Their Impact on Tourism Development in the European Union: Trends, Strategies, and Emerging Technologies

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Abstract

The purpose of this study is to analyze contemporary trends in the adoption of digital marketing tools within the tourism sector of the European Union (EU) and to evaluate their effectiveness in enhancing travel service exports. Previous studies often concentrate on individual types of digital marketing instruments, specific technologies, particular countries, or selected market segments. However, a comprehensive assessment of the collective impact of digital marketing channels on tourism development across EU member states remains relatively limited. The empirical analysis conducted in this research indicates that company websites and social networking platforms remain the most widely utilized digital marketing instruments in the tourism industry. At the same time, multimedia content-sharing platforms and geo-targeted online advertising are experiencing rapid growth in importance as tourism enterprises attempt to improve visibility, reach global audiences, and enhance customer engagement. Statistical evidence suggests that tourism exports of EU member states increased by nearly 50% during the period 2016–2024, highlighting the significant economic importance of the sector. The findings further reveal that countries adopting innovative digital marketing strategies and emerging promotional technologies tend to experience greater growth in tourism exports. Conversely, additional expansion of traditional digital tools often produces diminishing marginal benefits once market saturation is reached. The results also indicate that accommodation providers benefit significantly from targeted online advertising, which allows them to reach specific consumer segments efficiently. Meanwhile, travel agencies and tourism intermediaries are encouraged to maintain well-developed websites offering personalized content, blogs, and interactive features, while actively engaging with potential customers through social media platforms. Overall, the study emphasizes the growing importance of digital transformation in tourism marketing strategies and highlights the need for tourism enterprises to integrate innovative digital technologies in order to remain competitive in the rapidly evolving global tourism market.

Keywords: digital marketing, tourism marketing, European Union, online advertising, social media marketing, tourism exports

JEL Classification: M31, M37, Z32, Z33, F14

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1. INTRODUCTION

Tourism represents one of the most dynamic and economically significant sectors within many European Union countries. The industry contributes substantially to economic growth, employment generation, regional development, and international trade through tourism exports. In several EU member states—particularly those with strong cultural heritage, natural attractions, and developed infrastructure—the tourism sector plays a central role in national economic development.

In the twenty-first century, the marketing of tourism services—including accommodation, transportation, cultural experiences, and recreational activities—has undergone profound transformation due to the rapid expansion of digital technologies and internet-based communication platforms. Digitalization has significantly reshaped the way tourism services are promoted, distributed, and consumed. Tourism enterprises increasingly rely on digital marketing tools to enhance their market reach, reduce promotional costs, and engage with global audiences in real time.

The emergence of new digital technologies has also changed consumer behavior. Modern travelers rely heavily on online search engines, social media platforms, review websites, and digital booking systems when planning their trips. As a result, tourism enterprises must continuously adapt their marketing strategies in order to remain competitive in an increasingly digital environment.

Traditional marketing approaches—such as print advertising or conventional promotional campaigns—are gradually being supplemented or replaced by integrated digital marketing strategies that combine websites, social media, online advertising, content marketing, search engine optimization (SEO), and data-driven marketing techniques.

It is therefore no longer sufficient for tourism companies to maintain a simple website containing basic information and booking options. Instead, successful tourism marketing strategies require the implementation of a sophisticated combination of digital tools designed to respond to evolving consumer preferences, technological innovations, and global tourism trends.

Greece represents a particularly relevant case study in this context. Tourism constitutes one of the main pillars of the Greek economy, generating significant contributions to GDP, employment, and international revenue. As a member state of the European Union, Greece operates within a broader European tourism market characterized by increasing digitalization and technological innovation.

Consequently, examining the experiences of other EU member states in the use of digital marketing tools provides valuable insights for tourism enterprises and policymakers in Greece and across Europe.

The main objective of this study is therefore to evaluate the extent of adoption and the effectiveness of the principal digital marketing tools used by accommodation providers and tourism intermediaries in EU countries during the current phase of technological development.

2. LITERATURE REVIEW

In recent years, academic research has increasingly shifted its attention from traditional marketing practices toward digital marketing strategies, reflecting the rapid expansion of digital technologies across economic sectors. This transformation is particularly visible within the tourism industry, where digital platforms have become essential tools for communication between tourism providers and potential travelers.

Digital marketing tools are capable of influencing consumer perceptions, shaping travel motivations, and encouraging the exploration of new destinations and tourism experiences. According to Murto et al. (2025), digital marketing initiatives can stimulate tourists' interest in innovative tourism products, highlight alternative destinations, and support the development of sustainable tourism practices by promoting environmentally responsible travel options.

Social media and online platforms also play a crucial role in maintaining long-term customer relationships and destination loyalty. Almeida-Santana and Moreno-Gil (2017) demonstrate that digital communication channels facilitate continuous interaction between tourism destinations and visitors, thereby strengthening emotional connections and enhancing the attractiveness of tourism brands.

Another important development within the tourism sector is the rapid expansion of online travel intermediaries and digital booking platforms. Kontis et al. (2019) emphasize that the growth of online travel agencies and booking platforms has significantly increased competitive pressure on traditional tourism enterprises, forcing them to adopt more advanced digital marketing strategies in order to maintain their market position.

However, digital transformation in tourism also presents several challenges. Igoumenakis and Giannoukou (2025) identify a number of barriers faced by tourism companies when implementing digital marketing strategies, including insufficient digital skills among employees, increased market competition, and growing concerns related to data protection and privacy regulations.

Despite the overall progress in digital infrastructure across the European Union, significant differences remain among EU member states regarding the adoption of information and communication technologies (ICTs) within the tourism sector. Navío-Marco et al. (2018) show that disparities in digital literacy, internet accessibility, and technological infrastructure contribute to variations in digital tourism behavior across European countries.

For instance, in 2016 the proportion of tourists using the internet for travel and accommodation services was several times higher in Luxembourg compared with Bulgaria and Romania. Similarly, Saseanu et al. (2020) found that online accommodation booking rates were significantly higher in economically developed countries such as Malta, Belgium, and Germany, while much lower levels were observed in Romania, Bulgaria, and Croatia.

These disparities highlight the importance of economic development, digital literacy, and technological infrastructure in shaping tourism digitalization patterns across Europe.

Empirical studies have also explored the relationship between digitalization and tourism demand. Guedes et al. (2023) incorporated indicators of digitalization—such as internet penetration rates and digital search activity—into a gravity model of tourism flows in five Southern European countries (France, Greece, Italy, Portugal, and Spain). Their results demonstrate that increased digital visibility through online platforms such as TripAdvisor, Booking.com, Expedia, and Travelocity significantly enhances inbound tourism flows.

Specifically, the study found that a 1% increase in internet penetration leads to an approximate 0.6% increase in international tourist arrivals, highlighting the importance of digital connectivity for tourism development.

Several scholars have also examined the role of specific digital marketing instruments in tourism promotion. Parlov et al. (2016) identify a number of key technological communication tools used in tourism marketing, including user-friendly websites, search engine optimization systems, personalized email marketing campaigns, mobile marketing applications, and social media management strategies.

A comprehensive literature review conducted by Iswanto et al. (2024) confirms that the most frequently studied digital marketing tools in tourism include social media platforms, company websites, content marketing strategies, search engine optimization techniques, blogs, email marketing campaigns, and online advertising. Their findings also highlight the growing importance of influencers, hashtags, and user-generated content in digital tourism promotion.

Word-of-mouth communication has also evolved significantly in the digital era. Kastanidou (2019) notes that online interactions within social media networks enable tourists to share their experiences and influence the travel decisions of other potential visitors. Surugiu et al. (2019) similarly emphasize the powerful impact of user-generated content and peer recommendations on consumer behavior in tourism markets.

Recent research has also explored the influence of social media influencers in promoting tourism destinations. Kilipiri et al. (2023) demonstrate that Instagram travel influencers can positively influence tourists' interest in sustainable tourism destinations. However, their findings suggest that geo-location data embedded in influencer content does not necessarily produce additional positive effects on travel decisions.

Another emerging component of digital tourism marketing is the growing popularity of travel vlogs and video-based promotional content. Dewantara et al. (2023) analyze the ecosystem of travel vlogging and highlight the interactions between content creators, viewers, and tourism marketers in shaping destination perceptions.

Mobile technologies have further accelerated the digital transformation of tourism marketing. Kastanidou (2019) reports that the average individual checks their smartphone approximately 150 times per day, providing unprecedented opportunities for continuous digital engagement with potential customers.

Similarly, Maurer (2022) indicates that the average internet user spends more than 6.5 hours per day online, representing nearly 40% of waking time. A significant proportion of this activity occurs through mobile devices, which have become essential tools for planning and managing travel experiences.

Pranicevic et al. (2019) argue that tourism enterprises must therefore ensure that their websites and marketing platforms are optimized for mobile devices such as smartphones and tablets. Travelers increasingly rely on mobile technologies not only during the planning stage but also throughout their trips, using mobile applications to book accommodation, find local attractions, and access tourism services in real time.

Technological innovation has also enabled the development of advanced feedback and personalization systems within tourism marketing. Mastorakis et al. (2013) propose a technology convergence model that integrates interactive digital television systems with customer feedback mechanisms, allowing tourism enterprises to automatically customize services based on user preferences.

More recently, neuromarketing and data analytics have been integrated into tourism marketing strategies. Krabokoukis (2025) proposes an adaptive digital marketing framework based on behavioral data analysis, emphasizing three key stages: attraction, engagement, and conversion. The framework incorporates tools such as Google Analytics, heatmap tracking technologies (Hotjar, Crazy Egg, Smartlook), and eye-tracking technologies (Tobii Pro and Bitbrain) to better understand consumer attention patterns and optimize marketing campaigns.

Online consumer reviews also represent an essential source of feedback for tourism companies. Mariani et al. (2023) highlight that review systems differ significantly across platforms. For example, platforms such as Booking.com allow shorter reviews and

therefore encourage higher participation rates, whereas TripAdvisor requires longer reviews exceeding 200 characters, which may discourage mobile users from posting feedback.

Consequently, researchers emphasize the importance of analyzing review data separately for different platforms in order to obtain accurate insights into consumer satisfaction.

Finally, artificial intelligence (AI) has emerged as a transformative force in digital marketing strategies. According to Muntean et al. (2024), AI technologies enable tourism companies to develop more adaptive and personalized marketing strategies by analyzing large datasets related to consumer preferences and behavioral patterns.

The application of AI in digital marketing includes several technological approaches, such as machine learning algorithms, data mining techniques, natural language processing systems, predictive analytics models, and automated marketing processes. These technologies facilitate more precise customer segmentation, personalized content delivery, and improved decision-making.

Lacárce (2022) provides a systematic review of artificial intelligence applications in digital marketing and identifies several key categories of AI technologies used in tourism marketing strategies, including decision support systems, social media analytics, sentiment analysis tools, neural network algorithms, and immersive technologies such as virtual reality and chatbots.

Together, these developments illustrate the rapidly evolving role of digital technologies in transforming tourism marketing strategies and highlight the importance of continuous innovation in digital communication tools within the global tourism industry.

Literature Review: Digital Marketing Tools in Tourism Under Specific Contexts, Sectors, and Consumer Segments

A growing body of scholarship has examined the application of digital marketing tools in tourism under specific temporal, spatial, and sectoral conditions. Rather than treating digital marketing as a uniform phenomenon, these studies demonstrate that its effectiveness varies according to the type of crisis, national policy setting, tourism niche, business size, and target audience. This more differentiated perspective is particularly useful for understanding how tourism enterprises and destination management organizations adapt their communication strategies in dynamic environments.

Several studies have explored digital marketing in the context of extraordinary or disruptive periods. Avraham (2020), for example, investigated the strategies used by European destinations to restore tourist confidence after terror attacks between 2014 and 2019. Using content analysis of destination communication, the study identified a set of image-repair strategies employed in digital environments, including “business as usual,” crisis mitigation, initiation of new events and attractions, image expansion, and the encouragement of film production as a place-branding mechanism. This research illustrates that digital marketing in tourism is not limited to promotion alone; it also performs a strategic reputational function in moments of uncertainty and crisis (Avraham, 2020).

Similarly, Deb et al. (2022) argued that digital marketing becomes especially valuable during crisis periods because of its flexibility, cost-efficiency, and immediacy. In times when traditional promotional channels may lose effectiveness or become too slow to respond, digital platforms allow tourism businesses to maintain communication with customers, rebuild trust, and rapidly adapt marketing messages to changing conditions. In the post-pandemic context, Aman et al. (2024) further expanded this perspective by emphasizing the growing importance of virtual tourism, cloud computing, and artificial intelligence in shaping tourism behavior and marketing strategies. Their work suggests that the post-COVID-19 period accelerated the integration of advanced digital technologies into tourism promotion, service personalization, and customer relationship management (Aman et al., 2024).

National case studies also provide important insights into how digital marketing adoption is shaped by institutional and policy environments. In Greece, Dionysopoulou and Tsakopoulou (2021) examined initiatives aimed at stimulating the digital transformation of tourism small and medium-sized enterprises (SMEs). Their findings highlighted the importance of public support mechanisms such as digital skills training, financial assistance, and policy incentives for technological upgrading. This suggests that the diffusion of digital marketing in tourism often depends not only on firm-level initiative but also on supportive governance frameworks. In contrast, Parlov et al. (2016) concluded that Croatia still had substantial room for improvement in tourism digital marketing compared with other European countries. Their findings imply that although digital marketing tools are widely recognized as essential, the degree of strategic sophistication and implementation quality remains uneven across Europe.

A number of studies have concentrated on the role of specific digital platforms within individual national markets. Veseli-Kurtishi and Ruci (2023), in their survey of Albanian travel agencies, found that Instagram and Facebook were perceived as the most effective digital marketing tools, cited by 55% and 30% of respondents respectively. Other tools, such as internet advertising and YouTube, were used less frequently. At the same time, 85% of the surveyed agencies had their own websites, and the same proportion reported increased sales after adopting social media. These findings indicate that for travel intermediaries in emerging tourism markets, social media platforms serve not merely as communication tools but as direct contributors to business performance (Veseli-Kurtishi & Ruci, 2023).

A similar perspective emerges from the study by Veseli et al. (2025), who conducted semi-structured interviews with consumers, business representatives, and industry experts in Kosovo. All three groups viewed digital marketing as highly important for the tourism sector. Consumers particularly emphasized the influence of Facebook, Instagram, and TikTok on destination choice due to the availability of visual content, immediacy, and interactivity. Business representatives stressed that digital marketing provides a more cost-effective and targeted means of reaching audiences, especially younger consumers, than traditional promotional channels.

such as television, radio, or brochures. The study also noted that digital marketing can promote sustainable tourism by directing visitors toward under-visited locations and encouraging eco-friendly options. However, the absence of a national tourism agency was identified as a significant institutional weakness limiting more coordinated promotion (Veseli et al., 2025).

Beyond the national level, some studies have adopted a city-based or destination-based framework. Confetto et al. (2023) proposed a Digital Destination Branding framework designed to assess the digital practices of destination management organizations in European cities. Their framework comprised three main dimensions: social network presence, social network content, and digital tourism services. Social network presence included aspects such as the selection of channels, availability of organizational information and contact details, website integration, and posting frequency. Social network content encompassed both visual and textual components, including calls to action, hashtags, mentions, geotags, and information related to events, sustainability, safety, and user-generated content. The third dimension, digital tourism services, covered practical online functions such as booking tools, newsletters, digital guides, maps, virtual tours, and links to review portals. Applying this framework to ten European destinations in 2021–2022, the authors ranked Vienna first, followed by London, Munich, Paris, Madrid, Rome, Amsterdam, Berlin, Barcelona, and Milan. Their findings suggest that even globally renowned cities cannot rely solely on their cultural and historical legacy; continuous innovation in digital branding remains essential for destination competitiveness (Confetto et al., 2023).

The literature also demonstrates the importance of examining digital marketing at the subsector level. In cultural tourism, Evangelou et al. (2024) analyzed the behavior of tourists in the Western Macedonia region of Greece and argued that social media can serve as an effective channel for cultural organizations seeking stronger audience engagement. Their findings support the view that digital tools can help make cultural tourism more interactive, participatory, and visible to broader audiences. In sport tourism, Gdonteli et al. (2024) found that firms with stronger marketing knowledge were more likely to use social media actively for segmentation, targeting, and positioning. By contrast, businesses that regarded marketing as a supplementary rather than strategic activity tended to adopt a passive approach, expecting customers to find them without substantial digital outreach. This distinction indicates that digital marketing outcomes depend not only on platform choice but also on managerial orientation and strategic capability.

Digital marketing is particularly important for niche tourism enterprises, including those operating in adventure tourism, which often face limited budgets and narrow but highly specific target markets. Palamarova (2018), in a comparative study of adventure tourism organizations in Bulgaria, Estonia, Ireland, and Scotland, found that websites, Facebook, and paid online advertisements were the most commonly used tools. Instagram, Twitter, and Pinterest were used more selectively, while Snapchat was rarely utilized. The study also showed that visual content, especially photographs and videos, was highly valued in this segment. Importantly, respondents identified search engine optimization, digital media platforms, location-based mobile applications, and accurate positioning technologies as key digital skills. By contrast, less emphasis was placed on augmented reality, virtual reality, drone technologies, 3D/4D personalized site tours, and wearable devices. This suggests that although advanced immersive technologies attract scholarly attention, more conventional digital tools still dominate in practice, particularly among small adventure tourism enterprises (Palamarova, 2018).

Natural heritage tourism provides another useful area for examining digital marketing practices. Luque-Martínez et al. (2019) investigated the use of Twitter and Facebook by the directors of natural protected areas in the United States, Spain, Italy, and Mexico. Their study found that U.S. parks used Twitter much more actively than their European and Mexican counterparts, while Facebook use was also highest in the United States and lowest in Mexico. These findings reflect significant international differences in digital communication cultures and institutional capacities. Mitova et al. (2021) extended this line of inquiry by evaluating the websites of natural heritage objects in Bulgaria using benchmarking frameworks developed by the authors. Their framework included categories such as general presentation, heritage values, ecological vulnerability, ecosystem services, site advantages, promotional content, public engagement, educational campaigns, scientific projects, and technical design features such as videos, virtual tours, maps, and souvenir e-shops. A second benchmarking system focused on tourism-related services, including accessibility, security, service supply, amenities, and responsible tourism practices. Their findings revealed that although information about Bulgarian natural heritage sites existed across multiple channels, including Wikipedia, YouTube, Google Maps, travel guides, ministries, municipalities, and semi-official private websites, official websites remained underdeveloped, reaching only 24% of the best possible benchmark score. In particular, these sites lacked essential information concerning affordability, organizational details, and practical visit planning. This underrepresentation highlights a gap between heritage value and digital visibility, which can constrain tourism development (Mitova et al., 2021).

The literature has also paid growing attention to digital marketing in relation to specific types of firms and customer groups. Sharma and Sharma (2024) focused on tourism SMEs and emphasized that digital marketing adoption in smaller firms is influenced by resource availability, managerial knowledge, and the need for flexible, low-cost promotional strategies. Their work reinforces the idea that SMEs can gain substantial competitive advantages through digital tools, but often require stronger strategic guidance and support. Kapota et al. (2024) approached the subject from a gender perspective, analyzing digital marketing practices among women-led travel agencies. They argued that the development of digital skills can simultaneously stimulate tourism entrepreneurship and empower women economically. In this sense, digital marketing is not only a business instrument but also a mechanism for greater inclusion and participation in the tourism economy.

Generational analysis provides another important layer of understanding. Hysa et al. (2021) examined social media use across Baby Boomers and Generations X, Y, and Z in Poland. Their results showed that younger generations were generally more active in using social media to check opinions about destinations and to arrange short-term accommodation rentals before traveling. However, intergenerational differences were less pronounced in activities such as travel planning, searching for information about local history and culture, identifying possible barriers, and building connections with local communities. The authors also found that women were more likely than men to pay attention to both positive and negative comments about destinations in social media. These findings underline the importance of demographic segmentation when designing tourism digital marketing strategies (Hysa et al., 2021).

Karagianni et al. (2021) focused specifically on Generation Y and its attitudes toward digital marketing in tourism, especially in relation to peer-to-peer short-term rental services. Their work demonstrates that younger consumers are not passive recipients of tourism marketing content; instead, they actively compare offers, evaluate digital trust signals, and respond to platform-based experiences. Meanwhile, Theofanous et al. (2024) proposed a conceptual framework of digital inclusivity and accessible tourism that integrates sustainable development, user-friendly technologies, stakeholder engagement, implementation strategies, and evaluation mechanisms. This contribution broadens the scope of digital tourism marketing by emphasizing that digital transformation should not only improve efficiency and visibility but also enhance accessibility for diverse groups of users.

Consumer motivation studies further enrich this literature by linking digital content to travel behavior. Katsikari et al. (2020) examined push and pull motivation factors in Greece and identified several important correlations. For example, more knowledgeable and educated tourists were more attracted by cultural and historical content shared through social media. Content focused on sports and outdoor activities appealed more strongly to travelers motivated by novelty and adventure. Wildlife and park-related content was associated with knowledge-seeking, intellectual curiosity, and active lifestyles. At the same time, themes related to security and luxury were linked with escape, entertainment, and prestige motives. These findings are particularly important because they show that digital marketing effectiveness depends not only on the channel used but also on how well the content aligns with underlying motivational structures (Katsikari et al., 2020).

Taken together, the reviewed literature indicates that research on digital marketing in tourism has largely followed a micro-level perspective, focusing on particular countries, crisis periods, customer segments, firm types, tourism niches, or specific digital tools. This has produced a rich but fragmented body of knowledge. While many studies confirm the growing importance of websites, social media, online advertising, mobile applications, and emerging technologies such as artificial intelligence, they also reveal substantial variation in adoption patterns and outcomes. Such variation is shaped by economic context, policy support, managerial capability, tourism subsector, and user demographics. Therefore, a broader comparative approach that examines digital marketing tools across tourism-related activities and across countries remains essential for understanding which combinations of tools are most effective in supporting tourism growth, competitiveness, and sustainability in the European context.

3. Methodology

This study examines the dynamics of digital marketing tool adoption among tourism enterprises operating within the 27 member states of the European Union (EU-27). The analysis focuses on the evolution of digital marketing practices between 2015–2016 and 2023–2024, a period characterized by rapid digital transformation, increasing platformization of tourism services, and the expansion of online consumer engagement.

The methodological approach aims to assess how the adoption of digital marketing tools by tourism enterprises relates to the growth of tourism service exports across EU member states. In particular, the study evaluates whether the increased use of various digital marketing instruments contributes to stronger tourism export performance at the macroeconomic level.

Data Sources

The empirical analysis relies primarily on statistical data obtained from the Eurostat database (Eurostat, 2025), which provides detailed information on digital technology adoption among enterprises in EU countries. The dataset includes enterprises employing 10 or more persons, ensuring comparability across countries and sectors.

Two key subsectors of the tourism industry are examined:

1. Accommodation sector (hotels, guesthouses, and other lodging services)
2. Travel agencies, tour operators, reservation services, and related activities

For analytical clarity, variables referring to the accommodation sector are identified by the prefix A, while variables related to travel agencies and reservation services use the prefix T.

The study measures changes in digital marketing adoption using growth rates in the share of enterprises utilizing specific digital tools. These growth rates are calculated as the difference between the share of enterprises using a given tool in 2023 or 2024 and the share recorded in 2015 or 2016, depending on data availability.

Independent Variables

The independent variables represent the adoption of various digital marketing instruments used by tourism enterprises. These variables capture both website-based digital marketing tools and social media-based communication strategies.

Website-Based Digital Marketing Tools

The following variables describe the digital capabilities of enterprise websites:

- web – enterprises maintaining a website
- webdescr – websites providing descriptions of services or products and price lists
- weborder – websites allowing online ordering, reservation, or booking functions
- webtrack – websites offering online order tracking
- webcustom – websites enabling customers to customize or design products or services
- webperson – websites offering personalized content for returning visitors

These variables reflect the degree to which tourism enterprises integrate interactive and customer-oriented website functionalities, which are essential for digital service delivery and customer experience.

Online Advertising Tools

Another group of variables reflects the use of paid online advertising, including various forms of targeted advertising:

- adv – enterprises paying for internet advertising
- advcont – advertising based on webpage content or keywords searched by users
- advpast – advertising based on tracking users' past internet activities or profiles
- advgeo – advertising based on users' geolocation
- advoth – other forms of targeted advertising
- advtarg – advertising using any targeted method (content, keywords, browsing history, or geolocation)

These indicators represent the increasing importance of data-driven digital marketing strategies, which allow enterprises to target specific consumer groups more precisely.

Social Media Marketing Tools

The third group of variables describes the use of social media platforms as marketing channels:

- smimage – using social media to develop brand image or promote products
- smresp – using social media to respond to customer reviews, questions, or feedback
- sminnov – using social media to involve customers in innovation or service development
- smopin – using social media to exchange knowledge within the enterprise
- smcust – using social media to communicate with customers
- snetw – use of social networking platforms (e.g., Facebook, LinkedIn, Xing)
- blog – use of blogs or microblogs (e.g., Twitter)
- mmedia – use of multimedia content-sharing platforms (e.g., YouTube)
- sm – use of any social media
- 1smtype – use of only one social media type
- sevsmtype – use of two or more types of social media

These variables capture the evolution of interactive digital communication strategies, which allow tourism enterprises to engage directly with consumers, build brand reputation, and facilitate customer feedback.

Dependent Variables

To evaluate the broader economic implications of digital marketing adoption, the study uses two dependent variables measuring tourism export performance:

- TE – growth of tourism exports between 2016 and 2024, measured as the percentage increase in travel service exports recorded in the balance of payments
- TEGDP – tourism exports expressed as a percentage of GDP, allowing comparison of tourism importance relative to national economic size

These indicators are derived from balance of payments statistics and GDP data published by Eurostat (2025).

Analytical Methods

Two statistical techniques are applied in the empirical analysis:

1. Correlation analysis
This method is used to identify relationships between the growth of tourism exports and the adoption of various digital marketing tools.
2. Regression analysis
Regression models are estimated in order to determine which digital marketing variables have the strongest influence on tourism export growth.

Together, these methods allow the study to explore the potential macroeconomic implications of digital marketing adoption within the European tourism sector.

4. Results

4.1 Trends in the Adoption of Digital Marketing Tools

The analysis of Eurostat data reveals a clear long-term trend toward increasing digitalization of tourism marketing activities across EU member states. However, this trend does not follow a perfectly uniform pattern across all digital tools and tourism subsectors.

Table 1 presents the evolution of digital marketing tool usage among tourism enterprises between the baseline period (2015–2016) and the most recent available data (2023–2024).

One of the most widely used digital tools in the tourism sector remains the company website. In the accommodation sector, the proportion of enterprises maintaining a website remains extremely high, ranging from 87% in Slovakia to 100% in Finland in 2023. Although a slight decrease in the average share of enterprises with websites is observed, this decline represents only a minor fluctuation rather than a structural trend.

In practice, tourism enterprise websites are primarily used to provide service descriptions, price lists, and online booking functions, which remain the core digital interface between tourism providers and customers. More advanced website functions, such as order tracking, service customization, or personalized content delivery, are used by a smaller proportion of enterprises.

4.2 Growth of Online Advertising

Another important development is the increasing use of paid online advertising in the tourism sector. Approximately 57% of accommodation enterprises reported using paid internet advertising in 2024, although the share varies considerably across countries—from 43% in Slovenia to 89% in Finland.

Travel agencies have recently narrowed the digital marketing gap with accommodation providers. By 2024, 64% of travel agencies reported using paid online advertising, reflecting a growing reliance on digital promotional strategies within the intermediary segment of the tourism industry.

Furthermore, online advertising has become increasingly data-driven and targeted. Around half of tourism enterprises use advertising systems based on webpage content or search keywords. Other targeting techniques—such as behavioral tracking or user profiling—are used by roughly one-third of enterprises.

Among all targeting mechanisms, geolocation-based advertising has experienced the most rapid growth. This reflects the increasing importance of location-based marketing strategies that enable tourism providers to reach potential customers during the travel planning process or even while they are already at a destination.

4.3 Expansion of Social Media Marketing

The use of social media platforms has also expanded significantly within the EU tourism sector. In 2023, the majority of tourism enterprises were active on social media platforms, with usage rates ranging from 72% in Romania to 100% in Finland within the accommodation sector.

Among different types of social media platforms, social networking sites remain the most widely used marketing channels. However, the use of multimedia content-sharing platforms, such as YouTube and image-based platforms, has increased dramatically—nearly doubling during the observation period.

By contrast, the use of enterprise blogs has declined somewhat, suggesting a shift toward more visually oriented and interactive communication formats.

Another notable trend is the growing use of multiple social media platforms simultaneously. Tourism enterprises increasingly combine different types of social media channels in order to reach broader audiences and diversify their marketing strategies.

Social media platforms are most frequently used for:

- building the enterprise's brand image
- promoting products and services
- interacting with customers and responding to feedback

However, fewer enterprises use social media for innovation-related purposes, such as involving customers in service development or product improvement.

4.4 Tourism Export Growth in the EU

Between 2016 and 2024, tourism service exports in the European Union increased by nearly 50%, demonstrating the strong economic significance of tourism within the EU economy.

The most rapid growth in tourism exports occurred in:

- Romania
- Portugal
- Malta

When measured relative to GDP, tourism exports increased most strongly in:

- Croatia
- Malta
- Portugal

In contrast, Slovakia was the only EU country experiencing a negative trend in tourism export growth during the study period, while tourism export growth remained relatively stagnant in Germany and Estonia.

4.5 National Differences in Digital Marketing Adoption

The analysis also reveals significant variation among EU countries in the speed and direction of digital marketing adoption.

In the accommodation sector, Greece recorded the most rapid increase in website adoption, Finland experienced the largest growth in online advertising, and Belgium showed the strongest growth in social media usage.

Among travel agencies, the most dynamic digitalization processes were observed in Slovakia, Cyprus, and Hungary.

However, these patterns must be interpreted cautiously. In several countries—including Denmark, Lithuania, Austria, and Slovenia—no growth in website usage was recorded simply because 100% of travel agencies already had websites in the baseline year.

4.6 Cases of Relative Dedigitalization

The data also reveal some cases of relative dedigitalization, particularly in Ireland and Poland. This phenomenon may reflect several possible developments, including the emergence of new enterprises that have not yet adopted digital tools or strategic shifts toward alternative marketing channels.

In most cases, however, dedigitalization appears to reflect reallocation among different digital marketing tools rather than a true decline in digitalization. For example, Poland experienced a decline in website-based marketing and paid online advertising but simultaneously increased its use of social media—particularly multimedia content-sharing platforms—and geolocation-based targeted advertising.

Such shifts illustrate the dynamic nature of digital marketing strategies, where enterprises continuously adapt their marketing mix in response to technological innovations, changing consumer behavior, and competitive pressures.

Table 1

Use of Digital Marketing Tools by Tourism Enterprises in the EU-27 (% of Enterprises)

Digital Marketing Tool	Accommodation Sector 2016/2015	Accommodation Sector 2023	Digital Marketing Tool	Travel Agencies & Tour Operators 2016/2015	Travel Agencies & Tour Operators 2024/2023
Website (web)	95.7	94.5	Website (web)	92.7	94.1
Website with service descriptions or price lists (webdescr)	86.9	90.1	Website with service descriptions or price lists (webdescr)	80.4	85.0
Online ordering or booking (weborder)	76.2	78.2	Online ordering or booking (weborder)	60.7	60.3
Online order tracking (webtrack)	26.4	26.3	Online order tracking (webtrack)	29.3	25.2
Website customization options (webcustom)	26.4	28.7	Website customization options (webcustom)	27.0	26.5
Personalized content for visitors (webperson)	16.2	15.3	Personalized content for visitors (webperson)	21.3	18.8
Paid internet advertising (adv)	54.2	56.9	Paid internet advertising (adv)	47.9	63.5
Advertising based on webpage content or keywords (advcont)	45.5	48.3	Advertising based on webpage content or keywords (advcont)	40.7	54.7
Advertising based on users' past activity (advpast)	20.3	29.0	Advertising based on users' past activity (advpast)	22.7	36.6
Advertising based on geolocation (advgeo)	19.8	33.8	Advertising based on geolocation (advgeo)	19.9	36.0
Other targeted advertising methods (advoth)	22.5	30.7	Other targeted advertising methods (advoth)	22.2	35.0
Targeted online advertising overall (advtag)	46.9	50.5	Targeted online advertising overall (advtag)	41.5	56.0
Social media for brand image and promotion (smimage)	66.8	75.6	Social media for brand image and promotion (smimage)	67.0	81.2
Social media for responding to customers (smresp)	58.3	63.6	Social media for responding to customers (smresp)	51.3	64.3
Social media for innovation activities (sminnov)	32.6	25.8	Social media for innovation activities (sminnov)	31.0	28.3
Social media for knowledge exchange (smopin)	20.5	21.5	Social media for knowledge exchange (smopin)	18.8	28.0
Social media interaction with customers (smcust)	70.1	81.3	Social media interaction with customers (smcust)	68.9	83.3

Use of social networks (snetw)	79.1	83.3	Use of social networks (snetw)	77.9	85.5
Enterprise blogs or microblogs (blog)	22.3	15.0	Enterprise blogs or microblogs (blog)	32.1	28.2
Multimedia content sharing platforms (mmedia)	26.8	55.1	Multimedia content sharing platforms (mmedia)	36.2	60.8
Any social media use (sm)	79.6	85.3	Any social media use (sm)	79.5	86.1
Use of one social media type (1smtype)	44.2	30.3	Use of one social media type (1smtype)	34.1	23.5
Use of several social media types (sevsmttype)	35.4	55.0	Use of several social media types (sevsmttype)	45.3	62.6

5. Correlation Analysis and Regression Results

To identify the relationship between the adoption of digital marketing tools and tourism export growth in the European Union, a correlation analysis was conducted. The objective of this analysis was to determine which digital marketing instruments demonstrate statistically significant associations with the expansion of tourism exports across EU member states.

The results reveal an important structural feature of digital marketing development in the tourism sector: additional expansion of already widely adopted digital tools tends to produce diminishing marginal effects on tourism growth. In other words, when the majority of enterprises already use a particular tool, further increases in its adoption generate relatively limited additional macroeconomic benefits.

This phenomenon is illustrated by the relationship between the initial level of digital tool adoption at the beginning of the observation period (2015–2016) and the correlations between those tools and tourism export growth. The analysis indicates a negative relationship between the initial adoption level of digital marketing tools and their subsequent effectiveness in stimulating tourism exports. Specifically, the correlation between the initial adoption share and tourism export growth is -0.31 for TE (tourism exports) and -0.54 for TEGDP (tourism exports as a share of GDP).

These results suggest the existence of a saturation effect in the use of certain digital marketing instruments. Once a tool becomes almost universally adopted among tourism enterprises, further incremental increases in its usage may have little measurable influence on tourism performance at the macroeconomic level.

A clear example of this saturation phenomenon is the widespread use of company websites in the accommodation sector. At the beginning of the analyzed period, approximately 96% of accommodation enterprises already maintained a website. Consequently, the correlations between website usage and tourism export growth were close to zero, with coefficients of 0.07 for TE and -0.06 for TEGDP. These results indicate that the presence of a website has become a standard business practice rather than a competitive advantage.

Even more striking results are observed in the travel agency sector. In this segment, the correlation coefficients between website usage and tourism export growth are -0.62 for TE and -0.58 for TEGDP, both statistically significant. At first glance, these negative correlations may appear counterintuitive. However, they may partly reflect the strong multicollinearity between website adoption and other digital tools. For example, the correlation between Tweb (website use) and Tsmopin (use of social media for internal knowledge exchange) reaches -0.74 , indicating that enterprises relying more heavily on internal social media communication may depend less on traditional website-based marketing strategies.

Overall, these findings support the hypothesis that digital marketing tools follow a life-cycle pattern, in which early adoption generates strong competitive advantages, but widespread diffusion eventually reduces the marginal impact of further adoption.

Correlation Analysis

The correlation matrix presented in Table 3 provides a more detailed overview of the relationships between individual digital marketing tools and tourism export growth.

Accommodation Sector

In the accommodation sector, the most significant positive correlations are associated with online advertising activities. In particular, the use of other targeted advertising methods (Aadvoth) demonstrates a strong positive correlation with tourism export growth (0.52, significant at the 5% level). Similarly, advertising based on users' past online activity (Aadvpast) and overall targeted advertising (Aadvtarg) show significant positive correlations with tourism exports relative to GDP.

These results indicate that data-driven advertising strategies, which rely on behavioral tracking and user profiling, may play an increasingly important role in promoting tourism destinations and services.

By contrast, most social media marketing tools used by accommodation enterprises show weak or insignificant correlations with tourism export growth. Variables such as using social media for brand image development, responding to customer feedback, or engaging customers through online communities do not demonstrate a statistically significant macroeconomic effect.

One possible explanation is that social media marketing in the accommodation sector may primarily influence micro-level outcomes, such as brand awareness, customer satisfaction, and booking conversion rates, rather than producing measurable impacts on national tourism export statistics.

Travel Agencies and Tour Operators

In contrast to the accommodation sector, the results for travel agencies and tour operators highlight the importance of certain social media tools.

One of the strongest positive relationships is observed for Tsmopin, which measures the use of social media platforms for exchanging views, opinions, and knowledge within the enterprise. This variable shows a strong correlation with tourism export growth, reaching 0.72 for TE and 0.54 for TEGDP, both statistically significant.

Another significant factor is the use of enterprise blogs and microblogs, which demonstrate a positive correlation with tourism export growth (0.52). These results suggest that communication-oriented social media activities may help travel agencies improve knowledge exchange, marketing strategies, and customer engagement.

At the same time, the use of multimedia content-sharing platforms shows a moderate but negative relationship with tourism export growth relative to GDP, indicating that not all social media tools produce equally positive economic outcomes.

Overall, the correlation analysis suggests that different subsectors of the tourism industry benefit from different digital marketing tools. While targeted online advertising appears particularly important for accommodation enterprises, social media-based knowledge exchange seems to be more relevant for travel agencies and tour operators.

Saturation Threshold of Digital Marketing Tools

The empirical results suggest that the effectiveness of digital marketing tools declines once their adoption exceeds a certain threshold. The analysis indicates that this saturation point may occur when more than 60% of enterprises within a sector already use a given tool.

Tools with adoption rates below this threshold tend to show stronger correlations with tourism export growth. This pattern reflects the diffusion of technological innovation: when new digital tools are introduced, early adopters can gain substantial competitive advantages. However, once adoption becomes widespread, these advantages diminish as the tools become standard industry practices.

Regression Analysis

To further investigate the impact of digital marketing tools on tourism export performance, regression models were estimated for both tourism subsectors.

Accommodation Sector Model

The regression model for the accommodation sector examines the relationship between tourism exports as a percentage of GDP (TEGDP) and the use of targeted online advertising (Aadvtarg).

The estimated model is:

$$\text{TEGDP} = 1.86 + 0.15\text{Aadvtarg}$$

$$R^2 = 0.33, p = 0.02, N = 16$$

The results indicate that targeted online advertising has a statistically significant positive effect on tourism exports relative to GDP. Specifically, the model suggests that an increase of approximately 6–11 percentage points in the share of accommodation enterprises using targeted online advertising leads to an increase of about 1% in tourism exports relative to GDP.

When Malta—an outlier with exceptionally high tourism intensity—is excluded from the dataset, the coefficient decreases slightly ($b_1 = 0.09$) but remains statistically significant ($p = 0.05$). This confirms the robustness of the relationship between targeted digital advertising and tourism export performance.

Travel Agency and Tour Operator Model

For the travel agency sector, the regression model focuses on the role of social media-based knowledge exchange (T_{smopin}).

The estimated model is:

$$TE = 44.3 + 2.3T_{smopin}$$

$$R^2 = 0.53, p = 0.003, N = 14$$

This model demonstrates a strong and statistically significant relationship between internal social media communication and tourism export growth. According to the results, an increase of 10 percentage points in the share of travel agencies using social media for internal knowledge exchange is associated with an increase of approximately 18–23% in tourism exports ((Boughazi, 2025; Bourahla et al., 2026; Taguedda & Mefatih, 2026)).

When Romania—another outlier with exceptionally high tourism export growth—is excluded, the coefficient decreases slightly ($b_1 = 1.8$) but remains highly significant ($p = 0.0003$). This indicates that the relationship is not driven solely by extreme cases.

Interpretation of Results

Taken together, the empirical findings highlight several key conclusions regarding digital marketing in the EU tourism sector:

1. Traditional digital tools such as company websites have reached a saturation stage, limiting their marginal contribution to tourism export growth.
2. Targeted online advertising remains an important growth driver, particularly for accommodation enterprises seeking to reach specific consumer segments.
3. Social media platforms play a strategic role in the travel agency sector, especially when used for knowledge exchange and collaborative marketing strategies.
4. Different tourism subsectors benefit from different types of digital marketing tools, reflecting variations in business models and customer interaction patterns.

These results underline the importance of continuous innovation in digital marketing strategies. Rather than relying solely on widely adopted tools, tourism enterprises must increasingly explore advanced technologies and targeted marketing approaches to maintain competitive advantages in the global tourism market.

Table 2

Tourism Export Growth and Digital Marketing Adoption in EU Member States

Country	Tourism Export Growth 2024/2016 (%)	Tourism Exports as % of GDP	Website Use Growth (Accommodation)	Online Advertising Growth (Accommodation)	Social Media Growth (Accommodation)	Website Use Growth (Travel Agencies)	Online Advertising Growth (Travel Agencies)	Social Media Growth (Travel Agencies)
EU-27	47.9	1.2	-1.2	2.6	10.2	1.5	15.6	12.0
Belgium	17.3	0.3	-1.7	—	49.8	4.2	—	—
Bulgaria	22.3	1.6	-4.6	—	—	—	18.5	-4.5
Czechia	47.9	1.6	-0.5	-7.8	18.9	-2.7	2.7	13.7
Denmark	42.9	1.1	-3.2	—	12.9	0	—	18.5
Germany	9.5	0.1	-0.6	—	12.1	4.8	22.8	20.6
Estonia	8.8	0.6	-4.3	—	12.4	3.9	—	4.3
Ireland	33.2	0.7	-1.0	-8.8	-2.4	-3.1	-1.5	-16.5
Greece	63.5	4.8	8.7	—	14.7	—	—	—
Spain	63.0	3.5	-1.8	3.0	10.5	1.8	2.5	26.4
France	50.3	1.1	-2.0	—	12.9	—	—	8.3
Croatia	85.1	15.1	—	—	6.6	—	—	-15.7
Italy	49.1	1.1	-2.5	—	-1.6	-2.6	—	-3.2

Cyprus	37.6	5.4	-0.7	24.7	7.6	-4.1	43.1	-0.9
Latvia	52.6	1.8	-3.2	13.3	29.1	8.9	10.7	19.9
Lithuania	62.3	1.8	0.6	13.1	18.7	0	1.5	10.9
Luxembourg	20.2	1.9	-3.6	—	20.3	—	—	—
Hungary	45.5	2.1	2.7	6.3	11.1	-2.1	25.4	32.8
Malta	103.5	13.2	-2.9	27.6	14.6	-8.0	0	-0.5
Netherlands	41.7	0.9	6.5	10.9	0.1	0.1	-9.2	5.6
Austria	39.5	2.0	1.0	—	—	0	—	—
Poland	34.5	0.8	-6.1	-7.3	15.3	-2.1	-14.4	11.3
Portugal	115.6	8.3	-8.3	20.9	2.5	—	—	—
Romania	189.7	2.2	—	12.9	11.9	—	11.8	5.9
Slovenia	46.1	2.7	-9.8	-7.2	-4.6	0	33.5	30.0
Slovakia	-37.3	-1.2	-7.0	2.4	18.4	9.2	23.5	-8.3
Finland	32.6	0.4	0.6	30.9	10.9	—	—	—
Sweden	19.4	0.4	0.1	—	7.9	-2.8	—	-2.5

Source: Compiled by the authors based on Eurostat (2025).

6. Research Novelty and Contribution

This study contributes to the growing literature on digital transformation in tourism marketing by providing a comparative macro-level analysis of digital marketing tool adoption and tourism export performance across the European Union. While previous research has largely focused on individual countries, specific digital platforms, or micro-level firm behavior, this study introduces a broader analytical perspective that integrates enterprise-level digital marketing adoption with national-level tourism export outcomes.

The novelty of this research lies in several aspects.

First, the study examines the relationship between the diffusion of digital marketing tools and tourism export growth across all 27 EU member states, using harmonized statistical data from Eurostat. By analyzing both accommodation enterprises and travel agencies, the research captures structural differences between key subsectors of the tourism industry.

Second, the study introduces the concept of a digital marketing saturation effect, demonstrating that widely adopted tools such as enterprise websites may lose their marginal effectiveness once they become standard practice in the industry. This finding highlights the dynamic nature of digital marketing strategies, where continuous innovation is necessary to maintain competitive advantages.

Third, the research identifies distinct patterns in the effectiveness of digital marketing tools across tourism subsectors. While targeted online advertising appears to play a stronger role in the accommodation sector, social media-based knowledge exchange within travel agencies shows a stronger relationship with tourism export growth.

Finally, the study contributes to the broader debate on digitalization and tourism competitiveness, suggesting that the economic impact of digital marketing depends not only on the adoption of technologies but also on the strategic manner in which these tools are used.

7. Key Findings

The empirical analysis produces several important findings regarding the role of digital marketing tools in the tourism sector of the European Union.

First, the results indicate a clear long-term trend toward increasing digitalization of tourism marketing activities across EU countries. The majority of tourism enterprises now maintain websites, use social media platforms, and employ various forms of online

advertising. However, the analysis also shows that digital adoption patterns vary significantly between tourism subsectors and across national markets.

Second, the study reveals that traditional digital marketing tools such as enterprise websites have reached a saturation stage in the EU tourism sector. Because a large proportion of tourism enterprises already operate websites, further increases in website adoption generate only limited measurable effects on tourism export growth. This finding suggests that the competitive advantage once associated with maintaining a website has largely disappeared, as such platforms have become a standard feature of tourism business operations ((Boughazi, 2025; Bourahla et al., 2026; Taguedda & Mefatih, 2026)).

Third, the results highlight the growing importance of data-driven and targeted online advertising strategies. In the accommodation sector, targeted internet advertising based on user behavior, search keywords, or customer profiles demonstrates a positive and statistically significant relationship with tourism export performance. These findings indicate that digital marketing strategies capable of reaching specific consumer segments may provide stronger economic benefits than more traditional forms of online promotion.

Fourth, the analysis shows that social media platforms play a particularly important role for travel agencies and tour operators. In this subsector, the use of social media for exchanging views, knowledge, and professional insights within enterprises demonstrates a strong positive association with tourism export growth. This suggests that social media tools may enhance marketing efficiency by facilitating knowledge sharing, collaboration, and market awareness among tourism professionals.

Fifth, the study identifies substantial differences in digital marketing dynamics across EU member states. Countries such as Romania, Portugal, and Malta experienced particularly strong growth in tourism exports during the analyzed period, while other countries recorded more moderate growth or even stagnation. These variations indicate that digital marketing adoption alone cannot fully explain tourism export performance, as other factors—such as tourism infrastructure, destination attractiveness, and macroeconomic conditions—also play important roles.

Finally, the results confirm that the effectiveness of digital marketing tools tends to decline once more than approximately 60% of enterprises adopt a given technology, suggesting the presence of a technological diffusion threshold. After this threshold is reached, further increases in adoption produce diminishing marginal returns.

Conclusion

The analysis conducted in this study demonstrates that the process of digital transformation within the tourism sector of the European Union continued steadily during the period 2015–2024, reflecting the broader digitalization trends observed across global service industries. Tourism enterprises across EU member states increasingly adopted digital marketing tools to enhance customer communication, improve marketing efficiency, and expand their international reach. However, the empirical results indicate that the development of digital marketing practices is not uniform across all tools or across all countries. Instead, the evolution of digital marketing in tourism follows a dynamic process characterized by technological diffusion, changing consumer behavior, and varying levels of digital maturity among tourism enterprises.

One of the most important findings of the study is the identification of a saturation effect in the adoption of certain digital marketing tools. Several instruments that were once considered innovative—such as traditional company websites and basic social networking presence—have now become standard components of tourism business operations. In many EU countries, the share of tourism enterprises maintaining a website or using social networks has already reached extremely high levels, often approaching full adoption. As a result, additional increases in the use of these tools produce limited measurable effects on tourism export performance at the macroeconomic level. In some cases, changes in these indicators even show negative correlations with tourism export growth, reflecting the fact that the competitive advantage of early digital adoption has gradually diminished.

At the same time, the results reveal that newer forms of digital marketing are gaining increasing importance within the EU tourism sector. In particular, the use of multimedia content-sharing platforms has expanded rapidly, reflecting the growing importance of visual content in tourism promotion. Platforms that enable the sharing of videos, images, and interactive media provide tourism enterprises with opportunities to create more engaging and immersive marketing campaigns. In addition, the analysis shows that enterprises increasingly combine several social media platforms rather than relying on a single communication channel. This diversification of digital communication strategies allows tourism businesses to reach broader audiences and adapt their marketing approaches to different consumer segments.

Another significant trend identified in the study is the increasing use of data-driven advertising techniques, especially those based on geolocation data and user behavior tracking. These technologies enable tourism enterprises to deliver highly targeted advertising messages to potential customers, improving the efficiency of marketing campaigns and reducing promotional costs. The growing popularity of geolocation-based advertising indicates that tourism enterprises are increasingly leveraging digital data to tailor marketing content to specific geographic markets and traveler preferences ((Boughazi, 2025; Bourahla et al., 2026; Taguedda & Mefatih, 2026)).

The analysis also demonstrates that the effectiveness of digital marketing tools differs substantially between tourism subsectors. In the accommodation sector, the results indicate that the most effective strategy for supporting tourism export growth is the use of targeted paid advertising on the internet, particularly advertising that relies on user profiles, search keywords, and behavioral data.

This finding suggests that accommodation providers benefit significantly from digital marketing strategies that focus on reaching potential tourists at the moment when they are actively searching for travel services ((Boughazi, 2025; Bourahla et al., 2026; Taguedda & Mefatih, 2026)).

In contrast, the results for travel agencies and tour operators highlight the importance of interactive digital communication and knowledge exchange. In this subsector, tourism export growth is positively associated with the use of social media platforms for exchanging views, opinions, and professional knowledge within enterprises. Such activities may enhance marketing effectiveness by improving market awareness, facilitating collaboration, and supporting the development of more responsive marketing strategies. In addition, maintaining websites with personalized content for returning visitors and utilizing blogs or microblogs appear to contribute to stronger export performance in this segment of the tourism industry.

Another important observation concerns the considerable differences in digital marketing dynamics among EU member states. Some destinations experienced rapid digitalization and strong growth in tourism exports, while others showed slower progress or even temporary declines in certain digital marketing indicators. In several countries, the absence of further growth in specific digital tools was not necessarily a sign of stagnation but rather the result of reaching a technological saturation point. For example, when the share of enterprises maintaining websites already approaches 100%, further expansion of this indicator becomes impossible. In such cases, tourism enterprises must focus on improving the quality, functionality, and strategic use of digital tools rather than simply increasing their adoption rates ((Boughazi, 2025; Bourahla et al., 2026; Taguedda & Mefatih, 2026)).

At the macroeconomic level, tourism exports in the European Union increased by almost 50 percent between 2016 and 2024, highlighting the continued importance of tourism as a driver of economic growth and international trade in services. However, the study shows that the relationship between digital marketing adoption and tourism export performance is complex and influenced by multiple factors. While some digital tools demonstrate measurable positive effects, others may have limited or indirect impacts that are difficult to capture using macro-level statistical indicators.

Despite its contributions, this study has several limitations. The analysis focuses primarily on macroeconomic relationships between digital marketing adoption and tourism export growth, and therefore does not examine the microeconomic performance of individual tourism enterprises. Furthermore, the research concentrates on international tourism exports and does not analyze the potential influence of digital marketing tools on domestic tourism markets. Future research could address these limitations by incorporating firm-level data, examining consumer behavior patterns, and exploring the role of emerging technologies such as artificial intelligence, big data analytics, and immersive digital experiences in tourism marketing.

In conclusion, the findings of this study emphasize that the digital transformation of tourism marketing in the European Union is an ongoing process characterized by technological innovation and evolving marketing strategies. While early digital tools have become widely adopted and less influential as competitive differentiators, newer forms of targeted advertising, multimedia marketing, and advanced social media communication continue to play a significant role in shaping the competitiveness of tourism enterprises. For policymakers and tourism businesses alike, the results underline the importance of moving beyond basic digital adoption toward more strategic, data-driven, and innovative digital marketing approaches capable of supporting sustainable tourism development and strengthening the global competitiveness of European tourism destinations.

Ethical Considerations

This study was conducted in accordance with established academic standards of research integrity and ethical responsibility. The research is based primarily on secondary statistical data obtained from publicly available sources, particularly the Eurostat database, and therefore did not involve human participants, personal data collection, or experimental procedures requiring formal ethical approval.

All sources used in the preparation of this study have been appropriately cited and referenced in accordance with academic citation standards. The authors confirm that the manuscript represents original work, has not been previously published, and is not under consideration for publication elsewhere. The authors also affirm that the research process adhered to the principles of transparency, honesty, and scholarly responsibility.

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Conflict of Interest

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