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SPATIAL CONDITIONALITY OF TOURISM SUPPLY WITH A FOCUS ON SMART DESTINATIONS: THE CASE OF CROATIA AND THE EUROPEAN PERSPECTIVE

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Abstract: The aim of this paper is to examine how spatial factors of tourism supply and the implementation of smart technologies influence the shaping and competitiveness of destinations, with an emphasis on the Croatian and European context. A quantitative study (questionnaire, N=300) and qualitative research (semi-structured interviews) were conducted, accompanied by a comparative analysis of different destinations. A Spatial Attractiveness Index (SAI) was introduced to compare the attractiveness of regions. Spatial localization and smart technologies significantly contribute to the competitiveness of destinations. Quantitative analyses reveal key factors and respondents' attitudes, while qualitative findings deepen the understanding of major challenges and advantages. Furthermore, the analysis identified significant differences in the degree of smart technology adoption across destination types. Urban areas demonstrate higher levels of digital maturity, while rural and peripheral regions face infrastructural barriers. The research also highlights the importance of strategic investments in ICT infrastructure and the integration of spatial planning with digital solutions. Stakeholders must prioritize collaboration and data-driven management to achieve balanced tourism development. In conclusion, this study provides practical recommendations for policymakers and destination managers to foster sustainable and innovative tourism supply, emphasizing the combined role of spatial and technological components. Additionally, it underscores the necessity of continuous capacity-building and digital skills development across all stakeholder groups. Future research should explore the long-term impacts of smart technologies on destination resilience and visitor satisfaction.

Keywords: socio-economic indicators, econometric analysis, Europe, Croatia, destination competitiveness, sustainable development, smart destinations, spatial dimension of tourism, tourism supply

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INTRODUCTION

Context and Importance of the Research

Spatial conditions of tourism supply are one of the fundamental characteristics of contemporary tourism, as the geographical distribution of natural and social resources directly affects tourist decisions and the shaping of destinations (Dwyer, 2010). In the era of rapid technological advancement, the concept of smart destinations has emerged as a prominent strategy for the development of the tourism sector, aimed at optimizing the user experience and sustainably managing resources (Buhalis & Amaranggana, 2014). Croatia, as one of the Mediterranean tourist destinations, faces challenges of balanced distribution of tourist flows and the implementation of smart solutions across different regions (Ministry of Tourism and Sports of the Republic of Croatia, 2021). The same applies to the European context, where tourism is increasingly viewed through the lens of sustainability and digitalization (European Commission, 2020).

Tourism plays a pivotal role in regional development, influencing infrastructure, employment, and investment patterns. However, the spatial distribution of tourism activity remains highly uneven, with coastal and urban areas typically dominating over rural and inland regions (UNWTO, 2022; Mandić and Pavić, 2023; Gretzel et al., 2020).

Problem and Current State

Despite general consensus on the importance of the spatial component of tourism and the potential of "smart solutions," a more comprehensive analysis that combines these elements in a comparative perspective between different regions of Croatia and the rest of Europe is still lacking. Emphasis is often placed on central urban areas (e.g., Zagreb, Split, Dubrovnik), while less developed or rural areas receive less attention. At the same time, the implementation of smart technologies in the tourism sector is varied and depends on capacities, financial possibilities, legal frameworks, and the willingness of stakeholders to embrace change (Gretzel et al., 2015). There is a need for deeper insight into the spatial and technological determinants that shape tourism supply, and for empirical research that will indicate concrete solutions and models applicable both in Croatia and in other European destinations.

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Objectives and Research Hypothesis

The main objective of this paper is to examine how spatial conditions and the implementation of smart technologies influence the shaping and competitiveness of tourism supply, with a special focus on Croatia and a comparison with European destinations. Accordingly, the following research hypothesis has been defined:

H1: Destinations that actively implement smart technologies and strategically manage spatial resources achieve statistically significantly higher ratings of competitiveness and visitor satisfaction compared to destinations that do not.

LITERATURE REVIEW

Critical Review of Previous Studies

The spatial conditioning of tourism supply has been of interest to many authors (Smith, 2015; Hall & Page, 2014).

The spatial dimension encompasses natural and social factors, such as relief, climate, distance from markets, and the distribution of attractions (Williams & Lew, 2015). Recent research highlights the increasing importance of smart technologies and data-driven management in tourism planning, especially through the concepts of smart tourism and smart destinations (Buhalis & Amaranggana, 2014). These approaches offer potential to address spatial imbalances and foster regional competitiveness. The implementation of smart technologies, on the other hand, emphasizes the need for stakeholder cooperation in creating an innovative environment that will utilize digital tools, big data analytics, and intelligent infrastructure to enhance the user experience (Buhalis & Amaranggana, 2014; Gretzel et al., 2015). Previous research on smart destinations has mostly focused on technical and marketing aspects, while geographic distribution and regional influences remain insufficiently addressed (Boes et al., 2016). Geoparks play an increasing role as platforms for sustainable tourism development in sensitive landscapes (Malatyinszki & Kálmán, 2025).

In the European context, some countries such as Spain and Italy are strongly engaged in smart city and destination strategies (Garau & Pavan, 2018). The concept of smart destinations is based on three key pillars: technology, governance, and human capital (Buhalis & Amaranggana, 2014). However, technology alone will not automatically create a competitive destination if there are spatial constraints (e.g., insufficient transport connectivity) or if there is no clear strategic development vision (European Commission, 2020). Therefore, it is crucial to establish an interdisciplinary approach that connects geography, destination management, information sciences, and sustainable development (Gretzel et al., 2015).

In recent times, an integrated approach combining spatial theories with the concepts of "smart destinations" has become more prevalent. Smart destinations aim to ensure better interaction between visitors, the local community, and destination offerings through advanced technologies (Buhalis & Amaranggana, 2014). However, research (Boes et al., 2016) shows that technological solutions often remain at the level of pilot projects, especially in regions with inadequate transport and information-communication infrastructure. An additional issue is that many studies focus on urban environments and leading tourist cities, while rural and less developed regions remain under-researched (Gretzel et al., 2015).

Theoretical and Conceptual Framework

In theoretical terms, the concept of spatial conditioning relies on geographically determined factors, such as transport connectivity, relief, and climate, but also on socio-economic indicators (e.g., level of development and regional policies).

A contemporary interdisciplinary approach combines geographical analysis and destination management, enabling a comprehensive view of spatial relations and technological solutions (Hall & Page, 2014). Furthermore, theoretical frameworks of sustainable tourism development (Dwyer, 2010) add an additional dimension to the discussion, emphasizing that spatial and technological solutions must align with principles of long-term economic, environmental, and social sustainability.

A destination that wants to brand itself as "smart" must simultaneously integrate: spatial solutions (transport and information infrastructure), technological platforms (applications, sensor systems), strategic management (development vision, marketing initiatives) and inclusion of the local community (participation and adoption of innovations).

Recent studies propose multi-dimensional frameworks for understanding how smart technologies shape tourist experiences and value creation in destinations (Neuhofer et al., 2024). The findings support previous research on the role of technological innovation and spatial policy in enhancing regional competitiveness (Mariani et al., 2023). In conclusion, existing literature confirms that only the simultaneous addressing of spatial (geographic) dimensions and technological (digital) components can result in sustainable and competitive tourist destinations (European Commission, 2020; Gretzel et al., 2015).

MATERIALS AND METHODS

Research Approach

The research employed a mixed-method approach, combining quantitative and qualitative techniques to explore the spatial conditionality of tourism supply. This combination is in line with recent research trends in smart tourism studies that emphasize methodological triangulation to better capture the complexity of innovation in spatially diverse destinations (Sotiriadis, 2023). **Quantitative research** was conducted using a structured survey questionnaire. **Qualitative research** was based on semi-structured interviews with 15 stakeholders from public and private tourism sectors in Croatia and selected European countries. Additionally, a **comparative analysis** was applied to evaluate differences between Croatian and European destinations. The data were statistically processed using descriptive and comparative methods.A **Spatial Attractiveness Index (SAI)** was constructed as a composite indicator derived from normalized scores of selected variables.

Quantitative Methods: Survey Questionnaire

The aim of this paper is to examine how spatial factors of tourism supply and the implementation of smart destination principles influence regional disparities and destination competitiveness, with a focus on Croatia and selected European

regions. The research applies a mixed-methods approach. The quantitative component is based on a structured questionnaire (N = 300), designed to identify key spatial and innovation-related factors influencing tourism supply and demand.The survey instrument was constructed to assess respondents' attitudes regarding the significance of spatial components in tourism development, the adoption of smart technologies, and perceptions of destination competitiveness. It comprised 25 items grouped into four thematic sections: (1) socio-demographic characteristics, (2) travel preferences, (3) degree of smart technology usage in destinations, and (4) evaluation of spatial accessibility, attractiveness, and sustainability. Degree of use of smart technologies in destinations was assessed through a set of questions evaluating the presence and frequency of ICT tools such as mobile applications, geolocation services, digital tourist information, and contactless systems. Respondents were asked to indicate how often they encountered these technologies and to what extent they influenced their overall tourist experience. The sample was formed by combining purposive and convenience sampling, aiming to include diverse profiles of travelers and local residents from various Croatian counties, with an additional subsample of respondents from European destinations (Spain, Italy, Germany). The structure of respondents by group is shown below.

As shown in Figure 1, the respondent structure includes both domestic (Croatian) and international participants, ensuring a comparative perspective. This distribution enables a more nuanced understanding of attitudes across different spatial and cultural tourism contexts. The integration of AI and big data in tourism research design has become crucial for understanding tourist behavior and service optimization, especially in smart destinations (Gretzel et al., 2024).

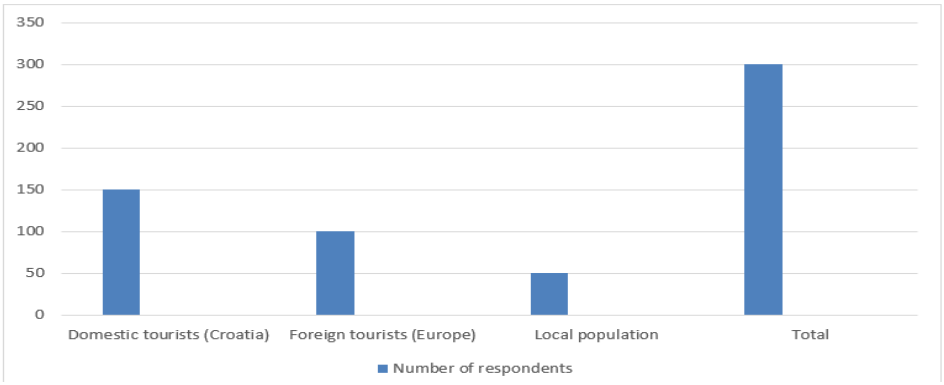

Figure 1. Structure of respondents by group (Source: Author, based on survey results)

Qualitative Methods

The qualitative component consists of semi-structured interviews with tourism professionals and local stakeholders, aiming to contextualise the survey findings. Additionally, a Spatial Attractiveness Index was developed by aggregating indicators such as accessibility, accommodation density, natural attractions, and smart infrastructure availability. This index served to compare the relative tourism appeal of different regions.

Interviews: A total of 15 semi-structured interviews were conducted with key stakeholders, including representatives of local tourist boards, hotel chains, technology companies, and spatial planning experts. Interviews were recorded with prior consent from the interviewees and lasted an average of 40 minutes. The interview guide covered topics such as the perception of smart solutions, the spatial distribution of tourism, funding opportunities, and management of tourism resources. Smart technologies were not uniformly applied. In some cases, the lack of coordination and investment delayed implementation, which aligns with trends identified in comparative research on European smart destinations (Buhalis & Sinarta, 2021). Interview data supported these conclusions, highlighting structural imbalances between core and peripheral regions, as well as opportunities for targeted innovation in spatially disadvantaged areas.

Data Processing and Analysis: Data from the survey were analyzed using SPSS software (version 26.0). Descriptive statistics (mean, standard deviation, minimum, maximum) were applied to gain insights into the basic characteristics of the sample and check the distribution of responses. To test differences between groups (domestic vs. foreign tourists, different regions), inferential statistical tests (ANOVA, t-test) were used. Multiple regression analysis was applied to examine causal relationships. Qualitative data from interviews were transcribed and imported into NVivo software (version 12). Thematic analysis was conducted (Braun & Clarke, 2006), generating categories and subcategories based on frequency and contextual relevance.

Comparative Analysis: Comparative analysis was applied to compare results from the Croatian and European contexts. In this part of the research, spatial conditioning was considered in terms of geographic distribution, transport connectivity, historical and cultural heritage, and the level of implementation of smart technologies in different regions. A regional comparison within Croatia (Adriatic vs. continental) and an analysis of several European destinations recognized as smart city/smart destination examples (Barcelona, Amsterdam, and Rome) were also performed.

COMPARATIVE ANALYSIS

This comparative analysis includes a comparison of different regions within Croatia (coastal versus continental parts) and a comparison of Croatian with European examples of smart destinations (Barcelona, Amsterdam, Rome). To provide an overview of regional specificities, Table 2. This table clearly shows the difference between continental and coastal parts of Croatia, as well as different levels of technology implementation in European destinations.

Comparing the data, it is evident that smart solutions actively contribute to the overall competitiveness of a destination (Buhalis & Amaranggana, 2014). Digital tools enhance interest in heritage visits (Gburová et al., 2024).

From the basic indicators (Table 2), it is clear that smart solutions and the degree of digitalization vary significantly, which is reflected in competitiveness and the spatial distribution of tourism demand. The analysis reveals a significant spatial disparity in tourism development across Croatian regions. Coastal destinations scored considerably higher in the Spatial Attractiveness Index (SAI), primarily due to their superior accommodation density, transport accessibility, and digital infrastructure. In contrast, inland regions lag behind in all measured dimensions. A comparative analysis with selected European countries confirms the persistence of spatial imbalances in tourism development, commonly characterized by dominant coastal zones and capital regions, while inland and peripheral areas remain underutilized.

Spain, Italy, and Portugal have implemented targeted policy frameworks aimed at diversification, regional branding, and the development of lesser-known destinations through smart tourism initiatives (García-Hernández et al., 2021).

Regarding smart technologies, their implementation varied considerably among destinations. Some urban coastal areas have introduced digital signage, interactive apps, or sensor-based visitor tracking, while others - particularly rural destinations - still lack basic ICT support. These patterns reflect broader European trends (Buhalis & Sinarta, 2021).

Table 2. Comparative analysis of regional tourism localization
(Source: Adapted from Eurostat (2020), Ministry of Tourism and Sports of the Republic of Croatia (2021)

Region	Tourist overnight stays (mil.)	Degree of digitalization	Infrastructure investments (€)	Smart solutions (number of projects)
Adriatic Croatia	80	Medium	1.2 billion	10
Continental Croatia	15	Low	0.5 billion	4
Barcelona (Spain)	30	High	2.0 billion	15
Amsterdam (Netherlands)	20	Very High	3.1 billion	20
Rome (Italy)	25	High	2.5 billion	12

Introduction of the Spatial Attractiveness Index (SAI)

To further illustrate how spatial attractiveness of destinations can be measured and compared, we introduced the Spatial Attractiveness Index (hereinafter: SAI). SAI is a simple mathematical measure that considers several relevant attributes (A_i) of a destination and their respective weights (W_i). Formally, it is expressed by the equation (Hall & Page, 2014):

$$SAI = \sum(A\_i \times W\_i) \qquad (1)$$

where: A_i = score of attribute i representing a specific spatial or infrastructural component of the destination (dimensionless; typically scored on a scale from 0 to 10); W_i = weight assigned to attribute i, reflecting its relative importance (dimensionless; sum of all weights equals 1); SAI = Spatial Attractiveness Index, composite score representing overall spatial attractiveness of the destination (dimensionless). In practical application, SAI helps in comparing different destinations or regions so that, for example, one destination can be assigned a higher weight to transport connectivity, while another region might prioritize cultural heritage or smart technologies. This results in a composite indicator that more easily highlights the strengths and weaknesses of each destination (Hall & Page, 2014).

Critical Comparison of SAI Results and Existing Indicators

When comparing SAI with already used indicators (such as the number of tourist overnight stays or degree of digitalization), it is evident that SAI offers a more comprehensive view. The mere number of overnight stays does not reveal the extent to which development is spatially balanced or whether technological innovations have been effectively implemented. In contrast, SAI integrates multiple variables and allows for a more precise identification of steps needed to enhance competitiveness. In the Croatian context, for example, coastal destinations would generally have high values in natural and cultural resources factors, but in some cases, they would need to strengthen transport and digital connectivity outside the main season. Continental destinations often have strong potential for the development of continental and rural tourism but lack adequate marketing visibility and smart solutions. By comparing these two types of regions through SAI, policymakers can more clearly identify thematic and investment areas that need to be prioritized.

RESULTS

Results of Quantitative Analysis: Sample Structure and Descriptive Statistics

The quantitative research included 300 respondents divided into three main groups (domestic tourists, foreign tourists, local residents). The socio-demographic structure indicates a diverse age and educational representation, which is useful for gaining a broader insight into perceptions of spatial conditioning and smart technologies. On average, respondents emphasized the high importance of natural attractions ($M \approx 4.20$), but interestingly, awareness of digital solutions ranged from low to above-average ratings ($M = 3.82$), indicating potential for strengthening technological literacy.

Differential Analyses and Variable Correlations

ANOVA and post hoc tests (shown in the previously mentioned Table 4) reveal that the assessment of smart technology usage differs among groups; foreign tourists statistically significantly value such innovations more than local residents. This difference is likely linked to habits of foreign guests who are accustomed to more advanced digital solutions in their home countries (Gretzel et al., 2015). Results of multiple regression analysis (Table 5) confirm that the perception of destination competitiveness is strongly associated with both spatial factors (e.g., accessibility and infrastructure) and the use of smart technologies. Marketing strategy also plays an important, though slightly smaller, role. The model explains 32% of variance, which is a relatively good indicator in social sciences.

Additional Analyses (Factor and Cluster Analysis)

Although not detailed in the original text, factor analysis (principal components method) was conducted to examine the dimensionality of attitudes towards smart technologies and spatial accessibility. Two factors were identified that together explain 54% of variance: (1) "technological capacity and innovativeness" and (2) "spatial accessibility and sustainability". Furthermore, cluster analysis (k-means method) showed that respondents can be categorized into three profiles: "technology enthusiasts", "traditionally oriented", and "moderate technology users". These additional analyses provide deeper insight into the heterogeneity of attitudes and potentially guide the adaptation of destination offerings. Descriptive Statistics: Below is Table 3, presenting descriptive statistics of key variables, referring to (a) attitudes on the importance of the spatial component, (b) the level of use of smart technologies, and (c) overall perception of destination competitiveness. Attitudes were measured on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Results show that respondents generally rate the importance of the spatial dimension (M = 4.21) and destination competitiveness (M = 4.10) highly, while the level of smart technology use is somewhat moderate (M = 3.82). Standard deviations indicate relatively homogeneous opinions within the sample.

Differential Analyses for Hypothesis Testing

To determine whether there are statistically significant differences in attitudes towards smart technologies among different respondent groups (domestic tourists, foreign tourists, and local residents), a one-way analysis of variance (ANOVA) was conducted. Results are shown in Table 4. ANOVA showed a statistically significant difference ($F(2,297)=4.10$; $p=0.018$) in attitudes towards smart technologies among the three groups. Post hoc test (Tukey HSD) revealed that foreign tourists had a higher average rating (M=3.95) than local residents (M=3.65), while domestic tourists (M=3.80) did not differ significantly from the other groups. Furthermore, to examine the research hypothesis about the relationship between smart technology implementation and perception of destination competitiveness, multiple regression analysis was conducted.

The model included independent variables: (1) level of smart technology use, (2) spatial accessibility (rating 1–5), and (3) destination marketing strategy (rating 1–5), while the dependent variable was the perception of destination competitiveness.

As shown, all three independent variables have a statistically significant impact ($p<0.05$) on the perception of competitiveness, with the highest standardized coefficient β for the use of smart technologies ($\beta=0.29$). The results support hypothesis H1 that the combination of spatial dimension and smart technologies is key to destination competitiveness.

Table 3. Descriptive statistics of key variables (N=300) (Source: Author, based on survey results)

Variable	M	SD	Min	Max
Importance of spatial dimension (1–5)	4.21	0.65	2	5
Level of use of smart technologies (1–5)	3.82	0.78	2	5
Perception of destination competitiveness (1–5)	4.10	0.71	1	5

Table 4. ANOVA results for comparing attitudes towards smart technologies among groups (N=300) (Source: Author, based on survey results) *p < 0.05

Source of Variation	SS	df	MS	F	p
Between Groups	4.32	2	2.16	4.10	0.018*
Within Groups	154.35	297	0.52		
Total	158.67	299			

Table 5. Regression analysis summary (dependent variable: perception of destination competitiveness) (Source: Author, based on survey results) $R^2 = 0.32$; $F(3,296)=15.55$; $p<0.001$; *p < 0.05

Variable	b	SE	β	t	p
(Constant)	1.52	0.38	–	3.89	0.000
Use of smart technologies	0.35	0.09	0.29	3.89	0.000*
Spatial accessibility	0.28	0.08	0.24	3.50	0.001*
Marketing strategy	0.22	0.10	0.15	2.20	0.029*

Table 6. Main thematic categories from NVivo analysis (Source: Author, based on NVivo analysis results)

Category	Number of references	Example quotes
Infrastructure and transport connectivity	45	"The key problem is the lack of transport…"
Technological solutions and digital transformation	60	"Smart applications for tourists facilitate…"
Destination management and marketing strategies	35	"It is important to have a clear vision and strategy…"
Sustainable development and community participation	40	"The local community must be involved…"

Results of Qualitative Analysis

Qualitative analysis deepens the understanding of the obtained quantitative results, emphasizing that technological solutions and the spatial dimension are not separate segments but complement each other within a broader destination management system.

Thematic Categories

In the qualitative part of the research, 15 semi-structured interviews were conducted with representatives of tourist boards, hotel managers, spatial planning experts, and IT companies. The average interview duration was 40 minutes, and all were transcribed and analyzed in NVivo software (Table 6) using thematic analysis (Braun & Clarke, 2006). Thematic analysis of interview transcripts identified four main categories: (1) infrastructure and transport connectivity, (2) technological solutions and digital transfor-mation, (3) destination management and marketing, (4) sustainable development and commu-nity involvement.

Key Insights from Interviews

Interviewees emphasized that spatial conditioning, especially transport connectivity, is often a limiting factor in the development of smart destinations. Rural areas lack adequate infrastructure and digital networks, which hinders the even implementation of technological solutions. Nevertheless, almost all agree that smart technologies are essential for enhancing competitiveness, particularly in terms of personalized visitor experiences (Buhalis & Amaranggana, 2014).

DISCUSSION

The results of this research confirm that the spatial dimension, in terms of infrastructural development and locational accessibility, is crucial for the success of smart destinations (Hall & Page, 2014; Smith, 2015). Findings from the quantitative analysis (Table 5) show that both spatial accessibility and the level of use of smart technologies are significant predictors of perceived competitiveness. This means that the contemporary trend of digitalization is not sufficient by itself, but must be viewed in synergy with sustainable spatial planning (Gretzel et al., 2015). The comparative analysis (Table 2) points to significant differences between coastal and continental areas of Croatia, consistent with previous studies on the importance of balanced development (Ministry of Tourism and Sports of the Republic of Croatia, 2021). European destinations most frequently cited as case studies of smart destinations (Barcelona, Amsterdam) invest significant resources in technology and sustainable infrastructure, resulting in a high degree of competitiveness (Garau & Pavan, 2018).

Qualitative findings further confirm that the integration of the local community and a well-defined marketing strategy are often decisive. Without a shared vision and coordination, even with advanced technology, destinations risk uncoordinated development and possible declines in visitor satisfaction. The findings of this research are consistent with previous studies (Gretzel et al., 2015; Buhalis & Amaranggana, 2014), which emphasize that the level of spatial accessibility is inextricably linked to the implementation of smart technologies. It was quantitatively confirmed (Table 5) that both spatial and technological factors significantly contribute to the perception of destination competitiveness, which aligns with the concept that smart destinations must integrate physical and digital infrastructure (European Commission, 2020).

Furthermore, the introduction of the Spatial Attractiveness Index (SAI) as a measurement tool in the comparative analysis proved useful for more precise comparisons of different regions. Previous methods, such as merely summing tourist overnight stays, are limited because they do not reflect the multidimensional character of destination attractiveness and do not account for spatial inequalities. SAI, on the other hand, allows for adjustment of different weighting factors, thus providing a more holistic insight. Qualitative findings also emphasize the importance of social and organizational aspects: even if infrastructure is satisfactory, weaker involvement of the local community and the absence of a strategy can limit the benefits of smart technologies. This observation aligns with the works of Boes et al. (2016); Gretzel et al. (2015), who warn that technology must not remain an isolated experiment, but rather be part of an integrated destination policy and stakeholder cooperation (the so-called ecosystem approach). Recent empirical research confirms that smart technologies significantly enhance the sustainable competitiveness of tourism destinations (Garau-Vadell et al., 2023).

CONCLUSION

This research highlighted the importance of viewing the spatial dimension and smart technologies as interconnected elements shaping tourism supply. In the Croatian and broader European context, destinations that actively implement technological solutions and strategically plan spatial resources tend to achieve higher levels of competitiveness and visitor satisfaction. Quantitative findings suggest statistical confirmation of hypothesis H1, while qualitative analyses provided a deeper explanation of how this manifests in practice. This research provides insight into the interrelationship between spatial conditioning and smart technologies in the development of tourist destinations, with a special focus on the Croatian and European context. The main contributions of this paper can be summarized in three points:

1.) Integration of Spatial and Technological Perspectives – Quantitative analysis confirmed that both infrastructure accessibility and the level of implementation of smart technologies are significant predictors of destination competitiveness. This emphasizes the need for synergy between physical and digital investments.

2.) Application of the Spatial Attractiveness Index (SAI) – By introducing SAI as an additional tool for comparative analysis, we obtained a more comprehensive view of spatial attractiveness. This measure can be adapted to various contexts, with the definition of appropriate values and weights (A_i, W_i).

3.) Combination of Quantitative and Qualitative Insights – Survey and interview results point to the importance of strategic management and community involvement.

Practical implications arise from the need for spatial aspects (especially transport connectivity) and digital infrastructure to be developed in parallel. In regions where transport isolation is still a problem, investments in basic infrastructure should be initiated before or simultaneously with the introduction of new technologies. Moreover, for the successful implementation of smart destination solutions, educational activities for local stakeholders and greater cooperation between the public and private sectors are essential. Research limitations include the fact that the survey sample of 300 respondents is relatively small in relation to the entire market. Also, the results do not cover a longitudinal perspective, which would allow monitoring of changes over time. Furthermore, although SAI proved useful in comparative analysis, the selection of factors and weights always partially depends on subjective assessments and the context of the destination.

Future research could focus on deepening econometric analyses and evaluating the cost-benefit of implementing smart technologies, especially in rural areas. Longitudinal monitoring of the development of destinations that choose to integrate SAI into their strategic plans is also recommended, to observe how the spatial and technological components affect the long-term sustainability of tourism. This research has confirmed that the synergy of spatial conditioning and smart

technologies is one of the key characteristics of modern tourist destinations. The analysis showed that destinations that actively implement technological solutions and strategically manage spatial resources generally achieve better competitiveness and a higher level of visitor satisfaction. By introducing a comparative method and the Spatial Attractiveness Index (SAI), the way in which overall attractiveness and sustainability of destinations can be assessed was further refined, making the similarities and differences between various regions in Croatia and Europe clearer.

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