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FACTORS ACTIVATING THE DEVELOPMENT OF TOWNS WITH A SPA AND TOURISTIC CHARACTER IN LOWER SILESIA DURING 2015-2019

CZYNNIKI AKTYWUJĄCE ROZWÓJ MIAST O CHARAKTERZE UZDROWISKOWYM I TURYSTYCZNYM NA DOLNYM ŚLĄSKU W LATACH 2015-2019

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Abstract: The study examined the development process of towns in the Polish region Lower Silesia. It analysed seven units with a very specific function – spa and tourist resort. The final comparison considered the period of 2015-2019. The conducted analysis was based on a taxonomic method that examined local explanatory factors towards the territorial aspect of development. The initial research findings show that towns can be an important link in regional settlement units, but only those who developed specific endogenous functions are performing well and respond to changing economic patterns and economic globalisation. In this case spa and touristic character were analysed.

Keywords: social and economic development, territorial capital, resort towns, spa and touristic towns.

Streszczenie: Artykuł prezentuje wyniki badań dotyczące procesów rozwoju miast o charakterze uzdrowiskowym i turystycznym na Dolnym Śląsku w latach 2015-2019. Analiza została przeprowadzona w oparciu o metody taksonomiczne z uwzględnieniem czynników bazujących na terytorialnych aspektach rozwoju. Wstępna analiza pokazała, że małe i średnie miasta mogą mieć wpływ na rozwój

całego regionu, ale szczególnie te miasta, które spełniają specyficzne, endogeniczne funkcje, rozwijają się i są w stanie podążać za zmieniającymi się wzorcami rozwoju i globalizacją.

Słowa kluczowe: rozwój lokalny, kapitał terytorialny, uzdrowisko.

1. Introduction

Since the political transformation, there has been a decrease of studies regarding small towns. Recent publications have focused on the effects of economic significance of metropolization. At the same time small town are playing an important role in the regional economy, but did not receive the same amount of scholar attention (Kaufmann & Meili, 2019; Meili & Mayer, 2017; Servillo, Atkinson, & Hamdouch, 2017).

One can indicate around 1500 different types of spa (resort towns) in Europe where it is possible to rest and recuperate using the healing properties of their climate, enjoy water facilities and curative qualities of mineral waters, as well as relax and enjoy recreation. According to the formal definition, a spa treatment is an organised activity consisting in the provision of healthcare services in the field of spa treatment or spa rehabilitation, carried out in a spa with spa treatment facilities or outside the spa in hospitals using natural conditions: the properties of natural medicinal raw materials, the healing properties of the climate, including thalassotherapy and subterranean therapy, and the healing properties of the microclimate, and physiotherapy treatments. Based on this definition, two important areas can be indicated: the background of the facilities that are used for treatment, and the very specific natural conditions.

The subject of the development of resort towns is not new in the literature. This issue has been taken up by Polish researchers in various areas, including development, methods of organization and functioning, financing and environmental problems. So far, authors have focused on various conditions of development health tourism (Hadzik, Tomik, & Ryśnik, 2016; Panasiuk, 2017; Smith & Puczko, 2017, as well as spa tourism (Dryglas, 2006; Michalczak, 2014) and medical tourism (Connell, 2006; Rab-Przybyłowicz, 2012). From the point of view of new challenges in the development of resort municipalities, the areas where it is worthwhile to deepen the research include the following issues:

- How to build the potential of a town based on its healing resources?
- Are the two coexisting areas, i.e. tourism and health resorts, complementary to each other and is it worth building a marketing product based on these two indicated areas?
- How should we shape the space and environmental management in resort towns?
- Is the status of a health resort conducive or inhibiting to the development?
- What are the new trends and innovations in spa treatment?

- What is the role of the silver economy in the spa economy?
- Is it possible under Polish conditions to develop an integrated, cross-border tourist and health resort package on the Polish border?

This paper examined the territorial aspects of development of resort towns in one of the Polish regions, Lower Silesia. The aim of this paper was also to investigate chosen endogenous, embedded factors of development of resort towns in the context of their future development. Conducted analysis is part of initial work dedicated to development process od towns in Lower Silesia (Rogowska, 2020).

2. Theoretical background

There are currently around 1500 resort towns in Europe, where one can find good climate conditions, water recreation, spa treatment, and access to thermal and healing waters. However, formal conditions are very different to what one can find in Polish law and the subject literature. In the medical environment in Poland, resort towns are understood as a typical treatment centre, where the basis for therapy is the use of healing waters. In a broader sense (outside Poland), one can also find the relevance of such resort places in supporting psychophysical well-being (Golba, 2003, p. 14). When looking at conditions for development in towns with spa and tourist functions, one must remember that each policy's intervention should be adjusted to specific territorial conditions. This also means supporting the network of relations, the pursuit of dialogue, sharing power and promoting comprehension as different forms of governance based on reciprocity. On a local scale, the main endogenous factors important for resort towns are (Dryglas & Golba, 2017):

- geological and geographical conditions (presence of natural material such as healing water),
- economic conditions (infrastructural investment, possibilities for creating spa areas); Poland's economic conditions (industrial zones) vary their offer in line with the history of the displaced spa areas,
- ecological conditions (green areas, air quality, noise),
- technical and technological conditions (modern technology for sewage systems, waste management),
- political and legal conditions,
- social and demographic conditions.

For macro conditions (exogenous) one can think of process on a broader scale that can accelerate the development process, or the opposite – slow down the process, a good example can be the lockdown situation caused by the COVID-19 pandemic.

The modern approach to development conditions is linked to territorial potential understood in the literature understood as several territorial keys that can be used as linking issues in the conducted research (Zaucha, 2014):

- accessibility (in different scale by different models of transportation and communication),
- public service (access to public service),
- territorial assets (such as specificity of local environment, local system and innovation net, renewable energy, city revitalization),
- connections inside the cities' network.

In contemporary conditions for development, including the globalized economy, turbulent environment, and environmental changes globally, for many small towns an important factor for development is perceived in endogenous potential, by relying on local tradition and identity, while searching for newcomers (inhabitants, entrepreneurs, and tourists).

3. Methodology

In presented study 7 units with specific spa and touristic functions were taken into consideration. In Lower Silesia we can distinguish 11 units in total, but some of them were part of bigger cities (Cieplice Śląskie-Zdrój), and was hard to include them in following analysis. Due to data access, territorial development factors were limited to only seven.

The conducted analysis was based on the taxonomic method with a hypothetical pattern of development, against which taxonomic distances of the examined objects were measured. The assessment of trends in the development process of small towns required defining indicators characterizing the main aspects related to local development (with special emphasis on territorial dimensions of development), which was the first step of the undertaken analysis.

In the second stage of the research, a selection of diagnostic variables was conducted, aimed at creating the final set of diagnostic features. Throughout the study period, formal criteria were used, primarily associated with access to statistical data. It was considered that the selection of variables for the model should ensure measurability of features, comparability for all facilities and study periods, completeness of data for all towns in the studied periods. The main sources of data used in the conducted research were: Central Statistical Office in Poland, Local Data Bank, information and data presented on municipalities websites.

The set of potential diagnostic variables was then verified by means of statistical procedures. The selection of diagnostic variables took into account the fact that they should not show similarities in the sense of information about objects. The coefficient of variation was used to assess spatial variability. With this procedure the features for which it reached a value lower than the arbitrarily accepted size (10%) were eliminated. The second step was to eliminate those variables that easily reach high values. The first stage of building a synthetic measure of development for the examined cities was the division of diagnostic variables into stimulants and

destimulants, followed by the transformation of the destimulants into stimulants. The next stage of the study was to reduce the established diagnostic features to comparability, which is a necessary condition for the description of complex social, economic and spatial phenomena using selected diagnostic variables. The diversity of such defined features entails the need to use multiple measuring units, which makes it impossible to create comparisons.

For such described set of features, a development pattern with standardised coordinates was created (assuming that it is the maximum value for each of the features). Further analysis was conducted on the basis of distance and Euclidean distance.

The more the object is similar to the development pattern (the less distant from it), the higher the level of the complex phenomenon of this object. To order the results obtained and to put them in the range [0,1], where values closer to 1 indicate a higher level of development of the examined object, the Hellwig development measure was used. The last stage of the process was therefore to determine the development measure for each object according to the formula:

$$m_{it} = 1 - \frac{d_{i0t}}{d_{0t}}, \ (i = 1, 2, ..., n, \ t = 1, 2, \ ... \ l)$$

where:

$$d_{0t} = d_{i0t} + 2s_{dt}, \ \ (i = 1, 2, ..., n, \ \ t = 1, 2, \ ... \ l)$$

s_{dt} – standard deviation of development measure for each object.

The measures of development were constructed in such a way that they meet the following properties (Bąk, 1999):

- the higher the level of the complex phenomenon, the greater the value of the measure of development,
- the values of the development measure are included in the range [0; 1], where the measure calculated for the development pattern is 1.

4. Case study. Data description

In the Lower Silesia region are located 11 units with very specific, spa and tourist facilities. Five of them are in a peripheral district: Kłodzko (Duszniki-Zdrój, Polanica-Zdrój, Kudowa-Zdrój, Lądek-Zdrój, Długopole-Zdrój). The other units are also located in southern parts of the region: Świeradów-Zdrój, Cieplice Śląskie--Zdrój, Szczawno-Zdrój, Jedlina-Zdrój, Przerzeczyn-Zdrój and Czerniawa-Zdrój. From the 6254 beds available in Lower Silesia, 3574 (as of 31.12.2015) were

Table 1. Basic characteristics of the researched spa resorts

Unit	Characteristics	2015	2019
1	2	3	4
Kudowa-Zdrój	population	10180	9886
	dynamics of accommodation (%)	100.1	91.6
	foreign tourists	16327	5940
	spa facility	6	6
	accommodation in spa facilities	844	841
Duszniki-Zdrój	population	4787	4545
	dynamics of accommodation (%)	102.8	103.4
	foreign tourists	2738	5969
	spa facility	4	4
	accommodation in spa facilities	434	444
Polanica-Zdrój	population	6521	6307
	dynamics of accommodation (%)	98.5	89.6
	foreign tourists	2092	7672
	spa facility	6	7
	accommodation in spa facilities	641	735
Lądek-Zdrój	population	5804	5557
	dynamics of accommodation (%)	125.4	96.1
	foreign tourists	1619	1445
	spa facility	2	3
	accommodation in spa facilities	224	241
Świeradów-Zdrój	population	4261	4100
	dynamics of accommodation (%)	110.6	93.1
	foreign tourists	17554	26206
	spa facility	6	6

Table 1, cont.

1	2	3	4
	accommodation in spa facilities	678	707
Jedlina-Zdrój	population	4970	4820
	dynamics of accommodation (%)	81.3	99.3
	foreign tourists	78	253
	spa facility	2	2
	accommodation in spa facilities	110	110
Szczawno-Zdrój	population	5699	5569
	dynamics of accommodation (%)	90.8	99.4
	foreign tourists	2694	2201
	spa facility	7	7
	accommodation in spa facilities	565	548

Source: (Główny Urząd Statystyczny [GUS], 2020).

located in the Kłodzko district (Główny Urząd Statystyczny [GUS], 2016). All of them are mountain or near-mountain type of spa resorts. It is also worth mentioning that Lower Silesia contains almost 24% of all spa resorts in Poland.

Overall there are 277 spa treatment facilities operating in the spa resorts, namely: 48 spa hospitals, 196 sanatoriums, 15 spa clinics, and 18 independent natural medicine facilities. In total, all the spa treatment facilities offer 44.1 thousand beds. Annually, 763.4 thousand people are treated in spas, using about 37 million treatments. The number of tourists using spa facilities is systematically growing.

Table 1 presents some basic information on the seven main spa resorts of Lower Silesia; the biggest ones (in terms of population) being Kudowa-Zdrój and Polanica-Zdrój. The best dynamics of accommodation can be seen in Duszniki-Zdrój and Jedlina-Zdrój, whilst the number of foreign tourists is highest in Świeradów-Zdrój. The availability of accommodation in spa facilities is highest in Kudowa-Zdrój, Świeradów-Zdrój and Szczawno-Zdrój.

The paper explores the differences in local development conditions towns with a spa and touristic function. The research examined the Polish case using the Lower Silesia region. It is located in the south-west part of the country, and in its history one

Table 2. Main indicators included in the conducted analysis

Name	Characteristics
Demographic load factor	This indicator represents the social sphere of development. The ratio of the number of people of non-working age to the number of people of working age. This is important especially against the background of demographic tendencies (ageing society, migration of young people).
Percentage of population using the sewage system/ gas installation	Indicator connected with quality of life in urban units. It is important to any unit but especially to ones with touristic and resort character. The indicator corelates with environmental aspects of development (circular economy). Good quality of air and good sewage management seemsed to be the most important for further development resort towns.
Number of entities in market services	In resort towns there is a tendency to develop more non-market services in comparison to market services. Nevertheless the market shere is important entity in social and economic development (especially micro, small and medium-sized units seems to be better embedded in local environment).
Number of small entities	Small entities are the most important part in the local economy. Usually connected with local tradition, and strongly embedded. Partly this factor corelates with "Number of entities in market services indicator".
Road accessibility	Territorial aspect of development. Represents the average time to reach the local unit by car from the main city of the region. This indicator seemed to be important to resort and touristic towns development due to peripheral localization all of researched units (additionally units are located in mountaineer or sub-mountaineer area).
Investment expenditure	Investment expenditure *per capita*. Represents the economic sphere of development. This indicator evaluates local budgets and numbers that are spend for development objectives.
Total number of entrepreneurs	Represents the economic sphere of development, includes small, embedded entities with fewer than 9 employees. This factor corelates with "Number of entities in market services indicator" and "Number of small entities".

Source: own elaboration based on (Rogowska, 2020).

can see periods where small towns (with an industrial background) were the basis for the region's development. Based on qualitative research (Dryglas & Golba 2017, p. 208) dedidaced to development factors od resort towns for further development very important are natural resources and infrastructural investments (ecological conditions). Acording to entrepreneurs this specific facors creates additional value for local labour market. In a holistic view it is very important to include costs and benefits for environment and inhabitants (Dryglas & Golba 2017, p. 208).

5. Research results

The research findings are presented in the following tables. Table 3 shows the results regarding the differences among towns with spa and tourist functions in terms of development capacity (with special emphasis placed on territorial aspects). To better understand the result it is important to know certain conditions that are created in each unit. For the purposes of this paper only general conclusions are presented.

Table 3. Synthetic measure of development and position of small-towns in 2015 and 2019

Municipality	Synthetic measure of development in 2015	Municipality	Synthetic measure of development in 2019
Duszniki-Zdrój	0.3075	Duszniki-Zdrój	0.2706
Jedlina-Zdrój	0.1637	Jedlina-Zdrój	0.1369
Kudowa-Zdrój	0.5701	Kudowa-Zdrój	0.3109
Lądek-Zdrój	0.4159	Lądek-Zdrój	0.3519
Polanica-Zdrój	0.6279	Polanica-Zdrój	0.6131
Świeradów-Zdrój	0.5409	Świeradów-Zdrój	0.7921
Szczawno-Zdrój	0.1943	Szczawno-Zdrój	0.1251

Source: own calculation based on (Główny Urząd Statystyczny [GUS], 2021).

The study looked at a certain group of small and medium-sized towns. In general, only cities with very specific functions can develop faster and overcome negative trends such as depopulation. The general results from the analysis were formulated as follows:

- the best development results were seen in two cities in the Kłodzko district: Polanica-Zdrój (the capital of the five resort towns located and managed in this area) and Kudowa-Zdrój. Both units tend to attract great interest and high evaluation from their visitors. Additionally these two units obtained a good amount of investment in the researched period,
- all the researched municipalities are located on periphery of the region (in mountain areas), with quite poor accessibility (by car or train); owing to the latest investments the situation has improved in some units (Polanica-Zdrój, Szczawno-Zdrój),
- the worst results were observed in Jedlina-Zdrój,
- in the researched areas there was not enough investment to reduce environmental problems such as poor air quality.

6. Conclusion

The carried-out analysis contributes to finding out the main factors for development in small urban units (less than 20.000 inhabitants) with a very specific spa function, and their capacities to support the development on endogenous, unique factors. The conclusions regarding the assessment of conditions for development in the resort towns show a much stronger impact of globalization. Symptoms of global trends can be observed in the area of legal and political conditions for the development of health resorts (the impact of international quality standards, and of EU regulations); in the economic area, there is a progressive privatization of spa treatment facilities (Zespół Uzdrowisk Kłodzkich S.A.), and the emergence of large spa and wellness hotels influencing the position of other business entities, and often also impacting on the existing spatial order. In terms of ecological conditions, these units have more obligations to adapt to the conditions of sustainable development than others of a tourist nature because their legally regulated operation requires meeting the requirements in relation to the environment and technical infrastructure (despite this, no significant amount of new investments and expenses in this regard were observed in the researched period). Globalization in relation to spas and tourist towns (as in other areas of socio-economic life) is, on the one hand, an opportunity for development, and the abolition of borders creates the opportunity to attract new customers on a European scale. On the other hand, however, it constitutes a barrier related to the disappearance of the local market, limiting the possibility of competing based on strongly endogenous factors related to the uniqueness and authenticity of local features. However, in the context of demographic conditions, the progressive ageing processes of society should be emphasized, as well as the possibility of targeting the offered range to young people interested in prevention of ill-health.

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