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LE INTELLIGENZE AZIENDALI PER LA COMPETITIVITÀ SOSTENIBILE E IL BENE COMUNE

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Lettera del presidente

Il XLI Convegno Nazionale di AIDEA è stato un'importante occasione di confronto sulle profonde trasformazioni che stanno interessando le imprese, le istituzioni, la società e naturalmente anche le università e le nostre discipline economico-aziendali.
La crescente diffusione dell'intelligenza artificiale sta imprimendo ai processi economici, organizzativi e sociali una velocità di cambiamento senza precedenti. Essa modifica le modalità attraverso cui si genera e si utilizza la conoscenza, si assumono le decisioni, si organizzano le attività e si costruiscono le relazioni con i diversi portatori di interesse: in sintesi, come si genera, si comunica e si distribuisce valore. La rapidità del progresso tecnologico non deve, tuttavia, farci dimenticare che la tecnologia non è mai del tutto neutrale: incorpora scelte, criteri, priorità e visioni della società. L'intelligenza artificiale deve rimanere uno strumento al servizio della responsabilità e della libertà umane, senza trasformarsi in un criterio autonomo e impersonale al quale delegare decisioni che incidono sulla vita delle persone e delle comunità.
Ciò richiede trasparenza, responsabilità e capacità di controllo, ma soprattutto la piena riconoscibilità della Governance aziendale cui compete la decisione finale. Le possibilità offerte dagli algoritmi non possono attenuare la responsabilità di chi progetta, governa e utilizza tali sistemi all'interno delle imprese e delle organizzazioni. In questa prospettiva, il bene comune non rappresenta un limite esterno all'innovazione, ma il suo criterio più alto di orientamento. Le imprese sono chiamate a concorrervi attraverso scelte che sappiano armonizzare competitività, sostenibilità, rispetto della persona e responsabilità verso le generazioni future. La loro capacità di perdurare non può essere separata dal contributo che offrono in termini di valore economico e di tutela del patrimonio umano, sociale e ambientale nel quale operano.
Gli studi raccolti in questi Atti testimoniano la vitalità della comunità italiana delle aziendaliste e degli aziendalisti, una comunità che ha sempre saputo confrontarsi con le trasformazioni del proprio tempo senza rinunciare alla solidità delle proprie centenarie radici scientifiche e alla responsabilità del proprio ruolo. È proprio dalla capacità di coniugare tradizione e innovazione, rigore metodologico e apertura interdisciplinare, che può nascere un contributo autorevole alla comprensione del presente e alla costruzione del futuro.
Nel corso di una storia più che bicentenaria, AIDEA e la tradizione scientifica che essa rappresenta hanno attraversato profonde trasformazioni ed anche diverse rivoluzioni industriali. Con il medesimo spirito, la nostra Accademia saprà continuare ad essere una comunità scientifica aperta, responsabile e capace di proiettarsi positivamente nel futuro, contribuendo a orientare anche la nuova rivoluzione che interessa le intelligenze aziendali.

Il Presidente

Gennaro Iasevoli

Il convegno

La celebrazione del XLI Convegno dell'Accademia Italiana di Economia Aziendale si è confermata un'eccellente opportunità per un ampio ed aperto confronto scientifico fra studiose e studiosi di discipline aziendali su temi che animano un dibattito accademico e culturale vivacissimo ed ormai giunto a un livello di maturazione e approfondimento tale da richiedere sintesi teoriche unitarie che si rivelino utili a integrare i paradigmi interpretativi utilizzati dai cultori delle discipline aziendali per condurre i loro studi e orientare l'agire manageriale.

L'amplissima partecipazione di socie e soci, la più alta mia registratasi da quando AIDEA ha adottato il nuovo modello di governance, è stata la dimostrazione più evidente dell'interesse per la tematica del Convegno e della crescente attenzione che le nostre comunità mostrano per le iniziative scientifiche di altro prestigio che AIDEA promuove con impegno e costanza.

Il successo del Convegno è il risultato di uno sforzo collettivo che ha richiesto l'impegno di numerosissime Colleghe e Colleghi e del numeroso ed efficiente staff dell'Università Cattolica del Sacro Cuore di Milano. Tutte le persone coinvolte, ciascuna nel proprio ruolo, hanno apportato un contributo importante nell'esclusivo interesse di AIDEA. Il consiglio direttivo, il comitato scientifico, il comitato organizzativo i coordinatori e i componenti delle track, le chair persons, i relatori e le relatrici, gli illustri ospiti della seduta plenaria e della track del Journal of Management and Governance, i dottorandi e le dottorande che hanno animato le attività precongressuali.

Il Convegno è stata un'occasione per riflettere sulle sinergie tra intelligenza artificiale e intelligenze aziendali. Se le intelligenze aziendali sono messe al servizio della generazione di valore, se la collaborazione e l'integrazione fra componente umana e artificiale genera maggiore valore, se le aziende restano al servizio "dell'uomo", è cruciale che questo maggior valore sia non solo generato, ma anche misurato, rendicontato ed equamente condiviso. Evidentemente non si tratta solo di valore in senso strettamente finanziario. In particolare, le nuove conoscenze generate dall'interazione delle intelligenze aziendali dovrebbero essere appannaggio di tutti per non rendere impari le relazioni economiche. La proposta di modelli teorico-interpretativi e di soluzioni operative per affrontare efficacemente anche le problematiche appena richiamate è un ulteriore impegno culturale che, grazie anche a questo Convegno, aziendaliste e aziendalisti hanno di mostrato di sapere assumere. Nell'esercizio del loro sforzo teorico, per accademiche e accademici, è utile tenere a mente l'ammonimento di Ursula Franklin: "La fattibilità della tecnologia, come la democrazia, dipende alla fin fine dalla pratica della giustizia e dall'imposizione di limiti al potere".

Riccardo Mussari

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INDICE DEI FULL PAPERS

Track 1: CREARE VALORE PUBBLICO SOSTENIBILE: SFIDE E OPPORTUNITÀ PER IL MANAGEMENT

Le aziende di trasporto pubblico locali tra assetto proprietario e strategia ESG: un'analisi empirica

Federica Ricci, Gaetano della Corte, Vincenzo Scafarto, Angela Oksana Fiorella, Leonzio Capparelli

Understanding Readiness for Accrual Accounting in Italian Municipalities: Results from a Large-Scale Survey

Francesco Badia, Maria Carmela Serluca

Track 13: STRATEGIE, GOVERNANCE E ACCOUNTING PER LE AZIENDE E I NETWORK TURISTICI: LE SFIDE DELL'AVVENTO DELL'AI E DELLA SOSTENIBILITÀ

Circular Economy in the Tourism Industry: from Drivers and Barriers to Collective Intelligence

Francesca Gennari[1], Alex Almici[2], Luisa Bosetti[3], Raffaella Cassano[4], Tommaso Fornasari[5]

Abstract
Purpose:
This study investigates how the Circular Economy (CE) is conceptualized within the tourism sector. Specifically, it examines the extent to which current academic contributions present a fragmented or integrated understanding of CE drivers and barriers, organized across three criteria interpreted as expressions of distinct yet interrelated forms of business intelligence that should converge within collaborative organizational contexts.
Methodology:
By conducting a systematic literature review and a qualitative content analysis of academic articles, the study identifies and classifies the key drivers and barriers influencing CE adoption according to three criteria (governance, stakeholder relations, and innovation).
Findings:
Findings reveal that innovation and stakeholder relations are widely addressed in the existing literature, whereas governance remains underexplored. Furthermore, only a limited number of studies adopt a comprehensive perspective that integrates all three dimensions of business intelligence.
Managerial implications:
From a managerial standpoint, the study provides insights into how internal organizational intelligences can be aligned with external enablers to support CE implementation, particularly within SMEs.
Research limitations:
As with most systematic literature reviews and qualitative content analyses, the study is subject to inherent methodological limitations concerning article selection, interpretation, and generalizability.
Originality:
This paper offers an analytical lens for interpreting CE practices in service-based industries and emphasizes the need for more holistic and integrated approaches that harmonize technological, relational, and governance intelligences.

Keywords: Sustainable Tourism; Circular Economy; Governance; Relations; Innovation

1. Introduction

In recent years, the Circular Economy (CE) has gained prominence as a key paradigm driving the transition toward more sustainable models of production and consumption. In contrast to the traditional linear approach characterized by the "take, make, dispose" logic, the CE aims to preserve the value of products, materials, and resources within the system for as long as possible, thereby minimizing waste generation and environmental impacts. Although circular principles

[1] Associate Professor, ECON-06/A, Università di Brescia; francesca.gennari@unibs.it – corresponding author

[2] Associate Professor, ECON-06/A, Università di Brescia; alex.almici@unibs.it

[3] Associate Professor, ECON-06/A, Università di Brescia; luisa.bosetti@unibs.it

[4] Associate Professor, ECON-06/A, Università di Brescia; raffaella.cassano@unibs.it

[5] Researcher, ECON-06/A, Università di Brescia; tommaso.fornasari@unibs.it

have been extensively studied and applied within manufacturing contexts, their implementation across service sectors, and particularly within the tourism industry, remains relatively underexplored.

In this paper, the term "tourism" is used as an overarching concept encompassing the hospitality industry, one of its core components. This integrated perspective captures the systemic nature of tourism dynamics and enables a more holistic understanding of CE practices across the entire tourism ecosystem.

The tourism sector plays a crucial role in both global and local economies, contributing to employment generation, wealth creation, and territorial development. At the same time, it exerts significant environmental pressures due to intensive resource consumption, waste production, and the inherent complexity of its operations (Voukkali et al., 2023). Integrating CE principles into tourism practices can help mitigate these impacts, foster sustainable business models, and encourage a regenerative approach to service design and delivery. Nevertheless, the adoption of CE in service industries differs substantially from its application in manufacturing contexts (Sehnem et al., 2019).

Despite its potential benefits, the transition toward circularity in tourism remains complex and challenging. There is a persistent risk that circular initiatives may be confined to greenwashing or used merely as marketing tools, rather than being genuinely embedded within core business strategies (Opferkuch et al., 2023). For circular practices to be both effective and enduring, they must be strategically conceived and systematically integrated with key organizational dimensions such as governance, stakeholder engagement, and innovation capabilities (Jones & Wynn, 2019).

The transition towards CE models in tourism can be interpreted also as an expression of business intelligences, namely that form of collective intelligence which emerges in organizational contexts through the conscious collaboration among multiple actors and capabilities. From this perspective, the ability to develop, harmonize, and govern these business intelligences together represents an essential condition for ensuring long-term economic value and for enhancing the environmental, social, and cultural heritage of tourist destinations.

By examining how circular strategies are currently conceptualized and implemented, this study seeks to provide actionable insights for both scholars and practitioners striving to align environmental ambitions with coherent business transformation. The findings aim to inform more effective policy and managerial frameworks that can support a transition from superficial and fragmented adoption toward deeply embedded organizational change.

Building on this premise, the present review seeks to identify and map the key criteria that shape decision-making processes in the implementation of CE practices as both drivers or barriers, and to assess whether the existing academic literature adopts a fragmented or an integrated perspective.

To this end, we first identified the main drivers and barriers to the adoption of CE practices as discussed in the existing literature. These elements were then clustered into three foundational pillars (governance, stakeholder relations, and innovation) which, according to previous studies, are essential for enabling a strategic and integrated transition toward circularity in the tourism sector. These pillars are distinct yet interrelated forms of business intelligence that collectively shape organizational learning and transformation.

Building on this framework, the paper examines the extent to which current academic contributions adopt an integrated perspective, specifically exploring whether and how the literature addresses the interconnections among these three dimensions in the context of CE implementation within tourism firms.

2. Literature review and state of the art

The CE represents a paradigm shift from the linear "take, make, dispose" model toward regenerative systems that decouple growth from resource depletion. This transition is increasingly urgent in the face of resource scarcity, environmental degradation, and climate change. As Homrich et al. (2018) note, CE offers a win–win framework by recognizing value throughout the value chain.

First conceptualized by Pearce and Turner (1990) and later popularized by the Ellen MacArthur Foundation (2013) with the so-called 'butterfly diagram', CE is defined in ISO 59010:2024 as an economic system that maintains circular resource flows while contributing to sustainable development (International Organization for Standardization (2024). Yet, despite this definition, more than 220 variants of the concept exist (Kirchherr et al., 2023), reflecting the absence of standardized terminology. The CE has evolved from the original "3Rs" (Reduce, Reuse, Recycle) to broader "R-strategies" that may include up to 10Rs (Potting et al., 2017) or even 100Rs (Zorpas, 2024), each addressing specific dimensions of circularity.

While CE research has largely focused on manufacturing, its application in service sectors remains limited. The service-dominant logic (Lusch & Vargo, 2014) emphasizes value co-creation over ownership, but CE studies often confine services within product-based frameworks such as Product-Service Systems (PSS) or Product-as-a-Service (PaaS), underestimating their independent potential for circularity (Fehrer & Vargo, 2023). Implementing CE in services like tourism, IT, and education is challenged by intangibility, difficulty in measuring circularity, and the lack of shared frameworks (OECD, 2019). Success also depends heavily on consumer behavior during products' life cycle and willingness to adopt circular goods and services (Zimmerman et al., 2024).

Tourism plays a central role within this context due to its economic weight and ecological impact. In 2023, it accounted for about 3% of global GDP, generating $8.6 trillion in spending and 357 million jobs (UNWTO, 2024; McKinsey, 2024). However, the sector's heavy resources use, CO_2 emissions, and waste generation, intensified by over-tourism situation, create significant environmental and social pressures. The concentration of 80% of travelers only 10% of world destinations (McKinsey, 2024) results in overcrowding, strained infrastructure, environmental degradation, and communities' stress.

Integrating CE principles into tourism offers an opportunity to enhance resource efficiency, foster regeneration, and create meaningful guest experiences (Einarsson & Sorin, 2020). In fact, the active role of tourists in shaping their experiences suggests that behavioral engagement is vital for circular transformation (Sørensen & Bærenholdt, 2020). Nonetheless, despite growing awareness of sustainability challenges, CE research in tourism remains fragmented (Alharethi et al., 2024). Most studies focus on 3R practices - Reduction, Reuse, and Recycling - alongside Repair and Recovery, mainly addressing waste, emissions, and resource efficiency (Arzoumanidis et al., 2020; Kaszás et al., 2022; Maines da Silva et al., 2021; Costa et al. 2024; Li et al., 2024; Strippoli et al., 2024). Emerging work highlights more innovative strategies (as Rethink, Redesign, Repurpose) that promote regenerative design and systemic transformation (Kaszás et al., 2022; Vardopoulos et al., 2023).

Nonetheless, the shift toward circular new service model presents considerable complexity. Although extensive academic research has examined the drivers and barriers influencing CE initiatives (Bassi & Dias, 2020; Falcone, 2019; Kirchherr et al., 2018; Rizos et al., 2017; Scipioni, 2021), the tourism industry remains relatively underexplored in this context. This gap underscores the need for additional studies to better understand how CE principles can be effectively implemented within the sector (Alharethi et al., 2024; Del Chiappa & Fotiadis, 2019).

The complexity faced by the tourism industry in its circular transition is partly due to the fact that SMEs account for around 80% of the sector (Kukanja et al., 2020), and often operate under resource constraints, limited expertise, and short-term priorities (Ahmadov et al., 2025; Salvioni et al., 2022). Previous studies on SMEs have shown that these organizations can also gain significant advantages by adopting an integrated perspective on the transition to a CE. This means

moving beyond a fragmented view that treats drivers and barriers as isolated enabling or hindering factors, and instead recognizing them as decision-making criteria linked to the core pillars that should guide a strategic shift toward circularity. Achieving long-term success and realizing the full benefits of circular practices requires a strategic business orientation grounded in governance, stakeholder engagement, and innovation (Gennari, 2023). Although earlier research on SMEs and the CE often overlooked this systemic perspective (Zhu et al., 2022), more recent studies increasingly acknowledge these pillars as fundamental to advancing sustainable production and consumption models within small and medium-sized enterprises.

Governance shapes strategic direction but is often weak in SMEs, where risk aversion and limited planning hinder CE adoption (Kirchherr et al., 2018; Singh & Pillai, 2022). Strong leadership and vision, however, can foster a circular culture (Ahmadov et al., 2025).

Stakeholder relations enable collaboration across value chains, promoting resource sharing, co-creation, and legitimacy (Oberholzer & Sachs, 2023; Rizos et al., 2017; Salvioni & Almici, 2020; Baah et al., 2021).

Innovation acts as both a foundation and driver of circularity, transforming products, processes, and business models (Skare et al., 2024; Suchek et al., 2021). Innovation capacity depends on leadership, organizational culture, resources, and networks (Saunila, 2020), which are also central to tourism competitiveness (Cong & Thu, 2021; Nguyen et al., 2021; Shi & Xiao, 2024).

Without integrating these three dimensions, CE efforts risk remaining fragmented or performative, resulting in greenwashing rather than genuine transformation.

In summary, the CE provides a transformative pathway to reconcile economic prosperity with environmental stewardship. Tourism, given its scale, complexity, and cross-sectoral nature, holds strong potential to pioneer circular innovation. Achieving this, however, requires conceptual clarity, standardized frameworks, and strategies tailored to SMEs. Emerging literature also invites us to consider tourism as a cognitive ecosystem in which business intelligences act interdependently: tourist enterprises, guests, and local communities share, through relations, knowledge, practices, and values that fuel a process of collective learning.

Only through the capability to realize forms of coordinated governance, to activate stakeholder collaboration, and to make business with an innovation-driven leadership tourism - and, more broadly, service economies – can advance toward truly circular and sustainable development. This study contributes to that goal by addressing two research questions:

RQ1: What key criteria influence decision-making processes regarding the adoption of CE practices in the tourism industry, considering both drivers and barriers?

RQ2: Does the academic literature on CE in tourism adopt a fragmented or integrated perspective?

3. Research methodology

To address the research questions, we employed a four-stage methodology. First, a systematic literature review (SLR) was conducted in accordance with the PRISMA protocol to ensure transparency and replicability in identifying relevant studies. Second, emerging criteria from the analysis were organized and systematized. Third, these criteria were classified under three analytical pillars (governance, stakeholder relations, and innovation) to enable structured mapping. Finally, a comparative synthesis evaluated the degree to which the literature adopts an integrated perspective on CE in tourism, examining whether individual studies concurrently address drivers and barriers across all three pillars.

PRISMA analysis

To examine the main drivers and barriers influencing the adoption of CE practices in the tourism industry, we conducted a SLR following the PRISMA protocol (Page et al., 2021). The search, carried out in January 2024 on the Scopus database (chosen for its broad coverage of peer-reviewed research) used the keywords "circular economy" AND "tourism" and "circular economy" AND "hospitality" applied to titles, abstracts, and keywords. Inclusion criteria restricted results to peer-reviewed journal articles in English available in full text and classified under Business, Management and Accounting, Social Sciences, and Economics, Econometrics and Finance. We excluded abstracts, editorials, book reviews, inaccessible papers, and non-English publications.

Article selection followed three stages: (1) initial screening to remove inaccessible papers; (2) review of titles and abstracts to exclude irrelevant studies; and (3) full-text assessment of the remaining works, summarized through a PRISMA flow diagram. From each selected study, key information was extracted: authors, year, study type (framework, review, case study, or business model), level of analysis (macro, meso, micro), geographical focus, and research method (qualitative, quantitative, mixed). These data formed the basis for identifying and categorizing criteria aligned with the research questions.

To maintain conceptual coherence, the review focused exclusively on private-sector tourism businesses, particularly within the hospitality and accommodation subsector. Public bodies, cultural institutions, and destination management organizations were excluded to ensure the analysis concentrated on firm-level CE strategies in private enterprises.

Emerging criteria

After selecting the final sample of studies, the second phase of the methodology aimed to address RQ1. To this end, each article was thoroughly analyzed to identify all explicit or implicit criteria influencing the adoption of CE practices, including both drivers and barriers at organizational, sectoral, or systemic levels.

An inductive approach was used, allowing criteria to emerge directly from the literature without predefined categories. Each study was fully reviewed, and relevant factors were manually extracted, preserving the authors' original wording and contextual nuances.

The identified criteria were first described individually in terms of definition, influence mechanisms, and relevance to the hospitality sector. Similar or overlapping concepts were then grouped through thematic clustering to synthesize information while retaining the diversity of perspectives.

This process produced a structured list of key criteria forming the basis for subsequent analysis, where these elements were aggregated to create an analytical map and categorization of factors affecting CE adoption in the tourism industry.

Comparative synthesis

After selecting the final sample, the second phase addressed RQ1 through an in-depth analysis of each study to identify criteria influencing the adoption of CE practices. Both drivers and barriers were considered across organizational, sectoral, and systemic levels. Using an inductive approach, criteria were derived directly from the literature, with key elements manually extracted while maintaining the authors' original meaning and context.

Each criterion was initially described in terms of definition, influence mechanisms, and relevance to the hospitality sector. Overlapping concepts were then merged through thematic clustering, producing a structured list of key factors forming the basis for subsequent analytical mapping and categorization of CE adoption drivers and barriers in tourism.

To address RQ2, a comparative synthesis of the classified criteria was conducted to evaluate the comprehensiveness of each study. The 64 reviewed articles were examined to determine

whether they addressed all three analytical pillars (governance, stakeholder relations, and innovation) or focused on specific dimensions. Particular attention was given to studies integrating multiple criteria across these pillars, indicating a holistic understanding of CE adoption dynamics.

4. Results

4.1. Descriptive analysis

Following the defined methodology, the systematic literature review initially identified 124 articles. A preliminary screening excluded 12 inaccessible or non-full-text papers from the Scopus database. A subsequent title and abstract review removed 41 irrelevant studies, and a final full-text assessment led to the exclusion of 7 articles not directly related to the research focus (Fig. 1).

The systematic literature review included 64 articles published between 2016 and 2024 (Annex 1). Most studies appeared after 2019 (61 articles, 95.3%), with a peak in 2022, reflecting growing scholarly interest in CE implementation within tourism. This surge likely stems from the global expansion of CE-related laws, regulations, and guidelines influencing business practices.

Regarding research design, case studies dominated (30 articles, 46.9%), highlighting the need to understand how hospitality firms apply the relatively new CE concept. 15 studies (23.4%) consisted of conceptual or framework-based papers (23.4%), 11 were literature reviews (17.2%), and 8 examined circular business models (12.5%).

Over half of the papers (34, accounting for 53.1%) focused on firm-level (micro) analyses, while 12 (18.8%) examined networks or supply chains (meso level) and 18 (28.1%) addressed macro-level perspectives. Additionally, 26 articles (40.6%) analyzed CE implementation within specific geographic contexts.

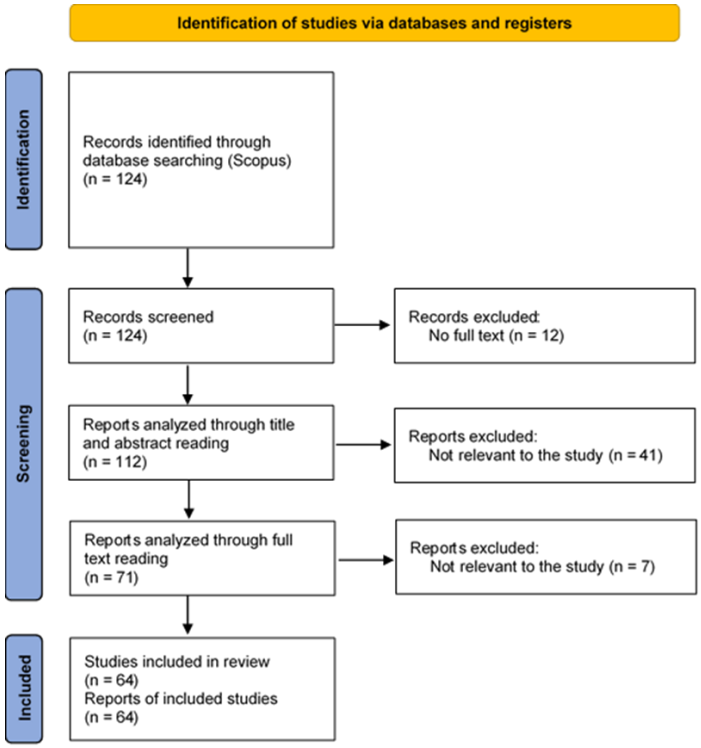

Figure 1. Identification of studies to include in the SLR according to PRISMA

In line with the prevalence of case studies, qualitative methods - used in 44 papers (68.8%) – were the most commonly employed, followed by quantitative techniques (17 articles, representing 26.6%) and mixed approaches (3 papers, accounting for 4.7%).

4.2. Content analysis

The literature identifies many criteria influencing the adoption of CE practices in the hospitality and accommodation sector, categorized as drivers, barriers, or mixed factors.

Key drivers include actors' mindset, economic incentives from efficient resource use, and collaboration, particularly among firms in geographically isolated or disadvantaged areas. The effectiveness of CE strategies depends strongly on guests' cultural openness to sustainable tourism, reflected in their growing demand for eco-friendly mobility, low-impact accommodations, and authentic experiences (Annex 1: articles 7, 9, 10, 17, 27, 31, 32, 39, 41, 42, 46, 55, 59, 60, 64).

On the supply side, eco-design enhances circularity by promoting reusable, recyclable, and repairable solutions such as modular structures and adaptable furnishings (Annex 1: articles 3, 4, 22, 33, 38, 44, 58). Economic convenience remains a major motivator, as CE practices lower costs through improved energy efficiency, optimized resource use, and waste reduction, while creative reuse of materials (e.g., upcycled furniture) strengthens local identity (Annex 1: articles 1, 4, 7, 11, 14, 24, 31, 38, 39).

Employee engagement also supports CE adoption, achieved via sustainability training and participatory, incentive-based organizational models (Annex 1: articles 7, 48, 61). Operationally, energy management and renewable sources, such as solar and wind, serve as core enablers (Annex 1: articles 8, 17, 18, 29, 30, 33, 37, 42, 50, 55). Procurement practices further contribute when hotels prioritize biodegradable, modular, and reusable products (Annex 1: articles 3, 19, 30, 33). Finally, in island contexts, inter-island cooperation facilitates CE implementation by addressing shared environmental and logistical challenges (Annex 1: article 59).

Despite growing attention to sustainability, the transition to a circular economy (CE) in hospitality is hindered by a network of barriers involving market dynamics, financial constraints, regulatory shortcomings, supply chain fragmentation, and organizational culture.

On the demand side, a key obstacle is tourists' low willingness to pay for circular products. Although sustainability awareness is rising, many consumers remain price-sensitive and reluctant to change habits, limiting demand to niche markets (Annex 1: articles 9, 24, 27, 31, 39, 55, 57). Perceived quality issues further complicate adoption, as guests may associate circular practices, such as eco-showers or water-saving systems, with lower service standards (Annex 1: articles 9, 11, 16).

Economic factors pose another major challenge. High upfront investments, labor-intensive waste treatment, lack of scale, and costly reverse logistics discourage CE implementation (Annex 1: articles 1, 4, 7, 11, 14, 19, 24, 31, 38, 39, 44). Assessing CE feasibility is equally difficult due to complex cost-benefit analyses and limited access to tools like Life Cycle Assessment (LCA), especially for SMEs (Annex 1: articles 2, 5, 11, 16, 27, 39, 44). Technological limitations (as expensive, non-adaptable, or outdated systems) further restrict progress (Annex 1: articles 22, 31, 39, 60).

Governance weaknesses exacerbate these issues. Many destinations lack financial incentives, targeted policies, and training programs for CE in tourism, while existing measures often suffer from bureaucracy, fragmented regulations, and poor enforcement particularly in waste management (Annex 1: articles 5, 7, 11, 13, 22, 28, 34, 39, 43).

Within the supply chain, fragmented networks, scarce certified suppliers, and weak collaboration mechanisms hinder coordination and transparency, impeding traceability and shared circular objectives (Annex 1: articles 2, 4, 20, 22, 31, 39, 40, 43, 54, 55, 62, 63).

Finally, organizational and human capital barriers persist. The shortage of CE experts and limited training opportunities constrain internal capabilities, while cultural resistance to change, reinforced by rigid hierarchies and short-term performance metrics, discourages long-term sustainability planning. Similarly, shareholder pressure for quick returns, particularly in franchised models, often overrides environmental priorities (Annex 1: articles 15, 27, 35, 39, 45).

The transition of hotels and other accommodations toward a CE depends on the complex interaction of the cited drivers and barriers spanning technological, environmental, organizational, and socio-political domains.

Technological factors are pivotal. Digital tools and smart systems can promote reuse, upcycling, and sustainable behavior, yet they are often applied for short-term goals rather than integrated CE strategies (Annex 1: articles 9, 20, 22, 38, 52, 54, 61). Expert support is therefore crucial, as hospitality firms typically lack in-house technological capabilities; guidance enables effective use of innovations such as solar panels or wastewater systems (Annex 1: articles 1, 4, 7, 36, 61, 62). However, limited technical knowledge, inadequate training, and inconsistent understanding of CE principles remain major barriers (Annex 1: articles 9, 16, 24, 27, 31, 44, 60). Conversely, managerial empowerment and environmental awareness can strengthen leadership commitment to circular practices (Annex 1: articles 6, 7, 14, 26, 27).

At the organizational and stakeholder level, CE adoption is often slowed by fragmented responsibilities and low trust among actors. Nevertheless, partnerships between universities, businesses, and public authorities can stimulate innovation and align policy goals with business needs (Annex 1: articles 2, 16, 20, 27, 36, 39, 54, 55, 62). Transparency in environmental and financial reporting also enhances accountability and collaboration (Annex 1: articles 3, 9, 16, 43).

Local engagement emerges as a key enabler of circular tourism. Community participation fosters socially inclusive and culturally rooted practices, while awareness campaigns (e.g. doggy bags or shared waste platforms) encourage responsible tourist behavior (Annex 1: articles 2, 7, 11, 20, 21, 24, 27, 31, 33, 38, 42, 51, 52, 54, 55, 58). Certifications and heritage projects further support behavioral change by linking sustainability with reputation (Annex 1: articles 2, 20, 22, 47, 56, 58).

Environmental management remains central. Efficient waste sorting, reuse, adaptive building design, and sustainable water management - through low-flow devices, rainwater reuse, and treatment systems - significantly improve circularity (Annex 1: articles 1, 12, 18, 19, 23, 25, 26, 30, 37, 38, 44, 50, 53, 58, 60). The use of local, low-impact products also ties circularity to cultural authenticity (Annex 1: articles 9, 22, 24).

Economic concerns, however, frequently deter investment as CE initiatives involve high initial costs and uncertain returns (Annex 1: articles 16, 24, 39, 43, 60). Yet, growing awareness of the economic risks of environmental degradation should reinforce the need for protection and restoration (Annex 1: articles 22, 43, 54). Policy tools (pay-as-you-throw schemes or improved public transport) can incentivize sustainable behavior, reduce waste, and support low-impact mobility (Annex 1: articles 3, 17, 19, 49, 59).

Ultimately, achieving circularity in tourism requires a long-term, coordinated effort among institutions, businesses, communities, and tourists. Strengthening capacity, collaboration, and shared environmental values is essential for building a genuinely circular and sustainable hospitality industry.

5. Mapping criteria and discussion

To examine the level of integration among the three key pillars (governance, stakeholder relations, and innovation) for the transition toward sustainable production and consumption, the criteria identified in the literature were classified according to the mechanisms through which each enabling or hindering factor operates (Fig. 2).

The governance pillar includes decision-making structures, public policies, regulatory mechanisms, and institutional coordination frameworks that guide CE adoption through clear strategies, policy support, and incentives (Kirchherr et al., 2018). Therefore, the papers reviewed in this study were connected to the governance pillar if they addressed government support (or lack of public assistance) to the CE implementation in the tourism sector through financial backing, favorable tax policies and private-public cooperation.

The stakeholder relations pillar reflects the capacity of actors (businesses, institutions, communities, and consumers) to collaborate, align objectives, and coordinate actions through participation and interorganizational dialogue (Freeman, 1994). For this reason, the papers concerning changes in managers' and employees' mindset were related to the stakeholder relations pillar. The same applied to the scholarly contributions considering how suppliers, customers and society at large could either encourage the adoption of CE practices in tourism or slow it down. The studies emphasizing possible cooperation between tourism firms and CE experts were also associated with the stakeholder relations pillar.

GOVERNANCE	STAKEHOLDER RELATIONS	INNOVATION
1. Government support	1. Personal empowerment by managers	1. Economic convenience
2. Government support in waste disposal	2. Managers' environmental personal concern	2. Cost structure
3. Lack of CE support by the government	3. Clients' mindset change	3. Estimation of costs and benefits
4. Inefficient governmental structures	4. Employees' mindset change	4. Trade-off between sustainability and service quality
5. Waste tariff policy	5. Shareholders' mindset change	5. Inadequacy of existing technologies to support CE
6. Private – public cooperation	6. Managers' mindset change	6. Technological support by experts
7. Public transport strengthening	7. Lack of experts on CE to hire and CE training offerings	7. Hotels' purchasing behavior and leasing solutions
8. Interisland cooperation	8. Local community as a key actor	8. Energy management
	9. Key partners & multi-stakeholder approach	9. Water management
	10. Economic damage perception	10. Waste management
	11. Financial risks	11. Eco-design
	12. Transparency	12. Sustainable mobility
	13. Transparency in the value chain	13. Access to advanced technology
	14. Raising customers' awareness in waste management	14. Reverse logistics costs
	15. Sustainable recognition (reputation)	15. Empower supply chain / value chain
	16. Only niche markets for CE offerings	16. Sustainable products
	17. Consumers' low willingness to pay for CE offerings	
	18. (Lack of) knowledge and expertise	

Figure 2. Mapping of criteria emerging from the literature analysis to the three pillars

Lastly, the innovation pillar covers the development and implementation of new technologies, business models, and regenerative operational practices supporting circularity (Skare et al., 2024). In particular, the literature review identified evidence of the innovation pillar in the articles regarding product and service eco-design, hotels' green purchasing policies and leasing solutions, technologies for energy, water and waste management, reverse logistics, sustainable mobility, as well as the economic convenience of these innovative practices.

This classification helped to organize heterogeneous findings and provided an analytical basis to assess the degree of integration across the three pillars.

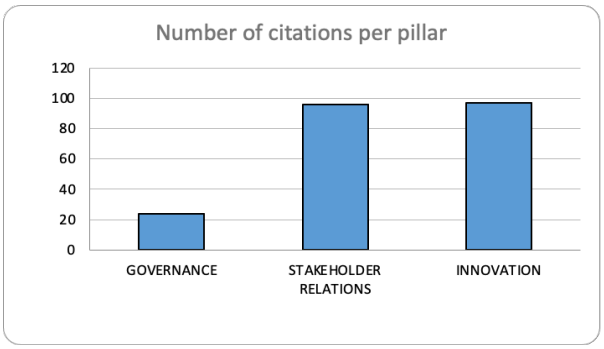

Figure 3. Mapping of criteria emerging from the literature analysis to the three pillars

The analysis reveals that the literature adopts a fragmented rather than integrated approach, emphasizing stakeholder relations and innovation, addressed respectively 96 and 97 times, while the governance dimension is comparatively overlooked (Fig. 3).

Hence, the existing literature predominantly concentrates on some main dimensions where both firms and tourists play a crucial role in promoting the diffusion of CE principles within the tourism sector. Through these dimensions, innovation and stakeholder engagement act as primary levers for spreading circular practices and fostering a mindset shift among relevant actors. The reviewed studies highlight that tourism firms acknowledge the pivotal role of innovation and collaboration in accelerating the transition toward CE models.

Innovation encompasses multiple facets, including product and process development, business model renewal, and strategic thinking, all of which require continuous adaptation to maintain competitive advantage. In particular, disruptive innovations, those that significantly alter existing business models, are identified as essential for achieving long-term success (Skare et al., 2024; Suchek et al., 2021). Within the tourism and hospitality industries, innovation is viewed as a critical driver for sustained performance improvement, enabling the introduction of new products and services, cost reductions, and enhanced customer satisfaction. Consequently, firms are encouraged to integrate innovation objectives into their strategic planning to access new markets, ensure profitability, and align with sustainability principles.

To achieve this, tourism firms must foster strategic partnerships and engage all relevant stakeholders in the pursuit of eco-innovation. In this framework, incremental innovation (often typical of small and medium-sized enterprises) should progressively give way to radical innovation, which can significantly shorten the transition process (Suchek et al., 2021). Innovation represents a distinctive capability of SMEs, allowing them to generate sustainable value by rethinking traditional business models, operational processes, and service offerings. Moreover, open innovation initiatives, which involve collaboration with multiple partners, are increasingly recognized as mechanisms for maximizing returns on research and development investments (Robayo-Acuña & Chams-Anturi, 2025; Saunila, 2020). This form of innovation closely intersects with the stakeholder relations dimension, as it relies on participatory processes among social actors to co-create new tourism products aligned with CE principles.

Similarly, an effective shift from the linear economy to a circular one demands the establishment of long-term stakeholder relationships, ensuring access to necessary resources and facilitating the alignment of consumer behavior with CE values (Oberholzer & Sachs, 2023; Rizos et al., 2017). Achieving this goal requires firms to generate value for all relevant actors through continuous engagement, collaboration, and dialogue. In this regard, hotels and hospitality businesses hold a particularly strategic position due to their flexibility and autonomy in allocating resources and shaping stakeholder interactions. The ability to define the nature and scope of these relationships allows them to capitalize on tourists' behaviors, which contribute actively to the development of circular practices. Tourists are not passive consumers but co-producers of tourism experiences, influencing service creation and delivery (Sørensen and Bærenholdt, 2020). Therefore, successful CE strategies depend on the creation of a virtuous feedback loop between firms and stakeholders, promoting mutual learning, behavioral change, and resource sharing.

The reviewed literature further reveals that only a limited number of studies (specifically 11 articles) adopt a truly cross-cutting perspective encompassing all three key pillars (innovation, stakeholder relations, and governance). Among these, the greatest emphasis is consistently placed again on innovation and stakeholder engagement. The focus on these two areas reflects an understanding of how voluntary actions by firms and tourists can enhance circularity and awareness within the sector.

In contrast, the governance dimension, which primarily involves external or institutional factors, receives considerably less attention, being cited only 24 times across the reviewed works. This imbalance underscores a conceptual limitation and the need for a more integrated framework that acknowledges the decisive role of governance in shaping CE adoption in hospitality and tourism. Effective circular transition cannot occur in isolation from supportive public policies, which include financial incentives, training programs, public-private cooperation, infrastructure development, and the reduction of bureaucratic inefficiencies. Governance thus plays a

fundamental enabling role by creating an environment that supports innovation and fosters productive stakeholder relationships aimed at protecting ecosystems and natural resources.

The relative neglect of governance is largely influenced by firm size. Most tourism businesses are SMEs, typically focused on day-to-day operations and networking with key actors, rather than on broader governance structures. Larger companies, by contrast, tend to integrate governance mechanisms into their sustainability strategies to achieve long-term resilience (Rizos et al., 2017). The limited attention of SMEs to governance stems from various factors: a lack of strategic and integrated vision, low risk exposure, weak commitment to circular values at the board level, minimal enforcement of corporate governance practices, and insufficient managerial expertise (Singh & Pillai, 2022). Many SMEs are still family-run and rely on internal financial resources, avoiding formal governance mechanisms to minimize risk (Romano et al., 2001). As a result, the implementation of CE practices among SMEs tends to be slower and more fragmented than in large corporations, which benefit from greater resources and more established sustainability cultures (Jain et al., 2024).

The absence of a truly integrated approach is further evident in the uneven scholarly attention given to the three pillars. Studies frequently emphasize either innovation or stakeholder relations, rarely addressing both comprehensively, and even more rarely incorporating governance. This fragmented focus limits the potential for developing effective, long-term strategies for sustainable value creation. Instead, what is needed is a holistic approach that aligns innovation, stakeholder engagement, and decision-making mechanisms within a coherent strategic framework.

The literature also confirms that the transition from a linear to a circular economy in tourism remains a gradual and ongoing process (Siegel et al., 2019). Initially, firms tend to focus on innovation and stakeholder relations as entry points, emphasizing efficiency, profitability, and competitive advantage while promoting environmentally responsible consumer behavior. These dynamics are strongly shaped by the small and medium scale of the firms under study, which are constrained by limited financial and managerial resources (Antony et al., 2016; Kukanja et al., 2020). Nevertheless, SMEs are recognized as key agents of change in the shift toward circularity, given their adaptability and proximity to local contexts. To fulfill this role, however, they must develop the necessary capabilities and secure adequate resources, leveraging their existing propensity for sustainability-oriented practices (Ahmadov et al., 2025).

Despite these strengths, the literature suggests that SMEs' efforts remain primarily concentrated on process and business model innovation and the development of long-term stakeholder relationships, while overlooking the critical role of governance as a strategic driver. This lack of awareness about governance as a facilitator of circular transformation highlights a cultural and managerial gap that must be addressed (Gennari, 2023).

Overall, the literature depicts a non-holistic perspective, where CE transition is framed through operational efficiency rather than systemic integration. Effective circular transformation requires a holistic, cross-cutting approach combining innovation, stakeholder engagement, and governance mechanisms to convert barriers into opportunities for shared value creation. In fact, in conceptual terms, the three pillars can be interpreted as complementary forms of business intelligence: governance represents institutional intelligence guiding collective decision-making; stakeholder relations embody social and relational intelligence; and innovation constitutes creative and technological intelligence. Their dynamic interplay enables the creation of adaptive, learning-oriented, and regenerative tourism systems.

6. Conclusion, limitations and future research directions

This study advances the academic debate on the CE in tourism by conducting a systematic literature review and qualitative synthesis of peer-reviewed articles. Moving beyond descriptive accounts of circular practices, it uncovers the mechanisms shaping decision-making within tourism firms. By classifying enabling and hindering factors across three dimensions –

governance, stakeholder relations, and innovation – the analysis reveals both the variety of influencing elements and the asymmetry in how they are treated in existing research. While innovation and stakeholder engagement receive extensive attention, governance remains notably underexplored, reflecting a persistent bias toward firm-centric, behavioral perspectives that overlook the institutional and structural conditions required for circular transformation (Kirchherr et al., 2018). This imbalance risks framing CE as a voluntary, market-driven practice rather than as a systemic transition demanding coordinated action across public and private domains.

The analytical framework proposed in this paper contributes to future research seeking to develop integrated models of CE implementation in service-based industries. It supports the notion that circularity should be viewed not as a discrete intervention or technological fix, but as a multidimensional transition in which governance mechanisms, stakeholder collaboration, and innovation dynamics are interdependent and mutually reinforcing. In light of the contemporary debate on business intelligences, the circular transition in tourism can be interpreted as a process of building collective intelligence, where people, technologies, and institutions co-create knowledge and value capable of delivering to future generations an improved environmental and socio-cultural heritage.

This aligns with broader debates on sustainability transitions, institutional change, and business policy co-evolution (Markard et al., 2012). Responding to recent calls for more theory-informed and holistic approaches to CE (Merli et al., 2018), the study encourages re-engagement with the conceptual foundations of circularity through the lenses of strategic management, organizational theory, and public governance. Advancing CE in tourism thus requires reframing 1949ta s a governance challenge, grounded in legitimacy, long-term vision, and cross-sectoral coordination.

The paper provides both a diagnostic and a foundation: it maps current research gaps and calls for more integrative frameworks capable of reflecting the complexity and ambition of CE transitions in tourism ecosystems. From a managerial perspective, the findings emphasize the alignment of internal capabilities (innovation and stakeholder engagement) with external enablers such as policy incentives, regulatory clarity, and infrastructure. For tourism firms, particularly SMEs, success depends not only on operational improvements but also on the ability to navigate and influence institutional frameworks. Managers are therefore urged to adopt a strategic orientation that embeds circularity into business models, fosters collaborative networks, and strengthens engagement with local communities.

Despite its contributions, this study has limitations. The literature sample, drawn exclusively from Scopus (as of early 2024), may omit relevant non-indexed, inaccessible or non-English studies. The focus on peer-reviewed articles excludes insights from grey literature and policy reports. Moreover, the classification of criteria into three pillars involves some interpretive subjectivity.

Future research should deepen the analysis of governance-related factors in CE adoption, exploring how policy design, institutional arrangements, and multilevel governance systems facilitate or constrain circular strategies. Expanding the analytical scope to encompass the broader contextual environment (sectoral, political, social, economic, and technological) would further clarify how these conditions shape the interaction between governance, stakeholder relations, and innovation in advancing circularity within tourism.

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Authors' contribution

Francesca Gennari: Literature review and state of the art
Alex Almici: Results; Mapping criteria and discussion
Luisa Bosetti: Results; Mapping criteria and discussion
Raffaella Cassano: Results; Mapping criteria and discussion
Tommaso Fornasari: Introduction; Research methodology; Conclusion, limitations and future research directions

References

Ahmadov, T, Durst, S, Gerstlberger, W, Kraut, E, 2025. SMEs on the way to a circular economy: Insights from a multi-perspective review. Management Review Quarterly 75(1), 289–322.

Alharethi, T, Abdelhakim, A, Mohammed, A, 2024. Drivers and barriers toward the circular economy in rural tourism destinations: A case study of Tunis village. Tourism and Hospitality 5(3), 639–656.

Antony, J, Vinodh, S, Gijo, EV, 2016. Lean Six Sigma for Small and Medium-Sized Enterprises: A Practical Guide. CRC Press, Boca Raton, FL.

Arzoumanidis, I, Mancini, E, Walker, AM, Petti, L, Raggi, A, 2020. Towards a definition of circular tourism: A literature review, in: Esposito, B, Malandrino, O, Sessa, MR, Sica, D (Eds.), Le Scienze Merceologiche nell'Era 4.0: Conference Proceedings AISME. pp. 44–52.

Baah, C, Afum, E, Agyabeng-Mensah, Y, Opoku Agyeman, D, 2021. Stakeholder influence on the adoption of circular economy principles: Measuring implications for satisfaction and green legitimacy. Circular Economy and Sustainability 2(1), 91–111.

Bassi, F, Dias, JG, 2020. Sustainable development of small- and medium-sized enterprises in the European Union: A taxonomy of circular economy practices. Business Strategy and the Environment 29(6), 2528–2541.

Cong, LC, Thu, DA, 2021. The competitiveness of small and medium-sized enterprises in the tourism sector: The role of leadership competencies. Journal of Economics and Development 23(3), 299–316.

Costa, B, Rodrigues, S, Santos, N, 2024. The implementation of circular economy R-principles and strategies: The Portuguese hotel industry perspective, in: Proceedings of the 7th International Conference on Tourism Research, Vol. 7(1), pp. 57–66.

Del Chiappa, G, Fotiadis, A, 2019. Research areas and emerging challenges in small and medium-sized tourism enterprises. Piccola Impresa/Small Business 1.

Einarsson, S, Sorin, F, 2020. Circular Economy in Travel and Tourism: A Conceptual Framework for a Sustainable, Resilient and Future-Proof Industry Transition. CE360 Alliance.

Ellen MacArthur Foundation, 2013. Towards the Circular Economy, Vol. 2: Opportunities for the Consumer Goods Sector. Ellen MacArthur Foundation.

Falcone, PM, 2019. Tourism-based circular economy in Salento, Southern Italy: A SWOT–ANP analysis. Social Sciences 8(7), 216.

Fehrer, JA, Vargo, SL, 2023. Rethinking service in a circular economy. Journal of Service Management Research 7(3), 130–146.

Freeman, RE, 1994. The politics of stakeholder theory. Business Ethics Quarterly 4(4), 409–421.

Gennari, F, 2023. The transition toward a circular economy: A framework for SMEs. Journal of Management and Governance 27(4), 1423–1457.

Homrich, AS, Galvão, G, Abadia, LG, Carvalho, MM, 2018. The circular economy umbrella: Trends and gaps in integrating pathways. Journal of Cleaner Production 175, 525–543.

International Organization for Standardization, 2024. Circular Economy—Guidance on the Transition of Business Models and Value Networks. ISO 59010:2024.

Jain, NK, Panda, A, Arghode, V, 2024. Tourism's circular economy: Opportunities and challenges from an integrated theoretical perspective. Business Strategy and the Environment 33, 6172–6186.

Jones, P, Wynn, MG, 2019. The circular economy, natural capital and resilience in tourism and hospitality. International Journal of Contemporary Hospitality Management 31(6), 2544–2563.

Kaszás, N, Keller, K, Birkner, Z, 2022. Understanding circularity in tourism. Society and Economy 44(1), 65–82.

Kirchherr, J, Piscicelli, L, Bour, R, Kostense-Smit, E, Muller, J, Huibrechtse-Truijens, A, Hekkert, M, 2018. Barriers to the circular economy: Evidence from the European Union. Ecological Economics 150, 264–272.

Kirchherr, J, Yang, NHN, Schulze-Spüntrup, F, Heerink, MJ, Hartley, K, 2023. Conceptualizing the circular economy revisited: An analysis of 221 definitions. Resources, Conservation and Recycling 194, 107001.

Kukanja, M, Planinc, T, Sikosec, M, 2020. Crisis management in tourism SMEs during the COVID-19 pandemic. Organizacija 53(4).

Li, K, Cipolletta, G, Andreola, C, Eusebi, AL, Kulaga, B, Cardinali, S, Fatone, F, 2024. Circular economy and sustainability in the tourism industry: Critical analysis of integrated solutions and good practices in European and Chinese case studies. Environment, Development and Sustainability 26(7), 16461–16482.

Lusch, RF, Vargo, SL, 2014. Service-Dominant Logic: Premises, Perspectives, Possibilities. Cambridge University Press.

Maines da Silva, P, Maines da Silva, L, Soares Echeveste, S, 2021. Circular economy in tourism and hospitality: Analysis of scientific production on the theme. European Journal of Tourism, Hospitality and Recreation 11(1), 45–53.

Markard, J, Raven, R, Truffer, B, 2012. Sustainability transitions: An emerging field of research and its prospects. Research Policy 41(6), 955–967.

McKinsey & Company, 2024. The State of Tourism and Hospitality 2024. McKinsey Global Publishing.

Merli, R, Preziosi, M, Acampora, A, 2018. How do scholars approach the circular economy? A systematic literature review. Journal of Cleaner Production 178, 703–722.

Nguyen, VK, Natoli, R, Divisekera, S, 2021. Innovation and productivity in tourism small and medium-sized enterprises: A longitudinal study. Tourism Management Perspectives 38, 100804.

Oberholzer, S, Sachs, S, 2023. Engaging stakeholders in the circular economy: A systematic literature review, in: Kujala, J, Heikkinen, A, Blomberg, A (Eds.), Stakeholder Engagement in a Sustainable Circular Economy. Palgrave Macmillan, Cham.

OECD, 2019. Business Models for the Circular Economy: Opportunities and Challenges for Policy. OECD Publishing, Paris.

Opferkuch, K, Walker, AM, Lindgreen, ER, Caeiro, S, Salomone, R, Ramos, TB, 2023. Toward a framework for corporate disclosure of the circular economy: Company perspectives and recommendations. Corporate Social Responsibility and Environmental Management 30(5), 2457–2474.

Page, MJ, McKenzie, JE, Bossuyt, PM, Boutron, I, Hoffmann, TC, Mulrow, CD, Moher, D, 2021. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ 372, n71.

Pearce, DW, Turner, RK, 1990. Economics of Natural Resources and the Environment. Harvester Wheatsheaf, Hemel Hempstead.

Potting, J, Hekkert, MP, Worrell, E, Hanemaaijer, A, 2017. Circular Economy: Measuring Innovation in the Product Chain. Policy Report. PBL Netherlands Environmental Assessment Agency, The Hague.

Rizos, V, Tuokko, K, Behrens, A, 2017. The Circular Economy: A Review of Definitions, Processes and Impacts. CEPS Research Report No. 2017/09, Brussels.
Robayo-Acuña, PV, Chams-Anturi, O, 2025. Open innovation in hospitality and tourism services: A bibliometric analysis. International Journal of Innovation Science 17(2), 394–418.
Romano, CA, Tanewski, GA, Smyrnios, KX, 2001. Capital structure decision-making: A model for family business. Journal of Business Venturing 16(3), 285–310.
Salvioni, DM, Almici, A, 2020. Transitioning toward a circular economy: The impact of stakeholder engagement on sustainability culture. Sustainability 12(20), 8641.
Salvioni, DM, Bosetti, L, Fornasari, T, 2022. Implementing and monitoring circular business models: An analysis of Italian SMEs. Sustainability 14(1), 270.
Saunila, M, 2020. Innovation capability in SMEs: A systematic review of the literature. Journal of Innovation & Knowledge 5(4), 260–265.
Scipioni, S, Russ, M, Niccolini, F, 2021. From barriers to enablers: The role of organizational learning in transitioning SMEs toward the circular economy. Sustainability 13(3), 1021.
Sehnem, S, Vazquez-Brust, D, Pereira, SCF, Campos, LMS, 2019. Circular economy: Benefits, impacts and overlaps. Supply Chain Management: An International Journal 24(6), 784–804.
Shi, J, Xiao, Y, 2024. Research on pathways toward the high-quality development of tourism SMEs: A perspective of value assigned through quality, standards and branding. Heliyon 10(23), e39772.
Siegel, R, Antony, J, Garza-Reyes, JA, Cherrafi, A, Lameijer, B, 2019. Integrated green-lean approaches and sustainability for SMEs: From a literature review to a conceptual framework. Journal of Cleaner Production 240, 118205.
Singh, K, Pillai, D, 2022. Corporate governance in small and medium-sized enterprises: A review. Corporate Governance 22(1), 23–41.
Skare, M, Gavurova, B, Rigelsky, M, 2024. Quantifying the impact of innovation in industry and infrastructure on sustainable circular economy production and consumption. Journal of Innovation & Knowledge 9(1), 100456.
Sørensen, F, Bærenholdt, JO, 2020. Tourist practices in the circular economy. Annals of Tourism Research 85, 103027.
Strippoli, R, Gallucci, T, Ingrao, C, 2024. Circular economy and sustainable development in the tourism sector: An overview of truly effective strategies and related benefits. Heliyon 10(17), e36801.
Suchek, N, Fernandes, CI, Kraus, S, Filser, M, Sjögrén, H, 2021. Innovation and the circular economy: A systematic literature review. Business Strategy and the Environment 30(8), 3686–3702.
UNWTO, 2024. International Tourism to Reach Pre-Pandemic Levels in 2024. UNWTO, Madrid.
Vardopoulos, I, Giannopoulos, K, Papaefthymiou, E, Temponera, E, Chatzithanasis, G, Goussia-Rizou, M, Karymbalis, E, Michalakelis, C, Tsartas, P, Sdrali, D, 2023. Sustainable adaptive reuse of urban buildings as tourism accommodation establishments: A SOAR analysis. Discover Sustainability 4(1), 50.
Voukkali, I, Papamichael, I, Loizia, P, Zorpas, A, 2023. The importance of KPIs for calibrating waste strategies in the hospitality sector. Energy Nexus 11, 100211.
Zhu, B, Nguyen, M, Sarm Siri, N, Malik, A, 2022. Toward a transformative circular economy model for SMEs. Journal of Business Research 144, 545–555.
Zimmermann, R, Inês, A, Dalmarco, G, Moreira, AC, 2024. The role of consumers in adopting R-strategies: A review and research agenda. Cleaner and Responsible Consumption 13, 100193.
Zorpas, AA, 2024. The hidden concept and beauty of multiple “R” strategies in waste-management frameworks reflecting circular economy principles. Science of the Total Environment 952, 175508.

Annex 1

1. Ahmed, MF, Mokhtar, MB, Lim, CK, Hooi, AWK, Lee, KE, 2021. Leadership roles for sustainable development: The case of a Malaysian green hotel. Sustainability, 13(18), Article 10260. https://doi.org/10.3390/su131810260
2. Anastasiadis, F, Alebaki, M, 2021. Mapping the Greek wine supply chain: A proposed research framework. Foods, 10(11), Article 2859. https://doi.org/10.3390/foods10112859
3. Axhami, M, Ndou, V, Milo, V, Scorrano, P, 2023. Creating value via the circular economy: Practices in the tourism sector. Administrative Sciences, 13(7), Article 166. https://doi.org/10.3390/admsci13070166
4. Basile, V, Capobianco, N, Vona, R, 2021. The usefulness of sustainable business models: Analysis from oil and gas industry. Corporate Social Responsibility and Environmental Management, 28(6), 1801–1821. https://doi.org/10.1002/csr.2153
5. Belliggiano, A, Garcia, EC, Labianca, M, Valverde, FN, De Rubertis, S, 2020. The "eco-effectiveness" of agritourism dynamics in Italy and Spain: A tool for evaluating regional sustainability. Sustainability, 12(17), Article 7080. https://doi.org/10.3390/su12177080
6. Bhagtani, N, 2022. Hotel general managers' quality of life and its impact on organisational sustainability and corporate social responsibility initiatives. Worldwide Hospitality and Tourism Themes, 14(3), 286–299. https://doi.org/10.1108/WHATT-02-2022-0022
7. Bittner, N, Bakker, N, Long, TB, 2024. Circular economy and the hospitality industry: A comparison of the Netherlands and Indonesia. Journal of Cleaner Production, 444, Article 141253. https://doi.org/10.1016/j.jclepro.2024.141253
8. Borysova, O, Gryniuk, O, Mykhailenko, T, Shparaha,T, Hryniuk, T, 2022. Global trends in tourism and imperatives of the circular economy in the context of sustainable environmental development of states. Review of Economics and Finance, 20, 196–202. https://doi.org/10.55365/1923.x2022.20.23
9. Bosone, M, Nocca, F, 2022. Human circular tourism as the tourism of tomorrow: The role of travellers in achieving a more sustainable and circular tourism. Sustainability, 14(19), Article 12218. https://doi.org/10.3390/su141912218
10. Bux, C, Amicarelli, V, 2023. Circular economy and sustainable strategies in the hospitality industry: Current trends and empirical implications. Tourism and Hospitality Research, 23(4), 624–636. https://doi.org/10.1177/14673584221119581
11. Camilleri, MA, 2021. Sustainable production and consumption of food. mise-en-place circular economy policies and waste management practices in tourism cities. Sustainability, 13(17), Article 9986. https://doi.org/10.3390/su13179986
12. Cordova-Buiza, F, Paucar-Caceres, A, Quispe-Prieto, SC, Rivera-Garré, AP, Huerta-Tantalean, LN, Valle-Paucar, JE, Ponce de León-Panduro, CV, Burrowes-Cromwell, T, 2022. Strengthening collaborative food waste prevention in Peru: Towards responsible consumption and production. Sustainability, 14(3), Article 1050. https://doi.org/10.3390/su14031050
13. Cornejo-Ortega, JL, Chávez Dagostino, RM, 2020. The tourism sector in Puerto Vallarta: An approximation from the circular economy. Sustainability, 12(11), Article 4442. https://doi.org/10.3390/su12114442
14. Corsini, F, Gusmerotti, NM, Testa, F, Borghini, A, 2022. The role of cognitive frames towards circular economy practices in SMEs. Sinergie, 40(2), 41–61. https://doi.org/10.7433/S118.2022.03
15. Costa, BJF, Rodrigues, SCSF, da Silva, CS, Pacheco, MPM, 2022a. Circular economy and the Portuguese hotel industry – Awareness, attitude, and impact on the organisational performance. Journal of Global Business and Technology, 18(2), 60–85. https://gbata.org/wp-content/uploads/2023/06/JGBAT_Vol18-2-FullText.pdf

16. Costa, J, Montenegro, M, Gomes, J, 2022b. Sustainability as a measure of tourism success: The Portuguese Promotional Tourism Boards' view. Worldwide Hospitality and Tourism Themes, 14(1), 65-71. https://doi.org/10.1108/WHATT-10-2021-0131
17. Costa, BJF, Rodrigues, SCSF, Pacheco, PM, 2020. Circular economy and the tourism industry. Journal of Global Business and Technology, 16(1), 45–61. https://gbata.org/wp-content/uploads/2020/08/JGBAT_Vol16-1-FullText.pdf
18. del Vecchio, P, Malandugno, C, Passiante, G, Sakka, G, 2022. Circular economy business model for smart tourism: The case of Ecobnb. EuroMed Journal of Business, 17(1), 88-104. https://doi.org/10.1108/EMJB-09-2020-0098
19. Diaz-Farina, E, Díaz-Hernández, JJ, Padrón-Fumero, N, 2023. A participatory waste policy reform for the hotel sector: evidence of a progressive Pay-As-You-Throw tariff. Journal of Sustainable Tourism, 33(4), 697–718. https://doi.org/10.1080/09669582.2023.2273760
20. Falcone, PM, 2019. Tourism-based circular economy in Salento (South Italy): A SWOT-ANP Analysis. Social Sciences, 8(7), Article 216. https://doi.org/10.3390/socsci8070216
21. Florido, C, Jacob, M, Payeras, M, 2019. How to carry out the transition towards a more circular tourist activity in the hotel sector. The role of innovation. Administrative Sciences, 9(2), Article 47. https://doi.org/10.3390/admsci9020047
22. Gatti, MP, Indrigo, A, 2020. The roads, tracks, paths, and ropeways of the first world war: An opportunity to preserve, maintain, and valorize alpine landscape. Sustainability, 12(3), Article 1157. https://doi.org/10.3390/su12031157
23. Girard, LF, Nocca, F, 2017. From linear to circular tourism. Aestimum, 70, 51–74. https://doi.org/10.13128/Aestimum-21081
24. González-Arnedo, EA, Izquierdo-Gascón, M, Rubio-Gil, Á, 2022. Ecovillages as a development model and the case of api-tourism in sustainable settlements. PASOS Revista de Turismo y Patrimonio Cultural, 20(5), 1143–1161. https://doi.org/10.25145/j.pasos.2022.20.077
25. Gretzel, U, Murphy, J, Pesonen, J, Blanton, C, 2020, Food waste in tourist households: A perspective article, Tourism Review, 75(1), 235–238. https://doi.org/10.1108/TR-05-2019-0170
26. Gruia, R, Florescu, GI, Gaceu, L, Oprea, OB, Ţane, N, 2021. Reducing environmental risk by applying a polyvalent model of waste management in the restaurant industry. Sustainability, 13(11), Article 5852. https://doi.org/10.3390/su13115852
27. Guerra, RJDC, Gonçalves, ECC, 2024. Co-creation of sustainable tourism and hospitality experiences: Education and organizations in search of new business models. Sustainability, 16(1), Article 321. https://doi.org/10.3390/su16010321
28. He, J, Mai, THT, 2021. The circular economy: A study on the use of Airbnb for sustainable coastal development in the Vietnam Mekong delta. Sustainability, 13(13), Article 7493. https://doi.org/10.3390/su13137493
29. Jaroszewska, M, Chaja, P, Dziadkiewicz, A, 2019. Sustainable energy management: Are tourism SMEs in the South Baltic region ready? International Journal of Sustainable Energy Planning and Management, 24, 75–84. https://doi.org/10.5278/ijsepm.3342
30. Jones, P, Wynn, MG, 2019. The circular economy, natural capital and resilience in tourism and hospitality. International Journal of Contemporary Hospitality Management, 31(6), 2544–2563. https://doi.org/10.1108/IJCHM-05-2018-0370
31. Joshi, S, Sharma, M, Kler, R, 2020. Modeling circular economy dimensions in agri-tourism clusters: Sustainable performance and future research directions. International Journal of Mathematical, Engineering and Management Sciences, 5(6), 1046–1061. https://doi.org/10.33889/IJMEMS.2020.5.6.080
32. Julião, J, Gaspar, M, Alemão, C, 2020. Consumers' perceptions of circular economy in the hotel industry: Evidence from Portugal. International Journal of Integrated Supply Management, 13(2-3), 192–209. https://doi.org/10.1504/IJISM.2020.107849

33. Kaszás, N, Keller, K, Birkner, Z, 2022. Understanding circularity in tourism. Society and Economy, 44(1), 65–82. https://doi.org/10.1556/204.2021.00025
34. Khalifa, AA, Ibrahim, AJ, Amhamed, AI, El-Naas, MH, 2022. Accelerating the Transition to a Circular Economy for Net-Zero Emissions by 2050: A Systematic Review. Sustainability, 14(18), Article 11656. https://doi.org/10.3390/su141811656
35. Khan, O, Bellini, N, Daddi, T, Iraldo, F, 2022. Effects of behavioral intention and dynamic capabilities on circular economy adoption and performance of tourism SMEs. Journal of Sustainable Tourism, 31(8), 1777–1796. https://doi.org/10.1080/09669582.2022.2066683
36. Loureiro, SMC, Nascimento, J, 2021. Shaping a view on the influence of technologies on sustainable tourism. Sustainability, 13(22), Article 12691. https://doi.org/10.3390/su132212691
37. Lu, SH., Ngo, TS, Tran, HTT, 2024. Exploring a hierarchical model for circular economy transition through launching green marketing. Sustainable Development, 32(3), 2119–2138. https://doi.org/10.1002/sd.2768
38. Martín, JMM, Martínez, SC, Martínez, JMG, Soriano, DER, 2022. Qualitative analysis on the driving force behind upcycling practices associated with mobile applications: Circular economy perspective. Operations Management Research, 15(3-4), 647–661. https://doi.org/10.1007/s12063-022-00269-5
39. Martínez-Cabrera, J, López-del-Pino, F, 2021. The 10 Most Crucial Circular Economy Challenge Patterns in Tourism and the Effects of COVID-19. Sustainability, 13(9), Article 4940. https://doi.org/10.3390/su13094940
40. Matteucci, V, 2020. How can the hospitality industry increase corporate value aligned with sustainable development goals? Case examples from Hilton, Meliá and Sun. Worldwide Hospitality and Tourism Themes, 12(5), 509–523. https://doi.org/10.1108/WHATT-06-2020-0043
41. Münster, MB, 2024. Adaptive reuse: Atmospherics in buildings repurposed as coffee shops. Sustainability, 16(4), Article 1585. https://doi.org/10.3390/su16041585
42. Nocca, F, Bosone, M, De Toro, P, Fusco Girard, L, 2023. Towards the human circular tourism: Recommendations, actions, and multidimensional indicators for the tourist category. Sustainability, 15(3), Article 1845. https://doi.org/10.3390/su15031845
43. Noll, D, Wiedenhofer, D, Miatto, A, Singh, SJ, 2019. The expansion of the built environment, waste generation and EU recycling targets on Samothraki, Greece: An island's dilemma. Resources, Conservation and Recycling, 150, Article 104405. https://doi.org/10.1016/j.resconrec.2019.104405
44. Oarga-Mulec, A, Turk, J, Gerbec, P, Jenssen, PD, Malovrh Rebec, K, Valant, M, 2023. Life cycle assessment of black and greywater treatment solutions for remote and sensitive areas. Sustainability, 15(4), Article 3832. https://doi.org/10.3390/su15043832
45. Pamfilie, R, Firoiu, D, Croitoru, AG, Ioan Ionescu, GH, 2018. Circular economy – A new direction for the sustainability of the hotel industry in Romania? Amfiteatru Economic, 20(48), 388–404. https://doi.org/10.24818/EA/2018/48/388
46. Pongsakornrungsilp, P, Pongsakornrungsilp, S, 2023. Mindful tourism: Nothing left behind – creating a circular economy society for the tourism industry of Krabi, Thailand. Journal of Tourism Futures, 9(3), 366–380. https://doi.org/10.1108/JTF-01-2021-0001
47. Ramos, D, Malta, A, 2023. The use of the circular economy and adaptive reuse in a tourism context in the preservation of Gandaresa identity and culture. Journal of Tourism and Development, 44, 353–363. https://doi.org/10.34624/rtd.v44i0.34654
48. Renfors, SM, Wendt, T, 2024. Restaurants without bins: How does a circular restaurant operate? Sustainability, 16(6), Article 2312. https://doi.org/10.3390/su16062312
49. Rivera Aguilar, JE, Zang, L, Fushimi, S, 2022. Towards sustainability in hospitality operations: how is quality of life and work–life balance related? Worldwide Hospitality and Tourism Themes, 14(3), 274–285. https://doi.org/10.1108/WHATT-02-2022-0019

50. Rodríguez-Antón, JM, Alonso-Almeida, MdM, 2019. The circular economy strategy in hospitality: A multicase approach. Sustainability, 11(20), Article 5665. https://doi.org/10.3390/su11205665
51. Rudan, E, 2023. Circular economy of cultural heritage – Possibility to create a new tourism product through adaptive reuse. Journal of Risk and Financial Management, 16(3), Article 196. https://doi.org/10.3390/jrfm16030196
52. Saura, JR, Ribeiro-Soriano, D, Palacios-Marqués, D, 2024. Adopting digital reservation systems to enable circular economy in entrepreneurship. Management Decision, 62(8), 2388–2408. https://doi.org/10.1108/MD-02-2022-0190
53. Scheepens, AE, Vogtländer, JG, Brezet, JC, 2016. Two life cycle assessment (LCA) based methods to analyse and design complex (regional) circular economy systems. Case: Making water tourism more sustainable. Journal of Cleaner Production, 114, 257–268. https://doi.org/10.1016/j.jclepro.2015.05.075
54. Serra, M, Antonio, N, Henriques, C, Afonso, CM, 2021. Promoting Sustainability through Regional Food and Wine Pairing. Sustainability, 13(24), Article 13759. https://doi.org/10.3390/su132413759
55. Sørensen F, Bærenholdt JO, 2020. Tourist practices in the circular economy. Annals of Tourism Research, 85, Article 103027. https://doi.org/10.1016/j.annals.2020.103027
56. Stombelli, VM, 2020. Corporate Social Responsibility in hospitality: Are sustainability initiatives really sustainable? Case examples from CitizenM, Lefay and Six Senses. Worldwide Hospitality and Tourism Themes, 12(5), 525–545. https://doi.org/10.1108/WHATT-06-2020-0041
57. Tedesco, S, Montacchini, E, Insinna, L, 2022. Experimenting with new ways of circular and participatory design: The case study of a traditional Sicilian architecture transformed for experiential tourism. Sustainability, 14(3), Article 1360. https://doi.org/10.3390/su14031360
58. Tomassini, L, Cavagnaro, E, 2022. Circular economy, circular regenerative processes, agrowth and placemaking for tourism future. Journal of Tourism Futures, 8(3), 342–345. https://doi.org/10.1108/JTF-01-2022-0004
59. Valls, JF, Mota, L, Vieira, SCF, Santos, R, 2019. Opportunities for slow tourism in Madeira. Sustainability, 11(17), Article 4534. https://doi.org/10.3390/su11174534
60. Vardopoulos, I, Giannopoulos, K, Papaefthymiou, E, Temponera, E, Chatzithanasis, G, Goussia-Rizou, M, Karymbalis, E, Michalakelis, C, Tsartas, P, Sdrali, D, 2023. Urban buildings sustainable adaptive reuse into tourism accommodation establishments: A SOAR analysis. Discover Sustainability, 4, Article 50. https://doi.org/10.1007/s43621-023-00166-2
61. Vargas-Sánchez, A, 2021. The new face of the tourism industry under a circular economy. Journal of Tourism Futures, 7(2), 203-208. https://doi.org/10.1108/JTF-08-2019-0077
62. Vargas-Sanchez, A, 2023. Toward a circular tourism industry: The importance of a start-up ecosystem. Worldwide Hospitality and Tourism Themes, 15(6), 625–632. https://doi.org/10.1108/WHATT-09-2023-0111
63. Vatansever, K, Akarsu, H, Kazançoğlu, Y, 2021. Evaluation of transition barriers to circular economy: A case from the tourism industry. International Journal of Mathematical, Engineering and Management Sciences, 6(3), 824–846. https://doi.org/10.33889/ijmems.2021.6.3.049
64. Yang, W, Lin, Y, 2022. Research on the interactive operations research model of e-commerce tourism resources business based on big data and circular economy concept. Journal of Enterprise Information Management, 35(4/5), 1348–1373. https://doi.org/10.1108/JEIM-12-2020-0520.