SPATIAL DISPARITIES IN THE HOTEL INDUSTRY ON CROATIAN ISLANDS: DETERMINANTS AND DEVELOPMENTAL IMPLICATIONS

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Abstract

Purpose – The spatial structure of the hotel industry within the Croatian archipelago reveals pronounced disparities that reflect broader processes of regional differentiation and tourism driven development. While a limited number of islands, primarily Krk, Lošinj, Hvar and Brač, account for the majority of tourism and hotel capacity, smaller, more peripheral islands are characterised by limited tourism activity and strong reliance on private accommodation.
Methodology – The research employs a mixed-methods approach, combining spatial analysis of tourism and hotel capacities on Croatian islands. The study focuses on 11 major islands and selects municipalities/cities with the largest hotel capacities for case study analysis. Data from the official national statistical bureau, tourist boards, hotel reports and the data from Ministry of Tourism were processed for quantitative and qualitative analysis. The Tourism Development Index was correlated with key variables via regression analysis to identify the main statistically significant drivers of tourism development and differences across the islands.
Findings – The resulting core-periphery pattern reflects a cumulative process of spatial concentration, whereby well-connected and branded destinations attract recurrent investment cycles, while marginal islands face stagnation. These disparities have multidimensional implications for the economic sustainability, local community resilience and spatial planning of insular regions.
Originality of the research – The paper analyses the causal mechanisms underlying spatial disparities and discusses policy options that could foster more balanced and sustainable hotel development across the Croatian islands. By integrating geographical, demographic, resource, economic and policy perspectives, the paper contributes to a deeper understanding of the insular hotel industry.
Keywords island tourism, spatial disparities, hotel industry, sustainable development, core-periphery model, regional planning

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INTRODUCTION

With the growth of tourism, islands are becoming increasingly attractive on the global level (Razović & Tomljenović, 2015; Razović & Razović, 2021; Figueroa & Rotarou, 2021). Many islands have established themselves as popular tourist destinations, and their tourism development shares the core characteristics of mainland tourism. The distinct features of island destinations primarily stem from their geography and local culture, which have developed under conditions of relative isolation from the mainland. This condition nowadays is steadily diminishing due to advances in technology and infrastructure (Figueroa & Rotarou, 2021).

The Croatian archipelago consists of 78 bigger islands, 524 smaller island and 642 rocks and reefs, and is the second largest archipelago in the Mediterranean after the Greek archipelago. The Croatian islands are part of seven coastal counties and are home to 59 local government units (18 cities and 41 municipalities). According to the latest census from 2021, 50 islands are permanently inhabited in 355 settlements, and islanders make up 3.3% of the total population of the Republic of Croatia. Demographically, all islands are in the process of depopulation (CBS, 2026). Due to the importance and specificity of islands in the context of balanced regional development, the Islands Act was adopted in 2018 (OG, 2026) to stimulate the economic development of islands and improve the quality of life of islanders. Based on the Islands Act, the National Island Development Plan was also adopted, which defines the implementation of the goals of the National Development Strategy of the Republic of Croatia until 2030 (MRD and MTS, 2026). Today, the Croatian islands represent one of the most valuable and recognisable components of Croatian tourism (Razović and Razović, 2021). Their diverse natural and cultural resources provide a strong foundation for the further development of high value-added tourism.

In a global context, Croatian islands belong to the category of small islands. Within Croatia, they can be grouped according to geographical position, size and distance from the mainland coast. They share many common features with other Mediterranean islands; from climate, geological structure and relief to historical development, including the modern era of tourism. Mediterranean and Croatian islands clearly illustrate the interactions between tourism, heritage and culture in island settings (Royle, 2009; Zlatar Gamberožić, 2021). A common challenge for all islands is their dependence on limited natural resources, particularly in the area of freshwater supply (Grofelnik, 2017). This represents a key constraint for further tourism development and for building resilience to climate change (Grofelnik & Maradin, 2023). Like other small island tourism destinations worldwide, Croatian islands also heavily rely on the mainland for the import and export of goods. Their local economies depend almost continuously on external financial inflows to the tourism sector (Shareef, 2003). In the development of islands as small geographical and social units, there is a persistent and unresolved challenge between two opposing goals: sustainability and economic growth, both of which are simultaneously driven and shaped by islands tourism (Ruggieri & Calò, 2022). In order to achieve economic prosperity, social equity and cohesion, as well as environmental and cultural protection, the development of small islands must rest on interconnected pillars of sustainability: social, environmental, economic, heritage-based and cultural pilar (Farmaki et al., 2015).

The history of the development of tourism on the Croatian islands has largely followed the pattern of coastal tourism. However, due to specific island conditions, it has progressed more moderately and has therefore avoided many of the negative effects associated with mass tourism. More dynamic growth of island tourism in Croatia began in the early 1960s, when fiscal policy measures stimulated larger investments in tourism infrastructure, while rising living standards and the liberalisation of border crossings led to a significant increase in both domestic and international tourist arrivals (Mikačić, 1994). One of the clearest examples of island tourism development can be found on the central Dalmatian islands of Brač and Hvar. From the 1960s onwards, the rapid expansion of mass beach tourism in Hvar, Starigrad, Supetar and Bol caused intense depopulation in the interior (non-coastal) rural villages. By the 1970s, Brač and Hvar had become widely recognised and very popular destinations, and tourism had established itself as the cornerstone of the local economy (Kuvedžić, 1999; Zlatar Gamberožić, 2021).

For several decades now, tourism has been the dominant economic activity on the Croatian islands, generating most local income and employing a substantial share of the population in many locations. The islands became significantly more attractive in the last decades of the 20th century thanks to the introduction of numerous ferry lines and the construction of roads on the islands (Mikačić, 1994). Improvements in basic communal infrastructure, especially roads and water supply, have turned the Croatian islands into increasingly valuable tourism resources (Razović, 2014; Razović & Tomljenović, 2015). Nowadays, the Croatian islands offer a more authentic Mediterranean experience and a more tranquil setting, with a better-preserved natural environment, than the Croatian coast. These qualities make them particularly suitable for premium and specialised forms of tourism that emphasise sustainable development and local experience.

The hotel sector on the Croatian islands has historically lagged behind the mainland coastal areas, with hotel beds typically accounting for less than a quarter of total accommodation capacity. Private apartments, rooms, and holiday homes have long predominated (Mikačić, 1994). In recent years, however, there has been a clear shift towards higher quality; older hotel facilities have been renovated, and new luxury and boutique hotels have been constructed. In the development of tourism and the hotel industry, the larger islands and those with better transport links stand out most prominently, such as Krk, Lošinj, Cres, Rab, Pag, Brač, Hvar, and Korčula. On smaller and more remote islands, private accommodation and small guesthouses continue to represent the local tourism economy. This leaves considerable potential for future growth, but also presents the significant infrastructure challenges for transformation of island tourism.

The development of tourism on the Croatian islands has often been unplanned. In the hotel segment, it has been marked by the construction of large, standardised facilities, frequently of lower category, designed primarily for mass summer beach holidays during the short peak season (Brkić-Vejmelka & Pejdo, 2008; Grabovac et al., 2024). Today, classic sun-and-sea tourism, supplemented by nautical tourism, remains dominant on the most of the islands. However, there is visible progress in developing more selective and diverse forms of tourism that would contribute to a broader and more complex island tourism product (Grabovac et al., 2024).

Following the COVID-19 pandemic, the Croatian islands recovered relatively quickly, with strong demand returning as early as 2022 and 2023. In 2024 and especially 2025, tourist traffic along the Adriatic (including the islands) reached new record levels, surpassing pre-pandemic figures (CBS, 2026). Hotels showed solid recovery, achieving higher occupancy rates and extended seasons compared to the pre-pandemic period. Nevertheless, private accommodation continues to prevail overall, and recovery on smaller islands has been slower due to infrastructure limitations (CBS, 2026).

Differences between the Croatian islands are significant. Larger, well-connected islands such as Krk, Cres, Lošinj, Brač, and Hvar achieve stronger tourism performance, longer seasons, higher occupancy, and more frequent investment in higher-category accommodation. Medium-sized islands are experiencing steady growth, but the greatest future potential lies with the smaller islands (Table 1). These islands have the potential to develop tourism by offering accommodation tailored to specific groups, emphasising authenticity, interaction with local communities and sustainability.

Geographical disparities in hotel accommodation development on the Croatian islands are very evident and reflect the broader pattern of uneven tourism development along the Croatian Adriatic (Zlatar Gamberožić, 2021). While larger and better-connected islands have seen substantial expansion of hotel capacity, smaller, more remote, and demographically weaker islands continue to have significantly limited hotel supply and weaker results. This imbalance stems from multiple factors: superior transport links (including bridges and more frequent ferries), shorter geographical distance from the mainland, island shape and terrain characteristics, established tourism tradition, longer and more stable seasons due to favourable microclimates, differences in destination recognition on tourist markets, concentration of investment capital in well-known areas, proximity to protected natural sites, and similar.

These factors have produced markedly uneven tourism development across the Croatian islands, particularly in the hotel sector, both in quantitative and qualitative terms. The resulting spatial disparities further widen gaps in income, employment, and demographic vitality between islands, creating additional challenges for sustainable tourism development on Croatian islands (Table 1). The object of research in this paper is the spatial structure and development of the hotel industry on the Croatian islands, with an emphasis on regional disparities and core-periphery relations.

To reduce evident spatial inequalities, harness existing potential, and support the revitalisation of local communities, a planned approach to stimulating the hotel industry on the islands is essential. Well-targeted hotel development has proven effective in extending the tourist season and increasing employment. Future growth in the hotel sector and island tourism overall should

follow a sustainable and regenerative model connected with local communities. This includes clear limits on the number of beds per unit of area, promotion of local circular economy practices, utilisation of solar energy and rainwater harvesting, protection of the sea and forests, and measures to recycling and waste management (Grofelnik & Maradin, 2023).

1. METHODOLOGY

This study interprets spatial differences in tourism development and the hotel industry on Croatian islands as the outcome of interrelated factors operating at the local island level. The research employs a mixed-methods approach combining spatial analysis of the basic characteristics of island accommodation facilities with an examination of factors influencing transport accessibility. Particular attention is given to key infrastructure such as bridges, as well as ferry and high-speed catamaran connections between the islands and the mainland. In addition, the basic demographic profile of the islands is described, including processes that shape demographic capacity and the availability of local labour, key prerequisites for sustaining hotel operations. Historical trajectories of tourism development, the presence of established hotel chains, property ownership fragmentation, and infrastructural limitations (particularly water supply and waste management) are outlined descriptively (Grofelnik & Maradin, 2023).

To enable a deeper analysis of the uneven tourism and especially hotel development across islands, representative examples from each island region in the Croatian Adriatic were selected. All larger islands with hotel facilities were included: Krk, Cres, Lošinj, Rab, Pag, Ugljan, Dugi otok, Brač, Hvar, Vis, and Korčula. Since these islands are divided into numerous local government units (LGUs), the next step involved selecting those LGUs that possess the largest hotel capacities on the respective islands. The chosen case-study LGUs for detailed analysis are: the Municipality of Baška, the City of Cres, the City of Mali Lošinj, the City of Novalja, the Municipality of Preko, the Municipality of Sali, the Municipality of Bol, the City of Hvar, the City of Komiža, and the City of Korčula. This selection strategy of case study follows a similar approach applied in Kušen (2001), who analysed the impact of tourism on the development of Croatian islands.

Figure 1: **Location map of the case-study LGUs on the Croatian island**

Source: Author's work

Quantitative and qualitative analysis of tourism development in the selected LGUs, with a particular focus on the hotel sector, relied on secondary data from the publications of the Croatian Bureau of Statistics, reports of local island tourist boards, annual reports of island hotel companies, and the official list of categorised hospitality and tourism facilities maintained by the Ministry of Tourism and Sports (CBS, 2026; MTS, 2026). The collected data were processed through quantitative and qualitative methods, spatially differentiated, and compared. Basic and specialised indicator tables were constructed to support

interpretation and the drawing of conclusions about the current state, specificities, differences, and underlying causes of spatial disparities in tourism and hotel development on the islands.

For comparative assessment of the islands' development levels, Tourism Development Index (TDI) data provided by the Croatian Institute of Tourism were used (IFT, 2026). The Tourism Development Index (TDI) is defined in the Ordinance on indicators for monitoring the development and sustainability of tourism (OG, 2026). The methodology set out in the Ordinance was developed based on the study entitled "Establishment of a model for calculating the tourism development index of local self-government units in the Republic of Croatia" (IFT, 2026).

The TDI index is widely used as a measure of the development of Croatian destinations in both scientific and professional literature, and also in national strategic and planning documents. The methodology of the TDI index and its values for each year are published by the Croatian Institute for Tourism (IFT, 2026).

TDI values in the analysis were correlated with selected influencing factors through regression analysis, yielding a statistical model of the impact of statistically significant variables on tourism development of the Croatian islands. The TDI, together with core indicators of tourism activity (number of overnight stays, accommodation capacity, and number of tourist arrivals), refers exclusively to island LGUs. This methodological decision ensures greater precision and comparability among island destinations while reflecting their specific characteristics.

The TDI is calculated on the basis of weighted values of the following indicators: number of beds, number of hotel beds, number of tourists, number of overnight stays, number of employees in the hospitality and tourism sectors, number of beds per capita, number of hotel beds per capita, number of tourists per capita, number of overnight stays per capita, and the share of employees in the hospitality and tourism sector.

The principal aim of the modelling process was to construct a robust statistical model incorporating only those variables that prove to be statistically significant predictors of tourism development on the islands.

2. RESULTS

The hotel industry on the Croatian islands is a smaller but strategically important part of the country's total tourist accommodation capacity. Although private accommodation accounts for around 80% of total capacity, hotels offer higher categories, quality, standardised services, and often form the basis for extending the tourist season to include business, health and elite tourism. Despite the island area's potential, the geographical distribution of hotel capacities is extremely uneven, indicating complex causes acting on the tourism development process in the Croatian islands. This is reflected in the current state of tourism, which is evident in the spatial and structural disparities in tourism and hotel development across the Adriatic islands.

2.1 Case study of the most developed local government units on the larger islands of the Croatian Adriatic

In order to conduct a more detailed analysis of disparities in tourism and hotel industry development across the islands, a representative case study list of local government units (LGUs) was selected from each island region of the Croatian Adriatic. The analysis included 11 islands with the most developed tourist LGUs and the best results in the hotel industry.

2.1.1 Descriptive analysis

Tourism on the analysed island destinations shows significant differences in the level of development, intensity of tourist traffic and structure of accommodation capacities.

Table 1: **Descriptive analysis of tourism of the case study LGUs**

Local government unit (island)	Overnights total	Hotel overnights number of tourists	Overnights hotels (%)	Overnight stays per 100 inhabitants	Number of tourists overnight stays per km²	Average number of tourists overnight stays per arrival	Average number of tourists overnight stays per bed	TDI -2024
Baška (Krk)	968,671	171,767	17.73	58,494.6	9,793.5	5.6	90.3	34.85
Cres (Cres)	928,031	59,747	6.44	34,169	3,183.7	7.2	80.1	32.87
Mali Lošinj (Lošinj)	1,944,428	426,253	21.92	25,798.4	8,658.4	6.6	88.5	35,18
Rab (Rab)	1,331,350	194,778	14.63	17,024.2	16,066.2	6.7	68.1	33.35
Novalja (Pag)	1,839,322	113,111	6.15	49,981.6	19,221.7	6.2	70.9	31.64
Preko (Ugljan)	203,549	8,441	4.15	5,724.1	3,730.1	7.4	60.1	26.45
Sali (Dugi otok)	209,467	26,790	12.79	11,997	1,686.3	6.5	71.8	27.97
Bol (Brač)	581,199	347,442	59.78	34,636.4	24,912.1	5.3	90.7	34.21
Hvar (Hvar)	660,249	257,212	38.96	16,593.3	8,723.1	3.4	69.8	33.67
Komiža (Vis)	104,950	32,978	31.42	7,225.1	2,085.3	5.9	50.8	27.9
Korčula (Korčula)	443,603	119,785	27.00	7,457.4	3,592.1	4	71.9	30.04

Source: CBS (2026); IFT (2026); MRD (2026); MTS (2026); OG (2026)

In the context of island tourism, TDI index as development indicator is particularly useful because it allows for the comparison of different island destinations that often differ in size, population and level of tourist development.

In general, the TDI clearly shows that there are significant differences in the level of tourist development among island destinations. While some have already reached a high level of tourist activity and are facing the challenges of managing tourist pressure, others still have significant potential for further, planned and sustainable tourism development.

Mali Lošinj stands out in particular with its high TDI (TDI 35.18), which is the highest value among the analysed destinations. Baška (34.85) and Bol (34.21) also have a high TDI, which indicates a high level of tourist activity and development of tourist infrastructure. The total number of tourist overnight stays is particularly high in several destinations, with Mali Lošinj in first place with as many as 1,944,428, followed by Novalja with 1,839,322, and Rab with 1,331,350 overnight stays. High values are also recorded by Baška with 968,671 overnight stays and Cres with 928,031 overnight stays. These data confirm that some island destinations have emerged as strong tourist centres with highly developed tourist traffic. An important indicator of the structure of the offer is the share of hotel overnight stays. In this respect, Bol stands out, where as many as 59.78% of overnight stays are generated by hotels. Hvar (38.96%), Komiža (31.42%) and Korčula (27%) also have a significant share of hotel accommodation, while Mali Lošinj generates 21.92% of hotel overnight stays. In contrast, in some destinations the hotel sector has a very small share, for example in Preko only 4.15%, in Novalja 6.15%, and in Cres 6.44%, which shows that private accommodation dominates in these places.

Large differences are also visible in the intensity of tourism in the area. The highest concentration of tourist overnight stays per area is recorded in Bol with as many as 24,912 overnight stays per km², followed by Novalja with 19,221 overnight stays per km² and Rab with 16,066 overnight stays per km². On the other hand, Sali with 1,686 overnight stays per km² and Komiža with 2,085 overnight stays per km² have significantly lower values, which indicates a significantly lower tourist pressure on the area. Similar patterns are also visible in the indicator of the tourist burden on the population. Baška has as many as 58,494 overnight stays per 100 inhabitants, and Novalja has 49,981 overnight stays per 100 inhabitants, which shows a very strong tourist dominance in relation to the size of the local population. Bol (34,636) and Cres (34,169) also have high values. In contrast, Preko (5,724 overnight stays per 100 inhabitants) and Komiža (7,225 per 100 inhabitants) have significantly lower values.

There are also differences in the average length of stay of tourists. The longest stay is achieved in Preko (7.4 overnight stays per arrival) and on Cres (7.2), while on Hvar the average stay is significantly shorter and amounts to only 3.4 overnight stays, which indicates a more pronounced short-term stay where destinations are part of a larger regional tourist tour or are of an excursion nature. Overall, the analysis shows that some island destinations are already reaching a high level of tourism development and intensity, while others still have relatively moderate tourist traffic and greater scope for further development. It is precisely destinations such as Preko, Sali or Komiža, with a lower tourism development index (TDI between 26.45 and 27.97) and a lower tourist burden on the area, that have the potential to develop new tourism products and selective forms of tourism. Future development of island tourism should therefore be directed towards improving the quality of accommodation, especially through the development of the hotel sector in destinations where it is not yet sufficiently represented, as well as towards sustainable management of tourist pressure in the most visited destinations.

2.1.2 Regression analysis

2.1.2.1 Sample Predetermination and Variable Selection Criteria for Regression Analysis

The linear regression analysis was conducted on a selected sample of 11 Local Government Units (LGU) that stand out with the highest level of tourism development according to the 2024 Tourism Development Index (TDI_LGU_2024) and the highest share of the hotel industry on each island. The average TDI_LGU_2024 value in the sample is 31.65 (standard deviation 3.08), which is above the national average and clearly indicates that this is a group of the most successful tourist destinations in Croatia. The goal of regression analysis was to identify deeper insight into the key drivers of tourism success of the top tourist LGU on the Croatian islands.

For the inclusion of variables in the regression models, the standard OLS was conducted. This method assumes that all predictor variables are entered into the model simultaneously, in a single step, without any automatic addition, removal, or prioritization. The reasons for choosing this method are theoretical completeness, transparency and avoidance of overfitting in a small sample. Given the small sample size (N=11), special attention was paid to avoiding extreme multicollinearity, which can make coefficients unstable and difficult to interpret. The predictors were reduced, replaced or log-transformed to reduce distribution asymmetry, minimize the impact of outliers, and improve the linearity of relationships. In the final model, all VIFs were kept below 5 - 6, and the highest condition index did not exceed levels that would indicate a serious issue. Only variables showing at least a moderate or strong linear correlation with TDI_LGU_2024 were included (Pearson correlation coefficient $r \geq |0.30|$ or $p \leq 0.10$).

The selection of variables for the regression model was based on theoretical and practical relevance. Variables were selected to collectively cover the most important aspects of tourism development:

- TDI_LGU_2024 - local tourism development index (broader socio-economic context of the destination)
- LN_SHR_HOT_NIG - ln share of hotel overnights in total overnights (volume and structure of tourist traffic)
- N_NIG_PB - number of nights per bed (annual utilization - intensity of usage of accommodation)
- LN_H2 to LN_H5 - number of beds by star categories (quality of accommodation)

A linear regression model:
$TDI_LGU_2024 = \beta 0 + \beta 1 LN_SHR_HOT_NIG + \beta 2 N_NIG_PB + \beta 3\ LN_H2 + \beta 4\ LN_H3 + \beta 5\ LN_H2 + \beta 6\ LN_H5$

2.1.2.2 Linear regression - model and results

The regression model estimates the 2024 Local Government Tourism Development Index (TDI_LGU_2024) using several logarithmic predictors: the number of beds by hotel category (LN_H2 to LN_H5), capacity utilization (overnight stays per bed, N_NIG_PB), and the logarithmic share of hotel overnight stays (LN_SHR_HOT_NIG). The analysis covers 11 local government units on large islands.

Model quality proves very high, with a correlation coefficient of $R = 0.998$, $R^2 = 0.996$, and adjusted $R^2 = 0.991$, explaining nearly all variability in the tourism development index, as a result of a small number of islands (N=11) and a relatively large number of predictors (6).

The F-test confirms overall significance: $F(6,4) = 187.21$; $p<0.001p<0.001$, showing the predictors substantially account for TDI variations.

Precision remains robust, with a standard error of 0.290; predicted values deviate from actuals by just ±0.29 points on average, negligible against the index scale (0 - 40) and its standard deviation (SD=3.08). Residuals range from -0.284 to +0.266, indicating very good prediction in this small sample. Multicollinearity is minimal (max VIF ≤ 3.07), though the Condition Index reaches 30.874 (final dimension) borderline high but not critical. The Durbin-Watson statistic of 2.287 indicates the absence of autocorrelation in the residuals, confirming that the model satisfies an important assumption of regression analysis.

Table 2: **Regression predictors, effects, significance, multicollinearity, and interpretation**

Predictor	Beta	p	VIF	Interpretation
N_NIG_PB	0.569	0.000	2.447	Highest Beta, extremely significant – capacity utilization is a key factor
LN_H3	0.556	0.000	2.164	Second strongest – number of beds in 3 hotels is the dominant driver of TDI*
LN_H2	0.317	0.001	1.594	Significant – 2* hotels have a positive contribution
LN_SHR_HOT_NIG	0.141	0.010	1.087	Significant – higher share of hotel nights increases TDI
LN_H5	0.132	0.016	1.228	Significant – the luxury 5* segment adds value, but has a small separate contribution
LN_H4	- 0.075	0.227	3.069	Not significant – negative effect, overlap with H3/H5

Source: Author's analysis

The most important conclusion from regression analysis is that the main drivers of TDI_LGU based on a case study of 11 developed municipalities on the Croatian islands are:

- LN_H3 (3*) and LN_H2 (2*) lower categories (large number of beds - mass tourism) strongly support high TDI on the islands (strongest correlation)
- LN_H5 (5*) luxury tourism adds value
- LN_H4 (4*) negative and insignificant, it is possible that 4* hotels "compete" with 3* and 5* or are in less developed
- N_NIG_PB has the highest Beta (0.569), and capacity utilization is a key efficiency factor
- LN_SHR_HOT_NIG, a higher share of hotels in total overnight stays, additionally contributes to a higher TDI.

3. DISCUSSION

Spatial disparities in the distribution of hotel supply on Croatian islands are the result of the interaction of traffic, demographic, historical, infrastructural, and market factors. Among them, the most important are traffic accessibility and connectivity to the mainland. Islands with frequent ferry lines, air connections or bridge connections (e.g., Krk and Pag) attract significantly higher investments in the hotel sector because good accessibility reduces construction, supply and employment costs. In contrast, on islands that are more isolated from traffic, such as Vis, Lastovo or Dugi Otok, smaller family hotels and guesthouses are more likely to prevail, while larger hotel projects are absent due to higher logistics costs and limited accessibility.

The size of the island and its demographic capacity also play an important role. Larger islands such as Krk, Hvar, Brač, Korčula and Pag have a larger population and workforce, which enables a more stable functioning of the hotel industry. Small islands often do not have a sufficient number of local employees or the infrastructure necessary to accommodate seasonal workers, which increases operating costs and limits the development of larger hotel systems.

Spatial differences are further shaped by the historical development of tourism. Islands such as Lošinj and Hvar developed tourism as early as the 19th century, especially in the context of health and elite tourism, which led to their early acquisition of hotel infrastructure and reputation as destinations. On the other hand, individual destinations, such as Novalja on Pag or Bol on Brač, are examples of more intensive tourism development after the 1960s, associated with a mass market and specific tourist niches. Islands without a long tourist tradition, such as Silba, Olib or Unije, often have less developed investment networks and a smaller accumulation of tourist capital.

The development of the hotel offer is also influenced by investment dynamics and ownership structure. On islands with a higher concentration of hotels, hotel companies operate more strongly, while on smaller islands, family-run properties with limited access to capital predominate. An additional limitation is the fragmented land ownership structure and unresolved property-legal relations, which make it difficult to implement larger investment projects. Foreign investors therefore rarely invest in islands without a developed infrastructure and stable tourist demand.

Infrastructure constraints also significantly affect the spatial distribution of hotel capacity. Water supply, drainage, waste management and energy systems often determine the maximum scope of tourism development. On some islands, such as Vis or Lastovo, the existing infrastructure can hardly handle a higher tourist volume, while supply logistics increase the costs of hotel operations compared to mainland destinations.

The development of the hotel offer is additionally conditioned by spatial planning and protection constraints. Many islands have a significant share of protected natural areas, including national parks, nature parks and Natura 2000 ecological network areas, which limits the possibilities of building larger tourist capacities. Although such constraints can reduce investment potential, they also contribute to the preservation of the landscape values and identity of the islands.

Finally, market perception and destination branding also play an important role. Islands with a recognizable tourist identity, such as Hvar or Lošinj, attract investments from a higher market segment, while lesser-known destinations often remain outside the mainstream investment flows. At the same time, marketing capital acts cumulatively, so more successful destinations more easily attract new investments and additionally strengthen their market position.

Regression analysis was used to identify the key drivers of the Tourism Development Index (TDI_LGU). The greatest impact is from the number of beds in lower categories (H3), which supports mass tourism and high TDI_LGU values. The occupancy rate shows the highest beta coefficient and plays a key role in operational efficiency. While the luxury segment (H5) adds value, its contribution is smaller; H4 has almost no impact. A higher share of hotel nights increases the TDI_LGU.

The findings of the regression analysis have implications for tourism development, these include strong management possibilities focusing on optimising mass tourism through lower hotel categories and improving capacity utilisation rates, as well as investment for diversification of the offer. In order to avoid competing with the dominant categories and encourage a higher share of hotel nights for sustainable TDI-LGU growth on the islands, planners should consider stronger marketing and branding, as well as restructuring the luxury offer.

CONCLUSION

The analysis of the development and spatial disparities of tourism on the Croatian islands shows that the existing differences cannot be explained by a single isolated factor, but arise from synergy of several interconnected structural, natural, infrastructural, and historical factors. Their cumulative interaction creates a mechanism of spatial polarization of the nowadays island tourism system. The results of the spatial analysis additionally confirm that transport accessibility is one of the key factors for the tourism development of the hotel sector. Islands connected by a bridge or with frequent ferry lines have significantly higher locational tourism competitiveness. In addition to transport accessibility, the demographic base of the island also plays an important role, i.e., the availability of the local workforce necessary for the functioning of the hotel business. The historical development of tourism, the presence of established hotel companies, and the state of the utility system and infrastructure additionally reinforce the existing development differences.

The findings of the regression model of the relationship of the tourism development index on the islands indicate an interesting structural pattern of tourism development. The results show that tourism development at the level of local government units is not primarily conditioned by the luxury accommodation segment, but above all by massive mid-range hotel capacities. The number of beds in three-star hotels is shown to be the most important driver of tourism activity, while high occupancy rates are a key indicator of the efficiency of existing resources. A higher share of hotel overnight stays in the overall accommodation structure also has a positive and statistically significant impact, suggesting that strengthening a more organized hotel sector can contribute to a higher level of tourism development.

The current situation of spatial disparities in tourism, and in particular the hotel sector on the Croatian islands, points to the so-called “inner core islands” (Krk, Lošinj, Brač and Hvar), characterized by higher hotel density, diversified tourist offer and higher revenue per night, while on the other hand there are the “outer core islands” (Rab, Cres, Pag and Korčula) with somewhat lower tourist and hotel activity, and “peripheral and marginalized islands” (Ugljan, Dugi otok, Vis and other smaller and offshore islands) with a poorly present or underdeveloped hotel sector and an orientation towards private accommodation. The described development pattern reflects the classic dynamics of the relationship between the centre and the periphery: development processes are concentrated in areas with more favourable traffic, infrastructure, and socio-economic conditions, while areas with limited resources and poorer accessibility remain developmentally marginalized.

The fact that certain islands still retain “peripheral” characteristics in today’s tourism landscape makes them a good starting point for redefining the periphery as a premium resource. In this context, isolation and limited infrastructure are not to be seen as signs of marginalisation, but as valuable features for creating exclusivity. In this context, physical distances from the shore and more difficult accessibility are to be taken as the primary foundations of luxury tourism based on privacy and untouched nature. Consequently, with the right marketing and management, these areas can be transformed into valuable, strategically positioned destinations with high added value.

In the context of limited spatial resources and sensitive island ecosystems, future tourism development on the Croatian islands will probably not be based on large hotel complexes, but rather on smaller, spatially integrated and more sustainable forms of accommodation. The potential for development can be particularly recognized in the gradual transformation of some private accommodations into more organized and higher-quality forms of tourist accommodation such as boutique hotels, diffuse hotels, aparthotels, and smaller family hotels. Such a development direction can contribute to the formation of a tourist environment of high-quality services, focused on an authentic island experience, in the context of offering an escape from urbanized everyday life, in direct contact with the local community, preserved nature, active vacation, and quality eno-gastronomy.

Spatial disparities in the development of tourism and the hotel industry on Croatian islands are not only an issue of tourism, but also of broader island development, the availability of public services and the long-term sustainability of island communities. Their mitigation requires a coordinated approach that includes strengthening transport and digital connectivity, encouraging sustainable small-scale investment models, and developing local brands and off-season tourism products.

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