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Attractiveness of peripheral areas' geographical environment for tourism and recreation vs the issue of holistic phenomenon measurement. Krajna case study (Poland)

Abstract: Owing to the location of Krajna in the north-western part of the country, in the historical border area of northern Wielkopolska and Pomorze (and especially its being far away from large cities), it is considered a peripheral region as per Christaller's theory. By virtue of such circumstances, Krajna exhibits rich and almost pristine environmental potential, together with well-preserved cultural capacity. The study aims to draw attention to the fact that nowadays the objective aspect of indexation should not be the only factor taken into consideration when assessing the usefulness of assets (tourism resources) for the development of tourism in a given area. Thus, the author performs calculations and data analysis using a two-stage research approach, which involves: 1) qualitative analysis of the results of a survey pertaining to the most prominent environment elements of the geographical region as indicated by tourists and local authorities, and 2) comparison and assessment (by means of a simple bonitation method) of tourists' subjective opinions regarding top-graded elements of the geographic environment that are deemed to affect tourist attractiveness of the region. The analysis shows that the qualitative aspect of assessment in particular plays a major role in the analyses of region's tourist attractiveness (especially in the case of peripheral regions). Although a given region may objectively demonstrate a higher degree of peripherality, this does not necessarily cause a decrease in perceived tourist attractiveness of environmental assets displayed by a geographic region as such but may in fact enhance those qualities from the subjective standpoint of tourists and local authorities. Said aspect is related to the determination of social perception on geographical environment elements. As such, it should be examined from both the perspective of "guests" (i.e. visitors) and "hosts", here the local government representatives of the research area. The results of conducted studies have a viable impact on the shaping and development of the region's tourist area. This, in turn, leads to a full (synthetic) measurement and assessment in terms of the attractiveness of the area's geographical environment for the development of tourism and recreation.

Keywords: peripheral areas, Krajna, tourist attractiveness, social perception on geographical environment elements, score-based evaluation – bonitation

1. Introduction

In literature on economy the issue of peripheral regions is typically discussed in the context of potential assessment and development disproportion between individual regions or from the perspective of economic activity displayed by peripheral regions. These issues were touched upon by, among others, Pilawka and Kazak (2013) as well as Wojewódzka-Wiewiórska (2013). Peripherality is traditionally viewed through the prism of spatial factors such as poor communication infrastructure, absence of modern means

of transport and relatively high cost of transport to other, more developed regions, which result from unfavourable geographic location and considerable distance from the central regions and markets (Leszczewska, 2010; Zarębski, 2012). In literature on geography (e.g. Christaller, 1964; Karolczak, 2002; Durydiwka, 2009; Kozłowska-Adamczak, 2016; 2017; 2019) peripheral regions/areas, due to their level of socio-economic development, are believed to reside at the opposite spectrum of urbanised areas, which are

seen as centres. Christaller (1964), on the other hand, argues that tourist traffic is predominantly generated by the inhabitants of urbanised areas because – driven by the urge to satisfy their leisure needs – they tend to prioritize natural values that can only be experienced away from large cities. Thus, an assumption can be made that tourists from areas deemed central (i.e. cities) tend to gravitate towards the peripheries (Durydiwka 2009, p. 63).

The analysis of basic socioeconomic indices paired with relatively low values of the synthetic Perkal index pertaining to peripherality as calculated for the geographic, economic and social criteria (e.g. Leszczewska, 2010; Zarębski, 2012) demonstrate that Krajna can be perceived as a peripheral region (Kozłowska-Adamczak, 2016; 2018). The underlying assumption of this research is that peripheral nature of an area resulting from spatial isolation may nowadays (in current market economy) be treated as a local (regional) asset, driving the development of tourism in the 21st century. Using the example of Krajna, this concept is to demonstrate that the peripheral location of an area or a historical and geographical region (such as Krajna) may also constitute a tourist value or attraction in the modern urbanised world. And thus, it can become a basis for creating new tourist areas because, according to Christaller (1955; 1964), sectors of tourist supply mostly emerge in peripheral regions featuring attractive tourist assets, and in this sense they become the cores of a given tourist area, as opposed to urbanized cities (the so-called centres).

According to Duda-Seifert (2015, p. 78), attractiveness is a complex category, assessment of which is prone to error due to the subjectification of the process. Consequently, research on the perception of tourist values falls within the mainstream of interpretative (humanistic) methodology. As per the cited author, this is also why the most frequent attempts to assess tourist attractions combined with studies on tourist preferences were made by integrating quantitative and qualitative methods (Kruczek, 2002; Fedyk et al., 2014; Duda-Seifert, 2015). In available literature, attractiveness is identified primarily with the concept of tourist attractiveness understood as all the properties of spatial units (i.e. a given area, region, gmina, city, or even a tourist route) resulting from a set of nat-

ural or non-natural features (also known as cultural or anthropogenic), which arouse interest and attract tourists (Warszyńska and Jackowski, 1979; Kurek, 2007). Based on Kożuchowski (2005), *tourist attractiveness* stands for the usefulness of the geographical environment for tourism, as well as the ability to attract attention, elicit admiration and desire. At the same time, owing to different psychophysical conditions displayed by the recipients of the space, *tourist attractiveness* is a concept that is relative by nature, which was prominently noted in the mid-1990s by Bogucka (after Kowalczyk, 2001). What is more, in the psychology of tourism, researchers Winiarski and Zdebski (2008) emphasise the importance of the so-called landscape preferences (driven by both socio-demographic and cultural determinants). Above all, however, they put the stress on the importance of individual characteristics displayed by consumers of a tourism area consumer, e.g. the level of knowledge, motivations, needs, and interests. In such a situation, it is reasonable to advocate a subjective approach to attractiveness perceived and assessed by each person in individual terms, through the prism of their feelings (Kowalczyk, 2001; Kożuchowski, 2005).

This article draws attention to the issue of synthetic measurement and assessment regarding the attractiveness of the geographic environment attributed to a given area (and peripheral areas in particular) for the development of tourism and recreation. Therefore, based on the example of the Krajna region, the author of this paper made an attempt to use one of the simplest quantitative methods (i.e. scoring method) to achieve this objective. Preceded by extensive questionnaire research, it was employed to define the phenomenon objectively, and to illustrate the social perception of the geographical environment values, taking both the point of view of “guests” (i.e. visitors) and “hosts” (i.e. representatives of local government authorities) of the studied region into consideration. As a result, such a research procedure gave a completely new and interesting, but most of all comprehensive picture of the studied reality. For the purpose of data analysis the author employed a two-stage approach encompassing: 1) qualitative analysis of the most prominent elements of the geographic environment of the study region from the perspective of tour-

ists and local authorities as presented in the survey, 2) comparison and assessment – based on a simple bonitation method – of subjective opinions of tourists and local authorities per-

taining to the number of indications for the geographic environment elements believed to affect tourist attractiveness of the region.

2. Area descriptions, methods and material studied

2.1. Research area

Krajna lies on the periphery of several major agglomerations, such as Bydgoszcz, Toruń, Poznań and Trójmiasto, and thus, it fits into the periphery theory. Krajna has much to offer to tourists and its peripheral location could be used to enhance the development of tourism in the region. Krajna constitutes a postglacial area rich in geological forms such as kaems and eskers and is largely pristine. The above-mentioned landforms are under protection (for instance Obszar Krajobrazu Chronionego Ozów Wielowickich in the gmina of Sośno) and constitute a characteristic element of Krajna.

The region remains largely unindustrialized and human influence is mainly limited to agriculture. There are many untrained rivers and unregulated lakes, river valleys and forests, which form beautiful postglacial landscapes. The largest and most interesting lakes include Więcborskie and Sępoleńskie lake complex, Borówno Lake near the town of Złotów, Płotki near the city of Piła (one of the cleanest lakes in Poland), Luchowskie Lake, Witosławskie Lake and Stryjowskie Lake. There are 13 nature reserves, as well as Krajeński Park Krajobrazowy (The Krajeński Landscape Park) with its seat in Więcbork. Additionally, the region

is rich in rare species of animals, for instance kingfishers, erne, blue throat.

Moreover, the region possesses rich folklore and traditions. There are many architectural elements that could become attractions, for instance old churches (in Więcbork, Piła, Miasteczko Krajeńskie), palace and garden complexes (in Komierowo, Sypniewo, Samostrzel), mills (Orzelski Młyn in Więcbork commune), granaries (in Nakło and Złotów – adapted into museums) and traditional cottages (for instance old cottage from *Dźwierszno*, moved to open-air ethnographic museum in Osiek). Krajna has the oldest Sanctuary of Virgin Mary in Poland, dating back to 1079 – Górka Klasztorna. Also, Krajna holds many cultural events that may attract tourists. One of the biggest events is *Smaki Krajny and Pałuk*, the aim of which is to propagate and advertise regional cuisine. The said events are, for the moment, largely unknown but attract an increasing number of tourists. All these elements of the geographical environment (natural and cultural) combined form a unique tourist destination that can be explained through and demonstrated on the periphery theory by Christaller (1955; 1964).

2.2. Methods and material studied

The historical region of Krajna (Goerke, 1918; Szafran, 1961), which is located in northern Poland (Fig. 1), constituted the subject matter of author's doctoral thesis and other publications (Kozłowska-Adamczak, 2016; 2017; 2019). The presented study, however, sets out to expand on the results obtained thus far by means of addressing the social aspect of the research problem, i.e. subjective views on attractiveness of the geographic environment in the context of tourism and recreation from the standpoint of both tourists and local authorities. The

author demonstrates, based on the example of Krajna, that nowadays the assessment of assets (resources) of the geographic environment in terms of their actual value to the development of tourism and recreation requires a two-way approach, i.e. objective consideration on the subject paired with the social perception of the problem (perspective of tourists and local authorities).

When subjectively assessing the level of tourist attractiveness, the quality of the geographical environment were first based on

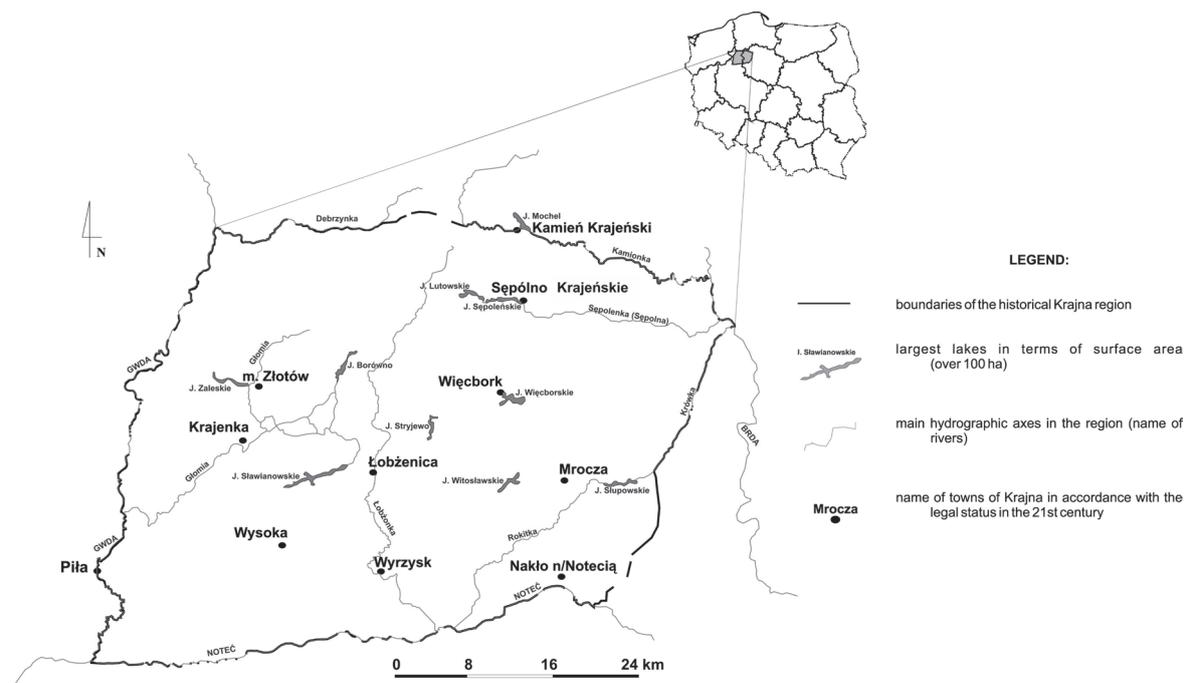


Figure 1. Location of the historical region of Krajna within the boundaries of the pre-partition Nakło powiat (district) from the 16th–18th century (Source: based on Kozłowska-Adamczak 2019, p. 126 – supplemented)

the survey method (Frankfort-Nachmias and Nachmias, 2001; Runge, 2006), using two types of questionnaires. The first one was aimed at tourists, preceded by a pilot experiment (sample size $n=50$). The other, i.e. the study proper, was carried out in two research cycles of the summer season of 2009 and 2010 and covered a population of approx. 1.800 people. It employed mainly the environmental survey technique and was supplemented by a questionnaire interview. Both involved a purposeful and occasional sample (Frankfort-Nachmias and Nachmias, 2001). Ultimately, a total of 1.233 questionnaires were used for further analysis (692 completed by women, which amounts to 56.1% of respondents overall, and the remaining 541 questionnaires by men – 43.9%).

The second group of respondents included local government representatives at the end of their fifth term (2006–2010): councillor of gmina, head of gmina, mayor or city president (depending on the size of the administrative unit). The survey was conducted between March and August 2010 by dint of an auditorium survey using the overall sample (Frankfort-Nachmias and Nachmias 2001). Conclusively, 287 in 370 anonymous questionnaires were used for further work upon verification, of which 95 were filled in by women (33.1%

of all respondents), and the remaining 192 by men (66.9%).

The analyses of respondents' opinions on the subjective attractiveness of the Krajna's tourist geographic environment carried out in this study allowed for identification of all perceived tourist values. Thus, a map of the region was created showing the synthetic presentation of Krajna's most important tourist values according to subjective assessments made by respondents (visitors and local government officials), taking into account the largest number of indications (see Fig. 3). Subsequently, the author of this paper decided to additionally objectively evaluate the responses that most frequently appeared in the assessments of both research groups and obtained the highest number of indications. For the purpose of this evaluation the author employed a score-based objective method (bonitation) in order to assess the views of visitors and local government officials of Krajna with regard to the individual assets. The method in question has been successfully applied in geography-oriented studies by, for instance, Bartkowski, (1977), Matczak (1986), Wiluś (1997), Wojciechowska (2003) and Runge (2006). It allows for determining the spatial diversity of the existing natural and cultural components of the environment deemed

important to tourism, and also proves useful in distinguishing and planning tourist development of areas believed to be most suitable for

this purpose. In this regard, a total of 6 components were subject to indexation (Table 1).

Table 1. Principles concerning the scoring method of subjective assessments (number of indications) in terms of Krajna's tourist values as per the opinion of visitors and local government officials (based on the Author's own study)

Point scale	Assessment criteria					
	Number of indications for lakes and rivers in the gmina	Number of indications for forest areas in the gmina	Number of indications for the forms of nature preservation in the gmina	Number of indications for immovable monuments protected by preservation orders in the gmina	Number of indications for museum facilities in the gmina	Number of indications for sightseeing and/or leisure opportunities in the gmina
0 pts	0	0	0	0	0	0
1 pts	1–5	1–5	1–5	1–5	1–5	1–5
2 pts	6–10	6–10	6–10	6–10	6–10	6–10
3 pts	11 or more indications	11 or more indications	11 or more indications	11 or more indications	11 or more indications	11 or more indications

Indexation coefficient = number of points obtained from the evaluation of all features of a given locality/ maximum number of scores possible (max. 18 points).

In such a way, according to the four-point scale adopted for the study (from 0 to 3 points), a given criterion received an appropriate number of points depending on the level of occurrence. Subsequently, point ranges were determined and gminas divided into classes with the help of the indexation coefficient (according to the formula $\text{sum } N/N_{\text{max}}$). Owing to the fact that the average value of the

indexation coefficient (0.24 for local government officials, and 0.25 for tourists) is within the range of 0.00–0.25 in both cases, it was concluded that all spatial units in this class were defined as moderately attractive in relation to usefulness of tourism assets (resources) for the development of tourism in Krajna. In turn, the gminas with coefficients of 0.51 and more were considered very attractive.

3. Results

The objective assessments of tourist attractiveness of Krajna's natural and cultural values used in the article and presented by the author in

her previous works demonstrates that they are diverse in nature and uneven in terms of spatial occurrence (Fig. 2).

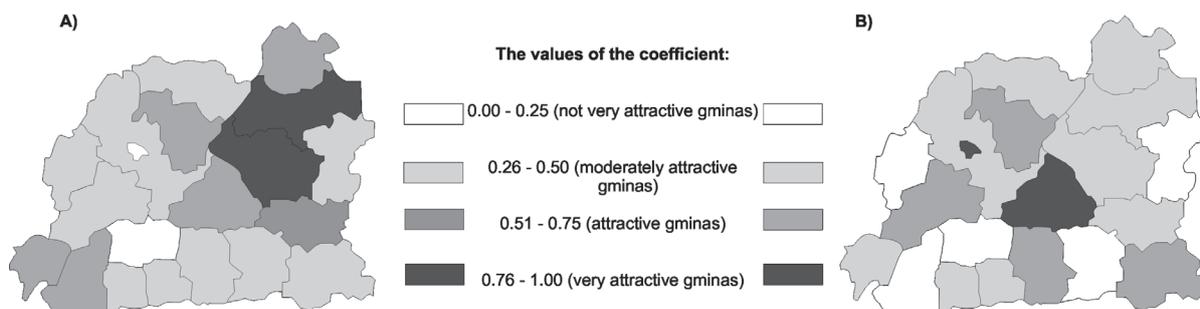


Figure 2. Indexation of gminas according to: A) selected elements of the natural environment, and B) selected elements of the cultural environment of greatest importance for tourism in Krajna (Source: Author's own compilation based on Kozłowska-Adamczak, 2016; 2017)

Most of the spatial units within the research area have a medium or high degree of attractiveness when it comes to tourist values, together with their applicability to the development of tourism and recreation in the region (Fig. 2). The gminas considered most attractive are interesting especially in terms of nature and recreational values, as well as leading spatial units, for instance owing to a great variety of sightseeing amenities, including cultural values in particular.

The analyses carried out in this paper show the importance of the qualitative aspect of the evaluation as it plays an essential role in the analyzes of the tourist attractiveness of a region (and peripheral areas in particular). When assessing the applicability of tourist values

(resources) of areas in general, not just peripheral ones, a vital role should be attributed to the social perception of the geographical environment elements from the point of view of: 1) “guests”, that is people visiting the tourist area (i.e. the demand side of the tourism market), and 2) “hosts”, namely local government officials (i.e. the supply side) – See Fig. 3 and Fig. 4. Therefore, the key impact on the synthetic indexation of tourist goods in the region is broken by the qualitative analysis of the results of questionnaire surveys conducted simultaneously among two groups of respondents (i.e. local government officials and visitors to Krajna). This, in turn, has a considerable impact on the formation and development of the region’s tourist space.

3.1. Assessment of tourist assets of the geographical environment in the light of the survey conducted in two groups of respondents (visitors and local government officials)

As for the survey, both groups of respondents were asked to indicate those elements within the geographical environment of the region which they believe to be the most interesting or attractive. As a consequence, the research results allowed for the identification of the tourist values considered the most appealing for the development of tourism within the studied area (Fig. 3).

The results of the survey conducted among visitors to Krajna reveal that natural values are of greatest importance to about a quarter of respondents (i.e. 319) who were asked to index the tourism area of the region according to their subjective assessments. These values received 51.6% of indications for option I, 54% for option II, and 41.3% for option III. Cultural values seem to be not as relevant for them: 21.9% of indications for option I, 7.2% for option II, and 4.1% for option III. The following elements of the natural environment proved to be of greatest prominence (Fig. 3):

- clean and uncrowded lakes – ranked highest in the hierarchy of tourist values and received the highest scores in all indications;
- vast forest areas.

It is worth emphasising that approx. 85.0% of all tourists (648) who came from various parts of Poland and abroad (especially Europe) to revisit Krajna at least twice or more times consider the tourist attractions of the region

very important (Table 2). They believe that such attractions satisfy the minimum conditions for a short rest (weekend or holiday), and a rest leave in the bosom of nature. This applies in particular to the close proximity of lakes located in forested areas away from human activity, the cleanliness of pristine natural environment, as well as peace and quiet.

Having synthesised the results of the study performed in 2010 on the group of representatives of local government authorities of the 5th term (2006–2010), it so transpires that (similarly to visitors, i.e. tourists) two groups of natural objects received the highest value of indications:

- 1) surface waters – in this case the largest lakes of Krajna exceeding 100 ha and the valley of the Noteć river, which obtained the highest scores among all the indicated rivers; and
- 2) forest areas – mainly woods of the Krajeński Landscape Park, Bory Krajeńskie forest, and the forest complex of Bory Kujańskie.

This implies that, in the opinion of local government officials, the natural assets displayed by Krajna are also particularly interesting in the context of tourist attractiveness, especially those of a recreational nature. The analysis of the research findings, which was performed at the gmina level, brought to light a relatively high correlation between the number of indications of specific tourist values and the respon-

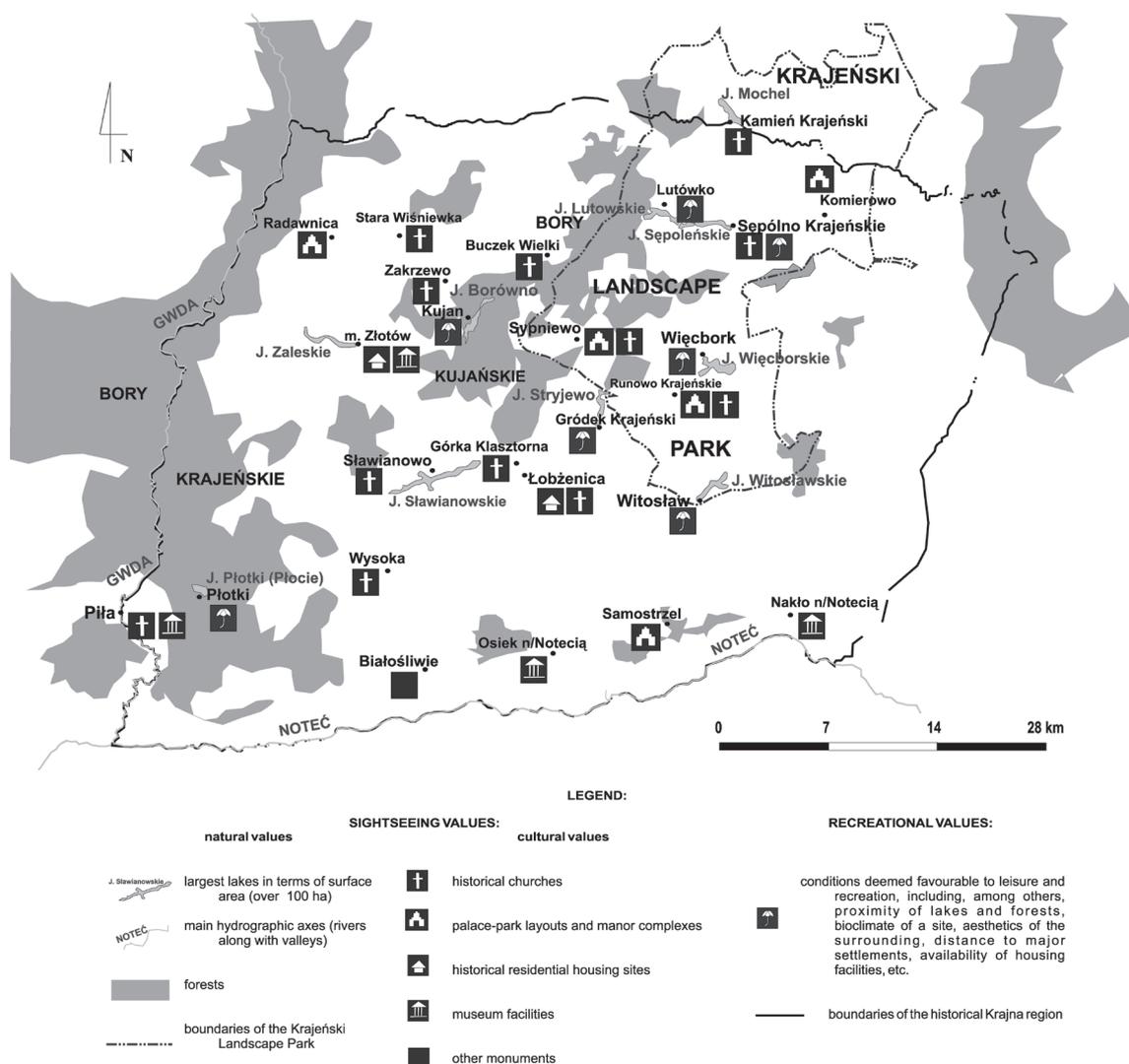


Figure 3. Synthetic presentation of Krajna's most important tourist values according to subjective assessments provided by respondents (visitors and local government officials), taking into account the largest number of indications (Source: Author's own elaboration based on the survey conducted among visitors to Krajna in 2009–2010 and representatives of local government authorities of the 5th term).

Table 2. Characteristics of the respondents visiting Krajna (total number N = 1233) according to the structure (in %) of the order of arrivals to the region in 2009–2010 – synthesis (based on the Author's own study)

Visitor types as defined in 1991 by UNWTO	Length of stay (in days)	Type of stay	The order of arrivals to the Krajna region					
			First time in their live		Twice or more times in their live		In total	
			number of respondents	%	number of respondents	%	number of respondents	%
1-day visitors	max. 1 day without an overnight stay	short-term	141	11.4	232	18.8	373	30.2
			243	19.7	366	29.7	609	49.4
tourists	2 – 4 days (include weekends)	long-term	54	4.4	84	6.8	138	11.2
	5 – 7 days		27	2.2	56	4.5	83	6.7
	8 – 14 days		6	0.5	24	2.0	30	2.5
	15 days and more							
		In total	471	38.2	762	61.8	1233	100.0

dents' place of residence – most often including their immediate surroundings (village or gmina area). The determinant factor for the place of residence was particularly relevant as regards indications for the group of sightseeing amenities and places that, according to local government officials, could potentially be used for

sightseeing purposes (Fig. 4). Among all places of tourist importance, the highest scores were obtained by: Górką Klasztorna (scores: 8.0% of indications for option I, 4.0% for option II, and 5.5% for option III), as well as Złotów (scores: 7.1% of indications for option I, 4.4% for option II, and 10.5% for option III).

3.2. The scoring method of subjective assessments (number of indications) in terms of Krajna's tourist values as per the opinion of two group of respondents (visitors and local government officials)

The analysis of the spatial diversity of subjective assessments regarding Krajna's tourism values (resources), as per both groups of respondents, suggests that individual gminas within the region demonstrate at least an average or

higher level of attractiveness in relation to the geographic environment potential, which is useful for the development of tourism and recreation in the region (Fig. 4).

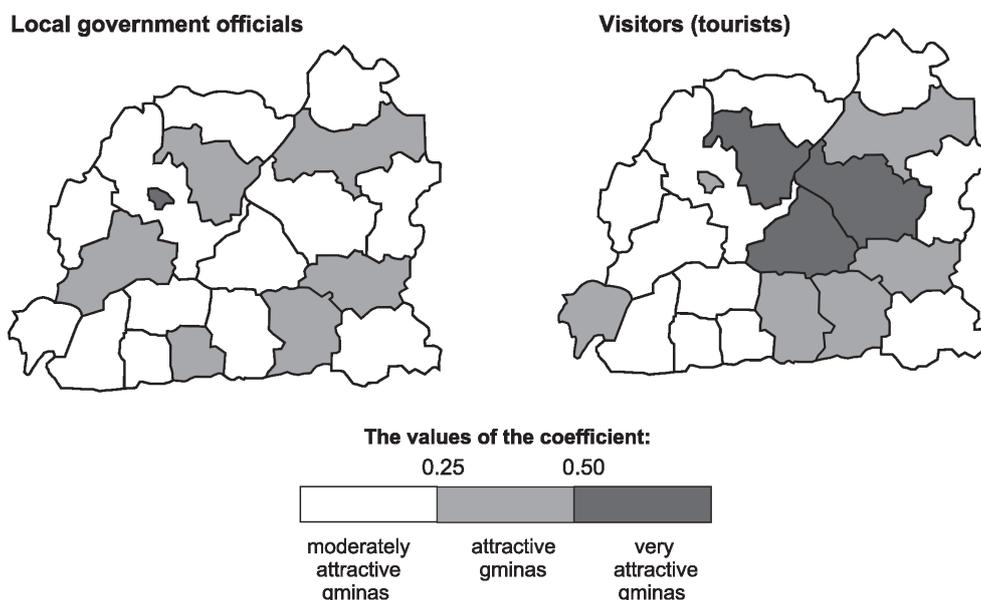


Figure 4. Spatial distribution of subjective assessments concerning Krajna's tourist values as stated by two groups of respondents (local government officials and visitors) (Source: Author's own elaboration based on a survey conducted among visitors to Krajna in 2009–2010 and the representatives of local government authorities of the 5th term)

On the basis of the extended analyses presented in the doctoral dissertation, the following factors were found to influence the opinions of tourists with regard to the matter in question (Kozłowska-Adamczak, 2016):

- 1) Age of respondents – affects the level of tourist attitude formation; fully developed and established as a result of life experiences in older people (especially aged 60+), and in the case of young people – formed in the process of the so-called socialisation (development) in a specific social and cultural environment of everyday life through

the influence of such factors as school, college, friends, immediate family etc.;

- 2) Place of residence – determines the possibility to access tourism assets depending on the distance to the destination within the region, which could have a viable impact on the frequency of tourist trips to Krajna;
- 3) Planned way of spending free time in the region – is largely related to the themes of tourist trips.

Taking into consideration new data (Fig. 4), according to visitors (tourists), as many as 9 gminas proved to be attractive or very attractive

in terms of tourism, the values of the indexation coefficient ranging from 0.28 (Gmina Sadki) to 0.67 (Gmina Więcbork and Łobżenica). As for the level of applicability of values for the development of tourism and recreation, 2 groups of gminas are considered attractive. These are the spatial units which, as the tourists stated, have:

- 1) the advantage of one type of value over another, e.g. natural resources over cultural ones, or vice versa;
- 2) relatively the highest degree of diversification of tourist goods (values) in relation to the entire territory of Krajna.

The indications made by gminas' hosts are presented in a much-changed spatial configuration (Fig. 4). According to them, only 7 spatial units deserve to be deemed attractive or very attractive in terms of diversification and usefulness of the potential of the geographical environment for the development of tourism and recreation in the region. As a matter of fact, only the city of Złotów (coefficient value equal to 0.56) qualifies for the group of units showing the highest degree of attractiveness regarding tourist values as per the opinion of the group in question. It should also be mentioned that most of the gminas which previously received the highest scores from tourists were often perceived as less attractive by local government officials, which, at the same time, causes rather substantial difficulties in interpretation. Perhaps the differences in subjective assessments of local authorities regarding the tourist attrac-

tiveness of the same values (tourism resources) in individual gminas result from place of residence, which reflects not only the degree of territorial identity of the discussed group with their immediate surroundings, but also serves as a certain filter of the level of their knowledge related to their gmina and the entire region.

In summary, Krajna lies on the periphery of several major agglomerations, such as Bydgoszcz, Toruń, Poznań and Trójmiasto, and thus, it fits well into the periphery theory. Krajna has a lot to offer to tourists, and its peripheral location can be used to develop tourism in the region. Therefore, paradoxically, for the majority of hosts and tourists of Krajna, objective assessments of geographical and economic peripherality are of lesser importance. The vast majority of local government officials (214 responses) recognise this geographic and economic "withdrawal" of Krajna as a great opportunity for its development (Fig. 5). In their opinion, a relatively large distance from major urban agglomerations ensures cleanliness of the environment, peace and quiet, as well as access to greenery, which allows tourists to rest peacefully, and undoubtedly affects the attractiveness of the geographic environment of the area. Therefore, it so happens that the peripheral nature may now become an asset of Krajna, enabling it to positively influence the growth of tourist traffic in the entire region, which in the near future will allow for generating greater revenues (profits) from the development of tourism to the local budget.

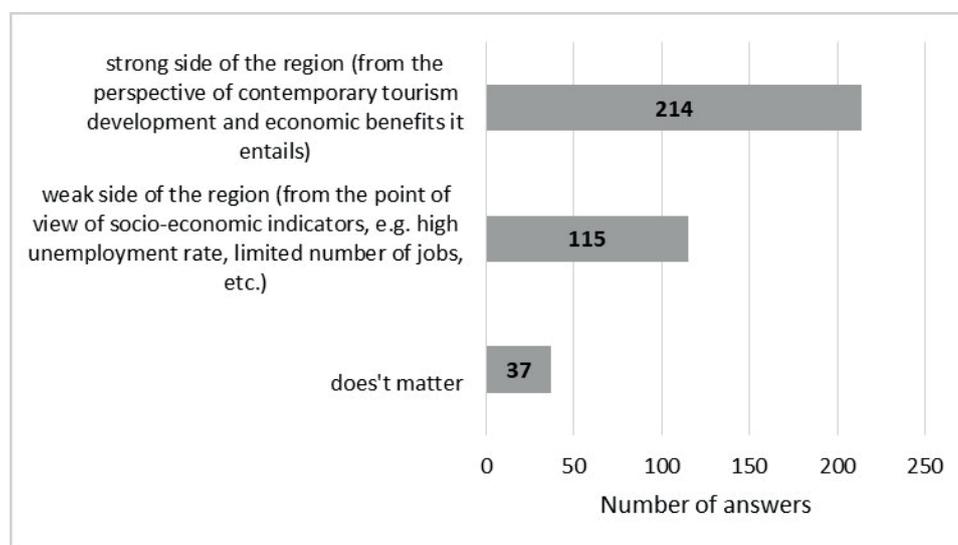


Figure 5. The importance of Krajna's geographic and economic peripherality in the opinion of local government officials (Source: Author's own elaboration based on a survey conducted among representatives of local government authorities of the 5th term)

It seems that in the case of such a peripheral area as Krajna – situated far from large urban agglomerations, with its natural potential little transformed by man (e.g. young glacial relief, clean air, forms of nature preservation etc.) and its cultural potential preserved for centuries

(e.g. folklore, monuments) – it can indeed be attractive to tourists both in objective and subjective terms. As a result, it may become a destination of tourist traffic with a short, medium, and long market range.

4. Discussion

According to Christaller (1955; 1964), sectors of tourist supply mostly emerge in peripheral regions featuring attractive tourist assets, and in this sense, they become the core of a given tourist area, as opposed to urbanized cities (central places). Initially this reasoning was applied to the establishment of distant tourist destinations, i.e. development stages of peripheral areas – from the coastal areas of western Europe and eastern parts of the U.S. in the 18th century to Antarctica and the most remote areas of all continents nowadays (Durydiwka, 2009 after: Prosser, 1994). Nevertheless, for the past several years the concept of peripheral areas, particularly in Polish literature, has also been applied in analyses on domestic tourist traffic to emphasize tourist attractiveness of the geographic environment of less urbanised and industrialised regions/areas of a country (among others Karolczak, 2002; Kozłowska-Adamczak, 2016). And thus, analysis of basic socioeconomic indicators paired with relatively low values of the synthetic Perkal index as calculated for three criteria (geographic, economic and social) related to the peripherality of a given region may suggest that said region can be regarded as a peripheral area (e.g. Leszczewska, 2010; Zarębski, 2012). In consequence,

such a situation seems to be very unfavourable for the development of modern tourism in the region due to:

- 1) lack of sufficiently attractive economic incentives that could bring in potential tourism investors;
- 2) relatively unfavourable geographical location manifested by the distance from the central regions and potential sales markets.

However, from the point of view of tourist demand, it seems that the relatively low economic potential of a region (e.g. the lack of developed industry and large agglomerations, low urbanisation and population density) exerts a considerable influence on the geographical environment of the region, which has not been transformed by man. Paradoxically, this has a relatively positive impact on the subjective assessment of the usefulness of the values (tourism resources) for the development of tourism in that region, perceived by both local government officials and visitors. Krajna is an excellent example of such a peripheral region, where objective assessments of geographic (Perkal index -0.0336) and economic (-0.442) aspects are very low (Table 3).

Table 3. Assessment of Krajna's peripherality against the background of Polish voivodeships broken down by geographical, social, and economic criteria according to data from 2011 – a synthesis showing only the final results for Krajna (based on the Kozłowska-Adamczak 2018, p. 12–33)

Spatial unit	Geographical criterion		Social criterion		Economic criterion	
	Perkal synthetic index value (W_s)	class*	Perkal synthetic index value (W_s)	class*	Perkal synthetic index value (W_s)	class*
	-0.336		0.426		-0.442	
Krajna Region	$\bar{x} = 0.000$	IV	$\bar{x} = 0.000$	II	$\bar{x} = 0.000$	IV
	$S(x) = 0.500$		$S(x) = 0.579$		$S(x) = 0.514$	

*evaluation (classes) of peripherality: I – very low, II – low, III – medium, IV – high

The results of this study and previous works (Kozłowska-Adamczak, 2016; 2018) show that while a region may be objectively considered peripheral, this does not necessarily diminish tourist attractiveness of its geographic environment (in general), but may in fact render its assets more appealing in the subjective opinion of tourists and local authorities. The analysis of tourist destinations demonstrates that individuals who visit Krajna for various tourist purposes (leisure, sightseeing, religious and even business and health-related) differ in their subjective perception of the geographical environment of the region, and benefit from it in different ways (Kozłowska-Adamczak, 2019). It seems that in the case of such a peripheral area as Krajna it can indeed be attractive to tourists both in objective and subjective aspects. The subjective aspect of assessment consists in an attempt to determine the social perception level of attractiveness represented by the geographic environment with regard to the development of tourism and recreation in a given area/region. This, in turn, as indicated in the analyses featured in this paper, can be compiled and serve as a new comprehensive research approach, even with the use of a simple bonitation method. Although academic considerations on the assessment of tourist attractiveness of an area (including the geographic environment) in the context of development of tourism and recreation tend to employ an objective approach by means of various more or less complex methods (e.g. Karolczak, 2002; Tomczyk 2005; Jania, 2007; Duda-Seifert, 2015; Majewska et

al., 2016; Kozłowska-Adamczak, 2017), they frequently refrain from comparing these objective results with subjective opinions of tourists and local authorities with regard to said attractiveness. The author believes that the resulting qualitative aspect of assessment complements the overall approach exercised in analysing the attractiveness of a tourist region (particularly in the case of peripheral areas).

Considering the analysis of the attractiveness of the geographical environment of a given region (especially the peripheral area) for the development of tourism and recreation, a complete and synthetic assessment is of utmost importance. In the light of the above, the problem of homogeneous measurement of attractiveness arises, depending on the approach and various research methods used. According to Duda-Seifert (2015, p. 75), more complex measures are used for multidimensional comparative analyses in economic research, for instance for tourist destinations. The measures include the factor analysis method, taxonomic methods, and synthetic measures of development. It should also be mentioned that the condition for their use is the availability of appropriate statistical material, which is not possible for certain architectural objects or any natural value. Following Tomczyk (2005, p. 22–23), such analyses can be performed by means of: quantitative methods – simple methods of space arrangement, e.g. scoring methods; methods with a higher degree of aggregation, such as model methods, factor analysis methods, taxonomic or synthetic measures of development; qualitative methods.

5. Conclusions

Based on the presented results one can conclude that an assessment of attractiveness displayed by the geographical environment of a given region (and peripheral areas in particular) in the context of tourism and recreation should be carried out:

- 1) by means of objective (quantitative) analyses, using various, even the simplest methods and statistical measures (e.g. scoring method and indexation coefficient, Perkal index etc.);
- 2) by supplementing such research with qualitative analyses of the phenomenon (e.g.

questionnaire research) aimed at verifying the public perception of tourist assets within the same region. In this regard, it is crucial to study the subjective opinions of two parallel groups of respondents, i.e. “guests” (tourists) and “hosts” (especially local government officials) of the region, which should be then additionally assessed in an objective way (e.g. score-based method – bonitation evaluation).

The study shows that, in particular, the qualitative aspect of assessment plays a major role in the analyses of region's tourist attrac-

tiveness (especially with regard to peripheral regions). Said aspect is related to the determination of social perception on the elements of geographic environment. Thus, it should be examined from the perspective of both “guests” (i.e. visitors) and “hosts”, (local government representatives). The results of the

conducted studies have a viable impact on the shaping and development of the region’s tourist area. This, in turn, leads to a full (synthetic) measurement and assessment in terms of the attractiveness of the area’s geographical environment for the development of tourism and recreation.

Acknowledgments

This research was funded by Project Supporting Maintenance of Research Potential at Kazimierz Wielki University.

References

- Bartkowski T., 1977. *Metodyka oceny atrakcyjności terenu dla rekreacji na przykładzie oceny obszarów pojeziernych Polski zachodniej i północnej*. Monografie 111, Wydawnictwo Akademii Wychowania Fizycznego w Poznaniu, Poznań [In Polish].
- Christaller W., 1955. *Beiträge zu einer Geographie des Fremdenverkehrs*. *Erdkunde* 9(1), 1–20 [In Germany].
- Christaller W., 1964. *Some Considerations Of Tourism Location In Europe: The Peripheral Regions-Underdeveloped Countries – Recreation Areas*. Regional Science Association, Papers XII, Lund Congress, 95–105.
- Duda-Seifert M., 2015. *Criteria of evaluation of tourist attractiveness of architectural monuments based on the literature review*. *Turystyka Kulturowa* 4, 74–87 [In Polish with English summary].
- Durydiwka M., 2009. *Tourist movement – from centre to peripheries*. *Prace i Studia Geograficzne* 42, 59–71 [In Polish with English summary].
- Fedyk W., Ciepik J., Smolarski T., Gruszka I., 2014. *Tourist attractiveness and commercialization of selected tourist facilities in the opinion of a specialist consumer group*. *Rozprawy Naukowe AWF we Wrocławiu* 46, 3–15 [In Polish with English abstract].
- Frankfort-Nachmias Ch., Nachmias D., 2001. *Metody badawcze w naukach społecznych*. Wydawnictwo Zysk i Spółka, Poznań [In Polish].
- Goerke O., 1918. *Der Kreis Flatow. In geographischer, naturkundlicher und geschichtlicher Beziehung dargestellt*. Kreisausschuße des Kreises, Flatow [In Germany].
- Jania M., 2007. *An Attempt Of Natural Valorization Of The Kłodzko Region Environment For Needs Of Tourism And Recreation*. [In:] Rzętała M. (Ed.), *Z badań nad wpływem antropopresji na środowisko* 8, Wydział Nauk o Ziemi Uniwersytetu Śląskiego, Sosnowiec, 28–41 [In Polish with English summary].
- Karolczak M., 2002. *Tourist-Recreational Space in Roztocze*. *Turyzm* 12(1), 5–36. DOI: <https://doi.org/10.18778/0867-5856.12.1.01>
- Kowalczyk A., 2001. *Geografia turystyki*. Wydawnictwo PWN, Warszawa [In Polish].
- Kozłowska-Adamczak M., 2016. *The tourist space of Krajna*. Ph.D. thesis, Uniwersytet Łódzki [In Polish with English summary].
- Kozłowska-Adamczak M., 2017. *Walory turystyczne środowiska geograficznego historycznej Krajny i próba ich oceny*. [In:] Kozłowska-Adamczak M., Rurek M. (Eds.), *Zrównoważony rozwój Pojezierza Krajeńskiego: wybrane aspekty*. Wydawnictwo Uniwersytetu Kazimierza Wielkiego, Bydgoszcz, 79–107 [In Polish].
- Kozłowska-Adamczak M., 2018. *Peripheral location and the formation of tourist space – Selected methodological aspects as illustrated with the region of Krajna (Poland)*. [In:] Simos T.E., Kalogiratos Z., Monovasilis T. (Eds.), *International Conference of Computational Methods in Sciences and Engineering 2018 (ICCMSE 2018)*. AIP Conference Proceedings 2040, American Institute of Physics, New York, 120003-1 – 120003-4, DOI: <https://doi.org/10.1063/1.5079179>.

- Kozłowska-Adamczak M., 2019. The Process Of Shaping Tourist Facilities Development In Peripheral Areas In The Context Of Leisure Tourism. Case Study Of The Krajna Region (Poland). *Czasopismo Geograficzne* 90(1), 123–147 [In Polish with English abstract].
- Kożuchowski K., 2005. Walory przyrodnicze w turystyce i rekreacji. Wydawnictwo Kurpisz S.A., Poznań [In Polish].
- Kruczek Z., 2002. Tourism Attractions The Methods of Review Their Reception – Interpretation. *Folia Turistica* 13, 37–61 [In Polish with English abstract].
- Kurek W. (Ed.), 2007. Turystyka. Wydawnictwo Naukowe PWN, Warszawa [In Polish].
- Leszczewska K., 2010. Economic Activity of Peripheral Regions. Nierówności społeczne a wzrost gospodarczy 17, 215–225 [In Polish with English abstract].
- Matczak A., 1986. Les bases naturelles de l'organisation du repos dans la zone suburbaine de Łódź. *Acta Universitatis Lodziensis - Turyzm* 2, 25–45 [In Polish with French and English abstracts].
- Majewska J., Napierała T., Adamiak M., 2016. Using New Information And Communication Technologies For The Description Of Tourism Space. *Folia Turistica* 41, 309–339 [In Polish with English abstract].
- Pilawka T., Kazak J., 2013. Social Capital and Use of Funds Under The Integrated Regional Operational Programme 2004–2006. *Journal of Agribusiness and Rural Development* 1(27), 189–197 [In Polish with English abstract].
- Runge J., 2006. Metody badań w geografii społeczno-ekonomicznej – elementy metodologii, wybrane narzędzia badawcze. Wydawnictwo Uniwersytetu Śląskiego, Katowice [In Polish].
- Szafran P., 1961. Osadnictwo historycznej Krajny w XVI-XVIII wieku (1511–1772). Gdańskie Towarzystwo Naukowe, Wydział Nauk Społecznych i Humanistycznych, Gdańsk [In Polish].
- Tomczyk A., 2005. Atrakcyjność turystyczna regionu – aspekt teoretyczny oraz praktyczne zastosowanie jednej z metod jej oceny. *Problemy Turystyki* 28 (3–4), 19–35 [In Polish].
- Warszyńska J, Jackowski A., 1979. Podstawy geografii turystyki. Wydawnictwo PWN, Warszawa [In Polish].
- Wiluś R., 1997. Rozwój funkcji turystycznej w dolinie rzeki Warty na odcinku od Działoszyna do Uniejowa. [In:] Liszewski S. (Ed.), *Szlakami Nauki* 24, Łódzkie Towarzystwo Naukowe, Łódź [In Polish].
- Winiarski R., Zdebski J., 2008. Psychologia turystyki. Seria Psychologia Wobec Współczesności: psychologia biegu życia, Wydawnictwa Akademickie i Profesjonalne, Warszawa [In Polish].
- Wojciechowska J., 2003. Analiza i ocena zagospodarowania turystycznego. [In:] Liszewski S. (Ed.), *Możliwości i kierunki rozwoju turystyki w Dolinie Odry*. Katedra Geografii Miast i Turystyki Uniwersytetu Łódzkiego, Łódzkie Towarzystwo Naukowe, Łódź, 136–156 [In Polish].
- Wojewódzka-Wiewiórska A., 2013. Typology of Mazovian Voivodeship Communes According To Absorption of The Funds From EU Budget And The Socio-Economic Development Level. *Roczniki Ekonomii Rolnictwa i Rozwoju Obszarów Wiejskich* 100(2), 15–24 [In Polish with English abstract].
- Zarębski P., 2012. The peripheral areas and their development potential. *Annals of The Polish Association of Agricultural and Agribusiness Economists* 15(4), 131–135 [In Polish with English abstract].