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This SYMPOSIUM is part of the **7th International Spring Symposium in Tourism Development (Fuerteventura VII SSTD 2025)** under the theme **“New Trends in Tourism and Hospitality Management”.** Its aim is to provide an international forum for academics, researchers, professionals, and students to discuss key topics related to sustainability, competitiveness, and innovation in tourism development and hospitality management.

These CONFERENCE PROCEEDINGS result from two days of knowledge and experience exchange related to Sustainable Tourism Development.

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Abstract 1

Can Tourism Sustain Growth? Unveiling the Value of Natural Attributes in the Canary Islands

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KEYWORDS: sustainable tourism, tourism demand, natural valuation, price elasticity, Canary Islands. ourism.

ABSTRACT: Tourism is a vital economic sector in the Canary Islands, significantly contributing to GDP, employment, and local development. However, despite constant tourism demand growth, overall GDP per capita does not increase at the same rate, therefore understanding demand elasticities (price, income, and tourism attributes) can help to identify actionable levers for revitalizing the sector. An adequate valuation of Canary Islands´ unique natural attributes is critical to assess their role driving tourist demand, quantify its economic value, and determine optimal usage levels that prevent degradation. Previous studies have shown the importance of tourists' profiles and their impact on economic development. High-end travelers, those with lower price elasticity and higher income elasticity, are likely to value pristine natural environments, while mid-tier travellers have a focus on affordability. Tourism attractions remain a key draw, but not every tourist is willing to put the same level of effort to ensure its conservation. To study this issue in depth, the proposed methodology is a stochastic equilibrium model estimating supply and demand curves, disaggregating the analysis by accommodation rating, and unveiling how natural assets shape tourism demand. At the core of this problem lies the debate on environmental degradation or underutilization of tourism attributes, in economic terms, common vs. anti-common goods. Estimating price elasticities and economic values of attributes can provide insights to address these challenges. Sustainable tourism development depends on maintaining long-term tourism competitiveness by valuing these tourism attributes. We contribute to identifying appropriate investment levels in conservation and infrastructure, while highlighting the role that intangibles play in sustaining demand across accommodation tiers, and differentiating the destinations from its competitors. We expect to obtain elasticities in price (negative and smaller for high-end travellers), income (above 1 as tourism is a luxury good) and tourism attributes (above one, larger for high-end travellers.) disaggregating by accommodation quality. The most relevant result could be the case that verifies the existence of large tourism attributes elasticities divergence across accommodation tiers, this would highlight the importance of natural assets in shaping tourism, its intrinsic value, and its long-term effects regarding economic development and environmental sustainability. The potential results can be used by accommodation industry pricing strategies, a deep understanding of price elasticities enables to optimized rates for different segments and better targeting when segmenting the market; and by policymakers helping them to balance the potential trade-offs between growth and degradation. Beyond this, our model might contribute to reducing the gaps between tourism studies, environmental economics, and hospitality management.

Abstract 2

Decomposing the Gender Wage Gap in Tourism: An Endogenous Switching Regression Approach

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KEYWORDS: gender wage gap, discriminatory component, endogenous switching regression, temporal evolution, tourism.

ABSTRACT: In recent decades, the support of the main international institutions and organisations for the promotion of quality employment and non-discrimination in the labour market, especially for certain disadvantaged groups such as women and young people, has been evident. This support is specifically enshrined in frameworks such as the United Nations' 2030 Agenda for Sustainable Development Goals (SDGs) and the European Commission's Gender Equality Strategy for 2020-2025, among others. In the context of the Spanish labour market, these issues are particularly relevant due to its marked dualistic nature, which disproportionately impacts vulnerable groups like women, leading to low wages, job insecurity, and social exclusion. The precariousness of employment suffered by women, as well as the gender wage gap, particularly its discriminatory component, are of particular interest in sectors such as tourism, where women's employment is traditionally more disadvantaged. The present research offers a rigorous analysis of the evolution of the determinants of the gender wage gap in the tourism sector, comparing two time periods, highly different from each other, because the labour market underwent significant transformations due to factors such as the COVID-19 pandemic and the subsequent Labour Reform of 2021—events that have particularly affected labour-intensive sectors such as the tourism sector.

In the tourism sector, job opportunities are typically of low quality, characterized by high levels of temporary and part-time employment coupled with low wages (Lacher and Oh, 2012; Santero et al., 2015). One of the key objectives of the 2021 Labour Reform is to reduce the excessive temporariness that afflicts Spain's labour market, particularly in sectors such as tourism. Additionally, the COVID-19 pandemic has brought about significant changes in the sector's occupational structure, altering hiring practices and facilitating work-life balance through the expansion of telecommuting (Palomino et al., 2020). The objective of this research is to assess how these factors have impacted the occupational and wage structures in tourism compared to other sectors, focusing specifically on the gender wage gap and its discriminatory aspects.

A comparative temporal analysis is carried out using data from the Structure of Earnings Survey for 2018 and 2022 (the most recent available). An alternative approach would be to estimate separate wage equations for each period to capture differences in the estimated coefficients. However, this method could be affected by dual selection bias. First, there is the composition effect, as the configuration of the employed population and the labour market may differ significantly between the two periods. Second, the occupational structure of tourism workers relative to other sectors may be self-selected based on both observable and unobservable factors. To address these issues, the study proposes an Endogenous Switching Regression model, which allows for the estimation of distinct wage equations for workers in each period, conditional on the endogenous nature of the observation period, while controlling occupational selection bias specific to the tourism sector.

Abstract 3

Affective Experiences in the Workplace and their Influence on the Evaluative Judgment of Middle Managers

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KEYWORDS: affective events theory, neuroleadership, middle managers, hospitality industry, evaluative judgment.

ABSTRACT: In the tourism industry, particularly in the hospitality sector, human resources play a key role. However, this is a work environment characterized by a high degree of emotional stress that generates pressures and conflicts. In this scenario, managing employees' emotions and moods is a key leadership challenge. Therefore, learning skills that improve employees' emotional energy and motivation is essential for hospitality leaders. The literature indicates that neuroleadership behaviours can change the workforce's perceptions of their work environment. Neuroscience is a field that investigates the interactions of neurons that support human behaviour and their effects. Certain neurochemicals have been shown to regulate mood, reduce stress, or improve feelings of well-being. Managers who understand these neuroscientific advances can lead an organizational transformation that considers the ways the brain predisposes employees to empathize with their organizations. This study uses affective events theory as a framework to explore the application of neuroleadership methods in the workplace. The purpose is to analyse how affective events influence the evaluative judgment of middle managers in hotel companies about certain organizational factors. The study compares the evaluative judgments of these employees about leadership style, organizational support, work environment and affective state, before and after participating in affective events. They are also compared with the evaluative judgments of other middle managers who did not participate in such events. The work was carried out over six months in a hotel chain with the participation of 25 middle managers as an experimental group and 25 as a control group, coordinated by a professional from the company. The employees were chosen through a stratified random sampling process. After informing participants about the objective of the study and assuring them that their participation was voluntary and confidential, they were invited to complete a questionnaire. After answering the first questionnaire, a series of events were carried out over six months, after which the 50 middle managers answered the same questionnaire again. To test the hypothesis, mean difference tests were carried out for dependent and independent samples.

The results show that affective events carried out in the workplace significantly improve the evaluative judgment of employees in the experimental group, while no improvements were seen in the control group. The findings of this study show that hotel companies must reconsider the way they manage their human resources and pay attention to neuroscientific advances that help them exercise leadership in a different way. This requires companies to implement actions for the training and development of managers, with the aim of eliminating negative behaviours that hinder a quality human relationship with employees. This research contributes to the literature on leadership by considering the neuroscientific perspective applied to the study of people management in hotel companies, a field that has been little explored until now. Another element that gives the study originality is that it was carried out by a member of the company's staff, a circumstance not within the reach of most investigations.

Abstract 4

Perceptions of Sustainable Destination Certifications: A Comparative Analysis of Age Groups

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KEYWORDS: sustainable tourism, destination certification, brand identity, tourist perceptions, triple bottom line.

ABSTRACT: In the sustainable tourism era, where topics like overtourism (Boos de Quadros et al., 2024) or Sustainable Development Goals (SDGs) (Costa et al., 2019) are prominent, many destinations will have to revise strategies and rethink branding positioning to meet new requirements (Seraphine et al., 2019). By incorporating issues related to social identity, community and sustainability, on brand identity (Górska-Warsewicz, 2020; Ishaq & Di Maria, 2020), destinations can create competitive advantage, strong brand positioning and favour access to new target markets, among other issues (Ishaq & Di Maria, 2020). These commitments can be reinforced by obtaining sustainability certification. Territories may choose one of the certification bodies and meet a wide range of criteria, assessed and renewed annually (Costa et al., 2019). Notable is the Global Sustainable Tourism Council (GSTC) (www.gstcouncil.org/), which establishes global standards for sustainable travel and tourism, known as the GSTC Criteria; Biosphere (www.biospheretourism.com/), which connects good practices with the principles, priorities and the SDGs of the United Nations. Certification is important because it can reduce claims of "green washing" (Lyon & Maxwell, 2011) and give credibility to messages about corporate environmental performance and sustainable practices (Martínez et al., 2018). Whereas environmental certifications have been extensively used in the hospitality industry (Heras-Saizarbitoria et al., 2015), certification of a tourism destination is a recent trend and an area of research still developing (Grapentin & Ayikoru, 2019). To advance knowledge in this field, the objective of the research is to analyse perceptions of certified destinations, considering variables related to destination brand identity and preference. Specifically, we adopt a triple bottom line perspective (economic, social, and environmental), also called the "sustainability tripod" (Costa et al., 2019), to measure perceptions of certified destinations and potential benefits of certifications. Thus, we analyse variables related to brand identity, such as distinctiveness, defined as the perceived uniqueness of a brand's identity (So et al., 2017), attractiveness, understood as tourists' perceptions about a destination elaborated according to how it helps individuals satisfy self-definitional needs (Reitsamer et al., 2016), and preference towards such destinations (Su et al., 2020a). This paper compares perceptions and preferences of tourists regarding the variables mentioned, considering two age groups. Previous studies have highlighted the importance of analysing sustainability attending socio-demographic variables (Agapito et al., 2023). Regarding age, results are not conclusive. For example, millennials are considered the most ethical generation (Kim & Austin, 2020), although they are sceptical about CSR practices of recent years (Chatzopoulou & de Kiewiet, 2021). Focused on business students, Haski-Leventhal et al. (2017) found that older participants rank ethical responsibility higher than other responsibilities, whereas younger participants ranked social responsibility higher. These results lead us to explore possible differences among age groups of certified destinations. The study is based on an online survey directed at tourists residing in the United States aged 18 and above who had travelled for leisure/vacation outside their state at least once. A valid sample of 1,000 individuals was obtained.

Abstract 5

Is Automation More Widespread in Fast Food than in Hotels?

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KEYWORDS: work automation, task analysis, fast food, hospitality, employment trends.

ABSTRACT: Tasks are the key job descriptor to consider analysing work automation. By identifying the tasks within each job, we can assess whether they are automatable and whether systems exist to perform them. However, the existence of a device capable of executing a task does not mean that the task will be automated. Other issues must be considered such as the cost of the machine, its integration into the physical space or the interaction between humans and machines. Additionally, an important factor in estimating how automation technologies may affect employment in an industry is the number of different jobs, as well as the number and type of tasks performed. Industries with a wide variety of jobs are generally more resistant to automation. Likewise, jobs that involve a high variety of tasks are less likely to be automated.

This study analyses two industries: fast food restaurants and accommodation. Compared to hotels, fast food restaurants provide a narrower range of services, based on a low number of jobs, and involve tasks that are highly standardized, simple, and repetitive. Our hypothesis is that work in the fast-food industry is more susceptible to automation than in the lodging industry. To test our hypothesis, we analysed data from Spain and United States. For Spain, we considered employment and company revenues in the accommodation and food and beverage service sectors. For the U.S., we focused on data from the fast food and accommodation industries. In Spain between 2015 and 2022, employment in accommodation and food and beverage services increased by 30.18% and 33.45%, respectively, while company revenues in those sectors grew by 54.88% and 45.75%. In the U.S., we examined the period from 2008 to 2023. Fast food revenues rose by 20-36%. Instead, hospitality occupations declined by 6-9%. During the same period, the total number of fast-food restaurants increased by 13% and the total number of hotel rooms increased by about 20%. From this initial analysis, it appears that although the automation potential is higher in the fast-food industry, technology is not replacing workers. On the contrary, labour demand in fast food appears to be rising. These results are surprising. While we were unable to identify systems capable of fully automating hospitality jobs, we did find systems that can automate fast-food tasks: Flippy, a robot that cooks burgers; Siren, a Starbucks system for crafting coffee; and self-service ordering kiosks. Several factors may explain this unexpected finding. First, work characteristics usually considered key determinants of automation may be less influential than theory suggests. Second, companies may use workers replaced by automation to provide new services, as happens in McDonald's. Third, external elements, such as the labour costs, which differ in each industry, also play a role in driving automation.

Abstract 6

Shore Excursions: Perception and Determinants of Cruise Passenger Choice

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KEYWORDS: cruise passenger decision-making, shore excursions (organised vs. self-organised), perceived safety and comfort, price sensitivity and booking ease, tour offer and onshore time.

ABSTRACT: This article investigates the factors that influence cruise passengers to participate in shore excursions. Data were collected from a sample of 403 people during the 2019-2020 season in the port of Las Palmas (Gran Canaria) using a self-administered questionnaire. The questionnaire included a section investigating the factors that influence cruise passengers' decision to buy an excursion organised by the cruise line or to organise the visit themselves. In a first approximation, through a direct analysis of the responses of the cruise passengers to the items proposed in this section, it seems that the perception of safety and comfort associated with the excursions proposed by the cruise line play a fundamental role for cruise passengers taking a shore excursion (group 1. These factors do not seem to be important for those who don't do it (group 2), or at least not so important as to make them pay a price that they consider excessive. It seems that for cruisers in group 1, leaving the organisation of the excursion in the hands of the cruise line gives them the feeling that everything will go well and is worth paying for.

After this initial analysis, an exploratory factor analysis (EFA) was carried out to see if there was a set of underlying variables that could explain the relationships between these items. Three factors were identified. The first one, named excursion factor, basically corresponds to all items related to comfort and safety in the broadest sense, not only during the excursion but also in terms of getting back to the ship on time. The second one, named monetary factor, corresponds to all items related to the cost and booking of the excursion in a broad sense, as it also includes aspects such as ease of reimbursement and booking. Lastly, the third factor was named offer/time as it refers to the tour offer and the time available onshore.

Finally, to model a cruise passenger's decision to purchase an excursion, we estimate several binary logistic models. The results of the best model show that passengers who participated in excursions rated the offer positively, suggesting a relationship between the experience and the perception of the service offered. Those who did not participate showed a lower rating, suggesting negative perceptions or lack of information about the activities available. Moreover, the likelihood of purchasing an excursion increased with factors such the assurance that the ship will wait in case of delay, ease of booking and refund in case of cancellation. In contrast, prices compared to local operators and limited time onshore decrease this likelihood. These findings highlight the need to improve the promotion of available excursions and understand passenger motivations and preferences in order to develop more effective strategies to encourage participation in shore excursions.

Abstract 7

Structure-Conduct-Performance in Family Firms within the Spanish Tourism Sector: An Approach from the Aragon Region

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KEYWORDS: family businesses, tourism sector, S-C-P analysis.

ABSTRACT: The Structure-Conduct-Performance (S-C-P) paradigm is one of the topics addressed in the field of business management and organisation. This framework aims to analyse how the structure of a market influences firm behaviour and, ultimately, their performance. This approach is particularly relevant in the context of family businesses within the Spanish tourism sector, a sector that constitutes a significant portion of the country's economy and is characterised by a high prevalence of family-owned enterprises. However, the application of this theoretical framework to the study of family businesses, particularly in the tourism sector, remains limited, representing a notable gap in the academic literature. The interest in studying the S-C-P framework arises from a project funded by the Chair of Family Business at the University of Zaragoza, which identified a lack of studies specifically addressing the relationship between these three elements—Structure, Conduct, and Performance—in family businesses. Of the 172 papers analysed concerning family businesses in this tourism sector, only three address this theme, and they do so from a theoretical standpoint, with none approaching it from an empirical perspective. This gap in the literature constrains our understanding of how the characteristics of family businesses influence their competitiveness and sustainability in a dynamic market such as tourism. Our proposal aims to contribute to bridging this gap through an analysis based on information collected from family businesses in the tourism sector in the Aragon region, using data available on the Iberian Balance Analysis System (SABI) platform. Preliminary results indicate that the tourism sector in Aragon is primarily composed of small and medium-sized family enterprises operating in segments such as rural tourism, hospitality, and accommodation services. Some of these businesses are characterised by a less formalised organisational structure and a strong reliance on local resources. The behaviour of these firms is marked by centralised management within the owning family, which, on one hand, facilitates agile decision-making but, at times, limits innovation and professionalisation. Furthermore, these enterprises tend to prioritise long-term sustainability and the preservation of family legacy. The performance of family tourism businesses in Aragon is heterogeneous. Some manage to combine the flexibility typical of SMEs with a more professionalised management approach and tend to achieve better results. However, others primarily face challenges related to limited market share growth, low economic profitability ratios, and inadequate value creation. This project provides a theoretical contribution by applying the S-C-P paradigm to an underexplored context, as well as offering a research design that can be replicated in other regional or sectoral contexts. From a practical perspective, the findings may prove useful to managers of family businesses, as well as to those responsible for public policy. For the former group, the study aims to provide insights on how to improve their competitiveness, while the latter, the results may help in the design of policies to support the tourism sector.

Abstract 8

Sustainable Tourism Development in Greece: A Phenomenological Study of Municipal Leaders

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KEYWORDS: sustainable tourism, Greece, municipal leadership, SDGs.

ABSTRACT: The Hellenic Republic relies heavily on the summer tourism industry for economic growth. The objective has been to increase demand for lesser-known destinations and encourage visitation outside the peak summer period. However, expanding the tourism offering is complex, as tourism destination networks are some of the most complicated systems. Even though there is no official national framework for sustainable tourism in the Hellenic Republic, multiple frameworks for sustainable tourism within the Hellenic Republic have been designed, focusing on tourism on regions and natural preserves. The problem is that municipal leaders' perspectives are not mentioned within any current frameworks for sustainable tourism in the Hellenic Republic. Municipal leaders are the closest form of government and directly affect local populations. This study facilitated qualitative phenomenological methods to interview twelve municipal leaders from nine of the thirteen regions of Greece. Research findings indicate that municipal leaders approach leadership as individuals or as a municipality leading its community. Leaders stress their need to create improvements within the bureaucratic system in Greece. They shared their desire to deter mass tourism. Leaders discussed collaborating with higher education and academics to work on sustainable tourism development programs. The need and want to expand the tourism into the off-season was evident. Within their answers, participants had knowingly or unknowingly mentioned multiple United Nations Sustainable Development Goals (SDGs) and, in some instances, connected multiple goals in their answers. Recommendations for further research include expanding this research between municipalities and their regions and the relative ministries.

Abstract 9

Digital Transformation and Artificial Intelligence in Tourism and Hospitality: Systematic Literature Review

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KEYWORDS: digital transformation, AI, tourism, sustainability.

ABSTRACT: Digital transformation (DT) and artificial intelligence (AI) are radically changing the tourism and hospitality industry, allowing for personalized customer experience and greater operational efficiency, competitiveness and sustainability of the company. The adoption of the Internet of Things (IoT), virtual reality, augmented reality and robots, among other technologies, also entails challenges at the level of business model, organizational structure, company culture, resources and leadership. Despite its importance and progress, research on DT and AI in tourism is characterized by its high fragmentation and dispersion, reasons that justify and motivate the bibliometric content analysis carried out in this study. Considering the SPAR-4-SLR protocol and the PRISMA method for searching, extracting and selecting documents, carried out through Scopus and Bibliometrix, the results obtained are the following: A total of 520 references and 1395 authors on DT and AI in tourism and hospitality. A growth from 1988 to 2025 in scientific production of more than 7% (although until 2020 only 50 articles had been published). Approximately 50% of the references are scientific articles. Spain occupies 5th place with 6% of scientific production (30 documents). The most frequent KEYWORDS have been "tourism development", "decision making" and "sales". The studies carried out can be grouped into three clusters: "information management and decision making", "sustainable development of tourism" and "artificial intelligence and robotics". The thematic evolution, taking 2022 as the cut-off year (end of the pandemic), has evolved from automation, robots, innovation and decision-based tourism management to the adoption of learning technologies and algorithms, and to the development of tourism. Tourism management, as well as general sustainability and tourism, which stand out as emerging topics that represent opportunities for future research. Cross-cutting research topics that should be given more attention include tourism development, as well as decision-making, information management - especially Big Data -, and to a lesser extent consumer satisfaction. The most relevant preconditions that have been studied for the adoption of DT and AI by tourism companies include the adequacy of the existing knowledge management system, information and existing computer technology, the current degree of acceptance and continued use of DT and AI, current prediction and decision-making systems, as well as the quality of the company's management and strategy, and of human resources and jobs. The most studied DT and AI systems and applications have been Big Data, Robots and algorithms. Anecdotally, the most relevant "outputs" are not related to the company, highlighting the community social and economic benefits and the development of tourism. Next in importance are consumer satisfaction and income and benefits for the company.

Abstract 10

Predictive Study of the Perceived Job Performance of Generation Z in a Tourism Context of Digital Transformation and Artificial Intelligence

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KEYWORDS: digital transformation, AI, tourism, generation Z.

ABSTRACT: The tourism and hospitality industries are immersed in the new era of digital transformation (DT) and artificial intelligence (AI). This process generates advantages in process efficiency, product design and personalisation of the customer experience, among many others. The adoption of DT and AI also entails the need to adopt changes in the business model, company culture and organisation that favour sustainability. It also requires the allocation of resources and the adoption of reasonable adoption timelines. Being a service-intensive sector and intangible in nature, human resource commitment and change is critical. The adoption of DT and AI will require training, especially in digital skills, as well as increased motivation and new ways of working to ensure sufficient and sustainable performance of employees and tourism businesses.

Of particular importance in this context is Generation Z, a segment of the population that includes people born between 1995 and 2012, and which is taking over from the next generation in tourism companies. They are digital natives and use resources (mobiles, platforms, apps) to search for information and manage their trips. The industry should therefore take advantage of Generation Z's knowledge and attitudes towards technology to drive the adoption of DT and AI, while meeting their expectations and improving their engagement and performance. Despite all this, there is very little research on the relationship between DT/AI and performance among young people.

In this context, this study has been carried out considering contributions from different theoretical approaches (TAM and UTAUT acceptance model). A sample of 478 undergraduate and master's degree students in tourism, a scale designed ad hoc, and the PLS-SEM methodology of structural equations were used. The results of this study show that the best way to predict and enhance young people's perceived job performance is to reinforce their attitudes towards DT and AI, in order to influence their perception that these technologies will generate job satisfaction. This is conducive to their perceived job performance. In any case, improving attitudes towards DT and AI positively influences perceived performance. While attitudes towards DT and AI influences their acceptance, mere acceptance alone does not lead to improved perceived job performance, contradicting other authors. As this is a generational study the results can be transferred to the same segment in other contexts.

Abstract 11

The Measurement of Spatiotemporal Concentration of Tourism Flows and the Modifiable Unit Areal Problem (MAUP): A Case Study Using Mobile Positioning Data

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KEYWORDS: seasonality, flows, modifiable areal unit problem (MAUP), mobile positioning data (MPD), Gini index decomposition.

ABSTRACT: The spatiotemporal concentration of tourism flows exerts significant impacts across economic, social, and environmental dimensions, challenging the sustainability of tourism destinations. As a result, the seasonality of tourism has been extensively examined in the academic literature, given its implications for destination management, policy formulation, and market stability. The academic discourse has predominantly centred on the conceptualisation, causes, mitigation strategies, and various quantitative approaches for measuring it. While the temporal dimension of seasonality has been extensively analysed, the spatial dimension has received comparatively less scholarly attention. Most previous research measuring seasonal concentration has adopted macro-level approaches, evaluating seasonality at national or regional scales, thereby overlooking intra-regional variations that may significantly influence local sustainability. This oversight is particularly problematic given the presence of spatial compensatory effects, which can mask localised seasonal concentration. At broader spatial scales, aggregate metrics may understate the severity of seasonal peaks in specific subareas, leading to misleading interpretations and suboptimal policy responses. This issue is related to a well-documented problem in spatial analysis: the Modifiable Areal Unit Problem (MAUP). The MAUP is a statistical bias that can occur during spatial analysis of aggregated data. It manifests through two primary biases: the scale effect and the zoning effect. Despite seasonality's clear spatial dimension, previous studies have not addressed the MAUP in its measurement.

Under these circumstances, this paper aims to answer the research question of whether MAUP is present in seasonality measurement and how it affects results and counter seasonal policies. To this end, we employ Mobile Positioning Data (MPD) to assess international and domestic tourist flows in Spain from 2022 to 2024 at several administrative spatial scales. Our methodological approach applies the Gini index additive decomposition using the covariance method. The objectives of this paper are twofold: first, to assess whether areas classified as nonseasonal at aggregated levels (e.g. provinces) may contain subareas with high seasonal fluctuations (municipalities); second, to develop an indicator that quantifies the extent to which the concentration index is influenced by spatial compensation effects. The findings confirm that the scale effect of MAUP is indeed present in the measurement of seasonality. The results highlight how spatial aggregation can mask significant seasonal fluctuations at more granular levels, affecting the interpretation of seasonality metrics and the effectiveness of counter-seasonal policies. Additionally, the proposed index to complement traditional seasonality measurement has proven effective in detecting when a low concentration index results from spatial compensation rather than a true absence of seasonality. Furthermore, MPD proves to be a valuable data source for increasing spatial granularity and addressing limitations in official statistics.

Finally, this paper highlights the necessity of a multi-scalar approach for precise seasonality measurement and policy development. Seasonality mitigation strategies must align with the spatial scale at which fluctuations occur, underscoring the efficacy of bottom-up approaches over traditional top-down approaches. Additionally, reliance on administrative boundaries may introduce potential zoning biases, representing the unexplored dimension of MAUP.

Abstract 12

Parisian Art Hotels: Cultural Heritage, Identity and Innovation

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KEYWORDS: contemporary art, tourism, hotel experience, Paris.

ABSTRACT: Paris owes its reputation as the world's most powerful city for tourism not just to its heritage, but also to the ongoing development of ways of showcasing it in the best possible way, turning a visit into a unique experience. Parisian hoteliers are constantly forced to innovate, and it's no coincidence that some are counting on contemporary art to extend the artistic and historical experience of the city into the interior space. Since the 1960s, art has been used for creating atmospheres that allow viewers to enjoy an immersive experience. Some hoteliers have built a strong brand identity by collaborating with renowned French designers such as Philippe Starck, Ora Ïto, and Matali Crasset to create multifunctional and unconventional hospitality spaces. Aware of art's potential to enrich and redefine the hospitality experience, others have recently begun collaborating with visual artists or partnering with exhibition curators. The aim here is to go beyond the idea of a hotel and create a total work of art, offering a whole new experience. They have all recognized that art allows an immersion in the local culture, functions as an intellectual stimulus and has a beneficial impact on the viewer, ultimately enhancing customer satisfaction and, potentially, financial performance. At least, it helps a company to express an identity. In this spirit, the Drawing Hotels are the result of a collaboration between Carine Tissot and Christine Phal, directors of the annual Drawing Now art fair at the Caroussel du Louvre, integrating the Drawing Lab with the aim of promoting drawing by developing "a real creative space". The Yooma Lodge Tour Eiffel has been created by designer Ora-Ïto and artist Daniel Buren, bringing together a family-friendly hotel space and artists' studios in an immersive setting, positioning itself as a creative alternative to Airbnb. The Villa Molitor, a gallery space, and the Hôtel Molitor (since 2014 part of the M Gallery Collection of Accor Group) are thus linked by an intense partnership between gallery owners, artists, hoteliers, and hotel guests. These collaborations seem so frugal that major chains such as the Accor (Pullmann) and the Radisson Group (Art'hotel) have also created art-hotels. These collaborations, which go beyond a simple exhibition in the hotel lobby, can have multiple facets. So how do they work? What is the strategy? Does corporate entrepreneurship play a role? How do the artists envision these cooperations? And in what way is the relationship with the place envisaged?

Abstract 13

Customer Recommendations in the Airline Industry: Analysis of User-Generated Content

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KEYWORDS: customer recommendations, airline service, online reviews, referral intent.

ABSTRACT: Recommendations play an important role in the consumer decision-making process, which is particularly significant in highly competitive industries such as the airline sector. Beginning with the initial choice of an airline, recommendations form the overall perception of the travel experience. From an airline's perspective, recommendations are key to cost-effective customer acquisition, the enhancement of loyalty, and the generation of positive word-of-mouth, thereby contributing to the overall performance of the airline.

Online customer reviews have become a reliable and accessible source of social proof and authentic feedback. According to the literature review, user-generated content is perceived as more reliable and up to date than information provided by marketers. Online evaluations, which include both positive and negative feedback, provide airline management as well as researchers with a valuable resource for analysis and subsequent improvement suggestions. The study examines passenger reviews to analyse recommendations through quantitative method. Its main objective is to analyse passengers' willingness to recommend an airline and how it varies depending on passenger characteristics and airline categories. The research analyses data from Skytrax, a main airline review platform. The dataset was collected through web scraping with Python programming language. It contains feedback from passengers over the last ten years, covering leading low-cost and full-service carriers in Europe.

Today, review platforms offer not only textual feedback and general ratings but also additional data, such as passenger type, nationality, cabin class, and ratings for attributes like cabin staff service, value for money, ground services, seat comfort, food and beverages, inflight entertainment, and cabin connectivity, thereby enabling a more comprehensive and in-depth analysis. Most importantly, the dataset contains information on passengers' willingness to recommend an airline, supporting detailed analysis and comparisons across various passenger groups. Prior research emphasizes the segmentation of the airline market, highlighting the differentiation of passengers based on their preferences and expectations. Therefore, the study examines both low-cost and full-service carriers to identify significant variations in passenger evaluations. Moreover, by analysing the differences between cabin classes, this research explores how recommendations vary between passengers of economy, premium economy, business, and first classes. According to the literature, passenger type segmentation is an important aspect of airline analysis, as certain factors are statistically significant for some passenger groups while not for others. Thus, the study examines recommendations based on different types of passengers, such as business, solo leisure, couple leisure, and family leisure. Understanding these differences will provide insights into how passenger characteristics influence their overall willingness to recommend an airline. This will assist airlines in adapting their in-flight and on-ground services to the diverse preferences of their passengers.

Abstract 14

Implementation of an Automated System for Analysing the Tourism Situation in Lanzarote

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KEYWORDS: report automation, tourism expenditure survey, tourism situation, data management.

ABSTRACT: This paper presents the methodology designed to automate the preparation of quarterly reports on the tourism situation in Lanzarote, using the R programming language. The solution is based on information provided by the Tourism Expenditure Survey (EGT).

The automated extraction and processing of this data is detailed, ensuring the generation of reports that facilitate the monitoring and evaluation of tourism trends on the island. Furthermore, the advantages and challenges of implementing this system are discussed, highlighting its contribution to supporting strategic decision-making in tourism management.

Abstract 15

The Role of Environmental, Social and Governance Factors in Global Tourism Development

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KEYWORDS: urbanization, government, environmental, social, governance, GMM.

ABSTRACT: Tourism plays a pivotal role in the economic growth and development strategies of many nations. In an era of increasing emphasis on sustainable development, attention has turned to the capacity of tourist destinations to grow responsibly and remain attractive amid environmental, social, and governance (ESG) challenges. This study investigates the empirical relationship between ESG indicators—specifically carbon dioxide (CO_2) emissions (environmental), urbanization (social), and government effectiveness (governance)—and international tourism receipts in a panel of 156 countries spanning the years 1996 to 2020. The analysis also incorporates control variables such as GDP per capita, internet usage (as a proxy for digitalization), and fossil fuel energy consumption, and considers the impact of major global shocks, including the 2008–2009 financial crisis and the COVID-19 pandemic. To conduct the analysis, we employ a dynamic panel data model using the two-step system Generalized Method of Moments (GMM) estimator with Forward-Orthogonal Deviations (FOD), which accounts for unbalanced data structures and endogeneity concerns. The results provide robust evidence that ESG factors significantly influence tourism development. Specifically, CO_2 emissions exhibit a negative association with tourism receipts, suggesting that environmental degradation and climate change adversely affect international tourism. Conversely, urbanization shows a generally positive impact, reflecting how developed urban infrastructure can enhance tourism appeal and accessibility. Government effectiveness is also found to positively influence tourism, underscoring the importance of stable institutions, regulatory quality, and public services in fostering a favourable tourism environment.

The study finds mixed results for the control variables. While digitalization positively correlates with tourism receipts—indicating that internet access and technological advancement facilitate tourism services—economic development exhibits a negative effect, potentially due to shifting economic structures or domestic focus in more affluent countries. Surprisingly, fossil fuel energy consumption correlates positively with tourism receipts, possibly reflecting tourism's continued reliance on energy-intensive services despite its environmental costs. Crisis periods yield important insights. During the global financial crisis, the negative impacts of CO_2 emissions and urbanization were amplified, and government effectiveness temporarily lost its positive influence, highlighting vulnerabilities in tourism systems. During the COVID-19 pandemic, while CO_2 emissions and urbanization continued to exert negative effects, government effectiveness regained significance, illustrating the critical role of competent governance in crisis management and tourism resilience. The paper contributes to the growing literature on sustainable tourism by being the first to assess all three ESG pillars alongside key control variables and external shocks in a comprehensive global framework. The findings emphasize the need for policymakers to integrate ESG considerations into tourism strategies, promoting sustainable urban planning, improving governance quality, and reducing environmental impact through cleaner energy adoption. In addition, it highlights the importance of fostering public-private collaboration to transition toward green energy while sustaining tourism revenue. Future research is encouraged to dissect governance effects further using granular indicators and to explore the dual challenge of boosting tourism while reducing reliance on fossil fuels.

Abstract 16

Hierarchical Pattern Analysis of Tourist Environmental Compensation: Evidence from the Canary Islands

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KEYWORDS: machine learning; tourism; hierarchical patterns; interdependencies.

ABSTRACT: This study advances tourism research by introducing a novel hierarchical pattern analysis framework that reveals the complex relationships between tourists' environmental compensation willingness and their behavioural patterns. While existing literature has primarily focused on identifying isolated determinants of environmental compensation, we develop and empirically validate a comprehensive theoretical model that demonstrates how tourist behaviour emerges through distinct hierarchical layers. Drawing on a unique dataset of 80,000 tourists visiting the Canary Islands between 2020-2022, we employ the FP-Growth algorithm to conduct a three-level analysis that progressively uncovers increasingly nuanced behavioural patterns. Our results reveal that environmental compensation willingness operates through a hierarchical structure, where broad willingness levels (ranging from non-compensating to more than 20% of total expenditure in destination willing) contain distinct sub-patterns of activity preferences, spending behaviours, and accommodation choices.

Among highly willing compensators, we identify two theoretically distinct profiles: pure ecotourists, who focus primarily on conservation activities and immersive nature experiences, and luxury-seeking environmentally conscious travellers, who prioritize premium eco-lodges, high end eco-services, and private sustainable tours while maintaining strong environmental commitments. Meanwhile, moderate compensators exhibit a cost-conscious approach to sustainability, engaging in structured eco-tours and mid-range nature excursions without fully committing to high-cost environmental options. Low-compensation tourists, despite showing minimal willingness to pay for sustainability initiatives, still participate in affordable or self-guided nature-based experiences, indicating an underlying engagement with natural environments even in the absence of explicit environmental contributions. This granular segmentation transcends traditional clustering approaches by revealing how different aspects of tourist behaviour are interconnected across multiple levels. Notably, it captures nuanced behavioural clusters, such as budget-conscious travellers favouring free or low-cost cultural experiences, and hybrid eco-luxury tourists balancing environmental responsibility with premium service preferences. The study makes three primary contributions: (1) establishing a theoretical framework for understanding the hierarchical nature of tourist environmental behaviour, (2) demonstrating the effectiveness of pattern mining algorithms in tourism research, and (3) providing evidence-based insights for designing graduated environmental initiatives. From a managerial and policy perspective, these findings offer critical insights for developing adaptive sustainable tourism strategies. Rather than adopting a one-size-fits-all approach, our results suggest that environmental policies should be tailored to specific tourist segments, offering graduated engagement strategies that align with different levels of willingness to pay. For instance, while high-compensation tourists may be receptive to premium eco-experiences with direct environmental benefits, moderate compensators might be encouraged to participate through incentives, bundled eco-packages, or tax-based approaches that integrate sustainability into mainstream tourism offerings.

Additionally, our study highlights that even low-compensation travellers, despite their reluctance to pay environmental fees, still demonstrate a behavioural affinity toward nature-based tourism. This suggests that destination managers can introduce subtle sustainability interventions—such as free environmental education within national parks or voluntary offset programs—without imposing financial barriers. These findings provide a data-driven foundation for more targeted marketing, policymaking, and sustainability initiatives, ensuring that destination managers and tourism planners can effectively balance environmental responsibility with economic viability.

Abstract 17

Overtourism: Identifying Less Critical Tourist Segments for Sustainable Destinations

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KEYWORDS: sustainability, overtourism, tourist segmentation, recentred influence functions (RIF).

ABSTRACT: This study investigates the implications of overtourism in the Canary Islands—a destination characterized by a concentrated influx of tourists—and examines its sustainability challenges from both environmental and social perspectives. In recent decades, technological advancements and the proliferation of low-cost airlines have spurred an unprecedented growth in global tourism. As highlighted by Capocchi et al. (2019), this growth occurs in two distinct forms: one that drives tourism expansion even in emerging economies, and another that generates significant negative externalities when demand concentrates in select destinations. In the Canary Islands, overtourism poses a potential threat by contributing to the depletion of finite resources such as water and soil, increasing waste generation and triggering social challenges such as high poverty rates, persistently low wages and housing shortages following the irruption of vacation rentals, problems already warned by Gössling (2002) and Guttentag (2015). The primary objective of this research is to determine which tourist segments are most dispensable for the Canary Islands by analysing two key dimensions: in-destination tourist expenditure and environmental concern—proxied by the willingness to offset the carbon footprint generated during travel. By doing so, the study aims to reveal the trade-offs between economic contributions and the environmental and social costs imposed by different visitor profiles, thereby informing policies to mitigate overtourism. An initial cluster analysis categorizes tourists into five segments: (1) sun-and-beach enthusiasts, (2) sports-oriented tourists, (3) culture-driven travellers with some engagement in sports, (4) health-oriented visitors with additional interests in nature, culture, and sports, and (5) nature centric tourists who also participate in cultural and sporting activities. Although this segmentation is a necessary preliminary step to understand the heterogeneity of tourist profiles, it primarily serves to facilitate the application of a more advanced econometric technique — Recentred Influence Functions (RIF). To approach the sustainability challenge, we employ the RIF methodology. This method allows for the estimation of any unconditional quantile of the distribution as well as other statistics, such as the interquartile range and the Gini coefficient, providing a deeper insight into how the key variables are distributed. Moreover, RIF enables the estimation of the Average Treatment Effect (ATE) by constructing a counterfactual scenario in which only the tourist profile differs among observations. This approach yields valuable insights into the causal effect of tourist profiles on expenditure and environmental commitment, beyond what the initial cluster analysis can offer. The empirical analysis utilizes quarterly data from the Tourism Expenditure Survey conducted by the Instituto Canario de Estadística (ISTAC) for the years 2022 and 2023, encompassing 78,874 observations that represent nearly 27 million tourists (12.8 million in 2022 and 14.1 million in 2023). In line with degrowth theory—which advocates for the deliberate reduction of economic activity to alleviate environmental pressures and promote social equity (Latouche, 2009; Hall, 2009)—this study argues for a strategic realignment of tourism policies. Policy recommendations include the introduction of eco-taxes, the implementation of stringent resource management regulations, and the promotion of carbon-offset initiatives. Additionally, measures to restrict the conversion of residential properties into vacation rentals are essential to safeguard local housing markets and community welfare.

Abstract 18

Concern About Climate Change and Acceptance of Mitigation Policies. Moderating Effect of Age

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KEYWORDS: climate change concern, sustainable tourism, mitigation policy acceptance, age.

ABSTRACT: Climate change poses unprecedented challenges that require effective responses from tourism policy makers as the sector is a significant contributor to global carbon emissions. Despite growing recognition of the need for mitigation policies such as eco-taxes or the promotion of renewable energies, the scientific literature has explored, to a limited extent, the factors that determine travellers' acceptance of these measures. There is a gap in knowledge on the impact of age on the relationship between concern about climate change and willingness to accept such policies. This study addresses this gap by exploring how climate concern drives the acceptance of pro-environmental policies in tourism and by assessing the moderating role of age in this dynamic. To do so, an analysis was carried out based on a survey of 656 Spanish nationals who had visited a tourist destination for at least three days in the last two years. The data, collected between October 2023 and March 2024 using a digital questionnaire, allowed for the construction of two regression models. These models analysed the relationship between concern about climate change and two dependent variables, the acceptance of a tourist eco-tax and the presence of renewable energy infrastructure in the destination, incorporating age as a moderating variable. The results show that concern about climate change has a positive and significant influence on the acceptance of both eco-taxes and renewable energy infrastructures, highlighting the role of climate awareness as a catalyst for sustainable behaviour. In addition, age was identified as moderating the relationship between climate concern and the acceptance of eco-taxes: younger individuals (18-26 years old) show a significantly higher predisposition to accept these measures, while this effect is not evident in older individuals (27-78 years old).

On the other hand, the acceptance of renewable energies seems to be widely supported across the board, without age playing a relevant moderating role. This paper contributes to the scientific debate by addressing a gap in the existing literature on the attitudinal and demographic determinants of climate policy acceptance in the tourism sector. The findings underline the importance of designing differentiated communication strategies that take generational factors into account, especially for policies such as eco-taxes, which generate more polarised reactions among age groups. It also highlights that the presence of renewable energy infrastructures in the tourist destination is widely accepted, making them a keyway to mitigate the environmental impact of tourism in a more immediate way.

The study has limitations that offer opportunities for future research. Thus, factors such as social norms, purchasing power or the use of alternative means of transport could be incorporated as additional variables to enrich the models. Furthermore, the extension of the analysis to international contexts would allow cross-cultural comparisons to be made in order to explore differences in behaviour between travellers from different regions. Finally, the use of a self-administered questionnaire may have introduced a social desirability bias, which could be addressed with mixed methodologies in future research.

Abstract 19

The University as a Catalyst for Sustainable Tourism: The Case of the Creation of the 'Aragon Sustainable Destination Distinction'

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KEYWORDS: sustainable tourism, certification, tourism governance.

ABSTRACT: The Aragon Sustainable Destination Distinction (ASD Distinction) is an initiative that arose from the collaboration between the Sustainable Tourism Cluster of Aragon (TSAC), the School of Business and Public Management (FEGP) of the University of Zaragoza (UNIZAR), the Biosphere Sustainable Certification, the Provincial Council of Huesca and the Government of Aragon. This distinction is part of the growing need to develop a tourism model that is competitive and that guarantees environmental, social and economic sustainability. The Autonomous Community of Aragon stands out for its commitment to sustainable tourism, being recognised as a responsible destination at European and world level. The creation of the ASD Distinction pursues to position Aragon as a benchmark in sustainable and regenerative tourism. The ASD Distinction has two main objectives: on the one hand, to contribute to the development of sustainable and regenerative tourism in Aragon; and on the other hand, to raise awareness among agents in the sector about the viability of a tourism model that respects the principles of sustainability. The research team, composed of five educators and scholars from the FEGP at UNIZAR, has undertaken the development of a specialized methodology grounded in the Environmental, Social, and Governance (ESG) indicators associated with the Biosphere Sustainable Certification. This methodology is designed to evaluate and certify the sustainability of tourism entities. The team is committed to ensuring rigor in the assessment of projects and adherence to the established criteria, thereby contributing to the ongoing professional development of individuals within the field of sustainability.

The ASD Distinction was launched in December 2024 and has so far incorporated eighteen entities in Aragon, with the aim of promoting the region as a Sustainable Destination. To join, entities must have a sustainability label or complete an online process (https://marcadestinoaragon.org/) of self-diagnosis and accreditation. 67 actions have been established in three ESG areas: 25 in environment, 24 in society and culture, and 18 in governance and economy. Each action includes various activities that entities must accredit in order to obtain the Distinction. The key value of this contribution lies in the supervision of the ASD Distinction membership badges by a committee of expert evaluators with experience in the tourism sector. The Aragon Sustainable Destination Distinction constitutes a substantial advancement in the pursuit of sustainability within the tourism sector of the region, effectively integrating academic research with established best practices in sustainability. This initiative reaffirms Aragon's status as a responsible and high-quality tourism destination and fosters innovation and the dissemination of knowledge in the scope of sustainable tourism. The collaborative synergies among diverse stakeholders, coupled with academic support, ensure a commitment to the principles of sustainability and sustainable development.

Abstract 20

Wine Tourism and Local Development: An Evaluation of Benefits and Impacts in Santana Do Livramento, Brazil

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KEYWORDS: wine tourism, resident perception, impacts.

ABSTRACT: Wine tourism has increasingly been recognised as a vital instrument for regional development, particularly within wine-producing regions such as Santana do Livramento in southern Brazil. This city, situated on the Border of Peace adjacent to Uruguay and positioned on the 31st parallel, benefits from distinctive geographical conditions that enhance the quality of its wines. The promotion of wine tourism is actively encouraged through initiatives such as the Pampa Train, which offers excursions to local wineries.

The primary objective of this study is to analyse the perceptions of residents of Santana do Livramento regarding the economic, sociocultural, and environmental benefits and impacts of wine tourism. The research was conducted from March to September 2024, employing a validated survey developed by Xu et al. (2016). This survey assessed respondents' sociodemographic profiles alongside their views on the impacts of wine tourism, utilising a five-point Likert scale. The sample comprised 287 participants. The findings indicated that most respondents were male, predominantly aged between 18 and 29 years, possessed a university education, and resided in urban areas. Their income levels primarily ranged from R$ 4,236.01 to R$ 8,472.00, with most respondents being homeowners and having lived in the region for over six years. In terms of perceived benefits, responses were categorised into personal improvement and community sensitivity. Residents reported a significant enhancement in their quality of life and a transformation of the community into a more desirable place to live. Economically, there was a perceived increase in tourist expenditure linked to wine tourism activities. Socio-culturally, respondents indicated a heightened sense of belonging to the community, while environmental impacts included an increased appreciation for the natural landscape. Furthermore, the study explored how perceived benefits of wine tourism relate to sociodemographic factors using multiple linear regression analysis. It considered six independent variables: age, educational level, home ownership, frequency of winery visits, involvement in wine-related activities, and length of residence in the municipality. The dependent variable was the perception of wine tourism benefits, rated on a scale from 1 to 5. Results indicated that age, frequency of winery visits, and involvement in wine-related activities significantly influenced perceived benefits. Specifically, each percentage increase in age correlated with a 0.187% increase in perceived benefits ($p<0.01$), while a 1% rise in winery visit frequency led to a 0.453% increase ($p<0.01$). Conversely, greater involvement in wine-related activities was linked to a 0.195% decrease in perceived benefits for each percentage increase ($p<0.05$), possibly due to the limited nature of residents' engagement in these activities.

This research contributes to the understanding of the impacts and benefits of wine tourism in Santana do Livramento, providing an analysis of residents' perceptions. The results illustrate that age, frequency of visits to wineries, and involvement in wine-related activities are crucial factors influencing perceptions of wine tourism benefits. Overall, the study enriches the existing literature on wine tourism by highlighting the significance of individual characteristics and behaviours in shaping local perceptions.

Abstract 21

Sipping Emotions: Emotional Responses to Soda Flavors

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KEYWORDS: facial expression analysis, soda flavours, neuromarketing.

ABSTRACT: Understanding consumer reactions to flavours is a critical aspect of product development in the beverage industry. Traditional sensory evaluation relies on self-reported data, yet such assessments may be influenced by subjective biases and cognitive interpretations. This study explores a dual-method approach by combining self-reported feedback with facial expression analysis to examine the emotional responses elicited by different soda flavours/brands in a blind testing experiment. A total of 150 participants were recruited for the study, undergoing a blind tasting of various soda beverages with distinct flavour profiles. Participants were asked to describe their perceived flavours and provide an overall assessment of their sensory-flavour experience. Simultaneously, facial expression recognition software employing a Facial Action Coding System (FACS) was used to capture and analyse real-time emotional reactions immediately after the tasting process. This method enabled an objective measurement of spontaneous, nonverbal affective responses to each beverage-tasting. The findings highlight both convergences and divergences between reported perceptions and observed emotional reactions. In some cases, participants expressed enthusiasm or displeasure explicitly in their self-reports, aligning with corresponding facial expressions indicative of joy, surprise, or disgust. However, discrepancies were also observed—some beverages elicited neutral or positive verbal feedback despite facial cues revealing subtle expressions of discomfort or hesitation. These inconsistencies suggest that cognitive rationalization or social desirability biases may influence self-reported data, whereas facial expression analysis provides a more immediate and subconscious emotional response. From a practical perspective, these insights can inform the formulation and marketing strategies of soda brands. By identifying which flavour profiles evoke the most favourable unconscious reactions, beverage companies can refine their organoleptic properties—such as sweetness, acidity, or carbonation intensity—to enhance consumer appeal. Furthermore, understanding the implicit emotional impact of flavours can guide communication strategies, ensuring that branding and promotional efforts align with genuine consumer experiences. This study contributes to the growing body of research in neuromarketing and sensory analysis by demonstrating the value of integrating self-reported feedback with biometric emotion recognition in flavour evaluation. It underscores the importance of a multimodal approach to consumer research, revealing layers of perception that traditional methodologies may overlook. Future research could explore additional biometric indicators, such as galvanic skin response or heart rate variability, eye tracking, to further deepen the understanding of consumer emotional engagement with beverages. Ultimately, this research provides actionable insights for both academia and industry, offering a nuanced perspective on the interplay between taste perception and emotional response. By leveraging objective emotional data alongside subjective reporting, companies can optimize both their product development and communication strategies to enhance consumer satisfaction and brand loyalty.

Abstract 22

The Power of Packaging: How Design Shapes Consumer Perception and Brand Connection

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KEYWORDS: packaging design, eye-tracking, consumer perception.

ABSTRACT: Packaging design plays a crucial role in consumer perception, influencing both purchasing preferences and the overall consumption experience. Beyond its practical function, packaging serves as a visual communication tool that conveys brand attributes and evokes emotional associations. Design changes can enhance product perception, but they may also face resistance if they alter an established visual identity. This study explores the impact of a packaging redesign in carbonated beverages using eye-tracking techniques and word association tests to understand how consumers perceive and process visual packaging elements. A total of 150 participants were exposed to different packaging versions while their visual fixation patterns and attribute associations were recorded. The study analysed areas of highest attention within each design, identifying elements that captured the first glance, those that held attention the longest, and those that received the highest number of fixations. Participants were then asked to associate descriptive words with each package, evaluating attributes such as modernity, authenticity, attractiveness, and tradition.

The results indicate that certain graphic elements generate significantly greater attention. In modern packaging, visual focus is concentrated on the logo and vibrant colors, whereas in traditional designs, attention is more dispersed across multiple elements, including typography and iconic brand details. Verbal associations reflect that updated packaging is perceived as modern and appealing, while traditional designs maintain a stronger connection with authenticity and the brand's cultural identity. These findings highlight the importance of a communication strategy to accompany rebranding efforts, minimizing perceptual dissonance among consumers. Brands can leverage packaging design not only as an aesthetic resource but also as a strategic tool to reinforce brand attributes and facilitate the transition between designs. Integrating eye-tracking studies into the redesign process can provide valuable insights to ensure visual changes are positively received by the target audience.

In conclusion, this study underscores the influence of packaging design on consumer perception and its potential to strengthen brand identity. Understanding attention patterns and the emotional associations triggered by packaging allows for the development of more effective design strategies, optimizing the connection between the product and its consumers. Future research could explore the combination of eye-tracking with other neuromarketing metrics to gain an even more detailed understanding of the impact of design on purchasing decisions.

Abstract 23

Analysis of Content and Key Factors in the Tweets of the Official Tourism Accounts of Spain and Italy: A Data Science Approach

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KEYWORDS: consumer behaviour, tourism communication, engagement, content strategy, twitter.

ABSTRACT: Social media has transformed how tourists' access, use, and trust tourism information, while also redefining the process of destination image creation (Polyzos et al., 2023). Among these platforms, Twitter (X) stands out for its ability to structure and mediate various social interactions among users, enabling Destination Management Organizations (DMOs) to actively collaborate in promoting and shaping the perception of destinations (Ahuja, 2020; Burgess & Baym, 2022). DMOs use this platform to disseminate information about attractions, special events, and enhance their brand visibility, leveraging a complex network of interconnected accounts (Bokunewicz & Shulman, 2017). This collaborative process involves multiple stakeholders contributing diverse and enriching perspectives, thereby constructing a more participatory and multidimensional image of tourist destinations (Garay & Morales Pérez, 2017). Various studies have highlighted the crucial role of social media in the communication and promotion of tourist destinations. For instance, Martínez García de Leaniz et al. (2024) emphasize the importance of using these platforms to communicate sustainability initiatives and generate positive emotions, fostering interaction and content co-creation by tourists. Similarly, Nautiyal et al. (2022) highlight the differences in destination perception and promotion based on the analysis of hashtags used by residents and tourists. Meanwhile, Chandrasekaran et al. (2023) demonstrate that interactive posts on Facebook generate higher engagement, whereas on Twitter, informative posts are more effective. These findings have enriched the literature on digital communication strategies, providing specific recommendations for DMOs to optimize their content across different platforms (Chandrasekaran et al., 2023). Additionally, Garay & Morales Pérez (2017) underscore the need to reconsider the strategic role of social media in destination image creation. The present study aims to analyse how tweets published by the official tourism accounts of Spain and Italy generate varying levels of engagement (likes, retweets, and comments) by evaluating factors such as the topics covered, the type of content (informative, dialogic, behaviour-based), the use of hashtags, and message length. Advanced data science and text mining techniques are employed. First, the BERTopic model is used for the automatic classification of topics in the tweets, validating the optimal number of topics through metrics such as silhouette score and topic coherence. Second, a text mining-based analysis is conducted to classify communication types (informative, dialogic, and behaviour-based), assessing their impact on engagement. Subsequently, CHAID (Chi-squared Automatic Interaction Detection) models are applied, enabling the identification of practical rules and non-linear relationships between variables. The model is further complemented by a regression analysis to validate the results and ensure their statistical robustness. This study contributes to the existing literature by addressing various gaps, as it integrates data science and big data techniques (Egger, 2022; Mariani et al., 2018; Mariani & Baggio, 2022) and conducts a cross-country comparison, an aspect that has been underexplored in the literature (Galiano-Coronil et al., 2023). Additionally, it provides valuable insights for DMOs to optimize their communication strategies and tailor their content to the cultural specificities of each country.

Abstract 24

Sustainable Business Model for Smart City Innovation Ecosystem: Developing the Smart Tourism Model Canvas (STMC)

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KEYWORDS: smart cities, tourism competitiveness, innovation ecosystem.

ABSTRACT: The rapid urbanization and technological advancements of the 21st century have positioned smart cities as hubs of innovation and sustainability (Marchesani et al., 2023; Hui et al., 2023). Over the last twenty years, researchers have focused more on innovation inside tourism enterprises examining products, services, processes and business model innovations (Madanaguli et al., 2021). The above concepts are complemented by collaboration and cooperation within a network that also receives external support from policy makers and supporting organisations, forming an innovation ecosystem (Madanaguli et al., 2021; Picaud-Bello et al., 2022) which provide a unique opportunity to access new ideas, resources and knowledge for the development of innovation projects. Tourism, a key economic driver, must adapt to these ecosystems through business models that prioritize sustainability, efficiency, and inclusivity (Buhalis et al., 2023). The aim of this study is to investigate the impact of the smart city innovation ecosystem on tourism competitiveness, using innovation ecosystem theory to address the knowledge gap related to systemic innovation and successful tourism development. We posed two research questions: (RQ1) how does the smart city innovation ecosystem influence tourism competitiveness and success? , (RQ2) how can the Smart Tourism Model Canvas (STMC) support the development of sustainable and inclusive tourism strategies, combining technology and collaborative approach with the smart city innovation ecosystem?

In order to address this aim, a multiple case study methodology (Yin, 2014; Eisenhardt, 1989) is employed through the exploration of three global leaders: Barcellona, Singapore, and New York City, chosen for their distinctive approaches to integrating tourism with smart city principles. By analysing these cases, critical elements of success emerge, including advanced technological integration, community-centric policies, and sustainable practices. This research examines how cities like Barcelona, Singapore, and New York City manage tourism through smart city innovation and digital technologies. Barcelona uses big data for real-time tourist flow monitoring, sustainable mobility, and energy-efficient accommodations. Singapore leverages IoT, AI, and big data to personalize visitor experiences, harmonizing urban and natural elements. New York City manages high tourist volumes via digital platforms, promoting neighbourhood-level tourism and incorporating green initiatives. This research introduces the Smart Tourism Model Canvas (STMC), a framework composed by five key dimensions, that identifies key success factors and offers actionable guidelines for managing tourism and accommodation in smart city innovation ecosystem: (1) technology integration: utilizing IoT, AI, and big data to enhance efficiency and personalize tourist experiences; (2) sustainability focus: promoting eco-friendly practices, such as energy-efficient accommodations and green transportation; (3) stakeholder collaboration: partnerships among public authorities, private entities, and local communities to foster innovation; (4) policy alignment: supporting regulations that incentivize sustainable tourism; and (5) cultural and social inclusivity: preserving cultural heritage while ensuring benefits for local communities. The STMC aims to create resilient and inclusive urban tourism ecosystems, aligning tourism management with smart city goals. This model addresses challenges like overtourism and environmental degradation, positioning tourism as a catalyst for economic vitality, environmental stewardship, and social equity. Technological and digital innovation is fundamental for sustainable and efficient tourism.

Abstract 25

Paying for Paradise? The Impact of Motivations on Tourist Tax Perception and Spending in the Canary Islands

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KEYWORDS: tourists' motivations, artificial neural networks, fuzzy logic, expenditure, tax.

ABSTRACT: To manage tourist destinations correctly, it is essential to understand the motivations of visitors, their sociodemographic profile, and how these factors influence travel motivations. This understanding can lead to better destination management through a more tailored approach that meets the diverse needs of tourists and increases profitability for the tourism sector. This work aims to determine how the sociodemographic characteristics of tourists visiting the Canary Islands (gender, age, income, education) influence their travel motivations, divided into three groups: the 3S (sun-sea-sand), culture-nature, or nightlife, using indicators to analyse these latent variables. A second-order equation model estimates the impact of these motivations on two key variables: expenditure and tourist tax.

Many European cities have implemented a tourist tax (city tax or visitor levy), charged per night in accommodations such as hotels or apartments. This revenue funds local tourism, infrastructure, and culture. Amsterdam has the highest tourist tax in Europe at 12.5% of the room price. Others like Barcelona, Florence, or Lisbon apply a fixed fee from €0.60 to €8 per night. In the Canary Islands, the regional government is studying the effects of introducing such a tax. However, the municipality of Mogán introduced a €0.15 per night fee in early 2024, sparking controversy. The study uses data from the 2024 Tourist Expenditure Survey (ISTAC, 2024), which includes tourist spending, sociodemographic data, trip characteristics, and motivations. Four new questions were added in 2024 to assess opinions on the tourist tax. Two methods are applied and compared: artificial neural networks (ANNs) and fuzzy logic.

These methods allow isolation of the effects of each input variable (sociodemographics) on the first-order outputs (main motivations: 3S, culture-nature, nightlife), and analyse their direct effects on expenditure and the tourist tax. Various ANN configurations are evaluated, and the model with the lowest error (between estimated and real outputs) is selected. This enables estimation of tourist preferences based on a "composite sketch" or profile that researchers can customise. For fuzzy logic, motivations are assessed using a fuzzy-hybrid Technique for Order of Preference by Similarity to the Ideal Solution (TOPSIS), a widely used multi-criteria decision analysis (MCDA) method. The same structure from the ANN approach is applied, and results are compared. This allows analysis of the robustness of results—one of the most practical contributions of the study. These methods can be useful for both public (e.g. tourism agencies) and private (e.g. hotels, restaurants) actors to optimise their offerings and adapt to target tourist profiles, increasing profitability in the private sector. While ANNs have been applied in areas such as holiday rentals and cultural tourism, this research focuses specifically on tourists in the Canary Islands. The comparative use of ANNs and fuzzy logic fills a significant gap in tourism studies. In conclusion, this research offers a valuable tool for improving tourism management in the Canary Islands. By unlocking tourist motivations through powerful analytical techniques, we can ensure a more sustainable and prosperous future for the archipelago.

Abstract 26

Potential Climate Change Impacts on Tourism Demand in the Mediterranean

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KEYWORDS: climate change, beach tourism, Mediterranean demand, heatwaves.

ABSTRACT: Climate change will alter the conditions for summer tourism due to more frequent, longer lasting, and more intense heat waves (IPCC, 2023). For Europe, a northward shift of suitability for tourism has been projected for the upcoming decades, leading to the assumption that the Mediterranean would experience a decline in tourist demand (Steiger, Demiroglu, Pons, & Salim, 2023). As Europe accounts for 51% of international tourist arrivals and 47% of overnight stays in Europe are in coastal municipalities (Eurostat, 2022), a decline in tourist demand would impact regional economies of tourism-dependent regions.

In climate change impact studies on summer tourism, three main methods have been used: tourism indices (e.g. TCI, HCI; Amelung & Viner, 2006; Scott, Rutty, Amelung, & Tang, 2016) to assess changing climatic suitability; revealed preference studies to analyse the impact of past climate/weather on tourism demand (e.g. Köberl, Prettenthaler, & Bird, 2016); and climate comfort studies to identify thresholds for acceptable/unacceptable weather conditions (e.g. Rutty & Scott, 2010). However, existing research lacks an assessment of potential demand losses due to future climate conditions. To fill this gap, we conducted a choice experiment to reveal tourists' preferences for temperatures for the main summer holiday in the Mediterranean. We modelled the share of tourists who would no longer choose the Mediterranean for a summer holiday under changed climate conditions. The online choice experiment was carried out via the platform Clickworker at the end of July 2024. After data cleaning, a sample of 292 fully completed online questionnaires was included in the analysis. The sample consists of German-speaking residents of Switzerland, Austria, or Germany who visited the Mediterranean for a beach holiday in the last five years. Besides the choice experiment, the survey included questions on travel behaviour, climate change perception, and demographics. In the experiment, subjects chose their preferred beach holiday destination among two options varying in air temperature, water temperature, and travel time. Each of the 13 choices included a "none of these" option to capture preferences outside the shown destinations. We used an additive random utility model to derive part-worth utilities from the conjoint data. A utility value for "None" was derived for each respondent, representing their acceptance threshold. If the sum of part-worth utilities for a destination is lower than the "None" utility, the respondent would reject that destination. This allows us to estimate potential demand shifts under various temperature scenarios. Results show air temperature is by far the most important factor in destination choice, with an importance value of 52.8. Water temperature and travel time scored 26.3 and 20.9, respectively. Air temperatures between 20°C and 34.9°C, and water temperatures between 20°C and 28.9°C, had positive utilities. A typical current scenario (e.g. Venice in July: 27.7°C air, 25.7°C water) was accepted by all respondents. Under conditions like past heat waves, 5% would no longer choose the Mediterranean. At 35–39.9°C air, 30% would opt out; with 29–31.9°C water, this rises to 35%. For air temperatures above 40°C, up to 75% would avoid the region.

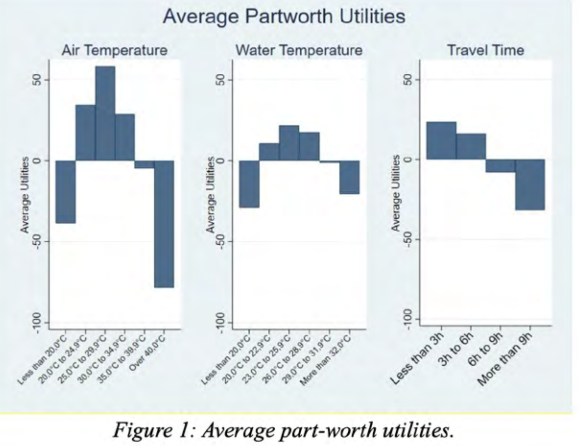

Figure 1: Average part-worth utilities.

Abstract 27

Musical Tourism: Music Events in the Tourism Industry

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KEYWORDS: musical tourism, tourist satisfaction, destination perception.

ABSTRACT: Musical tourism has recently become a key driver for the tourism industry, boosting the local economy and enriching the cultural offerings of destinations. Spain, in particular, is considered by some as "the epicentre of musical tourism" (EFE, 2024a), which is not surprising given that, according to the Ministry of Culture and Sport's Cultural Habits Survey (2022), listening to music is the most common cultural activity in the country, with a reported participation rate of 85.7%. Musical events, such as festivals and concerts, not only attract tourists but also shape the overall travel experience (Nicholson & Pearce, 2001; Matheson, 2008; Chen et al., 2019). However, most studies have focused on their economic impact (Packer & Ballantyne, 2011; Getz & Page, 2016) rather than on tourists' perceptions. This study aims to analyse tourists' experiences at musical events, their level of satisfaction, and how these factors influence their perception of the destination. To achieve this, a structured questionnaire was designed following previous studies in the literature (Packer & Ballantyne, 2011; Ballantyne et al., 2014; Lee, 2014). Data were collected from 112 participants regarding their travel habits, attendance at musical events, and satisfaction levels. In a pilot analysis, a multiple linear regression model was applied to examine the different dimensions of the experience and their effect on satisfaction with both the event and the destination. The results confirm the relevance of musical tourism in travellers' decision-making. More than half of the respondents expressed positive views about cultural experiences during their trips. Musical events were particularly attractive to Generation Z and individuals with university education, who seek authentic and enriching experiences. It was observed that 72.2% of participants attend at least one musical event per year in their city, while 68% travel to attend concerts or festivals at least once every two years. Musical tourists often travel in groups with friends and stay for up to four days. This study also estimates the model shown in Figure 1, which examines the relevance of the environmental and musical dimensions of events compared to the social and separation dimensions. A positive relationship was also found between satisfaction with the event and satisfaction with the destination.

These findings highlight the importance of integrating musical events into destination tourism strategies. It is recommended to promote cultural routes that include festivals and concerts and to schedule these events during low seasons to mitigate tourism seasonality. Improving the quality of the musical and environmental experience is essential, focusing on infrastructure, lighting, and cultural connection with the destination. Lastly, implementing economic accessibility strategies is crucial, especially in isolated regions such as the Canary Islands. To achieve this, collaborations with hotels, restaurants, and transportation companies could be established, benefiting all stakeholders involved.

Abstract 28

Analysis of factors affecting satisfaction level of visitors with road transport services in Khorezm region, Uzbekistan

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KEYWORDS: Tourist satisfaction, transport services.

ABSTRACT: The tourist sector has emerged as a key area for economic growth and change, which has led to a sharp rise in arrivals. The tourism market in Uzbekistan has benefited from ongoing reforms in the country's tourism sector, such as simplifying of visa and other registration processes. The sharp increase in the number of independent visitors to Uzbekistan is a direct result of these reforms. One important component of the Khorezm region's economy is the tourism industry, namely in Khiva. The Khorezm region has a lot of potential to draw tourists from different countries, but there are certain issues and difficulties that need to be resolved instantly. The absence of incentives to raise the standard of tourist transportation services is the most pressing problem.

The research attempts to identify the satisfaction levels of domestic and foreign tourists with the road transport services in the region, as well as the key features of transport services that are important to them. Therefore, the study applies the "Importance-Satisfaction Analysis" method to identify factors influencing tourist satisfaction in the region of Khorezm, Uzbekistan. The Importance-Satisfaction (I-S) Analysis Matrix is a valuable tool for evaluating tourist transport services by identifying gaps between the perceived importance of specific service attributes and the level of satisfaction tourists' experience. This approach helps prioritize improvements and allocate resources effectively.

The first step in the application of importance-satisfaction analysis involves the creation of a sufficiently complete list of important features appropriate to the situation under consideration. In order to determine the characteristics of transportation services for the analysis, the available literature on transportation and tourism was studied. In most of these studies, the main service aspects characterizing transport services are service frequency, reliability of service, information provision, cost/price value, employee behaviour, means of transport (physical condition of vehicles and infrastructure), convenience, cleanliness, safety, terminals and stops.

A questionnaire containing 13 questions was designed in order to assess the satisfaction of level of visitors with road transport services in the region. The survey period covered a period of 3 months from April to June 2022. It was conducted mainly among foreign and local tourists visiting transport infrastructure and tourist attractions located in the Khorezm region. In addition, in order to have enough respondents, the questionnaire was also distributed to tourists online. The number of eligible respondents for the study was 327.

Findings indicate that visitors choose convenience of payment, friendliness of drivers, speed of service, cleanliness and condition of transport vehicles as important factors. It is a clear message for the stakeholders (government bodies, transport companies, local authorities, and tourism sector stakeholders) that there are specific aspects of transport services in the Khorezm region that need attention in order to improve tourist satisfaction.

Abstract 29

Exploring Patterns in Hotel Cancellations: A Configurational Analysis Using FSQCA

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KEYWORDS: hotel cancellations, FsQCA, booking behaviour, profitability.

ABSTRACT: This study focuses on analysing the underlying dynamics and determining factors of hotel reservation cancellations, addressing a critical issue for the tourism industry that directly affects operational planning, profitability, and customer satisfaction. A high cancellation rate can generate hidden costs, such as the need for overbooking or last-minute adjustments, impacting both the customer experience and the hotel's reputation.

This work adopts a configurational approach to provide a comprehensive view of this phenomenon, using Fuzzy-Set Qualitative Comparative Analysis (FsQCA), a methodological tool particularly suited for phenomena characterized by complexity and multiple causality. The use of FsQCA makes it possible to identify combinations of conditions that lead to high or low levels of cancellations, overcoming the limitations of traditional approaches that typically analyse isolated specific relationships. Based on a database of 96,000 hotel booking records, key variables such as hotel category, booking horizon, length of stay, customer nationality, and booking price are analysed. These factors have been previously identified in the literature as influential elements in booking behaviour, but their combined and configurational effects have been scarcely explored.

The FsQCA approach allows for the identification of multiple equivalent causal configurations that explain the likelihood of cancellation, recognizing the complex and non-linear nature of consumer behaviour. This reveals not only the individual effects of variables but also their specific interactions and combinations that lead to different outcomes, thus contributing to a deeper understanding of the phenomenon.

At a theoretical level, this work contributes to the understanding of cancellation dynamics by integrating consumer behaviour concepts with hotel management variables. From a methodological perspective, the application of FsQCA provides an innovative approach by considering the existence of multiple pathways leading to the same outcome, as well as the equifinality in customer decisions.

The results show that variables such as price and booking horizon do not act in isolation but rather interact with other factors, revealing specific configurations that characterize customers with a higher propensity to cancel. Likewise, configurations leading to low cancellation rates are identified, offering valuable insights for reservation management and customer loyalty strategies.

The novelty of this study lies in the application of a configurational analysis that combines methodological rigor with practical applicability. The findings offer relevant implications for hotel management, such as designing more adaptive pricing and reservation policies, strategic segmentation based on cancellation risk configurations, and implementing more effective mitigation strategies. Overall, this study provides hotel managers with data-driven tools to optimize profitability, reduce operational uncertainty, and enhance customer satisfaction, while also establishing a replicable methodological framework for future research in the hospitality sector.

Abstract 30

The Mediating Role of Attachment Between Authenticity and Word of Mouth. an Evidence from Film Tourism

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KEYWORDS: film tourism, authenticity, destination attachment, WOM.

ABSTRACT: Recently, people's motivations have shifted, and they no longer seek to satisfy their demands through standardized tourism products. Instead, they pursue new experiences that provide them with higher levels of satisfaction. In this context, film tourism emerges as an alternative to this new reality. If there is one key characteristic to highlight about film tourism, it is that, in addition to experiencing rapid growth in recent years, this type of tourism also creates strong emotional bonds with viewers. This phenomenon is attributed to the prolonged and repetitive exposure of individuals to films or series, representing a clear opportunity for the tourism sector.

The study employed a methodology based on partial least squares structural equation modelling (PLS-SEM), using a quantitative approach with an online questionnaire conducted between June 2020 and December 2022. A total of 768 questionnaires were collected, of which 590 were deemed valid after excluding 178 responses that did not meet the necessary response standards. The variables analysed in this study include authenticity (both existential and constructive), destination attachment, and Word of Mouth (hereafter, WOM).

The findings reveal a positive influence of constructive authenticity on both destination attachment and WOM. Furthermore, the study demonstrates the influence of existential authenticity on destination attachment but not on WOM, highlighting the mediating role of destination attachment between existential authenticity and WOM. This implies that the perception of existential authenticity alone is not sufficient to generate active recommendations of the destination; rather, its impact is channelled through the emotional bond that tourists develop with the location.

In contrast, constructive authenticity exhibits a more direct relationship with WOM, indicating that subjective interpretations and individual narratives of the destination play a more immediate role in influencing the intention to share the experience. These differences have key implications for the management of film tourism destinations, emphasizing the need to strengthen emotional connections with visitors through strategies that enhance experiential authenticity and personal identification with the place. This suggests that strategies aimed at reinforcing destination attachment will be crucial in maximizing the impact of existential authenticity, while constructive authenticity can be leveraged more directly to encourage recommendations and repeat visits.

Abstract 31

Implementing Circular Economy Principles in Tourism: A Regional-Level Structured Observational Study of Mount Emei, China

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KEYWORDS: circular economy, sustainable tourism, structured observation, regional management, waste reduction, environmental governance.

ABSTRACT: As sustainable tourism development becomes a critical global priority, the integration of circular economy (CE) principles at the regional level has emerged as a key strategy to enhance environmental resilience, resource efficiency, and long-term sustainability in tourism destinations. This study focuses exclusively on the regional-level implementation of CE principles in Mount Emei, China, employing a structured observational methodology to assess the effectiveness of resource management systems, public infrastructure, and environmental governance mechanisms. The research utilizes a standardized observation framework to systematically analyse key components of Mount Emei's regional circular economy. The observation focuses on waste management systems, eco-friendly transportation networks, water treatment facilities, and environmental monitoring practices. The study documents CE practices such as the 100% wastewater treatment coverage achieved through advanced sewage facilities, the implementation of eco-friendly public transportation systems that significantly reduce carbon emissions, and the establishment of real-time digital environmental monitoring platforms to track pollution levels and ecological health.

Findings reveal that while Mount Emei has made notable progress in adopting CE practices—such as strict vehicle emission controls, the transition from coal to clean energy sources, and the optimization of tourism routes to minimize environmental footprints—several challenges persist. These include gaps in waste segregation, particularly concerning plastic waste from disposable raincoats, and limited recycling infrastructure in high-traffic tourist areas. Moreover, despite technological advancements, environmental monitoring systems exhibit blind spots, especially in remote ecological zones, which hinder comprehensive ecosystem management.

This study contributes to the field of sustainable tourism management by demonstrating how structured observation can yield objective, quantifiable insights into the operational dynamics of CE at the regional level. It emphasizes the need for integrated regional governance frameworks that enhance coordination among government bodies, tourism operators, and local communities. The research also underscores the importance of investment in green infrastructure, policy enforcement, and continuous environmental monitoring to optimize CE outcomes. The findings offer empirical insights into the complexities of implementing CE in a heritage tourism context, with implications for policymakers, environmental planners, and tourism managers seeking to enhance sustainability transitions in protected areas.

Abstract 32

Solving The Inefficiencies of Subsidies for Residents in Air Transport Markets with Blind Tickets

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KEYWORDS: blind tickets, air transport subsidies, residents.

ABSTRACT: Subsidies for passengers living in islands or remote regions are quite common in European air transport markets. The objective of these subsidies is to help cover passengers' travel costs when air transport is a crucial mode of ensuring territorial connectivity. However, several papers in the literature highlights their inefficiencies, since they may imply an increase in air fares and non-residents' exclusion. This research suggests using blind tickets to solve such inefficiencies. Blind tickets, opaque products or blind booking consist of surprise flight tickets on which customers purchase tickets without knowing the destination they are flying to. The real destination is revealed immediately after purchase or even two or three days before the journey. Because of the uncertainty, tickets are offered with a certain discount. Nowadays, different airlines and intermediaries offer these products, and they may include only flight tickets or organized trips. See for instance, Eurowings, Waynabox, Drumwit or Flykube. Previous research on blind tickets suggests that they are an optimal pricing strategy for airlines, since they imply flights with no empty seats, increasing airlines' profits by up to 25 per cent. With more than 87% of positive reviews posted by consumers, results suggest that it is also an optimal pricing strategy for customers (Alonso and Socorro, 2025). Moreover, policymakers, specially of low-demanded destinations may be also interested in implemented this pricing strategy since it supposes a new source of demand for these destinations (Alonso and Socorro, 2024).

This paper presents an economic model to assess the effectiveness of selling blind tickets in markets where resident passengers receive subsidies. Specifically, we analyse two distinct airline routes serving both resident and non-resident travellers. We analyse the social implications of introducing a subsidy only for residents. We show that such a subsidy may derive into different inefficiencies that can be solved introducing blind tickets creating two different markets. The main contribution of this paper is that, to our knowledge, it is the first to provide an alternative pricing strategy that may coexist with such a resident subsidy policy, mitigating its inefficiencies, enhancing social welfare and without requiring additional public funds for its implementation. Moreover, results suggest that introducing opaque products is a socially optimal strategy in markets with subsidies for residents. They allow the airline to discriminate among residents and non-residents, creating two different markets and increasing revenues. Moreover, we show that resident passengers may be better off because of additional discounts. Additionally, non-resident travellers, that were excluded from the transparent market, are now able to fly through blind tickets in the opaque market. The reintroduction of non-residents implies additional tourism demand for destinations what may be translated into an increase of tourism expenditure in those destinations.

Abstract 33

Evaluating Airline Service Quality Using Sentiment Analysis with Machine Learning and Large Language Model (LLM)

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KEYWORDS: airline review, rating, machine learning, online reputation, sentiment classification, large language model.

ABSTRACT: Understanding passenger perceptions of airline service quality requires analysing online star ratings and reviews. Passengers often share their ratings and feedback on the services they used, providing marketing managers with a valuable opportunity to collect market intelligence through user-generated content (UGC). However, the large amount of unstructured data accessible on the internet can complicate effective analysis as it contains mixed emotions and experiences, covering different aspects of service quality before, during, and after flight, such as check-in & boarding, in-flight experience, seat comfort, cleanliness, crew´s courtesy, baggage handling, etc. Techniques in Artificial Intelligence (AI) and machine learning have been developed to analyse, create forecasts, and offer practical insights to help airlines improve their services, which is essential in shaping their online reputation and image. Online reputation has become crucial in a company´s strategy and market competitiveness, especially given customers' increasing tendency to navigate online before making any purchase decisions. Natural Language Processing (NLP), a branch of AI, serves as a connection between human language and computer science, and it significantly influencing digital marketing and retail by helping airlines to improve their decision making by revealing their customer´s expectation, it enables the extraction of valuable insights from large volumes of textual data to support strategic revenue planning, delay prediction, and online reputation management. These rapid developments are transforming numerous sectors, ranging from NLP to decision-making support, ultimately enhancing business strategic processes in air transport management. Sentiment analysis, also known as opinion mining, is the task of identifying attitudes and sentiments in unstructured textual data and categorizing them into positive, negative, or neutral sentiments. SA is typically divided into three primary categories: machine learning methods (such as decision trees, Naïve Bayes, K-nearest neighbors, support vector machines, and others), deep learning approaches (including RNNs, LSTMs, BERT, etc.), and ensemble learning strategies, which integrate different models to improve overall performance. Alternatively, sentiment analysis methods have also been classified into four unique categories: traditional machine learning (e.g., SVM, Naïve Bayes, KNN, RL), deep learning architectures (like RNN, CNN, LSTM, and gradient Boosting Machines), large language models (including dialogue LLMs, BERT, and GPT), and pre-trained models.

Large Language Models (LLMs), like GPT-3.5, were released in March 2022. These models are pre-trained on a huge amount of textual data and have shown outstanding performance across diverse NLP tasks, including language translation, text summarization, text classification, and question answering. Whereas OpenAI's ChatGPT and GPT-4 are not freely accessible to public, the open-source community has been actively developing high-performing alternatives like LLaMA, Qwen, Mistral, Claude-2, Vicuna, among others, which offer important capabilities for diverse applications.
This study aims to explore and test different NLP models to analyse passenger reviews and ratings. The approaches compared between traditional methods like Term Frequency and Term Frequency-Inverse Document Frequency (TF-IDF), which are employed to generate feature vectors in machine learning to develop a classifier, as well as using large language models (LLMs) to directly classify reviews. These findings offer actionable recommendations for airlines seeking to improve service quality and strengthen their competitive position in the market.

Abstract 34

Tourist Security in Fernando De Noronha, Brazil: An Analysis of the Technical Dimension of Urban and Tourist Infrastructure

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KEYWORDS: sustainable tourism, tourist safety, visitor management, conservation.

ABSTRACT: The Archipelago of Fernando de Noronha (Brazil), comprising 21 islands, islets, and rocks, features a principal island bearing the same name. In the 20th century, it served as a political prison and a base for American soldiers during World War II. Today, it is a UNESCO Natural World Heritage Site since 2001 and a prominent tourist destination. In 2024, the Fernando de Noronha Marine National Park recorded a historic high of 131,503 visitors, despite legal restrictions on visitor numbers. Given this increase, systematic tourism planning that respects socio-environmental sustainability is urgently needed. In September 2024, researchers from the Federal University of Rio Grande do Norte (UFRN) conducted an Inventory of Tourist Offerings as a first step in planning, focusing on Tourist Safety. The study evaluated both urban and tourism infrastructure, guided by Brazil's Safe Tourism Programme and Responsible Tourism guidelines from the Ministry of Tourism.

The research identified several Tourist Safety initiatives tied to the island's infrastructure. The Chico Mendes Institute for Biodiversity Conservation (ICMBio), in partnership with Econoronha—the Marine Park's concessionaire—plays a central role in managing and conserving 70% of the main island. Key safety initiatives include three Information and Control Posts (PICs): Sueste, Sancho-Golfinho, and Leão. These facilities offer restrooms, snack bars, and amphibious chairs for people with reduced mobility. Access to trails requires advance booking and is supervised by environmental monitors. Each PIC is equipped with first aid kits and automated external defibrillators. Access to Baía dos Porcos is tide-dependent, and helmets are required for visitor safety. Bilingual signage warns tourists of risks such as "steep slopes," "rockfalls," "strong currents," "presence of sharks," "trees with caustic latex," and others. Ignoring these warnings may result in fines. Nautical tour companies are required to provide life jackets for aquatic activities. The island also benefits from state-run emergency and safety services, including Civil Defence, the Fire Brigade, Environmental Police, and the Mobile Emergency Care Service (SAMU). These efforts aim to protect the lives of visitors, residents, and service providers.

The study underscores the role of Tourist Safety in the sustainable development of Fernando de Noronha. Practices like the PICs and regulated access to sensitive areas reflect a commitment to both visitor safety and environmental conservation. Continued support for these initiatives is vital to balance tourist demand with the protection of the island's fragile ecosystem and the well-being of the local population.

Abstract 35

Transforming Crisis into a Catalyst for Sustainable Development: Insights from Health Crisis Management at Daming Palace

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KEYWORDS: health crisis management, cultural tourism, COVID-19.

ABSTRACT: The COVID-19 pandemic has profoundly disrupted the global tourism landscape, posing critical challenges for cultural tourism destinations (CTDs) that depend on visitor mobility. This study examines the health crisis management strategies implemented at Daming Palace National Heritage Park in China, with the objective of elucidating how cultural sites can adapt to such disruptions while preserving cultural authenticity and ensuring economic resilience, thereby advancing sustainable tourism development.

Anchored in the theoretical frameworks of sustainable tourism development and crisis management (Cheer, Lapointe, Mostafanezhad & Jamal, 2021), this research interrogates the dual imperative faced by CTDs: safeguarding public health while sustaining tourism flows. The COVID-19 pandemic exposed systemic vulnerabilities in existing crisis response mechanisms, underscoring the necessity for adaptive management strategies that not only address immediate health threats but also reinforce long-term sustainability. Effective crisis management functions as a pivotal mechanism for enhancing the resilience of tourism destinations across economic, social, and cultural dimensions.

Employing a quantitative research design, this study surveyed 508 tourists to evaluate their expectations and actual perceptions of health crisis management measures implemented at Daming Palace, both prior to and following their visits. The assessment focused on key variables including the clarity and accessibility of health-related information, the efficacy of preventive measures, the availability of multilingual communication, crowd management, and the responsiveness of emergency systems.

The analysis revealed a discernible disparity between tourists' expectations (median score of 4, indicating "important") and their post-visit perceptions (median score of 5, indicating "very important"). Statistical evaluation using the Wilcoxon signed-rank test confirmed that these differences were statistically significant across all measured dimensions ($p<0.05$). This divergence highlights the critical role of transparent communication and the visibility of health safety measures in fostering tourist confidence, which is integral to the sustainable management of tourism destinations.

Furthermore, the study contextualizes the influence of "COVID-19 fatigue" on tourist expectations, wherein prolonged exposure to pandemic-related restrictions may have shaped anticipations of more relaxed health protocols. Contrary to these expectations, the stringent health measures adopted by Daming Palace not only surpassed tourist anticipations but also positively influenced their overall visitor experience. These findings suggest that proactive and clear communication regarding health measures prior to travel can significantly enhance tourist acceptance and satisfaction, thereby contributing to the long-term appeal and sustainability of the destination. The empirical evidence from this study substantiates the effectiveness of Daming Palace's health crisis management strategies, with widespread recognition from tourists regarding their efficacy. This underscores the importance of strategic risk communication, the flexibility of health protocols, and the integration of visitor feedback into destination management practices to foster sustainable development.

In conclusion, the case of Daming Palace illustrates that robust health crisis management extends beyond immediate risk mitigation. It serves as a foundational element for building trust, enhancing visitor satisfaction, and promoting the long-term sustainability of tourism. These insights offer valuable implications for policymakers and tourism stakeholders committed to developing resilient, adaptive, and culturally sustainable tourism practices in the face of future global health crises.

Abstract 36

The Impact of CRM on Customer Loyalty in Canary Islands Airlines: A Strategic Analysis of Relationship Marketing

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KEYWORDS: customer relationship management, airlines.

ABSTRACT: The development of information and communication technologies has revolutionised the way in which organisations interact with their customers, mainly through digital platforms. In the tourism sector, specifically in the airline industry, this transformation has enabled companies to optimise their business relationships and reach new markets. In this context, Customer Relationship Management (CRM) emerges as an essential tool for achieving customer loyalty, allowing airlines to enhance user experience and maximise customer retention and value.

With a market that recorded almost 53 million passengers in 2024, the main objective of this study is to identify the relationship marketing efforts and CRM tools adopted by airlines in the Canary Islands to retain customers. The methodology used consisted of a content analysis of the websites of the 66 airlines operating in the Canary Islands, categorising the tools identified into three main groups: context (6 items) (e.g. country of origin; year founded.), interactivity and communication (10 items) (e.g. the website displays the airline's email; the airline has social media; the website has a chatbot), and content (33 items) (e.g. the website has a complaints and claims section; ticket purchase is available on the website; the company offers loyalty cards; the website has sustainability reports). The findings reveal that, although most airlines have an online presence, fewer than half fully implement the identified tools for customer loyalty, indicating limited development in customer-business relationships. The predominant use of CRM is operational and analytical, focusing on commercial aspects such as ticket sales, online check-in, and complimentary services. In contrast, collaborative practices—such as interaction based on user opinions and comments—are less frequent. This deficiency results in a suboptimal relational experience for customers. The study shows that low-cost airlines manifest greater interest in using social networks and mobile applications, given their focus on a young audience and their need to differentiate themselves. These companies have understood that digital platforms are an important channel for interacting with users, promoting offers and generating engagement. However, their use does not always translate into efficient customer service. On the other hand, traditional airlines excel at providing in-flight services, such as more elaborate meals and personalised attention, and are committed to differentiating themselves through service quality. However, both airlines have shortcomings in integrating loyalty programmes and communicating sustainability, which customers increasingly value. The lack of clear strategies in these areas limits airlines' ability to build long-term relationships with passengers and respond to new market demands. Based on the results, the study suggests investing in interactive tools such as blogs, AI-powered virtual assistants, and advanced social media monitoring systems to strengthen CRM management. It also emphasises enhancing loyalty programs by personalising interactions and offering attractive benefits. Furthermore, it recommends including sustainability reports to attract environmentally conscious customers and differentiate them from competitors.

Abstract 37

Travel Influencer: A Study of Their Role as an Advertising Tool on Youtube

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KEYWORDS: tourism marketing, digital advertising, travel influencers, youtube.

ABSTRACT: Tourism plays a crucial role in the global economy, generating employment, fostering cultural interconnection, and serving as a primary source of economic growth for many countries. This sector encompasses a variety of services, including accommodation, transportation, recreational activities, and gastronomy. Despite global inflation, in 2023, the arrival of international tourists to Spain reached levels similar to those of 2019, and tourism expenditure broke records, consolidating the sector as a fundamental pillar of Spain's GDP. It is interesting to observe how the tourism advertising sector adapts to new advertising modalities, mainly through travel influencers. These influencers have become an increasingly utilized strategy by organizations and companies in the tourism sector due to their ability to personalize and showcase tourist destinations naturally and creatively, directly reaching their community of followers as the target audience.

This study aims to understand and analyse the advertising strategies implemented by travel influencers on YouTube. The specific objectives include evaluating the effectiveness of the content formats used by travel influencers through KPIs, comparing the effectiveness of travel YouTubers as content creators, and corroborating compliance with advertising regulations in collaborations between travel influencers and brands. To achieve these objectives, three of the most notable travel influencers on YouTube were selected, and their content was observed over 15 days. Both advertising and non-advertising content were analysed. The research was supported by a theoretical framework based on secondary sources such as scientific articles, reports, and studies. An Excel database was designed to perform the necessary analyses. Travel influencers have proven to be effective advertising partners, connecting authentically with their audiences thanks to the trust they have built within their communities. Brands and organizations in the tourism sector turn to these influencers to promote their services, as they can guide potential travellers naturally and creatively. YouTube has effectively adapted to new forms of advertising, providing a conducive space for collaboration between influencers and brands facilitated by using tags to indicate advertising content. One of the challenges for influencers is maintaining transparency in their content, clearly specifying when a post is sponsored. Lack of clarity can lead to audience fatigue and damage the relationship with their audience. The analysed KPIs show that, although some influencers have many followers, the number of likes, views, and comments does not always proportionally reflect their audience, highlighting the importance of constant interaction with the public. Advertising through travel influencers on YouTube offers various possibilities that align with the message each influencer and brand wishes to convey. A future line of research could analyse the impact of influencers on travellers' decision-making, from choosing a destination to planning and booking a trip. This could lead to future trends based on hyper-personalization, using AI tools to offer personalized destination recommendations, considering individual audience preferences.

In conclusion, the trend of using advertising strategies through travel influencers shows no signs of diminishing. The audience continues to seek reliable recommendations and authentic experiences, so the influence of travel influencers will continue to rise in the tourism sector.

Abstract 38

Gastronomic Influencers: An Analysis of Their Advertising Effectiveness on Instagram

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KEYWORDS: gastronomic influencers, instagram, influencer marketing.

ABSTRACT: In the current digital era, influencer marketing has become a crucial tool for brands and businesses, especially in sectors such as food and hospitality. This phenomenon is driven by the increasing use of social media by consumers, who trust influencers as sources of information. According to the "2023 Advertising Investment Study in Spain" by InfoAdex, investment in digital media grew by 7.6% in 2022, making it the leading channel for advertising investment. This study focuses on analysing the profiles of gastronomic influencers on Instagram to evaluate the impact of their posts, the use of sponsored content, and their verbal and visual communication. The study was conducted by observing the accounts of the most relevant gastronomic influencers in Spain over a period of 15 days. The results indicate that influencer marketing is an effective and low-cost strategy for brands, allowing them to achieve their communication objectives through a targeted audience. Gastronomic influencers, along with their solid and loyal communities, have become key allies for brands in the sector and for gastronomic tourism. The predominant publication format on Instagram is reels used in 100% of the analysed posts. This format is highly efficient for creating dynamic and attractive content, such as recipes and reviews of establishments. Two main types of content creators were identified: those who focus on recipes and culinary advice, and those who create reviews of establishments and food products.

The analysis revealed that 50% of the posts were commercial in nature. Influencers who post less frequently tend to have a higher percentage of commercial posts, while more active influencers can alternate between commercial and non-commercial content. Brands are usually present in commercial posts in the form of tags in the written and visual content. The language used in the texts is mostly informative and demonstrative, in line with the content of recipes and video descriptions. The videos have an average duration of 52 seconds and usually include text and graphic editing. The audiovisual language is also informative and demonstrative, with a tendency to collaborate with other influencers. During the observation period, all analysed profiles included commercial posts, although most did not clearly identify them according to regulations and best practices. Even mega influencers, legally required to do so, do not always tag their commercial posts, reflecting unethical behaviour. The engagement rate of all profiles exceeded the global average, indicating that commercial content does not negatively affect performance in terms of interaction. However, it is crucial to align the brand's content with the right influencer to maximize advertising results. In conclusion, influencer marketing in the gastronomic field is an effective brand strategy as long as the right influencer is chosen and the regulations for identifying commercial content are followed.

Abstract 39

Does Income Follow Pilgrims? An Interrelational Income Multiplier Analysis for the Way of St. James

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KEYWORDS: cultural routes, impact analysis, regional development.

ABSTRACT: Cultural routes are on the rise as alternative strategies for sustainable tourism in Europe. Hence, both the public and policy makers are showing growing interest in how these routes affect the regions where they traverse. Among many other aspects, the impact on resident's income is a key determinant of positive or negative tourism perception. However, measuring this impact is not straightforward. While direct effects from tourist spending can be estimated through surveys and/or proxy-based models, indirect impacts are more complex. Cultural routes involve a series of industries and territories that can influence the revenues of industries and territories not directly related with the cultural route itself.

To circumvent this difficulty, in this paper we use an extended version a multiregional input-output model in which we endogenize residents' and non-residents' consumption expenditures á la Miyazawa. Using this model, we assess how expenditures by pilgrims of The Way of St. James—the role model for cultural routes in Europe—affects the income of residents in the local labour markets of Galicia (northwestern Spain).

Our findings reveal that pilgrim inflows and income multiplier effects do not necessarily align in many areas. The relevance of our result is twofold. First, it implies that some local areas might be potential focal points of tourism fatigue even though the impact in their income does not match their burden share of tourism-related congestion. Second, it points out the fact that businesses and households that are not directly in contact with The Way of St. James still benefit from this tourism strategy via spillover effects in the supply chains of the region.

Additionally, our results indicate that that pilgrim entrances could be redistributed across the different alternative routes of The Way of St. James without diminishing the aggregated income for Galician residents.

Abstract 40

The Tourist Expenditure Factor as a Determinant of Destination Competitiveness: An Analysis Through the Case of the Canary Islands

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KEYWORDS: competitiveness, expenditure, destination, accommodation categories.

ABSTRACT: The challenge of tourist destination competitiveness is a construct of relevance in academic debate, transcending the descriptive sphere to establish itself as a strategic and analytical element for understanding destination positioning (Faur and Ban, 2020). The competitive capacity of a tourist destination constitutes a multidimensional concept that integrates an interaction of factors (Lasisi et al., 2023), among which natural and cultural resources, infrastructure, accessibility, and a service offering capable of satisfying increasingly demanding and heterogeneous tourist requirements stand out. The existence of business ecosystems (Díaz et al., 2023) reinforces and improves the competitive conditions of the destination, enabling responses to transformations in consumer behaviour. Such changes, characterised by increased access to information and mobility, have resulted in the systematic pursuit of differentiated experiences with high added value (Dwyer and Kim, 2003; Crouch and Ritchie, 1999). In this context, an approach through the analysis of tourist expenditure at the destination emerges as a relevant factor for understanding the level of competitiveness, whose typology and magnitude can be observed both in tourists' preferences and in the intrinsic capacity of destinations to meet their expectations. Within this framework, the choice of accommodation type is taken as a component that, while not unique, is nonetheless a determining factor in tourist spending behaviours and patterns, and consequently in its distribution within the local economy. This study proposes a further step in the empirical approach, examining the relationship between the heterogeneity of accommodation offerings (Pérez and Acosta, 2021) and tourist spending behaviour, using as a reference a sample of 38,071 visitors to the Canary Islands, analysed through the 2024 Tourist Expenditure Survey (EGT) of the Canarian Statistics Institute (ISTAC), Government of the Canary Islands. For the processing of the database, once normalised, structured programming methodology in Python has been employed, utilising the pandas library for data manipulation and numpy for statistical analysis, performing descriptive analysis and variable correlation. The results obtained reveal distinctive spending patterns associated with different types of accommodation, from 5-star hotel establishments to holiday homes, providing substantive evidence of how the diversification of offerings impacts destination competitiveness. Previous research by Enright and Newton (2004) and Romero et al. (2017) had already suggested that investment in infrastructure, technology, and human capital constitutes a determining factor for the optimisation of the tourist experience. This study empirically corroborates those hypotheses, demonstrating that spending patterns can function as indicators of a destination's capacity to segment and satisfy different tourist market niches. The fundamental contribution of this study lies in its ability to provide an analytical basis that verifies effectiveness and guides the formulation of tourism strategies, highlighting the importance of considering the heterogeneity of accommodation offerings as a strategic element, beyond the traditional categorisation of accommodation establishments. From a methodological perspective, structured programming in Python facilitates an understanding of the mechanisms underlying tourists' spending decisions. By examining how different types of accommodation influence visitor behaviour, this study opens new lines of research and reflection on the strategic planning of tourist destinations.

Abstract 41

The Effect of Socioeconomic Factors on Public Transport Accessibility: Analysing Social Equity in the Network of Gran Canaria

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KEYWORDS: socioeconomic factors, spatial analysis, mobility.

ABSTRACT: This study aims to analyse equity in a public transport system. In this context, an equitable public transport system would be the one that benefits those groups that need this kind of service more than others. From this perspective, the service should benefit unfavourable groups, such as low-income population or immigrants. With this objective, an accessibility indicator which includes data regarding travel time and service frequency was created. The level of equity was determined through the estimation of a spatial econometric model which relates the accessibility levels with socioeconomic characteristics associated to neighbourhoods of origin. The level of accessibility of each neighbourhood of origin was calculated to different destinations of interest, such as education, jobs and leisure and outside connectivity places. The variables included in the model were the volume of the population, average age, gender, per capita income, the number of stops associated to each neighbourhood and the distance between the place of origin and the destination. This case study focused on the island of Gran Canaria. Three key destination types were analysed based on their relevance to different travel purposes. For educational access, the analysis focused on connectivity to the University of Las Palmas de Gran Canaria, the island's main higher education centre. Regarding employment and leisure, San Telmo station was selected due to its proximity to major commercial areas and its strong connectivity with various municipalities across the island. Finally, external connectivity was assessed by examining public transport accessibility to Gran Canaria Airport. The data used in this study was extracted from two main sources. Transport system information was provided by the island's main operator, Salcai Utinsa S.A. Socioeconomic data was extracted from the National Institute of Statistics (INE). Finally, our sample comprised 3,591 neighbourhoods. The main results indicate that the system operates equitably concerning certain socioeconomic factors, such as population size. However, for other factors, such as income, the system does not exhibit equity, as it fails to provide greater access to the segments with higher needs. Furthermore, the system is even more inequitable for educational destinations than for the other types of destinations. This work allows local administrations to analyse in which sense the accessibility by using public transport could be improved. Policies such as establishment of more direct bus lines in low-income areas, improvements to road infrastructures or the creation of more bus stops are proposed as measures to decrease inequality. This research project is also highly relevant to the tourism sector, as it evaluates the accessibility of public transport for different population centres on the island to reach the airport. It aims to assess whether socioeconomic factors influence the likelihood of using public transport as a means of accessing an external connectivity point. Additionally, as in Gran Canaria the only public transport alternative available is the bus, it is extremely important to ensure that it works well in terms of equity.

Abstract 42

Implications of Changing Consumer Preferences for the Tourism Environmental Sustainability

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KEYWORDS: CO2, environment, tourism, input-output, induced effects.

ABSTRACT: As a result of climate change and its impacts caused by the increase in greenhouse gas emissions, the academic community has focused its efforts on working in pursuit of sustainable and environmentally friendly development. The accelerated increase in global warming registered as one additional degree Celsius in average global temperatures since 1960 has served to make carbon emissions reduction an international consensus (Sun & Pratt, 2014; Tao et al., 2014). In exploring in greater depth, the different economic sectors with a direct and indirect effect on the environment, tourism is mentioned as one of the greatest contributors in terms of gas emissions. Tourism links together multiple activities, such as transport, lodging, events and attractions (Abonomi et al., 2022; Becken & Hay, 2007), which proves fairly beneficial from economic perspective, although it gives rise to a high level of energy consumption and carbon dioxide (CO2) emissions.

Tourism has over recent years achieved exponential growth worldwide, and its environmental impacts have therefore also risen. It is nonetheless important to understand that tourism has numerous classifications, and that depending on the demand for goods and services recognised, a greater or lesser environmental impact could arise. The aim of this research is to identify the direct, indirect and induced impact of gas emissions caused by demand from visitors according to their classification as residents, non-residents and pilgrims, which are determined by the type of tourism that is promoted in Galicia, the territory of study of this research. This methodological exercise is based on the most recent Supply-Use tables published by the Galician Institute of Statistics (IGE), structured on a product-by-product basis from the demand side and assuming industry technology. The objective was to generate multipliers using the Leontief inverse and to extend the matrix using the Miyazawa model in order to identify induced effects and link CO_2 emissions to the tourism-related consumption vectors.One of the main conclusions of the study is that environmental impact varies significantly depending on the type of tourist and their consumption patterns. Non-resident tourists—who are the primary consumers of high-impact services such as air travel and other forms of transportation—generate the highest CO_2 emissions. In contrast, pilgrim tourists have the lowest environmental impact, due to fundamentally different tourism dynamics and spending behaviours.

Abstract 43

Virtual Mystery Guest as a Tool for Territorial Diagnosis in Tourism Destination Planning. Practical Application in Several Municipalities of the Galicia-Norte de Portugal Euroregion

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KEYWORDS: virtual mystery guest, digital tools, tourism planning, destination diagnosis.

ABSTRACT: Mystery Shopping is a technique for auditing a particular market and is usually used to assess the quality of the service provided to the customer. This approach tries to reduce the effect of irregular situations and look for improvements that are feasible, providing considerable added value and advantages (Anderson et al, 2021). The ´Virtual Mystery Shopper´, on the other hand, adopts the role of a tourist planning to visit a destination for the first time, gathering information exclusively through digital means such as websites, social media, and other online platforms. At this stage, tourism promotion by public, private, or public-private entities, as well as private operators (e.g., travel agencies, tour operators, and hotels), plays a key role in raising awareness about destinations and motivating tourists to make a purchase. Analyzing tourist travel patterns can help improve destination planning and management. (Paulino, Lozano & Prats, 2021), but access to such data is not always feasible due to limited human, financial, and time resources. This challenge is even more pronounced for emerging destinations or those needing to redefine their main selling proposition.This study examines the use of virtual mystery shopping as a diagnostic tool for assessing tourism destinations, with a particular emphasis on its application in territorial planning. The research aims to explore how this innovative approach can assist destination managers in evaluating service quality, customer experiences, and overall destination performance. Following a comprehensive literature review, the study employs a virtual mystery shopping methodology across multiple municipalities with diverse characteristics. Simulated tourists assess various aspects of a destination—including service quality, infrastructure, and digital accessibility—exclusively through online channels. Data is collected through detailed evaluations and feedback, providing insights into the strengths and weaknesses of each destination. Findings indicate that virtual mystery shopping is a valuable and cost-effective tool for diagnosing tourism destinations. It enables real-time, unbiased evaluations of the visitor experience from a tourist's perspective, identifying key areas for improvement in service quality and destination planning.

The study concludes that virtual mystery shopping serves as a powerful tool for tourism destination planning, offering actionable insights that enhance destination management. It helps identify gaps in service delivery and highlights opportunities for improvement within both the public and private sectors. This research contributes to the field of tourism planning by demonstrating that virtual mystery shopping can complement traditional diagnostic methods. It provides a dynamic and efficient means of assessing and enhancing tourism destinations. The findings suggest that its implementation can lead to more informed, evidence-based decision-making and improved destination competitiveness.

Abstract 44

Exploring the Concept of Polycentric Tourism: A Path to Balanced Regional Development

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KEYWORDS: polycentric tourism, sustainable development, tourism networks, polycentricity, tourism strategies, over tourism, mass tourism.

ABSTRACT: This study explores polycentric tourism as a solution to overtourism and the uneven distribution of visitors, which negatively affects both tourists and local communities. Popular destinations suffer from environmental degradation and strained infrastructure, while lesser-known areas with tourism potential remain underutilized. Polycentric tourism promotes a balanced distribution of tourism activities, supporting local residents, fostering rural development, and aligning with the European Union's (EU) sustainability and net-zero objectives. Grounded in sustainable tourism development, spatial planning, and governance theories, this study integrates destination resilience, visitor flow management, and regional tourism development (Angelevska-Najdeska & Rakicevik, 2012). Network theory highlights the importance of interconnected tourism nodes and decentralized decision-making (Méndez et al., 2008). By advocating for an equitable allocation of tourism benefits, polycentric tourism enhances local livelihoods and promotes responsible use of cultural and natural resources. This approach also aligns with the EU's Green Deal and climate goals, facilitating the transition to net-zero carbon tourism destinations. This exploratory study combines a literature review covering polycentric tourism, tourism management, urban and rural development, and EU sustainability policies, with an analysis of relevant best practices. Key characteristics include diversified attractions, decentralized visitor flows, and governance structures ensuring long-term sustainability. The study also evaluates policy frameworks that enable polycentric tourism and examines digital tools, such as smart tourism platforms and real-time data analytics, to improve visitor flow management (Santos, 2014). EU funding mechanisms, including the European Tourism Agenda and Horizon Europe initiatives, are also considered (Iliev, 2018). Findings indicate that polycentric tourism requires developing interconnected tourism nodes rather than relying on a single dominant destination. This necessitates investment in infrastructure, improved transport connectivity, and targeted marketing strategies to encourage visitor dispersion (Kostopoulou et al., 2021). Empowering local communities, particularly in rural areas, is essential to ensure they actively participate in and benefit from tourism. The transition to net-zero tourism requires adopting green transportation, renewable energy, and sustainable resource management. Stakeholder collaboration is critical, involving public authorities, private sector actors, and local communities (Lourenço, 2011). Challenges include governance complexity, resistance from established tourism hubs, and the need for unified branding strategies for emerging destinations. This study contributes to sustainable destination management by providing a structured framework for polycentric tourism that incorporates community engagement, rural development, and EU sustainability targets. It offers practical insights for destination managers and policymakers on implementing tourism dispersion strategies while transitioning toward net-zero emissions (Medeiros et al., 2021). Socially, polycentric tourism alleviates overcrowding, creates economic opportunities in lesser-known areas, and preserves cultural and environmental resources. By prioritizing community-driven tourism initiatives, local populations play a central role in shaping and sustaining tourism development while benefiting from EU policies and funding. Previous research has largely focused on managing overtourism in high-density areas. In contrast, this study outlines methodologies for implementing polycentric tourism strategies in both established and emerging regions. Through spatial planning, visitor behaviour analysis, and sustainability-oriented measures, it offers actionable recommendations aligned with the EU's sustainability goals and the transition to net-zero tourism.

Abstract 45

Travel Practices and Tourist Experiences of the Motobikers Community in Portugal

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KEYWORDS: motocycle tourism, motorbike, experience tourism, sensory marketing, gender.

ABSTRACT: This research aims to analyse the Travel Practices and Tourist Experiences of the motorbiker Community in Portugal. To understand this work, it is necessary to consider the tourist motivations that attract motorcyclists. Expanding this niche can help combat seasonality and promote tourism in less-visited regions. A literature review on motorcycling is necessary, covering the evolution of motorbike tourism and including gender-related aspects of motorbike use. Motorbike culture has evolved, preserving freedom and autonomy as its essence, while absorbing urban influences and individual expressions. Motorbike tourism is also an intense sensory and social experience, and a connection with the landscape. Over time, there has been a diversification of motorcyclist profiles, with the growth of female participation in motorbike tourism (Romy & Dewan, 2020; Sykes & Kelly, 2016).

In the context of experience tourism, Pine and Gilmore (1998) and Krishna (2010) emphasise the importance of sensory immersion as a differential in the traveller's experience, through the sounds of the engine and elements of the environment, such as wind and aromas, allowing for the construction of experiences. In addition, this segment contributes to the development of local economies in under-explored regions and encourages small tourism businesses (Prideaux & Carson, 2011). Scol (2016) observes that in recent years mototourism has gained greater attention due to its economic potential. However, in the literature, mototourism remains an underexplored tourism subculture (Chung, 2019). A qualitative-quantitative methodology will be used following the mapping of motorbike clubs, groups, federations, associations, and gatherings across Portugal. In the qualitative approach, exploratory research - with the aim of '(...) getting to know the phenomenon studied as it appears or happens in the context in which it is inserted' (Revillion, 2003, p. 106). Qualitative data will be collected from tourism authorities in Portugal in order to understand the socio-economic impacts of motorbike tourism and quantitative data on the motorbike community will be collected through questionnaires in various geographical areas of the country. This study should result in theoretical contributions regarding the specificity of the Motobikers community in the tourist experience in Portugal and formulate recommendations for tourism services based on the needs of the community identified in this study. If studies on motorbikers tourism need to be expanded scientifically, this research will seek to make a relevant contribution to a better understanding of sensorial experience, socio-economic impact, gender trends, tourist demand, and the motivations, practices, and experiences of motorbikers.

The scientific literature on motorbike tourism is still limited. Most studies focus on large motorbike events and meetings, neglecting individual motivations and the influence of the sensory experience. There is also a gap in understanding the socioeconomic impact of motorbike tourism and its integration into national tourism policies. In summary, this study reinforces the need to recognise mototourism as a strategic segment for Portuguese tourism, promoting a more inclusive, sustainable development in line with new market trends.

Abstract 46

Analysis Of Propane Consumption in Hotels in the Canary Islands: Trends, Variations and Opportunities for Sustainable Management

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KEYWORDS: propane, energy management, hotels, greenhouse gas emissions, sustainability.

ABSTRACT: The hotel sector in the Canary Islands relies heavily on propane to produce domestic hot water, cooking, and various services, and is a significant source of greenhouse gas emissions. This study analyzes propane consumption over a seven-year period (2009–2015) in two hotels located in northern and southern Tenerife. It aims to propose energy optimization strategies tailored to local climatic and operational conditions. Monthly propane consumption data were cross-referenced with occupancy rates, electricity and water consumption, and several climatic variables (temperature, humidity, solar radiation, and wind). A correlation analysis was used to identify the factors with the greatest influence on propane consumption. Initial results revealed higher total propane consumption in the southern hotel (average 10,277 kg/month) compared to the northern hotel (average 2,005 kg/month). However, recognizing differences in hotel size and occupancy, consumption per guest-night (kg propane/pax) was calculated to provide a more accurate comparative indicator. Analysis showed clear seasonal variations: the highest propane consumption per guest-night for southern hotel occurred in December (4.03 kg/pax) and November (3.54 kg/pax), coinciding with lower temperatures and specific service requirements such as heating pools. Lower consumption per guest-night was observed in January (0.49 kg/pax) and February (1.08 kg/pax), periods of higher occupancy. In the north hotel, propane consumption per guest-night peaked in September (5.33 kg/pax), a period reflecting lower occupancy but consistent fixed energy requirements (e.g., DHW production). Consumption per guest-night was lowest in January (0.39 kg/pax) and February (0.82 kg/pax), corresponding to higher occupancy periods, indicating the significant influence of fixed energy uses independent of occupancy. Correlation analysis confirmed temperature as a critical influencing factor (negative correlation r = -0.522 in the north). Additionally, the negative correlation initially interpreted as high consumption (r = -0.363) was clarified as representing fixed energy demands independent of occupancy, such as pool heating and domestic hot water, which require a relatively stable energy input regardless of guest numbers. These observations highlight that the southern hotel requires targeted energy management. Strategies are needed to reduce peak seasonal energy demands during high-occupancy periods, especially through smarter pool and hot water system management. While the northern hotel, although less busy, maintains a regular consumption that could be optimized by adopting alternative energy solutions and could also benefit from adopting renewable thermal systems, such as solar thermal or heat pumps, to reduce propane dependency.

Abstract 47

Assessing the Distributional and Environmental Effects of Domestic and Inbound Tourism in Spain

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KEYWORDS: domestic tourism, inbound tourism, income distribution, environmental impact.

ABSTRACT: Tourism plays a fundamental role in the Spanish economy. However, analysing its impacts requires careful consideration of several nuances. While the sector generates income that fosters economic growth, its distributive effects can be regressive, impacting households unevenly by income level. Additionally, tourism's intensive reliance on transportation leads to significant environmental impacts, and the sector's specialization comes at an opportunity cost by diverting resources from other productive areas. The present paper aims to address, firstly, the distributive implications of tourism and, secondly, the evaluation of its environmental repercussions. For this study, a detailed Social Accounting Matrix (SAM) has been developed. Specifically, data from the EU Statistics on Income and Living Conditions, the Household Budget Survey, and the EU Labour Force Survey have been utilized to accurately capture the characteristics of household income and expenditure. In addition, information from the Spanish National Statistics Institute (INE) and the OECD has been employed to robustly construct the consumption vector, distinguishing between domestic and inbound consumption. This integrative approach ensures that the SAM faithfully reflects the inherent complexity of the tourism sector in Spain, thereby providing a solid empirical foundation for the subsequent analysis. One unique feature of the SAM is that national households pay rent to a new household category—the domestic tourist household. This rental payment is determined by the tourism expenditure that each household makes. Building on this comprehensive SAM, which is based on 2019 data and further refined with an environmental SAM constructed from INE's environmental accounts, the analysis proceeds by estimating the impacts separately for domestic and inbound tourism. This enhanced environmental SAM augments the traditional framework by incorporating environmental indicators—such as resource consumption and emissions—alongside economic flows, thereby providing a more complete picture of the ecological footprint associated with tourism activities. Four key dimensions are examined to characterize the sector's impact precisely. First, the study estimates direct, indirect, and induced multipliers for both production and Gross Value Added (GVA), shedding light on the intricate economic interdependencies within tourism. Second, it assesses contributions to household income across ten household types segmented by decile, enabling a nuanced evaluation of the distributional effects. Third, the analysis quantifies tourism's contribution to state revenue, thereby gauging its fiscal potential. Finally, it integrates environmental analyses—including resource consumption and emissions assessments—to measure the ecological repercussions of tourism. The novelty of this study lies in its use of a SAM rather than a conventional input–output framework, which permits a more detailed examination of both inbound and domestic tourism. By distinguishing between these two categories, the analysis is able to capture aspects of household redistribution, taxation, and induced effects that remain incomplete in alternative approaches such as Miyazawa's. This approach reinforces the advantages of using a SAM to provide a more robust and insightful understanding of the overall impact of tourism on the Spanish economy.

Abstract 48

Designing Tourist Routes with Points and Arcs of Interest

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KEYWORDS: tourist trip design problem, route optimization.

ABSTRACT: The Tourist Trip Design Problem (TTDP) is a route-planning problem where a route for tourists interested in visiting points of interest (POIs) is designed. The most basic version is the Orienteering Problem (OP), which can be considered a combination of the Knapsack Problem (KP) and the Traveling Salesman Problem (TSP), which are extensively studied problems in Operations Research (OR). The objective is to maximize the total score collected from visited points subject to a budget constraint (or time available to do the route). Among the variants of the problem, we have the Orienteering Problem with Time Windows (OPTW), the Team Orienteering Problem, the Team Orienteering Problem with Time Windows (TOPTW), the Cycle Trip Planning Problem (CTPP), the problem of designing the most attractive itineraries for different user classes, the Capacitated Team Orienteering Problem (CTOP), the Multi-agent Orienteering Problem with Time-dependent Capacity Constraints (MOPTCC), and the TTDP with clustered POIs (TTDP-Clu). To solve tourist route problems, a variety of solution procedures, exact and heuristic, have been proposed. The construction of algorithms that provide solutions in a very short time is especially relevant when a delay in response and decision-making has a significant impact on the operation of the system. In the case of tourist routes, there is an interest in ensuring a rapid response through the design of expert systems and computer applications (web- or mobile-based) that allow users to obtain a route that incorporates their preferences to the highest degree possible.

In the Arc Orienteering Problem (AOP), the objective is to maximize the total score collected along the arcs of the route. It is similar to the orienteering problem but on arcs instead of vertices in the network. A variant of the AOP is the Cycle Trip Planning Problem (CTPP). In this work, we combine the OP and the AOP, considering points of interest and arcs of interest. These problems are difficult and, if the size is large, the resolution via an exact algorithm in a reasonable amount of time may not be possible. We consider two versions of the problem, the case in which complementary arcs are allowed in the route (arc (a,b) and arc (b,a) can be in the route), and the case where complementary arcs are not permitted. The less restricted conditions of the first case can give routes with a score higher than the score of the best route in the second case. We present a formulation useful to obtain a route in an exact way (optimal solution) if the size of the problem is moderated. To solve large problems, we propose a heuristic procedure. We illustrate the results with examples and present an application in a particular geographical area.

Abstract 49

Exploring Water Use Behaviour Among Hotel Guests

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KEYWORDS: hotel sustainability, water conservation, guest behaviour.

ABSTRACT: In the context of sustainability, scholars emphasize that “green practices” in hotels - such as water- and energy-saving measures, waste reduction, etc. - play a central role in shaping guest behaviour and driving organizational performance. As more consumers become environmentally conscious, they increasingly demand - and reward - hotels that align with pro-environmental values. Moreover, water consumption in hotel establishments is highly influenced by guest behaviour, making it essential to understand the drivers behind guests’ water usage patterns. This study analyses the factors influencing water consumption behaviour among hotel guests, focusing specifically on personal norms, attitudes toward hotels based on their water management strategies, and guests’ perceptions of hotel water management initiatives. To address that, it proposes a conceptual model supported by hypotheses examining relationships between guests’ perceptions, attitudes, personal norms, and their subsequent water conservation behaviours. Water management perceptions were established as a mediator variable between personal norms and behaviour and between attitudes and behaviour. The behaviour variable was used by Rodriguez–Sanchez et al. (2020) who establish that hedonic motives can also influence these normative dispositions, depending on whether pro-environmental actions are seen as a pleasant aspect of the travel experience. According to Cheah and Paul (2010) it is expected that consumers with personal norms more leaned towards environmentally friendly products are more likely to purchase them because they appreciate their sustainable characteristics. Finally, the topic of attitude has been less studied in the previous literature than other aspects regarding green hotels such as the effect on their prices (Zang et al.,2020). To assess the proposed model the answers to a survey of 866 hotel clients of different characteristics has been examined. Personal norms were assessed through questions regarding feelings of guilt associated with excessive water usage during holidays and internalized values of responsible water consumption practices. Attitudes were evaluated by preferences for hotels with efficient water management systems and beliefs about the personal benefits derived from staying at these establishments. Lastly, the perception of hotel water management was determined by the extent to which guests recognized and acknowledged hotel efforts to encourage water conservation and implement water-saving systems. The results indicated that perceptions of sustainable practices and favourable attitudes towards green hotels positively influence guest behaviour, accounting for a 28.1% variance in behavioural outcomes. Additionally, the perception of hotel water management is significantly influenced by personal norms, underscoring the complex interplay of internal and external motivators. Ultimately, the findings from this research aim to provide hoteliers with actionable insights to better design, implement, and communicate water management strategies tailored to diverse guest segments. By recognizing and addressing the varying personal norms, perceptions, and attitudes towards sustainable practices among guests, hotels can optimize their conservation initiatives. This tailored approach enables establishments to significantly enhance guest satisfaction and loyalty by aligning sustainability efforts closely with guest expectations and values. Furthermore, hotels can leverage this enhanced guest engagement to foster deeper commitment toward sustainable practices, thereby creating a positive feedback loop that continually reinforces the importance of responsible water use.

Abstract 50

Silver Economy and Tourism: Challenges And Opportunities for Creating Value, Quality and Satisfaction

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KEYWORDS: silver tourism, aging population, service experience.

ABSTRACT: Increasing population longevity and declining birth rates worldwide have led to global population aging (Bojanić, Erceg and Sekuloska, 2024). This phenomenon is resulting in numerous substantial changes at all levels, influencing national and international economies. This is a consequence of a significant growing increase in the segment of the population over 65 years of age from the baby boom generation (Baños-Martínez and Limón Mendizabal (2022). In this regard, Santos del Cerro and de Paz Cobo (2023), in an analysis of the silver population at the European level, point out that population aging in Spain has important implications for the pension system and the public financial system, generating an imbalance between income and expenditure, and requiring solutions to ensure the financial sustainability of the public system as a whole.

Besides these structural problems, the shift in the average age of the population also generates new needs that represent great opportunities. As Baños-Martínez and Limón Mendizabal (2022) point out, greater population longevity requires new approaches to the perception of life stages. Thus, on average, this longevity is accompanied by better conditions of autonomous living, which increases the capacity for social participation and level of activity. Regarding the age that qualifies as the silver population, the literature initially pointed out to be 65 years old. Nevertheless, in the last few years, this population margin has widened; thus, according to the European Commission's document on the silver economy (European Commission, 2018), the silver population represents individuals aged 50 and over. Based on data from the European Commission report (European Commission, 2018), in the European Union almost 40% of the population reached the age of 50. All this extends the opportunities for economic growth brought by the silver population.

This new demographic context is affecting the tourism sector in a meaningful proportion, due to its international scope. Consequently, the academic literature displays a growing interest in the study of silver tourism. As evidence, a search in Web of Science with the terms [("elderly" or "silver" or "senior") and tourist*] shows an exponential growth of articles in this line of research, particularly in recent years. Travel motivations, preferences and new needs, demand for new services, new travel patterns, and satisfaction are examples of types of study. In this paper, the literature review on silver tourism will identify new challenges and opportunities. From here, sources of value, higher quality and satisfaction in the service experience for silver tourism will be identified.

Abstract 51

Service-Dominant Logic (SDL) and Tourism Management: Implications for Internal and External Customers

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KEYWORDS: service-dominant logic, tourism, value co-creation.

ABSTRACT: SDL indicates that firms cannot deliver value for customers, but only offer value propositions (Vargo and Lusch, 2015, 2008). A product's value is not in its price or exchange value, but in its potential to satisfy the customer's needs and demands. Theoretical discussion on SDL includes operand resources, operant resources, and resource integration (Vargo and Lusch, 2017, 2008). Operand resources are finite, static, and primary resources. These resources require action in order to create value (Vargo and Lusch, 2004). Operant resources are often invisible, continuous, intangible, dynamic and infinite, such as knowledge, capabilities and skills. These resources can act upon other resources (either operand or operant resources) to create value, or a benefit (Lusch & Nambisan, 2015; Vargo et al., 2020). Operant resources contribute to strategic benefit for the service-providing actor (Vargo and Lusch, 2015), as operant resources might be linked to core competences and organizational processes (Vargo and Lusch, 2004). Regarding resource integration, SDL explains that resource combination is the process of integrating resources (operand and operant resources) to obtain utility or value. All social and economic agents are resource integrators, as any resource requires grouping with other resources (operand or operant) to create usefulness or value (Lusch & Nambisan, 2015) so that employees and customers are resource integrators (Vargo and Lusch, 2008). The academic literature provides considerable evidence of interest in SDL to examine different types of services in various sectors of the economy, particularly in the business-customer relationship. Nevertheless, SDL recognizes the influence of the interdependence between back-office management and front office management on the success of the service. Furthermore, it is important to recognize the importance of the performance and satisfaction of the internal customer in the quality, satisfaction and value perceived by the external customer. This premise is particularly relevant in high human-component services, as is the case in the tourism sector. A search of the Web of science using ("service-dominant logic" and "touris*") reveals a growing interest in the academic literature on this topic. This scientific production includes, among others: Shaw, Bailey and Williams (2011) analyse implications of SDL for tourism management; Rodriguez and Alavarez (2011) analyse internal marketing as an antecedent of value co-creation; Bregoli (2016) writes about experience marketing and tourism from SDL; and, Kwon, Kim and Lee (2025) examine the interaction effect of self-service technology and value co-creation from SDL. However, it is required to identify strengths and weaknesses in this research map in order to determine an agenda for future research on SDL in the tourism management literature. The proposed paper aims to contribute to closing this gap, proposing a future research agenda, with a special focus on the internal customer-external customer relationship.

Abstract 52

Will AI Help Improve the Sustainability of Travel and Tourism?

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KEYWORDS: sustainability, artificial intelligence, tourism, sustainable development.

ABSTRACT: The use of AI in travel and tourism is being applied to solve various problems and improve efficiency in businesses. At the same time, sustainability has become one of the key vectors for the tourism industry. All the stakeholders want to integrate sustainable practices in an effective and visible way for society.

In this context, it is common to find arguments linking the use of AI and sustainability. These arguments usually assume that AI will improve sustainability in travel and tourism. But is it possible to find ways to link the use of AI with the improvement of sustainability in tourism? Is there a practical and real use that implies a direct and clear relationship between AI and improving sustainability in tourism?

In this article, we will analyse current applications of AI in the tourism sector that enable sustainable practices focused on reducing environmental impacts and improving tourist experiences from a sustainability perspective. Specifically, we will focus on the following aspects:

1) reduction of the environmental impact by analysing travellers' consumption patterns to suggest ways to manage waste and reduce carbon emissions (e.g., by optimizing transportation routes).
2) efficient management of essential resources (e.g. water and energy) used in tourism infrastructure by optimizing the consumption of these resources.
3) management of travellers, by predicting the pa ern of influx of travellers in order to distribute tourists, helping to preserve the integrity of destinations, as well as the behaviour of tourists by suggesting less crowded times or places and even allowing a better distribution of tourism expenditure.
4) improvement and personalization of the traveller's experience by recommending more sustainable activities and alternatives.

To this end, this research will begin with a literature review to identify the ways in which AI can contribute from a theoretical point of view to the sustainability of the tourism sector. Subsequently, real experiences will be sought both in the academic literature and in professional communications to validate these theoretical proposals.

Abstract 53

Residents' Tourism-phobia, Climate Change Beliefs, And Preferences for Decarbonisation Policies

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KEYWORDS: tourism phobia, climate change beliefs, decarbonisation policies, resident attitudes, social exchange theory.

ABSTRACT: Residents of tourist destinations may hold different attitudes toward tourism, depending on how they perceive its social, economic, cultural, and environmental levels (Almeida-García et al., 2021). In this context, tourism phobia has been extensively studied as a measure of the irritation or discomfort of residents with overtourism and related impacts, i.e. gentrification, congestion, increase in housing prices, commodification of public spaces, unstable employment and the tourism management model (Veríssimo et al., 2020; Żemła, 2020). Residents' feelings of tourism phobia led to responsive behaviour toward inbound tourism (e.g. protests, anti-tourism graffiti) and shape their disposition to support tourism growth (Caro-Carretero and Monroy-Rodríguez, 2025; Matiza, 2024). There is consensus that tourism phobia appears when residents consider that the negative impacts of tourism (e.g. "Tourism damages the environment") outweigh the positive ones (e.g. "Tourism increases environmental protection"), supporting social exchange theory (Nunkoo and Kam Fung So, 2015). A similar conclusion arises in studies analysing resident attitudes toward renewable energy and decarbonisation policies. Despite renewable energy being widely accepted as environmentally beneficial by reducing emissions, meaningful support still depends on residents' environmental beliefs and the trade-offs they are willing to make between protecting the climate and energy security, impact on landscape, biodiversity, and other perceived costs of the transition (Karasmanaki and Tsantopoulos, 2021). Considering that the origins of both phenomena have been insufficiently analysed (Caro-Carretero and Monroy-Rodríguez, 2025), this study has two objectives. First, to analyse the potential role of climate change beliefs in shaping residents' tourism phobia. Second, to examine residents' disposition to support and preferences for alternative decarbonisation policies in relation to tourism phobia and climate change beliefs. A hybrid choice model was designed in two stages. First, a structural equation model explains the relationships between climate change beliefs, perceived environmental benefits of tourism, tourism phobia and willingness to support (WTS) decarbonisation goals. Second, a choice experiment incorporates tourism phobia and WTS as latent variables in the mix-logit regression model estimating utility. Self-reported information from 300 Canary Islands residents who filled in an online questionnaire was used for empirical estimation. Preferences for decarbonisation policies were controlled by island of residence and socioeconomic characteristics (gender, age, education level, income).

As expected, consciousness and scepticism about climate change influence tourism phobia differently. Residents with poor climate change beliefs are less capable of accounting for tourism's environmental costs and show lower levels of tourism phobia. Conversely, those more aware of climate change and its causes are more likely to experience tourism phobia.

These results show both light and shadow. On one hand, residents with pro-environmental beliefs are more prone to tourism phobia. On the other, those with higher levels of tourism phobia are more willing to pay higher prices to support decarbonisation. Finally, Canary Islands residents prefer a decarbonisation process that achieves net-zero emissions by 2040, doubles forest mass through reforestation, combines energy storage systems, and decentralises renewable energy exploitation.

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