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ECONOMIC AND TOURISM INDICATORS AS A MEANS OF MONITORING SUSTAINABLE TOURISM: THE CASE OF INLAND ISTRIA

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Abstract:
This paper analyses indicators to study the sustainability of tourism in inland Istria, which comprises 24 municipalities and towns belonging to Istria County. Taking into account the criteria of availability, reliability, predictability, clarity and feasibility, the following quantitative indicators were used: the Indicator of Tourist Operation (ITO), the Modified Importance Index of major tourism centres (I_m), the Specific Overnights Threshold (SOT), tourism-related taxes in the budgets of municipalities and towns, company investments into tourism and hospitality, and the number of employees in tourism and hospitality. According to the ITO indicator, Predominant Tourism Activity was recorded only in Oprtalj Municipality. Being a measure of the spatial distribution of a specific economic activity, the Modified Importance Index established that in all municipalities and towns of inland Istria tourism is either poorly developed or in its incipient stage. The SOT indicator suggests that tourism has no negative effects on local economies and that tourism-related taxes make a minor contribution to the revenue side of municipal and town budgets. Company investment in tourism and hospitality and the number of employees in these industries are indicators that reveal that inland Istria is only beginning to develop into a tourism region. The quantitative indicators were confirmed by the results of qualitative indicators obtained through problem-focused interviews with the representatives of municipalities, towns and local tourist boards. The singular conclusion derived from the interviews was that tourism is a desirable activity, is in its initial stage of development, and is not a threat to local economies. The results of the study confirm the hypothesis that inland Istria is a region of sustainable tourism currently in the involvement stage of the destination lifecycle.

Keywords: Inland Istria, municipalities and towns, sustainable tourism, monitoring, indicators, Croatia.

Jel Classification: Q01

INTRODUCTION AND METHODOLOGICAL NOTES

Istria County is the leading county in Croatia with regard to the number of beds, tourist arrivals and overnights. This is the result of intensive tourism development,

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concentrated particularly in the coastal regions of the western, southern and, to a smaller extent, the eastern parts of the County, regions in which destinations, such as Porec, Roving, Vrsar, Umag, Medulin, Pula and Rabac have become well-known. Previous development in the coastal area was based on its favourable geographical position relative to outbound tourism markets, on its appealing natural basis suited to the development of summer tourism, leisure tourism and other forms of coastal tourism, as well as on anthropogenic tourist attractions. During the era of burgeoning tourism development in coastal regions, only a few spatially separated and disjointed destinations managed to develop in the County's inland areas.

To the neighbouring coastal regions, these inland areas of Istria provided agricultural and industrial products, facilitated traffic in transit, and served as a decade-long source of labour. Intense emigration to centres of work on the coast, especially of the young workforce, coupled with other adverse demo-geographic process, was the cause of depopulation that in some parts of Istria's interior led to the dying out of villages and small towns (Zupanc 2004). Only with the elaboration of the Spatial Plan of Istria County (Institute for Physical Planning of Istria County 2002) and, in particular, the Master Plan of Tourism in Istria (Istria County 2002), were conditions created that fostered a different way of thinking about and developing tourism. Where the interior regions were concerned, the Master Plan of Tourism focused on tradition and customs, history, the authentic Istrian rural life style, and the preserved environment, as the most important elements of the regions' tourism offering. In the municipalities and towns of inland Istria, the two documents set the path for the implementation of tourism activities as one of the ways of revitalising villages and towns, encouraging the return of emigrants or retaining the existing populations, and reviving traditional activities.[2] The second, equally important aim of planning tourism development was to reshape the existing tourism offering characterized by pronounced seasonality and marked spatial concentration in the narrow coastal zone.

This papers seeks to explore the extent to which emerging tourism activity, as a spatial and socio-economic innovation in inland Istria, is developing in adherence to the principle of sustainable development, and to identify the impact of this development on the economic features of the region's municipalities and towns.

The study's spatial framework encompasses the inland regions of Istria, that is, the interior of Istria County. This inland region comprises 24 municipalities and towns of Istria County (Figure 1), and covers an area of 1,776 km^2 (63% of the surface area of Istria County) and includes 470 settlements (71% of all settlements in the County). With regard to the various scientific and research methods used, research for the purpose of this paper was carried out in several phases, encompassing the period from the first half of 2010 to the end of the winter of 2011.

[2] In many areas, tourism development has become a generally accepted instrument in strengthening the economy, attracting investments, increasing employment, improving quality of life and facilitating overall modernization (Swarbrooke 1999).

Figure 1. Administrative and territorial division of Istria County (After the cartographic basis of the Institute for Physical Planning of Istria County, 2001, by the Authors)

By analysing quantitative and qualitative indicators, the aim of the study was to identify the economic aspect of shaping the interior of Istria into a region of sustainable tourism. In addition, the studied aimed to determine the extent to which tourism is established in municipalities and towns as a relatively recent spatial-economic factor.

The paper tests the hypothesis: The interior of Istria is a region of sustainable development whose spatial-economic component does not threaten the socio-economic development of municipalities and towns.

Indicators reveal the level of tourism development and the importance of tourism for municipalities and towns through the pressure of accommodation facilities on space and the degree of concentration. From the perspective of sustainable development, the indicators show how tourism traffic benefits local communities through overnights and tourist taxes collected, without generating adverse effects. Finally, the indicators suggest the importance of tourism for local economies from the perspective of investments in tourism and hospitality in municipalities and towns, and they indicate the contribution of tourism to employment. Accordingly, the primary purpose of sustainable tourism indicators is neither to assess the profitability of tourism in individual municipalities or towns nor to evaluate the performance of individual tourism and hospitality facilities, although research of this type in the future is not excluded.

To accomplish the paper's objectives and test its hypothesis, scientific and research methods and procedures commonly used in interdisciplinary scientific areas were applied in the various phases of research. The first part of the study applied the method of collecting, analysing, interpreting and using previous research into the economic and geographic aspects of sustainable tourism. Parallel to this method, statistical and other data of the Croatian Bureau of Statistics, the Croatian Ministry of Finance, and the Pula County Chamber of the Croatian Chamber of Economy were collected and processed.

Observation, a complex research method, comprising multi-day fieldwork was applied in the second part of the study. The complexity of this method derives from the fact that it consisted of the concurrent use of the methods of photographic and video recording, and sketching and field mapping, as well as the interview method. The study was also supplemented with informal discussions with the region's inhabitants and the many years of personal observation and research of this area by the authors, even though these were not part of the study's methodological basis. The interview method was applied to test the hypothesis and to provide additional explanation for phenomena and processes in the area of the respondents' professional competencies. This method was also applied to the representatives of the municipalities and towns of inland Istria and/or the representatives of their tourist boards. To this end, a standardized, semi-structured and problem-focused interview was conducted in which respondents were asked prepared questions or topics.

The backbone of the study of sustainable tourism in inland Istria includes indicators[3] that are a measure of the presence and size of specific, current phenomena; a measure of risk or the potential need for action; and a means of identifying and measuring the outcome of our action. Applicable indicators are the result of quantitative and qualitative measuring. Quantitative measurement includes the collection and processing of numerical data (raw data), ratios and percentages. Qualitative measurement comprises category indices, normative indicators, nominal indicators, and indicators based on attitudes and opinions. When selecting sustainable tourism indicators, it is essential to respect the criteria of availability, reliability, predictability, clarity and feasibility (UNWTO 2004a; UNWTO 2004b). A methodological framework for the application sustainable tourism indicators was presented in publications of the World Tourism Organization (1993, 1996, 2001, 2004b) and the Statistical Office of the European Union (EUROSTAT 2006), as well as in scientific research and projects (Manning 1999; McCool 1999; Farsari and Prastacos 2001; Miller 2001; Coccossis and Mexa 2004; Andriotis 2006; Blancas et al. 2010; Castelani and Sala 2010). Guided by these criteria, this paper applied the following quantitative indicators of sustainable tourism: the Indicator of Tourist Operation (ITO), the Modified Importance Index of major tourist centres (I_m), the Specific Overnights Threshold (SOT), tourism-related taxes in the budgets of municipalities and towns, company investments into tourism and hospitality, and the number of employees in tourism and hospitality. Data on the number of beds and overnights in commercial accommodation facilities (holiday homes excluded) were used to calculate the Indicator of Tourist Operation (ITO), the modified index of the importance of major tourist centres (I_m), and the Specific Overnights Threshold (SOT).

[3] There are three typical groups of indicators of sustainable tourism. This classification is based on three components of space with which tourism interacts directly: natural resources (the environment), residents and businesses (Hall 2008).

Data on the number of beds, tourist arrivals and overnights in holiday homes in the municipalities and towns of inland Istria are incomplete and scant and have, therefore, not been included in this analysis. The results of interviews were used to obtain qualitative indicators based on attitudes and opinions.

Ever since the Report of the Brundtland Commission, *Our Common Future*, was published in 1987 (UN 1987), numerous studies have been carried out and papers, written on the topic of sustainable development and sustainable tourism. Most of these studies are focused on investigating the impact and harmful consequences that tourism has on natural resources (Priestly et al. 1996). For this paper, however, the most relevant studies and papers are those dealing with the social, economic and geographic aspects of sustainable tourism and the correlation between tourism and local economies. Archer (1996) introduced economic techniques for assessing the impact of tourism on the environment, while Berno and Bricker (2001) explored the difficulties in operationalizing tourism sustainability as an activity involving numerous stakeholders. The role of sustainable tourism indicators, presented by the World Tourism Organization in numerous projects, has been discussed in many theoretical and empirical studies. Manning (1999) sees sustainable tourism indicators as part of a holistic approach to managing and planning tourist destinations, while Miller (2001) looks at their development through the Delphi method. Coccossis and Mexa (2004) provide a differentiation of sustainability indicators, sustainable tourism and tourism carrying capacity, by distinguishing between physical-environmental, socio-cultural, and political and economic groups of indicators. The most important scientific papers are those in which various sustainable tourism indicators have been applied in regions whose geographical characteristics are similar to those of inland Istria. Such papers focus on studying the Mediterranean region as a whole (Farsari and Prastacos 2001), the Lepontine Alps (Castelani and Sala 2010), the coastal destinations of Spain (Blancas et al. 2010), and the Greek islands (Coccossis and Parpairis 1996; Andriotis 2006).

Even before the UN Report of 1987, the first studies concerning the adverse effect of tourism on natural resources, residents and businesses appeared in the domestic literature (Alfier 1994). The Conference Proceedings entitled *Sustainable Tourism Development* (Blazevic 2005) presents an important contribution, as it underlines the role of carrying capacity and previous experience in evaluating sustainable tourism development in various Mediterranean destinations. Recent studies have also contributed towards the scientific revalorization of the notions of sustainability in a tourism context, while underlining that this is still a poorly characterized concept with no clear definitions (Vukonic 2010). Opacic and Mikacic (2009) applied the Indicator of Tourist Operation in differentiating commercial and non-commercial accommodation facilities along the Croatian coast. The study of the economic and geographic implications of weekender tourism in host areas on Krk Island is also important as it singles out the contributions of non-commercial tourism to the receipts side of local budgets (Opacic 2008).

TOURISM FEATURES OF INLAND ISTRIA

The reshaping of inland Istria into a tourist region began with the onset of this century and was driven by the spatial development and planning documents and development plans of Istria County. Up to that period, Pazin, Motovun, Buzet and Istarske Toplice were somewhat successful in becoming known as inland destinations, despite lacking

any substantial differentiating tourism features and having a low number of tourist arrivals and overnights. Of these four destinations, Istarske Toplice boasted the largest number of tourists and overnights, mostly due to its orientation towards health tourism, which was partially subsidized by government funds.

The attraction basis of tourism in inland Istria differs somewhat from that of the coastal area. Namely, central to the tourism offering of inland Istria is a sub-type of Mediterranean landscape consisting of intertwined and integrated natural, anthropogenic, physiognomic and sensory components (Dumbovic-Bilusic and Obad-Scitaroci 2007), the valorisation of which, in terms of tourism, is not constrained to only the summer season, as is the case in coastal Istria. The major individual attractions in the landscape of inland Istria include geomorphological features and geological structures, hydro-geographic features, climate and vegetation, cultural heritage, events and other attractions. In addition to these attractions, a vital tourism resource is inland Istria's favourable geographical position relative to the outbound tourism markets of Central and Western Europe.

Having based their development on a differentiated attraction basis and on the implementation of projects of Istria County aimed at fostering tourism development in rural settlements by the end of 2003, all municipalities and town of inland Istria boasted commercial accommodation facilities in their territories. As a result of such development, the number of beds in the period 1989 – 2009 grew by 116%. In the same period, the number of tourist arrivals increased by 73%, and the number of overnights, by 60% (Republican Bureau of Statistics 1990; Croatian Bureau of Statistics 2010b).

RESULTS AND DISCUSSION

The Indicator of Tourist Operation (ITO) is derived from the Coefficient (Index) of Tourism Functionality (CTF). Being an indicator of the spatial concentration of tourism, ITO is divided into six categories.[4] Accordingly, the municipalities and towns of inland Istria were classified into only four categories because none qualified for the fifth and sixth categories (Important Tourism Activity and Major Tourism Activity, respectively) in 2010 (Table 1). Predominant Tourism Activity was recorded only in Oprtalj Municipality (ITO 4), while nine municipalities and the town of Buje were classified in the category of Important but not Major Tourism Activity (ITO 3). The other municipalities and the town of Buzet were classified as ITO 2 (Tourism Activity of Minor Importance).

[4] The obtained coefficient is classified according to Defert's Indicator of Tourism Operation (ITO) into six categories with regard to spatial loads, that is, to spatial concentration of tourism activities: CTF>500: Major Tourism Activity (ITO 6); 100–500: Important Tourism Activity (ITO 5); 40–100: Predominant Tourism Activity (ITO 4); 10–40: Important but not Major Tourism Activity (ITO 3); 4–10: Tourism Activity of Minor Importance (ITO 2) and <4– Slight Tourism Activity (ITO 1).

Table 1. Coefficient of Tourism Functionality (CTF) and Indicator of Tourist Operation (ITO) of commercial accommodation capacities, by municipalities and towns of inland Istria in 2010

Ord. No.	Municipality/ Town	CTF	ITO	Ord. No.	Municipality/ Town	CTF	ITO
1	Oprtalj	53.76	4	13	Cerovlje	7.45	2
2	Barban	15.92	3	14	Karojba	9.23	2
3	Buje	39.43	3	15	Krsan	8.40	2
4	Groznjan	14.02	3	16	Lupoglav	9.69	2
5	Kanfanar	17.98	3	17	Motovun	8.92	2
6	Kastelir-Labinci	17.24	3	18	Pican	6.49	2
7	Lanisce	17.19	3	19	Visnjan	6.15	2
8	Sveta Nedjelja	13.03	3	20	Vizinada	6.72	2
9	Sveti Lovrec	18.97	3	21	Zminj	8.60	2
10	Svetvincenat	14.97	3	22	Gracisce	3.00	1
11	Tinjan	12.29	3	23	Pazin	3.09	1
12	Buzet	5.99	2	24	Sveti Petar u Sumi	3.32	1

Source: Data on beds: Croatian Bureau of Statistics, 2011a; Data on population size: Croatian Bureau of Statistics, 2010a.

ITO: 1 – Slight Tourism Activity, 2 – Tourism Activity of Minor Importance, 3 – Important but not Major Tourism Activity, 4 – Predominant Tourism Activity.

The spatial distribution of municipalities and towns with fairly high indicators (ITO 3 and ITO 4) (given the conditions in inland Istria) is along the state border with Slovenia and not far from the coastal centres Umag, Novigrad, Tara-Vabrige, Porec, Funtana, Vrsar, Rovinj, Fazane, Pula and Rabac, although there is no correlation between the value of the indicator and the vicinity of the coast. ITO 1 municipalities (Slight Tourism Activity) are located in the central part of inland Istria and are concentrated around the town of Pazin (Figure 2).

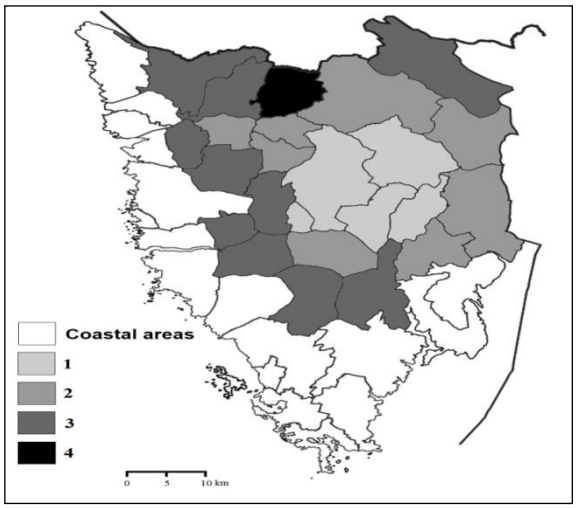

Figure 2. ITO by municipality and towns of inland Istria, 2010. (After the cartographic basis of the Institute for Physical Planning of Istria county, 2011, by the Authors)

ITO shows that the highest spatial concentration of tourism is in Oprtalj Municipality, which was to be expected considering the variables that shape this indicator. Predominant Tourism Activity in this municipality is partially a result of the large number of beds at Istarske Toplice and the small number of residents. Indeed, small population size is a factor that has contributed to the classification of the municipalities of Barban, Groznjan, Kanfanar, Kastelir-Labinci, Lanisce, Sveta Nedelja, Sveti Lovrec, Svetvincenat and Tinjan in the category ITO 3 (Important but not Major Tourism Activity). Conversely, the classification of Buje as an ITO 3 town is the result of the large number of beds. According to ITO, the municipalities and towns of inland Istria, with the exception of Oprtalj, have not yet become areas of intensive touristification, and considering the existing plans, this development trend is not likely to change in any significant way. In comparison with the coastal region, the destinations of which have a high spatial concentration (Opacic and Mikacic 2009), inland Istria is unambiguously positioned as an emerging tourism region.

The Modified Importance Index of major tourist centres (I_m) is a measure of the spatial distribution of tourism activities (Andriotis 2006), that is, the degree of the concentration of tourism relative to a large spatial unit. It is calculated according to the following formula:

$$\frac{\frac{\text{Number of beds in municipilaty/town}}{\text{Number of beds in Istria County}}}{\frac{\text{Number of inhabitants in municipality/town}}{\text{Number of inhabitants in Istrian County}}}$$

Data from 2010 were used to establish the number of beds in municipalities, towns and Istria County, while data for the number of inhabitants were taken from an estimate on 31 December 2008. The results obtained show that none of the municipalities and towns in inland Istria have a high concentration of tourism activities, as their indexes were all less than 1.00 (Table 2). However, when the 1984 typology (Feletar 1984) is applied to tourism, only Oprtalj, with an index of 0.40, can be singled out as a municipality with slightly developed tourism. All other municipalities and towns have an index smaller than 0.40, which categorizes them as areas with incipient tourism activities according to the 1984 typology. Interestingly, as many as 13 municipalities and towns of inland Istria have an exceptionally low index, that is, an index lower than 0.10.

Table 2. Modified Importance Index of major tourism centres (I_m) by municipalities and towns of inland Istria, 2010

Ord.no.	Municipality/Town	Number of inhabitants *	Number of beds	Index (I_m)
1	Oprtalj	891	479	0.47
2	Buje	5 503	2 170	0.34
3	Sveti Lovrec	1 070	203	0.17
4	Kanfanar	1 557	280	0.16
5	Kastelir-Labinci	1 543	266	0.15
6	Lanisce	349	60	0.15
7	Barban	2 708	431	0.14
8	Svetvincenat	2 231	334	0.13
9	Groznjan	799	112	0.12
10	Sveta Nedjelja	3 062	399	0.11
11	Tinjan	1 692	208	0.11
12	Lupoglav	970	94	0.08
13	Karojba	1 463	135	0.08
14	Motovun	964	86	0.08
15	Zminj	3 465	298	0.08

Table 2. (continued)

Ord.no.	Municipality/Town	Number of inhabitants *	Number of beds	Index (I_m)
16	Krsan	3 083	259	0.07
17	Cerovlje	1 638	122	0.07
18	Vizinada	1 145	77	0.06
19	Pican	1 896	123	0.06
20	Visnjan	2 278	140	0.05
21	Buzet	6 062	363	0.05
22	Sveti Petar u Sumi	1 054	35	0.03
23	Pazin	8 837	273	0.03
24	Gracisce	1 400	42	0.03
	Istarska zupanija	214 732	245 685	

Source: Data on beds: Croatian Bureau of Statistics, 2011a; Data on population size: Croatian Bureau of Statistics, 2010a.

* Number of inhabitants on 31 December 2008

This sustainable tourism indicator suggests relations among the municipalities and towns of inland Istria similar to those demonstrated by the previous indicator. The Modified Importance Index of major tourism centres shows that the Municipality of Oprtalj has the highest value due to a small number of inhabitants and the large accommodation capacities at Istarske Toplice. However, an index value of 0.40 points to a low level of tourism development. Index results were influenced by several factors, the most important being the low number of beds in most municipalities and towns of inland Istria in comparison with the large number of beds in the greater spatial unit, i.e., in Istria County. Andriotis (2006) also obtained similar results using a locational coefficient in comparing the differences in tourism valorisation between the inland and coastal parts of Crete. Hence, this model could be applied in future studies to differentiate between the coastal and inland tourism destinations of Croatia's littoral counties. Although Feletar (1984) observed certain methodological inconsistencies when using this type of indicator as a locational coefficient on industry in the then Croatian municipalities, the results obtained for inland Istria, nevertheless, clearly demonstrate the incipience of the touristification process.

From the perspective of tourism sustainability, the Specific Overnights Threshold (SOT) is an indicator that represents an attempt to determine and establish the boundary above which the achieved number of overnights generates negative effects, alongside positive effects, on natural resources, residents and businesses (Castellani and Sala 2010). SOT was calculated according to the following formula:

$$\text{SOT}=\frac{\dfrac{\text{Number of overnights in municipality/town}}{365}}{\text{Number of inhabitants in municipality/town}}\times 100$$

As in the previous indicator, data from 2010 provided the number of overnights in municipalities and towns, while the number of inhabitants was taken from the estimation on 31 December 2008. Because of the possibility of subjectively defining the boundary beyond which negative effects are generated alongside positive effects, this indicator was additionally verified through interviews with the representatives of municipalities and tourist boards. The Municipality of Oprtalj and the town of Buje had the highest SOT value in inland Istria (17.43 and 7.66, respectively). A total of eight municipalities have a value higher than the average for inland Istria SOT = 2.51), while eight municipalities and towns had an SOT value less than 1.00 (Table 3).

Table 3. Specific Overnights Threshold (SOT) by municipalities and towns in inland Istria, 2010

Ord.no.	Municipality/Town	Overnights	Number of inhabitants	SOT
1	Oprtalj	56 688	8 91	17.43
2	Buje	153 950	5 503	7.66
3	Kastelir-Labinci	35 948	1 543	6.38
4	Kanfanar	22 093	1 557	3.89
5	Sveti Lovrec	14 573	1 070	3.73
6	Motovun	11 046	964	3.14
7	Svetvincenat	24 829	2 231	3.05
8	Groznjan	7 473	799	2.56
9	Vizinada	9 423	1 145	2.25
10	Barban	21 886	2 708	2.21
11	Tinjan	13 648	1 692	2.21
12	Krsan	24 672	3 083	2.19
13	Visnjan	15 181	2 278	1.83
14	Zminj	22 358	3 465	1.77
15	Sveta Nedjelja	17 369	3 062	1.55
16	Pican	6 966	1 896	1.01
17	Sveti Petar u Sumi	3 021	1 054	0.79
18	Buzet	15 771	6 062	0.71
19	Pazin	22 179	8 837	0.69
20	Cerovlje	3 338	1 638	0.56
21	Lupoglav	1 886	970	0.53
22	Karojba	2 795	1 463	0.52
23	Gracisce	2 268	1 400	0.44
24	Lanisce	464	349	0.36

Source: Data on overnights: Croatian Bureau of Statistics, 2011a; Data on number of inhabitants: Croatian Bureau of Statistics, 2010a.

SOT confirms the low level of tourism development in the municipalities and towns of inland Istria. The results obtained indicate that, at present, in all municipalities and towns, tourism generates only positive effects on natural resources, businesses and residents. The slightly higher value of this threshold for the Municipality of Oprtalj is still considerably lower than the estimated boundary (25.00), set by Castellani and Sala (2010), beyond which tourism begins to generate negative effects alongside positive effects in an observed area. Accordingly, the number of tourists and overnights in inland Istria can increase in the coming period without the danger of saturation and any negative effects on natural resources, residents and businesses. Moreover, considering that the accommodation facilities in inland Istria are fragmented and spatially scattered, an increase in the number of tourist arrivals and overnights could help towards partially preserving population density in various depopulated areas, although there could be no great expectations that such an increase would make tourism into a major engine of revitalisation in this region.

The example of Croatia's islands that are much more developed in terms of tourism demonstrates that only a large increase in the number of overnights could have a favourable effect on demographic trends (Zupanc et al. 2001). It follows that only the overnights realized in the town of Buje could bring about positive demographic effects. However, with regard to the location of most beds in Kanegra and to the seasonal character of this accommodation facility, it is difficult to estimate the actual impact of tourism on demographic characteristics.

Despite the subjectively defined sustainability limit because of which SOT needs to be further revalorized, this indicator has nevertheless confirmed that all municipalities and towns in inland Istria are developing in line with the concept of sustainable tourism.

Tourism (in both its commercial and non-commercial components) contributes towards filling municipal and town budgets in at least five items. The most immediate contribution is made through residence taxes, paid by tourists and weekenders in the summer season, as well as through property tax paid by weekenders for holiday homes. The share of these tourism-related taxes, in a narrow sense, in the revenue of municipal and town budgets is calculated by dividing the total sum of residence taxes and property taxes on holiday homes by total budget revenues, and then multiplying the result by 100. Data from 2010 budgets were used in calculating this share for the municipalities and towns of inland Istria.

Table 4. Share of tourism-related taxes in municipal and town budgets of inland Istria, 2010

Ord. no.	Municipality/Town	Budget revenue (in HRK)	Tourism-related tax (in HRK)*	Share (%)
1	Kastelir-Labinci	5,175,811.00	169,332.28	3.27
2	Motovun	4,269,583.00	78,805.72	1.85
3	Oprtalj	4,441,803.00	55,399.06	1.25
4	Groznjan	4,925,571.00	56,623.35	1.15
5	Buje	26,530,944.00	234,963.26	0.89
6	Karojba	2,644,907.00	20,317.76	0.77
7	Tinjan	4,949,900.00	27,280.57	0.55
8	Sveti Lovrec	3,238,001.00	16,442.50	0.51
9	Vizinada	5,131,892.00	24,944.74	0.49
10	Svetvincenat	5,954,028.00	19,332.54	0.32
11	Visnjan	14,462,855.00	40,655.45	0.28
12	Zminj	10,528,230.00	21,588.20	0.21
13	Buzet	41,163,287.00	83,057.00	0.20
14	Kanfanar	8,981,031.00	17,100.00	0.19
15	Krsan	18,161,160.00	28,625.27	0.16
16	Barban	6,955,573.00	10,351.79	0.15
17	Lupoglav	4,231,291.00	5,078.26	0.12
18	Pican	5,776,122.00	2,582.41	0.04
19	Sveti Petar u Sumi	2,547,567.00	1,059.15	0.04
20	Pazin	50,198,592.00	17,370.00	0.03
21	Sveta Nedelja	11,304,827.00	1,343.50	0.01
22	Cerovlje	4,668,559.00	349.81	0.01
23	Gracisce	4,422,907.00	0.00	0.00
24	Lanisce	1,764,816.00	0.00	0.00

Source: Croatian Ministry of Finance, 2011.

* Tourism-related tax comprises residence tax and property tax on holiday homes

Tourism has not contributed in any substantial extent to filling the revenue side of municipal and town budgets of inland Istria. The greatest contribution of tourism in this respect has been in the Kastelir-Labinci Municipality, in which these two items amount for 3.27% of budget revenue. Tourism has contributed with more than 1% in the budgets of the municipalities of Motovun (1.85%), Oprtalj (1.25%) and Groznjan (1.15%), while in all other municipalities and towns, tourism has generated less than 1% of budget revenue. The share of revenue from tourism is the lowest in the municipalities of Cerovlje

and Sveta Nedelja (0.01% in both). In the municipalities of Lanisce and Gracisce, tourism has failed to generate any revenue at all through tourism-related taxes (Table 4). In absolute terms (in HRK), the highest amount of tourism-related taxes were collected in the town of Buje (HRK 234,963), the Kastelir-Labinci Municipality (HRK 169,332) and the town of Buzet (HRK 83,057). On the other extreme of budget revenue from tourism-related taxes are the municipalities that collected the least amount. These are Cerovlje (HRK 350), Sveti Petar u Sumi (HRK 1,059) and Sveta Nedelja (HRK 1,343), and Lanisce and Gracisce with no tourism-generated revenue in their budgets (Ministry of Finance 2011).

The results of Tourism-related Taxes in Municipal and Town Budgets, as an indicator of sustainable tourism, lead to conclusions similar to those of previously analysed indicators. According to this indicator, the commercial and non-commercial components of tourism have no substantial effect on the revenue of the budgets of inland Istria's municipalities and towns. There are external and internal reasons for such low shares of tourism-generated revenue in budgets. The most important external reasons are existing legislation and its implementation, and the statistical monitoring of individual budget items. Croatian legislation fails to effectively prevent holiday homes from being registered as residential facilities. Namely, to avoid paying taxes or to gain certain benefits, home owners change the use of their facilities from accommodation facilities into permanent residences. Very often, the owners of holiday homes in inland Istria are not registered and, hence, taxes are not collected from them. On the revenue side of budgets, in certain items, such as public utilities charges, municipal contributions and real estate sales tax, which are in part also collected from tourists and weekenders, it is not clear how much is generated by tourism and how much by other charge payers, residents and economic branches. There are many internal reasons for the low share of tourism-related taxes in the revenue of budgets of municipalities and towns in inland Istria. The first is the patchy supervision of commercial and non-commercial accommodation facilities by competent municipal, town, county and state bodies, as a result of which some tax payers remain unregistered. In addition, public utilities charges, municipal contributions and real estate sales tax – budget revenue items that are collected in a large share from tourists and weekenders in some littoral destinations or well-developed tourism regions (Opacic 2008) – are not considered as being tourism-related items in inland Istria because of the different structure of municipal and town economies of this region. Namely, industry, trade and entrepreneurial zones have affected the amounts of these three budget items in the municipalities of Cerovlje, Kanfanar, Kastelir-Labinci, Krsan, Lanisce, Lupoglav, Pican, Sveti Petar u Sumi, Visnjan and Svetvincenat, as well as in the towns of Buje, Buzet and Pazin. Another important internal reason is the low tourism traffic in the municipalities and towns of inland Istria, and the immediate re-direction of tourism-related taxes into local tourist boards, that is, according to the law, municipalities and towns have waived their right to collect taxes on holiday homes (Roller 2003). At present, the potential effect of this measure on the revitalization of certain parts of inland Istria has not yet been determined. Finally, in certain municipalities, such as Lanisce and Sveta Nedelja, the absence of a tourist board has not had a favourable effect on the role of tourism in budget revenue. In future studies, especially in case studies of specific municipalities or towns, these methodological and practical handicaps could partially be mitigated by calculating the three-year or five-year amounts for total budget revenues, residence taxes and holiday home taxes.

Another indicator is the share of company investment in tourism and hospitality in total company investment, by municipality and town of inland Istria. This indicator is calculated as a percentage share: total company investment in tourism and hospitality by town and municipality of inland Istria in a three-year period, from 2008 to 2010, was divided by the total sum of all company investment in that period, and then multiplied by 100. The results obtained indicate that the greatest investments in tourism and hospitality were made in the municipalities of Oprtalj (73.25% of all investments), Sveti Lovrec (24.58%) and Sveta Nedelja (14.36%). Investment in tourism and hospitality, higher than the average for inland Istria (2.32%), was observed in the municipalities of Motovun, Kastelir-Labinci, Kanfanar, Vizinada and Visnjan (Table 5). On the other hand, in the period 2008–2010, there were no company investments in tourism and hospitality in the municipalities of Cerovlje, Gracisce, Groznjan, Karojba, Lanisce, Pican and Svetvincenat, although fieldwork and interviews established that other investors – individuals, tradespeople or private family farms – did invest unknown amounts into the tourism and hospitality industry.

Table 5. Share of company investment into tourism and hospitality in overall investments, by municipality and town of inland Istria, 2008–2010

Ord. no.	Municipality/Town	Total investments (in HRK) 2008 – 2010	Investment into tourism and hospitality (in HRK) 2008 – 2010	Share of tourism and hospitality in total investments (in %)
1	Oprtalj	18,209,371	13,337,973	73.25
2	Sveti Lovrec	3,609,775	887,168	24.58
3	Sveta Nedjelja	43,383,399	6,229,403	14.36
4	Motovun	11,108,467	1,007,181	9.07
5	Kastelir-Labinci	25,150,361	1,681,043	6.68
6	Kanfanar	9,970,859	397,242	3.98
7	Vizinada	15,551,305	506,619	3.26
8	Visnjan	35,285,751	1,140,220	3.23
9	Barban	17,278,183	245,802	1.42
10	Tinjan	14,629,525	86,213	0.59
11	Buzet	373,444,639	1,757,483	0.47
12	Zminj	27,880,321	124,443	0.45
13	Sveti Petar u Sumi	14,519,171	59,522	0.41
14	Lupoglav	21,800,091	70,282	0.32
15	Krsan	48,698,440	121,387	0.25
16	Buje	121,204,261	245,894	0.20
17	Pazin	194,233,111	349,668	0.18

Source: Pula County Chamber of the Croatian Chamber of Economy, 2011.

According to Company Investment in Tourism and Hospitality as an indicator of sustainable tourism, companies invested in more than two thirds of all municipalities and towns in inland Istria in the three-year period 2008–2010. Seemingly, there were no such investments in seven municipalities. This is due to the fact that not all investors are obliged to report their investments into tourism and hospitality to the competent financial institutions. As a result, the investments of individuals, for the most part, tradespeople, private family farms, cooperatives and other investors, are also completely hidden in the 17 municipalities and towns in which company investment was evident. The eight municipalities that have a share of investment into tourism and hospitality higher than the average for inland Istria are spatially distributed in the

western part of the region (Kanfanar, Kastelir-Labinci, Sveti Lovrec, Visnjan and Vizinada). This could be explained as the results of the effect of the highly-developed tourism area of Istria's western coast and its northern part (Oprtalj and Motovun), the effect of the attractive landscapes of Istria's hilly terrain and the Mirna River valley, the favourable geographical position close to the state border with Slovenia, as well as the effect of investment in hotel facilities of Istarske Toplice (Oprtalj). In addition, it should be underlined that investment in infrastructure, such as roads or public utilities, which is not primarily tourism focused but which nevertheless has a direct impact on tourism development in individual municipalities or towns, has not been included in this indicator. Accordingly, further research should focus on this area of investment.

The above leads to the conclusion that Istria continues be a favourable region for investment into tourism. From a geographical perspective, investment should focus on destinations that have a better traffic position and are closer to outbound tourism markets but also have preserved landscapes, especially in terms of nature and physiognomy. However, in addition to geographical advantages, investment into tourism is also affected by legal, economic, political, psychological, sociological and other factors. In this stage of tourism development it is not likely that the share of investment into tourism and hospitality in inland Istria will be able to reach 50%, which is the average for Istria County as a whole (Uravic and Toncetti-Hrvatin 2009). This would be an improbable expectation given the type and structure of accommodation facilities in inland Istria which lack large hotels, characteristic of the coastal region. Hence, investments are considerably smaller and very often made on an individual basis. Finally, only in the future stages of development can the strong correlation between direct foreign investment and tourism development, which has been established in studies dealing with this issue (Craigwell and Moore 2008; Zhang et al. 2011), be expected to achieve the desired results in inland Istria.

The share of employees in legal entities in tourism and hospitality in the total number of employees in legal entities in the municipalities and towns of inland Istria is an indicator that partly makes it difficult to fully analyse tourism sustainability. This is because of the practical and methodological constraints that emerge in collecting and processing such data. The indicator is calculated as a percentage share: the number of employees in legal entities in tourism and hospitality is divided by the total number of employees in legal entities in inland Istria's municipalities and towns, and then multiplied by 100. As in the other indicators, data from 2010 are analysed. The key criterion was the place of employment rather than the place of residence. In 2010, in 14 municipalities and towns in inland Istria, legal entities in tourism and hospitality employed 170 persons, or 1.47% of all employees in legal entities in Istria (Croatian Bureau of Statistics, 2011b). The municipality of Oprtalj had the largest share of employees in legal entities engaged in tourism and hospitality (11.41% of employees), followed by Motovun (4.03%) and Visnjan (3.60%). This indicator was above the average of employees in tourism and hospitality in legal entities in the municipalities of Barban and Tinjan, and in the towns of Buzet and Buje (Table 6). In the municipalities of Cerovlje, Gracisce, Groznjan, Karojba, Kastelir-Labinci, Lanisce, Pican, Sveti Lovrec, Svetvincenat and Vizinada, there were no people employed by legal entities in tourism and hospitality.

Table 6. Share of employees in legal entities engaged in tourism and hospitality in the total number of employees in legal entities, by municipality and town of inland Istria, 2010

Ord. no.	Municipality/Town	Total number of employees	Employees in tourism and hospitality	Share of employees in tourism and hospitality (in %)
1	Oprtalj	184	21	11.41
2	Motovun	124	5	4.03
3	Visnjan	222	8	3.60
4	Barban	173	5	2.89
5	Tinjan	146	4	2.74
6	Buzet	2 362	53	2.24
7	Buje	1 700	33	1.94
8	Sveta Nedjelja	253	3	1.19
9	Sveti Petar u Sumi	296	3	1.01
10	Pazin	3 234	29	0.90
11	Lupoglav	304	2	0.66
12	Kanfanar	396	2	0.51
13	Zminj	488	1	0.20
14	Krsan	749	1	0.13

Source: Croatian Bureau of Statistics, 2011b.

Because of methodological difficulties arising from the unobtainability of data on the actual number of employees by place of employment and because of very liberal employment legislation, this indicator of tourism sustainability did not have any crucial importance for this study. The results of this part of the analysis fail to provide a fully reliable review of tourism sustainability in the municipalities and towns of inland Istria. As expected, the municipality of Oprtalj had the largest share of employees in tourism and hospitality in legal entities, as a result of the location of Istarske Toplice and the small number of employees in other industries. The towns of Buje, Buzet and Pazin also had the results expected. However, the lack of employees in tourism and hospitality in legal entities in the municipalities of Cerovlje, Gracisce, Groznjan, Karojba, Kastelir-Labinci, Lanisce, Pican, Sveti Lovrec, Svetvincenat and Vizinada may create a misrepresentation of the state of employment. Namely, because of the existing legislation that allows a broad range of the active workforce to engage in tourism and hospitality (Official Gazette no. 138, 2006), many employees remained concealed in a variety of initiatives and projects, trades and crafts, family employment, etc. Another reason for the inaccuracy of data is that many people, who are employed in the above municipalities, are actually registered at the head offices of companies located in other parts of Istria and Croatia. This problem is evident especially in the municipalities of Motovun (five persons employed in tourism and hospitality) and Krsan (one person employed), in which there are hotel facilities but only a small number of employees in tourism and hospitality.

Further research should focus exclusively on the issue of employment in tourism and hospitality in special studies that exceed the framework of this paper and which could provide greater insight and enable the revalorization of this indicator, providing reliable statistical monitoring of this phenomenon is ensured.

Interviews with officials in municipalities and tourist boards were either conducted in person as part of fieldwork or by telephone. The respondents were asked to respond to five broad themes, the purpose of which was to help explain the special features of tourism development in the individual municipalities and towns. These five themes were

concerned with an assessment of tourism development in municipalities/towns, the contribution of tourism to the local economy and its importance for the municipal/town budget, the contribution of tourism to employment in municipalities/towns, the attitude of residents towards tourists in the context of potential conflict between these two groups, and the role of tourism in preserving local traditions and customs.

All interview respondents gave very similar responses; their attitudes and opinions concerning the themes set out were almost identical. In assessing the level of tourism development, officials in municipalities and local tourist boards agreed that while potential does exist, tourism development is still in the cradle. The only minor exception would be the development of the Kanegra tourist complex and the hotel at Plovanija in the town of Buje. All respondents also underlined the minor contribution of tourism to the local economy and its small significance in the budgets of municipalities and towns. They went on to stress the importance that trades and crafts, various industries, and commerce have for the items on the revenue side of budgets, in which commercial tourism and weekend tourism participate. All respondents agreed that tourism has a minor and negligible contribution when it comes to employment. Concerning the relationship of residents and tourists, the respondents reported no conflicts between these two groups within the territory of their municipalities and towns. There was a high level of agreement among respondents concerning the fifth topic, as they all believe the interest of tourism in traditional features and local customs helps to further motivate organizers in their efforts to prepare and sustain local events. Hence, fostering tradition and customs also has a function in tourism.

Finally, the low number of beds, tourists and overnights, together with the indicators derived from these numbers, demonstrates that there is still enough room for tourism to develop without posing a threat to the local economy. However, the results of such analysis should not be taken at face value as evidence of the successful implementation of the sustainable tourism concept, because Butler (1999) points out that a low intensity of development does not necessarily have to be a guarantee of sustainability. Despite the much needed caution of experts in monitoring tourism, the example of the municipalities and towns of inland Istria has indeed confirmed the sustainable development of tourism. This indicates that the small number of beds, in dislocated and mutually distant accommodation facilities with individual visitors, confirms tourism as being a sustainable activity. The failure to deliver certain projects is not linked with the economic unprofitability of tourism activities but rather with external factors that were beyond the influence of the municipalities and towns of inland Istria. A more complete picture of the economic viability of tourism could be gained providing that investment shares and the number of employees per place of work were to become part of the official national tourism statistics.

Finally, the results of the study indicate that the formulated hypothesis – *Inland Istria is a region of sustainable tourism whose spatial and economic components do not threaten the social and economic development of municipalities and towns* – has been wholly confirmed.

CONCLUSION

Despite the certain drawbacks of indicators which could not be overcome in the research procedure, the application of indicators in monitoring sustainable tourism has confirmed

that inland Istria is a tourist region in the making. As an emergent spatial and socio-economic phenomenon, tourism has not yet had any significant effect on the local economy, nor has it contributed to any substantial extent to the general development of municipalities and towns through budget revenues. With regard to the type of accommodation facilities in this region, in its present stage of development, tourism has made a minor contribution to the employment of residents. The low values of indicators suggest that the recent increase of tourism activities in inland Istria has not threatened other economic activities, indicating that tourism is a sustainable activity. Clearly, in no way does this diminish the results of previous research according to which spatially and economically unsustainable forms of tourism may also emerge in tourism regions that have a small number of beds, tourist arrivals and overnights. However, in the case of the municipalities and towns of inland Istria, results indicate that if the tourism capacities and traffic were to grow considerably in the coming period, there is no danger of these processes disrupting the region's current socio-economic development. Nonetheless, it would be unrealistic to expect that tourism could play a pivotal role in the demographic and economic revitalisation of various parts of inland Istria.

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