

GEOGRAPHIC AXES AND TOURISM IMPLICATIONS CASE STUDY: NIRAJ AXIS IN MUREȘ COUNTY

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ABSTRACT: *The Niraj Valley represents a geographical axis determined hydrographically by the Niraj River, one of the main left tributaries of the Mureș River in Mureș county. Nirajului Valley represents one of the secondary geographical axes at the county level, with a potential of position mainly determined by the perpendicularity to the median area of the main axis, thus connecting the areas from upstream to downstream and directing the flows towards the main axis. The Niraj Axis represents an offering touring area, a characteristic determined in a proportion that cannot be neglected to the continuous and composite nature of the tourist offer. The Niraj Axis represents a model of the "axes approche" tourism management, a way that emphasizes continuity and balance. The purpose of this paper is to present the recurring advantages of the axial approach to tourism through a concrete example, from an area that can otherwise be considered peripheral in terms of tourism offer. The working methodology is based on a series of methods adapted to the recurring objectives of the three questions established at the beginning of the study and determines the obtaining of conclusions that prove the usefulness of such an approach in the field of tourism.*

Keywords: *tourism; geographic axes; tourism axes; Nirajului Axis;*

1. Introduction

Tourism represents an economic field, a continuously growing industry that is often considered an indicator of the civilization degree of a state [Oshkordina & Chikurova, 2020, p. 331].

The influences of tourism can be seen in both the economic and social spheres. Because is an industry with indisputable advantages, a management strategy for this field is necessary, both macro-scale, at the national level, and micro-scale, at the regional or zonal level.

Tourism as an action is based on two elements, push factors and pull factors, and the relationship between them materializes in the form of the tourist market.

However, pull factors or attractive tourist resources are inconsistent both in terms of the quantitative side, i.e. spatial distribution, and in terms of the qualitative side, i.e. value. This leads to strong imbalances in a destination, creating hotspots, i.e. overcrowded areas and isolated areas with underutilized potential [Capello, 2009, pp. 1-3].

The theory of push-pull factors is a popular way of justifying the choice or preference of

tourists for a certain destination. Thus, motivation represents the push factor and perception the pull factor, the relationship between them is the reason behind choosing a destination [Said and Maryono, 2017, p. 1]

If the choice of a destination is determined by the relationship between these factors, then the field of tourism must adapt its requirements according to them and their basic characteristic, that being constant change according to trends, tendencies and demand.

The field of tourism is determined by this demand and must make constant efforts to adapt, such an attempt is represented by the one that involves the transition from the spot approach, i.e. a rather more isolated approach to a more integrative or complementary model, that support regional development, i.e. axes approche [Pazhuhan & Shiri, 2020, pag. 119]

The axes approach is based on geographic axes and their ability to shape a territory by adapting to the conditions encountered, helping in balancing or rebalancing the geographic space.

Geographic axes represent patterns of spatial development, based on linearity and continuity [Albrechts & Tasan-Kok, 2009, p. 298].

These geosystems offer the possibility to

properly manage the existing potential from the regional level, improving the existing system by modeling the flows according to the social and natural component [Pop, 2016, p. 291].

Geographical axes represent intelligent territorial systems that allow the diagnosis and forecasting of a territory in a spatio-temporal way, being lines of force and attraction that guide material and immaterial flows, provide balance and continuity [Pop, 2016, pp. 10-11].

Thus, the geographical axes represent a way of managing the push-pull factors relationship, which involves all the actors in the field and offers a way of creating a positive image and a sustainable development.

Mureș County represents a region with an anthropic and natural potential suitable for a strong economic development, being an area with an ethnic potential determined by diversity, a heterogeneous area in both natural and anthropic way, a multi-millenary place for development of what today represents the tourism potential in the county. According to the INS [National Institute of Statistics], in 2023 a number of 479,790 tourists arrived in Mureș County. According to this indicator, in terms of the number of arrivals, Mureș County ranks 5th out of 11 at the level of Microregion I and 3rd out of 6 at the level of the Central Region [insse.ro, 2024]. Valea Nirajului is a part of Mureș county, which contributes, in a smaller or larger proportion, as the study will present, to this county's tourist potential.

Research questions:

1. Does the study area have an important tourism potential at the regional level?
2. Does the Niraj Valley represent a model of axial development of tourism?
3. Does the management of the "Niraj Axis" represent a model of sustainable tourism development at micro-regional level?

The objectives of the research: the analysis of the tourist potential at the level of the study area, the analysis of the geographic axis of Niraj and the analysis of the role of tourist axes and axial tourism in the development of the sector.

The purpose of this paper is to present the recurring advantages of embracing tourism with the help of axial type management, an alternative management method that is based on the natural continuity determined by the orographic and hydrographic axes in particular and which has as its main advantage the ability to compose the tourist offer from a certain area.

2. Study area

The study area, which runs along the Niraj Valley, totals 608.56 km², which represents approximately 9% of the county total.

The Niraj Valley runs along the course of the Niraj River, a left tributary of the Mureș River that joins it in the area of Ungheni city after covering a distance of 82 km from the source located at 1239m in the Gurghiului Mountains.

The area of the Niraj drainage basin is 651 km², unfolding in an area of valley corridor with the landscape potential determined by the contact with plain, plateau, subcarpathian and even mountain areas, resulting in a diversified landscape.

The Niraj axis directs the flows from upstream to downstream, connecting with the central area of the main geographical axis at the county level. The axis' area of influence is one of the most densely populated nationally, with villages strung like beads along the two banks of the Niraj and its tributaries. The 70 component localities of this microregion add up to over 38,000 souls, which means that in this area, which cover approximately 9% of the county's surface area, lives approximately 7% of the county population [valea nirajului.ro, no date].

Regarding development poles or cores, the city of Miercurea Nirajului stands out among the 13 ATUs at the micro-regional level, being the only urban representative in this area. Thus, among the 13 ATUs, 12 are common and add up to 63 villages, and Miercurea Nirajului counts, in addition to the residence, 7 more villages that belonging to it, which means that there are a total of 71 localities at the level of the study area [valeanirajului.ro, no date].

The fact that the Niraj Valley is a hearth of civilization is demonstrated by the archaeological discoveries in this area that are dating back to the Neolithic Period. It is noted that the upper part of this area is crossed in the north-south direction by the boundary line of the Roman Empire, which at the beginning of the 2nd century, with the growth of Dacia, represented the border of the province. On the bank of the Niraj, in the western direction, you can still see a line of the Roman road that connected Cășugăreni with the Mureș Valley, which proves the antiquity and importance of the Niraj axis [valeanirajului.ro, no date].

Limited development of the tourism sector in this area can be observed from official statistical

data showing tourist arrivals at the level of the study axis, noting that there is information only for 6 localities out of 13.

Figure 1 shows the evolution of the number of tourist arrivals from the level of the study axis during the years 2020-2023 [insse,2024].

3. Research methodology

The research methodology involves going through three steps with the aim of answering the research questions and achieving the three

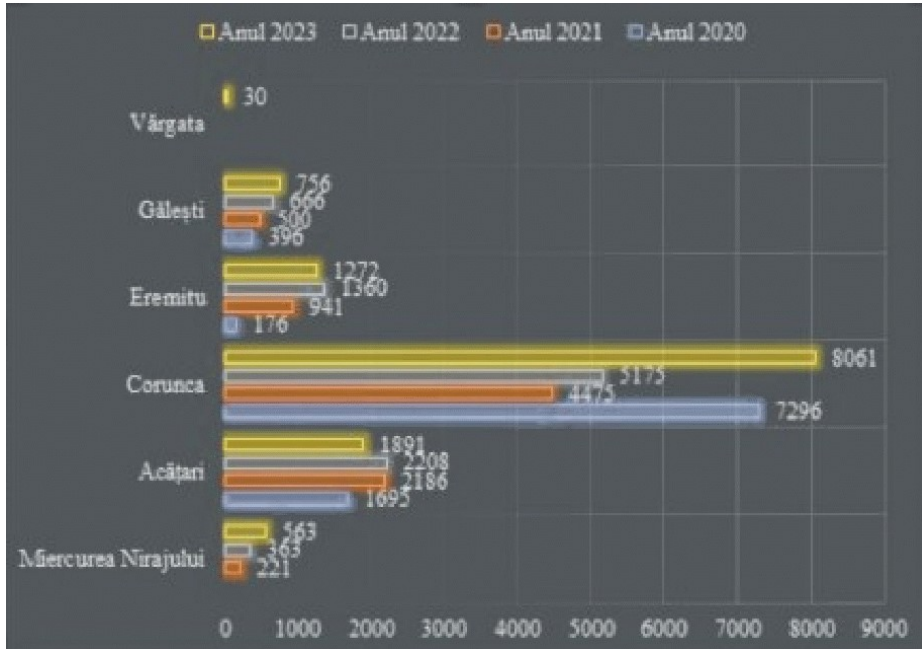


Fig. 1. The evolution of the tourists number of in the 2020-2023 period

Thus, it can be seen that the official data shows a rather low consumption of the tourist offer, but which mostly stagnates or even increases in the last 4 years, which can mean the adaptation and even improvement of the management strategy of this sector according to the characteristics of the area and the current trends. Figure 2 represents the positioning of the study area at the county level.

proposed objectives. A series of methods were used to achieve what was proposed: the method of studying specialized bibliography, the method of analysis and synthesis, the GIS method, the descriptive inventory and the the mathematical method.

The study of specialized literature is the basis of any research because of its multiple role: identification of the problem, connection with

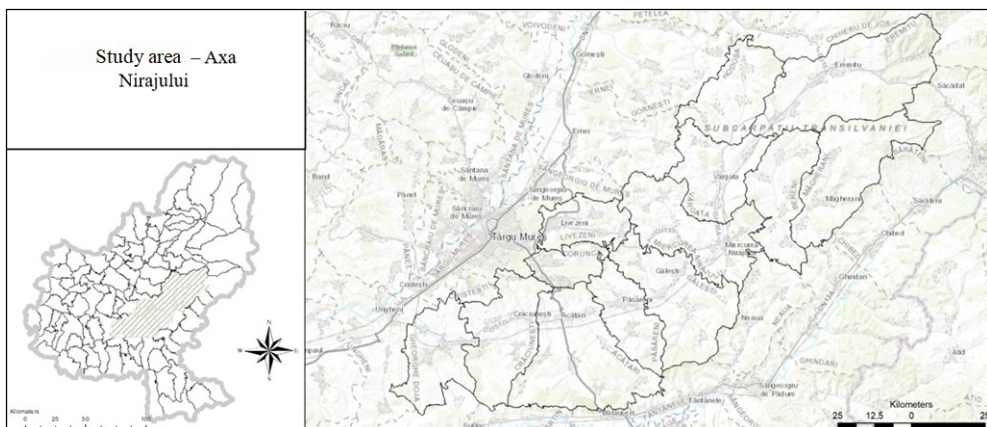


Fig. 2. Study area in Mure county

previous studies, the scientific substrate, new perspectives, provides continuity to any field etc [Sajeevanie, 2021, pag. 2714].

The method of analysis and synthesis was necessary for the interpretation of the data present in the specialized literature, the thematic and topographical maps and for the adaptation in order to achieve the proposed objectives.

GIS systems are ubiquitous in studies based on the management of natural and human resources, because offer increased efficiency for data storage, analysis and communication [Merry, et al, 2023, pag. 3]. In this work, the arcgis program was used to analyze the layers in the study area and to outline the necessary maps.

Descriptive inventory method includes a number of techniques for assessing environmental resources. It is based on quantitative and qualitative methods of assessing the environment by analyzing and describing its components [Arthur et al., 1977, pag. 153].

Descriptive inventory was used to quantify axis-level resources and attributes. This method was used in combination with that of studying the specialized bibliography, analysis and synthesis and the GIS method.

The mathematical method allows a more objective evaluation and leads to obtaining a territorial model outlined in accordance with the established criteria, allowing at the same time to compare the results obtained. For this study, a weighted sum formula was used, a formula that aligns with the purpose of this paper.

4. Results and discussion

Step 1 – analysis of the tourist potential of the Niraj Axis

The analysis of the tourist potential of an area requires an assessment based on the descriptive inventory method, being a quantitative assessment in principle, and for a more objective

measurement, it is necessary to use a type of mathematical analysis that brings results that are as concrete and difficult to dispute. For the quantification of the components of the tourist offer that contribute to the potential of an area, there is no single mathematical formula or a valid and accepted general model. In practice, the evaluation of the tourist potential involves the use of various methods, economic analyses, market studies and the consultation of tourism experts. However, a theoretical model allows a primary analysis that provides a necessary substrate for subsequent field studies that also involve the human side and their opinions. The model used in this study enables the achievement of the goal and has the role of presenting the effects that the axial tourism development has on the increase in the value of an area. Thus, the model used to quantify this potential must take into account several factors, for each has been assigned a weight coefficient according to its degree of importance.

The model used to analyze the tourist potential at the level of the study area:

$$PT = p_1 \cdot N + p_2 \cdot H + p_3 \cdot I + p_4 \cdot A$$

where:

PT = total tourist potential;

p_n = the weighting coefficient;

N = natural attractiveness;

H = human/anthropogenic attractiveness;

I = the specific and associated tourist infrastructure;

A = ambience.

Table 1 shows the four factors considered in the study and the attributes analyzed for each. It is observed that for each factor there are a number of five attributes considered relevant for the field of tourism.

The value of each factor is rated on a scale of 0 to 5, each attribute of the 4 factors considered will be scored between 0-1 as follows: 0 for the non-existence of the attribute, 0.5 for the partial existence or an objective/elements of the attribute

Table 1. Factors evaluated in the study

Nr. crt	Natural attractiveness	Anthropogenic attractiveness	Tourist infrastructure	Ambience
1.	Biodiversity	Cultural events	Accessibility	Authenticity
2.	Climate	Anthropic objectives	Leisure	Environmental quality
3.	Natural objectives	Traditional crafts	Eating facilities	Hospitality
4.	Landscape	Historical monuments	Accommodation	Promotion/advertising
5.	Protected areas	Traditions	Public transport	Safety

and 1 for the full existence or multiple objective/elements of the attribute. As for the weighting coefficients, they have value according to their importance, and for the first three factors considered this value is equal to 20%, and for the fourth factor the value is 40%.

Depending on the evaluation result, each locality will be classified in one of three value categories/areas: yellow area - poorly developed offer, orange area - medium developed offer and red area - well developed offer. Table 2 shows the score range for each area.

The first factor analyzed is that of natural attractiveness (N), the criteria according to which the evaluation was carried out and the result of the analysis for each UAT in the study area being presented in table 3.

The landscape is specific to the contact area between the Niraj corridor or valley with the hills and plateaus in this area. The agricultural landscape stands out with a potential that cannot be neglected for agritourism and rural tourism, with an emphasis on the traditions of this area, representative of the majority Hungarian population and the objects of the Szeklerland. Thus, for the "Landscape" attribute, all localities will get the maximum score.

Regarding biodiversity and climate, given the relatively small extent of the study area, all the component localities can be treated together. Thus, maximum points will be given to these attributes again, considering the natural and

climatic potential of the study area and of Mureş county.

The attributes "Natural features" and "Protected areas" will be scored as follows: 0 points for no natural features, 0.5 points for 1-5 such features and 1 point for more than 5 features. At the level of the study area, natural objectives were identified on the territory of the communes of Eremitu (Laleaua Pestiřă, Archaeological Park, Arini Lake, Likaskó Piatra, Berechi Mountain and the oldest living tree in Transylvania), Livezeni (Pyramidele) and Vărgata {Fânăřea din Grăușorul). As for the protected areas, in this area was identify only the Natura 2000 protected area ROSPA0028 Târnavelor Hills - Valea Nirajului.

Table 4 presents the result of the analysis for the anthropic attractiveness factor.

With regard to the "Events" factor, the annual events that are taken into account are: Eremitu Grape Ball, 8R - Eremitu Roman Festival, Balloon Parade - Eremitu, Beheci Mountain Days - Eremitu, Octoberfest - Acățari Harvest Day, Agricultural Exhibition and Horticola - Miercurea Nirajului, Marosszék Folk Dance and Music Camp from Hodo a. Scoring is awarded as follows: 0 points for no event, 0.5 for one to two events and 1 point for three or more events.

In the case of the "Anthropic Objectives" factor, a quantitative analysis is made, the scoring being given as follows: 0 points for the absence of anthropogenic objectives, 0.5 points for 1-5 such

Tabel 2. Value groups and value range

Value group	Yellow area	Orange area	Red area
Range	0 – 1,69	1,7 – 3,49	3,5 - 5

Tabel 3. Natural attractiveness – result of the analysis

ATU	Natural attractiveness					Total
	Biodiversity	Climate	Natural objectives	Landscape	Protected areas	
Acățari	1	1	0	1	0,5	3,5
Bereni	1	1	0	1	0,5	3,5
Corunca	1	1	0	1	0	3
Crăciunești	1	1	0	1	0,5	3,5
Eremitu	1	1	1	1	0,5	4,5
Gălești	1	1	0	1	0,5	3,5
Gheorghe Doja	1	1	0	1	0,5	3,5
Hodoșa	1	1	0	1	0,5	3,5
Livezeni	1	1	0,5	1	0	3,5
Măgherani	1	1	0	1	0,5	3,5
Miercurea Nirajului	1	1	0	1	0,5	3,5
Păsăreni	1	1	0	1	0,5	3,5
Vărgata	1	1	0,5	1	0,5	4

Tabel 4. Human attractiveness - the results of the analysis

ATU	Human attractiveness					Total
	Events	Anthropic objectives	Traditional crafts	Historical monuments	Traditions	
Acățari	0,5	1	0	0,5	0	2
Bereni	0	0,5	0	1	0,5	2
Corunca	0	0,5	0	0,5	0	1
Crăciunești	0	0,5	0	0,5	0	1
Eremitu	1	1	0	0,5	0,5	3
Gălești	0	0,5	0	0,5	0	1
Gheorghe Doja	0	0,5	0	0	0	0,5
Hodoșa	0,5	0,5	0	0,5	0	1,5
Livezeni	0	0,5	0	0,5	0	1
Măgherani	0	0,5	0	0,5	0	1
Miercurea Nirajului	0,5	1	0,5	0,5	0	1,5
Păsăreni	0	1	0,5	0,5	0,5	1,5
Vărgata	0	0,5	0	0,5	0	1

objectives and 1 point for more than 5 such objectives of at least 2 types. The same type of scoring is provided for historical monuments.

Examples of arts and crafts exist only at Păsăreni - Făurarul Satului and at Miercurea Nirajului - Cazinoul Secuiesc. The traditions are represented by the Traditional Portions from Eremitu, the winemaking from Păsăreni, the traditional portions and ensembles from Bereni.

There are traditions on holidays in all the localities, however, only the distinct ones were calculated. The next factor analyzed is that of the specific and associated tourist infrastructure, an important and often determining factor in tourist consumption. Table 5 shows the result of the analysis of this factor and its attributes.

For the "Tourist infrastructure" factor, the quantification of the elements is relatively simpler considering the fact that it is based on a quantitative analysis and the awarding of the three types of points according to those previously presented.

Accessibility, as it is also mentioned in the chapter dedicated to the study area, is very good, considering the favorable natural premise, the proximal location to the main axis and the secondary axis of Târnava Mică and the existence of road communication routes, the proximity to two railways and the airport of Târgu Mureș.

The "Leisure" attribute considers the offer available for indoor and outdoor activities at the level of the study area, and the scoring method is:

Tabel 5. Analysis results for the „Tourism Infrastructure” factor

ATU	Tourism Infrastructure					Total
	Accessibility	Leisure	Eating facilities	Accommodation	Public transport	
Acățari	1	1	0,5	1	0,5	4
Bereni	1	0	0	0,5	0,5	2
Corunca	1	0	1	1	0,5	3,5
Crăciunești	1	0	0,5	0	0,5	2
Eremitu	1	0	0,5	0,5	0,5	2,5
Gălești	1	0	0	0	0,5	1,5
Gheorghe Doja	1	0	0	0	0,5	1,5
Hodoșa	1	0	0,5	0,5	0,5	2,5
Livezeni	1	0	0,5	0,5	0,5	2,5
Măgherani	1	0,5	0	0	0,5	2
Miercurea Nirajului	1	0,5	0,5	0,5	0,5	3
Păsăreni	1	0	0,5	0	0,5	2
Vărgata	1	0	0	0,5	0,5	2

0 points for no type of activity, 0.5 for at least one such activity and 1 point for at least 3 such types of activities.

The attribute "Eating facilities" includes restaurants or other types of food service establishments, but also gastronomic points such as stables, households open to tourists, local bakeries or wineries. Cunanification follows the rule: 0 points for no element of the attribute, 0.5 for partial existence in this case between 1-5 units and 1 for more than 5 different units.

Regarding the "Accommodation" attribute, the most comprehensive offer is that of Corunca (7 guesthouses, 1 villa and 1 hotel) followed by Acățari (3 guesthouses, 1 hotel, 1 motel). Accommodation is also available in Bereni (1 guest house), Eremitu (1 guesthouse and 1 apartment), Hodoa with 2 houses for rent, Livezeni with a guesthouse, Vărgata (1 stop and 1 guest house) and Miercurea Nirajului where there are 3 guesthouses. Scoring is given as follows: 0 points for no units, 0.5 points for 1-5 units and 1 point for more than 5 units and at least 2 different types of such items.

The "Public transport" attribute includes only road transport on the Nirajului axis from and towards the area of the main axis, thus each locality will receive 0.5 points.

The last factor analyzed is that of "Ambiance", the result of the analysis being presented in table 6.

borrowings and the belonging to the Szeklerland whose charm increases the potential of the study area. Because in the study area the emphasis is on the development of rural tourism with variants of agrotourism and ecotourism, each locality will receive maximum points.

Regarding the "Environmental Quality" attribute, reports on air quality were studied as an indicator with obvious repercussions on the other elements. Thus, according to the data provided by the Mureş County Council, the study area is in the medium and good area in terms of this indicator, with the ATUs located close to the large urban centers of the main axis affected by the recurrent pollution of the intense activities in such centers.

The analysis of the "Hospitality" attribute is associated with the news from the national and international press that places Mureş county in the top 10 most hospitable areas worldwide in 2023 (tirnaveni.ro, 2023).

Thus, each UAT will receive the maximum score.

For the "Promotion" attribute, the presentation of the study area in the form of "Valea Nirajului" within a compact site dedicated to the accumulation of the zonal potential is taken into account, this consideration determining the awarding of the maximum score for each locality.

For the analysis of the "Security" attribute, the "Specific crime coefficients at the level of municipality/city/community in Mureş county for

Table 6. The result of the analysis for the "Ambiance" factor

ATU	Ambiance					Total
	Authenticity	Environmental quality	Hospitality	Promotion	Safety	
Acățari	1	0,5	1	1	1	4,5
Bereni	1	1	1	1	1	5
Corunca	1	0,5	1	1	1	4,5
Crăciunești	1	0,5	1	1	1	4,5
Eremitu	1	1	1	1	1	5
Gălești	1	0,5	1	1	1	4,5
Gheorghe Doja	1	0,5	1	1	1	4,5
Hodoșa	1	1	1	1	1	5
Livezeni	1	0,5	1	1	1	4,5
Măgherani	1	1	1	1	1	5
Miercurea Nirajului	1	0,5	1	1	1	4,5
Păsăreni	1	0,5	1	1	1	4,5
Vărgata	1	1	1	1	1	5

The attribute of "Authenticity" within this area is determined by the preservation of traditions, the ethnic mosaic, the historical

the year 2023" presented by the MAI was taking into account, according to them, at the level of the study area, the coefficient is low, in the most cases

even 0 and that is why each locality is rated with the maximum score [politiaromana.ro, 2024].

The tourism potential of the study area, presented in table 7, represents the summarization of the four factors at the level of each ATU in the study area.

Figure 3 shows the results of the analysis at the level of each UAT and their classification according to the value area.

Step 2 - the analysis of the geographic axis of Niraj

Tabel 7. Results of the analysis - The tourism potential of the study area

ATU	RESULT				PT
	N	H	I	A	
Acățari	3,5	2	4	4,5	3,7
Bereni	3,5	2	2	5	3,5
Corunca	3	1	3,5	4,5	3,3
Crăciunești	3,5	1	2	4,5	3,1
Eremitu	4,5	3	2,5	5	4
Gălești	3,5	1	1,5	4,5	3
Gheorghe Doja	3,5	0,5	1,5	4,5	2,9
Hodoșa	3,5	1,5	2,5	5	3,5
Livezeni	3,5	1	2,5	4,5	3,2
Măgherani	3,5	1	2	5	3,3
Miercurea Nirajului	3,5	1,5	3	4,5	3,4
Păsăreni	3,5	1,5	2	4,5	3,2
Vărgata	4	1	2	5	3,4

The calculation was made according to the formula:

$$PT = p_1 \cdot N + p_2 \cdot H + p_3 \cdot I + p_4 \cdot A$$

where: $p_1 - p_3 = 20\%$ iar $p_4 = 40\%$.

According to the analysis results, 0 ATUs belong to the yellow zone, 9 ATUs to the orange zone and 4 ATUs to the red zone.

The Niraj Valley can be considered an axis-type structure because it has a clearly outlined route along the hydrographic unit of the Niraj River, it has a main direction of flow circulation, poles and cores of development, constituting itself as a unitary whole.

At the level of the study region, there is only one city, Miercurea Nirajului, raised to this level

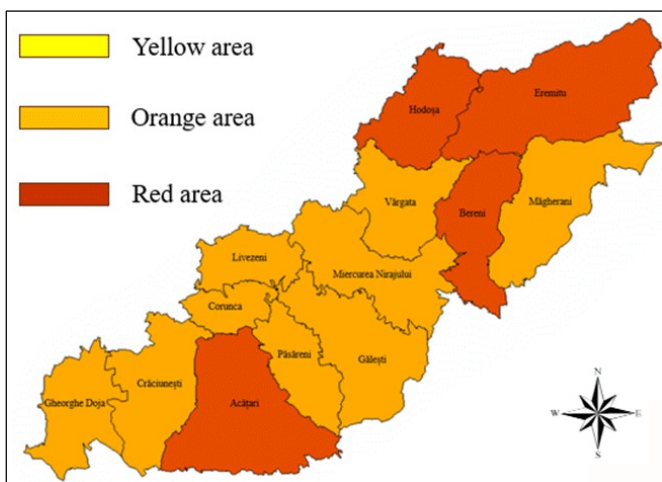


Fig. 3. The results of the analysis for the four factors and the classification of UAt according to the value category

for the purpose of territorial balancing, but whose characteristics do not perfectly align with this concept.

Regarding the tourist axis, the highest density of atus in the first value category can be observed in the northeastern part, which overlaps to some extent with the mountainous and submontane area. Also in the first value category is the commune of Acăţari, which stands out as a development pole for the south-western part of the axis, the potential position being an asset, the commune being in the proximity of two main axes at the county level.

Figure 4 shows the Niraj axis, the location of the atu components within the area and the analysis result for each factor within all the atus in the study valley.

tourist destinations being determined to form a unique and meaningful identity in the mind of the consumer in order to gain as many points as possible in the tourism competition. Thus, special attention is paid to the formation of a tourist image and a tourist brand of the destination [Stăncioiu, et. al, 2011, page 139]

Tourism is a sector where consumption is trigger be a positive image, and this image is a way of promoting a destination. The image of a destination is the business card that attracts consumption and that is why it is so important.

The tourist image is presented as a composite sphere, a combination of sensations, impressions and stereotypes [Porumb-Ghiurco, 2019, page 300]

According to Ritchie & Ritchie [1998, p. 103]

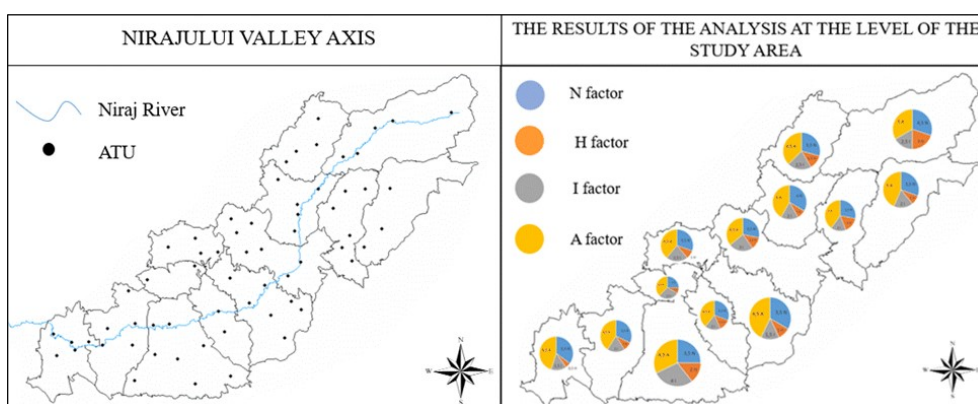


Fig. 4. The geographical axis of Niraj - localities and the result of the analysis from the tourist point of view at the level of ATU

Moreover, the axial treatment of "Văi Nirajului", as an axial tourist destination, represents a first step towards a closer collaboration between the economic actors in this area. One of the results of the promotion of this type of collaboration is the association of local producers from the year 2023 under the brand "Produs în Valea Nirajului".

An initiative at the beginning of the road resulting from the collaboration of the Valea Nirajului Mircoregion Association, the city of Miercurea Nirajului and local producers from the region, a proof of the role of axial development of tourism within other sectors.

Step 3 - analysis of the role of tourist axes and axial tourism in the development of the sector

The economic role of the tourism field has led to increased competitiveness in this sector,

the brand of a destination is "a name, a symbol, a logo, a keyword or any graphic sign that identifies and at the same time differentiates the destination; moreover, it expresses the promise of a memorable travel experience that is uniquely associated with the destination; [the brand] serves to strengthen the emotional connection between the visitor and the destination".

Between the brand identity of the destination and the brand image is a reciprocal relationship, the brand image being a reflection of the brand identity, playing a decisive role in its constitution. The tourist creates an image of the destination based on the brand identity, and this is the basis of a future choice.

The expectations determined by the image of the destination lead to the satisfaction or dissatisfaction of the tourist and therefore it is important to correlate this image with reality [Pike, 2002, p. 543].

The tourist destination represents the area receiving tourists, the place where tourists travel for consumption. The tourist destination brand represents a well-known, profit-generating area. Porumb-Ghiurco [2019] considering that "The purpose of all efforts regarding tourist destinations is to transform them into brands and to have, for as long as possible, tourist products from the "golden calf" category [Porumb-Ghiurco, 2019, page 939]

Although the advantages of this tourism image-brand association are indisputable, there are also some negative elements such as the differences between reality and the presented image, the inconsistency in practice of maintaining standards, thus resulting in artificial tourism brands and without substance or substrate/tradition [Stăncioiu, et.all, 2011, page 139].

However, as Morgan & Pritchard [2001, p. 214] anticipated, "the battle for customers in the tourism industry of tomorrow will be fought not for price, but for the minds and hearts of customers - in essence, the brand (...) will be the key to success", the tourism brand is a way to attract attention and consumption and therefore occupies an important place in the tourism industry.

If the tourist image and the tourist brand still occupy today, as Morgan and Pritchard anticipated, a very important place in the field of tourism, the trends of this field are consistent in terms of change, being in a continuous modification according to the demands of the market.

Sustainable development is a necessity, and the alignment trends of all fields, including tourism, is already a normality, the social trend of alignment with this type of development is also observed, which is largely due to the "attempts" to impose this objective

Geographic axes represent lines of force, polarizing zones with an important role in directing material and immaterial flows. They have different geometric configurations and sizes depending on the polarization capacity of the components. Geographic axes are intelligent and complex territorial structures, and the way they behave reflects the operating states of a system. Properly managed, they are a way to respect the principle of maximum efficiency with minimum energy and substance, a current requirement in all fields of activity [Pop, 2016]

Regarding the link between tourism and geographical axes, there is a tendency to move from the "spot approach" strategy that include spatial concentration, especially island or city type, to a more comprehensive, more compressive approach to the strategy regional in terms of tourism planning, i.e. towards a "axis approach" development type or towards axial development.

This type of approach requires effective planning and management that respects local characteristics and provides continuity to the tourist offer. The management of the tourist axes is based on the identification, planning, equipping and exploitation of the regional tourism potential and considers the activation of the local tourism capacity in all the villages and towns on the axis level, thus developing a systematic and integrative regional plan.

Regional tourism axes occupy an important place in territorial planning because they connect areas with tourist potential in a region, including and linking villages and small towns, thus developing and multiplying the tourist offer, while reducing economic and social isolation and also, providing opportunities for the development of the local economy [Pazhuan & Shiri, 2019, pp. 119-121]. Tourist axes offer continuity, balance, increasing compatibility and complementarity, promote collaboration and determine the accumulation of potential in a certain area, thus being viable solutions for managing tourism at least in areas with low or isolated potential.

The "Valea Nirajului" project represents a model of axial tourism management, being an area without a single or a distinct touristic personality to attract tourists. In such cases, where an important objective or attraction is missing and the offer is relatively low, the accumulation seems the only viable solution to attract and maintain tourists for as long as possible. This strategy makes Valea Nirajului an axial development model, which offers the opportunity for each locality to develop its potential, thus offering territorial balance and a solution for the sustainable development of tourism at the level of the study axis.

Conclusions

The answer to the first question: "Does the study area have an important tourism potential at the regional level?" is no. The tourist potential at the level of the study area is quite low, being

below the average county density from both the natural and anthropological perspectives. It is noted that there are no objectives that stand out as points of interest at the national or county level. However, the presentation and promotion of this area as a unitary whole leads to the accumulation of the offer and its diversification, the website "Valea Nirajului", responsible for the development of tourism in this area, having approximately 270,000 hits.

The tourist infrastructure is developed in direct proportion to the demand, and accessibility in the area is good considering the proximity to the main geographical axis at the county level. The desire to develop rural tourism and agritourism is notable, although the offer still requires some improvements.

The increase in the value of this area comes from the involvement of the locals in tourism and the attempt to make them aware of the area's potential. Valea Nirajului is a tourist axis that must be oriented towards tourist development in accordance with the specifics of the area, benefit from belonging to the Szeklerland, from traditions and customs and develop the offer so that the local specifics do not suffer.

The answer for question two: "Does the Niraj Valley represent a model of axial development of tourism?" is yes.

The Niraj Valley represents an axial development model, developing along the hydrographic axis of the Niraj River, a tributary of the Mureş River. The tourism axis of Niraj represents a tourism brand that promotes the image of this area in accordance with the offer, trying to develop tourism in a peripheral area in terms of potential.

Valea Nirajului is a model of axial development of tourism because it represents a cumulative, compatible and at the same time complementary offer, which has the role of balancing the territory by offering the possibility to each locality to participate in the development of tourism in its area. It also represents a model of continuity, which can even be considered a branch of the Mureş axis due to its proximity to it.

The answer for question three: "Does the management of the "Niraj Axis" represent a model of sustainable tourism development at micro-regional level?" is yes.

The axial development of tourism represents a way of sustainable development in tourism because it can be the basis of a tourism strategy that unites smaller and sometimes peripherally located communities, provides continuity to the tourist offer, compatibility and complementarity of this offer and also balances.

The development of tourism with the help of tourist axes or axial development as presented in this study leads to the elimination or reduction of "hotspots" and disperses the tourist offer.

At the same time, it offers the possibility of cumulating the tourist potential, allowing the less attractive areas to enter and maintain themselves on the tourist market, a first step they need for further development.

Tourism axes, by developing an axial development strategy, can lay the foundation for a positive tourist image and help create a tourist brand that, although it may include a divergent offer at first sight, has the ability to converge, especially in the conditions of a natural continuity, as is the case of the Niraj Axis, developed along the homonymous valley.

Acknowledgements: No financial support was received for this study.

Conflict of interest: The authors declare no conflict of interest.

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