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VALORISATION OF A DISTRICT AREA FOR TOURISM AND RECREATION – A CASE STUDY

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Abstract: The aim of the work is to assess the tourist and recreational attractiveness of the Zator commune using synthetic indexation. An inventory of selected tourist assets, both natural and anthropogenic, as well as tourist development, was carried out. The Gołembski synthetic measure method was used to assess the conditions of tourism development. The results were presented in a descriptive form using GIS tools. The valorisation of the area of the selected administrative unit using the Gołembski method has allowed the identification of towns that stand out in terms of tourism and recreation in the examined commune.

Keywords: valorisation, tourism, recreation, tourist attractiveness, multifunctional development.

1. Introduction

Economic and social development are important elements of interest not only in management sciences, but also economics and economic policy. They cover both the economic objective and subjective issues, e.g. related to views, trends or behavioural patterns. The phenomenon of socio-economic development belongs to complex phenomena. This is difficult to unequivocally and objectively assess, in particular at the municipality level, due to relatively small communities and limited access to detailed and homogeneous data (Kropsz-Wydra and Kurtyka-Marcak, 2015). An attempt to determine the level of economic and social development inclines one, therefore, to analyse the components of this development, such as tourist and recreational conditions.

Tourism is now a branch of industry which, along with the revolution of transport, the increase in the wealth of citizens and the change in the lifestyle, is recording continuous development. The goals of travelling are varied, ranging from the desire to explore and visit new places, get a break from everyday life, experience new adventures, to the need to realise one's own passions. The choice of travel destination usually depends on financial issues and the broadly defined tourist attractiveness of the area. Basically, this attractiveness is conditioned by two factors: natural space and anthropogenic space (Gołembski, 1999). The first of them, less shaped by man, is associated with the location of a given destination, i.e. the area occupied by individual land use, the occurrence of legal forms of nature protection, water relations, topography and valuable cultural and historical objects (Garbelli et al., 2017). The second, however, directly shaped by humanity, includes, among others, communication, service facilities, technical infrastructure and the state of the natural environment. An inventory, taking into account the above criteria and appropriate methodology, provides the possibility to calculate the synthetic measures of tourist attractiveness of a given area, as well as to compare physical and geographical administrative units or adopted geometric fields (Król, 2019). Therefore, local government authorities should support the development of tourism, among others, by creating development plans and supporting the activities of public organisations and the private sector (Nunkoo, 2015). Appropriate identification of factors affecting tourist attractiveness can be a source of information when developing management and marketing strategies supporting the development of tourism in a given area (Hakuć-Błażowska et al., 2018). The aim of the study is to assess the tourist and recreational attractiveness of the Zator commune using synthetic indexation of valorisation.

2. Assessment and valorisation of areas for tourism and recreation

The term "valorisation" can be seen in two aspects, i.e. as a description of values and as a method of assessing space. In spatial planning, valorisation is interpreted as an estimate of the value of a particular area. In order to determine the tourist attractiveness of the region, it is important to assess its natural and anthropogenic values. When analysing the importance of values in the development of tourism, it is necessary to take into account natural issues that directly increase or decrease the degree of tourist attractiveness (Wojcieszak, and Sznajder, 2017).

The issue of determining the attractiveness and valorisation of tourist areas has appeared in literature for a long time. Identification of factors affecting the tourist attractiveness of a given area can be a source of information, e.g. when developing marketing strategies or development strategies. The first attempts to quantify the tourist values of selected regions of Poland by the point bonitation method were already undertaken in the interwar period (Przezbórska, 2010).

Since then, many methods have been developed to assess tourist attractiveness. One of the commonly used methods is the point bonitation method, which refers to elements of the natural environment and anthropogenic environment. The method of point bonitation consists in assigning a specific number of points to individual features. Elements such as topographical relief, climate, soil, vegetation, landform and cultural heritage monuments and objects are analysed. The method of point bonitation is considered a method belonging to the group of subjective methods. The method of assessing the tourist attractiveness of areas is also often used, which was developed, among others, by G. Gołembski (1999). It assumes that the condition for assessing the attractiveness of a site is to estimate the value of the resources determining a given attractiveness. In the 1970s, another quantitative method of assessing the tourist attractiveness of an area was developed - the model method (Warszyńska, 1974). In later years, multivariate comparative analysis methods, in particular taxonomic methods, e.g. the Hellwig index or the Perkal method (Kukuła, 1994), found relatively common application for the valorisation of areas due to their usefulness for the development of various forms of tourism.

In international literature, there are many types and methods of valorisation used to assess the development of tourism, e.g. assessing the attractiveness of the landscape (Baczyńska et al., 2018), as well as using an assessment of the attractiveness of views (Potyrała et al., 2012), assessment of the attractiveness of the destination (Krešić, and Prebežac, 2011; Gravagnuolo, and Angrisano, 2013), assessment of the "ecological value of the commune" (Guzal-Dec, 2013), assessment of tourist potential (Racasan et al., 2016) or an assessment of attractiveness based on an assessment of natural conditions (Matzarakis et al., 2013). The assessments of tourist attractiveness and tourism potential are made based on indicator analyses (Baimai, and Daniel, 2009; Krešić, and Prebežac, 2011), point analyses (Dezsi, 2008) or surveys (Yankholmes, and Akyeampong, 2010). Baimai and Daniel (2009) presented a more economical approach to assessing tourism potential, which focused on analysing, among others, revenues from tourism, the number of tourists, assessment of cultural heritage, hotels and tourism expenditure, which were considered important variables (integrated in multiple regression models) with a large impact on the development of tourism.

3. Material and methods

The statistical material used for the study was obtained from the Local Data Bank. The research was carried out with the use of Gołembski's multidimensional comparative analysis (1999), which enables comparison of objects with many features and creation of an objective ranking of these objects on the basis of features indicating tourist attractiveness and attractiveness for investors.

Gołembski (1999) proposed to divide the attributes into two spheres: related to tourist attractiveness and attractiveness for investors. This division was modified, and the variables were divided into 2 spheres – tourist values and attributes of tourist development. In addition, a weight was assigned to each variable (Table 1).

Table 1.
Spheres and areas in which diagnostic variables were selected

Spheres	Areas	Weight
Tourist values	Natural values	0.30
	Anthropogenic values	0.70
Tourist development	Transport accessibility	0.10
	Accommodation	0.25
	Gastronomy and recreation	0.25
	Tourist infrastructure	0.25
	Paratouristic and technical infrastructure	0.15

Source: own elaboration based on Gołembski (1999).

Rural space consists of three types of elements: natural (e.g. greenery, water, landform), anthropogenic nonmaterial (e.g. human resources, tradition, customs, interpersonal relationships, cyclical events, tourism) and anthropogenic material (e.g. spatial arrangement, buildings, infrastructure, greenery, surface waters) (Niedźwiecka-Filipiak, 2009). The study included 20 diagnostic features (Table 2), which were unified so that they were all stimulants (an increase in the value of the explanatory variable leads to an increase in the explained variable). Diagnostic variables were selected based on an analysis of source materials (Dorocki et al., 2013; Kukuła, and Bogocz, 2014; Hakuć-Błażowska et al., 2018; Król, 2018). Destimulants were transformed into stimulants using a method called maximum shift. The diagnostic variables were then normalised according to the formula (1), i.e. the value of the next indicator was divided by the value of the reference point (standard), in this case the maximum recorded value of a given feature (Gołembski, 1999):

$$n_{ij} = \frac{y_{ij}}{y_j \max} \quad (1)$$

where:

n_{ij} – normalised value of the j-th indicator in the i-th village,

y_{ij} – value of the j-th indicator in the i-th village,

y_j max – maximum value of j-th stimulant index in villages.

Table 2.
Diagnostic features in the area of tourist and recreational attractiveness and their weight

Sphere	Area	Feature	Measure	Weight
Tourist values	Natural values	The share of forests in the total area	%	0.50
		Watercourses – coastline chainage	km	0.20
		Protected area – Natura 2000	ha	0.30
	Anthropogenic values	Castles, palaces, manors	number	0.40
		Historic churches and temples	number	0.40
		Memorials, historical tombs	number	0.15
		Libraries	number	0.05

Cont. table 2.

Tourist development	Transport accessibility	Density of national roads	km/km^2	0.5
		Opened railway stations	number	0.2
		Motor Transport Company stops	number	0.3
	Accommodation	Hotels and resorts	number	0.5
		Hostels	number	0.3
		Campsites	number	0.2
	Gastronomy and recreation	Restaurants, gastronomy and recreation centres	number	0.6
		Bars, cafes,	number	0.4
	Tourist infrastructure	Fisheries	number	1.0
	Paratouristic and technical infrastructure	ATMs	number	0.1
		Grocery shops	number	0.5
		Sewage system	piping %	0.2
		Water supply network	km/km^2	0.2

Source: own elaboration.

Standardisation is an action aimed at adapting diagnostic variables to the role of partial criteria in the assessment of a complex phenomenon. Diagnostic features usually have different units of measure, and their values reach different values. Standardisation methods are used to transform absolute values into relative values. Standardisation of features enables comparative studies of objects described by means of many variables (Prus, and Król, 2017).

In the next stage, diagnostic variables were assigned weights, and a synthetic measure was then calculated for areas and spheres using the formula (2) (Hakuć-Błażowska et al., 2018).

$$Md_i = \sum_{j=1}^{n} wj \times nij \quad (2)$$

where:

Md_i – synthetic meter for area d in the i-th village,

w_j – weight of j-th indicator in area d_i,

n_{ij} – normalised value of the j-th indicator in the i-th village.

In the last stage, the value of the synthetic indicator of general determinants of tourism development was calculated for each village. The results were presented using QGIS software.

The area of research

The research area was selected because of its tourist potential and location in a region with exceptional natural and cultural values. The Zator commune is a rural and urban commune located in the Oświęcim county (Lesser Poland). It covers an area of 51.4 km^2 and includes 9 villages: Graboszyce, Grodzisko, Laskowa, Łowiczki, Palczowice, Podolsze, Rudze, Smolice, Trzebieńczyce and the city of Zator, which is the residence of the commune (Fig. 1).

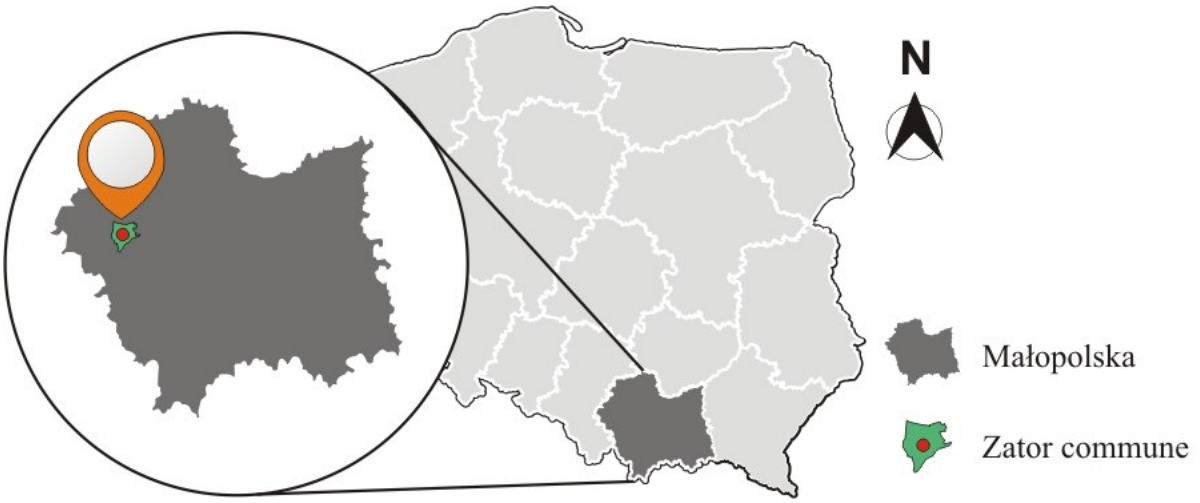


Figure 1. Location of the Zator commune within the Małopolska voivodeship. Source: own elaboration.

The commune of Zator, according to the classification of the International Documentation Federation (Kondracki, 2009), is located in Western Europe, in the megaregion: Carpathian Region, within the province of the Western Carpathians with Western and Northern Subcarpathia. The commune is located in the sub-province of Northern Subcarpathia and the macroregion of the Oświęcim Basin and includes two mesoregions: the Upper Vistula Valley and Wilamowickie Podgórze.

4. Results and conclusions

The highest natural qualities, according to the value of the aggregated indicator and in the adopted research model, were recorded in the case of Podolsze and Grodzisko. To a large extent, this is due to the relatively high forest cover of these villages. In turn, the greatest anthropogenic values (in the "tourist values" zone) were recorded in the case of Graboszyce and Zator. These cities have the largest number of cultural heritage sites, in particular historic buildings and structures (Table 3). Fewer historic buildings are located in Grodzisko, Łowiczki and Smolice, which gave them a zero value of the aggregate index in the assessment of anthropogenic values. Ultimately, the highest scores in sphere I (tourist values) were obtained by the cities of Graboszyce and Zator, which results from the high scores obtained in the assessment of natural and anthropogenic values.

Table 3.
Values of aggregated indicators for zone I including weight

Villages	Sphere I – Tourist values					
	Natural values		Anthropogenic values		Total	Total including weight
	WW	WZ (0,3)	WW	WZ (0,7)	WW	WZ (0,5)
Graboszyce	0.42	0.13	0.95	0.67	0.80	0.40
Grodzisko	0.58	0.17	0.00	0.00	0.17	0.09
Laskowa	0.35	0.11	0.05	0.04	0.15	0.08
Łowiczki	0.32	0.10	0.00	0.00	0.10	0.05
Palczowice	0.42	0.13	0.40	0.28	0.41	0.21
Podolsze	0.87	0.26	0.13	0.09	0.35	0.18
Rudze	0.39	0.12	0.45	0.32	0.44	0.22
Smolice	0.50	0.15	0.00	0.00	0.15	0.08
Trzebieńczyce	0.43	0.13	0.00	0.00	0.13	0.07
Zator	0.49	0.15	0.85	0.60	0.75	0.38

WW – indicator value; WZ – indicator value with weight (weight).

Source: own elaboration.

The highest value of the synthetic indicator in terms of transport accessibility was recorded in the case of Graboszyce and Zator, with the lowest in Grodzisko, Łowiczki and Palczowice (Table 4). There is also high forest cover in these towns, which results in less density of transport and communication infrastructure. This is associated with a smaller number of tourist and historic facilities, which in turn translates into a lack of accommodation, catering and recreation facilities, as well as technical infrastructure. Within these sections, the highest values of the synthetic indicator were recorded for Graboszyce and Zator, which ultimately stand out in the synthetic assessment of tourism development (in the adopted research model).

Table 4.
Values of aggregated indicators for zone II including weight

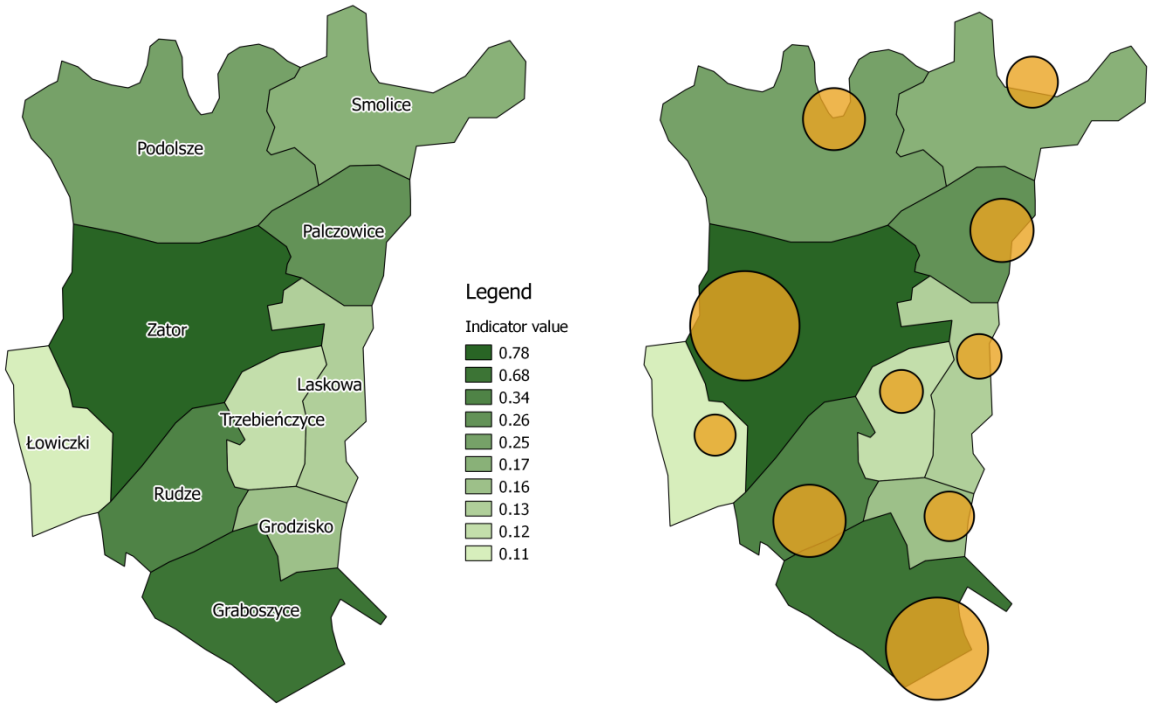
Villages	Sphere II – Tourist development											
	Transport accessibility		Accommoda-tion		Catering and recreation facilities		Tourist infrastructure		Paratouristic and technical infrastructure		Total	Total including weight
	WW	WZ (0.1)	WW	WZ (0.25)	WW	WZ (0.25)	WW	WZ (0.25)	WW	WZ (0.15)	WW	WZ (0.5)
Graboszyce	0.68	0.07	0.55	0.14	0.32	0.08	1.00	0.25	0.15	0.02	0.56	0.28
Grodzisko	0.00	0.00	0.20	0.05	0.20	0.05	0.00	0.00	0.27	0.04	0.14	0.07
Laskowa	0.55	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.04	0.10	0.05
Łowiczki	0.10	0.01	0.00	0.00	0.20	0.05	0.00	0.00	0.38	0.06	0.12	0.06
Palczowice	0.10	0.01	0.00	0.00	0.20	0.05	0.00	0.00	0.24	0.04	0.10	0.05
Podolsze	0.20	0.02	0.00	0.00	0.00	0.00	0.00	0.06	0.42	0.06	0.14	0.07
Rudze	0.43	0.04	0.25	0.06	0.12	0.03	0.25	0.06	0.29	0.04	0.23	0.12
Smolice	0.30	0.03	0.00	0.00	0.20	0.05	0.25	0.06	0.19	0.03	0.17	0.09
Trzebieńczyce	0.36	0.04	0.00	0.00	0.00	0.00	0.25	0.00	0.38	0.06	0.10	0.05
Zator	0.80	0.08	0.80	0.20	1.00	0.25	0.5	0.13	0.88	0.13	0.79	0.40

WW – indicator value; WZ – indicator value including weight (weight).

Source: own elaboration

The highest values of the synthetic indicator of tourist attractiveness were recorded for the city of Zator and for the Graboszyce village council (Fig. 2). These measures, at the level of 0.78 and 0.68, testify to the high tourist values of these cities (in the adopted research model).

This is connected not only with numerous natural, cultural and historical values, but also with prosperous service facilities. Accommodation options, the use of developed catering facilities and various tourist attractions largely shape the positive image of these cities.



(a) (b)

Figure 2. Spatial diversity of villages of the municipality of Zator based on the value of a synthetic indicator of the tourist attractiveness (a); cartodiagram – size of the circle showing value of the synthetic indicator of the tourist attractiveness (b). Source: own elaboration.

The areas which, according to the values of the synthetic index, are the least attractive to tourists include Łowiczki and Trzebieńczyce. These villages are mainly characterissed by the lack of basic tourist facilities.

5. Summary

The possibilities of rural development, which depend to a large extent on the evolution of non-agricultural functions, are determined by their social, economic and natural conditions. The process of multifunctional rural development is conditioned by the formation of a favourable system of many factors that are often interrelated.

Conducting an inventory, collecting numerical data and calculating a synthetic indicator showed that the areas with the greatest tourist potential are the city of Zator and the village of Graboszyce (in the adopted research model). The village councils of Łowicz and Trzebieńczyce were rated the least attractive.

Therefore, the valorisation of the area of the selected administrative unit using the Gołembski method allows for the isolation of towns that are distinguished by their special values and thus are characterised by greater tourist and recreational attractiveness. Thanks to this, the results of such analysis can be useful for the initial diagnosis of investment and promotional needs of individual areas of a given commune or for assessing their development over time.

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