

# SETTLEMENT COMPETITIVENESS IN THE BALATON REGION – THE POPULATION’S PERCEPTIONS

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**Abstract:** *The subjects of this research are the residents of the Balaton Region, those who have a secondary home, a holiday home and those who work / study there. The aim of the research is to find out which local competitiveness factors are important to the examined population and to what extent they are satisfied with their quality. A questionnaire survey was used to answer these questions. In the course of the research, 27 variables were examined, whose groups of variables are: municipal services, economic factors, leisure and tourism factors, demographic factors, settlement characteristics. During the evaluation of results, the importance and satisfaction scores and their differences for each settlement factor were examined. From the results, we expect the differences in importance-satisfaction scores to be greatest in the municipal services variable group. Knowing the differences between importance and satisfaction can help practical decision-makers to direct regional and local development resources towards the well-being and quality of life of the population in the Balaton Region.*

**Keywords:** *Settlement factors, Ranking by Importance, Ranking by Satisfaction.*

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## 1. INTRODUCTION

The literature on competitiveness generally measures competitiveness through so-called “hard” factors that can be found in statistical databases and so they can be quantified such as income, revenue, incoming taxes, and the production of goods and services. However, competition between settlements is not only about this, but whether or not the inhabitants like living in the settlement, beside their well-being, their wellness is also important, which belongs to a “soft” category because it depends on human opinions and so it is more difficult to measure.

The aim of the research is to measure “soft” factors via a questionnaire survey in the Balaton Region, from the perspectives of local residents, those who have secondary homes, and those working/studying in the area. The main question of the research is which settlement factors are important for the population and how satisfied they are with those factors. From the differences in the importance and satisfaction among individual competitiveness factors of the settlements we can draw conclusions about which factors should be improved to boost the satisfaction of those involved in the survey, and so to improve their life quality and well-being.

The theoretical background section summarises the possibilities of measuring territorial competitiveness and in the second chapter of the paper the examined area is presented. This introductory part ends with the third chapter that presents the methodology of the research. The following section presents the results of the questionnaire survey. In the fifth chapter, the data on the areas of the highest importance-satisfaction perceived by the results of the questionnaire survey are compared with information from statistical databases. Finally, in the last section, the research findings are summarised and conclusions drawn.

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## 2. THEORETICAL BACKGROUND

### 2.1. Possibilities for measuring settlement competitiveness

Competitiveness is a flexible and widely applicable concept, interpretable to all basic units of economy (company, industrial branch, region, nation, macroregion). According to regional sciences, the competitiveness of regions and towns is more than the productivity of inputs, as it means economic growth that can be realised with high employment and, as a result, the average standard of living improves. (Lengyel, 2000, 2016).

There are several models in territorial competitiveness literature, most of which (for example, competitiveness cylinder, competitiveness tree, pyramid model) use some kind of top indicator to measure competitiveness. Such top indicators are, for instance, output, GDP, employment, productivity, or income.

### 2.2. The competitiveness cylinder

From a variety of approaches to define competitiveness, the Cambridge University research group highlighted that there are some issues that should be included in the analysis of regional competitiveness as distinctive features (Martin, 2005). These factors are synthesised by the four-tiered competitiveness cylinder (see Figure 1). For the purposes of the present research, regional competitiveness factors located on the rim of the cylinder, and the secondary factors outside the rim that determine them are the most important.

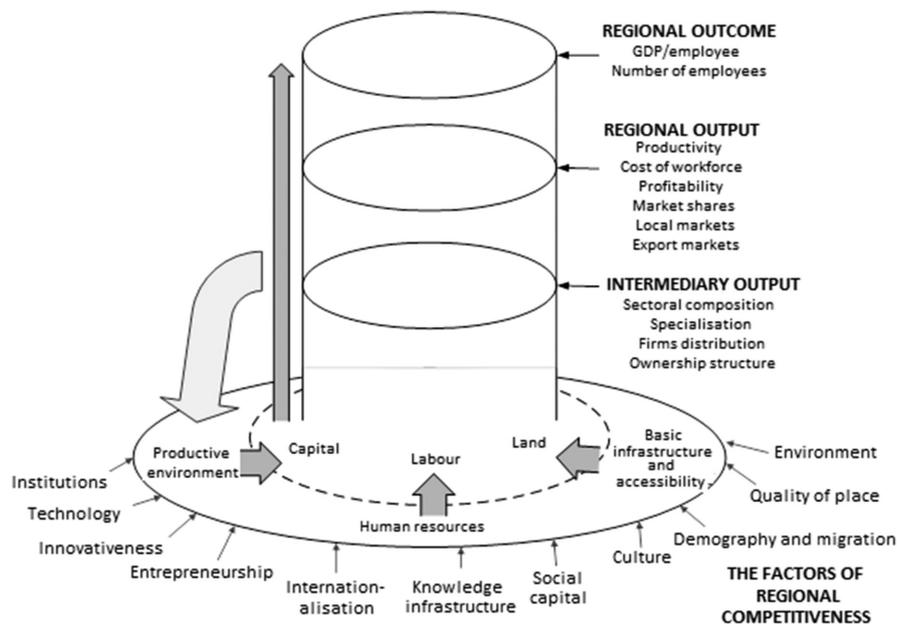


Figure 1. The competitiveness cylinder

Source: Author's edition, based on Lukovics, 2008

### 2.3. The competitiveness tree

Lukovics (2008) describes very expressively the metaphor of the competitiveness tree created by the ECORYS research team: “the quality of soil, and efficient functioning of the roots, trunk and

*branches determine the strength of the tree and the quality of the crop. It is a dynamic process, as the fertility of the soil is partly determined by extent to which the fallen fruit revitalise it.”*

- The roots in the soil are the factors of competitiveness, the inputs: talent, innovation, connection (communication, infrastructure, networks), and entrepreneurship.
- The trunk and the branches are the fundamentals of competitiveness: the trunk is the industrial structure and productivity, the branches stand for outputs, such as employment, profit, and taxes.
- The fruit itself is competitiveness, such as well-being, social care, environment, health, place of residence, culture, sustainability.

The competitiveness tree presents the interdependence of factors; the inputs emerging from the roots show the possible future developments as well. It should be noted that certain categories of the competitiveness tree (for example, food, and sustainability) are difficult to define and measure.

### **2.3.1. *The measurement of the competitiveness of regions, areas and towns on the basis of the pyramid model***

The best-known competitiveness model in Hungary was developed by Imre Lengyel. The levels of the renewed pyramid model (Lengyel, 2016):

- At the top of the pyramid, there is the aim, which is the improvement of the well-being and life quality of those living in the region.
- On the level below, the indicators for measuring realised competitiveness take place: income, labour productivity and employment.
- The realisation of the above issues is determined by various drives (research and technological development, human capital, physical capital, agglomeration advantages, strategic control and institutions) – these are economic factors that can serve as a base for regional economic development programmes.
- The long-term, mainly non-economic factors at the bottom of the pyramid determine the above levels (economic structure, innovation activity and entrepreneurship, regional availability and infrastructure, social capital, social structure, decision making centres, the quality of the environment, regional identity) – these can mainly be influenced by regional development policies.

### **2.3.2. *Koltai’s studies on the residential opinions about the competitiveness of Hungarian towns and cities***

In several of his works, Koltai sought to answer, through representative questionnaire surveys, which quality aspects affecting the competitiveness of towns are preferred by the population when choosing their place of residence. In his research, Koltai (2016) classified competitiveness factors into four factors by means of factor analysis:

- service factor: health care, education, urban roles;
- living conditions factor: infrastructure, transportation, employment, leisure time, housing;
- environment factor: living environment, natural conditions;
- human factor: history-traditions, demography.

There are a lot of similarities between the factors used by the individual authors. With regard to the so-called “soft” factors, Koltai’s competitiveness factors fit best with the objectives of

the present research. Koltai (2005) states that the methods of analysing the competitiveness of settlements on a statistical basis are well-complemented by questionnaire surveys, as they are able to present the underlying socio-economic processes as well.

#### **2.4. Sipos's competitiveness factors**

The greatness of Sipos's (2002) method lies in its simplicity; in his work on the comparative analysis of the microregions of Pest County, he worked with the percentage differences from the average of the values of various selected factors. The analysis was based on the following factors: business life and enterprises, tourism, unemployment, standards of living, occupational structure, infrastructure, demography, and availability.

In his analysis on competitiveness, he defined various regional types:

- Primary  $\alpha$  region – value high above county average (above 133 %)
- Secondary  $\alpha$  region – value above county average (111-133 %)
- $\alpha\beta$  region – value that corresponds to the county average (91-110 %)
- Secondary  $\beta$  region – below county average (67-90 %)
- Primary  $\beta$  region – far below county average (below 67 %).

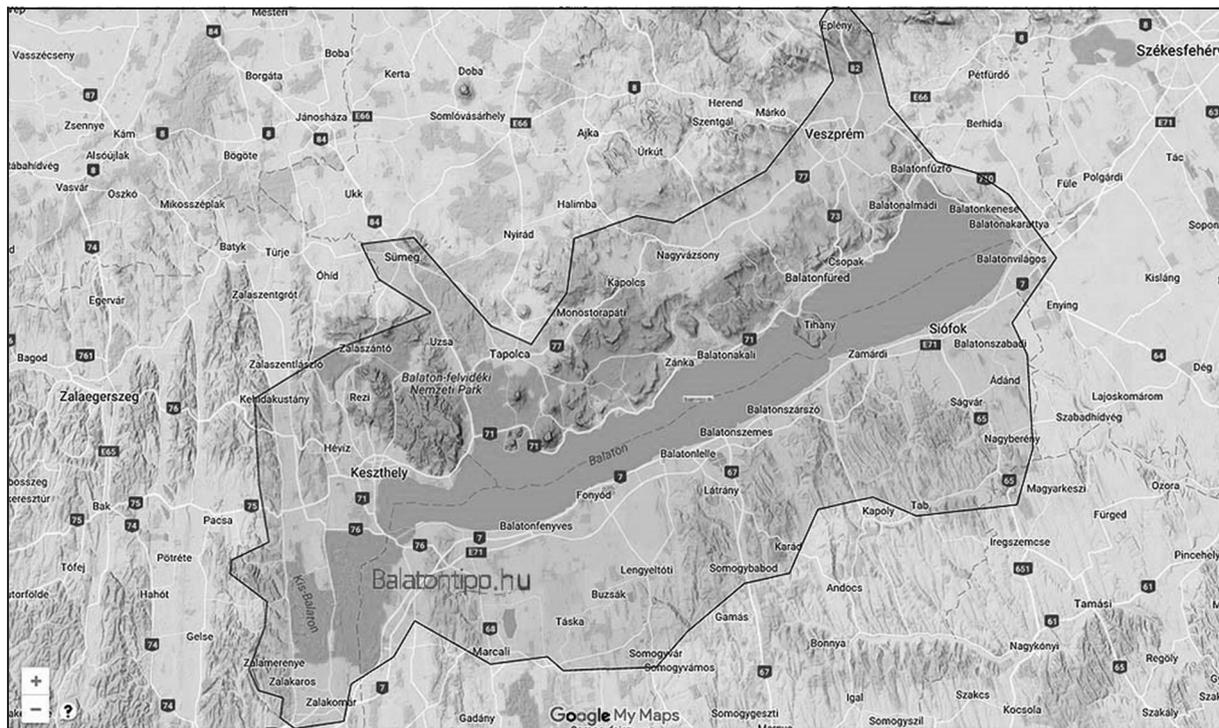
#### **2.5. Literature review**

Several authors studied regional competitiveness in the international literature (Bristow, 2005; Kitson et al., 2004; Budd and Hirmis, 2004), but in view of the present research topic, the specialties of the studied area – the Balaton Region –, and the relevance of the literature background reviewed in this paper, the main approaches prevalent in Hungary are presented. Several regional competitiveness studies have been published on Hungary (Majerova, 2018; Patay, 2018; Hoffmann, 2018; Lipták, 2019), most of which draw conclusions from statistical databases. Koltai's (2005, 2016) approach is the closest to the aims of the present research, whose studies focused on the examination of how the population evaluated settlement factors. In terms of satisfaction, Marien (2013) has conducted a similar research in the country examining the relationship between residential satisfaction and intention to stay.

### **3. THE AREA STUDIED**

The area studied is the Balaton Region, the scope of which is determined by a government decree. Instead of being a natural spatial unit, it is considered a region from the perspective of regional development, tourism, and economic development.

According to the situation assessment (2013-2014) of BDC (Balaton Development Council), the boundary of the area is uncertain in terms of how long inhabitants form some kind of cultural entity, since the area does not only include waterfront settlements. No. 429/2016. (XII. 15.) Government decree on the definition of touristic regions and priority touristic development regions lists the settlements belonging to the Balaton Region in detail. According to the government decree, the region covers 174 settlements, which are located in three counties (Veszprém, Somogy, and Zala). (Györffy, 2017).



**Figure 2.** The scope of the Balaton Region according to the 429/2016. (XII. 15.) Government decree

Source: Balatontipp.hu (2017)

### 3.1. Special characteristics of the Balaton Region

The settlements of the Balaton Region have several special characteristics. Such is the fact that the economic and social conditions of the settlements in the region are highly influenced by their geographical location, their distance from Lake Balaton. There are significant differences between waterfront and hinterland settlements, and between the northern and southern shores. The region is not only a recreational area but a number of other settlements are also organically linked to the region (BDC, 2013-2014).

According to Nemes Nagy (1998, 2016) the spatial organisation and shaping characteristics of a region can be:

- spatial unit,
- spatial characteristics (landscape-natural homogeneity),
- social-economic characteristics,
- cultural identity or ethnic, linguistic peculiarities in sociology,
- the functions of territorial administration in public administration science.

The landscape-natural homogeneity of the Balaton Region is typical rather to coastal settlements, as well as the similarity of the socio-economic characteristics, mainly due to the tourism there (BDC, 2013-2014). The Balaton Region, as defined in the government decree, is rather a scene of solutions for common spatial development, tourism, economic development and environmental protection issues, based on shared responsibility and interest, instead of being the spatial shaping characteristics suggested by Nemes Nagy.

### 3.2. Tourism as the most important sector of the Region

Lake Balaton, the largest lake in Central Europe, is one of the most important resources of our country. After Budapest, it is the second most visited tourist destination in Hungary, and thus a prominent player in the domestic economic scene. “*The key to the development of a given place is the existence of locally available resources and special capacities*” (Marton, 2013), the presence of which is indisputable in the case of the Balaton Region. Due to the special characteristics of the area, tourism is one of the most significant economic branches in the region, which is important as the gross added value of the accommodation and hospitality section from 2016 to 2017 (7,4 %) exceeded that of the total national economy (4 %) (CSO, 2017).

In 2017, the Balaton Tourism Region ranks:

- first with 32,5 % of the total number of tourist rooms,
- second with the 14,1 % of foreign guest nights (after Budapest – Central Danube Region, 61,8 %),
- first with 28,1 % of domestic guest nights,
- and second at national level with 21,3 % of the total number of guest nights (after Budapest – Central Danube Region, 36,7 %).

Based on the number of guest nights in the settlements registered in commercial accommodation rooms, the settlements in the Balaton Region take a prominent place in the national list: immediately after Budapest, Hévíz is ranked 2<sup>nd</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> are Siófok, Balatonfüred and Zalakaros, and 18<sup>th</sup> is Keszthely (HTA, Hungarian Tourism Agency, 2017). The Balaton region is a unique and colourful tourist destination that includes all types of destinations according to Aubert (2011): urban, mountain, coastal, health tourism and rural.

The second busiest tourist regions in Hungary is the Balaton Region, the most significant destination for domestic tourism. The attractiveness and competitiveness of the region as a whole and its individual settlements have significant economic impacts on the national economy.

## 4. RESEARCH METHODOLOGY

The aim of the present research is to examine which factors of settlement competitiveness are considered important by the inhabitants of the Balaton Region and how satisfied they are with them in their settlements.

In the present research, economic indicators are not analysed together with data from “hard” databases, but through a questionnaire survey, the population’s perception of certain economic factors are examined such as the cost of living, job opportunities, real estate prices, and, as for social factors, human relationships, the existence of community and the friendliness of the population.

Thus, “hard” categories (such as output, GDP, employment, productivity, and income) are not observed this time, but it should be noted that the fundament of models that are completed by these top indicators is built upon factors, the residential examination of which can yield valuable and interesting results, and their quality may contribute to the well-being experienced by the population and to the improvement of life quality, for example, infrastructure, environment, the quality of the place of residence, and of social and health care.

In the course of the empirical research, a questionnaire was compiled, which was filled in by personal questionnaire and electronically. The surveyed population in a settlement of the Balaton region:

- local residents: living and working or studying;
- local residents: living in a settlement in the region but working or studying somewhere else;
- those who have a secondary home or holiday house;
- those living elsewhere but working or studying in a settlement of the region.

The respondents were asked how important each settlement factor is to them, and how satisfied they are with each factor in their settlements. During the course of selection of the settlement factors – the variables of the questionnaire –, factors found in the literature of competitiveness provided the basis, and they were supplemented and modified taking the specifics of the Balaton Region into account.

Regarding settlement attractiveness/competitiveness, the respondents rated the following factors on a five-point Likert-type scale, in terms of importance (1=not at all important, 5=very important) and satisfaction (1=very dissatisfied, 5=very satisfied):

**Table 1. Questionnaire variables**

<b>Settlement services:</b>
<ul style="list-style-type: none"> <li>• Accessibility</li> <li>• Infrastructure (e.g.: gas, water, sewerage, road conditions, street lighting)</li> <li>• Local public transport</li> <li>• Parking facilities</li> <li>• Presence of a sidewalk</li> <li>• Existence of a bicycle path</li> <li>• Provision of public institutions</li> <li>• Health care, health services</li> <li>• Quality of public safety</li> <li>• Educational institutions</li> <li>• Conditions of living environment (e.g.: green areas, cleanliness, tidiness)</li> <li>• Calmness</li> </ul>
<b>Economic factors:</b>
<ul style="list-style-type: none"> <li>• Job opportunities</li> <li>• Shopping facilities</li> <li>• Costs of living</li> <li>• Favourable real estate prices</li> <li>• Continuous improvements in the settlement</li> </ul>
<b>Demographic factors:</b>
<ul style="list-style-type: none"> <li>• Age and ethnic composition of the population</li> <li>• Human (family, friends) relationships, community</li> <li>• Friendliness of the population</li> </ul>
<b>Factors related to leisure and tourism:</b>
<ul style="list-style-type: none"> <li>• Recreational facilities (wellness, amateur sports)</li> <li>• Entertainment opportunities, night life</li> <li>• Offered cultural programmes</li> <li>• Number and quality of sights</li> <li>• The quality of restaurants and hospitality</li> <li>• Beaches</li> </ul>
<b>Settlement characteristics:</b>
<ul style="list-style-type: none"> <li>• Natural conditions of the settlement</li> <li>• History and traditions of the settlement</li> </ul>

**Source:** author’s edition

As Lengyel (2003) points out the importance of regional specialisation, during the course of residential assessment of settlement factors, the undeniable fact was taken into considerations that the Balaton region – although including not only the coastal areas – is a highly tourism-specific region, thus related factors that are relevant to the quality of life of those who live there were also included in the questionnaire. (See above: factors related to leisure and tourism.)

In the reliability analysis of the internal consistency of the questionnaire, Cronbach's alpha was used, the most frequently applied internal consistency measuring index. The index expresses how consistent the statements in the scale are with the measured concept, with a minimum value of 0.6. (Sajtos - Mitev, 2007) In our questionnaire the Cronbach's alpha is 0.871, so we can say that the questionnaire is consistent, the scale measures correctly.

#### **4.1. The question of measuring scales**

The measurement level of variables in the questionnaire determines the applicable analytical methods (Molnár – Barna, 2004). Several publications have been published in literature regarding the evaluation of Likert-scale responses (Sajtos-Mitev, 2007, Zerényi, 2016, Parker et al., 2002, Chimi and Russell, 2009, Brown, 2011, Kehl, 2012). In the present study, it would be really illustrative and well-presented if we ranked the settlement factors using the average of given scores. Due to the doubts in literature, for the evaluation of questionnaires, in terms of applicable analytical methods, the strictest scale, the nominal scale, was assumed. Accordingly, the average score for each factor was not used, but their total score.

### **5. RESULTS OF THE QUESTIONNAIRE SURVEY**

The questionnaire survey was conducted via personally in a paper-based form and with the help of the Internet. The sample collection took place in 2018, lasting for 5 months. The sample analysis was done in 2019. As a result of the questionnaire survey, 776 respondents' answers have been analysed.

#### **5.1. Ranking of the settlement factors by importance**

Not surprisingly, in terms of importance, public safety comes first, followed by the infrastructural conditions of the settlement, but the quality of the conditions of the living environment, calmness, accessibility and health services also take prominent places. Each of the first six factors belong to the settlement services variable group. Settlement development policy can affect their improvement. When considering the need for developments and improvements, it is worth taking into account how satisfied those in concern are with them. (See: next section.)

It is an interesting result that in a region with outstanding tourism, the entertainment and night-life factor takes the last place. If tourists were asked instead of local residents and workers and those with secondary homes, there would certainly be different results in this regard. This may also raise the issue of conflict between local residents and tourists. It seems that the perception of this factor can also be related to the quality of public safety, which is the number one priority for respondents in terms of importance. Here, it should be pointed out that, in terms of importance and satisfaction, the calmness factor, which can be oppositely associated to night life, takes the prominent 3<sup>rd</sup> and 4<sup>th</sup> places. As for the entertainment opportunities and night life factor, it is also interesting that it is in the penultimate position, so the respondents are not at all concerned with this factor, but at the same time, they are not satisfied with the available opportunities.

**Table 2.** Ranking of the settlement factors by importance

Settlement factors	Total given score
1. Quality of public safety	3 662
2. Infrastructure (gas, water, sewerage, road conditions, street lighting)	3 575
3. Conditions of living environment (e.g.: green areas, cleanliness, tidiness)	3 563
4. Calmness	3 553
5. Accessibility	3 508
6. Health care, health services	3 479
7. Costs of living	3 432
8. Natural conditions of the settlement	3 374
9. Human (family, friends) relationships, existence of community	3 330
10. Friendliness of the population	3 327
11. Continuous improvements in the settlement	3 325
12. Recreational facilities (wellness, amateur sports)	3 283
13. Presence of a sidewalk	3 282
14. Shopping facilities	3 259
15. Provision of public administration	3 236
16. Job opportunities	3 227
17. Quality of restaurants and hospitality	3 199
18. Educational institutions	3 183
19. Number and quality of sights	3 113
20. Favourable real estate prices	3 110
21. Offer of cultural programmes	3 086
22. Parking facilities	3 054
23. Existence of a bicycle path	3 016
24. History and traditions of the settlement	2 926
25. Local transport	2 839
26. Age and ethnic composition of the population	2 821
27. Entertainment opportunities, night life	2 765

**Source:** Author’s edition

## 5.2. Ranking of settlement factors by satisfaction

If you look at the table of satisfaction data for settlement factors, there are several factors among the last that can influence not only the quality of life of the population but also the tourism to the region. These include entertainment opportunities and nightlife at the penultimate place (although this factor, as mentioned above, is not determining in terms of importance), or shopping facilities, parking facilities, and last but not least, health services. From the satisfaction ranking of all settlement factors, it should be highlighted the scope of settlement services, as the first six factors of importance belong to the scope of settlement services.

With the exception of the calmness and accessibility variables, all variables are significantly lower ranked by satisfaction than by importance. Out of the settlement services variables, health services, infrastructure, the conditions of living environment and the quality of public safety are the most important factors which can be influenced by development decisions, out of them, due to the large difference, health services and infrastructure need to be highlighted.

In the ranking of satisfaction, belonging to the settlement condition variable group, the natural conditions and the history and traditions of the settlement factors are in the first place (see Table 3), ahead of settlement services that comes first in order of importance. It should be noted that these factors do not take prominent places in terms of importance, especially history and traditions that are among the last. In terms of satisfaction, it is not surprising that in the case of a region with such a beautiful natural environment, the natural conditions are in the first place.

**Table 3.** Ranking of settlement factors by satisfaction

	<b>Settlement factors</b>	<b>Total given score</b>
1.	Natural conditions of the settlement	3 368
2.	History and traditions of the settlement	3 300
3.	Calmness	3 232
4.	Accessibility	3 192
5.	Quality of public safety	3 183
6.	Human (family, friends) relationships, community	3 153
7.	Educational institutions	3 150
8.	Provision of public administration	3 099
9.	Age and ethnic composition of the population	3 097
10.	Friendliness of the population	3 017
11.	Conditions of living environment (e.g.: green areas, cleanliness, tidiness)	3 012
12.	Number and quality of sights	2 898
13.	Local transport	2 883
14.	Quality of restaurants and hospitality	2 877
15.	Infrastructure (gas, water, sewerage, road conditions, street lighting)	2 856
16.	Job opportunities	2 837
17.	Existence of a bicycle path	2 822
18.	Offer of cultural programmes	2 816
19.	Recreational facilities (wellness, amateur sports)	2 807
20.	Costs of living	2 786
21.	Continuous improvements in the settlement	2 786
22.	Presence of a sidewalk	2 769
23.	Health care, health services	2 741
24.	Parking facilities	2 697
25.	Shopping facilities	2 660
26.	Entertainment opportunities, night life	2 627
27.	Favourable real estate prices	2 621

**Source:** author's edition

**Table 4.** Ranking of settlement services variable group by importance and satisfaction

<b>Ranking by importance</b>	<b>Variables of settlement services</b>	<b>Ranking by satisfaction</b>
1.	Quality of public safety	5.
2.	Infrastructure (gas, water, sewerage, road conditions, street lighting)	15.
3.	Conditions of living environment (e.g.: green areas, cleanliness, tidiness)	11.
4.	Calmness	3.
5.	Accessibility	4.
6.	Health care, health services	23.

**Source:** author's edition

**Table 5.** Factors related to leisure and tourism in terms of importance and satisfaction

<b>Ranking by importance</b>	<b>Factors related to leisure and tourism</b>	<b>Ranking by satisfaction</b>
12.	Recreational facilities	19.
17.	Quality of restaurants and hospitality	14.
19.	Number and quality of sights	12.
21.	Offer of cultural programmes	18.
27.	Entertainment, night life	26.

**Source:** author's edition

Overall, factors related to leisure and tourism were similarly ranked by satisfaction as by importance. At the same time, the importance and satisfaction differences in the variable group are noteworthy. Recreational facilities, where the opportunities for wellness and amateur sports

were ranked, were seven places lower in the satisfaction ranking, which is an interesting result due to the tourism orientation of the Balaton region.

All factors related to economy are higher ranked by importance than by satisfaction. Among them, shopping facilities and real estate prices are outstanding that come last in order of satisfaction. The provision of shopping facilities is an important issue not only to the population but also to tourism, which draws attention to local development issues.

In terms of satisfaction, real estate prices come last in the ranking. Here, it should be noted that the Balaton Region is one of the most expensive areas in Hungary, after the capital, and the growth rate of real estate prices in Veszprém and Somogy Counties is above the national average. Among the settlements in the resort area, real estates in Siófok and Balatonfüred are the most sought after and the most expensive.

### 5.3. Sequence differences of importance and satisfaction factors

If we examine the place of a settlement in terms of importance and satisfaction – significant differences can be found. First, those that have been ranked significantly higher by importance than by satisfaction are highlighted below:

**Table 6..** Variables with the highest negative importance-satisfaction ranking difference

Settlement factors	Ranking by importance	Ranking by satisfaction
Health care, health services	6.	23.
Infrastructure	2.	15.
Costs of living	7.	20.
Shopping facilities	14.	25.
Continuous improvements in the settlement	11.	25.
Presence of a sidewalk	13.	22.
Conditions of living environment	3.	11.
Recreational facilities	12.	19.
Favourable real estate prices	20.	27.

**Source:** author’s edition

Fortunately, however, there were not only negative differences in ranking, but there were several factors that were ranked much higher in terms of satisfaction than in terms of importance.

**Table 7.** Variables with the highest positive importance-satisfaction ranking difference

Settlement services	Ranking by importance	Ranking by satisfaction
History and tradition of the settlement	24.	2.
Age and ethnic composition of the settlement	26.	9.
Local transport	25.	13.
Educational institutions	18.	7.
Provision of public administration	15.	8.
Natural conditions	8.	1.
Existence of a bicycle path	23.	17.
Offer of cultural programmes	21.	18.
Quality of restaurants and hospitality	17.	14.

**Source:** author’s edition

If we look at the table, you can see that positive differences in ranking are, unfortunately, lower ranked in terms of importance. It is interesting to notice that local transport moved from the 25<sup>th</sup> place to the 13<sup>th</sup>. It is also notable that educational institutions at the 18<sup>th</sup> place in terms of importance are ranked 7<sup>th</sup> in terms of satisfaction.

## 6. HEALTH CARE AND INFRASTRUCTURE

As a result of the population questionnaire survey, health care and infrastructure were the two factors with the largest difference in importance and satisfaction, so it seems these must be further analysed. In the following, some relevant indicators will be analysed that are available in the Hungarian Central Statistical Office's (HCSO) databases.

### 6.1. Health care, health services

Table 8 shows that the number of patients per General Practitioner (GP) is 2.8 % higher in the Balaton Region than the national average, (however, one resident appears 4.8 % less times in GP practice). The HCSO database contains indicators for permanent residents, but there is no information about the number of temporary residents and holiday home owners. In the field of general practitioners, development is recommended in the light of these results, as only the ratio of permanent residents is higher than the national average, moreover, the large number of holiday home owners and also tourists may need greater or lesser medical care, which would further increase the workload on GPs.

The situation is better in the case of working hospital beds, the number of residents per hospital bed is lower than the national average (9.9 %), but the number of actual nursing days per capita (15.9 %) is higher than the national average.

The number of residents per pharmacy is also lower than the national average (by 15.9 %). Although demand for the latter is particularly important for the evaluation of results, as holiday home owners and tourists may also demand the services of pharmacies.

**Table 8.** Some factors related to health care in the Balaton Region and Hungary

Factor related to health care	Balaton Region	Hungary	Population per item	
			Balaton Region	Hungary
Number of GPs and home pediatricians (person)	205	6 219	1 630	1 585
			resident/doctor	
Number of working hospital beds (pcs)	2 550	68 301	131	144
			resident/bed	
Pharmacies + branch pharmacies (pcs)	118	3 004	2 832	3 281
			resident/pharmacy	
Total number of attendances in GP and Pediatric Care (cases)	2 182 279	67 442 846	6,53	6,84
			case/resident	
Actual number of nursing days in hospital (days)	755 233	18 677 364	2,26	1,90
			day/residence	

**Source:** HCSO (figures for 2016), author's edition

## 6.2. Infrastructure

According to the results of the questionnaire, the second largest difference between importance and satisfaction was with the infrastructure variable. The questionnaire included factors such as gas, water, sewerage, road conditions and street lighting. In connection with these, on the basis of HCSO data, comparisons on the Balaton Region and the averages of Hungary were made. The results show that the Balaton Region is slightly better equipped with public utility networks than the country as a whole (drinking water pipeline, sewerage network, electricity distribution network, gas pipeline network per 1 km<sup>2</sup>).

For the public utility supply of homes, the proportion of homes connected to the public water supply is slightly lower than the national average, presumably due to the greater presence of residential properties in the region, such as vineyards or out-of-town weekend homes, where water supply may not be available.

In terms of roads and spaces, indicators of public spaces, green areas, playgrounds, outdoor gyms, resting places, and bicycle paths are slightly better than nationally. In relation to roads and spaces, two factors should be highlighted in the region that are weaker than the national average: the length of municipal road network and public spaces and state roads per 1 km<sup>2</sup>, and the length of municipally built sidewalk per 1 km<sup>2</sup>. This “hard” factor is also confirmed by the results of the questionnaire survey, as out of the 27 questioned factors, the presence of a sidewalk is at the 7<sup>th</sup> place in the ranking of the negative differences of importance-satisfaction.

**Table 9.** Some factors related to infrastructure

<b>Roads, spaces</b>	<b>Balaton Region</b>	<b>Hungary</b>
Regularly cleaned public areas as % of total areas	0,13	0,10
Total green areas as % of total areas	0,08	0,07
Number of playgrounds, outdoor gyms, resting places per 1 km <sup>2</sup>	0,12	0,10
Length of built municipal roads and public spaces and state roads per 1 km <sup>2</sup> (km)	0,74	0,84
Length of municipally built bicycle paths, common footpaths and bicycle paths per 1 km <sup>2</sup> (km)	0,05	0,03
Length of municipally built sidewalk per 1 km <sup>2</sup> (km)	0,33	0,47

**Source:** HCSO, 2016, author’s edition

When it comes to data from statistical databases, both for infrastructure and health care factors, it should be noted that these are quantitative indicators, not qualitative, for instance the length of roads given in kilometres does not express the quality felt by the population.

## 7. CONCLUSION

The presented study assessed the importance of individual settlement factors for residents, employees and students, and those with secondary homes in the Balaton Region, when considering their settlements – and how satisfied they are with these factors.

During the research, the individual settlement factors were ranked in terms of perceived importance of the surveyed population, as well as in terms of satisfaction, based on the rankings achieved and the total score.

Important conclusions can be drawn from the differences between importance and satisfaction as perceived by the respondents, as they reveal the factors that are considered important by the population in connection with a settlement, and how satisfied they are with the individual factors. The factors that are considered important, but their level is not satisfactory, may have an awareness-raising effect on regional, county- and settlement-level decision making and the distribution of development resources in terms of in which areas their inflow would increase the satisfaction of the population, and the development of which areas is expected to improve the quality of living and well-being.

Based on the results of the questionnaire survey, among the factors with the largest difference in the importance-satisfaction ranking, which may be influenced by regional or settlement-level decisions are: health care, infrastructure, shopping facilities, continuous improvements in the settlement, presence of a sidewalk, conditions of the living environment.

In terms of the two key areas, health care and infrastructure, the “hard” data from HCSO also confirmed the results of the questionnaire survey. As far as health care is concerned, GP, in terms of infrastructure, primarily the length of built pavement, and after that the length of public roads were the weakest points.

When making settlement development decisions, these factors are suggested to be treated with priority in order to increase the well-being of the population.

In the course of the questionnaire survey, based on the importance-satisfaction rankings, the factors that the population felt strong are: history and traditions of a settlement, educational institutions, number and quality of sights, natural conditions of the settlement, existence of a bicycle path, offer of cultural programmes.

These implications can be the focus areas of regional and settlement-level marketing.

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