
| RESEARCH ARTICLE

Digital Transformation Policies for Sustainable Tourism: A Comparative Policy Analysis of the European Union and Albania

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| ABSTRACT

This study analyzes how digital transformation and environmental sustainability are articulated as a common policy agenda known as the “twin transition” in the tourism sector, comparing the European Union (EU) as a mature regulatory and financing framework with Albania as an EU candidate country undergoing rapid but uneven digitalization. Adopting a qualitative comparative policy analysis, the study applies qualitative document analysis to a purposively selected core corpus of official EU strategic and legislative documents, EU-Albania accession negotiation documents, and Albanian national strategies. Documents were selected on the basis of official status, thematic relevance, and recency, and were compared within a structured comparative framework of seven policy dimensions, using the EU’s own accession requirements as the benchmark for comparability. Particular attention is paid to the positioning of artificial intelligence within each framework: while EU policy discourse treats AI as embodied within a green digital agenda, despite the lack of a clearly specified mechanism, the most visible AI initiatives in Albania have focused on general public administration, not on specific sustainability applications for tourism. The analysis identifies a gap highlighted in official documents in the accession negotiation process: the lack of tourism data infrastructure in Albania. The study argues that AI should be conceptualized not as an automatic result of digitalization, but as a potential mediating mechanism, conditioned by the existence of this data infrastructure, a condition that remains empirically untested. The paper concludes with concrete policy implications for the current phase of accession negotiations and identifies empirical testing of this mediating mechanism as a priority for future research.

| KEYWORDS

Digital Transformation; Sustainable Tourism; European Union; Albania; Artificial Intelligence; Comparative Policy Analysis

| ARTICLE INFORMATION

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1. Introduction

Tourism is both one of the sectors most transformed by digital technology and one of the most exposed to the environmental costs of economic growth. Across Europe, digitalization has reshaped the way destinations are discovered, booked, experienced and promoted, from online booking platforms to data-driven marketing and intelligent destination management. At the same time, the continued increase in tourist flows to popular destinations has reintroduced issues such as overtourism, pressure on coastal ecosystems, and the preservation of cultural heritage under conditions of increasing demand onto the political agenda.

The European Union (EU) has formalized this tension between digital acceleration and environmental pressure through the concept of the “twin transition,” treating digital and environmental objectives not as competing priorities, but as interconnected dimensions of a single growth model. This approach is reflected in a series of strategic documents from the Digital Compass 2030 to the Transition Pathway for Tourism, the first EU sectoral document of its kind, developed specifically for tourism after the COVID-19 pandemic and influencing not only the domestic policy of member states, but also the conditionality and expectations towards candidate countries for membership.

For candidate countries like Albania, this context takes on particular importance. The Albanian tourism sector has grown rapidly in the last decade, achieving high levels of foreign visitors and an increasingly large contribution to the Gross Domestic Product. This growth, however, is accompanied by increasing pressure on infrastructure, the coastal strip, and cultural heritage sites, as well as publicly recognized challenges such as seasonal congestion in certain destinations. At the same time, Albania is in an active and formalized phase of the European integration process, including open negotiations specifically on digital transformation and enterprise policy, which means that its national digitalization and tourism policies are drafted, at least in part, in direct institutional dialogue with the EU normative framework. Despite this practical importance, the literature reviewed for this study tends to address these two trajectories separately. A first strand examines EU digitalisation and twin transition policies at the EU or regional level. Çelik Kılıç et al. (2025) trace the evolution of EU digital policies and their implications for tourism; Bianchini et al. (2023) estimate the environmental effects of the twin transition across European regions; and Jones (2023) and Kovacic et al. (2024) critically assess the twin transition discourse itself. All of these studies remain confined to the EU and do not extend their analysis to candidate countries. A second strand focuses on Albania, either on the economic contribution of tourism (Hamza & Fetai, 2025) or on the country’s digital governance in general (World Bank, 2022; Bômout, 2025), without examining tourism-specific digital policy against the EU framework. To the best of our knowledge, no study in the reviewed literature systematically compares EU and Albanian policies at the intersection of digitalisation, sustainability, and tourism, or takes into account that the EU model itself is academically contested (Kovacic et al., 2024; Jones, 2023). This paper addresses this double gap by conducting a comparative analysis of digital transformation policies relevant to tourism in the EU and Albania, as further developed in Section 2.3.

The study is guided by three research questions:

1. How has the European Union articulated the relationship between digital transformation and environmental sustainability in its policies relevant to tourism, and how coherent is this conceptual articulation?
2. What is the current state of Albanian digital transformation policies, as implemented directly or indirectly in the tourism sector, including the official EU assessment in the context of accession negotiations?
3. What are the key similarities and gaps between the two frameworks, and what role can artificial intelligence play in addressing them?

1.1 Methodological Note

The study adopts a qualitative comparative policy analysis based entirely on publicly available documents and makes no claim to primary empirical data. Following Bowen (2009), documents are treated as primary sources of policy intent. They are analysed through qualitative document analysis structured around a comparative framework.

Document selection. Documents were selected purposively against four criteria: (1) official status, meaning adoption or publication by an EU institution or by the Albanian Government or a line ministry; (2) thematic relevance, meaning explicit treatment of digital transformation, environmental sustainability, artificial intelligence, or tourism; (3) recency, with priority given to documents in force or published between 2019 and 2025; and (4) public availability. Documents were identified through systematic searches of the official websites of the European Commission, the Council of the EU, EUR-Lex, and the relevant Albanian institutions.

The resulting core corpus comprises 19 official documents in three groups: (a) EU strategic and legislative documents, including the Transition Pathway for Tourism (2022), the 2030 Digital Compass, the Digital Decade reports, and the nine horizontal digital acts adopted between 2022 and 2024 (Table 1); (b) EU–Albania accession negotiation documents, specifically the EU Common Position on Cluster 3 and the related Council communication (2025); and (c) Albanian national strategies, namely the Digital Agenda of Albania 2022–2026 and the National Tourism Strategies 2019–2023 and 2024–2030. Earlier EU documents, from the Bangemann Report (1994) to the Digital Single Market Strategy (2015), are used only to trace the chronological evolution of EU policy and are not part of the comparative coding. Reports by international organisations (OECD, World Bank) and the academic literature are used as secondary sources to triangulate and contextualise the findings from the official documents, not as objects of comparison.

Analytical procedure. The core documents were analysed following a directed approach to qualitative content analysis (Hsieh & Shannon, 2005): the analytical dimensions were derived deductively from the EU’s twin transition framework and from the critical literature reviewed in Section 2, and were refined during close reading of the documents. Each document was examined along seven comparative dimensions: (1) legal and institutional framework; (2) financing mechanisms; (3) digital–green integration; (4) tourism data and monitoring; (5) AI adoption; (6) SME digitalisation; and (7) overtourism management. The findings were organized into a comparative matrix (Table 2), which identifies areas of convergence (Section 5.3) and divergence (Section 5.4). This approach is consistent with earlier document-based studies of tourism policy discourse in Europe (Torkington et al., 2020).

Establishing comparability. The EU and Albania are not equivalent units: one is a supranational framework and the other a candidate state. Comparability is therefore established through two principles. First, functional equivalence: documents are compared by the policy function they perform within each dimension, not by their legal form. Second, an institutional benchmark: because Albania is formally required to align with the EU *acquis* through the accession negotiations (Chapters 10 and 20, Cluster 3), the EU framework serves as the reference standard against which the Albanian documents are assessed. The comparison therefore asks how far Albania is from the standard the EU has itself set as a condition of membership (see Section 5.1).

The main limitation of this approach is the lack of triangulation with primary empirical evidence, which is addressed explicitly in Section 7.3.

The contribution of the paper lies in providing a systematic comparative analysis of EU and Albanian policies at the intersection of digitalization and sustainability in tourism, directly linking this comparison to the current accession negotiation process.

The paper is structured as follows: Section 2 sets out the conceptual framework of the dual transition and its position in the academic literature, including the main criticisms of the concept. Section 3 reconstructs the EU digitalisation policy relevant to tourism, with an emphasis on the Transition Pathway for Tourism. Section 4 follows the same logic for Albania, including the EU’s official assessment in the context of the negotiations. Section 5 conducts the systematic comparison between the two frameworks. Section 6 discusses the implications of this comparison. Section 7 summarizes the conclusions, limitations, and directions for future research.

2. Literature Review: Digital Transformation and Sustainable Tourism

2.1 The Twin Transition: Conceptual Origins and Academic Contestation

The concept of the “twin transition” was consolidated in the European Commission’s policy discourse in the framework of the 2020 industrial strategy, and was specifically applied to tourism, the sector considered most affected by the COVID-19 pandemic, through the Transition Pathway for Tourism report (European Commission, 2022a), which proposed 27 concrete areas of action linking digitalization with environmental sustainability, from sustainable mobility to the circularity of tourism services. However, the concept of the “twin transition” itself has been the subject of considerable academic contestation. Kovacic et al. (2024) argue that the twin transition functions more as a “policy imaginary” that rhetorically reconfigures real tensions between economic growth and sustainability as a synergy, without actually resolving them. In a similar critical vein, Jones (2023) notes that the European Commission, in its report on tourism, never offers a clear definition of the term “sustainable growth” a

shortcoming that Torkington et al. (2020) had previously identified this in their analysis of national tourism policy documents in Europe, arguing that the term "sustainable" is often used to legitimize the growth of ...continuous, rather than accepting its ecological limits.

This critical line of literature is important for the current paper, because it shows that the very premise of the "twin transition" that digitalization and sustainability are automatically mutually reinforcing should not be taken for granted, but as a political hypothesis that requires empirical verification in each specific context, including the Albanian one.

2.2 The Relationship between Digitalization and Sustainability

The literature on the relationship between digitalization and sustainability has evolved from treating the two phenomena as simply parallel, towards attempts to specify the concrete mechanisms of the connection. Rosario and Dias (2022), in a bibliometric review of the literature, find that digital technologies contribute to environmental, economic and social sustainability through various pathways (sustainable urban development, circular economy, reduction of the digital divide), but at the same time note that digitalization itself can increase energy consumption and generate new environmental problems, so the effect is not automatically positive. In the specific context of European tourism, Bianchini et al. (2023) find that the positive effect of environmental technologies is stronger in regions with high digital technological capacity, and vice versa, a finding that suggests that the digital-green relationship is not universal, but conditioned by regional structural factors, such as the level of infrastructure and digital skills. This finding has direct implications for the EU-Albania comparison that is developed in the continuation of this paper.

Within this body of literature, artificial intelligence (AI) occupies a distinct yet not fully developed position. Applications of AI in tourism personalization, dynamic pricing, destination management are consistently associated with efficiency gains (Mariani & Baggio, 2020; Samala et al., 2022), but most evidence documents the operational/marketing effects of AI, not its specific contribution to measurable environmental outcomes. This is precisely the methodological gap that makes AI a candidate for conceptualization as an intermediary mechanism, not simply one among several parallel technologies, but a specific link that potentially translates digital investment into green practice. This approach remains, in the current literature, largely theoretical, and consistent with the Technology Acceptance Model (Davis, 1989) and the Diffusion of Innovation Theory (Rogers, 2003) which describe the processes of technological adoption, but not necessarily the causal path between adoption and subsequent sustainability outcomes.

2.3 The European Union as a Reference Framework for Candidate Countries

Since EU membership requires the progressive approximation of national legislation and strategy to the *acquis communautaire*, EU policy functions in countries like Albania not simply as an external standard of comparison, but as an active driver of internal reform (Bômont, 2025). This methodological feature makes the EU-Albania comparison different from a common "developed country versus developing country" comparison: Albanian strategies are explicitly designed with EU alignment in mind, which allows for direct observation of how a candidate country adapts, selects, or deviates from a policy model for which it has had no formative role. By juxtaposing these three bodies of literature, the conceptual contestation of the twin transition, the search for specific mechanisms (especially AI) between digitalization and sustainability, and the specific role of the EU for candidate countries, it becomes clear that the systematic comparison of EU-Albania policies, proposed in this paper, addresses an identifiable gap: the reviewed literature does not identify so far whether the EU's "twin transition premise" so contested in the European literature is itself reproduced, modified, or simply completely absent in the policy framework of a candidate country like Albania.

3. European Union Policy on Digital Transformation Relevant to Tourism

3.1 Chronology of EU Digitalization Policies

The EU's digitalisation policy has developed cumulatively from the 1987 Green Paper on telecommunications, through the 1994 Bangemann Report, the e-Europe action plans (1999–2005), the i2010 strategy, the 2010 Digital Agenda, the 2015 Digital Single Market Strategy, and most recently the 2021 Digital Compass and the 2022

Declaration on Digital Rights and Principles (European Commission, 2010, 2015, 2021b, 2022b). This long-term trajectory establishes the general institutional framework within which specific tourism policy has later developed.

3.2 “Transition Pathway for Tourism”: The EU’s Key Tourism Policy Document

Unlike the general chronology of digitalization, the document most directly relevant to this paper is the Transition Pathway for Tourism, published by the European Commission in 2022 (European Commission, 2022a). This report was born in response to the COVID-19 pandemic; tourism was among the most economically affected sectors in the EU, and was chosen as the first sector for which a specific “transition path” was developed within the EU’s 2020 industrial strategy (Jones, 2023). The document explicitly articulates the union of the “green transition” and the “digital transition” as two intertwined priorities, and proposes 27 concrete areas of action, organized around four approaches: environmental sustainability (sustainable mobility, circular economy, waste reduction), digital transformation (data collection and sharing, public-private partnerships, personalization of services), long-term sustainability of the sector, and financing and monitoring mechanisms (European Commission, 2022a). It is important to note that the European Commission itself, in this document, does not provide a precise operational definition of the term “sustainable growth”, a shortcoming pointed out by Jones (2023) and which coincides with the earlier finding of Torkington et al. (2020). This conceptual deficiency in the EU’s basic document itself is directly relevant to the comparison with Albania: if the EU itself has not fully operationalized the digital-green nexus in tourism, the expectation that a candidate country would do so in a more advanced way would be unreasonable, but this does not diminish the need to assess how far or close Albania is to this framework itself, although not entirely perfect.

3.3 Financing Instruments and Implementation at Regional Level

The implementation of the Transition Pathway is supported by a range of funding instruments, Horizon Europe, the Digital Europe Programme, and Interreg Europe, some of which explicitly combine digital and environmental objectives at the regional level. The Interreg Europe “Tourism as a Service” (TAAS) project, for example, implements “smart tourism” tools (virtual tours, smart payments, chatbots) in nine different European regions, from the South Aegean (Greece) to Donegal (Ireland), directly linking them to the priorities of the “Smarter Europe” (TAAS Project Interreg Europe, 2025). However, Bianchini et al. (2023) find, however, that the effectiveness of these interventions varies strongly according to pre-existing regional technological capacity, a finding that warns against expecting uniform effects of EU policies even within member states, let alone in candidate countries with lower initial capacity like Albania.

At the same time, the EU’s formal competence over tourism remains limited under Article 195 of the Treaty on the Functioning of the European Union, meaning that the main influence on national tourism policy within the EU and even more so in candidate countries occurs through funding conditionality and soft law recommendations, not binding regulation (European Parliament, 2017).

3.4 Artificial Intelligence and the Metaverse in EU Tourism Policy Discourse

Beyond the Transition Pathway, other EU documents indirectly address the role of AI in tourism. Although the term “metavers” does not appear in binding EU legislation, EU-funded investment in AI, virtual/augmented reality, and data governance is understood in the literature as cross-supporting metaverse-based tourism applications, including virtual heritage tours and personalized destination marketing with AI (Çelik Kılıç et al., 2025). The Transition Pathway itself mentions the use of “data” and “intelligent services” as a priority, but in line with the broader critique of Kovacic et al. (2024) on the dual transition discourse does so in largely aspirational terms, without specifying the concrete mechanism through which AI will produce measurable environmental outcomes, as opposed to mere competitive/marketing benefits.

3.5 New EU Horizontal Digital Legislation (2022–2025) and Implications for Tourism

Beyond the Transition Pathway and the classic chronology presented in Subsection 3.1, since 2022 the EU has adopted a new, horizontal wave of digital legislation that, despite not being specifically designed for tourism, directly affects the digital infrastructure on which the sector operates (data, online platforms, artificial intelligence, cybersecurity, connectivity, digital identity). Following the comparative-tabular approach used by Çelik Kılıç et al.

(2025) for the chronology of EU digital policies, Table 1 summarizes the main acts adopted after 2022 and their possible connection to tourism.

Table 1. New EU horizontal digital legislation (2022–2025) and relevance to tourism

Act	Reference and entry into force/implementation	Relevance to tourism
Data Governance Act	Regulation (EU) 2022/868; applicable from September 2023	It establishes the framework for data intermediaries and "data altruism," a potential basis for cross-border shared tourism data spaces.
Digital Services Act (DSA)	Regulation (EU) 2022/2065; fully applicable from February 2024	It regulates the transparency and accountability of online platforms (online booking agencies, tourism review sites).
Digital Markets Act (DMA)	Regulation (EU) 2022/1925; applicable from May 2023	It regulates "gatekeeper" platforms (search engines, booking ecosystems); this is relevant to the visibility of Albanian tourism SMEs in EU digital markets.
NIS2 Directive	Directive (EU) 2022/2555; national transposition deadline October 2024	It establishes minimum cybersecurity requirements for digital infrastructure (cloud, online platforms) widely used by the tourism sector.
Artificial Intelligence Act (AI Act)	Regulation (EU) 2024/1689; in force from August 2024, phased implementation until August 2027.	Classifies AI systems used in personalization, tourism chatbots, and destination management according to risk; provides a direct reference framework for any future expansion of "Diella" into the tourism sector.
Data Act	Regulation (EU) 2023/2854; in force January 2024, applicable from September 2025	It regulates access to and the sharing of data generated by connected devices/products (sensors, IoT)—data directly relevant to "smart tourism" and the monitoring of tourist flows—addressing a gap in Albania identified by the EU.
Cyber Resilience Act	Regulation (EU) 2024/2847; in force December 2024, full implementation by December 2027.	Establishes "security-by-design" requirements for products/devices with digital elements (e.g., IoT devices in hotels, smart check-in systems).
Gigabit Infrastructure Act	Regulation (EU) 2024/1309; in force May 2024, applicable from November 2025	Reduces the costs of deploying gigabit networks; supports connectivity in coastal and rural areas with tourism potential that are often underserved.
European Digital Identity Regulation (eIDAS 2.0)	Regulation (EU) 2024/1183; in force May 2024; identity wallets by the end of 2026	The European Digital Identity Wallet potentially enables cross-border check-ins and digital travel documents, with long-term implications for EU–Albania tourism mobility.

This legislative wave reconceptualizes the very gap identified by the EU for Albania (Subsection 4.3): "tourism data infrastructure" is no longer simply a general policy objective, but a moving regulatory target, specifically linked to the Data Act, the Data Governance Act, and the cybersecurity requirements of the NIS2/Cyber Resilience Act. This means that Albania's alignment in Chapter 10 of the accession negotiations will need to go beyond the migration of online services (the logic of the Digital Agenda 2022–2026), towards specific alignment with this new horizontal framework, particularly the dimensions of AI risk classification, IoT data sharing, and cybersecurity "by design" before sectoral applications of AI in tourism can be considered fully aligned with the acquis.

4. Albania's Digital Transformation Policy Relevant to Tourism

4.1 National Digital Governance Framework

Albania's digital governance is organized around successive national digital agendas, implemented by the National Information Society Agency (NAISA). The Digital Agenda 2015–2020 focused on the migration of public services online, resulting in over 95% of central government services available through the e-Albania platform (EPC-Tirana,

2025). Its successor, the Digital Agenda of Albania 2022–2026 approved by Decision of the Council of Ministers No. 370, June 2022 shifts the emphasis towards advanced computing, artificial intelligence, cybersecurity and digital skills (AKSHI, 2022). Independent assessments note that, despite institutional progress, e-Albania remains insufficiently “user-centric” and continues to rely on outdated ICT infrastructure in parts of the system (World Bank, 2022).

4.2 Artificial Intelligence in Albanian Public Administration

The most internationally visible AI initiative in Albania is “Diella”, a virtual assistant developed by AKSHI in collaboration with Microsoft, launched in January 2025 on e-Albania (Prime Minister of Albania, 2025). In September 2025, Diella was elevated to a cabinet-level role as Minister of State for Artificial Intelligence, explicitly framed by the government as a means to accelerate anti-corruption reform explicitly linked to Albania’s goal of EU membership in 2030 (Bômont, 2025). The importance of this case for our paper is not Diella itself as a technology, but what it indicates about the prioritization of AI in Albania: focused on governance and anti-corruption, not on specific sectors such as tourism.

4.3 Tourism in the EU Accession Negotiation Process

The EU-Albania connection in the field of digitalization and tourism is not simply analytical, but institutional and formalized through the accession negotiation process itself. On 22 May 2025, Cluster 3 (“Competitiveness and Inclusive Growth”) of the EU–Albania negotiations was officially opened, which includes, among others, Chapter 10 (Digital Transformation and Media) and Chapter 20 (Enterprise and Industrial Policy) (Council of the European Union, 2025a). These are precisely the chapters through which the EU officially monitors Albania’s alignment with the *acquis* in the areas addressed in this paper.

In the EU Common Position on Cluster 3 (May 2025), the EU makes a specific assessment on tourism, inviting Albania to improve consumer protection, data sharing, and monitoring of tourist flows (Council of the European Union, 2025b). This official statement supports the main finding of this paper: the digitalization of Albanian tourism remains underdeveloped, especially in the dimension of data and monitoring, namely precisely that data infrastructure that would be a prerequisite for any subsequent application of AI in the sustainable management of tourist flows. In the same document, the EU acknowledges the positive side: Albania is “partially aligned” with the horizontal aspects of EU industrial policy, particularly in skills development and corporate social responsibility (Council of the European Union, 2025b).

This is also reflected in the recent OECD (2026) assessment of small and medium-sized enterprises (SMEs) in the Western Balkans: the digitalization of Albanian SMEs “remains limited in depth, despite the existence of relevant policy frameworks”; most SMEs use at least one basic digital tool, but the adoption of more advanced technologies such as data analytics or automation remains low, and implementation depends mainly on donor-funded initiatives (OECD, 2026).

4.4 Tourism Specific Digitalization: Concrete Strategies and Instruments

Albania’s tourism policy is defined in successive National Tourism Strategies. The 2019–2023 Strategy explicitly acknowledged that the provision of digital services in Albanian tourism was “still underdeveloped” and was mainly used for marketing (Ministry of Tourism and Environment, 2019). Its successor, the National Tourism Strategy 2024–2030, presented in October 2024, commits to “continuous investments in digitalization, infrastructure, and tourism workforce development” (Malaj, 2025). Concrete tools presented include a National Tourism Registry and an e-Visitor system (Travel And Tour World, 2025), alongside the “Visit Albania Responsibly” campaign (2022) for managing overtourism in areas such as Ksamil (European Commission, Tourism Transition Pathway, 2025). It is significant that these instruments (National Register, e-Visitor) correspond precisely to the gaps officially identified by the EU in its Common Position on “data sharing” and “tourist flow monitoring”, which shows that Albania has started to address these gaps, but (as confirmed by OECD, 2026) their deep implementation (e.g. using collected data for active, AI-driven destination management) still remains at an early stage.

5. Comparative Analysis

5.1 The Comparative Approach

The following comparison does not treat the EU and Albania as two independent systems, because as shown in Section 4.3, they are already institutionally linked through the accession negotiation process. This makes the comparison a unique analytical exercise: we do not simply ask “how far is Albania from the EU”, but “how far is Albania from the standard that the EU itself has set as an official condition for membership” a standard that, as discussed in Section 3.2, is itself the subject of academic contestation due to its lack of conceptual precision (Torkington et al., 2020; Jones, 2023).

5.2 Comparison Table

Table 2. Comparative overview of digital-sustainability policies for tourism in the EU and Albania

Dimension	European Union	Albania
Legal/institutional framework	<i>Transition Pathway for Tourism (2022)</i> ; limited formal competence regarding tourism (Article 195 TFEU), influence primarily through soft law.	National strategy + accession negotiations (Chapter 10, Chapter 20, Cluster 3)
Financing mechanism	Dedicated funds (Horizon Europe, Digital Europe Programme, Interreg Europe/TAAS)	Primarily state budget + programs funded by donors/IFIs.
Digital-green integration	Formalized as a “twin transition,” but without an operational definition of “sustainability” (Jones, 2023)	Present rhetorically in the 2024–2030 Strategy; not operationalized.
Tourism data and monitoring	Priority expressed in the Transition Pathway (data sharing, public-private partnerships)	Officially identified by the EU as a key gap (Council of the European Union, 2025b)
AI Adoption	Framed around tourism personalization/marketing; lacking a specified mechanism for environmental outcomes.	Focused on public administration/anti-corruption (Diella); no AI strategy specific to tourism.
Digitalization of SMEs	EU targets: 90% of SMEs with a high level of digital intensity by 2030.	“Limited in depth”; widespread basic adoption, advanced technologies still scarce (OECD, 2026)
Overtourism management	Part of the “circularity” / sustainable mobility framework of the Transition Pathway.	Promotional campaign (“Visit Albania Responsibly”); not data/AI-driven.

5.3 Compliance

The comparison shows an important structural match: both the EU and Albania frame the digitalization of tourism simultaneously as a tool for economic competitiveness and as a component of sustainability, without fully specifying the mechanism linking the two. This is not merely a weakness replicated by Albania; rather, as shown by Kovacic et al. (2024) and Jones (2023), a characteristic of the EU's own discourse on the “dual transition”. In this sense, Albania does not “fail” to achieve a clear EU standard; it reproduces the same conceptual gap, simply at an earlier institutional level of development.

A second point of alignment: both parties identify SMEs as the group that is simultaneously the most vulnerable and the most critical for success. The EU Transition Pathway emphasizes the central role of SMEs (over 99% of tourism businesses in the EU are SMEs), while the OECD (2026) confirms the same model for Albania, with additional specific constraints (dependence on donor funding, lack of financial capacity).

5.4 Differences

The primary divergence lies not in the “extent” of digitalization, but in its type. Albania has achieved a high level of administrative digitalization (95% of public services online, AI in governance through Diella) before achieving sector-specific digitalization in tourism (data, monitoring, applied AI). This is the opposite sequence to what the

EU's Transition Pathway implicitly implies, which treats sectoral digitalization as an integrated first part of the agenda, not as a late consequence of overall state digitalization.

The second, and perhaps most significant, divergence lies in the EU's own official statement (Council of the European Union, 2025b): the gap identified for Albania is not a "technology gap" in the broad sense (Diella demonstrates high technical capacity), but a specific lack of tourism data infrastructure, precisely the minimum prerequisite without which any future application of AI for sustainability purposes would simply be technically impossible, regardless of political will or the capacity of AI itself.

5.5 Synthesis

Synthesized, the comparison suggests a three-stage model, not yet fully explored by Albania: (1) general administrative digitalization widely achieved; (2) sector-specific data infrastructure (tourism) at an early stage, explicitly identified as a gap by the EU itself; (3) applying AI on this data for measurable sustainability outcomes is still theoretical/aspirational, as in the case of the EU itself. Albania is mainly between stages (1) and (2), while the EU, despite its institutional and financial advantage, itself remains mainly between stages (2) and (3) without fully passing it.

6. Discussion

6.1 Reconceptualizing the "Gap" between the EU and Albania

The central finding of Section 5 requires a reconceptualization of the very nature of the EU–Albania comparison. The literature usually treats this type of comparison according to the "catching-up" logic (progressive approximation of a candidate country to a mature standard). This paper shows that the logic is more complicated: in the specific case of the digitalization–sustainability nexus in tourism, the EU standard itself (Transition Pathway for Tourism) remains conceptually imperfect as the criticisms of Torkington et al. demonstrate. (2020), Jones (2023), and Kovacic et al. (2024). This means that Albania is not simply following a proven model towards a clear goal; is following a model that its creator (the EU) has not yet fully operationalized. The practical implication for Albanian policymaking is twofold: on the one hand, this should not be used as an excuse for inaction; on the other hand, it offers the real possibility that Albania, precisely because it starts from a smaller institutional base and is less "locked-in" to existing practices, can draft more precise instruments than the EU itself, instead of simply importing them without adapting them.

6.2 The Sequence of Digitalization and the Danger of "Technology Without Foundation"

The fact that Albania has achieved a high level of administrative digitalization before building a tourism-specific data infrastructure (expressly identified as a gap by the EU) creates a concrete risk: the country's technological capacity risks being oriented towards applications with high political visibility (such as Diella, linked to signaling EU membership and the fight against corruption) instead of sectoral applications that are more politically "invisible" but structurally more necessary for the sustainability of tourism (integrated visitor registers, real-time environmental monitoring systems for overtourism areas). This is a particular form of what may be termed "technology without foundation": advanced AI capacity (Azure/OpenAI) placed on top of a sectoral data infrastructure that is not yet fully developed.

6.3 The Potential Role of Artificial Intelligence: From Rhetoric to Mechanism

In line with the theoretical framework established in Section 2.2, this comparison strengthens the central argument of the paper: AI should not be conceptualized as an automatic consequence of digital investment, but as a possible, structurally conditioned mechanism. The structural condition identified here in a concrete way is the existence of sectoral data infrastructure, precisely what the EU has officially marked as a deficiency in Albania. This leads to a clear conceptual proposition, formulated in policy terms (not yet empirically tested): without tourism-specific data infrastructure, AI cannot function as a mediator towards green outcomes, regardless of the overall level of national capacity in AI. This hypothesis clearly establishes the necessary policy sequence: first data infrastructure, then sectoral AI applications, and only later measurement of environmental effects, not vice versa.

6.4 Implications for Albanian Policymaking

Three concrete policy implications arise from the comparison. First, the ongoing Chapter 10 and Chapter 20 negotiations offer a concrete institutional window to condition funding and technical assistance specifically towards building tourism data infrastructure, rather than having future resources focus primarily on expanding AI applications in central administration. Secondly, the experience of Diella, despite its legal and institutional challenges, which remain outside the focus of this paper, shows that Albania possesses technical capacity and partnerships (Microsoft/OpenAI) that could theoretically be reoriented towards tourism sector applications, if the political will exists to do so. Third, the fact that the EU itself has failed to fully operationalize the “dual transition” in tourism means that Albania has real space, institutionally driven by active negotiations, to contribute itself to shaping concrete practices, rather than simply being a passive recipient of a still-evolving model.

6.5 Limitations of this Discussion

This discussion remains, as emphasized in the methodological sections, based entirely on document analysis and not on primary empirical evidence. The implications presented here are therefore hypotheses informed by official documents, not statistically tested conclusions, a distinction that is explicitly reaffirmed in Section 7.

7. Conclusions, Limitations, and Future Research

7.1 Conclusions

This paper compared the digital transformation policies of the European Union and Albania, as they relate to sustainable tourism, using a qualitative comparative analysis based entirely on official policy documents. Four main conclusions emerge from the analysis:

First, the EU has developed an increasingly integrated policy architecture for the digitalisation–sustainability nexus in tourism, more concretely formalised in the Transition Pathway for Tourism (2022), but this framework itself remains conceptually imperfect, lacking a clear operational definition of “sustainability” and a specified mechanism linking digital investment to measurable environmental outcomes.

Second, Albania has achieved rapid and visible progress in the digitalization of public administration in general, but this progress has not been accompanied by parallel development of data infrastructure specific to the tourism sector, a gap officially identified by the European Union itself in its Common Position for accession negotiations (Council of the European Union, 2025b). Third, this sequential divergence creates the risk that Albania's high technical capacity in AI will remain disconnected from the concrete needs of tourism sustainability, unless deliberate policy steps are taken to redirect this capacity towards the sector.

Fourth, the ongoing accession negotiation process (Chapter 10 and Chapter 20) offers a concrete and timely institutional window to address these gaps.

7.2 Implications for Policymaking

Based on the above findings, the paper recommends that the Albanian authorities (Ministry of Tourism and Environment, NAKSHI, and institutions responsible for accession negotiations) prioritize the construction of tourism data infrastructure as a necessary prerequisite before further expanding AI applications in the public sector unrelated to tourism. At the same time, funding available through the EU pre-accession framework should be explicitly channelled towards this specific sectoral infrastructure.

7.3 Restrictions

This study has several methodological limitations that should be explicitly highlighted. First, the analysis is based exclusively on publicly available policy documents and secondary reporting, not primary data, and therefore cannot claim to capture actual implementation practice beyond what is officially documented. Second, the study does not measure actual environmental outcomes attributable to digitalization, neither in the EU nor in Albania; any proposed link between AI and green outcomes remains a hypothesis informed by literature and documents, not a causally tested assertion. Third, some developments discussed (Diella's status, progress of accession negotiations) are evolving rapidly and the information presented here reflects the known state of affairs at the time of writing; readers should verify these details against up-to-date official sources. Fourth, although the EU corpus includes

several strategic and legislative documents, the comparison relies most heavily on the Transition Pathway for Tourism as the only tourism-specific EU document, and does not examine a broader sample of national practices within the EU itself, which would have better reflected the real heterogeneity between member states (as evidenced by the findings of Bianchini et al., 2023, on regional variation in effects).

7.4 Future Research

The above limitations open up concrete research directions. The most immediate study needed would be to empirically test the hypothesis formulated in Section 6.3 whether tourism data infrastructure functions as a necessary condition for AI to successfully mediate between digitalization and green practices through quantitative data from Albanian tourism businesses (e.g. PLS-SEM modeling). Further studies could focus on regional comparisons within the Western Balkans (North Macedonia, Montenegro, Serbia), to test whether the sequential pattern identified here is a general characteristic of candidate countries, or specific to Albania.

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