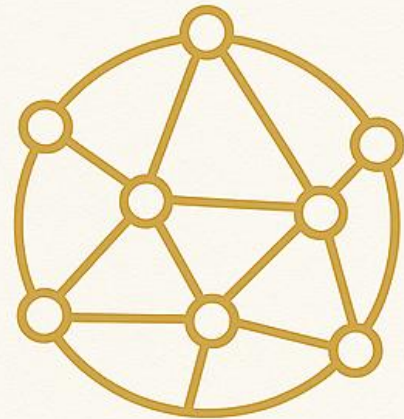


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Editorial

It is a pleasure to introduce the second issue (2025) of the Journal of Business and Tourism Management (JBTM), which consolidates the journal's mission to publish rigorous, interdisciplinary research addressing the complex challenges currently facing tourism, hospitality, and related business sectors. The five articles included in this issue engage with pressing debates on sustainability, platform economies, urban governance, organisational behaviour, and destination imaginaries, offering both conceptual depth and practical relevance.

The issue opens with the contribution by **Sandra Monroy-Rodríguez, Daniela Thiel-Ellul, and Ana Fernández-Ardavín** present *Exploring Willingness to Pay for Sustainability in Tourism: A Co-Word Analysis of the Literature*.

Using bibliometric and co-word analysis techniques, the article maps the conceptual structure of research on tourists' willingness to pay for sustainability, identifying dominant themes, methodological trends, and underdeveloped areas. The study provides a valuable roadmap for future research at the intersection of consumer behaviour, environmental economics, and sustainable tourism policy.

The second article, authored by **Lorena Quidiello and Jose Manuel Montes**, *Externalities of Urban Logistics: Challenges and Opportunities for Achieving Smart and Sustainable Cities*, addresses a crucial yet often overlooked dimension of urban sustainability.

Through a systematic review of the literature, the authors identify the economic, environmental, and social externalities associated with urban freight distribution and outline technological, organisational, and governance-based pathways aligned with the principles of smart cities and the 2030 Agenda.

In the third contribution, **Jorge Rivera-Garcia**, *Platformised Performances: Free Walking Tours and the Informal Sharing Economy*, which provides a critical ethnographic analysis of free walking tours as an underexplored manifestation of platform-mediated tourism.

By examining algorithmic reputation systems, affective labour, and the informal governance of public space, the article advances theoretical discussions on platform capitalism while offering policy-relevant insights for urban tourism management and labour regulation.

The fourth article, *Employee Green Practices, Organizational Support, and Sustainable Performance in Chinese Hotels*, by **Daokai Gong and Cao Guoyong**, shifts the focus to the organisational and human dimensions of sustainability in hospitality.

Drawing on survey data from Chinese hotels and applying PLS-SEM, the study demonstrates how employee green practices contribute to environmental, social, and economic performance, highlighting the mediating role of perceived organisational support and the moderating effect of environmental training intensity. The article offers robust empirical evidence from a non-Western context and clear managerial implications.

The issue concludes with **Andrés Romero-Montero's** conceptual article, *Urban Decline on Screen and Tourism Imaginaries Beyond the Tourist Bubble*, which critically examines how the television series *The Wire* shapes alternative tourism imaginaries in Baltimore

By integrating perspectives from film-induced tourism, dark tourism, and slum tourism, the article challenges conventional destination branding narratives and raises important ethical and governance questions for post-industrial cities exposed to critical audiovisual representations.

Taken together, the contributions in this issue reflect JBTM's growing international scope and its commitment to addressing tourism and business phenomena through analytical lenses that integrate economic, social, technological, and cultural dimensions. They also underscore a shared concern with sustainability—not as a narrow environmental objective, but as a multidimensional challenge involving labour conditions, urban justice, organisational practices, and symbolic representations of place.

I would like to express my sincere appreciation to the **authors** for the quality and originality of their work, and to the **reviewers** for their constructive and rigorous evaluations. I invite scholars, practitioners, and policymakers to engage with the insights presented in this issue and to contribute to future volumes of the *Journal of Business and Tourism Management* as we continue to build an international forum for impactful and forward-looking research.

Dr. Asier Baquero

Editor-in-Chief

Journal of Business and Tourism Management

Exploring willingness to pay for sustainability in tourism: A co-word analysis of the literature review

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Abstract

This study presents a comprehensive bibliometric and co-word analysis of academic literature on tourists' willingness to pay (WTP) for sustainability in tourism. Through a systematic review of 173 articles indexed in Web of Science and analyzed using SciMAT, we map the conceptual landscape of WTP, identifying dominant themes and research gaps. Results reveal that WTP is a motor theme, central to understanding financial support for conservation and sustainable practices, closely linked to biodiversity, consumer behaviour, and carbon emissions. Thematic clusters such as hybrid choice models and ecosystem services underscore the intersection of environmental, economic, and psychological dimensions in sustainable tourism. Our analysis shows that WTP is driven by socio-demographic factors, environmental awareness, and the perceived impact of contributions. While conservation fees and eco-labelling foster positive responses, behavioural barriers and limited trust in policy transparency can hinder engagement. Emerging and underdeveloped areas—including cultural events and psychological biases—suggest promising directions for future inquiry. We conclude by proposing a research agenda that integrates behavioural economics, environmental psychology, and digital innovation to deepen understanding of tourists' financial commitment to sustainability. This article contributes novel insights by combining bibliometric mapping with qualitative interpretation, offering a roadmap to advance sustainable tourism scholarship and practice.

Keywords: Willingness to Pay (WTP), Sustainable Tourism, Co-word Analysis, Environmental Awareness.

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1. Introduction

The concept of willingness to pay (WTP) for sustainability in tourism is essential for understanding tourists' financial commitment to environmentally and socially responsible practices. WTP not only influences the viability of conservation efforts but also plays a crucial role in shaping sustainable tourism policies. By identifying the key factors that drive tourists' financial engagement, policymakers and industry stakeholders can design more effective sustainability initiatives that align environmental goals with market expectations (Ezeh & Dube, 2024).

Studies indicate that income and education levels are significant predictors of WTP. Tourists with higher disposable income and greater educational attainment tend to exhibit a stronger willingness to financially support conservation initiatives (Lan et al., 2024; Pengwei & Ji, 2023). This suggests that targeted awareness campaigns and differentiated pricing strategies could enhance engagement among diverse tourist demographics.

A key driver of WTP is the extent of an individual's environmental awareness and concern for climate change. Tourists who prioritize sustainability and recognize the long-term benefits of conservation are more likely to contribute financially to eco-friendly initiatives (de Araújo et al., 2024). For instance, in Puerto Rico, households demonstrated a WTP to support biodiversity conservation, highlighting the direct link between awareness and financial support (Tavárez et al., 2024). Similarly, research on circular economy principles indicates that heightened environmental awareness leads to a more favourable evaluation of sustainable practices, reinforcing the importance of education in fostering pro-environmental behaviour (Godhino et al., 2024).

The payment context significantly influences tourists' willingness to contribute to sustainability efforts. Studies show that tourists exhibit higher WTP for conservation initiatives when they perceive a tangible benefit, such as cultural heritage preservation, rather than for generalized sustainability fees (Göktaş & Cetin, 2023). This suggests that framing sustainability contributions in a way that emphasizes direct impact can increase financial engagement.

One of the most widely studied financial mechanisms in sustainable tourism is the implementation of conservation fees. Studies suggest that tourists are generally receptive to such fees when they perceive them as directly contributing to environmental preservation (Pengwei & Ji, 2023). However, transparency in fund allocation and clear communication about conservation outcomes are critical to maintaining tourists' trust and willingness to contribute.

Despite the growing body of research on WTP, there remains a gap in comprehensive reviews that synthesize findings, highlight methodological diversity, and propose structured research agendas (Cavallin Toscani, et al. 2024). While factors such as environmental awareness, socio-economic characteristics, and conservation fees have been extensively studied, there is still limited exploration of behavioural biases, systemic barriers, and cultural influences on WTP. Additionally, more interdisciplinary approaches—such as combining behavioural economics with tourism studies—could provide deeper insights into how financial commitment to sustainability evolves across different contexts.

This study seeks to bridge this gap by conducting a systematic review and bibliometric analysis of WTP for sustainability in tourism. Specifically, it aims to:

- Identify the dominant research themes by addressing the question: What are the main topics of research on willingness to pay for sustainability in tourism?
- Outline a roadmap for future research by exploring: What areas could contribute to advancing knowledge on WTP for sustainability in tourism?

To achieve these goals, bibliometric techniques—particularly co-word analysis—are applied to uncover the conceptual structures of the field. A reflective analysis of the results will further identify emerging themes and research gaps that warrant further exploration.

By integrating WTP and sustainability in tourism through a mixed-method approach, this study contributes a novel perspective that combines bibliometric and qualitative analysis. The article follows a structured format: an introduction, a methodology section detailing data collection and analysis procedures, a results section showcasing strategic diagrams and thematic networks, and a discussion and conclusion section summarizing key insights. The final section proposes directions for further studies.

2. Methodology

This study employs a systematic review methodology to synthesize existing research, official reports, is based on the willingness to pay (WTP) for sustainability in tourism, and presents a comprehensive bibliometric analysis based on the academic literature available up to August 2025.

To analyze the selected literature, co-word analysis was employed, a bibliometric technique that maps relationships and structures within a research field by examining the co-occurrence of keywords in scientific documents (Callon et al., 1991). This analysis was conducted using the open-source tool SciMAT, which was selected over other bibliometric tools due to its ability to integrate performance analysis with science mapping in a longitudinal framework. Unlike software focused solely on citation metrics or co-authorship networks, SciMAT allows for a dynamic visualization of conceptual evolution, making it especially suitable for studies aiming to capture thematic development over time. Its built-in modules for data preprocessing, strategic diagram generation, and thematic network mapping make it a comprehensive tool for co-word analysis in emerging interdisciplinary fields such as sustainable Tourism (Cobo et al., 2011).

The methodological process began with the extraction of data from the Web of Science (WOS) database in August 2025. A structured search was conducted using keyword combinations related to "willingness to pay" and "sustainability in tourism", which initially returned a total of 173 relevant articles. After importing the bibliographic records, the dataset was cleaned by removing duplicates and standardizing entries to ensure consistency. Subsequently, a manual refinement process was carried out to group similar terms—such as synonyms, plurals, and spelling variations, thereby enhancing the accuracy of the keyword analysis. This refined dataset served as the foundation for the co-word analysis performed using SciMAT.

SciMAT generated a co-occurrence matrix, where the rows and columns represented keywords, and the cells indicated the frequency with which the terms co-occurred in documents. A minimum threshold was applied to highlight the most significant relationships. From this matrix, a co-word network was constructed, where the nodes represented keywords and the links indicated the strength of their co-occurrence.

Clustering algorithms identified thematic clusters, classified into four categories (Callon et al., 1991):

-Motor themes: Well-developed and central to the research field. They have high density and high centrality, indicating both strong internal development and strong connections to other themes.

-Basic themes: Fundamental topics that are widely connected to other themes but are underdeveloped internally. They are high in centrality but low in density.

-Emerging or declining themes: Topics with low density and low centrality. These may be new, underexplored themes that are just starting to gain attention, or older topics that are losing relevance within the field.

-Isolated themes: Well-developed internally (high density) but with few connections to other themes (low centrality), making them more peripheral in the research landscape.

These clusters were visualized in strategic diagrams, which represented themes according to two axes: centrality (relative importance) and density (level of internal development). The size of the nodes in the thematic network reflected the number of documents containing the keyword, while the thickness of the links indicated the strength of the associations between terms.

3. Results

3.1 Analysis of thematic centrality and density in sustainable tourism and WTP

The analysis of centrality and density of clusters generated by SciMAT (Table 1) offers a comprehensive view of thematic relevance and interconnectedness within the field of sustainable tourism research. Centrality measures the importance of a cluster within the broader conceptual network, while density reflects the strength of relationships among the concepts that form the cluster. These metrics are essential for identifying core themes and emerging areas of interest in sustainable tourism.

Table 1: Centrality and density measures for each cluster made by SciMAT

Cluster	Centrality	Centrality range	Density	Density range
Willingness To Pay	177.46	1	37.67	1
Biodiversity	116.47	0.95	33.48	0.95
Carbon emissions	53.91	0.45	26.58	0.9
Hybrid-Choice-Model	62.58	0.7	25.41	0.85

Consumers-behaviour	78.23	0.9	23.7	0.8
Economic-Values	42.72	0.25	14.33	0.75
Consumers	68.16	0.8	13.88	0.7
Data	39.6	0.2	12.65	0.65
Ecosystem-Services	63.96	0.75	12.13	0.6
Visitors	60.2	0.6	11.58	0.55
Competitiveness	33.24	0.1	10.49	0.5
Sustainability	72.41	0.85	9.25	0.45
Festival	37.87	0.15	9.25	0.4
Models	57.9	0.5	6.61	0.35
Attitudes	59.77	0.55	5.74	0.3
Fees	52.04	0.4	5.37	0.25
Adaptation	62.26	0.65	5.22	0.2
China	20.24	0.05	4.63	0.15
Knowledge	50.47	0.35	3.96	0.1
Bias	45.85	0.3	3.59	0.05

Source: own elaboration from SciMAT program.

Among the clusters analyzed, "Willingness to Pay" (WTP) stands out as the most prominent, with the highest centrality (177.46) and density (37.67). This indicates that WTP is not only a central topic in sustainable tourism but also a highly cohesive area of study. The importance of WTP is supported by recent research highlighting its critical role in understanding how tourists value and are willing to invest in sustainable tourism products and services. For instance, Fichter et al. (2023) explore how environmental attitudes influence WTP through a hybrid choice model that integrates latent constructs related to environmental concerns and individual preferences. This approach provides valuable insights into identifying key market segments and designing effective strategies to promote sustainable tourism offerings.

Given its pivotal role in aligning economic incentives with sustainability goals, WTP is a fundamental topic that requires further investigation. Understanding what drives tourists to financially support sustainable practices can help policymakers and businesses develop targeted interventions that enhance the economic viability of sustainability initiatives. Moreover, exploring WTP can provide valuable insights into the effectiveness of economic instruments such as green taxes, conservation fees, and eco-labelling in shaping consumer behaviour.

Another significant cluster is "Biodiversity", with centrality and density values of 116.47 and 33.48, respectively. This cluster underscores the critical relationship between biodiversity, ecosystem services, and sustainable tourism development. Biodiversity serves as a cornerstone for many tourism activities, particularly in protected areas where natural attractions drive visitor engagement. Saayman and Saayman (2017) emphasize the economic valuation of endangered species, such as rhinos, demonstrating how both use and non-use values contribute to conservation funding. Their study highlights the necessity of integrating conservation policies with tourism strategies to ensure long-term sustainability for destinations reliant on biodiversity.

Biodiversity loss is a major global challenge, and tourism can be both a driver of degradation and a tool for conservation. By examining this cluster in depth, we can better understand how sustainable tourism practices can contribute to biodiversity preservation while maintaining economic benefits for local communities. This research is particularly relevant in the context of nature-based tourism, ecotourism, and the role of protected areas in balancing conservation efforts with visitor experiences. Furthermore, understanding tourists' WTP for biodiversity conservation can inform funding mechanisms that support ecological protection and sustainable destination management.

The cluster "Carbon Emissions" also emerges as a relevant topic, with moderate centrality (53.91) but high density (26.58), indicating strong thematic cohesion. This cluster reflects growing interest in mitigating the environmental impact of tourism, particularly through carbon reduction initiatives. Babakhani et al. (2017) investigate marketing strategies to encourage carbon offsetting in tourism, demonstrating that visually engaging and persuasive messages can significantly enhance tourist participation in environmental mitigation programs. These findings are particularly pertinent as destinations increasingly prioritize environmental sustainability in their tourism management plans.

Tourism, particularly air travel, is a major contributor to global carbon emissions. Given the increasing urgency to address climate change, this cluster demands further analysis to explore how carbon reduction strategies can be effectively implemented in the tourism sector. Researching WTP for carbon offsetting, alternative transportation, and sustainable accommodation practices can help identify the most effective policies and incentives to encourage responsible travel. Moreover, an in-depth analysis of this topic can provide insights into the psychological and behavioural factors that influence tourists' willingness to engage in low-carbon tourism practices.

Another key cluster that requires further exploration is "Consumer Behaviour", which has a centrality of 78.23 and a density of 23.7. This cluster is essential for understanding the psychological, social, and economic factors that drive sustainable tourism choices. Consumer behaviour research examines how tourists perceive and react to sustainability initiatives, providing a deeper understanding of their motivations, barriers, and decision-making processes.

Investigating this cluster is crucial for developing effective communication strategies, marketing campaigns, and policy frameworks that encourage sustainable travel choices. For example, Pulido-Fernández and López-Sánchez (2016) highlight that tourists with high levels of "sustainable intelligence" are willing to pay more for destinations that adopt sustainable practices. However, their study also reveals that this willingness decreases when the price increase is perceived as excessive. This underscores the need for balanced pricing strategies that align sustainability with economic accessibility, ensuring that responsible tourism remains attractive to a broad audience.

Furthermore, the intersection between WTP and consumer behaviour is particularly relevant. Tourists' willingness to pay for sustainability does not always translate into actual financial commitments, highlighting the well-documented "attitude-behaviour gap". Researching this relationship can help bridge the gap between positive environmental intentions and concrete sustainable actions. This knowledge can then be applied to develop behavioural nudges, incentives, and educational campaigns that effectively promote sustainable tourism practices.

3.2 Thematic classification of research cluster

The thematic classification derived from the co-word analysis provides a structured overview of how different research topics are positioned within the field of willingness to pay (WTP) for sustainability in tourism. Based on Callon et al. (1991) framework, thematic clusters are grouped into four categories—motor, basic transverse, emerging or declining, and isolated according to their centrality (importance within the field) and density (internal development). Table 2 summarizes this classification, offering a comprehensive view of how each theme contributes to the overall research landscape.

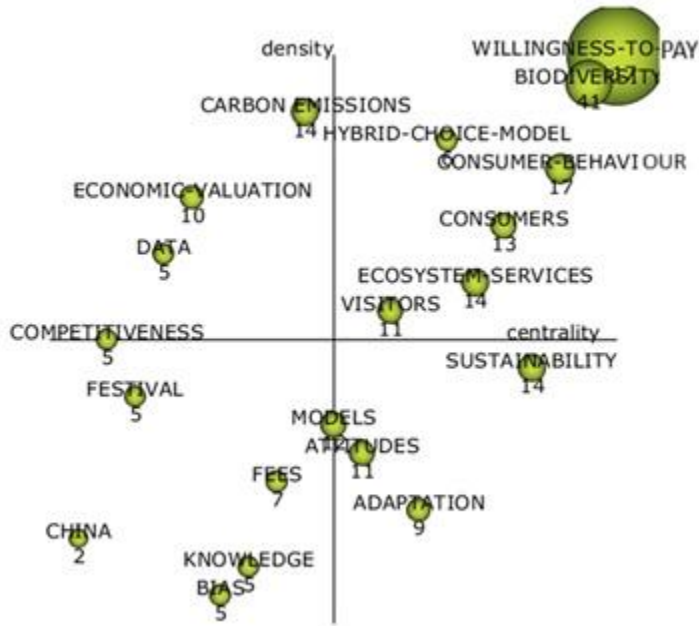
Table 2: Thematic clusters

Thematic cluster	Theme groups according to Callon et al. (1991)
Willingness to Pay Biodiversity Hybrid-Choice-Model Consumer-behaviour Consumers Ecosystems-Services Visitors	Motor themes
Sustainability Attitudes Adaptation Models	Basic Transverse themes
Festival Fees China Knowledge Bias	Emerging or declining themes
Competitiveness Carbon emissions Economic valuation Data	Isolated themes

Source: own elaboration from SciMAT program.

This classification of themes is visually represented in the strategic diagram (Figure 1), which illustrates the distribution of thematic cluster according to their centrality and density. The diagram highlights four quadrants, each of which reflects different levels of development and relevance within the field of WTP for sustainable tourism.

Figure 1: Strategic Diagram



Source: from SciMAT

In the upper-right quadrant, we find the motor themes—topics that are both well-developed and highly relevant to the field. Their strong internal consistency and extensive connections make them foundational to the research landscape. These themes serve not only as methodologically advanced clusters but also as conceptual anchors that shape the intellectual structure around WTP and sustainability.

The lower-left quadrant is composed of emerging or declining themes. These areas exhibit low centrality and low density, indicating they are either in the early stages of development or gradually diminishing in influence. Their peripheral position, however, does not preclude relevance; instead, they offer potential entry points for innovation or call for critical re-evaluation, depending on how scholarly attention evolves.

In the upper-left quadrant lie the well-developed but peripheral themes—highly structured and internally cohesive topics that have yet to establish strong connections with the core of the field. Although currently marginal, their analytical maturity offers an opportunity for integration into broader theoretical and empirical frameworks, especially through interdisciplinary collaboration.

Finally, the lower-right quadrant hosts basic and transversal themes. These are widely cited and conceptually significant, often serving as bridges across research areas, yet they remain underdeveloped in terms of methodological refinement. To realize their full potential, these themes require more rigorous conceptual framing and empirical elaboration to transition from general references to structured research agendas.

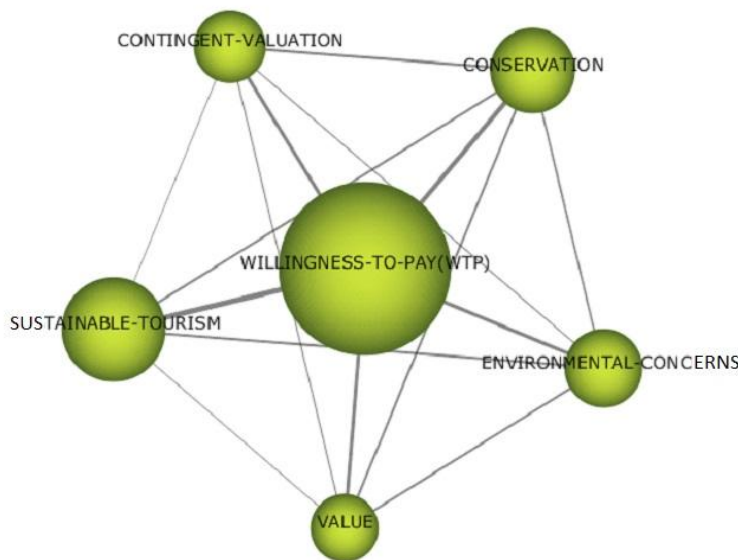
Taken together, the strategic diagram not only captures the current configuration of the field but also illuminates its internal dynamics and thematic asymmetries. It serves as a guide for identifying core strengths and areas of opportunity within the evolving discourse on WTP and sustainable tourism.

To deepen this understanding, the following section presents a detailed examination of the main thematic clusters identified through co-word analysis. Each cluster is explored in terms of its centrality and density, internal keyword relationships, and contribution to the conceptual development of the field. The clusters are introduced individually, starting with the most dominant motor theme—Willingness to Pay—followed by key areas such as Biodiversity, Consumer behaviour, and Carbon emissions.

3.3 Cluster Willingness to Pay

As mentioned, the "Willingness to Pay" (WTP) cluster (Figure 2) emerges as a motor theme in the study of sustainable tourism, reflecting its centrality and well-developed nature within the field. As a prominent node in thematic visualizations, its size and connections signify its importance and the extensive research dedicated to this topic. WTP is strongly linked to key concepts such as "sustainable tourism," "conservation," and "contingent valuation," forming an interconnected framework that emphasizes its relevance in promoting sustainability. These connections reveal how WTP acts as a mechanism to align economic contributions with environmental and social goals.

Figure 2. Cluster Willingness to pay



Source: from SciMAT.

The relationship between WTP and conservation is particularly notable, emphasizing how tourists' financial contributions can support initiatives that mitigate the environmental impacts of tourism, including biodiversity preservation and natural habitat conservation (Diez-Gutierrez & Babri, 2022; Bigerna et al., 2019). Similarly, the link between WTP and sustainable tourism reflects its role in funding practices and policies that ensure long-term, environmentally responsible tourism development. This

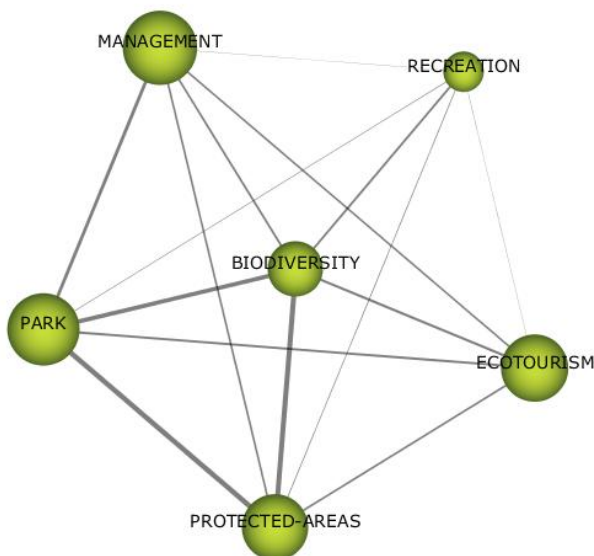
connection underscores the importance of financial support for initiatives that reduce negative impacts on ecosystems and promote sustainable practices across the tourism sector.

The methodological connection to "contingent valuation" demonstrates the use of robust tools to estimate WTP and identify non-market values relevant to sustainability goals (Pulido-Fernández, 2017 & López-Sánchez; Bai & Zhang, 2021).

3.4 Cluster Biodiversity

The biodiversity cluster highlights its foundational role in sustainable tourism and environmental conservation, forming an interconnected network of themes such as protected areas, parks, ecotourism, recreation, and management (Figure 3). These elements collectively emphasize biodiversity's centrality in preserving ecosystems while fostering sustainable tourism practices.

Figure 3: Biodiversity



Source: from SciMAT.

The strong links between biodiversity, protected areas, and parks illustrate their mutual dependency, with protected areas safeguarding biodiversity and enhancing their appeal as tourism destinations (Singh et al., 2020). Similarly, the connection between biodiversity and ecotourism underscores how the preservation of natural ecosystems attracts visitors while supporting conservation and community involvement (Samal & Dash, 2023). However, careful management is required to ensure that ecotourism's benefits do not lead to environmental degradation (Reddy & Wilkes, 2012).

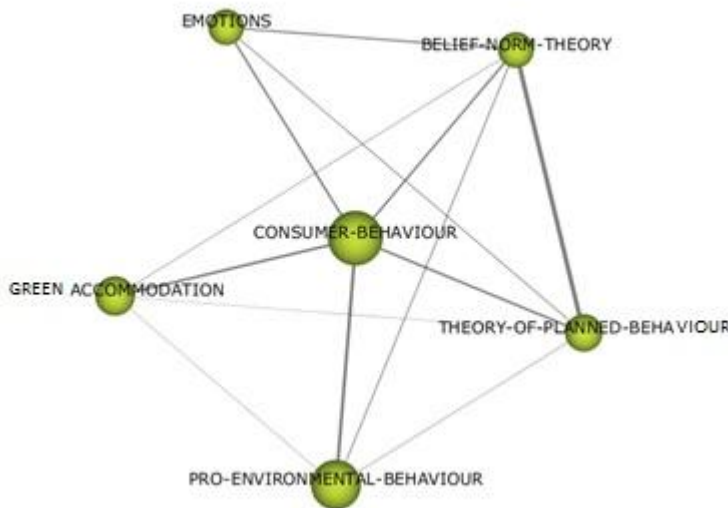
Management acts as a central node, balancing tourism development with conservation objectives through strategies such as visitor regulation and adaptive frameworks (Saayman & Saayman, 2017). Recreation plays a supporting role in this cluster, as activities like hiking and birdwatching depend on biodiversity to provide meaningful experiences. Nevertheless, sustainable practices in recreational activities are essential to minimize ecological impacts (Grilli et al., 2021).

This cluster underscores the interconnectedness of biodiversity with key themes, highlighting the need to strengthen relationships involving recreation and management. Integrating recreational activities into conservation frameworks and promoting sustainable ecotourism can enhance their positive impacts on biodiversity while contributing to long-term sustainability goals (Singh et al., 2020; Samal & Dash 2023).

3.5 Cluster Consumer Behaviour

The cluster centred on consumer behaviour reveals a complex interplay of psychological, social, and environmental factors that influence sustainable decision-making. Consumer behaviour emerges as a central theme, strongly connected to key components such as emotions, belief-norm theory, the theory of planned behaviour, pro-environmental behaviour, and green accommodation (Figure 4). These interconnections emphasize the pivotal role of understanding consumer behaviour to promote sustainable practices.

Figure 4: Consumer behaviour



Source: from SciMAT

The connection between consumer behaviour and emotions highlights the significant influence of affective factors like guilt, pride, and empathy in shaping sustainable choices. These emotions often bridge to belief-norm theory, which underscores the motivational role of deeply held personal norms in driving pro-environmental actions (Onwezen et al., 2013). Belief-norm theory itself serves as a critical node, interacting strongly with the theory of planned behaviour and providing a moral foundation for understanding sustainable consumer decisions (Han et al. 2016).

The theory of planned behaviour emerges as another central element, integrating attitudes, subjective norms, and perceived behavioural control to predict sustainable intentions. Its strong connection to consumer behaviour and belief-norm theory demonstrates its relevance in fostering environmentally responsible actions, such as choosing green accommodations or adopting eco-friendly practices (Ajzen, 2020; Steg et al., 2014).

Pro-environmental behaviour, though primarily focused on direct environmental actions like waste reduction or energy conservation, reflects its connection to consumer behaviour and the theory of planned behaviour. However, weaker links to green accommodation and belief-norm theory suggest a specialized rather than integrative role within the cluster (Vermeir & Verbeke, 2006).

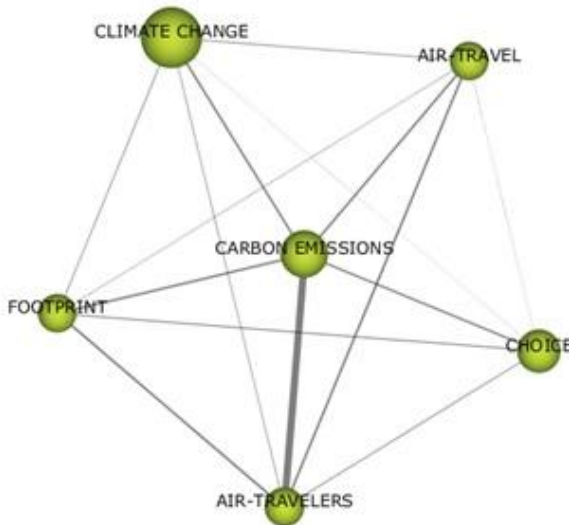
Green accommodation, while a peripheral node, connects significantly to consumer behaviour and the theory of planned behaviour, illustrating the growing importance of eco-friendly lodging choices in sustainable tourism. This connection highlights practical considerations such as certifications and sustainability practices in influencing decisions, with less emphasis on emotional or moral drivers (Rahman & Reynolds, 2016).

This cluster underscores the interconnected nature of psychological and behavioural theories with practical applications, highlighting consumer behaviour's centrality in advancing sustainable decision-making and guiding future strategies in sustainability research and practice

3.6 Carbon Emission

The Carbon Emissions cluster plays a central role in the literature on Willingness to Pay (WTP) for sustainability in tourism. This cluster is classified as well-developed, demonstrating strong internal coherence and significant influence across related themes such as Air Travelers, Footprint, Air Travel, Choice, and Climate Change (Figure 5).

Figure 5: Carbon emission



Source: from SciMAT

At the core of the cluster lies the robust connection between Carbon Emissions and Air Travelers, emphasizing the critical role of individual behaviour in mitigating tourism's environmental impact Babakhani et al. (2017). Another strong link exists between Carbon Emissions and Footprint, reflecting the measurable impact of tourism activities on the environment. Duff and Lenox (2021) emphasize the importance of quantifying tourism's ecological footprint as a foundation for sustainable decision-

making and policy development. This relationship highlights the necessity of transparent reporting mechanisms to foster accountability within the tourism sector.

The connections between Air Travel, Choice, and Climate Change illustrate moderate interdependencies within the cluster. For instance, Choi and Ritchie (2014) argue that consumer willingness to pay for carbon offset programs is shaped by the visibility and ease of offset options. Additionally, the relationship between Air Travel and Climate Change reflects the alignment of aviation practices with broader climate goals. Tyers (2018) underscores the significance of integrating aviation behaviours into climate mitigation frameworks, including the adoption of alternative fuels and emissions caps, to address the tourism sector's contribution to climate change.

Weaker, yet significant, links are observed between Choice and Climate Change, suggesting the indirect role of individual preferences in addressing global environmental challenge. For example, Crosby et al. (2024) argue that systemic changes in tourism infrastructure and consumer education are essential for promoting climate-conscious travel behaviours. These weaker connections highlight the potential cumulative impact of small-scale decisions, such as selecting eco-friendly travel options, on achieving broader sustainability objectives.

Moreover, the interplay between Air Travel, Choice, and Air Travelers demonstrates synergies in fostering sustainable travel practices. Babakhani et al. (2017) note that the connection between these elements is strengthened when consumers are presented with tangible and straightforward options for reducing their carbon footprint, such as offsetting programs and clear environmental benefits associated with their choices.

The Carbon Emissions cluster is pivotal in the discourse on sustainable tourism. Its strong connections to other themes emphasize the need for holistic strategies that integrate consumer behaviour, industry accountability, and policy measures. This cluster serves as a cornerstone for advancing sustainability in tourism, focusing on actionable solutions to mitigate its environmental impact effectively.

4. Discussion and Conclusion

This study provides a comprehensive exploration of the academic landscape surrounding willingness to pay (WTP) for sustainability in tourism, using co-word analysis as a method to reveal the field's conceptual structure. Based on 173 peer-reviewed articles indexed in Web of Science, the analysis aimed to fulfill two primary objectives: first, to identify the dominant themes in WTP-related research within tourism; and second, to offer a structured understanding of how these themes are interrelated and positioned within the broader discourse on sustainable tourism.

The findings confirm that WTP functions as the thematic nucleus of this body of literature, both conceptually and methodologically. The high centrality and density values associated with the WTP cluster indicate its deep integration into the field's intellectual fabric. This reflects sustained scholarly interest in how tourists' economic decisions can directly support sustainable practices, including environmental conservation, community well-being, and low-impact development. WTP thus operates not merely as a behavioural indicator, but as a critical link between market mechanisms and sustainability goals.

Closely associated with WTP, the cluster on biodiversity emerges as another central pillar of the research field. Its strong network connections—with themes such as protected areas, recreation, ecotourism, and management—suggest that biodiversity is not only a key beneficiary of tourists' financial contributions, but also a structuring element of sustainable tourism products. The coherence of this cluster points to a well-established recognition that conservation outcomes depend in part on effective financial engagement from tourists, and that such engagement is influenced by how biodiversity is framed within tourism experiences.

Another prominent cluster is carbon emissions, which exhibits moderate centrality but high internal cohesion. This suggests that while carbon-related issues may not be as widely interconnected as WTP or biodiversity, the body of work addressing tourism's contribution to climate change—particularly through air travel—has developed clear thematic boundaries. The robust internal structure of this cluster reflects an increasing precision in the way scholars assess tourists' carbon footprints, preferences for offsetting schemes, and attitudes toward mitigation efforts. The tangible and urgent nature of climate change has arguably contributed to the methodological and theoretical maturity of this cluster.

The theme of consumer behaviour further enriches the WTP discourse by introducing psychological, emotional, and cognitive dimensions to the analysis of sustainable choices. Although its density is slightly lower than the core clusters, consumer behaviour acts as a conceptual bridge, connecting economic willingness with deeper value structures and belief systems. Constructs such as the theory of planned behaviour, norm-activation theory, and emotional triggers (e.g., pride, guilt, empathy) feature prominently in this cluster. This reveals a shift in the literature from viewing tourists as purely rational agents to recognizing the nuanced drivers of sustainable consumption.

Despite the presence of well-developed and central clusters, the study also highlights thematic asymmetries within the field. For instance, the theme of sustainability, while frequently cited and broadly relevant, is characterized by high centrality but low density. This indicates a widespread but often superficial use of the term, lacking in conceptual refinement or methodological specificity. Sustainability is frequently referenced as a guiding principle, yet the diversity of interpretations and applications reduces its analytical coherence. This observation underscores the need for greater precision in how sustainability is framed and operationalized in studies of tourist behaviour and financial commitment.

Moreover, a number of themes—such as fees, festivals, China, and knowledge—appear on the periphery of the research network, with low centrality and density. While these clusters are less developed and less connected, their presence suggests thematic experimentation within the literature. For example, although conservation fees represent a practical application of WTP, the limited cohesion of this cluster reflects fragmented treatment across studies, perhaps due to contextual variability or inconsistent policy analysis. Likewise, cultural or regional dimensions (e.g., studies specific to China) remain largely isolated, pointing to a lack of integration with global theoretical frameworks.

The methodological dimension of the field is also visible in the Hybrid-Choice-Model cluster, which occupies a position of both conceptual depth and connectivity. This reflects a growing interest in combining qualitative insights with quantitative rigor to capture the latent variables that influence WTP. The presence of this theme signals the increasing sophistication of research tools employed to understand the complexity of tourists' financial decisions in the context of sustainability.

Taken together, the results of this co-word analysis reveal a research field that is mature in its core yet fragmented at its margins. The dominant themes—WTP, biodiversity, carbon emissions, and consumer behaviour—form a stable conceptual nucleus, supported by recurring theoretical frameworks and empirical validation. Around this core, however, orbit a range of less integrated topics suggest either emerging interests or conceptual dispersion.

This study not only confirms the centrality of WTP in sustainable tourism research but also elucidates the thematic architecture that supports and surrounds it. By mapping the field's internal structure, this research enhances our understanding of how economic, environmental, and psychological dimensions interact in shaping tourists' financial engagement with sustainability. The findings provide a critical reference point for scholars, practitioners, and policymakers seeking to align tourism development with environmental stewardship and responsible consumption. As such, WTP continues to stand as a vital lens through which the evolving relationship between tourism and sustainability can be examined, understood, and acted upon.

5. Future research and limitations

This analysis also highlights areas for future research. The relatively lower centrality and density of clusters such as "Festival" and "Fees" suggest opportunities to explore their connections with sustainability in greater depth. For instance, future studies could examine how festivals contribute to community engagement and environmental awareness, or how entrance fees can be optimized to balance visitor access with conservation funding. Additionally, the role of emerging technologies, such as digital platforms and smart tourism solutions, could be investigated to enhance the effectiveness of sustainability initiatives across all clusters.

The analysis of centrality and density of clusters generated by SciMAT provides a valuable framework for identifying thematic priorities and guiding future research in sustainable tourism. Key topics such as willingness to pay, biodiversity, and carbon emissions emerge as critical areas of focus, supported by recent studies that highlight their theoretical and practical significance (Fichter et al., 2023; Saayman & Saayman, 2017; Babakhani et al., 2017; López-Sánchez & Pulido-Fernández, 2016). By addressing these themes, researchers and practitioners can develop more effective strategies to promote sustainability, enhance tourist experiences, and ensure the long-term viability of tourism destinations.

Future research should address gaps in understanding the long-term impacts of WTP-driven policies on local communities and ecosystems. Moreover, interdisciplinary approaches that combine economic, social, and technological perspectives could provide holistic solutions to the challenges of sustainable tourism.

Although the analysis is based solely on Web of Science data and a manually curated keyword standardization process, this focused approach ensured the inclusion of high-quality sources and allowed for a more precise thematic mapping—while also opening avenues for future research to expand the scope across other databases and multilingual contexts.

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N/A

References

- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
- Babakhani, N., Ritchie, B. W., & Dolnicar, S. (2017). Improving carbon offsetting appeals in online airplane ticket purchasing: Testing new messages, and using new test methods. *Journal of Sustainable Tourism*, 25(7), 955–969. <https://doi.org/10.1080/09669582.2016.1257013>
- Bai, Z., & Zhang, Y. (2021). Sustainability of Ski Tourism in China: An Integrated Model of Skiing Tourists' Willingness to Pay for Environmental Protection. *Sustainability*, 13(16), 8883. <https://doi.org/10.3390/su13168883>
- Bigerna, S., Micheli, S., & Polinori, P. (2019). Willingness to pay for electric boats in a protected area in Italy: A sustainable tourism perspective. *Journal of Cleaner Production*, 224, 603–613. <https://doi.org/10.1016/j.jclepro.2019.03.266>
- Cavallin Toscani, A., Vendraminelli, L., & Vinelli, A. (2024). Environmental sustainability in the event industry: a systematic review and a research agenda. *Journal of Sustainable Tourism*, 32(12), 2663–2697. <https://doi.org/10.1080/09669582.2024.2309544>
- Callon, M., Courtial, J.P. & Laville, F. (1991). Co-word analysis as a tool for describing the network of interactions between basic and technological research: The case of polymer chemistry. *Scientometrics* 22, 155–205. <https://doi.org/10.1007/BF02019280>
- Choi, A. S., & Ritchie, B. W. (2014). Willingness to pay for flying carbon neutral in Australia: An exploratory study of offsetter profiles. *Journal of Sustainable Tourism*, 22(8), 1236–1256. <https://doi.org/10.1080/09669582.2014.894518>
- Cobo, M. J., López-Herrera, A. G., Herrera-Viedma, E., & Herrera, F. (2011). Science mapping software tools: Review, analysis, and cooperative study among tools. *Journal of the American Society for Information Science and Technology*, 62(7), 1382–1402. <https://doi.org/10.1002/asi.21525>
- Crosby, P., Thompson, D., & Best, R. (2024). Air travellers' attitudes towards carbon emissions: Evidence from the Google Flights interface. *Journal of Sustainable Tourism*. 1-24. <https://doi.org/10.1080/09669582.2024.2412161>
- de Araújo, A. F., Marques, I. A., & Moreno, L. (2024). No Planet-B Attitudes: The Current Environmental Paradigm and Its Role on Willingness to Pay for Sustainable Tourism Destinations. <https://doi.org/10.20944/preprints202409.2111.v1>
- Diez-Gutierrez, M., & Babri, S. (2022). Tourists' perceptions of economic instruments as sustainable policies in protected areas: The case of Geiranger fjord in Norway. *Journal of Outdoor Recreation and Tourism*, 39, 100526. <https://doi.org/10.1016/j.jort.2022.100526>
- Duff, R., & Lenox, M. (2021). *The decarbonisation imperative: Transforming the global economy By 2050*. <https://doi.org/10.1515/9781503629622>
- Ezeh, P. C., & Dube, K. (2024). Willingness to Pay in Tourism and Its Influence on Sustainability. *Sustainability*, 16(23), 10630. <https://doi.org/10.3390/su162310630>.
- Fichter, T., Martín, J. C., & Román, C. (2023). Young segment attitudes towards the environment and their impact on preferences for sustainable tourism products. *Sustainability*, 15(24), 16852. <https://doi.org/10.3390/su152416852>
- Göktaş, L. S., & Cetin, G. (2023). Tourist tax for sustainability: Determining willingness to pay. *European Journal of Tourism Research*, 35, 3503. <https://doi.org/10.54055/ejtr.v35i.2813>
- Godinho, M. F., dos Santos J., Gonella, H. L., Miller, D. G., (2024). Awareness as a catalyst for sustainable behaviors: A theoretical exploration of planned behavior and value-belief-norms in the circular

- economy, *Journal of Environmental Management*, 368, 122181, <https://doi.org/10.1016/j.jenvman.2024.122181>.
- Grilli, G., Tyllianakis, E., Luisetti, T., Ferrini, S., & Turner, R. K. (2021). Prospective tourist preferences for sustainable tourism development in Small Island Developing States. *Tourism Management*, 82, 104178. <https://doi.org/10.1016/j.tourman.2020.104178>
- Han, H., Hwang, J., & Lee, M. J. (2016). The value–belief–emotion–norm model: investigating customers' eco-friendly behavior. *Journal of Travel & Tourism Marketing*, 34(5), 590–607. <https://doi.org/10.1080/10548408.2016.1208790>
- Lan, B. T. H., Truong, D. D., Huan, L. H., & Hang, N. D. (2024). Valuation of Tourists' Willingness to Pay for Ecological Conservation towards a Sustainable Financial Mechanism for National Parks: An Empirical Case of Cuc Phuong National Park, Red River Delta, Vietnam. *Environmental Research Communications*. <https://doi.org/10.1088/2515-7620/ad7fbd>
- López-Sánchez, Y., & Pulido-Fernández, J. I. (2016). Factors influencing the willingness to pay for sustainable tourism: A case of mass tourism destinations. *International Journal of Sustainable Development and World Ecology*, 24(3), 262–275. <https://doi.org/10.1080/13504509.2016.1203372>
- Onwezen, M., C & Jos Bartels, G. H. (2013) The Norm Activation Model: An exploration of the functions of anticipated pride and guilt in pro-environmental behaviour, *Journal of Economic Psychology*, 39, 141-153, <https://doi.org/10.1016/j.joep.2013.07.005>.
- Pulido-Fernández, J. I., & López-Sánchez, Y. (2016). Are tourists really willing to pay more for sustainable destinations? *Sustainability*, 8(12), 1240. <https://doi.org/10.3390/su8121240>
- Rahman, I., & Reynolds, D. (2016). Predicting green hotel behavioral intentions using a theory of environmental commitment and sacrifice for the environment. *International Journal of Hospitality Management*, 52, 107-116. <https://doi.org/10.1016/j.ijhm.2015.09.007>
- Reddy, M., & Wilkes, K. (2012). *Tourism, climate change and sustainability*, Routledge, 304. <https://doi.org/10.4324/9780203128954>
- Saayman, M., & Saayman, A. (2017). Is the rhino worth saving? A sustainable tourism perspective. *Journal of Sustainable Tourism*, 25(2), 251–264. <https://doi.org/10.1080/09669582.2016.1197229>
- Samal, R & Dash, M. (2023). Ecotourism, biodiversity conservation and livelihoods: Understanding the convergence and divergence, *International Journal of Geoheritage and Parks*, 11 (1), 1-20, <https://doi.org/10.1016/j.ijgeop.2022.11.001>.
- Singh, J., Tardieu, L., & Tuffery, D. (2020). Biodiversity and its economic value in sustainable tourism. *Tourism Economics*, 26(3), 476–495. <https://doi.org/10.1177/1354816620914247>
- Steg, L., Bolderdijk, J. W., Keizer, K., & Perlaviciute, G. (2014). An integrated framework for encouraging pro-environmental behavior: The role of values, situational factors and goals. *Journal of Environmental Psychology*, 38, 104–115. <https://doi.org/10.1016/j.jenvp.2014.01.002>
- Tavárez, H., Abelleira, O. & Elbakidze, L. (2024). Environmental awareness and willingness to pay for biodiversity improvement in Puerto Rico. *J Environ Stud Sci* 14, 154–16. <https://doi.org/10.1007/s13412-023-00869-y>
- Tyers, R. (2018). Nudging the jetset to offset: Voluntary carbon offsetting and the limits to nudging. *Journal of Sustainable Tourism*, 26(10), 1668–1686. <https://doi.org/10.1080/09669582.2018.1494737>
- Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude–behavioral intention" gap. *Journal of Agricultural and Environmental Ethics*, 19, 169–194. <https://doi.org/10.1007/s10806-018-9755-7>

(Title, Abstract and Keywords in Spanish)

Explorando la disposición a pagar por la sostenibilidad en el turismo: Un análisis de coocurrencia de palabras en la revisión de la literatura

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Resumen

Este estudio presenta un análisis bibliométrico y de coocurrencia de palabras exhaustivo de la literatura académica sobre la disposición a pagar (DAP) de los turistas por la sostenibilidad en el turismo. Mediante una revisión sistemática de 173 artículos indexados en Web of Science y analizados con SciMAT, trazamos un mapa conceptual de la DAP, identificando temas dominantes y lagunas de investigación. Los resultados revelan que la DAP es un tema central, fundamental para comprender el apoyo financiero a la conservación y las prácticas sostenibles, estrechamente vinculado a la biodiversidad, el comportamiento del consumidor y las emisiones de carbono. Grupos temáticos como los modelos de elección híbrida y los servicios ecosistémicos subrayan la intersección de las dimensiones ambientales, económicas y psicológicas en el turismo sostenible. Nuestro análisis muestra que la DAP está impulsada por factores sociodemográficos, la conciencia ambiental y el impacto percibido de las contribuciones. Si bien las tasas de conservación y las ecoetiquetas fomentan respuestas positivas, las barreras conductuales y la limitada confianza en la transparencia de las políticas pueden obstaculizar la participación. Áreas emergentes y poco desarrolladas —como los eventos culturales y los sesgos psicológicos— sugieren direcciones prometedoras para futuras investigaciones. Concluimos proponiendo una agenda de investigación que integra la economía conductual, la psicología ambiental y la innovación digital para profundizar en la comprensión del compromiso financiero de los turistas con la sostenibilidad. Este artículo aporta nuevas perspectivas al combinar el mapeo bibliométrico con la interpretación cualitativa, ofreciendo una hoja de ruta para impulsar la investigación y la práctica del turismo sostenible.

Palabras clave: Disposición a pagar (DAP), Turismo sostenible, Análisis de coocurrencia de palabras, Conciencia ambiental.

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Externalities of urban logistics: challenges and opportunities for achieving smart and sustainable cities

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Abstract

Although urban logistics is vital for cities, it is often provided inefficiently and current trends are unsustainable, creating an urgent need to find innovative ways to reduce its externalities. This article presents a systematic review of the literature with the aim of analysing in depth the negative externalities associated with urban logistics, such as traffic congestion, pollutant emissions, energy consumption, accidents and noise. In addition to analysing these and other challenges, the article offers technological, organisational and governance proposals to promote a transition towards smart and sustainable cities in line with the sustainability and efficiency challenges of the 2030 Agenda and the principles of Logistics 5.0.

Keywords: urban logistics; urban freight distribution; urban freight transport; city logistics; externalities; smart cities, sustainable cities.

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1. Introduction

Although urban logistics is vital to the prosperity of cities by providing the flows of materials, food and goods so necessary for the consumption and production sectors of urban economies, it is also responsible for generating a series of negative externalities that reduce the economic well-being of regions (Holguín-Veras et al., 2020a; Boussier et al., 2011; Browne and Gomez, 2011; Comi et al., 2024; Crainic et al., 2009; Savelsbergh and

Van Woensel, 2016; Rai et al., 2017; Galambos et al. 2024), by directly impacting the productivity and competitiveness of the private sector and damaging the quality of life of citizens.

The environmental problems of urban logistics are related to three main phenomena: greenhouse gas emissions (the main contributor to global warming), local pollution and noise emissions (Gonzalez-Feliu and Morana, 2010). Urban freight transport is thus one of the most significant contributors to environmental problems in cities (Quak and De Koster, 2009; Russo and Comi, 2016). Furthermore, in 2020 it was already expected that, without effective intervention, urban freight logistics would grow by more than 30% in the world's 100 largest cities over a 10-year period, up to 2030 (World Economic Forum, 2020). At the beginning of this decade, segments such as same-day and instant delivery were experiencing annual growth rates of 36% and 17%, respectively.

On the other hand, many business decisions are more focused on achieving economic efficiency, leaving environmental and social objectives aside, and therefore contribute more to these externalities (Österle et al., 2015). There is therefore a growing concern that environmental issues are being neglected in favour of economic aspects (Arvidsson et al., 2013).

The 2030 Agenda seeks to achieve more sustainable and resilient cities by 2030; therefore, while economic growth must be pursued, it must be accompanied by less environmental impact. It is also necessary to prevent the demand for freight transport from increasing substantially with economic growth, or congestion and environmental impacts from increasing with the growing demand for freight transport (Taniguchi and Van Der Heijden, 2000).

This article analyses, on the one hand, the main negative externalities and challenges generated and faced by urban logistics and, on the other hand, some lines of action and proposals that would improve its sustainability, thus moving towards smarter and more sustainable cities. The following research questions have been posed to guide the development of this article.

- What are the main externalities and challenges of urban logistics?
- What proposals are being put forward to achieve smart and sustainable cities?

2. Literature Review

Urban logistics, as the last link in the supply chain, is essential for the functioning, productivity and competitiveness of cities, both in their regional, national and global contexts. However, its impact on urban environmental problems is considerable, and sustainable improvements are therefore required to balance it with environmental protection, global economic development and social cohesion (Russo and Comi, 2010; Arvidsson et al., 2013). It is also essential for employment, as it is estimated that between 5% and 10% of jobs in large cities are associated with freight transport (Ragàs Prat, 2018).

Numerous studies refer to the negative externalities generated by urban goods distribution. Table 1 shows some examples of these references, with interesting excerpts:

Table 1: References from authors on the negative externalities generated by urban goods distribution

Allen et al. (2007)	<p>They refer to the main economic, environmental and social externalities produced by urban goods distribution, citing the following:</p> <ul style="list-style-type: none"> • Economic impacts: traffic congestion, inefficiencies and resource consumption. • Environmental impacts: pollutant emissions, use of non-renewable fossil fuels, land use and waste generation. • Social impacts: consequences of these externalities on people's health, whether due to pollution, traffic accidents, noise, visual intrusion, or other factors that may alter citizens' quality of life.
Akyol and De Koster (2013)	<p>Urban transport contributes significantly to pollution, noise disturbance, traffic congestion and safety problems in urban centres.</p>
Holguín-Veras et al. (2020b)	<p>Although goods vehicles are the ones that physically produce the externalities, and transport operators appear to be directly responsible for these problems, quite often most of these externalities are caused by decisions made by other actors involved in supply chains, and even by city governments.</p> <p>Addressing these problems often requires collaborative approaches and changes in the behaviour of multiple actors, not just operators.</p>
Iwan (2016)	<p>Most transport processes in urban logistics favour road transport, which has many adverse effects associated mainly with:</p> <ul style="list-style-type: none"> • Traffic congestion, which contributes to increased vehicle operating costs and infrastructure maintenance, more time wasted by transport users, and other losses related to the time and reliability required to make deliveries. • Environmental pollution, through the consumption of non-renewable energy and fossil fuels. • Reduction of green spaces versus the development of transport infrastructure. • Noise. • Traffic accidents. • Loss of attractiveness of the city while decreasing its functionality. • Increasing amount of waste products such as tyres, oil and other materials.
Jaller et al. (2016)	<p>Identifies as negative externalities increased fuel consumption, traffic congestion levels, emissions and</p>

	pollutants that affect people's health, among other aspects, which, if left unaddressed, deteriorate conditions as a result of the continuous growth in demand experienced in most cities.
Moutaoukil et al. (2015)	<p>Although urban freight distribution plays an important role in supporting commercial activities and contributes to the dynamism of cities, it also generates some negative impacts, which can be classified as:</p> <ul style="list-style-type: none"> • Economic impacts: congestion, inefficiency and waste of resources, damage to infrastructure. • Environmental impacts: pollutant emissions, global warming, excessive fuel consumption. • Social impacts: physical consequences of pollutant emissions on public health, traffic accidents, noise, etc.
Papoutsis and Nathanail (2016)	<p>Due to its inherent characteristics and service objectives, urban road freight transport generates harmful atmospheric emissions to a greater extent than journeys made by car or motorbike.</p> <p>Its fuel consumption per kilometre is higher than that of passenger vehicles, and the traffic congestion it creates affects the level of mobility and road safety for drivers, pedestrians and cyclists.</p> <p>In this sense, urban freight distribution generates a wide range of direct impacts and secondary effects.</p>
Quak (2008)	The dominant share and growing trend of road transport in urban freight distribution negatively affects sustainability, impacting human health, reducing quality of life, and affecting the economy in general due to the potential price increases it generates.
Ranieri et al. (2018)	They address innovative strategies for last-mile logistics, with a focus on reducing the costs of externalities such as congestion and pollution, which have increased in recent years due to the growth of freight transport, online sales and globalisation.
Savall-Mañó and Ribas (2024).	The boom in online sales, coupled with the speed of home deliveries, has a negative impact on cities, generating a series of externalities that municipal authorities are trying to mitigate. In this case, it is proposed that the authorities assess the impact of restricting freight traffic during specific time slots and formulate regulations based on scenarios that minimise negative externalities (congestion, emissions, etc.).

Source: own elaboration.

Although there is a clear diagnosis of the ills of the modern city, what is much less clear is the formula for moving from current unsustainable urban transport trends to a more sustainable future, especially

given the numerous stakeholders involved, the complexity of urban systems and the fragmented nature of decision-making. Furthermore, in most cases, authorities probably do not have the mandate, responsibility, power or support to make decisions that are consistent with sustainable development (Kennedy et al., 2005).

Urban logistics is a field characterised by strong technological and digital dynamism and by the urgent need to consolidate more sustainable models in the face of the growing economic, social and environmental challenges set out in the 2030 Agenda (Russo and Comi, 2024).

It has thus become a major challenge for cities, and several articles have paid special attention to how to improve urban mobility from the perspective of smart cities (Asuncion del Cacho Estil-Les, 2025; Cassiano et al., 2021; Ismael and Holguin-Veras 2025; Golinska-Dawson and Sethanan, 2023; Yu et al., 2025; Pan et al., 2021; Zhang et al., 2025).

Table 2 provides some examples of references to innovative initiatives and technologies that can help in the transition to smart and more sustainable cities.

Table 2: References from authors on innovative initiatives and technologies to promote a transition to more sustainable cities

Barbosa et al. (2018); Golinska-Dawson and Sethanan (2023); Liu et al. (2023); Rubino et al. (2025)	Developments in information and communication technologies (ICT), such as sensor networks, the Internet of Things (IoT), Big Data, artificial intelligence, cloud computing, cyber-physical systems and digital twins, enable organisations and individuals to interact dynamically and intensively and are changing the demands and requirements of urban logistics. Smart city developments are driving the integration and convergence of urban infrastructures based on the integration of technological resources, creating real opportunities for supply chain management.
Russo and Comi (2023)	The introduction of ICTs, such as the Internet of Things (IoT), Big Data, blockchain and artificial intelligence, helps to improve the learning process in route optimisation problems in smart cities. By providing real-time data, it reduces both driving and walking costs for delivery personnel and allows them to reserve delivery areas in advance, which improves delivery times.
Golinska-Dawson and Sethanan (2023)	They consider the use of drone-based modes of transport, autonomous delivery robots, autonomous vehicles, cargo bikes (including electric cargo bikes and electric tricycles), electric vehicles (mainly vans) and combined rapid passenger and freight transport systems to be an important factor in achieving more energy-efficient smart cities.

Faiçal et al. (2023)	Propose a roadmap for cyber-physical systems applied to unmanned aerial vehicles (drones) to reduce costs and increase speed in last-mile deliveries in smart cities.
Kwasiborska et al. (2023)	Address zero-emission transport policy, analysing the energy efficiency of using drones versus electric scooters for delivering food from restaurants to consumers.
Melo et al. (2017)	They analyse traffic management systems to help achieve smart cities, relying in this case on redirection systems, i.e. guides for vehicle routes that could reduce travel times and improve traffic efficiency and performance.
Asuncion del Cacho Estil-Les (2025)	Addresses two very relevant problems in smart cities, namely postal delivery and waste collection, applying route optimisation strategies and considering smart charging to minimise peaks in demand on the electricity grid.
Kłodawski et al. (2024)	They address the importance of optimising operations and improving the energy efficiency of intermodal terminals in smart cities by focusing on the strategies and operations of crane loading.
Ismael and Holguin-Veras (2025)	They propose reducing congestion, the social costs of parking and driving, and emissions, based on a model of optimal parking space allocation according to attributes such as vehicle type or parking time, which could support policy interventions to manage high parking demand.
Aloui et al. (2021)	They address collaboration between companies as a possible solution to improve the efficiency of freight transport in cities, and their case study of four small and medium-sized enterprises in the agri-food sector shows positive results in reducing CO2 emissions, logistics costs and the accident rate caused by urban freight transport.
Oliveira et al. (2022)	They propose integrating the public transport and freight transport structures with the aim of reducing the externalities associated with freight transport, proposing the use of a network of lockers in the public transport infrastructure, through which residents actively participate in last-mile deliveries. This also encourages the use of public transport, contributing to more sustainable cities.
Leyerer et al. (2020)	They analyse the optimisation of urban logistics in e-grocery operations through a network of refrigerated lockers that allow products to be temporarily stored in urban areas for direct collection by customers, and route planning using bicycles to transport the product from the lockers to customers' homes.

Zhang et al. (2025)	They propose a route planning model that integrates lockers for the collection of parcels by citizens, but considering not only operational optimisation, but also the analysis, behaviour and preferences of consumers, who sometimes do not seem to use such lockers because they are not located on their regular routes.
Cassiano et al. (2021)	They promote sustainable urban freight transport by integrating freight transport planning with urban planning to develop it.
De Oliveira et al. (2024)	They propose, with the aim of promoting sustainable cities, developing integrated freight and passenger transport systems, as these allow for the optimisation of urban space, a reduction in freight vehicle movements and operating costs, and an increase in the efficiency of the transport system.
Yu et al. (2025)	They address the optimisation of the design of a network of underground spatial logistics systems for smart cities that seeks to balance economic efficiency and robustness for the planning of underground logistics space, contributing to the sustainable urban development of densely populated regions.

Source: own elaboration.

3. Methodology

3.1 Systematic review approach

In this article, we have chosen to follow a systematic review of the literature as the main research methodology, with the aim of offering a rigorous and replicable analysis of knowledge related to the externalities of urban logistics and its challenges and opportunities in the transition to smart and sustainable cities.

Compared to narrative reviews, this methodology establishes very precise questions and follows a structured process that increases the traceability of the procedure, guarantees a comprehensive synthesis of the existing academic literature, and presents the most relevant findings (Lagorio et al., 2016; De Oliveira et al., 2017).

Using internationally renowned databases such as Web of Science, Science Direct and Google Scholar, which integrate multidisciplinary literature covering areas ranging from transport engineering and supply chain management to urban public policy and environmental sciences, and applying advanced search strategies that have made it possible to link keywords such as "externalities" with "urban logistics" or "urban freight transport" or "last-mile deliveries", and also with terms such as "sustainable cities" or "smart cities". In the first phase, we have managed to identify articles that relate all these keywords, thus focusing the research on the transition to smart and sustainable cities.

Table 3. Keywords and search criteria (inclusion/exclusion) used in Web of Science

Topic
"Externalities" OR "Costs"
And
"Urban Freight Solutions" OR "Urban freight distribution" OR "Urban freight transport" OR "Urban freight" OR "Urban logistics" OR "City logistics" OR "Last mile delivery" OR "Last mile supply chains"
And
"Smart cities" OR "Sustainable cities"

Source: own elaboration.

On the other hand, in order to guarantee the quality of the results, increase the number of publications reviewed and delve deeper into the analysis of the externalities and challenges facing urban logistics, in a second phase, other publications located in other databases and search engines such as Science Direct or Google Scholar were considered, taking into account criteria such as the relevance of the publications analysed and the soundness and empirical rigour of the studies.

In these two phases, some articles were discarded, either because they were too specific or because they had methodologies and results that did not fall within the scope of this article. This made it possible to carry out a quality assessment process of the articles identified and reviewed.

Finally, although the results obtained after applying this methodology can help public decision-makers and other stakeholders to understand the externalities and challenges facing urban logistics and can assist in the transition to smarter cities, its application has revealed research gaps that could be of great interest to all stakeholders in urban logistics management, such as, for example the lack of specific policy capacities that consider urban freight transport issues (Cui et al., 2015); the lack of consensus between national and local authorities and private actors, and in many cases, the absence of policies and guidelines for efficient urban transport system planning (Sdoukopoulos et al., 2016); or the lack of fundamental data and knowledge on the part of local governments for organising freight transport in cities (Holguín-Veras et al., 2020a).

4. Results and Analysis

4.1 Negative externalities generated by urban logistics

The main negative externalities associated with urban logistics are described and analysed below.

Table 4. Negative externalities generated by urban logistics

Excessive consumption of energy resources.
Polluting emissions.

Traffic congestion.
Noise.
Road safety.

Source: own elaboration.

4.1.1 Excessive consumption of energy resources

Fuel consumption per kilometre in urban logistics is higher than for passenger vehicles. However, growing awareness of environmental issues and related policy objectives and tax reduction measures (e.g. to promote biofuels), together with declining availability and rising prices of fossil fuels, may promote more optimal use of vehicles, as well as new opportunities for environmental businesses, thus having a decreasing effect on average fuel consumption. Energy and environmental concerns could also add value to modal shift in urban transport (Liimatainen et al., 2015), and increasingly stringent environmental protection regulations could increase the attractiveness of other modes of transport such as rail or maritime (Von der Gracht and Darkow, 2010).

It is also important to note that in recent years there has been rapid growth in the trend towards sharing freight journeys in private cars, vans and light trucks, especially in the construction and service sectors, which may complicate the assessment of the impacts attributable to freight transport (Himanen et al., 2004).

On the other hand, volatile oil prices could encourage logistics service providers to research and implement alternative fuels (Tacken et al., 2014).

4.1.2 Pollutant emissions

Air pollution continues to have a significant impact on the health of the European population, particularly in cities, with transport being one of the main sectors contributing to such pollutant emissions (Himanen et al., 2004).

The most serious pollutants in Europe, in terms of damage to human health, are PM (particulate matter), NO₂ and O₃ at ground level. In general terms, they can cause more than 230,000 premature deaths per year in the European Union (according to data from the European Environment Agency (EEA) in 2022). Poor air quality is therefore one of the main causes of premature death related to the environment in the European Union.

The World Bank estimates that 0.5 million people in developing countries die each year from transport-related emissions, with a similar number dying from traffic accidents. Thus, the pressure to develop sustainable transport systems is particularly intense in urban areas (Kennedy et al., 2005).

In this context, where GHG emissions undoubtedly pose the greatest threat to society in the medium and long term (Whiteing, 2010), the European Union has set the ambitious target of reducing them by 55% by 2030 (European Commission, 2021), as it contributes significantly both to local emissions (i.e. NO_x, elemental carbon and organic carbon) that affect urban air quality, disrupting citizens' health and life expectancy, and to global emissions (i.e. CO₂) that affect global warming (Quak et al., 2016).

Furthermore, some studies argue that emission reductions of less than 1% produce significant health benefits (Jaller et al., 2016).

Urban transport is more polluting than long-distance transport due to the frequency of short trips and stops. Fuel consumption increases considerably if the vehicle has to stop very often: with five stops in 10 km, fuel consumption can increase by up to 140% (Filippi et al., 2010).

Therefore, operations involving a large number of short journeys and a large number of stops make urban freight transport less sustainable than long-distance transport (Tadić et al., 2015).

In addition, urban logistics is more polluting than long-distance freight transport because delivery vehicles are generally older, vehicles accelerate and decelerate continuously, and idling vehicles are less energy efficient (Ragàs Prat, 2018).

4.1.2.1 Some factors that influence pollutant emissions

In terms of urban logistics, pollutant emissions depend on several factors, such as the weight and size of vehicles, the type of fuel used (Cui et al., 2015), the technical specifications of the vehicle, the load capacity used, the distance travelled, traffic and road conditions, and the average speed, which will depend, among other things, on the urban route itself. However, some studies indicate that CO₂ emissions are not directly related to the weight of the load, but rather to the actual weight of the vehicles used, including their load and unladen weight. This means that the use of appropriately sized vehicles reduces CO₂ emissions. The incorporation of a lighter vehicle would, however, mean a reduction in its payload (Moutaoukil et al., 2015).

Behnke and Kirschstein (2017) argue that alternative routes and heterogeneous vehicles must be taken into account when planning urban freight transport with an environmental focus. This could lead to potential emissions savings of more than 4%. They therefore propose a vehicle routing model that seeks to minimise the total GHG emissions of all vehicles used to serve all customers from a central depot. Traditional approaches seek routes that minimise travel distance or travel time, but as environmental issues become additional objectives in almost all business management processes, the most current approaches address environmental aspects by focusing, for example, on minimising fuel consumption, GHG emissions, noise, or similar measures.

Zhang et al. (2025) also address the importance of operational efficiency in delivery and environmental sustainability as relevant aspects in achieving sustainable development in smart city distribution logistics, proposing specific goods distribution routes using electric vehicles.

And Azad et al. (2023) assess how the use of electric tricycles can reduce pollutant emission costs, thereby improving the sustainability of urban logistics.

4.1.2.2 Percentage of pollutant emissions generated by freight transport

Numerous studies refer to the percentage of pollutant emissions generated by freight transport. Table 3 shows some examples of these references:

Table 5: Polluting emissions generated by freight transport

Cagliano et al. (2017)	Approximately 8% of global energy-related CO ₂ emissions are derived from freight transport, 92% of which is due to road transport.
Dablanc (2007)	Although freight transport accounts for only 20-30% of road traffic in cities, it can generate between 16 and 50% (depending on the pollutant considered) of the atmospheric pollutant emissions derived from transport activities in a city. so although urban freight transport operations constitute a small proportion of road traffic in cities, they are one of the main emitters of air pollutants.
De Marco et al. (2018)	The share of CO ₂ emissions from goods vehicles in relation to total urban traffic is approximately 20 to 30%, while for PM particles it can reach 50%.
Kin et al. (2016)	Pollutant emissions from transport-related activities within cities can account for up to 50%, depending on the pollutant considered.
Ragàs Prat (2018)	Urban freight distribution in European cities accounts for 25% of transport-related CO ₂ emissions, 33% of NO _x emissions and 50% of particulate emissions.

Source: own elaboration.

4.1.3. Traffic congestion

Traffic congestion is a common phenomenon in major cities around the world (Figliozi, 2007) and its levels on urban roads are constantly increasing due to growing traffic demand as cities become more populated (Taniguchi et al., 2003). Increasing levels of congestion are also likely to be related to the increased frequency of delivery vehicle use and longer transport distances (Pawlak and Stajniak, 2011).

Therefore, as population and income (and thus total consumption) grow, and as global trade expands, congestion is likely to worsen unless effective solutions are found, and its effects will be most noticeable in urban areas, where, in the case of the EU, this problem is expected to worsen in the future (Whiteing, 2010).

Table 6. Some consequences of traffic congestion

- Traffic congestion, caused mainly by increased population concentrations, together with greater use of motor vehicles (Himanen et al., 2004), means that citizens and transport operators have to spend more time travelling, causing a serious loss of productive time.
- Some studies refer to the cost of time lost due to traffic congestion and inefficiencies in urban logistics management, which accounts for approximately 2% of the GDP of any OECD country (Sanz and Pastor, 2009).
- Other studies argue that, as a result of traffic congestion, Europe loses approximately more than €80 billion per year (Sdoukopoulos et al., 2016), approximately 1% of the European Union's GDP (Savelsbergh and Van Woensel, 2016).
- The increase in travel time and uncertainty caused by congestion affects the efficiency of logistics operations. As congestion increases, the number of vehicles needed to complete the journey also increases. This is accompanied by an increase in the percentage of total driving time, as well as the average distance travelled per customer (Figliozzi, 2007).
- Congestion increases the operating costs of carriers, who will need more fuel and will have to bear higher labour costs due to the need for overtime (Figliozzi, 2007).
- Goods arrive late to their final recipients, thus increasing delivery costs (Tadić et al., 2015), which will have an impact on the final price of the products and, consequently, on the competitiveness of companies.
- Traffic congestion often leads to the use of alternative routes, which may be longer and less safe, thereby increasing transport costs and risk. These costs and risks are transferred through the supply chain to the end user and also result in an overall loss for society (Tadić et al., 2015).
- Traffic congestion encourages fuel consumption, pollution and accidents. Collisions involving large lorries cause great trauma to communities, so that both the social and environmental impacts of goods transport become a major problem for residents (Taniguchi et al., 2003).
- Goods vehicles reduce road capacity more than other types of vehicles when they park, for example, to carry out loading and unloading operations (Kin et al., 2016).
- When comparing passenger vehicles with commercial goods delivery vehicles, although the latter are fewer in number, they are larger in size and noisier, and therefore cause greater road safety issues (Anand et al., 2015).

Source: own elaboration.

Table 7. Some solutions to traffic congestion

- Traffic congestion is a major problem that affects all stakeholders today. According to the European Commission, 9 out of 10 Europeans believe that the traffic situation in their city could be improved, which is why many cities are trying to optimise their traffic situation by setting up traffic control management, responsible for monitoring and controlling the city's traffic infrastructure to ensure safe, efficient and effective flows that minimise congestion (Köster et al., 2015).

- One measure that could reduce traffic congestion in cities would be night-time deliveries, which, although they could provide advantages for logistics service providers and citizens, could harm both recipients, by increasing their operating costs, and local residents, due to the noise nuisance they may cause (Verlinde and Macharis, 2016).

Source: own elaboration.

4.1.4 Noise

In the European Union, 80% of noise in cities comes from traffic and interferes with people's basic activities such as communication, sleep and rest, causing physical and psychological disorders in many cases.

Research carried out by the World Health Organisation (WHO) shows that more than 34 million EU citizens are exposed to noise levels exceeding 50 decibels at night, when the limit should be less than 30 decibels. This leads to health problems and dysfunctions in the human body (Kauf, 2016).

Although noise is mainly taken into account in zoning policies, the evolution of its impacts does not seem to have progressed very far and in many cases it is still treated as a nuisance (Himanen et al., 2004).

4.1.5 Road safety

With the increase in the number of goods vehicles, road safety is declining. Furthermore, road characteristics, vehicle types, driver training and traffic management are often not taken into account in the route planning process for goods vehicles, and these weaknesses are leading to an increase in the number of accidents and damage to infrastructure, i.e. roads (Tadić et al., 2015).

Urban logistics affects road safety in multiple ways (Ragàs Prat, 2018):

- If goods vehicles park near pedestrian crossings, they can block direct visibility between pedestrians and other traffic.
- Logistics corridors generally run along the main roads of cities, affecting pedestrians and other smaller vehicles.
- On other occasions, larger vehicles, due to their size, do not take pedestrians and smaller vehicles into account, unconsciously ignoring their presence.
- In addition, they need more space to turn, sometimes occupying lanes and spaces intended for pedestrians and cyclists.

4.2 Challenges and proposals for improving the sustainability of urban logistics

Important challenges in urban logistics and possible proposals to promote a transition towards smart and sustainable cities are described and analysed below.

Table 8. Sustainability challenges and proposals

Challenges	Proposals
Heterogeneous preferences of different stakeholders	Integration/collaboration
Lack of efficient transport policies	Incorporation of sustainability into governance and urban freight transport policy-making
Lack of knowledge of international norms and standards	Improvement of logistics and freight transport quality
Poor environmental performance of companies	Integration of sustainable development into supply chains
Need to promote technological development and logistics 5.0	Smart cities.

Source: own elaboration.

4.2.1 Heterogeneous preferences of different stakeholders. Proposal for integration/collaboration

The sustainability/unsustainability of urban freight transport often depends on the specific stakeholders involved and their perception of their activity/role in urban logistics. A possible solution from one actor's point of view may represent a new and insurmountable problem for another, which exacerbates the complexity of the system. In this regard, local policymakers, in addition to being effective in achieving economic, environmental and social objectives, have to deal with this complex framework of heterogeneous stakeholders in order to gain their acceptance of such policies. That is why conducting comprehensive ex ante policy assessments, acquiring specific data from each of the stakeholders (even though this data acquisition process is critical and costly), becomes essential for forecasting the likely effects and reactions of these policies on the different stakeholder groups affected (Comi et al., 2024; Gatta and Marcucci, 2016; Nuzzolo and Comi, 2014).

However, while city administrators make great efforts to develop ex post evaluation methodologies to understand results, draw lessons for other implementations, and compare best practices in city logistics, unfortunately, ex ante estimates of these urban logistics measures are rarely carried out. Cause-and-effect relationships are not studied, and there is no estimation of the conditions required to ensure that objectives are achieved (Estrada and Roca-Riu, 2017).

On the other hand, transport sustainability, from a policy perspective, is often treated in isolation, and policymakers should reconcile sustainability with other public objectives (Himanen et al., 2004).

4.2.2 Lack of efficient transport policies. Proposal to incorporate sustainability into the governance and formulation of urban freight transport policies

The growing popularity of the concept of sustainable development in recent years has led public bodies to incorporate sustainability issues into urban freight transport policy considerations, with the aim of developing sustainable urban freight transport that takes into account social, economic and environmental dimensions (Akyol and De Koster, 2013).

The basis for this sustainable development of urban freight transport are solutions that could support the implementation of the transport process in terms of its optimisation and reduction of negative impacts, solutions that are based on the integration of many different subsystems and require effective information flows and modern technologies for their operation (Iwan, 2016).

The Transport Policy Agenda of the European Union and Member States has also been considering the sustainability of transport systems for a long time, and its development has been strongly driven by policies supported mainly by research, funded by various national (government institutions and private companies) and international (European Union Framework Programmes) sources (Janic, 2006).

Table 9. Objectives of the European Union's Research Programmes

- To understand the problems and develop solutions to mitigate the impacts that transport systems have on society and the environment.
- Disseminate existing knowledge and exploit research results to support the EU's Common Transport Policy and the national policies of Member States.
- Develop and integrate innovative transport technologies for introduction into more sustainable future transport systems.

Source: own elaboration.

4.2.3 Lack of knowledge of international norms and standards. Proposal to improve logistics and freight transport quality

The European Committee for Standardisation (CEN) provides a platform for the development of European standards and other specifications and is the only recognised European organisation authorised to plan, draft and adopt European standards in almost all areas of economic activity.

Table 10. European international norms and standards that exist to promote logistics and freight transport quality

- UNE - EN 13011:2001: Transport services. Freight transport chains. System for declaring service conditions.
- UNE - CEN / TR 14310: 2003: Freight transport services. Declaration and information on environmental performance in the freight transport chain.
- UNE - EN 13876: 2003: Transport. Logistics and Services. Freight transport chains. Code of good practice for the provision of freight transport services.
- UNE - EN 12507: 2006: Transport services. Guide for the application of Standard EN ISO 9001:2000 to road and rail transport, storage and distribution companies.
- UNE - EN ISO 9001: 2015: Quality management systems. Requirements (ISO 9001:2015).
- UNE - EN 12798: 2007: Transport quality system. Road, rail and inland waterway transport. Quality system requirements complementary to EN ISO 9001 with regard to the safety of the transport of dangerous goods.
- UNE - EN 15696: 2009: Self-storage. Specifications for self-storage services.

Source: own elaboration.

In addition to the above standards, there are key ISO management standards: ISO 9001 (quality management system requirements), ISO 14001 (environmental management system requirements) and ISO 28000 (supply chain security management system).

On the other hand, by way of example, ISO 14064 provides governments, companies, countries, regions and other organisations with an integrated set of tools aimed at guiding the measurement, quantification and reduction of greenhouse gas emissions, with ISO 14064-1 clarifying the principles and requirements at company level for measuring and reporting greenhouse gas emissions and removals (GHG) (Tacke et al., 2014).

There is also a draft UNE 178304 standard, "Smart cities. KPIs for the characterisation, monitoring and improvement of urban logistics or last-mile distribution", which aims to define and establish key performance indicator (KPI) requirements for the characterisation, monitoring and improvement of urban logistics or last-mile distribution, from the point of view of reducing the impact of the activity, energy efficiency and cost reduction.

For its part, the International Organisation for Standardisation's ISO 37120: 2018 standard: Sustainable cities and communities - Indicators for city services and quality of life proposes a series of indicators that measure service provision and quality of life in cities. These types of standards make it possible to analyse the effects of urban transport (Hajduk, 2017).

In this regard, as environmental management standards become increasingly common and certifications such as ISO 14001 and corresponding environmental management systems are increasingly valued, many companies are planning to obtain certification if they do not already have it, in addition to measuring their carbon footprints, energy consumption, noise, empty trips, or having ecological KPIs (Tacke et al., 2014).

It also appears that carbon footprints are often the measurement technique chosen by logistics service providers. However, different standards are used, indicating a lack of general agreement on measurement, so standardisation at the sectoral level would be desirable in terms of the effectiveness of the application of different certification schemes (Tacke et al., 2014).

Some studies argue that, in general terms, these standards are little known except for ISO 9001 and ISO 14001, so an effort is needed to disseminate them and make them known to all users (Islam and Zunder, 2014).

4.2.4 Poor environmental performance of companies. Proposal to integrate sustainable development into supply chains

In today's complex and uncertain business environments, where companies are increasingly subject to external pressures from both legislation and public opinion, the pursuit of sustainable development is imperative, and companies must reconfigure their supply chains to combine economic prosperity, social equity and environmental quality. In this context, environmental analysis is a strategic activity that is becoming increasingly important, although there is still insufficient knowledge about how to create sustainable supply chains, and companies lack the knowledge they need to address the challenges posed by the need to adhere to the principles of sustainable development (Fabbe-Costes et al., 2014).

Thus, growing economic, political and social pressures are causing companies to prioritise their efforts to reduce their environmental impact (Tacken et al., 2014), and both innovation and resilience are becoming necessary traits that they must acquire in order to compete in the dynamic and turbulent environments that characterise today's markets, as they show that they are receptive to change; they are always ready to face new challenges, actively seeking innovative and creative ideas; they can respond quickly to sudden disruptions; and they can better meet customer needs.

In this regard, organisations are increasingly investing in innovative capabilities related to logistics, with the aim of increasing their service levels. This is being demonstrated, for example, by companies such as DHL, which is innovating in environmental sustainability and urban logistics to anticipate possible disruptions that may occur in the urban distribution environment (Golgeci and Ponomarov, 2013).

On the other hand, sustainable development has an impact on operations and supply chain management, modifying product design, sourcing, production, transport models, stock policies, distribution and waste networks, and partner relationships. However, companies should not simply be reactive, aimed at complying with legal requirements, but rather proactive. As companies face the challenges of integrating sustainable development into their supply chains, they will discover the strategic benefits that can be accumulated, which may be related to better financial performance, improved corporate reputation, and greater competitive advantage (Fabbe-Costes et al., 2014).

Sustainability is therefore considered a key factor that can help companies improve both their operations and strategic growth, while gaining a competitive advantage and delivering sustainable value to society at large (Mangiaracina et al., 2015).

Some studies have argued that the environmental performance of transport is a value-added service for some segments of shippers, and some of the largest logistics service providers (LSPs) offer services with excellent environmental performance (Arvidsson et al., 2013).

4.2.5 Need to promote technological development and logistics 5.0. Smart city proposal.

Organisations need to invest in Logistics 5.0 systems in order to optimise processes and achieve greater operational efficiency in today's competitive environments. The use of advanced technologies such as artificial intelligence can also have a major impact on the environment, contributing significantly to green logistics (Nicoletti and Appolloni, 2024).

The concept of a smart city proposes a holistic view of all aspects related to city management, such as construction, energy, the environment, government, housing, mobility, education, health, and urban logistics, from an integrated and optimised approach to all freight transport systems within the city in terms of efficiency, safety, viability, and environmental sustainability. Within this framework, smart technological tools, services, and applications are integrated into a single platform, which provides interoperability and coordination between the various sectors (Perboli et al., 2014).

Reyes-Rubiano et al. (2021) consider a smart city to be a city in which technology is applied to improve urban operations, infrastructure, strategies and policies, emphasising the dimensions of technology and sustainability as key elements in achieving the transition to smart cities.

These are modern cities that use innovative technologies in all areas of their operations and comply with the environmental protection requirements demanded by the European Union, improving the quality of life and competitiveness of businesses located in their urban areas (Kauf, 2016). They provide businesses with the necessary infrastructure to perform Big Data analysis, facilitate governance mechanisms based on collaboration between various stakeholders (businesses, end users and local stakeholders), and information and communication technology-based infrastructures that enable the dissemination of big data and the implementation of initiatives and solutions that provide a better quality of life, making a city more attractive. In addition, they have potential workers with the necessary skills to manage them (Tachizawa et al., 2015).

5. Discussion. The need to improve the sustainability of urban logistics and achieve sustainable cities

Freight transport is caught in a constant tension between efficient logistics and sustainable development (Tadić et al., 2015), the latter being considered as development that meets present needs without compromising the ability of future generations to meet their needs (Janic, 2006; Mangiaracina et al., 2015).

Therefore, logistics managers face the challenge of designing sustainable supply chains for the future, as well as ensuring the continuous development of the capacity of sustainability management professionals (Von der Gracht and Darkow, 2016).

Some studies argue that the process that regions must follow to move towards more sustainable urban transport development should consider the four pillars in the order presented here: governance, financing, infrastructure and neighbourhoods, with Greater London providing a good example in this regard. However, even if a city meets the requirements for sustainable urban transport, it would still need to adapt its governance structure to the growth of the region (Kennedy et al., 2005).

Although in recent years urban logistics initiatives have focused on improving the efficiency, safety, viability and environmental sustainability of urban transport systems, and although several projects have been developed for this purpose, transport is still considered an important sector that needs further improvement (Perboli et al., 2014).

In order to overcome the challenges of urban logistics and achieve modern, smart and sustainable cities, it is necessary to implement proposals that integrate a technological, organisational and governance approach to help build more sustainable urban logistics ecosystems, characterised by collaboration between public and private actors, enabling not only the digital evolution of cities, but also a structural transformation of urban logistics, thus turning it into a lever for resilience, efficiency and cohesion (Rubino et al., 2025).

6. Conclusions

Although urban logistics is an indispensable element for the functioning of modern cities, it is also accompanied by a series of negative externalities that need to be understood and well managed in order to improve the quality of cities.

The aim of this study was, firstly, to identify the main externalities generated by urban logistics and, secondly, to understand the main challenges and propose actions that would enable progress towards smarter and more sustainable city models. To this end, a literature review was conducted with the aim of first identifying the main negative externalities generated by urban logistics and, secondly, the challenges and proposals for action that could be implemented to achieve more sustainable cities.

Various authors refer to these externalities in their publications, which can be summarised in the following five categories: excessive consumption of energy resources, polluting emissions, traffic congestion, noise and road safety. In addition to these externalities, companies prioritise economic efficiency to the detriment of environmental and social objectives, which reinforces their persistence.

With the aim of assisting in the transition to smart cities and improving the sustainability of urban logistics, a series of proposals are put forward that could mitigate the externalities and challenges it faces. The analysis shows that the heterogeneity of stakeholders and their divergent perceptions constitute a structural challenge to the viability of sustainable policies in urban logistics. It is critical to implement rigorous ex ante assessments that allow impacts to be anticipated, rather than focusing solely on ex post assessments. There is also a lack of clear and integrated urban transport policies, which requires greater incorporation of sustainability into public governance and the formulation of urban freight transport policies. The lack of knowledge of international norms and standards also creates a need to improve logistics quality and freight transport. The adoption of international standards in logistics and transport could contribute to standardising practices, improving the efficiency and quality of the system. In addition, companies must face the challenges of integrating sustainable development into their supply chains. Finally, smart city proposals show great potential for harmonising mobility, technology and sustainability, favouring the reduction of externalities generated by urban logistics. Digitalisation and the use of technologies such as IoT, Big Data, AI, drones and autonomous vehicles represent new opportunities for operational and energy efficiency. At the same time, companies must restructure their supply chains to integrate sustainability as a strategic focus, generating competitive advantages and strengthening their resilience.

All of this suggests that, in order to support the transition to a sustainable urban logistics model, both technological innovation and cooperation between the different agents are required, under a systemic and long-term approach.

The results of this study can help decision-makers and transport and logistics managers in various sectors, both public and private, to understand the current priorities and approaches in this transition towards sustainable urban logistics and a model of resilient, inclusive and smart cities that inspire the guidelines of the 2030 Agenda.

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N/A

References

- Akyol, D.E. and De Koster, R.B.M. (2013). Non-dominated time-window policies in city distribution. *Production and Operations Management*, 22 (3), 739-751.
- Aloui, A., Hamani, N., & Delahoche, L. (2021). An integrated optimisation approach using a collaborative strategy for sustainable cities freight transportation: A Case study. *Sustainable cities and society*, 75, 103331.
- Allen, J., Thorne, G., & Browne, M. (2007). *Good practice guide on urban freight transport*. Rijswijk: Best Urban Freight Solutions (Bestufs).
- Anand, N., Van Duin, J.R., Quak, H., & Tavasszy, L.A. (2015). Relevance of city logistics modelling efforts: a review. *Transport Reviews*, 35 (6), 701-719.
- Arvidsson, N., Woxenius, J., & Lamngård, C. (2013). Review of road hauliers' measures for increasing transport efficiency and sustainability in urban freight distribution. *Transport Reviews*, 33(1), 107-127.
- Asuncion del Cacho Estil-Les, M., Marcello Mangini, A., Roccotelli, M., & Fanti, M. P. (2025). Electric Vehicle Routing Optimisation for Postal Delivery and Waste Collection in Smart Cities. *IEEE Transactions on Intelligent Transportation Systems*, 26(3), 3307-3323.
- Azad, M., Rose, W. J., MacArthur, J. H., & Cherry, C. R. (2023). E-trikes for urban delivery: An empirical mixed-fleet simulation approach to assess city logistics sustainability. *Sustainable Cities and Society*, 96, 104641.
- Barbosa, M.W., de la Calle Vicente, A., Ladeira, M.B., & de Oliveira, M.P.V. (2018). Managing supply chain resources with big data analytics: a systematic review. *International Journal of Logistics Research and Applications*, 21 (3), 177-200.
- Behnke, M., & Kirschstein, T. (2017). The impact of path selection on GHG emissions in city logistics. *Transportation Research Part E*, 106, 320-336.
- Boussier, J.M., Cucu, T., Ion, L. and Breuil, D. (2011). Simulation of goods delivery process. *International Journal of Physical Distribution & Logistics Management*, 41 (9), 913-930.
- Browne, M. and Gomez, M. (2011). The impact on urban distribution operations of upstream supply chain constraints. *International Journal of Physical Distribution & Logistics Management*, 41 (9), 896-912.
- Cagliano, A.C., Carlin, A., Mangano, G., & Rafele, C. (2017). Analysing the diffusion of eco-friendly vans for urban freight distribution. *The International Journal of Logistics Management*, 28, 1218-1242.
- Cassiano, D. R., Bertocini, B. V., & de Oliveira, L. K. (2021). A conceptual model based on the activity system and transportation system for sustainable urban freight transport. *Sustainability*, 13(10), 5642.
- Comi, A., Fancello, G., Piras, F., & Serra, P. (2024). Towards more sustainable cities: tools and policies for urban goods movements. *Journal of Advanced Transportation*, (1), 1952969.
- European Commission. (2021). "Target 55" package for a just transition. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal/fit-55-delivering-proposals_es
- Crainic, T.G., Ricciardi, N., & Storchi, G. (2009). Models for evaluating and planning city logistics systems. *Transportation Science*, 43(4), 432-454.
- Cui, J., Dodson, J. and Hall, P.V. (2015). Planning for urban freight transport: an overview. *Transport Reviews*, 35 (5), 583-598.

- Dablanc, L. (2007). Goods transport in large European cities: difficult to organise, difficult to modernise. *Transportation Research Part A: Policy and Practice*, 41 (3), 280–285.
- De Marco, A., Mangano, G., & Zenezini, G. (2018). Classification and benchmark of city logistics measures: an empirical analysis. *International Journal of Logistics Research and Applications*, 21 (1), 1–19.
- de Oliveira, C.M., Albergaria De Mello Bandeira, R., Vasconcelos Goes, G., Schmitz Gonçalves, D.N., & D'Agosto, M.D. (2017). Sustainable vehicles-based alternatives in last mile distribution of urban freight transport: a systematic literature review. *Sustainability*, 9, 1324.
- de Oliveira, I. K., Meira, L. H., & Oliveira, L. K. (2024). Key factors for developing freight and passenger integrated transportation systems in Brazil. *Research in Transportation Economics*, 104, 101425.
- Estrada, M., & Roca-Riu, M. (2017). Stakeholder's profitability of carrier-led consolidation strategies in urban goods distribution. *Transportation Research Part E: Logistics and Transportation Review*, 104, 165-188.
- Fabbe-Costes, N., Roussat, C., Taylor, M., & Taylor, W.A. (2014). Sustainable supply chains: a framework for environmental scanning practices. *International Journal of Operations and Production Management*, 34 (5), 664-694.
- Façal, B. S., Marcondes, C. A., Loubach, D. S., Sbruzzi, E. F., Verri, F. A., Marques, J. C., ... & Curtis, V. V. (2023). A Cyber-Physical System's Roadmap to Last-Mile Delivery Drones. *IEEE Aerospace and Electronic Systems Magazine*, 38(5), 6-16.
- Figliozzi, M.A. (2007). The impacts of congestion on commercial vehicle tours and costs. *Transportation Research Part E: Logistics and Transportation*, 46 (4), 496-506.
- Filippi, F., Nuzzolo, A., Comi, A., & Delle Site, P. (2010). Ex-ante assessment of urban freight transport policies. *Procedia - Social and Behavioural Sciences*, 2(3), 6332-6342.
- Galambos, K. J., Palomino-Hernández, A. B., Hemmelmayr, V. C., & Turan, B. (2024). Sustainability initiatives in urban freight transportation in Europe. *Transportation Research Interdisciplinary Perspectives*, 23, 101013.
- Gatta, V., & Marcucci, E. (2016). Stakeholder-specific data acquisition and urban freight policy evaluation: evidence, implications and new suggestions. *Transport Reviews*, 36 (5), 585-609.
- Golgeci, I., & Ponomarov, S. (2013). Does firm innovativeness enable effective responses to supply chain disruptions? An empirical study. *Supply Chain Management: An International Journal*, 18 (6), 604-617.
- Golinska-Dawson, P., & Sethanan, K. (2023). Sustainable urban freight for energy-efficient smart cities—systematic literature review. *Energies*, 16(6), 2617.
- Gonzalez-Feliu, J., & Morana, J. (2010). Are city logistics solutions sustainable? The Cityporto case. *Territorio Mobilità e Ambiente*, 3 (2), 55–64.
- Hajduk, S. (2017). Bibliometric analysis of publications on city logistics in international scientific literature. *Procedia Engineering*, 182, 282–290.
- Himanen, V., Lee-Gosselin, M. and Perrels, A. (2004). Impacts of transport on sustainability: towards an integrated transatlantic evidence base. *Transport Reviews*, 24 (6), 691-705.
- Holguín-Veras, J., Amaya Leal, J., Sánchez-Díaz, I., Browne, M., & Wojtowicz, J. (2020a). State of the art and practice of urban freight management: Part I: infrastructure, vehicle-related, and traffic operations. *Transportation Research Part A: Policy and Practice*, 137, 360-382.
- Holguín-Veras, J., Amaya Leal, J., Sanchez-Díaz, I., Browne, M., & Wojtowicz, J. (2020b). State of the art and practice of urban freight management: Part II: financial approaches, logistics, and demand management. *Transportation Research Part A: Policy and Practice*, 137, 383–410.

- Islam, D.M.Z. and Zunder, T.H. (2014). The necessity for a new quality standard for freight transport and logistics in Europe. *European Transport Research Review*, 6 (4), 397-410.
- Ismael, A., & Holguin-Veras, J. (2025). Optimal parking allocation for heterogeneous vehicle types. *Transportation Research Part A: Policy and Practice*, 192, 104357.
- Iwan, S. (2016). Implementation of telematics-based good practices to support urban freight transport systems, applying a city's adaptability level. *International Journal of Shipping and Transport Logistics*, 8 (5), 531-551.
- Jaller, M., Sánchez, S., Green, J., & Fandiño, M. (2016). Quantifying the impacts of sustainable city logistics measures in the Mexico City Metropolitan Area. *Transportation Research Procedia*, 12, 613-626.
- Janic, M. (2006). Sustainable transport in the European Union: a review of past research and future ideas. *Transport Reviews*, 26 (1), 81-104.
- Kauf, S., (2016). City logistics - A strategic element of sustainable urban development. *Transportation Research Procedia* 16, 158-164.
- Kennedy, C., Miller, E., Shalaby, A., Maclean, H., & Coleman, J. (2005). The four pillars of sustainable urban transportation. *Transport Reviews*, 25 (4), 393-414.
- Kin, B., Verlinde, S., van Lier, T., & Macharis, C. (2016). Is there life after subsidy for an urban consolidation centre? An investigation of the total costs and benefits of a privately-initiated concept. *Transportation Research Procedia*, 12, 357-369.
- Köster, F., Ulmer, M.W., & Mattfeld, D.C. (2015). Cooperative traffic control management for city logistic routing. *Transportation Research Procedia*, 10, 673-682.
- Kwasiborska, A., Stelmach, A., & Jabłońska, I. (2023). Quantitative and comparative analysis of energy consumption in urban logistics using unmanned aerial vehicles and selected means of transport. *Energies*, 16(18), 6467.
- Kłodawski, M., Jachimowski, R., & Chamier-Gliszczyński, N. (2024). Analysis of the overhead crane energy consumption using different container loading strategies in urban logistics hubs. *Energies*, 17(5), 985.
- Lagorio, A., Pinto, R., & Golini, R. (2016). Research in urban logistics: a systematic literature review. *International Journal of Physical Distribution and Logistics Management*, 46 (10), 908-931.
- Leyerer, M., Sonneberg, M. O., Heumann, M., & Breitner, M. H. (2020). Shortening the last mile in urban areas: Optimising a smart logistics concept for e-grocery operations. *Smart Cities*, 3(3), 585-603.
- Liimatainen, H., Hovi, I.B., Arvidsson, N., & Nykänen, L. (2015). Driving forces of road freight CO₂ in 2030. *International Journal of Physical Distribution & Logistics Management*, 45, 260-285.
- Liu, Y., Pan, S., Folz, P., Ramparany, F., Bolle, S., Ballot, E., & Coupaye, T. (2023). Cognitive digital twins for freight parking management in last mile delivery under smart cities paradigm. *Computers in Industry*, 153, 104022.
- Mangiaracina, R., Marchet, G. Perotti S., & Tumino A. (2015). A review of the environmental implications of B2C e-commerce: a logistics perspective. *International Journal of Physical Distribution & Logistics Management*, 45 (6), 565-591.
- Melo, S., Macedo, J., & Baptista, P. (2017). Guiding cities to pursue a smart mobility paradigm: An example from vehicle routing guidance and its traffic and operational effects. *Research in transportation economics*, 65, 24-33.
- Moutaoukil, A., Neubert, G., & Derrouiche, R. (2015). Urban Freight Distribution: the impact of delivery time on sustainability. *IFAC-PapersOnLine*, 48 (3), 2368-2373.
- Nicoletti, B., & Appolloni, A. (2024). Green Logistics 5.0: a review of sustainability-oriented innovation with foundation models in logistics. *European Journal of Innovation Management*, 27(9), 542-561.

- Nuzzolo, A., & Comi, A. (2014). Urban freight demand forecasting: a mixed quantity/delivery/vehicle-based model. *Transportation Research Part E: Logistics and Transportation Review*, 65, 84-98.
- Oliveira, L. K. D., Oliveira, I. K. D., França, J. G. D. C. B., Balieiro, G. W. N., Cardoso, J. F., Bogo, T., ... & Littig, M. A. (2022). Integrating freight and public transport terminals infrastructure by locating lockers: analysing a feasible solution for a medium-sized Brazilian cities. *Sustainability*, 14(17), 10853.
- Österle, I., Aditjandra, P.T., Vaghi, C., Grea, G., & Zunder, T.H. (2015). The role of a structured stakeholder consultation process within the establishment of a sustainable urban supply chain. *Supply Chain Management: An International Journal*, 20 (3), 284-299.
- Pan, S., Zhou, W., Piramuthu, S., Giannikas, V., & Chen, C. (2021). Smart city for sustainable urban freight logistics. *International Journal of Production Research*, 59(7), 2079-2089.
- Papoutsis, K., & Nathanail, E. (2016). Facilitating the selection of city logistics measures through a concrete measures package: a generic approach. *Transportation Research Procedia*, 12, 679-691.
- Pawlak, Z., & Stajniak, M. (2011). Optimisation of transport processes in city logistics. *Electronic Scientific Journal of Logistics*, 7 (1), 15-22.
- Perboli, G., De Marco, A., Perfetti, F., and Marone, M. (2014). A new taxonomy of smart city projects. *Transportation Research Procedia*, 3, 470-478.
- Quak, H.J. (2008). Sustainability of urban freight transport: retail distribution and local regulations in cities. Ph.D. thesis, Erasmus University Rotterdam, the Netherlands.
- Quak, H.J. and De Koster, M.B.M. (2009). Delivering goods in urban areas: how to deal with urban policy restrictions and the environment. *Transportation Science*, 43 (2), 211-227.
- Quak, H., Nesterova, N. and van Rooijen, T. (2016). Possibilities and barriers for using electric-powered vehicles in city logistics practice. *Transportation Research Procedia*, 12, 157-169.
- Ragàs Prat, I. (2018). Urban logistics. Manual for logistics operators and public administrations. Barcelona: Editorial Marge Books.
- Rai, H.B., Verlinde, S., Merckx, J., & Macharis, C. (2017). Crowd logistics: an opportunity for more sustainable urban freight transport? *European Transport Research Review*, 9, 39.
- Ranieri, L., Digiesi, S., Silvestri, B., & Roccotelli, M. (2018). A review of last mile logistics innovations in an externalities cost reduction vision. *Sustainability*, 10(3), 782.
- Reyes-Rubiano, L., Serrano-Hernandez, A., Montoya-Torres, J. R., & Faulin, J. (2021). The sustainability dimensions in intelligent urban transportation: a paradigm for smart cities. *Sustainability*, 13(19), 10653.
- Rubino, G., Gattuso, D., & Gronalt, M. (2025). Modelling the interactions between smart urban logistics and urban access management: a system dynamics perspective. *Applied Sciences*, 15(14), 7882.
- Russo, F., & Comi, A. (2010). A classification of city logistics measures and connected impacts. *Procedia - Social and Behavioural Sciences*, 2(3), 6355-6365.
- Russo, F. and Comi, A. (2016). Restocking in touristic and CBD areas: deterministic and stochastic behaviour in the decision-making process. *Transportation Research Procedia*, 12, 53-65.
- Russo, F., & Comi, A. (2023). Urban courier delivery in a smart city: the user learning process of travel costs enhanced by emerging technologies. *Sustainability*, 15(23), 16253.
- Russo, F., and Comi, A. (2024). New challenges for city logistics: a unified view of energy and transport systems for addressing sustainability. *Transportation Research Procedia*, 79, 313-320.
- Sanz, G., & Pastor R. (2009). Methodology for defining a logistics system that seeks to achieve efficient urban distribution of goods. *Management and Organisation*, 37, 60-66.

- Savall-Mañó, M., & Ribas, I. (2024). How effective is the introduction of freight distribution time windows in reducing congestion, externalities and transport costs? The case of Barcelona. *Transportation Research Procedia*, 78, 311-318.
- Savelsbergh, M., & Van Woensel, T. (2016). City logistics: challenges and opportunities. *Transportation Science*, 50 (2), 579-590.
- Sdoukopoulos, E., Kose, P., Gal-Tzur, A., Mezghani, M., Boile, M., Sheety, E., & Mitropoulos, L. (2016). Assessment of urban mobility needs, gaps and priorities in Mediterranean partner countries. *Transportation Research Procedia*, 14, 1211-1220.
- Tachizawa, E.M., Alvarez-Gil, M.J., & Montes-Sancho, M.J. (2015). How “smart cities” will change supply chain management. *Supply Chain Management: An International Journal*, 20, 237-248.
- Tacken, J., Sanchez Rodrigues, V. and Mason, R. (2014). Examining CO2e reduction within the German logistics sector. *The International Journal of Logistics Management*, 25 (1), 54-84.
- Tadić, S., Zečević, S. and Krstić, M. (2015). City logistics-status and trends. *International Journal for Traffic and Transport Engineering*, 5 (3), 319-343.
- Taniguchi, E. and van der Heijden, R.E.C.M. (2000). An evaluation methodology for city logistics. *Transport Reviews*, 20 (1), 65-90.
- Taniguchi, E., Thompson, R.G., & Yamada, T. (2003). Predicting the effects of city logistics schemes. *Transport Reviews*, 23 (4), 489-515.
- Verlinde, S. and Macharis, C. (2016). Who is in favour of off-hour deliveries to Brussels supermarkets? Applying Multi Actor Multi Criteria analysis (MAMCA) to measure stakeholder support. *Transportation Research Procedia*, 12, 522-532.
- Von der Gracht, H.A. and Darkow, I.-L. (2010). Scenarios for the logistics services industry: a Delphi-based analysis for 2025. *International Journal of Production Economics*, 127, 46-59.
- Von der Gracht, H.A. and Darkow, I.-L. (2016). Energy-constrained and the low-carbon scenarios for the transportation and logistics industry. *The International Journal of Logistics Management*, 27, 142-166.
- Whiteing, A. (Institute for Transport Studies, University of Leeds, UK). (2010). The future of sustainable freight transport and logistics. Retrieved from [https://www.europarl.europa.eu/RegData/etudes/note/join/2010/431578/IPOL-TRAN_NT\(2010\)431578_ES.pdf](https://www.europarl.europa.eu/RegData/etudes/note/join/2010/431578/IPOL-TRAN_NT(2010)431578_ES.pdf)
- World Economic Forum. (2020). The future of the last-mile ecosystem. https://www3.weforum.org/docs/WEF_Future_of_the_last_mile_ecosystem.pdf
- Yu, H., Shi, A., Liu, Q., Liu, J., Hu, H., & Chen, Z. (2025). Immune-Inspired Multi-Objective PSO Algorithm for Optimising Underground Logistics Network Layout with Uncertainties: Beijing Case Study. *Sustainability*, 17(10), 4734.
- Zhang, H., Lin, P., & Zou, L. (2025). Optimising Parcel Locker Selection in Campus Last-Mile Logistics: A Path Planning Model Integrating Spatial–Temporal Behaviour Analysis and Kernel Density Estimation. *Applied Sciences*, 15(12), 6607.
- Zhang, Y., Zhang, M., Jiang, P., Cao, P., & Fang, X. (2025). Mechanism of sustainable logistics distribution operation path in smart cities based on improved CS algorithm. *Journal of Computational Methods in Sciences and Engineering*, 14727978251364459.

(Title, Abstract and Keywords in Spanish)

Externalidades de la logística urbana: retos y oportunidades para lograr ciudades inteligentes y sostenibles

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Resumen

Si bien la logística urbana constituye un eje vital para las ciudades, a menudo se presta de forma ineficiente y las tendencias actuales más habituales son insostenibles, lo que genera una necesidad urgente de encontrar formas innovadoras de reducir sus externalidades. Este artículo presenta una revisión sistemática de la literatura con el objetivo de analizar en profundidad las externalidades negativas asociadas a la logística urbana, como la congestión vehicular, las emisiones contaminantes, el consumo energético, los accidentes y el ruido. Además de analizar estos y otros desafíos, el artículo ofrece propuestas tecnológicas, organizativas y de gobernanza para promover una transición hacia ciudades inteligentes y sostenibles, en línea con los retos de sostenibilidad y eficiencia de la Agenda 2030 y los principios de la Logística 5.0.

Palabras clave: logística urbana; distribución urbana de mercancías; transporte urbano de mercancías; logística de la ciudad; externalidades; ciudades inteligentes, ciudades sostenibles.

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Platformised Performances: Free Walking Tours and the Informal Sharing Economy

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Abstract

This article examines platform-mediated free walking tours as an informal and performative manifestation of the platform economy in tourism. Drawing on multi-sited urban ethnography (participant observation of 20 free walking tours and 18 semi-structured interviews with guides across Barcelona, Lisbon and Naples, May–September 2024), the article shows how algorithmic reputation systems structure narrative choices and incomes; how affective/performance labour is calibrated to ratings and tipping; and how spatial concentration produces congestion and informal territorialisation of public space. Conceptually, the article advances debates on platformised informality by bridging performative tourism, gig-work governance and urban justice, and outlines policy avenues (light-touch licensing, route decentralisation, and minimum labour standards). Implications are discussed for tourism policy, urban planning, and the theorisation of informal economies in platform-mediated contexts. Overall, the study advances understanding of how platformised informality reconfigures cultural labour and urban governance, extending debates beyond emblematic cases such as accommodation and ride-hailing.

Keywords: platform economy; tourism informality; free walking tours; reputation algorithms; performative labour; urban ethnography; urban governance.

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1. Introduction

The rise of the platform economy (García & Ruiz, 2022a) has profoundly reshaped the landscape of global tourism, disrupting traditional service models and institutional frameworks. Promoted as a means to

democratise access, empower local actors, and foster sustainable practices, the sharing economy has become a powerful narrative in policy circles, industry rhetoric, and academic discourse alike (Belk, 2014; Paulauskaite et al., 2017). Platforms like Airbnb, Uber, and BlaBlaCar have been widely studied for their transformative effects on urban environments, labour structures, and consumer behaviour. Yet, beyond these emblematic cases lies a spectrum of lesser-known, under-researched practices that embody the complexities, contradictions, and tensions inherent in platform-mediated tourism. One such practice is the Free Walking Tour (FWT) (García & Ruiz, 2022b). FWTs have proliferated across cities worldwide, particularly in Europe and Latin America, as informal, platform-organised, tip-based walking tours. These experiences are typically led by independent, usually non-certified guides who register on peer-to-peer platforms such as FreeTour.com or GuruWalk. Promoted as accessible, spontaneous, and 'authentically local', FWTs appeal to travellers seeking low-cost, narrative-rich encounters with urban space. However, behind their informal ethos lies a complex and often problematic dynamic: FWTs operate at the intersection of unregulated labour, performative storytelling, and commercialised visibility. As such, they offer a compelling case through which to interrogate the evolving logic of the sharing economy and its implications for tourism planning, labour ethics, and urban sustainability.

This paper examines FWTs as a performative and informal modality of the platform economy in tourism. Drawing from critical literature on the sharing economy, platform capitalism, and urban tourism, the study situates FWTs within broader debates around labour precarity, algorithmic governance, and spatial justice. The article argues that FWTs—despite their collaborative and low-threshold appearance—are deeply embedded in neoliberal tourism circuits, shaped by digital reputation systems, self-branding pressures, and regulatory invisibility. As platforms mediate the guide–tourist relationship, they not only facilitate access but also subtly transform the nature of tourism work and the governance of public urban space. Unlike formal guiding services regulated by licensing, training, and institutional oversight, FWTs thrive in legal grey zones. Guides are typically not subject to professional standards, and their income depends entirely on voluntary contributions, usually in cash, at the end of the tour. While this model provides flexibility and low entry barriers, it also exposes guides to financial uncertainty, platform dependency, and social vulnerability. The absence of contracts, protections, or minimum compensation reflects a broader pattern of informal professionalisation, whereby digital platforms extract value from labour without offering corresponding rights or recognition (Mosaad et al., 2023). In this sense, FWTs exemplify the structural precarity embedded in the gig economy and challenge simplistic celebratory accounts of peer-to-peer tourism.

From a spatial and urban perspective, FWTs reconfigure access to the city and its heritage. By offering non-official narratives and alternative routes, they decentralise the tourist gaze and potentially subvert dominant heritage regimes. However, they also contribute to the overuse of central areas of the cities, especially when aggregated demand funnels large volumes of tourists into specific routes. Without coordination with local authorities, these tours may lead to congestion, nuisance for residents, and appropriation of public space for private gain. The lack of accountability mechanisms further complicates the integration of FWTs into urban tourism strategies, posing risks for long-term sustainability and equity (Farmaki et al., 2023; Leung et al., 2019). Furthermore, the digital infrastructure underpinning FWTs plays a pivotal role in shaping their operation and social dynamics. Platforms act as intermediaries, but also as regulators: by curating visibility, filtering feedback, and ranking guides, they impose an algorithmic discipline that rewards conformity, emotional labour, and client satisfaction over critical engagement or ethical consistency (Räisänen et al., 2021). Guides are incentivised to

optimise their performance, adjust their narratives, and perform affective labour to maximise tips and ratings. As a result, the distinction between authentic storytelling and market-oriented entertainment becomes blurred, raising concerns about the commodification of culture and the reproduction of tourist stereotypes under the guise of localism.

This article contributes to the growing literature on the dark sides and contradictions of the sharing economy (Buhalis et al., 2019; Geissinger et al., 2019; Gil & Sequera, 2022) by focusing on a tourism practice that has remained relatively underexplored despite its global reach and socio-political relevance. By foregrounding the case of FWTs, this article aims to unpack how platformised performances challenge established categories of tourism planning, labour ethics, and participatory heritage. It positions FWTs not simply as informal alternatives to formal tourism, but as a symptom of a larger structural shift—one in which digital platforms increasingly mediate, commodify, and govern tourism practices while evading regulation and accountability.

The paper is structured as follows. The next section outlines the theoretical framework, reviewing literature on the sharing economy, performative tourism, platform labour, and urban governance. Section three presents the methodology, drawing on qualitative data from fieldwork conducted in selected Southern European cities. Section four presents the main findings, organised around key dimensions of FWTs: performativity, labour precarity, spatial dynamics, and platform governance. Section five discusses the implications of these findings for tourism planning and policy. The conclusion reflects on the need to critically rethink the role of informal tourism practices within the broader trajectory of post-pandemic, platform-mediated tourism futures.

This article makes three contributions. First, it conceptualises free walking tours (FWTs) as platformised performances, showing how staged authenticity and affective labour are disciplined by algorithmic reputation (linking classic debates on authenticity with contemporary gig-work governance). Second, it empirically documents precarious professionalisation among guides, beyond celebratory sharing-economy narratives. Third, it foregrounds the urban governance implications of cumulative FWT activity for spatial justice and sustainable visitor management.

2. Theoretical Framework

2.1. The Sharing Economy: Between Ideology and Contradiction

The sharing economy has been widely promoted as a more equitable, decentralised, and sustainable alternative to traditional capitalist models. In tourism, its appeal lies in the promise of democratised access to unique, affordable, and locally grounded experiences (Belk, 2014; Paulauskaite et al., 2017). However, the rapid platformisation of the sector has shifted the sharing economy from its grassroots, collaborative ethos toward profit-driven structures.

While early discourses emphasised mutual benefit and community empowerment, more recent critiques highlight how dominant platforms increasingly operate under extractive and centralised business models (De las Heras et al., 2021; Geissinger et al., 2019). Srnicek (2017) conceptualises this transformation as ‘platform capitalism’—a mode of accumulation based on the control and commodification of digital infrastructures and user-generated data. Within this framework, the sharing

economy becomes less about genuine sharing and more about monetising access to underregulated markets (García et al., 2024).

Empirical studies, such as Gyódi (2019), show how platforms like Airbnb function more as conventional commercial actors than as collaborative innovators, reproducing dynamics of exclusion and market consolidation (García et al., 2024). This context frames FWTs as ambiguous practices: while discursively presented as grassroots and inclusive, they often replicate the structural inequalities of neoliberal tourism economies.

Beyond popular framings of ‘sharing’, scholarship differentiates sharing, on-demand/gig work and second-hand/product-service models, with distinct regulatory and sustainability implications (Frenken & Schor, 2017). This helps situate FWTs as on-demand, platform-mediated services, not “pure sharing”, and clarifies why platform capitalism’s extractive logics apply here.

2.2. Performative Tourism and Non-Institutional Urban Narratives

FWTs exemplify a form of performative tourism wherein urban space is narrated, embodied, and consumed through situated storytelling. Rather than relying on official heritage discourse, FWT guides enact and co-produce narratives in real time, often emphasising lesser-known, critical, or alternative histories (García et al., 2024; Paulauskaite et al., 2017). This resonates with Salazar’s (2005) notion of “glocal” tour guiding, where guides negotiate local cultural identity while responding to global tourist expectations. These performances blur the boundaries between guide and performer, heritage and entertainment, local and tourist.

Classic debates on staged authenticity show how narratives are curated and consumed within social arrangements that separate ‘front’ and ‘back’ regions (MacCannell, 1973). This aligns with long-standing research on the professionalism and role expectations of tourist guides (Ap & Wong, 2001), highlighting how guides negotiate between institutional expectations, visitor demands, and their own interpretive agency. In FWTs, guides mediate authenticity much like tourist guides as cultural brokers (Cohen, 1985), while performing emotional/affective labour to meet visitor expectations (Hochschild, 1983). Platform ratings intensify this dynamic by rewarding specific performance styles. As García et al. (2024) argue, this participatory form of narration aligns with the idea of ‘living like a local’ but must be critically examined. While it allows for a more experiential and potentially empowering encounter with the city, it is also shaped by the market logics of digital platforms. Thematic content, routes, and styles of delivery are often influenced by algorithmic feedback loops—especially customer reviews and ratings—which can standardise what is supposed to be ‘authentic’.

Thus, although FWTs enable access to non-official urban imaginaries, their performative agency is constrained by the expectations of digital tourism markets and the need to maintain competitive online reputations.

2.3. Platformisation, Algorithmic Reputation, and Informal Professionalisation

Research on the gig economy shows how algorithmic control shapes workers’ autonomy, scheduling and income volatility even when “flexibility” is promised (Wood et al., 2019). Policy and legal analyses describe a broader shift towards just-in-time work and non-standard employment in platform labour

(De Stefano, 2016; ILO, 2021), explaining why ambiguous professionalisation emerges without parallel protections. This framing fits guides' dependency on rankings and tips observed in FWTs.

This logic reinforces a system of algorithmic governance, where guides are autonomous in appearance but constrained by opaque ranking mechanisms. The emphasis on customer ratings encourages practices of self-exploitation, emotional labour, and reputational management. Newcomers often perform tours for free or for minimal earnings, hoping to accumulate sufficient visibility for future income.

Such dynamics foster a form of ambiguous professionalisation. As Gil and Sequera (2022) observe in the case of Airbnb, what begins as a casual, informal activity quickly becomes institutionalised and market-oriented, yet without the protections associated with formal employment. Similarly, FWT guides perform a functionally professional role—curating content, managing groups, navigating urban logistics—without being legally recognised as professionals. This grey zone reflects broader trends in the gig economy, where labour is fragmented, individualised, and underregulated (Mosaad et al., 2023).

2.4. Precarity, Sustainability, and Spatial Justice

From the perspective of urban sustainability and tourism planning, FWTs present a paradox. On the one hand, they offer low-cost, flexible, and often decentralised tourism experiences that may reduce pressure on traditional heritage sites. On the other, their rapid proliferation can contribute to urban congestion, particularly in high-tourist traffic areas, without contributing to local infrastructure or policy frameworks.

As Farmaki et al. (2023) note, peer-to-peer tourism models often operate outside traditional accountability systems, raising concerns about their long-term impact on communities. FWTs typically use public spaces without formal agreements or oversight, effectively privatising access through informal practices. This leads to tensions between spontaneous, democratised tourism and the need for inclusive, strategic urban governance.

The governance gap surrounding FWTs reveals a broader challenge for city authorities: how to regulate non-traditional tourism practices that fall outside established legal frameworks. Leung et al. (2019) argue that sustainable development of the sharing economy requires alignment of stakeholder interests, ethical commitments, and social responsibility. Without such alignment, the risk is that informal tourism reinforces inequality and overexploitation, even when framed as community-driven or 'alternative'.

The challenge, as Sharpley (2022) and Rastegar et al. (2023) emphasise, is to integrate such practices into models of tourism that foreground justice, degrowth, and socio-spatial equity, rather than defaulting to market-led solutions. Finally, debates on the right to the city and the governance of urban commons (Harvey, 2012) illuminate how platformised tourism practices may privatise benefits while socialising costs in public space, sharpening the need for just and participatory governance models.

3. Methodology

This study adopts a qualitative, multi-sited approach grounded in urban ethnography and critical tourism studies. Given the informal, performative, and platform-mediated nature of Free Walking Tours (FWTs), qualitative methods were deemed most appropriate to capture the nuanced dynamics of guide–tourist interactions, digital labour practices, and the socio-spatial implications of these tours.

3.1. Case Selection and Context

Fieldwork was conducted in three Southern European cities—Barcelona (Spain), Lisbon (Portugal), and Naples (Italy)—selected for their prominence as urban tourism destinations, their active FWT ecosystems, and their differing regulatory and socio-political contexts. These cities represent contrasting models of tourism governance while sharing challenges of overtourism, precarious labour, and contested urban space.

The selection of FWTs within each city followed a purposive sampling strategy. Criteria included:

- Active listing on major FWT platforms (FreeTour.com, GuruWalk, or Civitatis).
- Minimum of six months of guiding experience.
- Representation of diverse narrative styles and thematic content.

3.2. Data Collection Methods

The research employed a triangulated methodology consisting of:

- Participant observation: Attendance at over 20 FWTs across the three cities (May–September 2024), with detailed fieldnotes on guide performances, group interactions, spatial practices, and narrative strategies.
- Semi-structured interviews: Conducted with 18 FWT guides (six per city), lasting 45–90 minutes, exploring motivations, working conditions, perceptions of platform governance, and views on sustainability and authenticity.
- Platform analysis: Examination of the digital infrastructure of FWT platforms, including interface design, ranking mechanisms, user reviews, and terms of service, with screenshots and metadata collected for documentation.

3.3. Analytical Approach

Data were analysed thematically using inductive coding supported by NVivo (v.12) software. Codes were initially derived from fieldnotes and transcripts, focusing on labour conditions, algorithmic dependency, performative practices, and spatial dynamics. These codes were progressively refined into higher-order categories aligned with the study's research questions:

1. How do FWTs operate as performative and informal tourism practices?
2. How do digital platforms shape labour conditions and narrative choices?
3. What are the implications of FWTs for urban governance and sustainability?

The analysis incorporated elements of critical discourse analysis to interpret guides' self-positioning and the implicit governance logics embedded in platform interfaces. Sampling ceased upon thematic saturation, when no substantially new categories emerged.

3.4. Validation Strategy

To enhance trustworthiness, multiple techniques were employed:

- Triangulation: systematically comparing data from observations, interviews, and platform analysis to identify convergences and discrepancies.
- Peer debriefing: two sessions with colleagues in tourism and urban studies provided external perspectives, helping refine coding categories and reduce interpretive bias.
- Cross-validation: narratives of algorithmic dependency expressed by guides were corroborated by both field observations (emphasis on ratings during tours) and platform analysis (ranking algorithms privileging visibility).

3.5. Reflexivity

Researcher positionality was critically reflected upon. The author's prior academic involvement with tourism platforms created both familiarity and risk of confirmation bias. Reflexive fieldnotes and peer discussions were used to monitor assumptions and ensure analytic transparency.

3.6. Ethical Considerations

All participants were informed of the research objectives and gave verbal consent. Pseudonyms were used to ensure anonymity, and identifiable platform usernames were excluded. Given the precarious and often informal status of participants' labour, special care was taken not to disclose sensitive details that could cause harm. The study adhered to institutional ethical guidelines established by the author's university.

4. Results

The findings from this study reveal the complex and often contradictory dynamics underpinning Free Walking Tours (FWTs) as platformised, informal tourism practices. Through thematic analysis of field observations, guide interviews, and platform data, four key dimensions emerged: urban performativity, algorithmic dependency, labour precarity, and spatial impacts. These interconnected aspects illustrate how FWTs both reproduce and reconfigure dominant logics of tourism in the platform era.

4.1. Urban Performativity and Narrative Flexibility

Across sites, guides enact the city through situated storytelling that blends historical narration, humour, and personal anecdotes. Such narrative hybridity reflects broader glocalisation dynamics identified by Salazar (2005). Such platform-calibrated performances pursue "authenticity" while remaining sensitive to real-time group feedback and expected tipping. Read through classic debates on staged authenticity and the role of guides as cultural brokers, these performances are not merely spontaneous but orchestrated within recognisable scripts that manage visitors' expectations (MacCannell, 1973; Cohen, 1985). Such scripted expectations resonate with classic analyses of tour guiding professionalism and role performance (Ap & Wong, 2001). The prominence of emotional labour—warmth, enthusiasm, responsiveness—further underscores how affect is folded into value creation in platformised tourism (Hochschild, 1983).

One guide in Lisbon explained: “You have to read the group. If they are here for fun, I give them fun. If they want politics, I just sprinkle a little bit—otherwise the tips go down”.

This flexibility enables a sense of authenticity but is also shaped by pressure to secure positive ratings, which can dilute more critical or politically charged narratives.

4.2. Algorithmic Reputation and Platform Governance

Visibility and demand hinge on ranking positions and review scores, foregrounding guides’ dependency on opaque reputation systems. Consistent with research on algorithmic control in the gig economy, small changes in ratings can cascade into reduced bookings and income volatility, encouraging conformity and self-discipline to platform norms (Wood et al., 2019). Guides’ strategic requests for reviews and calibrated closing speeches illustrate reputational entrepreneurship under asymmetrical information conditions.

A Barcelona guide noted: “You are basically a slave to the algorithm. One bad review can put you at the bottom, and then you don’t work for weeks”.

This dynamic demonstrates how platforms externalise risk onto guides while exerting subtle forms of algorithmic discipline. The peer-review system, while presented as transparent, often reinforced conformity and emotional labour.

4.3. Precarious Autonomy and Informal Professionalisation

While guides value autonomy over routes and scripts, earnings remain uncertain and protections scarce. This precarious professionalisation mirrors labour patterns documented across on-demand work—flexibility coexists with fragmented employment status and externalised risk (De Stefano, 2016; ILO, 2021). The craft elements of guiding (curation, logistics, crowd management) accumulate into a professional identity without commensurate recognition or safeguards.

A Naples guide described the reality bluntly: “Sometimes I work two hours and go home with ten euros. It’s like gambling—you never know”.

Despite this, many embraced a professional identity, stressing their role as cultural mediators and performers of the city. Yet, the absence of collective organisation or recognition reinforced their vulnerability to exploitation.

4.4. Spatial Concentration and Informal Territorialisation

Tours cluster in central heritage nodes (squares, viewpoints, landmarks), creating acoustic overlap and crowding as multiple groups simultaneously “stage” the city. This accumulation amounts to informal territorialisation of public space for private economic purposes, raising governance questions widely discussed in urban theory (Harvey, 2012) and in sustainable tourism debates on visitor dispersion.

A Lisbon guide remarked: “We all start in the same square—sometimes five groups are talking at once. Residents complain, but we don’t have any official space”.

This concentration revealed a process of informal territorialisation, whereby public space was appropriated for private economic purposes without mechanisms to mitigate impact or ensure equitable use. In summary, the key findings across these four dimensions are synthesised in Table 1.

Table 1. Summary of Findings

Dimension	Key Insights	Illustrative Evidence
Urban Performativity	Guides blend storytelling, humour, and critical narratives; constrained by reviews	“If they want politics, maybe just a little bit” (Lisbon)
Algorithmic Dependency	Success depends on visibility, ratings, and opaque ranking systems	“One bad review can ruin your week” (Barcelona)
Labour Precarity	Flexibility paired with financial instability; no contracts or protections	“Sometimes I work two hours and go home with ten euros” (Naples)
Spatial Impacts	Tours concentrate in central areas, producing congestion and resident tension	“We all start in the same square... five groups at once” (Lisbon)

Source: own elaboration.

5. Discussion

The findings of this study illuminate how Free Walking tours function as both products and producers of platformised tourism economies. While often framed as participatory, grassroots, and low-impact, FWTs reveal underlying contradictions of the sharing economy, particularly in its informal and unregulated variants. Four key discussions emerge.

5.1. From Informal Innovation to Platform-Driven Precarity

The findings substantiate how FWTs operate as platform-mediated gig work, where promised autonomy is constrained by algorithmic metrics and demand variability—patterns consistent with comparative studies of ride-hailing and crowdwork (Wood et al., 2019; De Stefano, 2016; ILO, 2021). FWTs exemplify how informal, entrepreneurial practices are absorbed into the structures of platform capitalism. Similar to food-delivery workers or ride-hailing drivers, guides operate under conditions of reputational dependency, algorithmic surveillance, and income instability. Flexibility and autonomy are celebrated rhetorically but in practice coexist with structural precarity.

The parallel with Uber drivers or Deliveroo couriers is striking: in each case, platforms externalise risks (e.g. unstable income, lack of protections) while internalising value through digital intermediation. FWTs thus highlight how tourism is not exempt from broader patterns of gig work and underscore the need to rethink celebratory discourses of entrepreneurial freedom.

5.2. Performing Authenticity under Algorithmic Pressure

Bringing classic authenticity debates into dialogue with platform governance reveals how affect and narration are performed under reputational discipline (MacCannell, 1973; Hochschild, 1983). This hybrid lens clarifies why certain themes and tones become standardised and why “critical” content may be strategically minimised. The demand for authentic, local storytelling is mediated by digital infrastructures. What counts as authentic is not a neutral or organic process but is filtered through

ratings, algorithms, and customer expectations. This paradox echoes debates in other gig sectors, where affective labour (e.g. smiling, being accommodating) becomes a survival strategy rather than a genuine expression of identity.

FWTs therefore complicate the idea that informal tourism is inherently more authentic or democratic. Rather, authenticity is continuously performed, negotiated, and commodified, raising concerns about cultural simplification and stereotype reproduction.

5.3. Governance Vacuums and Urban Impact

From a governance perspective, FWTs illustrate a regulatory blind spot. Their cumulative presence reshapes urban life—congestion, noise, appropriation of public space—however they escape taxation and oversight. Similar tensions can be observed in the case of Airbnb, where neighbourhoods face housing pressures while platforms resist accountability.

In cities like Lisbon or Barcelona, where overtourism has become politically salient, FWTs add another layer of complexity: they democratise tourism access but risk undermining urban liveability. The challenge is not simply whether to regulate, but how to do so without suppressing the creative and participatory potential of informal tourism.

5.4. A Global Perspective on Informality

While this study focused on Southern Europe, similar dynamics have been reported globally. In Latin America, FWTs often overlap with broader informal economies and grassroots organising, sometimes filling gaps left by weak tourism governance (García & Ruiz, 2025). In Asia, rapid digital adoption has facilitated the proliferation of tip-based tours, but precarious working conditions mirror those observed in Europe.

This global diffusion of FWTs suggests that platform-mediated informality is not a regional anomaly but a structural feature of contemporary tourism economies. Comparative research could therefore enrich understanding of how cultural, regulatory, and socio-economic contexts shape the manifestations of this practice.

5.5. Beyond Binary Classifications

Finally, FWTs trouble binary distinctions between formal/informal and professional/non-professional. Guides are simultaneously cultural curators, entrepreneurs, and precarious workers; platforms are both marketplaces and regulators. Such hybridity calls for a conceptual shift: instead of asking what the sharing economy is, it is necessary to interrogate what it does—how it distributes value, structures power, and transforms everyday urban and cultural life.

6. Conclusion

This article has examined Free Walking Tours (FWTs) as informal, performative, and platform-mediated expressions of the sharing economy in urban tourism. Drawing on ethnographic research in Southern European cities, it has demonstrated how FWTs both democratise access to urban narratives

and reproduce precarious labour conditions, spatial pressures, and algorithmic dependencies. Three overarching contributions emerge:

1. Labour precarity in tourism platforms: FWTs illustrate how flexibility and entrepreneurial opportunity are accompanied by instability, lack of protections, and dependency on opaque digital infrastructures.
2. Cultural performance under digital governance: Authenticity, often presented as grassroots and alternative, is continuously performed within algorithmic frameworks that reward conformity and affective labour.
3. Urban impacts and governance gaps: By concentrating flows in central spaces, FWTs generate congestion and resident tension while operating outside formal accountability systems.

Policy and Practice Implications

- For policymakers and urban planners: Regulation should move beyond punitive restrictions toward adaptive frameworks that recognise informal practices while ensuring accountability. Options include light-touch licensing, participatory land-use planning, and minimum labour protections.
- For platforms: Increased transparency in algorithms, clearer mechanisms for dispute resolution, and support for professional training could mitigate some of the risks identified.
- For Destination Management Organisations (DMOs): Collaboration with FWT operators could channel tours toward decentralised routes, distributing visitor flows more sustainably and fostering inclusive heritage narratives.

Directions for Future Research

- Comparative studies across regions (e.g. Latin America, Asia) to capture global variations in how FWTs evolve under different governance regimes.
- Quantitative analyses of platform data (e.g. review systems, visibility rankings) to complement qualitative findings on algorithmic governance.
- Exploration of collective strategies (e.g. unions, associations, cooperatives) through which guides may contest precarity and negotiate recognition.
- Interdisciplinary approaches bridging tourism studies, labour sociology, and digital governance to advance a more holistic understanding of platformised informality.

FWTs are not marginal anomalies but central indicators of how tourism is being reorganised in the platform age. They remind us that who tells the story of the city—and under what conditions—remains a profoundly political question. Addressing the contradictions they embody is not only a matter of labour justice or tourism management but also of envisioning fairer, more sustainable urban futures.

Beyond well-studied cases like accommodation and ride-hailing, this article identifies FWTs as a paradigmatic site where performance, platform governance, and urban space intersect. The synthesis of authenticity/performance theory with algorithmic labour governance offers a transferable framework for analysing other platformised cultural services (e.g. tip-based tours, street performances, micro-experiences). This contributes conceptually to platformised informality and practically to the co-design of governance instruments balancing access, labour justice and spatial equity.

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N/A


References

- Ap, J., & Wong, K. K. F. (2001). Case study on tour guiding: Professionalism, issues and problems. *Tourism Management*, 22(5), 551–563. [https://doi.org/10.1016/S0261-5177\(01\)00013-9](https://doi.org/10.1016/S0261-5177(01)00013-9)
- Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8), 1595–1600. <https://doi.org/10.1016/j.jbusres.2013.10.001>
- Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., & Hofacker, C. (2019). Technological disruptions in services: lessons from tourism and hospitality. *Journal of Service Management*, 30(4), 484–506. <https://doi.org/10.1108/JOSM-12-2018-0398>
- Cohen, E. (1985). The tourist guide: The origins, structure and dynamics of a role. *Annals of Tourism Research*, 12(1), 5–29. [https://doi.org/10.1016/0160-7383\(85\)90037-4](https://doi.org/10.1016/0160-7383(85)90037-4).
- De las Heras, A., Gutiérrez, J., & García, I. (2021). Beyond sharing: The platformisation of tourism economies. *Tourism Management Perspectives*, 40, 100897. <https://doi.org/10.1016/j.tmp.2021.100897>
- De Stefano, V. (2016). The rise of the “just-in-time workforce”. ILO Working Paper Series.
- Farmaki, A., Stergiou, D., & Xu, F. (2023). Peer-to-peer accommodation and sustainable tourism: Revisiting overtourism debates. *Journal of Sustainable Tourism*, 31(2), 329–347. <https://doi.org/10.1080/09669582.2022.2036054>
- Frenken, K., & Schor, J. (2017). Putting the sharing economy into perspective. *Environmental Innovation and Societal Transitions*, 23, 3–10. <https://doi.org/10.1016/j.eist.2017.01.003>
- García, J. R., & Ruiz, R. P. (2022b). Free Walking Tours. In *Encyclopedia of Tourism Management and Marketing* (pp. 340–343). Edward Elgar Publishing. <https://doi.org/10.4337/9781800377486.free.walking.tours>
- García, J. R., & Ruiz, R. P. (2022a). Platform Economy. In *Encyclopedia of Tourism Management and Marketing* (pp. 522–525). Edward Elgar Publishing. <https://doi.org/10.4337/9781800377486.platform.economy>
- García, J. R., & Ruiz, R. P. (2025). Expansión de plataformas de free tours en América Latina: tendencias y desafíos en el contexto global. *Ayana. Revista de Investigación en Turismo*, 5(2), 059–059. <https://doi.org/10.24215/27186717e059>
- García, J. R., Wilson, J., & Obrador, P. (2024). The emergence of free tours: Catalysts of platform-mediated tourism encounters. *Ara: Revista de Investigación en Turismo*, 14(1), 86–115. <https://doi.org/10.1344/ara.v14i1.47538>
- Geissinger, A., Laurell, C., & Sandström, C. (2019). Digital disruption and new market entrants in the sharing economy. *Journal of Business Research*, 100, 163–176. <https://doi.org/10.1016/j.jbusres.2019.03.035>
- Gil, J., & Sequera, J. (2022). Airbnb, digital platforms and urban transformation: Impacts and critical debates. *Urban Studies*, 59(6), 1153–1170. <https://doi.org/10.1177/00420980211014839>
- Gyódi, K. (2019). Airbnb in European cities: Business models and regulation. *Annals of Tourism Research*, 78, 102732. <https://doi.org/10.1016/j.annals.2019.102732>
- Harvey, D. (2012). *Rebel Cities: From the Right to the City to the Urban Revolution*. Verso.
- Hochschild, A. R. (1983). *The Managed Heart: Commercialization of Human Feeling*. University of California Press.

- ILO. (2021). World Employment and Social Outlook 2021: The role of digital labour platforms in transforming the world of work. International Labour Office.
- Leung, D., Xue, L., & Bai, B. (2019). Sharing economy platforms: Governance challenges and policy responses in tourism. *Tourism Management*, 71, 354–362. <https://doi.org/10.1016/j.tourman.2018.10.020>
- MacCannell, D. (1973). Staged authenticity: Arrangements of social space in tourist settings. *American Journal of Sociology*, 79(3), 589–603. <https://doi.org/10.1086/225585>
- Mosaad, M., Johnson, M., & Kovačević, B. (2023). Gig tourism: Labour fragmentation and precarious work in platform economies. *Tourism Management*, 94, 104636. <https://doi.org/10.1016/j.tourman.2022.104636>
- Paulauskaite, D., Powell, R., Coca-Stefaniak, J. A., & Morrison, A. M. (2017). Living like a local: Authentic tourism experiences and the sharing economy. *International Journal of Tourism Research*, 19(6), 619–628. <https://doi.org/10.1002/jtr.2134>
- Räisänen, J., Ojala, A., & Paavola, H. (2021). Algorithmic reputation and digital intermediation in tourism. *Information Technology & Tourism*, 23(2), 203–222. <https://doi.org/10.1007/s40558-021-00205-5>
- Rastegar, R., Gretzel, U., & King, B. (2023). Degrowth and tourism futures: Reframing justice and sustainability. *Annals of Tourism Research*, 94, 103395. <https://doi.org/10.1016/j.annals.2022.103395>
- Salazar, N. B. (2005). Tourism and glocalization: “Local” tour guiding. *Annals of Tourism Research*, 32(3), 628–646. <https://doi.org/10.1016/j.annals.2004.10.012>
- Sharpley, R. (2022). Tourism and sustainable development: Exploring the dialectics. *Tourism Management*, 91, 104531. <https://doi.org/10.1016/j.tourman.2022.104531>
- Srnicek, N. (2017). Platform capitalism. Polity Press.
- Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Good gig, bad gig: Autonomy and algorithmic control in the global gig economy. *Work, Employment and Society*, 33(1), 56–75. <https://doi.org/10.1177/0950017018785616>

(Title, Abstract and Keywords in Spanish)

Representaciones en plataformas: recorridos gratuitos a pie y la economía colaborativa informal

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Resumen

Este artículo examina los recorridos gratuitos a pie mediados por plataformas como una manifestación informal y performativa de la economía de plataforma en el turismo. A partir de la etnografía urbana multisituada (observación participante de 20 recorridos gratuitos a pie y 18 entrevistas semiestructuradas con guías en Barcelona, Lisboa y Nápoles, mayo-septiembre de 2024), el artículo muestra cómo los sistemas algorítmicos de reputación estructuran las elecciones narrativas y los ingresos; cómo el trabajo afectivo/performativo se calibra con las calificaciones y las propinas; y cómo la concentración espacial produce congestión y territorialización informal del espacio público. Conceptualmente, el artículo avanza los debates sobre la informalidad en plataformas al conectar el turismo performativo, la gobernanza del trabajo temporal y la justicia urbana, y describe las líneas de acción políticas (licencias de bajo impacto, descentralización de rutas y estándares laborales mínimos). Se discuten las implicaciones para la política turística, la planificación urbana y la teorización de las economías informales en contextos mediados por plataformas. En general, el estudio promueve la comprensión de cómo la informalidad plataformizada reconfigura el trabajo cultural y la gobernanza urbana, ampliando los debates más allá de casos emblemáticos como el alojamiento y los servicios de transporte.

Palabras clave: economía de plataforma; informalidad turística; recorridos a pie; algoritmos de reputación; trabajo performativo; etnografía urbana; gobernanza urbana.

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Employee Green Practices, Organizational Support, and Sustainable Performance in Chinese Hotels: A Structural Equation Modeling Approach

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Abstract

Sustainability has become a strategic imperative for the hotel industry, particularly in emerging economies where environmental pressures and labor intensity intersect. This study investigates how employee green practices influence sustainable performance in Chinese hotels, examining the mediating role of perceived organizational support for sustainability (POSS) and the moderating effect of environmental training intensity. Using survey data collected from 402 hotel employees across four major tourist regions in China, the study applies Partial Least Squares Structural Equation Modeling (PLS-SEM). Results indicate that employee green practices have a significant positive effect on environmental, social, and economic performance. POSS partially mediates these relationships, while environmental training intensity strengthens the impact of employee green practices on sustainable performance outcomes. The study contributes empirical evidence from a non-Western context and offers actionable implications for hotel managers seeking to align human resource practices with sustainability objectives.

Keywords: Employee green practices; Sustainable performance; Hotels; Organizational support; PLS-SEM; China.

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1. Introduction

The hotel industry is characterized by high resource consumption, labor intensity, and significant environmental and social impacts. In China, rapid tourism growth has amplified concerns related to energy use, waste generation, employee well-being, and community relations. Sustainability continues to be a

central concern in tourism-related industries in China, where both large and small enterprises face complex environmental and social performance pressures (Jing and Wei, 2025). While prior research has emphasized technological solutions and managerial policies, increasing attention is being paid to the role of employees as key agents of sustainability implementation.

Employees directly influence daily operational practices such as energy saving, waste reduction, and responsible service delivery. However, the effectiveness of such behaviors depends not only on individual attitudes but also on organizational contexts that encourage and reward sustainability-oriented conduct. Despite growing conceptual discussion, empirical evidence on how employee green practices translate into multidimensional sustainable performance in Chinese hotels remains limited.

In recent years, sustainability has evolved from a peripheral concern to a central strategic priority in the hospitality industry. Hotels face increasing pressure from regulators, customers, and other stakeholders to reduce their environmental footprint while simultaneously maintaining service quality and economic viability (Font et al., 2016). As a result, sustainability is no longer viewed solely as an environmental issue but as a multidimensional challenge encompassing environmental, social, and economic dimensions of performance.

Although previous research has extensively examined sustainability in hospitality from technological, operational, and policy-oriented perspectives growing attention has been directed toward the human side of sustainability implementation (Renwick et al., 2013). Employees play a critical role in translating sustainability policies into daily operational practices, particularly in labor-intensive service contexts such as hotels. However, empirical research has produced mixed findings regarding the extent to which employee green practices lead to tangible organizational outcomes, suggesting that contextual and organizational mechanisms may shape the effectiveness of such behaviors.

In this regard, organizational support mechanisms have been identified as crucial drivers of employee engagement in sustainability-related behaviors. When employees perceive that their organization values and supports sustainability initiatives, they are more likely to reciprocate through discretionary efforts that go beyond formal job requirements. Moreover, organizational investments in environmental training may further strengthen this process by enhancing employees' capabilities and signaling long-term commitment to sustainability. Despite these theoretical insights, empirical evidence simultaneously examining employee green practices, perceived organizational support for sustainability, and environmental training intensity remains scarce in the hotel sector, particularly in emerging economies such as China.

This study addresses this gap by examining (1) the direct effects of employee green practices and perceived organizational support for sustainability on environmental, social, and economic performance; (2) the mediating role of perceived organizational support for sustainability; and (3) the moderating effect of environmental training intensity. By applying PLS-SEM to data from 402 hotel employees, the research provides robust quantitative insights.

2. Literature review

This study is grounded in Social Exchange Theory (SET), originally developed by Blau (1964) and later advanced by Cook et al. (2013). The present study explains how employees respond to perceptions of organizational support for sustainability (POSS) by engaging in green behaviors and discretionary efforts that enhance sustainable performance. In this context, POSS can be interpreted as a socio-emotional resource that fosters positive reciprocity, leading to more intensive green practices, particularly when organizations invest in environmental training (ETI). From a social exchange perspective, environmental training intensity reinforces this reciprocity mechanism by signaling a long-term organizational commitment to sustainability.

SET has been widely applied in organizational and sustainability research to explain how supportive organizational actions generate reciprocal employee responses. In sustainability contexts, employees are more likely to engage in discretionary pro-environmental behaviors when they perceive that such behaviors are valued, supported, and rewarded by the organization. This perspective is particularly relevant in service industries such as hospitality, where employee behaviors are highly visible and directly affect both operational efficiency and stakeholder perceptions.

Accordingly, SET provides a robust theoretical lens to examine how POSS and ETI jointly shape the effectiveness of employee green practices (EGPs) in achieving sustainable performance outcomes.

2.1 Employee Green Practices

EGPs refer to voluntary and prescribed behaviors by employees aimed at reducing environmental harm and supporting sustainability objectives, such as conserving energy, minimizing waste, and encouraging eco-friendly behaviors among guests (Renwick et al. 2013). Prior studies suggest that such practices enhance organizational legitimacy and operational efficiency.

In the hospitality sector, EGPs are especially critical due to the labor-intensive nature of hotel operations and the close interaction between employees, guests, and physical resources. Frontline employees influence energy consumption, waste generation, and service delivery on a daily basis, making their behaviors a key determinant of sustainability performance. Prior research suggests that employee green practices not only contribute to environmental improvements but also enhance organizational reputation, customer satisfaction, and internal operational efficiency.

However, the extent to which employee green practices lead to consistent and sustained organizational outcomes remains contingent upon the broader organizational context in which such behaviors occur.

2.2 Sustainable Performance in Hotels

Sustainable performance is conceptualized as a triple-bottom-line construct encompassing environmental performance (e.g., reduced emissions), social performance (e.g., employee well-being and community relations), and economic performance (e.g., cost savings and competitiveness). Integrating these dimensions is particularly relevant for hospitality firms facing stakeholder pressure (Baquero, 2024a).

Adopting a triple-bottom-line perspective is particularly important in hospitality research, as hotels must simultaneously balance environmental responsibilities, social expectations, and financial performance. Environmental initiatives that reduce resource consumption may also generate economic benefits through cost savings, while social sustainability practices can improve employee well-being, reduce turnover, and strengthen community relationships. Consequently, sustainable performance in hotels should be understood as an integrated outcome rather than as isolated environmental or financial indicators.

This multidimensional conceptualization allows for a more comprehensive assessment of sustainability outcomes derived from employee-level practices in hotel organizations.

2.3 Perceived Organizational Support for Sustainability

POSS reflects employees' beliefs that their organization values and supports sustainability initiatives (Lamm et al. 2015). Drawing on social exchange theory, higher perceived support is expected to strengthen the translation of individual behaviors into organizational outcomes.

POSS plays a pivotal role in shaping employees' motivation to engage in green practices. When employees believe that their organization genuinely values sustainability and supports environmentally responsible behaviors, they are more likely to internalize sustainability goals and engage in voluntary actions beyond formal job requirements. From a social exchange perspective, such perceptions foster feelings of obligation and reciprocity, which translate into higher levels of pro-environmental engagement.

As a result, perceived organizational support for sustainability can be expected to function as a key mediating mechanism linking employee green practices to broader sustainable performance outcomes in hotels.

2.4 Environmental Training Intensity

ETI refers to the depth and frequency of formal sustainability-related training programs. Training enhances employees' skills and awareness, potentially amplifying the effectiveness of green practices (Dumont et al., 2017).

ETI represents an important organizational investment that enhances employees' knowledge, skills, and confidence to implement sustainability practices effectively. Beyond skill development, training programs also serve a symbolic function by signaling organizational commitment to sustainability values. In this sense, environmental training may strengthen the impact of EGPs by reinforcing the perception that sustainability is a long-term strategic priority rather than a short-term managerial initiative.

Therefore, environmental training intensity is expected to act as a boundary condition that amplifies the effectiveness of employee green practices in driving sustainable performance.

2.5 Hypotheses

Despite the growing body of research on EGPs, existing studies have predominantly focused on direct relationships with environmental outcomes, often overlooking the organizational mechanisms that

translate individual behaviors into multidimensional sustainable performance. In particular, the joint role of POSS and ETI remains underexplored in the hotel context, especially in emerging economies such as China. Addressing this gap, the present study proposes a conceptual model that integrates direct, mediating, and moderating relationships to explain how EGPs influence sustainable performance in hotels. Thus, the following hypothesis have been proposed:

H1a–H1c: Employee green practices positively affect environmental (H1a), social (H1b), and economic performance (H1c).

H2: Employee green practices positively affect Perceived organizational support for sustainability.

H3a–H3c: Perceived organizational support for sustainability positively affect environmental (H1a), social (H1b), and economic performance (H1c).

H4a–H4c: Perceived organizational support for sustainability mediates the relationships between employee green practices and (a) environmental, (b) social, and (c) economic performance.

H5: Environmental training intensity positively moderates the relationship between employee green practices and sustainable performance.

The theoretical framework of the research is shown below in Figure 1.

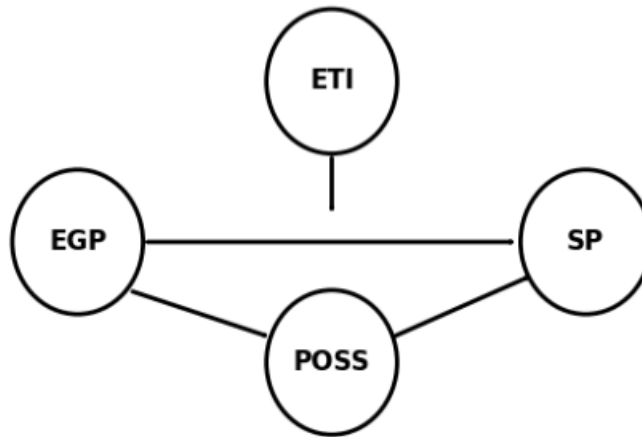


Figure 1. The theoretical framework of the study.

3. Methodology

3.1 Sample and Data Collection

Data was collected between August and September 2025 via a structured questionnaire administered to hotel employees in Beijing, Shanghai, Guangdong, and Zhejiang. A total of 600 questionnaires were distributed, 430 were returned and 402 valid responses were retained after data screening. This exceeded the recommended size sample of 220 respondents (Hair et al. 2022), therefore the sample was considered

sufficient for the analysis. Respondents represented heads of front-office, housekeeping, food and beverage, and administrative departments.

The questionnaire was administered in Chinese. To ensure linguistic accuracy and conceptual equivalence, the original items were translated from English into Chinese and subsequently back-translated into English following established academic research guidelines. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Participation was voluntary, informed consent was obtained from all respondents, and anonymity and confidentiality of the data were strictly ensured throughout the research process.

3.2 Measurement Instruments

All constructs were measured using validated multi-item Likert scales (1 = strongly disagree; 5 = strongly agree). Employee green practices, perceived organizational support for sustainability, and sustainable performance dimensions were adapted from prior hospitality and sustainability research.

Employee green practices were measured using 5 items adapted from Paille and Boiral (2013) and Khan et al. (2022), i. e. “I follow hotel environmental guidelines even when not monitored”. Perceived organizational support for sustainability was assessed using 5 items adapted from Eisenberger et al. (1986) and Lamm et al. (2015), i. e. “Management values environmental initiatives proposed by employees”. Environmental Training Intensity was evaluated using 4 items adapted from Dumont et al. (2017) and Jabbour (2013), i. e. “Environmental training in my hotel is practical and useful”. Sustainable Performance was measured using 9 items adapted from Baquero (2024a) and Yusliza et al. (2020), i. e. “Improved compliance with environmental standards,” “Reduction in operating costs”, and “Improved overall stakeholder welfare”.

3.3 Data Analysis

Partial Least Squares Structural Equation Modeling (PLS-SEM) was deemed appropriate for this study due to its suitability for predictive research, complex models involving mediation and moderation effects, and its robustness when working with non-normal data and medium-to-large sample sizes (Hair et al., 2022).

PLS-SEM was conducted using WarpPLS 7.0. The analysis followed a two-step approach: assessment of the measurement model (reliability and validity) and evaluation of the structural model (path coefficients, mediation, and moderation). Bootstrapping with 5,000 resamples was applied.

Table 1. Item loadings, Cronbach’s alpha (CA), Composite Reliability (CR), AVE and VIFs

Construct /Item	Loading	CR	CA	AVE	VIF
Employee Green Practices		0.914	0.883	0.640	1.34
EGP1	0.812				
EGP2	0.846				
EGP3	0.801				
EGP4	0.782				
EGP5	0.792				
Perceived Organizational Support for Sustainability		0.928	0.904	0.684	1.47
POSS1	0.864				
POSS2	0.881				
POSS3	0.843				

POSS4	0.799				
POSS5	0.826				
Environmental Training Intensity		0.902	0.858	0.648	1.31
ETI1	0.842				
ETI2	0.875				
ETI3	0.761				
ETI4	0.792				
Sustainable Performance (Second-order construct: Environmental, Social, Economic)		0.941	0.925	0.727	1.51
Environmental Performance					
ENV1	0.851				
ENV2	0.832				
ENV3	0.879				
Social Performance					
SOC1	0.823				
SOC2	0.847				
SOC3	0.801				
Economic Performance					
ECO1	0.794				
ECO2	0.836				
ECO3	0.818				

All factor loadings exceeded the recommended threshold of 0.70. Composite reliability (CR) and Cronbach's alpha (CA) values were above 0.70, indicating satisfactory internal consistency. Convergent validity was confirmed as AVE values exceeded 0.50. Variance inflation factors (VIFs) were below the critical value of 3.3, suggesting no multicollinearity issues.

4. Results

4.1. Measurement Model

All constructs demonstrated satisfactory internal consistency (Cronbach's alpha > 0.70; composite reliability > 0.70). Convergent validity was confirmed through average variance extracted (AVE > 0.50), and discriminant validity was established using the HTMT criterion.

The final sample consisted of 402 hotel employees in China. Regarding age, 36.82% of the respondents were between 18 and 30 years old, 46.52% were aged between 31 and 45, and 16.66% were over 45 years old. In terms of educational attainment, 17.91% held a high school or vocational diploma, 63.68% possessed a bachelor's degree, and 18.41% had completed postgraduate studies. With respect to marital status, 40.55% of the participants were single, 57.46% were married, and 1.99% reported being divorced or in other marital situations. Concerning organizational tenure, 30.10% of the respondents had between one and three years of work experience, 27.11% reported between four and six years, and 42.79% had more than six years of tenure in their current hotel.

4.2. Structural Model

Employee green practices showed significant positive effects on environmental ($\beta = 0.42$, $p < 0.001$), social ($\beta = 0.38$, $p < 0.001$), and economic performance ($\beta = 0.31$, $p < 0.001$), supporting H1a–H1c.

Perceived organizational support for sustainability partially mediated all three relationships, confirming H2a–H2c. The moderation analysis revealed that environmental training intensity strengthened the effect of employee green practices on sustainable performance ($\beta = 0.14$, $p < 0.01$), supporting H3.

The model explained substantial variance in environmental ($R^2 = 0.48$), social ($R^2 = 0.44$), and economic performance ($R^2 = 0.39$).

Table 2 reports the discriminant validity assessment using the Fornell–Larcker criterion. Discriminant validity is established when the square root of the AVE for each construct exceeds its correlations with other constructs. The results confirm satisfactory discriminant validity, as all diagonal values are greater than the corresponding inter-construct correlations.

Table 2. Discriminant validity results Fornell-Larcker criterion.

	EGP	POSS	ETI	SP
EGP	0.800			
POSS	0.421	0.827		
ETI	0.367	0.402	0.805	
SP	0.512	0.548	0.471	0.853

Note: Diagonal elements in bold represent the square root of the AVE for each construct.

Table 3 reports the HTMT ratios and corresponding p-values, confirming satisfactory discriminant validity, as all HTMT values were below the conservative threshold of 0.85 and statistically significant. Figure 2 and Table 4 summarize the results of the structural model. EGPs significantly influence sustainable performance both directly and indirectly through POSS. In addition, ETI positively moderates the relationship between EGPs and sustainable performance, supporting all proposed hypotheses.

Table 3. HTMT for validity.

HTMT Ratios (Good if <0.90, best if <0.85)	EGP	POSS	ETI	SP
EGP				
POSS	0.421			
ETI	0.367	0.402		
SP	0.512	0.548	0.471	
p-values (one-tailed) for HTMT ratios (good if <0.05)	EGP	POSS	ETI	SP
EGP				
POSS	<0.001			
ETI	<0.001	<0.001		
SP	<0.001	<0.001	<0.001	

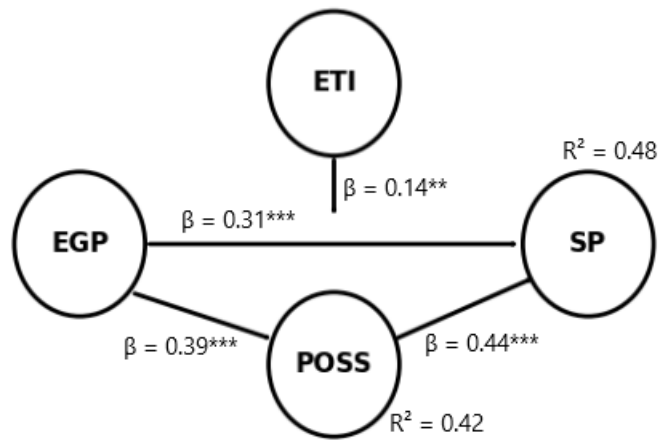


Figure 2. Final model of the study.

Table 4. Direct and moderating effects

Hypothesis	Relationship	Path Coefficient (β)	p-values	t-value	Decision
Direct Effects					
H1	EGP → SP	0.31	0.000	6.24	Supported
H2	EGP → POSS	0.39	0.000	7.88	Supported
H3	POSS → SP	0.44	0.000	8.95	Supported
Moderating Effects					
H5	ETI × EGP → SP	0.14	0.009	2.61	Supported

Finally, the moderating effect of environmental training intensity (ETI) was examined using the product indicator approach in PLS-SEM. The results reported in Table 4 show that ETI significantly moderates the relationship between employee green practices and sustainable performance ($\beta = 0.14$, $t = 2.61$, $p < 0.01$). This finding indicates that higher levels of environmental training intensity strengthen the positive effect of employee green practices on sustainable performance, thereby supporting Hypothesis H5. Given the second-order nature of sustainable performance, the moderating effect was tested on the higher-order construct to capture the overall sustainability outcome.

The variance inflation factor (VIF) for the interaction term was below the recommended threshold, indicating that multicollinearity was not a concern.

The positive effect of EGPs on sustainable performance becomes stronger at higher levels of ETI.

Table 5 presents the bootstrapping results for the mediation analysis. The indirect effect of employee green practices on sustainable performance through perceived organizational support for sustainability is positive and statistically significant. The 95% bias-corrected confidence interval does not include zero, confirming the presence of a significant mediation effect.

Table 5. Bootstrapped confidence interval of model mediation analysis

Hypo.	Path a	Path b	Indirect Effect	SE	t-value	95% LL	95UL	Mediation
H4	EGP → POSS (0.39)	POSS → SP (0.44)	0.172	0.041	4.195	0.094	0.255	Yes

According to Cohen's (1988) guidelines, f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively. EGPs show a small-to-medium effect on sustainable performance ($f^2 = 0.061$), while POSS exhibits a medium effect ($f^2 = 0.221$). ETI intensity and its interaction with EGPs display small but meaningful effects on sustainable performance. Conversely, EGPs demonstrate a medium effect on POSS ($f^2 = 0.148$).

Table 6. Effect sizes (f^2) for total effects

Effect Sizes (f^2) for Total Effects on SP	
Predictor	f^2
EGP	0.061
POSS	0.221
ETI	0.022
EGP × ETI	0.024
Effect Sizes for Total Effects on POSS	
EGP	0.148
ETI	0.031

5. Discussion

The findings highlight employees as pivotal drivers of sustainability in hotels. EGPs directly enhance all dimensions of sustainable performance, reinforcing the argument that sustainability is not solely technology-driven but also behaviorally embedded. The mediating role of organizational support underscores the importance of aligning corporate policies with employee initiatives.

The moderating effect of environmental training suggests that investments in structured training programs can amplify sustainability outcomes. This is particularly relevant in the Chinese context, where standardized training can bridge skill gaps across diverse hotel segments.

Beyond confirming the proposed hypotheses, the results emphasize the central role of employees as operational enablers of sustainability strategies in the hotel industry. The findings suggest that sustainability outcomes are not only driven by formal policies or technological investments but also by employees' day-to-day behaviors and discretionary efforts. This reinforces the view that sustainability in hospitality should be approached as a socio-organizational process embedded in human resource practices rather than as a purely technical or compliance-oriented initiative.

5.1 Theoretical Implications

This study offers several theoretical contributions to the literature on sustainability and hospitality management. First, it extends prior research on EGPs by empirically demonstrating their influence on sustainable performance as a multidimensional construct encompassing environmental, social, and economic outcomes. By adopting a holistic view of sustainable performance, the study responds to calls for integrating triple-bottom-line perspectives in hospitality research, these findings reinforce prior arguments that sustainability outcomes in organizations are strongly influenced by employee-related practices and behaviors, particularly when sustainability is embedded within human resource management systems (Renwick et al., 2013).

Second, drawing on Social Exchange Theory, the study advances understanding of the mechanisms through which employee green practices translate into organizational-level outcomes. The findings empirically validate perceived organizational support for sustainability as a key mediating mechanism, reinforcing the notion that sustainability-related employee behaviors are shaped by reciprocal social exchanges between employees and organizations. Moreover, by introducing ETI as a moderating variable, the study identifies an important boundary condition that strengthens the effectiveness of employee green practices, thereby enriching the theoretical explanation of how and when such practices generate sustainable performance benefits, by adopting a multidimensional perspective of sustainable performance, this study aligns with the triple-bottom-line approach, which emphasizes the simultaneous pursuit of environmental, social, and economic outcomes (Elkington, 1997).

5.2. Managerial Implications

From a managerial perspective, the findings suggest that hotel managers should move beyond symbolic sustainability initiatives and actively embed sustainability into human resource management systems. Recognizing and rewarding employee green practices can reinforce POOS and foster a culture of sustainability. In addition, managers should ensure that sustainability objectives are clearly communicated and aligned with employees' daily tasks and performance expectations.

Furthermore, the moderating role of ETI highlights the strategic importance of continuous and structured training programs. Investments in environmental training not only enhance employees' technical competencies but also signal long-term organizational commitment to sustainability. In the Chinese hotel context, where workforce diversity and standardization challenges coexist, well-designed training programs can serve as an effective mechanism to harmonize sustainability practices across departments and hotel categories.

5.3. Limitations and Future Research

The cross-sectional design limits causal inference. Future studies could employ longitudinal data or multi-source designs. Comparative studies across countries or hotel categories would further enrich understanding.

In addition, the use of self-reported data may introduce common method bias, despite the application of established procedural and statistical remedies. Future research could address this limitation by incorporating objective performance indicators or supervisor-rated measures of EGPs. Moreover, examining alternative theoretical frameworks, such as institutional theory or conservation of resources theory, could further enrich understanding of sustainability-related behaviors in hospitality settings.

5.4. Conclusion

This study provides empirical EGPs constitute a critical antecedent of sustainable performance in Chinese hotels. By elucidating the mediating role of POSS and the moderating effect of ETI, the research advances understanding of the socio-organizational mechanisms underlying sustainability in hospitality. This study contributes to a growing body of applied research that empirically investigates organizational and behavioral factors in tourism and hospitality, extending insights from recent work on tourism marketing and sustainability (Baquero, 2024b). Overall, the findings highlight the importance of aligning human resource practices with sustainability objectives and contribute to the growing body of applied research at the intersection of business management and tourism.

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References

- Baquero, A. (2024a). Examining the role of ambidextrous green innovation and green competitive advantage in stimulating sustainable performance: The moderating role of green absorptive capacity. *Sage Open*, 14(4).
- Baquero, A. (2024b). Expo2020 Dubai and Tourism Marketing: An Online User-Generated Content Analysis. *Journal of Hospitality and Tourism Issues*, 6(2), 130–148. <https://doi.org/10.51525/johti.1528836>
- Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: Wiley.
- Cohen, J. E. (1988). *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates, Inc.
- Cook, K. S., Cheshire, C., Rice, E. R. W., & Nakagawa, S. (2013). Social exchange theory. En J. DeLamater & A. Ward (Eds.), *Handbook of social psychology* (pp. 61–88). Dordrecht, Netherlands: Springer
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56(4), 613–627.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507. <https://doi.org/10.1037/0021-9010.71.3.500>
- Elkington, J. (1997). Cannibals with forks: The triple bottom line of 21st century business. Capstone.
- Font, X., Garay, L., & Jones, S. (2016). Sustainability motivations and practices in small tourism enterprises in European protected areas. *Journal of Cleaner Production*, 137, 1439–1448.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage.
- Jabbour, C. J. C. (2013). Environmental training in organizations: From a literature review to a framework for future research. *Resources, Conservation and Recycling*, 74, 144–155.
- Jing, L, and Wei, C. (2025). Small and Medium Enterprises (SMEs) and Sustainable Development in China: Opportunities, Challenges, and Future Directions. *Journal of Business and Tourism Management*, 1(1), 13-30. <https://doi.org/10.64976/jbtm.2025.002>

- Khan, N. U., Ali, F., Usman, M., & Younas, M. Z. (2022). Antecedents of employee green behavior in the hospitality industry. *Frontiers in Psychology, 13*, 836109.
- Lamm, E., Tosti-Kharas, J., & King, C. E. (2015). Empowering employee sustainability: Perceived organizational support toward the environment. *Journal of Business Ethics, 128*(1), 207–220.
- Paillé, P., & Boiral, O. (2018). Pro-environmental behavior at work: Construct validity and determinants. *Journal of Business Ethics, 150*(2), 543–559.
- Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal of Management*, doi: 10.1111/j.1468-2370.2011.00328.x
- Yusliza, M. Y., Yong, J. Y., Tanveer, M. I., Ramayah, T., Noor Faezah, J., & Muhammad, Z. (2020). A structural model of the impact of green intellectual capital on sustainable performance. *Journal of Cleaner Production, 249*, 119334

Urban Decline on Screen and Tourism Imaginaries Beyond the Tourist Bubble: A Conceptual Analysis of The Wire and Baltimore

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Abstract

Film-induced tourism has been widely examined in relation to iconic destinations and positive place branding. However, significantly less attention has been paid to audiovisual productions that portray urban decline, social exclusion, and institutional failure, where tourism impacts tend to be indirect, unofficial, and ethically contested. This gap is particularly relevant in post-industrial cities whose global visibility is shaped not only by promotional strategies but also by critical media representations. This article adopts a conceptual approach combined with a critical case study to examine how the television series *The Wire* contributes to the construction of alternative urban tourism imaginaries in the city of Baltimore. Drawing on an integrated review of the literature on film-induced tourism, dark tourism, and slum tourism, the study explores how *The Wire* functions as a symbolic catalyst that challenges the dominant “tourist bubble” narrative traditionally associated with Baltimore’s Inner Harbor and visitor-oriented urban regeneration strategies. Rather than attempting to quantify tourism demand, the analysis focuses on the symbolic, discursive, and governance dimensions through which representations of urban decline and social inequality shape destination perceptions and potential tourism practices. The study offers actionable insights for destination managers and policymakers dealing with non-institutionalized tourism dynamics shaped by critical audiovisual representations in post-industrial cities.

Keywords: Dark tourism; Slum tourism; Urban tourism; Destination management; Baltimore.

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1. Introduction

Film-induced tourism has become a well-established area of research within tourism studies and destination management, highlighting the ability of films and television series to shape destination images, increase international visibility, and stimulate tourism flows linked to iconic settings (Beeton, 2005; Hudson & Ritchie, 2006; Connell, 2012). Much of this literature has focused on contexts in which audiovisual representations project positive or idealized images of places, facilitating their integration into place branding and tourism promotion strategies.

However, considerably less attention has been paid to audiovisual productions that depict urban decline, social inequality, and institutional failure. In such cases, tourism impacts rarely materialize through official promotional strategies or easily measurable increases in visitor numbers. Instead, they emerge through the construction of alternative tourism imaginaries that are often controversial and ethically problematic. Despite the growing body of research on film-induced tourism, little is known about how critical audiovisual representations of urban decline influence tourism imaginaries and destination management in post-industrial cities. While the literature on dark tourism and slum tourism has partially addressed tourist interest in spaces associated with suffering and marginalization, these perspectives have seldom been systematically integrated with film-induced tourism research or with urban destination management.

This gap is particularly relevant in post-industrial cities that have pursued visitor-oriented urban regeneration strategies concentrated in specific enclaves, commonly described as “tourist bubbles,” which remain disconnected from broader urban social realities (Friedman et al., 2012). Baltimore represents a paradigmatic case in this regard. While the Inner Harbor has been promoted as a symbol of urban revitalization and tourism appeal, the city has gained a very different form of global visibility through the television series *The Wire* (2002–2008), widely recognized for its critical portrayal of urban decline, socio-spatial segregation, and the institutional dynamics of contemporary capitalism (Dreier & Atlas, 2009).

In this context, this article adopts a conceptual approach combined with a critical case study to examine how *The Wire* contributes to the construction of alternative urban tourism imaginaries in Baltimore. The main objective is to analyse how audiovisual representations of urban decline operate as symbolic catalysts for forms of tourism located at the intersection of film-induced tourism, dark tourism, and slum tourism, and to discuss the implications of these imaginaries for destination management, urban tourism governance, and ethical debates surrounding the commodification of marginalized urban spaces. By doing so, the article seeks to expand the analytical scope of film-induced tourism research from a management and public policy perspective, in line with the aims of the *Journal of Business and Tourism Management*.

2. Literature review

2.1. Film-Induced Tourism and Destination Image Construction

Film-induced tourism has been widely acknowledged as a phenomenon capable of shaping destination images and influencing tourists’ decision-making processes. Early studies emphasized the role of films and television series as powerful agents of indirect promotion, capable of generating awareness, familiarity, and emotional attachment to places (Beeton, 2005; Kim & Richardson, 2003). Unlike conventional marketing campaigns, audiovisual productions operate through narrative

immersion and symbolic meaning, allowing viewers to establish affective connections with the settings portrayed on screen.

Much of the existing research has focused on destinations that benefit from positive or idealized representations, such as scenic landscapes, heritage cities, or culturally appealing urban environments. Recent tourism management research emphasizes the relevance of community-based and sustainability-oriented approaches as mechanisms to address social, ethical, and governance challenges in tourism development (Kumar & Sharma, 2025). Empirical studies have examined the effects of audiovisual exposure on destination image, visit intention, and tourism flows, as well as its integration into destination branding and marketing strategies (Hudson & Ritchie, 2006; Connell, 2012). Recent reviews of tourism research highlight the growing centrality of sustainability-related values and perceptions in shaping contemporary tourism discourses and visitor expectations (Rodríguez et al., 2025). In these contexts, film-induced tourism is commonly framed as a clear opportunity for destination management, facilitating the development of themed routes, location tours, and place-based promotional initiatives.

However, this dominant approach presents notable limitations. First, it tends to assume a predominantly positive relationship between audiovisual representation and tourism attractiveness, overlooking productions that convey critical, negative, or uncomfortable images of destinations. Second, it prioritizes quantitative measurements of impact, such as visitor numbers or economic benefits, which limits the analysis of symbolic, discursive, and non-institutionalized tourism phenomena. As a result, the tourism implications of audiovisual narratives depicting urban decline and social inequality remain underexplored.

2.2. Dark Tourism and Tourist Interest in Spaces of Suffering

The concept of dark tourism provides a relevant theoretical lens for examining tourist interest in places associated with death, suffering, violence, and collective trauma. Lennon and Foley (2000) introduced the term to describe the growing attraction to sites linked to tragic events, emphasizing the role of modernity and media in shaping such experiences. Subsequently, Stone (2006) proposed a spectrum of dark tourism, distinguishing varying degrees of “darkness” according to factors such as temporal distance from the event, interpretative intent, and levels of commercialization.

Research on dark tourism has explored both visitor motivations and the ethical and managerial challenges involved in commodifying suffering. Identified motivations include the search for authenticity, educational purposes, moral reflection, and, in some cases, morbid curiosity (Sharpley, 2009). From a management perspective, scholars have highlighted the need to balance interpretative responsibility, respect for affected communities, and market demands.

While early dark tourism studies focused primarily on historical sites such as battlefields, memorials, or concentration camps, more recent work has expanded the concept to include contemporary urban spaces where violence and suffering are ongoing structural conditions. This extension is particularly relevant for post-industrial cities characterized by inequality, crime, and institutional failure. Nevertheless, the integration of dark tourism perspectives with film-induced tourism research remains limited, especially regarding the governance and management of urban destinations shaped by critical media representations.

2.3. Slum Tourism, Ghetto Tourism, and the Commodification of Urban Marginality

Slum tourism and ghetto tourism constitute another important body of literature for understanding tourist interest in marginalized urban spaces marked by poverty, exclusion, and segregation. Although such practices have historical precedents in nineteenth-century European and North American cities, contemporary research has largely focused on cases in the Global South, including favela tourism in Brazil and township tours in South Africa (Frenzel et al., 2012).

Scholars have debated the social, ethical, and economic implications of slum tourism. Some studies emphasize its potential to generate income, visibility, and opportunities for marginalized communities when developed under participatory and regulated models (Freire-Medeiros, 2013). Others warn against the risks of voyeurism, territorial stigmatization, and the reproduction of unequal power relations, particularly when tours are designed primarily for external consumption.

Table 1. Comparative overview of tourism typologies.

Tourism Typology	Core Focus	Main Visitor Motivations	Management and Ethical Challenges
Film-Induced Tourism	Audiovisual locations and mediated place imagery	Emotional attachment, fandom, narrative immersion	Risk of over-commercialization; dependence on media exposure
Dark Tourism	Sites associated with death, suffering, or trauma	Moral reflection, curiosity, search for authenticity	Ethical representation of suffering; interpretive responsibility
Slum / Ghetto Tourism	Marginalized urban neighborhoods	Desire for “real city” experiences, social awareness	Voyeurism, territorial stigmatization, community exclusion

Source: Authors’ elaboration based on Beeton (2005), Lennon and Foley (2000), Frenzel et al. (2012)

From an urban tourism management perspective, slum tourism raises significant governance challenges related to regulation, legitimacy, and community involvement. These practices often operate outside official destination strategies, creating tensions between local authorities, tourism operators, and residents. In the context of cities in the Global North, ghetto tourism highlights the persistence of urban inequalities and the complex relationship between media representation, tourist curiosity, and social responsibility.

2.4. Post-Industrial Cities, Tourist Bubbles, and Urban Tourism Governance

Urban tourism in post-industrial cities has frequently been associated with visitor-oriented regeneration strategies aimed at economic revitalization and competitiveness. Within this framework, the concept of the tourist bubble refers to the creation of spatially concentrated tourism enclaves characterized by safety, accessibility, and detachment from broader urban social problems (Judd, 1999). These spaces offer controlled and consumable tourism experiences aligned with official destination narratives.

Critical urban scholars have linked this model to neoliberal forms of urban governance, in which tourism is mobilized as a tool for economic growth, often at the expense of social equity and spatial justice (Harvey, 1989, 2001). In the case of Baltimore, Friedman et al. (2012) demonstrate how sustained investment in the Inner Harbor has produced a well-defined tourist bubble that coexists with extensive areas of urban decline and social exclusion.

From a destination management perspective, these dynamics raise questions about the sustainability and legitimacy of urban tourism strategies that prioritize selective visibility. The emergence of alternative media narratives that expose marginalized urban realities further complicates governance processes, challenging destination managers to respond to tourism imaginaries beyond their direct control.

2.5. Critical Synthesis and Research Positioning

The literature review reveals a clear fragmentation between studies on film-induced tourism, dark tourism, slum tourism, and urban tourism governance. Film-induced tourism research has largely focused on positive representations and measurable outcomes, while dark tourism and slum tourism studies have examined suffering and marginality from critical and ethical perspectives, often without systematically considering the role of audiovisual media as a triggering force. Similarly, urban tourism studies have addressed tourist bubbles and regeneration strategies without fully integrating media-driven destination imaginaries.

This fragmentation justifies the need for integrative approaches capable of capturing how critical audiovisual productions, such as *The Wire*, generate forms of tourism interest located at the intersection of these literatures. In the case of Baltimore, the series not only challenges the official tourism narrative but also raises specific managerial and governance issues related to non-institutionalized tourism practices and ethical representation. Building on this synthesis, the following section develops the conceptual framework guiding the analysis of the case study.

3. Conceptual Framework

This section constitutes the main conceptual contribution of the article by integrating fragmented strands of tourism literature into a coherent analytical framework. By bringing together insights from film-induced tourism, dark tourism, and slum tourism, the framework provides a structured approach to understanding how critical audiovisual representations of urban decline generate alternative tourism imaginaries and pose specific challenges for destination management and urban tourism governance.

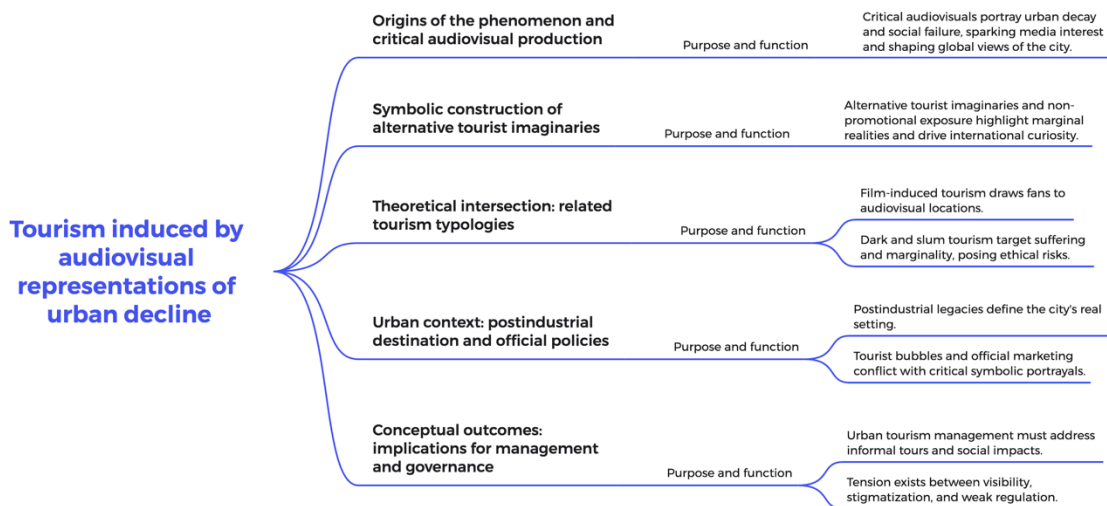


Figure 1. illustrates the conceptual framework developed in this study, showing how critical audiovisual representations, like *The Wire*, serve as symbolic catalysts for the construction of alternative tourism imaginaries located at the intersection of film-induced tourism, dark tourism, and slum tourism

3.1. Audiovisual Representations and the Construction of Urban Tourism Imaginaries

The conceptual framework developed in this study is grounded in the assumption that audiovisual productions do not merely influence destination image, but actively contribute to the construction of tourism imaginaries, understood as sets of symbolic representations, narratives, and expectations that mediate the relationship between potential visitors and urban space. Unlike conventional approaches to film-induced tourism, which emphasize implicit promotion and destination branding, this framework recognizes that critical or negative representations may also generate tourism interest, albeit in non-traditional and difficult-to-institutionalize forms.

Television series with a strong territorial anchoring and long-form narratives, such as *The Wire*, possess a distinctive capacity to construct complex urban imaginaries. Their serialized format allows for in-depth portrayals of cities, institutions, and social inequalities, shaping audience perceptions of urban space beyond iconic landmarks and tourist enclaves. These representations do not seek to attract visitors explicitly, but they may operate as symbolic catalysts for alternative tourism practices oriented toward the exploration of the “real city,” rather than the city promoted through official tourism channels.

3.2. Beyond Conventional Film-Induced Tourism.

The proposed framework conceptualizes the tourism implications of *The Wire* as a phenomenon located at the intersection of three strands of tourism literature: film-induced tourism, dark tourism, and slum tourism. Rather than treating these perspectives separately, the study adopts an integrative approach that captures the hybrid nature of tourism interest generated by audiovisual representations of urban decline.

From a film-induced tourism perspective, *The Wire* enhances Baltimore’s global visibility and associates the city with a distinctive narrative. However, unlike widely studied cases, this narrative

does not align with destination promotion objectives or aspirational place images. The relevance of dark tourism emerges here, as the attraction lies in representations of violence, inequality, and institutional failure, which may appeal to tourists seeking authenticity, understanding, or confrontation with uncomfortable social realities.

At the same time, the focus on marginalized neighborhoods, public housing projects, street corners, and spaces of exclusion connects with the literature on slum and ghetto tourism. In the case examined, however, these practices rarely take the form of formalized or regulated tourism products. Instead, they manifest as diffuse and informal forms of urban exploration and cultural consumption. The framework therefore conceptualizes tourism associated with *The Wire* as a hybrid continuum, rather than as a clearly delineated tourism typology.

3.3. The Tourist Bubble and the Emergence of Alternative Urban Narratives

A central component of the conceptual framework is the tension between official tourism imaginaries and alternative urban narratives generated by critical audiovisual productions. In post-industrial cities, destination management strategies have often concentrated on the development of tourist bubbles that offer safe, controlled, and consumable experiences, spatially and symbolically disconnected from broader urban problems.

The Wire disrupts this logic by foregrounding spaces, actors, and dynamics systematically excluded from official tourism narratives. As illustrated in Figure 1, this disruption does not dismantle the tourist bubble, but it generates symbolic frictions that expand the range of imaginaries associated with the destination. These frictions may translate into forms of tourist curiosity oriented toward marginal, contested, or non-promoted urban spaces, thereby challenging conventional assumptions in destination management.

3.4. Implications for Destination Management and Urban Tourism Governance

From a management perspective, the framework highlights the complex dilemmas faced by public and private actors in urban tourism governance. On the one hand, ignoring critical audiovisual narratives may be ineffective in an era of global media circulation and transnational cultural consumption. On the other hand, their uncritical incorporation into official tourism strategies raises ethical, social, and reputational risks, particularly when vulnerable communities and marginalized spaces are involved.

The proposed framework therefore shifts the analytical focus from impact measurement to governance capacity, emphasizing regulation, community engagement, and ethical responsibility. Rather than framing tourism induced by *The Wire* as either an opportunity or a threat, the framework conceptualizes it as a phenomenon that reveals deeper structural tensions between tourism development, urban inequality, and media representation in post-industrial cities.

3.5. Framework Synthesis

Overall, the conceptual framework positions *The Wire* as a symbolic catalyst for alternative urban tourism imaginaries that operate beyond conventional film-induced tourism and the logic of the tourist bubble. These imaginaries emerge at the intersection of film-induced tourism, dark tourism, and slum tourism, and are characterized by their fragmented, non-institutionalized, and ethically ambiguous nature. This framework provides the theoretical foundation for analysing the case of

Baltimore, enabling an examination of how representations of urban decline shape destination perceptions and pose specific challenges for destination management and urban tourism governance.

4. Baltimore as a critical Case Study

4.1. Baltimore, Urban Regeneration, and the Consolidation of the Tourist Bubble

The case of Baltimore is not intended to be statistically representative, but illustrative of broader dynamics affecting post-industrial urban destinations shaped by critical media representations. As a critical case, Baltimore allows for an in-depth examination of how alternative tourism imaginaries emerge in tension with official destination narratives and visitor-oriented regeneration strategies.

Baltimore has been widely examined in urban studies as a paradigmatic example of a post-industrial city that has relied on tourism and leisure as tools for economic regeneration. Since the late twentieth century, local urban policies have prioritized the transformation of the Inner Harbor into a visitor-oriented enclave through sustained investment in cultural, commercial, and sports infrastructures. This process has led to the consolidation of a “tourist bubble” characterized by accessibility, perceived safety, and a spatial and symbolic disconnection from broader urban social problems (Friedman et al., 2012).

From a destination management perspective, the Inner Harbor has functioned as the central pillar of Baltimore’s tourism branding strategy, projecting an image of urban revitalization and consumption-oriented attractiveness. However, this model has been criticized for its limited redistributive effects and its tendency to obscure persistent socio-spatial inequalities, particularly in the city’s eastern and western neighborhoods. In this context, urban tourism governance has largely focused on reinforcing selective visibility, privileging enclaves aligned with promotional narratives while marginalizing alternative representations of the city.

4.2. The Wire and the Construction of an Alternative Urban Narrative

In contrast to Baltimore’s official tourism narrative, the television series *The Wire* (2002–2008) has contributed to the construction of a radically different representation of the city. Across its five seasons, the series portrays Baltimore as a complex assemblage of institutional dysfunction, structural inequality, and urban decline, where crime and violence are presented as outcomes of broader economic and political dynamics rather than isolated social pathologies (Dreier & Atlas, 2009).

Within the conceptual framework proposed in this study, *The Wire* functions as a critical audiovisual production that enhances Baltimore’s global visibility while simultaneously destabilizing its dominant tourism imaginary. The city itself emerges as the central protagonist of the narrative, with attention shifting away from tourist enclaves toward marginalized neighborhoods, public housing projects, decaying port areas, and failing educational institutions. Although the series does not aim to promote the destination, it generates a deep sense of familiarity with urban spaces that are typically excluded from official tourism discourses.

4.3. Alternative Tourism Imaginaries and Non-Institutionalized Practices

The global circulation of *The Wire* has contributed to the emergence of alternative urban tourism imaginaries associated with Baltimore, as illustrated in Figure 1. These imaginaries do not necessarily translate into formal tourism products or institutional strategies, but rather into diffuse forms of

tourism interest that combine cultural consumption, urban curiosity, and symbolic engagement with the “real city.”

From an analytical perspective, tourism interest linked to *The Wire* can be interpreted as a hybrid phenomenon located at the intersection of film-induced tourism, dark tourism, and slum tourism. On the one hand, the series functions as a trigger of destination recognition, consistent with film-induced tourism dynamics. On the other hand, the attraction lies precisely in exposure to uncomfortable urban realities such as structural violence, poverty, and institutional failure, which resonates with dark tourism motivations. Finally, the focus on marginalized neighborhoods and spaces of exclusion aligns with debates surrounding slum and ghetto tourism, albeit in the absence of regulated or formalized tourism offerings.

These practices largely operate outside formal tourism governance structures, making them difficult to identify, measure, or manage. At the same time, their existence exposes the limitations of destination management models that overlook the role of critical media narratives in shaping tourism imaginaries.

4.4. Destination Management Tensions and Urban Tourism Governance Challenges

The coexistence of the Inner Harbor tourist bubble and the urban imaginaries generated by *The Wire* poses significant challenges for destination management in Baltimore. Strategically, local authorities face the dilemma of whether to acknowledge or ignore a globally circulating narrative that lies beyond their direct control but nonetheless influences destination perceptions. While the uncritical incorporation of such narratives into official tourism strategies risks reinforcing territorial stigmatization and ethical concerns, their complete exclusion limits the capacity to respond to non-institutionalized tourism practices.

From an urban tourism governance perspective, the Baltimore case highlights the need for more integrative and reflexive approaches that consider the impact of audiovisual representations on destination management. Rather than viewing tourism associated with *The Wire* as an anomaly, the conceptual framework suggests interpreting it as a manifestation of deeper structural tensions between tourism development, urban inequality, and mediated representations in post-industrial cities.

4.5. Case Study Synthesis

The analysis of Baltimore as a critical case demonstrates how *The Wire* contributes to the construction of alternative urban tourism imaginaries that challenge the logic of the tourist bubble and raise fundamental questions for destination management and governance. Rather than producing conventional tourism impacts, the series amplifies marginalized urban realities and acts as a symbolic catalyst for hybrid, fragmented, and ethically ambiguous forms of tourism interest. This case study illustrates the analytical value of the proposed conceptual framework and sets the stage for a broader discussion of the theoretical and practical implications of tourism induced by critical audiovisual representations.

5. Discussion

5.1. Theoretical Contribution:

The findings derived from the conceptual analysis and the Baltimore case study contribute to extending current understandings of film-induced tourism beyond dominant approaches focused on implicit promotion and positive destination branding. As illustrated in Figure 1, this study demonstrates that *The Wire* does not generate conventional tourism impacts but instead functions as a symbolic catalyst in the construction of alternative urban tourism imaginaries located at the intersection of film-induced tourism, dark tourism, and slum tourism.

This integrated perspective addresses a key gap identified in the literature. While film-induced tourism research has largely assumed a positive relationship between audiovisual representation and destination attractiveness (Beeton, 2005; Hudson & Ritchie, 2006), studies on dark tourism and slum tourism have examined tourist engagement with suffering and marginality from critical and ethical viewpoints, often without systematically considering the role of audiovisual media as a triggering mechanism (Lennon & Foley, 2000; Frenzel et al., 2012). The case of *The Wire* illustrates that critical representations can generate meaningful forms of tourism interest, even when they are fragmented, informal, and ethically ambiguous.

From a theoretical standpoint, the article expands the scope of film-induced tourism by incorporating contexts of urban adversity and non-promotional narratives. Rather than conceptualizing tourism impact solely in terms of visitor numbers or economic benefits, the study emphasizes symbolic processes through which mediated representations shape destination perceptions and potential tourism practices.

5.2. Alternative Tourism Imaginaries and Tensions with the Tourist Bubble

The discussion of Baltimore highlights a structural tension between official tourism imaginaries concentrated within the Inner Harbor tourist bubble and the alternative urban narratives generated by *The Wire*. This tension reinforces critical perspectives on urban tourism governance in post-industrial cities, where visitor-oriented regeneration strategies tend to privilege selective enclaves while excluding broader social realities from destination narratives (Judd, 1999; Friedman et al., 2012).

Within this context, *The Wire* operates as a mechanism of visibility for the “non-touristic city,” expanding the range of meanings associated with Baltimore. While the series does not replace or redefine the official tourism strategy, it introduces symbolic frictions that may translate into alternative tourism interests oriented toward marginalized, contested, or non-promoted urban spaces. These dynamics challenge conventional assumptions in destination management, particularly those based on spatial containment and narrative control.

5.3. Implications for Urban Destination Management

From a destination management perspective, the findings suggest that ignoring critical audiovisual representations is unlikely to be effective in the long term. In an era of global media circulation and transnational cultural consumption, such narratives operate beyond the direct control of destination managers while exerting a significant influence on external perceptions of cities.

At the same time, the study cautions against the uncritical incorporation of these narratives into official tourism strategies. The commodification of urban suffering or marginality may reinforce processes of territorial stigmatization and generate conflicts with local communities, as highlighted in the slum tourism literature (Freire-Medeiros, 2013). The conceptual framework proposed here points

to the need for intermediate management approaches that acknowledge alternative tourism imaginaries without automatically translating them into formalized tourism products.

5.4. Urban Tourism Governance and Ethical Dilemmas

The Baltimore case also underscores the ethical dimension of urban tourism governance. Tourism practices associated with *The Wire* are characterized by moral ambiguity, as they involve the observation and symbolic consumption of spaces shaped by inequality and social exclusion. This raises fundamental questions regarding who benefits from tourism, who bears its social costs, and what responsibilities public and private actors hold in regulating such practices.

From this perspective, the article reinforces the importance of integrating ethical considerations into urban tourism planning and governance, particularly in post-industrial cities. Rather than framing tourism induced by critical audiovisual representations as either an opportunity or a threat, the study conceptualizes it as a phenomenon that exposes deeper structural tensions between tourism development, urban inequality, and mediated representations.

5.5. Contributions and Future Research Agenda

Overall, the discussion highlights three main contributions. First, the article proposes an integrative conceptual framework that extends film-induced tourism research to contexts of urban decline. Second, it demonstrates the analytical value of conceptual and qualitative approaches for examining tourism impacts that are not directly quantified. Third, it offers a management- and governance-oriented interpretation that is particularly relevant for complex urban destinations.

These contributions open several avenues for future research, including empirical investigations of visitor motivations linked to critical urban narratives, comparative studies with other destinations shaped by similar audiovisual productions, and the exploration of governance models capable of ethically and sustainably engaging with alternative tourism imaginaries.

6. Conclusions and Implications

6.1. Main Conclusions

This article has examined the role of audiovisual representations of urban decline in shaping alternative urban tourism imaginaries, through a conceptual analysis and a critical case study of the television series *The Wire* and the city of Baltimore. Moving beyond dominant approaches to film-induced tourism that focus on positive destination images and quantifiable impacts, the study demonstrates that critical audiovisual productions can generate meaningful, albeit non-conventional, forms of tourism interest.

By integrating the literature on film-induced tourism, dark tourism, and slum tourism, the article has developed a conceptual framework that captures the hybrid and symbolic nature of tourism imaginaries associated with representations of urban adversity. The case of Baltimore illustrates how *The Wire* functions as a symbolic catalyst that challenges the logic of the tourist bubble and expands the range of meanings associated with the destination. Rather than producing direct increases in tourist arrivals, the series contributes to reshaping perceptions of the city by foregrounding social inequality, institutional failure, and marginalized urban spaces.

6.2. Implications for Destination Management and Urban Tourism Governance

From a destination management perspective, the findings suggest that urban tourism authorities must acknowledge the influence of critical audiovisual narratives on destination perception, even when these narratives fall outside official promotional strategies. Ignoring such imaginaries may limit the capacity of destination managers to understand and respond to emerging, non-institutionalized tourism practices.

At the same time, the study cautions against the uncritical incorporation of narratives of urban decline into formal tourism products. The commodification of suffering and marginality may reinforce territorial stigmatization and exacerbate tensions with local communities. In this context, urban tourism governance should move beyond enclave-based strategies and adopt more reflexive and ethically informed approaches that prioritize regulation, community engagement, and social responsibility.

Table 2. Implications for Urban Destination Management and Governance

Management Dimension	Key Challenge	Implications for Practice
Destination image management	Presence of unofficial and critical narratives	Need to acknowledge alternative tourism imaginaries beyond official branding
Tourism regulation	Emergence of informal and media-driven tourism practices	Development of regulatory frameworks addressing non-institutionalized tourism
Community relations	Risk of stigmatization and social conflict	Inclusion of local communities in tourism governance and decision-making
Ethical responsibility	Commodification of urban decline and marginality	Adoption of ethically informed and socially responsible tourism strategies

Source: Author elaboration.

The article also highlights the limitations of tourism development models centered on tourist bubbles, suggesting the need for more inclusive and nuanced destination narratives that better reflect the social complexity of post-industrial cities.

In practical terms, this implies the need for regulatory frameworks addressing informal or media-driven tourism practices, mechanisms for community participation in tourism-related decision-making, and strategies for managing unofficial destination narratives without reinforcing territorial stigmatization or social exclusion.

6.3. Limitations and Directions for Future Research

This study is subject to limitations inherent in its conceptual and qualitative approach. It does not aim to measure empirically the tourism impact of *The Wire* in terms of visitor numbers, economic effects, or employment generation, but rather to analyse the symbolic mechanisms through which audiovisual representations influence tourism imaginaries. While this approach responds to a significant gap in the literature, it also points to the need for complementary empirical research.

Future studies could explore visitor motivations and experiences related to critical urban narratives, conduct comparative analyses with other cities shaped by similar audiovisual productions, or examine governance models capable of engaging ethically and sustainably with alternative tourism

imaginaries. Such research would further enhance understanding of the complex relationships between tourism, media representation, and urban inequality.

6.4. Final Contribution

Overall, this article contributes to expanding the analytical scope of film-induced tourism research by incorporating contexts of urban decline and critical media representations that have been largely overlooked in the literature. By proposing an integrative conceptual framework and applying it to the case of Baltimore, the study offers theoretically grounded and managerially relevant insights for scholars, destination managers, and policymakers concerned with the challenges of urban tourism governance in post-industrial cities.

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References

- Beeton, S. (2005). *Film-induced tourism*. Channel View Publications.
- Connell, J. (2012). Film tourism – Evolution, progress and prospects. *Tourism Management*, 33(5), 1007–1029.
- Dreier, P., & Atlas, J. (2009). The Wire: Bush-era fable about America’s urban poor? *City & Community*, 8(3), 329–346.
- Freire-Medeiros, B. (2013). *Touring poverty*. Routledge.
- Frenzel, F., Koens, K., & Steinbrink, M. (2012). *Slum tourism: Poverty, power and ethics*. Routledge.
- Friedman, M. T., Bustad, J. J., & Andrews, D. L. (2012). Feeding the downtown monster: (Re)developing Baltimore’s “tourist bubble”. *City, Culture and Society*, 3(4), 209–218.
- Harvey, D. (1989). *The condition of postmodernity*. Blackwell.
- Harvey, D. (2001). *Spaces of capital: Towards a critical geography*. Routledge.
- Hudson, S., & Ritchie, J. R. B. (2006). Promoting destinations via film tourism: An empirical identification of supporting marketing initiatives. *Journal of Travel Research*, 44(4), 387–396.
- Judd, D. R. (1999). Constructing the tourist bubble. In D. R. Judd & S. S. Fainstein (Eds.), *The tourist city* (pp. 35–53). Yale University Press.
- Kim, H., & Richardson, S. L. (2003). Motion picture impacts on destination images. *Annals of Tourism Research*, 30(1), 216–237.
- Kumar, P., & Sharma, A. (2025). Community-Based Tourism for Sustainable Development in the Himalayan Region: Opportunities, Challenges, and Future Directions. *Journal of Business and Tourism Management*, 1(1), 1-12. <https://doi.org/10.64976/jbtm.2025.001>
- Lennon, J. J., & Foley, M. (2000). *Dark tourism: The attraction of death and disaster*. Continuum.
- Monroy-Rodriguez, S., Thiel-Ellul, D., & Fernandez-Ardavin, A. (2025). Exploring willingness to pay for sustainability in tourism: A co-word analysis of the literature review. *Journal of Business and Tourism Management*, 1(2), 1-17. <https://doi.org/10.64976/jbtm.8>
- Sharpley, R. (2009). Shedding light on dark tourism: An introduction. In R. Sharpley & P. R. Stone (Eds.), *The darker side of travel* (pp. 3–22). Channel View Publications.
- Stone, P. R. (2006). A dark tourism spectrum: Towards a typology of death and macabre related tourist sites, attractions and exhibitions. *Tourism: An Interdisciplinary International Journal*, 54(2), 145–160.

(Title, Abstract and Keywords in Spanish)

El declive urbano en pantalla y los imaginarios turísticos más allá de la burbuja turística: un análisis conceptual de *The Wire* y Baltimore

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Resumen

El turismo inducido por el cine ha sido ampliamente examinado en relación con destinos icónicos y estrategias positivas de construcción de marca de lugar. Sin embargo, se ha prestado considerablemente menos atención a las producciones audiovisuales que representan el declive urbano, la exclusión social y el fracaso institucional, donde los impactos turísticos tienden a ser indirectos, no oficiales y éticamente controvertidos. Esta laguna resulta especialmente relevante en ciudades posindustriales cuya visibilidad global no se configura únicamente a través de estrategias promocionales, sino también mediante representaciones mediáticas críticas. Este artículo adopta un enfoque conceptual combinado con un estudio de caso crítico para analizar cómo la serie televisiva *The Wire* contribuye a la construcción de imaginarios turísticos urbanos alternativos en la ciudad de Baltimore. A partir de una revisión integrada de la literatura sobre turismo inducido por el cine, turismo oscuro y turismo de barrios marginales, el estudio explora cómo *The Wire* funciona como un catalizador simbólico que desafía el relato dominante de la “burbuja turística” tradicionalmente asociada al Inner Harbor de Baltimore y a las estrategias de regeneración urbana orientadas al visitante. En lugar de intentar cuantificar la demanda turística, el análisis se centra en las dimensiones simbólicas, discursivas y de gobernanza a través de las cuales las representaciones del declive urbano y la desigualdad social configuran las percepciones del destino y las prácticas turísticas potenciales. El estudio ofrece aportaciones aplicables para gestores de destinos y responsables políticos que afrontan dinámicas turísticas no institucionalizadas, moldeadas por representaciones audiovisuales críticas en ciudades posindustriales.

Palabras clave: Turismo oscuro; Turismo de barrios marginales; Turismo urbano; Gestión de destinos; Baltimore.

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