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SUSTAINABILITY-ORIENTED PREFERENCES FOR ADRIATIC ISLAND DESTINATIONS: AN EXPLORATORY PCA APPROACH

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Abstract: *This study examines sustainability-oriented tourist preferences for Adriatic island destinations and explores the underlying dimensions that structure destination choice. Particular attention is given to natural and environmental values, tourism and development pressures, cultural authenticity, local identity, and the experiential qualities associated with island tourism. The empirical research was conducted between June and September 2025 on a stratified random sample of 529 tourists visiting selected Adriatic islands. Data were collected using a structured questionnaire covering socio-demographic characteristics, travel behaviour, destination values, and sustainability-related attitudes and perceptions. Descriptive and bivariate analyses examined individual preference patterns, while principal component analysis (PCA) was used as an exploratory technique to identify the underlying structure of sustainability-oriented destination preferences. The measurement instrument demonstrated high internal consistency, while the Kaiser–Meyer–Olkin measure and Bartlett’s test confirmed the suitability of the data for component analysis. The findings indicate that tourists attach particular importance to natural and environmental qualities, contact with nature, lower tourism intensity, and the preservation of cultural and local identity. The exploratory PCA revealed three distinct dimensions of sustainability-oriented island destination preferences: avoidance of mass tourism and development pressures, natural values and the psychological experience of vacation, and cultural authenticity and local identity. Together, these dimensions accounted for 67.80% of the total variance. The findings contribute to a more differentiated understanding of sustainability-oriented destination choice by demonstrating that tourists perceive island sustainability as a multidimensional combination of environmental, experiential, developmental, and cultural attributes. The study also provides practical implications for destination managers seeking to balance tourism development with environmental preservation, authentic visitor experiences, and the protection of local identity.*

Keywords: *Adriatic islands; island destinations; sustainability-oriented preferences; tourist preferences; sustainable tourism; principal component analysis*

JEL Classification: *L83, Q01, Q56, Z32*

INTRODUCTION

Tourism is one of the most important economic activities in the Republic of Croatia, with island destinations occupying a special place due to their natural, spatial-geographical and socio-cultural characteristics. The Adriatic islands are at the same time carriers of exceptional tourism potential and extremely sensitive spatial systems, whose limited carrying capacity, isolation and dependence on natural resources require careful planning and development management. In this context, the issue of sustainability is no longer a normative ideal, but a necessary prerequisite for the long-term competitiveness and preservation of island destinations. The modern tourist shows an increasingly pronounced preference for destinations that offer authentic experiences, preserved nature, lower levels of crowds and more direct contact with the local community. Such patterns of behaviour are particularly evident in the context of island destinations, which, in the perception of tourists, often contrast with coastal and urban areas marked by mass tourism. However, at the same time, the strengthening of tourist demand for islands creates strong development pressures which, if not aligned with the principles of sustainable development, can lead to spatial degradation, disruption of the quality of life of the local population and the loss of fundamental destination values. In the scientific literature of recent decades, increasing attention has been paid to the study of the relationship between tourist preferences, destination characteristics and the concept of sustainable development. Research on tourist destination choice has traditionally developed along several related but conceptually distinct streams. Motivation research explains the internal forces that stimulate travel, most notably through the push–pull framework (Dann, 1977; Crompton, 1979), whereas destination image research focuses on tourists' cognitive and affective representations of destinations and their role in destination evaluation and behavioural intentions (Pike, 2002; Pike, 2007). A further stream examines sustainability-related destination attributes, including environmental quality, resource preservation, carrying capacity, tourism intensity, and the social and economic consequences of tourism development (Gössling et al., 2017; Rodríguez et al., 2008). More recent research has additionally highlighted ecological destination image, environmental beliefs, overtourism, and the vulnerability of tourism-dependent island destinations (Luong, 2023; García-Buades et al., 2022; Krajičková et al., 2022; Slijepčević & Kordej-De Villa, 2025). Although these research streams provide important insights into destination choice, they address different stages and components of tourists' decision-making processes. Motivation explains why individuals travel; destination image reflects what they believe and feel about a destination; attitudes represent favourable or unfavourable evaluations; perceived sustainability concerns tourists' assessments of sustainability-related destination characteristics; and satisfaction is predominantly a post-consumption evaluation of the tourism experience. Destination preference, as conceptualised in this study, refers instead to the relative desirability tourists assign to destination characteristics when evaluating

an island as a potential or actual holiday destination. Preference therefore represents an evaluative orientation toward destination attributes rather than being synonymous with motivation, image, attitude, perceived sustainability, or satisfaction. Within this conceptualisation, sustainability is not treated as a single preference construct in itself. Rather, sustainability-related characteristics constitute a set of destination attributes that may become preference-relevant when tourists evaluate alternative island experiences. Environmental preservation, limited tourism and development pressure, contact with nature, cultural authenticity, and preservation of local identity may therefore contribute to destination preference insofar as tourists perceive these characteristics as desirable features of the island tourism experience.

This distinction is particularly relevant for island destinations. Their spatial limitations, ecological sensitivity, dependence on natural resources, exposure to tourism pressure, and strong place-based cultural identities create conditions in which environmental, experiential, developmental, and cultural attributes are closely intertwined. Existing studies provide substantial evidence on individual elements of this relationship, but the literature reviewed here provides less insight into whether these sustainability-related attributes form a coherent multidimensional structure of tourist preferences in the specific context of Adriatic islands. Accordingly, the research gap addressed in this study is not the absence of research on sustainable tourism or destination choice, but the limited empirical integration of these attributes into an exploratory structure of sustainability-oriented island destination preferences. The purpose of this study is therefore to examine how sustainability-related attributes are reflected in tourists' preferences for Adriatic island destinations and to explore whether these attributes can be organised into a smaller number of conceptually meaningful preference dimensions. Principal component analysis (PCA) is employed for this exploratory purpose rather than to confirm a predetermined theoretical measurement model. A special research challenge is the identification of latent dimensions that structure tourist preferences and their perception of sustainability, which go beyond individual, isolated variables.

Based on the above, the purpose of this paper is to develop and empirically test a model of island destination preferences with an emphasis on sustainability, based on tourist perceptions and attitudes. The research relies on a combination of descriptive, bivariate and multivariate statistical procedures, where principal component analysis (PCA) allows the reduction of a large number of manifest variables and the identification of key latent factors that shape the choice of an island destination. Such a methodological approach allows for a deeper understanding of the complex relationships between destination values, travel motives and attitudes towards island development.

In the present study, sustainability is therefore conceptualised primarily at the attribute level rather than as a synonym for destination preference. Environmental preservation, responsible development, lower tourism intensity, protection of natural resources, and preservation of cultural and local identity represent characteristics of a destination that tourists may evaluate with different degrees of desirability. When such attributes systematically influence tourists' evaluations of island destinations, they become components of sustainability-oriented destination preference. The term "sustainability-oriented preference" consequently refers to a pattern of tourist evaluations in which sustainability-related destination attributes receive particular importance in the assessment of island attractiveness.

OVERVIEW OF PREVIOUS RESEARCH

Research into the selection of a tourist destination traditionally starts from travel motivation and the decision-making process. Classic works emphasise that destination choice is shaped by a combination of internal incentives (e.g., escape, relaxation, self-discovery) and external destination attributes (e.g., facilities, natural resources, safety), later conceptualised through the push–pull framework. Within this approach, *push* factors explain why a tourist travels, while *pull* factors explain why a specific destination is chosen (Dann, 1977; Crompton, 1979). More recent studies confirm the enduring relevance of the push–pull logic, while also highlighting the need for more precise measurement and hierarchical modelling, particularly when motivations are linked to sustainability perceptions and quality of experience (Joseph, 2025).

Alongside motivation, destination image consistently emerges as a key predictor of tourist preferences, satisfaction, and behavioural intentions. Review studies indicate that destination image is predominantly conceptualised as a multidimensional construct, although significant methodological heterogeneity remains in its operationalisation (Pike, 2002; Pike, 2007). Sustainability is increasingly framed as an integrated concept encompassing economic, social, and environmental impacts of tourism, balancing the needs of visitors, industry, and local communities (UN Tourism, n.d.; UN DESA, n.d.). Consequently, destination research increasingly examines how sustainability-related attributes influence perceived quality, competitiveness, and attractiveness. Empirical studies demonstrate that sustainability variables can exert a strong and direct effect on destination competitiveness, frequently tested using multivariate techniques such as PCA and regression analysis (Rodríguez, 2008). In the field of tourist behaviour, recent research further confirms the importance of ecological destination image, environmental beliefs, and attitudes toward ecotourism in shaping destination evaluation and behavioural intentions (Luong et al., 2023; Huo et al., 2023). Island destinations are typically characterised as spatially limited and ecologically sensitive systems, exposed to seasonality, infrastructural constraints, and strong dependence on natural resources. Because of this limited carrying capacity, the literature increasingly emphasises the need for careful development management and a balance between economic benefits and resource conservation (Gössling et al., 2017).

A similar distinction is necessary between destination preference and destination image. Destination image concerns the set of cognitive beliefs and affective impressions tourists hold about a destination, whereas preference concerns the relative desirability assigned to destination characteristics during evaluation and choice. A destination may therefore be perceived as highly developed, accessible, culturally rich, or environmentally preserved without all of these characteristics being equally preferred by a particular tourist. Attitude represents a broader favourable or unfavourable evaluation of the destination, while satisfaction generally refers to a post-visit assessment of whether the experience met or exceeded expectations. Perceived sustainability, in turn, reflects tourists' assessment of how environmentally, socially, or economically sustainable a destination appears to be. These constructs may influence one another, but they should not be treated as interchangeable with destination preference.

The push–pull framework provides a useful starting point for understanding the distinction between travel motivation and destination preference. Push motives refer to internal psychological forces that generate the desire to travel, such as escape, relax-

ation, novelty, or self-discovery, whereas pull factors represent destination characteristics perceived as capable of satisfying those motives (Dann, 1977; Crompton, 1979). From this perspective, preference emerges at the evaluative stage at which tourists assign different levels of desirability to destination attributes. A tourist may, for example, be motivated by escape and relaxation, while preferring an island destination because it is perceived as less crowded, environmentally preserved, authentic, and conducive to contact with nature. Motivation and preference are therefore theoretically related but conceptually distinct: motivation provides the internal reason for travelling, whereas preference reflects the relative attractiveness of destination characteristics capable of satisfying that motivation.

In the Croatian context, studies on tourism development in offshore islands (e.g., Dugi otok, Vis, Lastovo, Mljet) highlight the importance of aligning tourism growth with local resources and the preferences of both tourists and residents, favouring selective and sustainable forms of tourism (Razović, 2015). Further research shows that high dependence on tourism can generate structural vulnerability, often analysed through residents' attitudes and the sustainability of tourism-led transformation (Slijepčević, 2025). The concept of overtourism has gained increasing attention, particularly in island and coastal destinations, where excessive demand may undermine residents' quality of life and visitor experience. Empirical evidence suggests that perceptions of overtourism significantly influence stakeholder attitudes and destination evaluations, underscoring the role of management strategies and tourist behaviour in mitigating negative impacts (García-Buades et al., 2022; Krajčková & Králiková, 2022). Recent European practice further confirms a shift from growth-oriented strategies toward carrying capacity management and "quality over quantity" approaches (Le Monde, 2024). In destination preference research, the combined use of descriptive indicators, bivariate tests, and multivariate techniques is common, with PCA/factor analysis frequently employed to reduce large sets of indicators and identify latent dimensions of destination values. This approach is particularly suitable when preferences are measured using extensive batteries of statements and when the objective is to construct parsimonious and interpretable preference models (Rodríguez, 2008; Bui, 2024). In the context of island destinations, such techniques enable the identification of core dimensions—such as natural values, avoidance of mass tourism, authenticity, and cultural heritage—which are central to sustainability-oriented preference models.

The conceptual framework proposed in this study integrates the previously discussed research streams through an attribute–experience–preference mechanism. The underlying assumption is that tourists do not evaluate sustainability-related destination characteristics in isolation. Instead, destination attributes acquire preference value through the type of experience they are expected to facilitate. Environmental preservation and limited development pressure contribute to the perception of an island as relatively intact and differentiated from highly urbanised tourism environments. Lower levels of mass tourism and crowding may enhance perceptions of tranquillity, privacy, escape, and psychological restoration. Preserved cultural heritage, local traditions, and community identity contribute to perceptions of authenticity and place distinctiveness. These environmental, developmental, experiential, and cultural characteristics therefore represent different but potentially interconnected routes through which an island destination may acquire preference value.

The proposed mechanism can be expressed conceptually as:

Destination attributes → perceived experiential value → sustainability-oriented destination preference.

Within this framework, environmental preservation, controlled tourism development, and cultural authenticity are primarily destination attributes; contact with nature, peace, escape, relaxation, and perceived authenticity represent experiential or evaluative consequences of those attributes; and destination preference represents the relative desirability attached to this configuration of characteristics. The framework therefore does not assume that all sustainability attributes constitute a single latent construct. Rather, it proposes that they may form several interconnected preference dimensions whose empirical structure should be explored. This approach is particularly appropriate for island destinations because the tourism experience is strongly dependent on the relationship between environmental quality, development intensity, spatial characteristics, cultural identity, and opportunities for psychological and experiential escape. The exploratory question is therefore whether tourists evaluate these characteristics independently or whether they cluster into broader and conceptually interpretable dimensions of sustainability-oriented preference.

RESEARCH METHODOLOGY AND RESEARCH RESULTS

The development of island tourism increasingly takes place under conditions of growing pressure on limited spatial resources, natural ecosystems, infrastructure, and local communities. In this context, sustainability represents not only a destination management objective but also an increasingly relevant element of tourists' perceptions and destination preferences. Island destinations are particularly sensitive to these pressures because their attractiveness is closely associated with preserved natural environments, landscape quality, cultural authenticity, local identity, and the possibility of experiencing tourism outside highly urbanised and congested settings. Despite growing academic interest in sustainable tourism, there remains a need for a more integrated understanding of how sustainability-related destination attributes are reflected in tourists' preferences for island destinations. The research problem therefore concerns the structure of sustainability-oriented tourist preferences and, more specifically, whether individual perceptions related to natural values, tourism intensity, development pressures, cultural authenticity, local identity, and the experiential qualities of island tourism form broader and interpretable preference dimensions. Accordingly, the subject of the research is tourists' sustainability-oriented preferences for Adriatic island destinations, examined through their attitudes, travel motives, perceptions of destination attributes, and evaluations of sustainability-related characteristics.

The general objective of the study is to examine the structure of sustainability-oriented tourist preferences for Adriatic island destinations and to identify the key dimensions underlying destination choice.

More specifically, the study aims to:

- examine the importance tourists attach to natural and environmental attributes when choosing an island destination;
- assess tourists' perceptions of different dimensions of island sustainability;
- examine attitudes towards mass tourism, overcrowding, and development pressures;

- investigate the perceived importance of cultural authenticity, heritage, and local identity;
- examine the role of experiential attributes, particularly contact with nature, peace, relaxation, and escape from everyday life; and
- explore whether individual sustainability-related destination attributes can be reduced to a smaller number of meaningful underlying dimensions that provide a more parsimonious representation of tourists' island destination preferences.

Based on the theoretical framework and the exploratory nature of the empirical analysis, the following hypotheses were formulated:

H1. Tourists attach greater importance to natural and environmental destination attributes than to infrastructural and transport-related attributes when choosing Adriatic island destinations.

H2. Sustainability-related attributes, particularly natural and environmental qualities, represent important determinants of tourists' preferences for Adriatic island destinations.

H3. Tourists perceive mass tourism, overcrowding, and excessive development pressures as factors that reduce the attractiveness and perceived sustainability of Adriatic island destinations.

H4. Sustainability-oriented tourist preferences for Adriatic island destinations are structured around a smaller number of distinct underlying dimensions integrating natural and experiential values, avoidance of tourism and development pressures, and cultural authenticity and local identity.

The empirical research was conducted using a quantitative cross-sectional research design. Data were collected through a structured questionnaire administered to tourists visiting selected Adriatic islands between 1 June and 30 September 2025. The study included a stratified random sample of 529 tourists visiting Dugi otok, Krk, Lošinj, Vis, and Mljet. The empirical research was conducted using a quantitative cross-sectional research design. Data were collected through a structured questionnaire administered to tourists visiting selected Adriatic islands between 1 June and 30 September 2025. The study included a stratified random sample of 529 tourists visiting Dugi otok, Krk, Lošinj, Vis, and Mljet. The empirical research was conducted using a quantitative cross-sectional research design. Data were collected between 1 June and 30 September 2025 among tourists visiting five selected Adriatic islands: Krk, Lošinj, Vis, Dugi otok, and Mljet. The final sample consisted of 529 respondents. The sampling procedure was organised by island destination, with each island representing a separate sampling stratum. The stratification was introduced to ensure the representation of tourists visiting island destinations characterised by different levels of tourism development, accessibility, tourism intensity, and environmental and cultural characteristics. The final sample was distributed across the five strata as follows: Krk ($n = 150$; 28.36%), Lošinj ($n = 125$; 23.63%), Vis ($n = 115$; 21.74%), Dugi otok ($n = 111$; 20.98%), and Mljet ($n = 28$; 5.29%). Krk therefore represented the largest stratum, followed by Lošinj, Vis, and Dugi otok, while Mljet accounted for the smallest proportion of respondents. The sampling frame consisted of tourists present on the selected islands during the data-collection period and accessible at predefined survey locations. The inclusion criteria required respondents to be tourists visiting one of the selected

islands during the research period, to voluntarily agree to participate, and to provide a sufficiently completed questionnaire. Only one questionnaire per respondent was included in the final dataset. Within each island stratum, respondents were approached during different days and time periods at selected tourist locations in order to achieve broader coverage of the tourist population and reduce location- and time-related selection bias. All 529 respondents were included in analyses performed on the total sample, including the exploratory principal component analysis. However, due to the substantially smaller number of respondents surveyed on Mljet ($n = 28$), this stratum was excluded from selected island-specific descriptive comparisons in Tables 5–7 in order to avoid overinterpretation of results based on a comparatively small subsample.

The questionnaire covered respondents' socio-demographic characteristics, travel behaviour, perceptions of island destination attributes, attitudes towards sustainability, tourism and development pressures, natural and cultural values, and experiential characteristics associated with island tourism. Sustainability-related perceptions and destination preferences were primarily measured using five-point Likert-type scales. The analytical procedure was conducted in several stages. First, descriptive statistics were used to examine the characteristics of the sample and the distribution and intensity of tourists' evaluations of individual destination attributes. Second, bivariate statistical procedures were applied to examine selected differences and relationships between variables. Finally, principal component analysis (PCA) was employed as an exploratory multivariate technique to identify the underlying structure of sustainability-oriented destination preferences and to reduce a larger set of interrelated observed variables into a smaller number of interpretable components. The final analytical sample consisted of 529 tourists surveyed across five Adriatic island destinations: Dugi otok, Krk, Lošinj, Vis, and Mljet. Mljet was included in the original study sample, with 28 respondents surveyed on the island. However, because the Mljet subsample was substantially smaller than the subsamples available for the other island destinations, it was retained in analyses based on the total sample but excluded from selected island-specific comparisons presented in Tables 5–7. This decision was made to avoid overinterpreting descriptive differences based on a relatively small island-specific subsample.

Accordingly, analyses referring to the overall sample ($N = 529$), including the exploratory principal component analysis, include respondents surveyed on Mljet. By contrast, Tables 5–7 present descriptive comparisons only for Dugi otok, Krk, Lošinj, and Vis. The distinction between pooled analyses and island-specific comparisons is explicitly stated in the revised manuscript.

The empirical part of the study was conducted using a **quantitative cross-sectional research design**. The study does not employ a mixed-methods design. Data were collected through a structured questionnaire administered to tourists visiting selected Adriatic islands between 1 June and 30 September 2025. The final sample consisted of 529 tourists visiting Dugi otok, Krk, Lošinj, Vis, and Mljet. The questionnaire was designed to capture respondents' socio-demographic characteristics, travel behaviour, perceptions of island destination attributes, attitudes towards sustainability, tourism and development pressures, natural and cultural values, and experiential characteristics associated with island tourism. Sustainability-related perceptions and destination preferences were primarily measured using five-point Likert-type scales.

Table 1. Respondents according to sociodemographic characteristics (N=529)

Variable and variable form	Number of respondents	Percentage of respondents
Sex		
Male	218	41,21%
Female	311	58,78%
Total	529	100,00%
Age		
15 - 24	61	11,53%
25 - 34	207	39,13%
35 - 44	134	25,33%
45 - 54	72	13,61%
55 - 64	36	6,81%
65+	19	3,59%
Total	529	100,00%
School preparation		
Elementary School	17	3,21%
High School	78	14,74%
College	249	47,06%
Faculty	85	16,09%
Master's Degree	81	15,31%
Doctorate	19	3,59%
Total	529	100,00%
Personal monthly income		
To 800 eur	82	15,50%
801 – 1200 eur	228	43,10%
12001 – 1700 eur	119	22,50%
1701 – 2200 eur	31	5,86%
More than 2200 euros	69	13,04%
	529	100%
Place of employment		
Public authority	47	8,9%
Non-governmental organizations	65	12,27%
Craft	42	7,94%
Company	336	63,52%
Institution	39	7,37%
Type of employment		
Agency mediation	33	6,23%
Banking and insurance	73	13,80%
State or local government	41	7,75%
Industry	167	31,57%
Utilities	16	3,02%

Culture	25	4,73%
Education	26	4,91%
Personal services	32	6,05%
Traffic	39	7,37%
Sports and recreation	9	1,71%
Hospitality	51	9,64%
Fun	9	1,71%
The rest	8	1,51%

Source: author's work

Respondents could answer the questionnaire questions with only one of several possible answers. The sample of respondents consisted of 41.21% men and 58.78% women. Of the more significant age groups, we singled out three groups. 39.13% of respondents were aged 25-35, while 25.33% were respondents between 35-44 years of age, and 13.61% represented the 45-54 age group. Regarding education, almost 2/3 (63.15%) of the respondents have a higher education, 14.74% have a secondary school, and 15.31% of the respondents 81 have completed a master's degree, and 3.59% have a doctorate. Looking at the criterion of type of employment, the majority of people are employed in industry at 31.5%, followed by banks and institutions with 13.5%. By place of employment, 63.52% of respondents work in companies, while 12.27% of respondents are employed in non-governmental organisations. 13.80% earn their monthly income in banking and insurance, 9.64% work in the hospitality industry, 7.37% in transport, 7.75% in state or local administration, 6.23% in agency work, and 6.05% in personal services.

Table 2. Frequency of travel to one of the Adriatic islands for more than three days in the last 12 months

Frequency of travel to one of the Adriatic islands for more than three days in the last 12 months	Number of responses	Percentage of respondents
0 – 1 travel	156	29,49%
2 – 3 travels	228	43,10%
4 – 5 travels	103	19,47%
6 – 10 travels	42	7,94%
11 – 15 travels	0	0%
More than 16 travels	0	0%
Total	529	100,00%

Source: author's work

Accordingly, (Table 2.) 43.0% of respondents who have traveled to the Adriatic islands for more than three days in the last 12 months travel 2 to 3 times a year, 19.47% of respondents who have traveled to the Adriatic islands for more than three days in the last twelve months travel 19.47%, 7.94% of respondents travel between 6 and 10 times, and 29.49% of respondents travel 0-1 time more than three days in the last twelve months. In addition to the stated frequency of travel to the Adriatic islands, some dependent variables will be compared in later analyses, with the frequency of

travel being expressed in only three groups (less frequent, medium and more frequent). Less frequent travel, expressed in further analyses, is travel from 0-1 time, medium travel to the Adriatic islands is 2-3 times during the year, and more frequent travel is travel from four or more times.

Table 3. Daily non-passionate spending per family member on vacation (N=529)

Daily non-passionate spending per family member on vacation (N=529)	Number of responses	Percentage of respondents
to 50,00 eur	17	3,21%
of 51,00 to 100,00 eur	40	7,56%
of 101,00 to 200,00 eur	45	8,50%
of 201,00 to 350,00 eur	66	12,48%
of 351,00 to 500,00 eur	184	34,78%
of 501,00 to 750,00 eur	105	19,86%
More than 751,00 eur	72	13,61%
Total	529	100,00%

Source: author's work

Tourist destinations are spatial units of tourist offer consisting of direct tourist receptive capacities such as accommodation, food and supplies, entertainment, sports and recreation and indirect capacities such as shops, crafts, cultural institutions, and various sights. All of the above capacities, facilities and activities are objective pre-requisites for the development of tourism in a tourist destination and more or less participate in satisfying the needs of consumers in tourism and make up the structure of non-passive consumption.

Table 4. Descriptive indicators of the intensity of influence of destination values, i.e. destination characteristics, on choosing an island as a vacation destination

Descriptive indicators of the intensity of influence of destination values, i.e. destination characteristics, on choosing an island as a vacation destination	Arithmetic mean	Standard deviation	Coefficient of variation
Peace and less crowding	2,87	1,188	41
Less tourist development (mass development)	2,82	1,450	51
A wider range of indigenous products	2,33	1,402	60
Greater preservation and protection of the environment	3,13	1,055	34
Greater diversity of landscapes and natural beauty (e.g. beaches)	3,16	1,125	36
Better preservation of flora and fauna	3,19	1,195	38
Better hotel offers and hotel facilities	2,21	1,083	49
Diversity of the indigenous gastronomic offer.	2,33	1,402	60
Better destination marketing	2,61	1,122	43
A multitude and diversity of sports and recreational facilities	2,81	1,270	45
Greater kindness and hospitality of the local population	3,12	1,314	42
Richer and greater diversity of vegetation	4,12	0,943	23

Greater presence of historical and cultural landmarks	3,46	1,226	35
Better supply of domestic food products	2,95	1,259	43
Better transport connections	2,12	1,395	66
Better entertainment and event facilities	2,86	1,327	46
Better revitalisation of the landscape	3,37	1,194	35
Total	2,91	1,221	44

Source: author's work

The results presented in Table 4 indicate that natural and environmental attributes have the strongest influence on the choice of an island destination. The highest mean was recorded for richer and greater diversity of vegetation ($M = 4.12$), followed by the presence of historical and cultural landmarks ($M = 3.46$), landscape revitalisation ($M = 3.37$), preservation of flora and fauna ($M = 3.19$), and landscape diversity and natural beauty ($M = 3.16$). In contrast, transport connections ($M = 2.12$) and hotel offers and facilities ($M = 2.21$) were rated as the least influential destination characteristics. The coefficient of variation indicates the greatest agreement among respondents regarding vegetation diversity ($CV = 23\%$), while opinions were most heterogeneous regarding transport connections ($CV = 66\%$). Overall, the findings suggest that natural, environmental, and cultural values are more important in island destination choice than infrastructure and conventional tourism facilities.

Although only 28 valid questionnaires were collected on Mljet, the island was deliberately retained in the study because of its particular relevance to the research context of sustainable island tourism. Mljet represents an especially valuable case from a sustainability perspective due to its highly preserved natural environment, relatively limited level of tourism development and urbanisation, strong dependence on natural resources, and the importance of maintaining a balance between tourism development and environmental protection. These characteristics make Mljet particularly relevant for examining sustainability-oriented tourist preferences, especially those related to environmental preservation, contact with nature, lower tourism intensity, limited development pressures, and the preservation of authentic island identity. The relatively small number of respondents from Mljet ($n = 28$) resulted from fieldwork conditions and the lower number of eligible and accessible respondents encountered at the pre-defined survey locations during the data-collection period. Therefore, the smaller Mljet subsample should be interpreted as a fieldwork limitation rather than as an indication of the lower analytical or conceptual importance of the destination. Given the specific sustainability characteristics of Mljet, excluding the island entirely from the study would have reduced the diversity of island contexts represented in the sample. For this reason, the 28 respondents from Mljet were retained in all analyses conducted at the level of the total sample ($N = 529$), including the exploratory principal component analysis. However, because the Mljet subsample was substantially smaller than those of Krk, Lošinj, Vis, and Dugi otok, it was excluded from selected island-specific comparisons in Tables 5–7. This methodological decision was made to avoid overinterpreting potentially unstable differences based on a small destination-specific subsample while simultaneously preserving Mljet's contribution to the overall analysis of sustainability-oriented preferences.

Table 5. Descriptive indicators of acceptance of individual statements regarding the preservation of the landscape and the beauty of nature

Averment	Island	Arithmetic mean	Standard deviation	Coefficient of variation
I visit islands because of the A greater diversity of landscapes and natural beauty, e.g. beaches	Dugi Otok	3,44	1,129	33
	Krk	3,23	1,271	39
	Lošinj	3,62	1,111	31
	Vis	3,36	1,175	35
I visit islands because there is greater preservation and protection of nature.	Dugi Otok	3,59	1,164	32
	Krk	3,38	1,304	39
	Lošinj	3,64	1,125	31
	Vis	3,32	1,215	37
I visit islands because the flora and fauna are better preserved.	Dugi Otok	2,58	1,125	44
	Krk	2,56	1,198	47
	Lošinj	3,93	0,96	24
	Vis	3,46	1,172	34
I visit islands because of the abundance and diversity of sports and recreational facilities	Dugi Otok	2,45	1,166	48
	Krk	2,44	1,215	50
	Lošinj	3,7	1,196	32
	Vis	3,54	1,248	35
I visit islands for the richer and greater diversity of vegetation	Dugi Otok	1,56	0,882	57
	Krk	1,41	0,826	59
	Lošinj	2,29	1,314	57
	Vis	3,87	1,172	30

Source: author's work

The results in Table 5 confirm that **nature preservation, landscape diversity, and natural beauty** are key factors in island destination choice. **Lošinj and Vis** show the strongest ecological recognition, with Lošinj achieving the highest ratings due to its well-preserved environment. **Krk and Dugi otok** receive lower scores, indicating weaker ecological differentiation. All islands are perceived as ecologically attractive, while sports and recreational facilities are most developed on Lošinj and Vis. Overall, respondents strongly value **flora and fauna**, emphasising Mediterranean biodiversity as a central determinant of destination selection.

Table 6. Level of acceptance of the statement that the chosen island allows for better contact with nature (N=529)

Averment	Island	Stupanj prihvaćanja		Averment			Total
		1	2	3	4	5	
The chosen Island allows better contact with nature	Dugi otok	18	44	98	198	137	495
	Krk	46	71	122	262	179	680
	Lošinj	36	57	101	293	223	710
	Vis	26	33	121	254	221	655
	Total	126	205	442	1.007	760	2.540

Source: author's work

Note: 1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree. In each row of the table, the highest absolute (modal) and relative frequencies are printed in bold.

Note: N = 529 refers to the number of unique respondents. Respondents were allowed to select and evaluate more than one island; therefore, the island-specific frequencies represent multiple responses and are not mutually exclusive. The total of 2,540 refers to the number of recorded island evaluations rather than the number of respondents. Consequently, percentages and frequencies presented in this table should be interpreted at the response/evaluation level, not as independent respondent-level observations.

Table 7. Descriptive indicators prihvaćanja Averment da The chosen island allows for better contact with nature (N=529)

Averment	Island	Descriptive	indicators	
		Arithmetic mean	Standard deviation	Coefficient of variation
A secluded island allows for better contact with nature	Dugi otok	3,53	1,319	46
	Krk	3,58	1,314	42
	Lošinj	3,85	0,943	23
	Vis	3,71	1,059	27

Source: author's work

Table 7 presents descriptive indicators for the statement “*The chosen island allows for better contact with nature*” across four island destinations. Lošinj is rated highest ($M = 3.85$) with the lowest variability, indicating a strong and consistent perception of nature-oriented experiences. Vis follows with a slightly lower mean ($M = 3.71$) and moderate dispersion, reflecting a stable but more diverse evaluation. Dugi otok and Krk show lower mean values and higher variability, suggesting more heterogeneous perceptions, likely due to greater spatial diversity and development pressures. Overall, the results confirm that contact with nature is a key factor in island destination preferences, with less developed and ecologically oriented islands perceived as offering more authentic natural experiences.

Table 8. Respondents' attitudes towards the most important aspects of island sustainability

Respondents' attitudes towards the most important aspects of island sustainability	Number of responses	Percentage of respondents
social aspect (encouraging people to stay on the island, demographic development)	93	8,70%
economic aspect (development of entrepreneurship in line with sustainable development, family farms, farming, and indigenous gastronomy)	344	32,51%
ecological aspect (disposal of municipal waste, no illegal landfills)	212	20,04%
energy aspect (energy independence: solar energy, own water supply, etc.)	94	8,89%
natural aspect (establishment of an ecosystem, symbiosis of flora and fauna)	315	29,77%
Total	1.058	100,00%

Source: author's work

Table 8 shows that respondents consider **economic sustainability** the most important aspect of island sustainability (32.51%), particularly through entrepreneurship development, local agriculture, and indigenous gastronomy. This is followed by **environmental preservation** of flora, fauna, and natural landscapes (29.77%). **Infrastructure and resource management**, including water supply, transport, and waste management, are ranked third (20.04%). In contrast, **social sustainability** (8.70%) and **energy efficiency and independence** (8.89%) are perceived as less important, indicating that tourists prioritise economic and natural aspects over social and energy dimensions of island sustainability.

Table 9. Tourists' opinions on the importance of respecting the opinions and views of residents on the sustainability of the island

Tourists' opinions on the importance of respecting the opinions and views of residents on the sustainability of the island	Number of responses	Percentage of respondents
Yes, completely	193	36,48%
Yes, to some extent	161	30,43%
I don't know	78	14,74%
No, to some extent	53	10,02%
No, completely	44	8,32%
Total	529	100,00%

Source: author's work

Most respondents (66.91%) consider the local population a key stakeholder in island development and sustainable tourism, recognising that poor resource management directly threatens environmental values and residents' quality of life. A smaller share (14.74%) expressed no clear opinion, while 18.34% believe that residents' views do not need to be fully considered in tourism development.

Table 10. Tourists' opinion on the availability of information on new municipal and transport infrastructure projects and investment projects (N=529)

Tourists' opinion on the availability of information on new municipal and transport infrastructure projects and investment projects (N=529)	Number of responses	Percentage of respondents
Yes, completely	168	31,76%
Yes, to some extent	155	29,30%
I don't know	89	16,82%
No, to some extent	65	12,29%
No, completely	52	9,83%
Total	529	100,00%

Source: author's work

The results presented in Table 10 indicate a generally positive perception of the availability of information on new municipal and transport infrastructure and investment projects. A total of **61.06% of respondents expressed a positive assessment**, with 31.76% responding "Yes, completely" and 29.30% "Yes, to some extent". In contrast, 22.12% expressed a negative assessment, while 16.82% were undecided. These findings suggest that information on infrastructure and investment development represents a relevant element of tourists' perception of island destinations, particularly in the context of transparency and sustainable destination development.

Table 11. Descriptive statistics and t-test for the items visited at the island destination

Item	N	M	SD	95% CI	t	p
Satisfactory gastronomic offer	529	4,11	0,93	4,03–4,19	2,72	0,007
Satisfactory hospitality and friendly local population	529	3,85	0,98	3,77–3,93	–3,52	<0,001
Satisfactory hotel accommodation and facilities provided by the hotel	529	4,13	0,86	4,06–4,20	3,48	<0,001
Satisfactory cultural and historical heritage	529	3,97	0,99	3,89–4,05	–0,70	0,486
Satisfactory offer of domestic food products	529	3,64	0,84	3,57–3,71	–9,86	<0,001
Satisfying natural beauty	529	3,59	0,84	3,52–3,66	–11,23	<0,001
Satisfactory transport connections	529	4,02	0,79	3,95–4,09	0,58	0,561
Satisfactory variety of catering facilities and other entertainment content	529	3,98	0,89	3,90–4,06	–0,52	0,605
Fewer crowds due to fewer tourists	529	4,27	0,78	4,20–4,34	7,96	<0,001
Satisfactory sports and recreational facilities	529	4,00	0,84	3,93–4,07	0,00	1,000
Impression of neglect and insufficient horticultural arrangement of the destination	529	3,89	0,87	3,82–3,96	–2,91	0,004
Excessive crowds at all local events, museums and festivals	529	4,36	0,85	4,29–4,43	9,74	<0,001
Excessively high prices	529	4,36	0,82	4,29–4,43	10,10	<0,001

Note: N - sample size, M - mean, SD - standard deviation, CI - confidence intervals of the mean (low and high), t - simple sample t - test testing the difference from point 4 out of 5 on the Likert scale, p - statistical significance, * - items with a mean value significantly greater than 4.

Source: author's work

The results indicate that the most pronounced positive evaluations are associated with fewer crowds resulting from lower tourist numbers ($M = 4.27$; $p < 0.001$), the quality of hotel accommodation ($M = 4.13$; $p < 0.001$), and the gastronomic offer ($M = 4.11$; $p = 0.007$). At the same time, respondents strongly recognise the negative aspects of tourism pressure, particularly excessive crowds at local events, museums, and festivals ($M = 4.36$; $p < 0.001$), as well as excessively high prices ($M = 4.36$; $p < 0.001$). Statistically significant differences were also found for the hospitality and friendliness of the local population ($p < 0.001$), the availability of local food products ($p < 0.001$), natural beauty ($p < 0.001$), and the perception of insufficient destination maintenance and landscaping ($p = 0.004$). In contrast, cultural and historical heritage ($p = 0.486$), transport connections ($p = 0.561$), the variety of catering and entertainment facilities ($p = 0.605$), and sports and recreational facilities ($p = 1.000$) did not show statistically significant differences. A key finding is a notable sustainability paradox: respondents strongly value destinations characterised by fewer tourists and lower levels of crowding, while simultaneously identifying overcrowding and high prices as the most pronounced destination-related problems. This finding further highlights the importance of managing tourism intensity as a key component of the sustainable development of island destinations.

Table 12. Descriptive statistics of the specifics of the offer of the island destination, considering the uniqueness of the locality

Item	N	M	SD	95% CI	t	p
The chosen island is an ideal nautical destination	529	2,87	1,04	2,78–2,96	–24,99	<0,001
The selected island allows you to visit small indigenous catering establishments (taverns)	529	2,94	1,25	2,83–3,05	–19,50	<0,001
The selected island has several cultural and sacred objects	529	4,28	0,83	4,21–4,35	7,76	<0,001
The chosen island provides insight into a multitude of customs and intangible heritage	529	3,57	1,20	3,47–3,67	–8,24	<0,001
The chosen island allows you to visit several historical and archaeological sites	529	3,78	1,05	3,69–3,87	–4,82	<0,001
The chosen island allows for better contact with nature	529	3,83	1,05	3,74–3,92	–3,72	<0,001
The chosen island is not overcrowded with tourists	529	4,34	0,99	4,26–4,42	7,90	<0,001

Source: author's work

The results in Table 12 confirm the high value of island cultural heritage. Respondents strongly agreed that the selected islands are **not overcrowded** ($M = 4.34$) and offer **numerous cultural and sacral sites** ($M = 4.28$), while also recognising **good contact with nature** ($M = 3.83$). In contrast, islands were least perceived as **ideal nautical destinations** ($M = 2.87$), which is expected given that respondents were not sailors. Overall, islands were primarily chosen for their rich history, cultural tradition, natural landscape, and the lifestyle of the local population.

Exploratory Principal Component Analysis

Principal component analysis was employed to explore whether the observed sustainability-related destination attributes could be represented by a smaller and conceptually interpretable set of underlying preference dimensions. The purpose of PCA was therefore not to confirm a predetermined measurement structure, but to explore patterns of association among the observed variables and identify broader dimensions characterising tourists' sustainability-oriented preferences for Adriatic island destinations. Given this exploratory objective, PCA provides an appropriate first step toward developing a more parsimonious representation of island destination preferences, which may subsequently be validated using confirmatory approaches in future research.

Table 13. KMO i Bartlettov test

Indicators	Value
Kaiser–Meyer–Olkin (KMO)	0.926
Bartlett's Test of Sphericity – χ^2	6.325,703
df / Sig.	171 / < .001

Source: author's work

KMO > 0.90 indicates a very good adequacy of the sample; Bartlett's test ($p < .001$) confirms that the correlation matrix is suitable for factorisation.

Table 14. Total explained variance

Component	SS loadings	% variances	Cumulative %
1	4,269	22,47	22,47
2	4,658	24,52	46,99
3	3,954	20,81	67,80

Source: author's work

Reliability of the measurement instrument. Before the multivariate analysis, the internal consistency of the sustainability-oriented island destination preference scale was assessed using Cronbach's alpha. The reliability analysis included the 19 Likert-type items subsequently entered into the principal component analysis (PCA), covering perceptions of natural and environmental values, avoidance of mass tourism and development pressures, cultural authenticity and local identity, and the psychological experience of an island vacation. All items were measured on the same five-point Likert scale. Cronbach's alpha was calculated for the complete 19-item scale using valid responses from the total sample ($N = 529$). The resulting coefficient was $\alpha = 0.960$, indicating excellent internal consistency of the measurement instrument and supporting the suitability of the item set for subsequent multivariate analysis.

Table 15. Rotated component matrix (Varimax)

Items	Component 1	Component 2	Component 3	h ²
The island has preserved nature	0,007	0,819	-0,098	0,681
The island is very uninhabited	-0,764	-0,043	-0,193	0,624
The island offers authentic cultural experiences	-0,084	0,087	-0,781	0,625
The island provides an escape from everyday life	-0,151	0,828	-0,121	0,724
The island is not overdeveloped	-0,648	0,068	-0,200	0,464
The island's cultural heritage is preserved	-0,191	-0,023	-0,864	0,784
A stay on the island offers peace	-0,067	0,862	-0,003	0,747
The island is devoid of mass tourism	-0,877	0,116	-0,125	0,798
Tradition and local identity are visible	-0,150	0,201	-0,717	0,577
The island allows for better contact with nature	-0,064	0,794	-0,067	0,638
There are no excessive tourist crowds on the island	-0,899	0,102	-0,048	0,821
The authenticity of the offer is important to me when choosing an island	-0,218	0,042	-0,793	0,678
The island offers an experience of untouched nature	-0,129	0,769	0,033	0,610
The island is not burdened with large investments	-0,909	0,140	-0,041	0,847
Cultural events contribute to the experience of the destination	-0,018	0,143	-0,813	0,682
A stay on the island has a relaxing effect	-0,059	0,768	-0,126	0,610
Mass tourism spoils the experience of the island	-0,809	0,077	-0,226	0,712
The local community preserves the identity of the island	-0,116	0,157	-0,743	0,590
The island provides a sense of isolation and privacy	-0,168	0,771	-0,216	0,670

Note: Factor saturations $\geq |0.40|$, h² – utilities are shown.

Source: author's work

Based on the items with the highest factor loadings, three clearly differentiated latent dimensions of preferences for island destinations can be identified. The exploratory PCA identified three clearly differentiated dimensions of sustainability-oriented preferences for Adriatic island destinations.

Component 1 – Avoidance of mass tourism and development pressures. This dimension captures preferences for destinations characterised by lower tourism intensity, limited overcrowding, lower levels of development pressure, and the absence of excessive investment. It reflects tourists' sensitivity to the potential negative consequences of mass tourism and intensive destination development.

Component 2 – Natural values and the psychological experience of vacation.

This component integrates environmental preservation, contact with nature, peace, relaxation, escape from everyday life, and the experience of relatively untouched natural surroundings. It therefore represents both the ecological and experiential dimensions of island destination preferences.

Component 3 – Cultural authenticity and local identity. This dimension encompasses preserved cultural heritage, tradition, authenticity of the tourism offer, cultural experiences, and the role of the local community in maintaining island identity. It reflects the importance of symbolic, cultural, and identity-related attributes in tourists' evaluations of island destinations. Together, the three components explain 67.80% of the total variance, indicating that sustainability-oriented island destination preferences can be meaningfully represented through a smaller number of conceptually coherent dimensions. Rather than viewing sustainability as a single destination characteristic, the findings suggest that tourists' preferences integrate environmental and experiential qualities, attitudes towards tourism and development intensity, and the preservation of cultural authenticity and local identity.

The factor loading structure confirms that preferences for island destinations can be explained by a smaller number of latent dimensions that integrate natural, developmental, and cultural characteristics, thereby empirically supporting the conceptual model of the work. The descriptive results indicate that tourists generally assign considerable importance to natural and ecological destination attributes, while infrastructure and transport characteristics receive comparatively lower mean ratings. However, these descriptive differences alone cannot be interpreted as formal statistical support for H1. A conclusion regarding H1 must be based on the paired-samples comparison of the two respondent-level composite scores. Similarly, Table 8 descriptively shows that the economic aspect of sustainability received the largest individual share of responses (32.51%), followed by the natural aspect (29.77%) and the ecological aspect (20.04%). Since respondents provided multiple responses, these percentages are not statistically independent. Therefore, the statistical evaluation of H2 requires Cochran's Q test and the corresponding respondent-level pairwise comparisons. Until these tests are conducted, Table 8 should be interpreted as descriptive evidence rather than confirmation of H2.

H3 received partial inferential support from the one-sample t-tests. Respondents reported significantly high perceptions of excessive crowding at local events, museums and festivals ($M = 4.36$; $t = 9.74$; $p < 0.001$) and recognised fewer crowds as a relevant advantage of island destinations ($M = 4.27$; $t = 7.96$; $p < 0.001$). Nevertheless, because H3 also refers explicitly to excessive investment and development pressure, its final evaluation requires corresponding one-sample tests for the items measuring overdevelopment, large investments and the perceived negative effects of mass tourism. Consequently, H3 should presently be classified as partially supported rather than fully supported.

H4 was supported by the PCA results. The KMO value of 0.926 and the statistically significant Bartlett's test of sphericity ($\chi^2 = 6,325.703$; $df = 171$; $p < 0.001$) confirmed the suitability of the correlation matrix for component extraction. The three retained components explained 67.80% of the total variance and represented avoidance of mass tourism and development pressures, natural values and the psychological

vacation experience, and cultural authenticity and local identity. Principal component analysis (PCA) was conducted to reduce the initial set of 19 preference items and identify a smaller number of interpretable dimensions underlying tourists' evaluations of island destinations. PCA was selected because the primary analytical objective was data reduction and the construction of a parsimonious empirical representation of destination preferences, rather than the estimation of an explicitly specified latent measurement model. Before component extraction, the suitability of the correlation matrix was evaluated using the Kaiser–Meyer–Olkin measure of sampling adequacy and Bartlett's test of sphericity. The KMO value of 0.926 indicated excellent sampling adequacy, while Bartlett's test was statistically significant ($\chi^2 = 6,325.703$; $df = 171$; $p < 0.001$), confirming that the correlations among the items were sufficiently strong for component analysis. The number of retained components was determined by combining several criteria: eigenvalues greater than 1, inspection of the scree plot, cumulative explained variance and the theoretical interpretability of the resulting solution. These criteria supported the retention of three components. After rotation, the three-component solution explained 67.80% of the total variance, which was considered satisfactory for behavioural and tourism research based on multi-item attitudinal measures. The retained solution was also substantively coherent with the theoretical framework concerning natural values, cultural authenticity and tourism development pressures. Varimax rotation with Kaiser normalisation was applied to obtain a simpler and more interpretable component structure. An orthogonal rotation was selected because the analytical objective was to identify distinct and parsimonious dimensions of island destination preferences that could subsequently be interpreted and used independently. Nevertheless, because dimensions of destination preferences may theoretically be related, this decision represents a methodological simplification. Future research should compare the present solution with an oblique rotation, such as Direct Oblimin or Promax, and report the correlations between the extracted dimensions.

The items were measured on a five-point Likert scale and were treated as approximately continuous variables. This approach was considered acceptable given the five response categories, the relatively large sample ($N = 529$), and the exploratory and data-reduction purpose of PCA. Pearson correlations were therefore used as the analytical basis. However, the ordinal nature of the items should be acknowledged. Future studies should examine the robustness of the component structure using a polychoric correlation matrix and ordinal exploratory factor analysis. Component loadings with an absolute value of at least 0.40 were considered substantively relevant. Items were assigned to the component on which they had the highest absolute loading. Potential cross-loading was defined as an absolute secondary loading of at least 0.30, particularly when the difference between the primary and secondary loadings was smaller than 0.20. Communalities, theoretical coherence and item wording were considered together when interpreting and retaining the items.

The rotated component matrix produced a clear three-component structure. All 19 items had primary absolute loadings above the predefined threshold of 0.40, ranging from 0.648 to 0.909 on Component 1, from 0.768 to 0.862 on Component 2 and from 0.717 to 0.864 on Component 3. Communalities ranged from 0.464 to 0.847, indicating that the retained components explained a substantial proportion of variance in most items.

No problematic cross-loadings were identified. None of the items had a secondary absolute loading of 0.30 or higher, and the differences between the primary and secondary loadings were generally substantial. The absence of pronounced cross-loadings supports the empirical distinctiveness of the three components and facilitates their substantive interpretation. Nevertheless, the component labels were determined by considering the common conceptual meaning of the items rather than relying exclusively on the magnitude of individual loadings.

Component 1 – Avoidance of mass tourism and development pressures was defined by the absence of excessive investment (loading = -0.909), the absence of excessive tourist crowds (-0.899), the absence of mass tourism (-0.877), the perception that mass tourism spoils the island experience (-0.809), the island's low level of habitation (-0.764) and the absence of overdevelopment (-0.648). These items consistently reflect tourists' sensitivity to crowding, intensive construction and excessive development pressures.

All loadings on the first component were negative. The negative signs do not imply that the items are unimportant or that respondents negatively evaluated the corresponding destination characteristics. The direction of a component is mathematically arbitrary and may be reversed without changing the substantive solution. For clearer interpretation, Component 1 may therefore be reverse-scored so that higher component scores indicate a stronger preference for destinations protected from mass tourism, crowding and excessive investment.

The item "*The island is very uninhabited*" should be linguistically reconsidered because the current wording may be interpreted ambiguously. A clearer formulation would be "*The island is sparsely populated*" or "*The island offers a low-density and uncrowded environment.*" Its strong loading on Component 1 indicates that respondents associated isolation and low population density with the broader avoidance of mass tourism and development pressures.

Component 2 – Natural values and psychological vacation experience comprised preserved nature (0.819), escape from everyday life (0.828), peace (0.862), contact with nature (0.794), untouched nature (0.769), relaxation (0.768) and isolation and privacy (0.771). The component integrates the ecological characteristics of the destination with the psychological benefits of staying on an island. It therefore represents more than an evaluation of natural resources: it reflects an experiential preference in which preserved nature provides peace, relaxation, privacy and temporary escape from everyday life.

Although this component combines environmental and psychological content, the very low secondary loadings indicate that the items form an empirically coherent dimension rather than two competing subdimensions. Nevertheless, future confirmatory research could examine whether natural values and psychological restoration should be modelled as separate but correlated latent constructs.

Component 3 – Cultural authenticity and local identity included preservation of cultural heritage (-0.864), cultural events (-0.813), authentic cultural experiences (-0.781), importance of an authentic offer (-0.793), local community preservation of island identity (-0.743), and the visibility of tradition and local identity (-0.717). This component reflects the symbolic, cultural and community-based dimension of island destination preferences. As with Component 1, the negative signs are a consequence

of component orientation and do not change the substantive interpretation. The component can be reverse-scored so that higher scores represent a stronger preference for cultural authenticity, preserved heritage, local tradition and community identity. Overall, the rotated solution demonstrates a well-defined component structure. The absence of substantial cross-loadings, satisfactory communalities and clear theoretical coherence support the interpretation of the three retained components. The results therefore provide empirical support for H4, according to which island destination preferences can be represented by a smaller number of dimensions integrating developmental, natural-experiential and cultural characteristics.

Discussion of research results

The findings confirm that natural and environmental attributes primarily shape tourist preferences for island destinations, whereas infrastructural characteristics play a secondary role. Landscape diversity, environmental preservation, and the conservation of flora and fauna emerged as particularly important determinants of island destination choice. This finding is consistent with previous research emphasising the importance of ecological destination image, environmental beliefs, and attitudes towards ecotourism in shaping destination evaluations and behavioural intentions (Luong, 2023; Huo et al., 2024). It also supports the broader sustainability perspective proposed by Rodríguez et al. (2008), according to which the long-term attractiveness and competitiveness of island destinations depend strongly on preserving their environmental resources. The present study extends these findings by demonstrating that, in the Adriatic island context, natural attributes are not merely complementary elements of destination attractiveness but constitute one of the central dimensions around which tourists structure their island preferences. The results are also consistent with Gössling et al. (2017), who emphasise the particular vulnerability of island destinations due to their limited carrying capacity, infrastructural constraints, and dependence on natural resources. In the present study, tourists showed a clear preference for preserved nature, contact with nature, peace, and lower levels of tourism development. These findings suggest that the environmental sensitivity of islands identified in previous research is reflected not only in destination management challenges but also in tourist preferences themselves. In other words, the characteristics that make islands environmentally vulnerable may simultaneously constitute some of their most important competitive advantages from the visitor perspective. Differences observed among the analysed islands further demonstrate that sustainability-oriented perceptions are not uniform across island destinations. Lošinj showed the most stable and positive perception of contact with nature, whereas evaluations of Dugi otok and Krk were more heterogeneous. This finding complements Razović (2015), who emphasised the need to align tourism development on Croatian offshore islands with local resources and the preferences of tourists and residents. The differences identified in the present study may reflect variations in tourism intensity, destination development, accessibility, spatial characteristics, and the degree to which individual islands have maintained a recognisable nature-oriented tourism identity. Consequently, sustainability strategies for Adriatic islands should not be based on a uniform development model but should take destination-specific characteristics into account.

An important finding concerns respondents' understanding of **island sustainability**. Economic and natural aspects were perceived as more important than so-

cial and energy dimensions. This partially differs from the integrated sustainability approach presented in the literature, which conceptualises sustainable tourism as a balance between environmental, economic, and social objectives. The comparatively lower importance attributed to social and energy dimensions may be explained by the visitor perspective adopted in this study. Tourists are more directly exposed to visible destination attributes, such as landscape quality, environmental preservation, local products, and tourism services, whereas demographic sustainability, energy independence, and other structural issues may be less immediately observable during a temporary stay. This result therefore extends previous research by demonstrating that tourists' perceptions of sustainability may differ from broader policy-oriented conceptualisations of sustainable destination development.

The findings concerning **crowding and tourism pressure** are particularly relevant in relation to previous overtourism research. Respondents strongly valued lower tourist density and the possibility of avoiding crowds, while at the same time identifying excessive crowds at events, museums, and festivals, as well as high prices, as prominent destination-related problems. This result is consistent with García-Buades et al. (2022) and Krajčková et al. (2022), who demonstrate that perceived overtourism can negatively affect destination evaluations and stakeholder attitudes. However, the present findings reveal an additional **sustainability paradox**: tourists are attracted to islands partly because they associate them with peace, lower density, and escape from mass tourism, yet tourism demand itself may progressively undermine precisely these attributes. This tension is particularly important for island destinations because of their limited spatial and environmental carrying capacity. The PCA results further extend previous studies by showing that individual destination attributes do not operate independently but form **three coherent latent dimensions of island preference**: (1) avoidance of mass tourism and development pressures, (2) natural values and the psychological experience of vacation, and (3) cultural authenticity and local identity. This structure is broadly consistent with the push–pull perspective on destination choice (Dann, 1977; Crompton, 1979) and with more recent attempts to integrate tourist motivation, destination image, and sustainability-related characteristics (Joseph & Gillariose, 2025). Nevertheless, the present study extends this literature by demonstrating that, in the context of Adriatic islands, sustainability-related attributes are embedded within broader experiential and identity-based preference structures rather than functioning as isolated destination characteristics.

The cultural dimension identified through PCA also confirms the importance of authenticity, preserved cultural heritage, tradition, and local identity in shaping the island experience. This complements the environmental orientation of the results and demonstrates that tourists' sustainability-oriented preferences cannot be reduced exclusively to ecological concerns. Instead, the findings indicate that the attractiveness of island destinations is based on the interaction between preserved natural resources and the preservation of distinctive local cultural characteristics. In this respect, the study contributes to a more integrated understanding of island sustainability by linking environmental preservation with cultural authenticity and destination identity. Overall, the findings largely **confirm previous research** concerning the importance of environmental preservation, carrying capacity, destination image, and the negative effects of overtourism, while also **extending existing knowledge in three important respects**. First, they demonstrate

that natural and sustainability-related characteristics constitute central dimensions of tourist preferences in the Adriatic island context. Second, they identify a sustainability paradox in which tourists simultaneously seek uncrowded destinations and perceive tourism-induced crowding as a major problem. Third, the PCA demonstrates that island preferences can be organised into three broader dimensions combining development pressures, nature-based and psychological experiences, and cultural authenticity. These findings suggest that sustainable island destination management should focus not only on environmental protection but also on controlling tourism intensity, preserving local identity, and maintaining the experiential qualities that differentiate islands from more intensively developed coastal and urban destinations.

CONCLUSION

This study examined sustainability-oriented tourist preferences for Adriatic island destinations, focusing on the ways in which environmental, experiential, developmental, and cultural destination attributes are reflected in tourists' evaluations and destination choice. The findings demonstrate that sustainability-oriented preferences cannot be adequately understood through isolated destination attributes alone. Instead, tourists evaluate island destinations through a multidimensional combination of preserved natural environments, the intensity and consequences of tourism development, the quality of the vacation experience, and the authenticity of cultural and local identity. The descriptive findings indicate the particular importance of natural and environmental characteristics in tourists' evaluations of island destinations. Contact with nature, landscape and environmental preservation, lower tourism intensity, and opportunities for peaceful and relaxing experiences emerge as relevant elements of island destination attractiveness. At the same time, respondents demonstrate sensitivity to overcrowding, high tourism intensity, and excessive development pressures, suggesting that the attractiveness of island destinations is closely associated with their ability to preserve characteristics that differentiate them from highly developed mass-tourism destinations. The exploratory PCA provides further insight into the structure of these preferences by identifying three distinct dimensions: *avoidance of mass tourism and development pressures, natural values and the psychological experience of vacation, and cultural authenticity and local identity*. Together, these dimensions explain 67.80% of the total variance. The findings therefore suggest that sustainability-oriented preferences for Adriatic island destinations extend beyond environmental concerns and encompass experiential, developmental, cultural, and identity-related considerations. The theoretical contribution of the study lies in providing a multidimensional empirical representation of sustainability-oriented island destination preferences. Rather than conceptualising sustainability exclusively through environmental protection, the findings indicate that tourists simultaneously associate sustainable island destinations with controlled tourism development, lower levels of crowding, opportunities for contact with nature and psychological restoration, and the preservation of cultural authenticity and local identity. This perspective contributes to the literature on destination choice and sustainable island tourism by linking sustainability-related attributes with the broader experiential and symbolic dimensions of tourist preferences. From a managerial perspective, the findings indicate that sustainable destination strategies for Adriatic islands should not be based solely on increasing tourism supply or visitor numbers. Destination managers

should place greater emphasis on preserving natural resources, managing tourism intensity and development pressures, protecting cultural heritage and local identity, and creating high-quality experiences characterised by authenticity, contact with nature, and lower levels of congestion. Such an approach may contribute to destination differentiation while simultaneously supporting the long-term environmental and socio-cultural sustainability of island communities. Several limitations should be acknowledged. The research was conducted on a sample of tourists visiting selected Adriatic islands during a specific tourism season, which limits the generalisability of the findings to other island contexts and periods of the year. Furthermore, the exploratory nature of PCA means that the identified component structure should not be interpreted as a fully validated measurement model. Future research should therefore examine the stability of the three-dimensional structure using independent samples and confirmatory factor analysis (CFA). Subsequent research could also employ structural equation modelling (SEM) to investigate causal relationships between sustainability-oriented preferences, destination image, perceived authenticity, satisfaction, destination attachment, and behavioural intentions. Comparative studies across different island destinations and tourism development contexts would further contribute to understanding whether the identified preference dimensions are specific to the Adriatic context or represent broader patterns of sustainable island destination choice.

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