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MOUNTAIN COMMUNES' EXPENDITURE FOR TOURISM AS A FACTOR OF TOURIST TRAFFIC INTENSITY IN THEIR AREAS

Summary

The aim of the paper is identification of the relationship between the amount of expenditure for tourism born by mountain communes (*gminas*) in Poland and intensity of tourist traffic in their areas.

The analysis of tourist traffic in mountain communes in Poland in the first place allowed to establish that an average intensity of tourist traffic is greater than generally in Poland. The observation does not refer to the whole of the analyzed area, since tourist traffic reveals a very high concentration, reaching extreme cases in the communes where not a single tourist used bed-places. Registered increase in tourist traffic intensity did not apply to the whole area of mountain communes in Poland.

Mountain communes only to some extent get involved in realization of expenditure on tourism – less than half of communes participated in them in 2009 and only few communes spent considerable amounts of money. Average expenditure from commune budgets on tourism, both total and per one tourist using bed places in mountain communes, were higher than the average for all communes in Poland.

None of the applied methods of identification of correlative dependence allowed to establish its occurrence on a significant level, therefore the number of tourists in mountain communes in Poland does not directly depend on the amount of expenditure on tourism realized by these communes.

Key words: mountain rural areas, tourist traffic, communes' expenditure on tourism

INTRODUCTION

The objective of the paper is an estimation of relationship between the amount of expenditure born by local self-government units on commune level and performing the tourist function within their administrative borders. Communes (*gminas*) making up mountain areas in Poland were discussed in detail. The area covers 43 rural communes and rural parts of seven urban and rural communes.

The paper aims to identify the relationships between the amount of expenditure on tourism in mountain communes in Poland and the intensity of tourist traffic in their areas.

It was assumed that due to centralized character of local government units' budgets and the way of registration of realized expenses, the territory of the whole commune would be regarded as a basic spatial unit, even in case of urban-rural communes. In this respect the obtained results may be disturbed to some extent and the final outlook reflects the situation in mountain communes and not exclusively in mountain rural areas in Poland.

MOUNTAIN COMMUNES AS A TOURIST REGION

Current criteria of identification of regions determine various interpretations of a region. In such context mountain rural areas in Poland may or not be recognized as a region, depending on the approach used. If the basic criterion of delimitation is homogeneity regarding certain features and coherence of a given region, then joint mountain regions of the Carpathian and Sudety Mts. cannot be regarded as a region. However, assuming that a region may be created for pre-determined aims, diversified needs and in various circumstances, the area treated in this way may be for instance a goal of investigations or regional policy and for this purpose may be regarded as a region [Chudy-Hyski D., 2009].

A tourist region is one of the types of regions identified on the basis of a given criterion. An individual area may be regarded as a tourist region when considerable registered tourist traffic occurs in its territory. Tourist regions are also the areas which possess [Kompendium..., 2006]:

- tourist values,
- tourist management,
- communication access.

Therefore, combining the above mentioned characteristics, mountain rural areas in Poland under the analysis form a region composed of communes (*gminas*) of the individual provinces: Dolnośląskie, Małopolskie, Podkarpackie and Śląskie (Table 1).

Table 1. Communes forming mountain rural areas in Poland

| Province | | | | |
|-------------------------|---------------------|-----------------|---------------------|--------------|
| Małopolskie | | Śląskie | Dolnośląskie | Podkarpackie |
| Biały Dunajec | Mszana Dolna | Istebna | Czarny Bór | Cisna |
| Bukowina Tatrzańska | Muszyna (w) | Jeleśnia | Głuszycza (w) | Czarna |
| Bystra-Sidzina | Niedźwiedź | Koszarawa | Kamienna Góra | Komańcza |
| Czarny Dunajec | Nowy Targ | Milówka | Lewin Kłodzki | Lutowiska |
| Czorsztyn | Ochotnica Dolna | Rajcza | Mieroszów (w) | |
| Dobra | Piwniczna-Zdrój (w) | Ślemień | Stronie Śląskie (w) | |
| Jabłonka | Poronin | Ujsoły | | |
| Jordanów | Raba Wyżna | Węgierska Górka | | |
| Kamienica | Rabka-Zdrój (w) | | | |
| Kościelisko | Słupnice | | | |
| Krościenko nad Dunajcem | Spytkowice | | | |
| Krynica-Zdrój (w) | Stryżawa | | | |
| Lipnica Wielka | Szaflary | | | |
| Lubień | Tokarnia | | | |
| Łabowa | Uście Gorlickie | | | |
| Łąpsze Niżne | Zawoja | | | |

(w) – denotes rural part of urban-rural commune

Source: Author's own compilation.

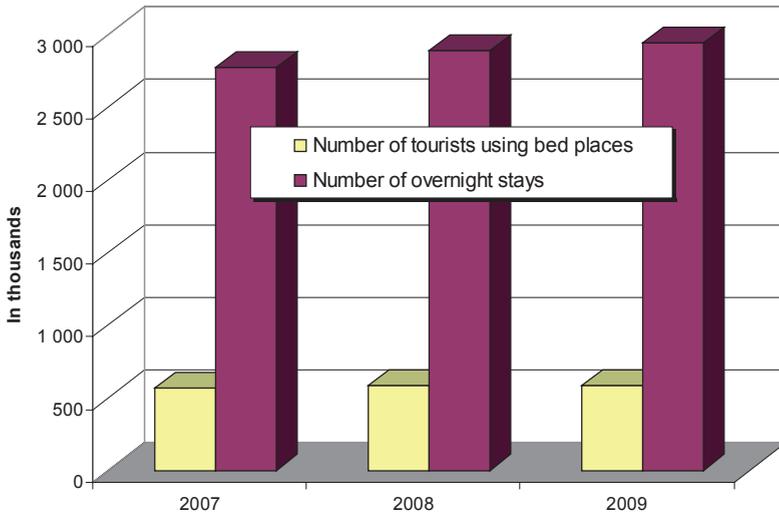
ANALYSIS OF TOURIST FUNCTION OF ANALYZED COMMUNES

Analysis of tourist function of the analyzed communes was conducted using Central Statistical Office (CSO) data about the number of tourists using bed places and the number of overnight stays in 2007-2009 [www.stat.gov.pl]. Development of the number of tourists using bed places and the number of overnight stays in mountain communes in Poland in 2007-2009 was presented in Fig. 1.

Results of the analysis of tourist traffic in mountain communes of Poland show that:

– in 2009 on average of 117.7 thousand tourists used bed places in all mountain communes in Poland, which indicates that there were 93 tourists per each square kilometer of the total area. The same, Defert index for Poland was 62 tourists per square kilometer [Lijewski et al., 2002, Problemy..., 1999];

– the distribution of the analyzed communes in view of tourist traffic intensity reveals a strong right hand side asymmetry, which points to a significant concentration of this traffic in few communes;



Source: Author's own compilation based on CSO data [www.stat.gov.pl].

Figure 1. Tourist traffic in mountain communes in Poland in 2007-2009

– there were as many as six mountain communes where not a single overnight stay was registered in 2009 (Czarny Bór, Głuszyca, Słopnica, Lipnica Wielka, Spytkowice, Koszarawa);

– in 2009 the highest number of tourists in absolute values, i.e. 171.8 thousand was registered in Krynica-Zdrój (Małopolskie province, Nowy Sącz county). In the other communes the values were on a much lower level. The next in ranking were Bukowina Tatrzańska (Małopolskie province, Tatra county) about 50.3 thousand tourists, and then Piwniczna-Zdrój (Małopolskie province, Nowy Sącz county) – 38.4 thousand people.

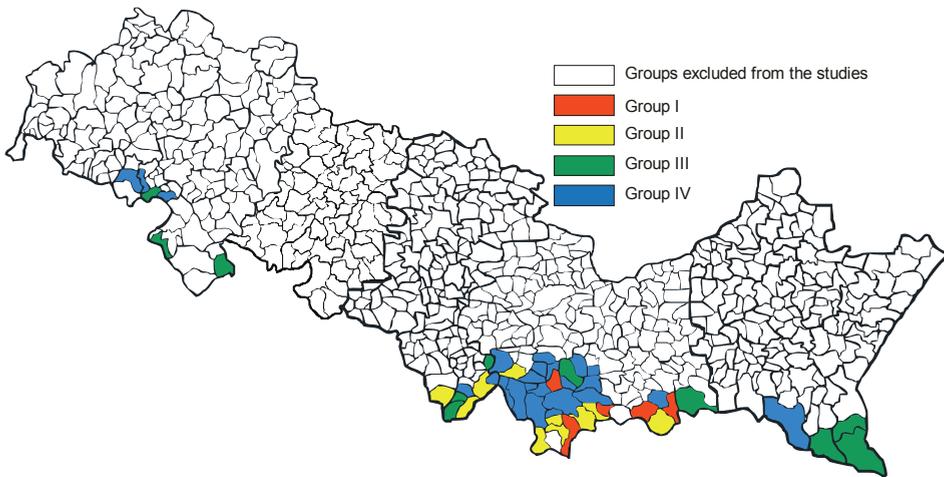
– The relative values describing tourist traffic intensity expressed by Defert index were on the highest level in the following communes: Krynica Zdrój – 1185 overnight stays per a square kilometer of total area, Bukowina Tatrzańska – 381 persons per square kilometer and Rabka-Zdrój (Małopolskie province, Nowy Targ county) – 353 persons per square kilometer;

– the analysis of tourist traffic dynamics shows a relatively small increase in the intensity of the analyzed phenomenon during the studied period. In 2009 this growth in comparison with the previous year was 0.8% and was lower than a year before when the increase reached 2.6%;

– increase in tourist traffic intensity observed in 2009 did not refer to the whole analyzed area. A growth of the number of tourists using bed places was noted in 19 communes, whereas a decrease in 23 communes. No changes were registered in the remaining 8 communes;

– the highest dynamics of increase in tourist traffic characterized Czarny Dunajec commune (Małopolskie province, Nowy Targ county) – 105.2% increase in 2009 in relation to 2008, Stronie Śląskie (Dolnośląskie province, Kłodzki county) – 71.6% and Ślemień (Śląskie province, Żywiec county) – 70.1.

The analysis of tourist traffic intensity conducted using selected indexes provided a basis for the estimation of similarity of mountain communes in Poland in this respect. A method of three means was used for the assessment of similarities [Nowak, 1990] and the results of spatial distribution of particular types of mountain communes considering the intensity of tourist traffic in 2009 were presented in Fig. 2.



Source: Own compilation on the basis of CSO data [www.stat.gov.pl].

Figure 2. Classification of mountain communes using the method of three means according to the number of tourists per km² (Defert index) in 2009

Identified groups of rural communes differ from one another by the intensity of tourist traffic and commune number per group.

Group I comprises 5 communes characterized by a very high density of tourist traffic. The communes are situated in the administrative borders of the Małopolskie province and a mean value of the Defert index informs that in 2009 there were 473 tourists using bed places per square kilometer.

Group II is formed of 10 communes in which the value of the analyzed index in 2009 remained on a high (but not the highest) level. The averaged value for the communes included in this typological group was 138.5 persons/km². The communes are situated in the Śląskie and Małopolskie provinces.

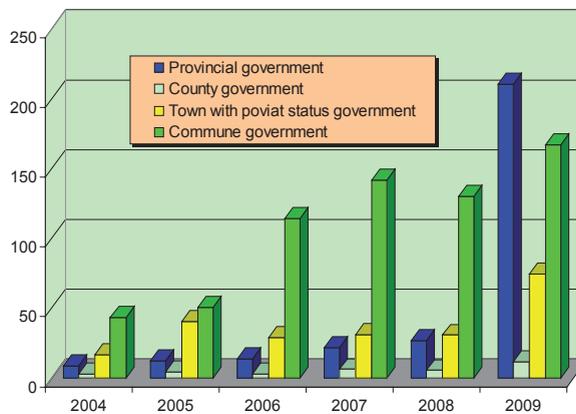
Group III is characterized by values of Defert index below the medium (but not the lowest) and comprises 11 communes from four provinces. Average value of the index computed for the communes in this typological group was 28.5 persons/km² of the total area.

Group IV is the most numerous group composed of 24 mountain communes where in 2009 on average 7.6 tourists using bed places per square kilometer were registered.

ANALYSIS OF THE AMOUNT OF EXPENDITURE FOR TOURISM IN THE STUDIED COMMUNES

The analysis of the amount of expenditure for tourism in mountain communes used CSO data about the expenses of local government units registered under section 630 of the their budgets, i.e. “Tourism”.

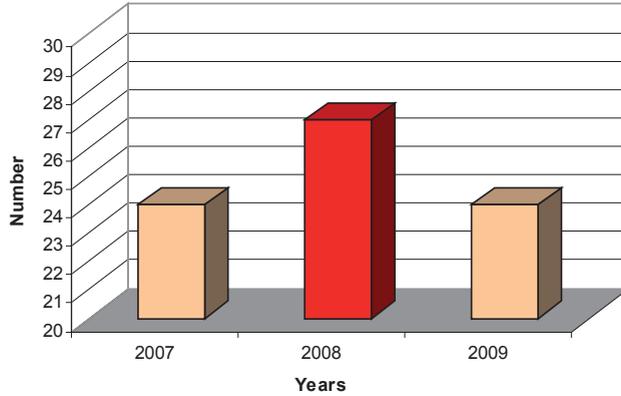
Expenditures of government units in the years under analysis differ in their amount each year (Fig. 3). Considerable differences in their amount are also associated with the kind of units. Generally in the years 2004-2009 a tendency of growing expenditure on tourism may be observed, still the rate of the changes is uneven. During the discussed period communes participated in the expenditure for tourism to the largest extent, then towns with a county (*poviat*) or province status and finally counties. In 2009 the ranking changed because the expenditure of provinces reached the highest value among all kinds of local government units.



Source: own compilation on the basis of: [Wydatki jednostek samorządu terytorialnego na turystykę w 2009 (Expenditure of local government units for tourism in 2009), Department Turystyki, Warszawa 2009].

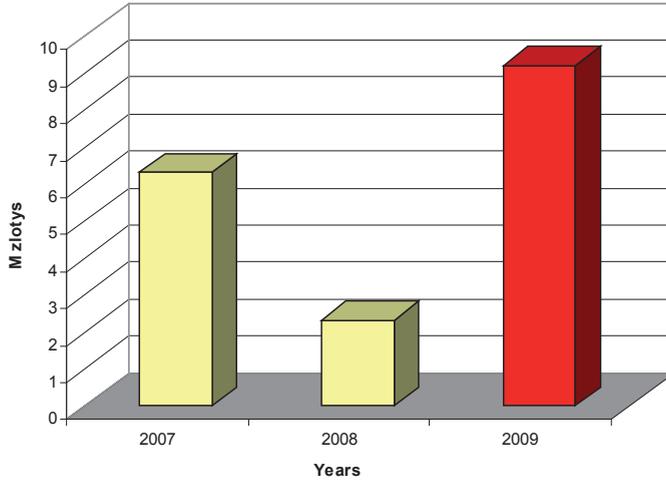
Figure 3. Expenditure of local government units classified to section 630 of the budget “Tourism” in 2004-2009 (M zlotys)

Data in Fig. 4 show that mountain communes participate in the expenditure on tourism to a relatively small extent. Only in 2008 over half of these communes allocated at least some small means on tourism.



Source: own compilation on the basis of CSO data [www.stat.gov.pl].

Figure 4. Number of mountain communes which allocated means on tourism in 2007-2009



Source: own compilation on the basis of CSO data [www.stat.gov.pl].

Fig. 5. Total amount of mountain communes' expenditure for tourism in 2007-2009 (M zlotys)

It is difficult to detect a tendency of change in the amount of expenditure for tourism realized by mountain communes. After a relatively high value of expenses on tourism noted in 2007, a rapid, three fold decline occurred in 2008. The year 2009 showed the highest spending on tourism over the whole analyzed period.

Results of the analysis of the expenses on tourism born by mountain communes in Poland are as follows:

- mountain communes in Poland to a slight degree engage their finances in tourism development in their territories as evidenced by the number of communes bearing expenses on tourism in the years under analysis. In 2009 only half of all analysed communes (24) registered expenses on tourism;

- in 2009 on average each mountain commune made outlays on tourism in the amount of 184 thousand zlotys (mean for all communes in Poland was 67.4 thousand zlotys), whereas communes pattern concerning the amounts spent was characterized by a strong right hand asymmetry, which suggests that only few communes made considerable outlays on tourism, whereas a definite majority either spent relatively small amounts or did not bear the costs at all;

- in 2009 average expenses on tourism per one tourist using bed places in mountain areas was PLN 15.72 (average for Poland was PLN 8.64). In 2007 and 2008 the same values were respectively PLN 11.40 and 3.98 (respectively for Poland: PLN 7.50 and 6.69);

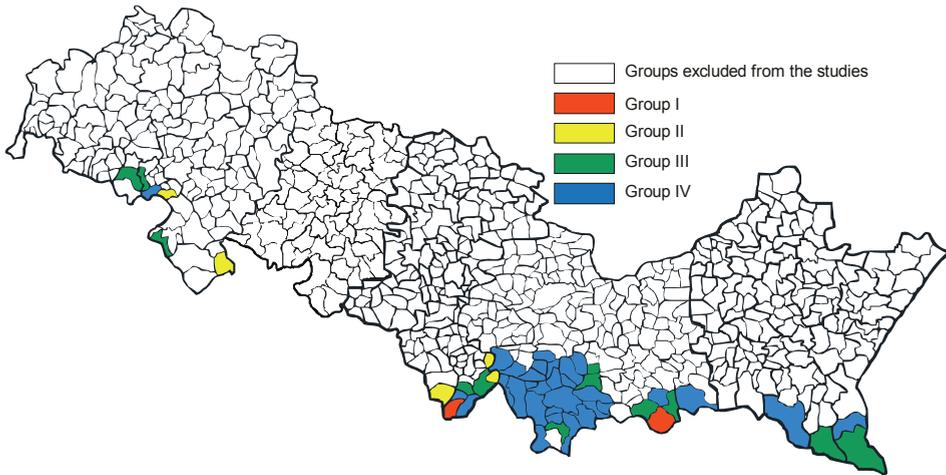
- in 2009 the highest outlays on tourism, slightly over PLN 4 million were made in Muszyna commune (Małopolskie province, Nowy Sącz county)- sixth position in Poland, two following communes were: Rajcza (Śląskie province, Żywiec county) c.a. PLN 1.5 million and Ślemień (Śląskie province, Żywiec county) c.a. PLN 1.2 million;

- the highest expenses on tourism per one tourist in 2009 were registered in the counties of Ślemień – PLN 1091.37, Dobra (Małopolskie province, Limanowa county) – PLN 43.64 and Stronie Śląskie (Dolnośląskie province, Kłodzko county) – PLN 134.59;

- it is difficult to point out any tendency of outlays on tourism in the investigated years;

- average expenses of mountain communes on tourism per one tourist in 2009 were as follows: PLN 156.65 in the Śląskie province; PLN 31.63 in the Dolnośląskie, PLN 19.90 in the Małopolskie and PLN 1.88 in the Podkarpackie province.

Like in case of analysis of the tourist traffic, investigations on similarities of mountain communes concerning the amount of expenditure on tourism used the method of three means. The results of spatial distribution of mountain commune types distinguished in this respect were shown in Fig. 6.



Source: own compilation on the basis of GUS data (www.stat.gov.pl).

Figure 6. Classification of mountain communes by means of three means method as to the amount of expenditure on tourism in 2009

Grouping identified 4 groups of communes similar in respect of their expenses on tourism in 2009.

Group I – was formed by communes with very high level of expenditure on tourism comprised only the Muszyna commune (Małopolskie province, Nowy Sącz county) and Rajcza (Śląskie province, Żywiec county). In these communes on average c.a. PLN 2.8 million was spent on tourism in 2009. In these communes on average PLN 124.27 was spent on one tourist using bed places.

Group II – comprises a total of 5 communes with a high level of expenditure on tourism: two are located in the Dolnośląskie province and three in the Śląskie. The communes in this group are characterized by a level of expenses on tourism which in 2009 slightly exceeded PLN 600 thousand i.e., PLN 248.72 1 per one tourist.

Group III – includes communes with a level of outlays on tourism below the medium (but not the lowest). There are 12 communes in this group of which 3 are located in the Dolnośląskie province, 5 in Małopolskie and two in Podkarpackie and Śląskie provinces each. The expenditure on tourism in the communes forming this typological group in 2009 was PLN 10.33 per one tourist.

Group IV – is the most numerous, combining 31 communes which in 2009 either did not make any outlays on tourism, or their expenses reached low level (much below the average for expenses on tourism of the studied communes total). In communes in the fourth typological group the expenses on one tourist using bed places in their areas reached on average PLN 14.31.

CONCLUSION

The studies were undertaken to identify the correlation relationship between the number of tourists using bed places and the amount of expenditure for tourism born by mountain communes.

The analysis used: correlation graphs, Czuprow's coefficient of convergence, Pearson's linear correlation coefficient and Spearman's rank correlation coefficient [Sobczyk, 1996] (assignment of each commune to one of the four identified groups was used as a rank).

None of the ways used to identify the correlation relationship allowed establishing its occurrence on a significant level. Therefore, a final conclusion may be formulated that the number of tourists in mountain communes in Poland does not depend directly on the amount of expenditure for tourism born by these communes.

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