

SZENT ISTVÁN UNIVERSITY

**THE IMPACT OF TOURISM ON THE DEVELOPMENT OF
SPATIAL ECONOMY OF HUNGARY**

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TABLE OF CONTENTS

1. INTRODUCTION.....	4
2. MATERIAL AND METHOD	7
2.1. Research defined in space and time	7
2.2. Analysis of the indicators	7
2.3. The primary aim – tourism penetration index	7
2.4. The secondary aim – complex development index	9
2.5. Third pillar of the research – examination of the factors influencing the first two pillars	11
3. RESULTS.....	12
3.1. The primary aim.....	12
3.2. The secondary aim	13
3.3. The third aim	15
3.3.1. <i>Examination of further influencing factors</i>	16
3.3.2. <i>The analysis of EU funds</i>	20
3.4. New scientific findings.....	24
4. CONCLUSIONS, RECOMMENDATIONS.....	25
5. LIST OF PUBLICATIONS RELATED TO THE DISSERTATION	31

1. INTRODUCTION

Today's spatial economy is influenced by increasingly strong globalization processes, the valuation of immaterial resources and the fast technological changes. Regarding globalization, processes get new interpretation, the share of work at international level is important, territorial units need to specialize themselves because of the different resources leading to the valuation of local conditions. Consequently, the local level gets more importance, since the lasting advantages in competition of companies are concentrated there and by cooperation the local players can realize their economic development ideas. I believe that one of the major bases of spatial and rural development is the economic development based on endogenous resources.

Actuality of the topic

Nowadays, not only in Hungary, tourism as well as developments based on domestic tourism get more attention in both spatial and economic development strategies. Accordingly, I intended to highlight the importance of this sector in my dissertation. In my dissertation, I examined the development of rural space through analyzing the tourism sector, since I believe that due to the harmony in our natural, economic and human resource, we have great potentials in this regard. Based on the abovementioned, I think that tourism may become a leading or supplementary sector of an area, providing a future perspective for the local population directly or indirectly. My recent researches also prove that Hungary put increased attention on the planning and development activities in tourism not only for the programming period 2007-2013, but also before – even on such areas where not much income from tourism can be expected. Despite of the fact that the country has favourable touristic conditions in general, I think that some of the areas do not have the necessary economic, infrastructural and human resources. As a principle, I believe that it is important to examine the priorities of economic development strategies of all regions, with special focus on tourism potentials. In order to discover the development potentials of the regions, we should analyze the internal conditions of their environment, the success factors, the influence of external factors as well as their potential use.

Objectives and hypotheses

Nowadays, when rural areas intend to identify their specific development goals and try to define their own strategies, tourism is preferred in many cases as a possible way to get out of the lagging behind status. However, tourism – as a type of industry – requires well-established economic background and qualified human resource, in addition to the touristic attractions. Therefore, tourism might not be the way to success in many rural regions which do not possess the required resources. Hungary has unique natural and cultural treasure in Europe, so tourism has always played significant role in the national economy. The contribution of tourism to GDP in accommodation and catering sectors has shown gradual increase in the past 15 years, but still it is not the key for rural areas, since tourism sector is highly concentrated in the capital and in the area of Lake Balaton. So, overall, it may show further increase in such areas, but we do not have sufficient information about the tourism potentials of rural areas which would need help in boosting their economies to avoid the break-off.

My aim was to do a comprehensive analysis on the changes in the economic potentials of Hungary, with special focus on the potentials of micro-regions. My special focus was on the tourism developments and their economic impacts. My former research results show that significant potentials for economic development are hidden in rural areas.

In my research I was searching for the answers to the questions as follows:

- How can the touristic situation of Hungary be described?
- Which areas stand out in the sector and why?
- What economic indicators and developments have influence the development of rural space the most?
- Do the European Union funds allocated contribute to the development?
- May the tourism development be an outbreak from the peripheral situation?

Based on the abovementioned, my research objectives were

- to examine the changes and directions of international and domestic spatial development,
- to analyze the major correlations of endogenous local development,
- to search the economy-accelerating effects of tourism as well as to discover how it influences the Hungarian rural spatial economy,
- to list up recommendations for the tourism development potentials of the Hungarian micro-regions.

Overall, I have the following hypotheses:

H1: The real impacts of tourism are difficult to measure due to its intersectoral character. The methods to measure the direct and indirect impacts do not provide information about the real operation of the whole sector.

H2: The tourism and its environment have very close relationship. Tourism requires stable external environment. The development of the external environment has positive effect on the development of rural economy, generating increasing tourism potential as well.

H3: Without the development of the tourism's external environment, tourism development attempts cannot reach the expected results either. The special allocation of tourism development sources is often not sufficient to realize long-lasting sustainable development.

H4: The developments in tourism have outstanding role in the development of rural economy in Hungary, however, in the peripheral rural areas lagging behind, tourism is not always able to offer solution for the way out.

In my dissertation, I intended to examine the abovementioned hypotheses, I set objectives and I wanted to find the answers for my research questions. At the end of my research, I defined my new scientific findings and based on the conclusions, I made some recommendations.

2. MATERIAL AND METHOD

2.1. Research defined in space and time

In my dissertation, I focused on Hungary's LAU 1 level units to see how the abovementioned methods can be applied to measure the impacts of tourism. The data was collected from the 2007-2013 programming period of the European Union, with special focus on the start and end of the period. All the data is from secondary sources from the Central Statistical Office TEIR database and the TSTAR database. Every data was standardized by the total population of the micro-regions and the size of land (km²).

2.2. Analysis of the indicators

The "SPSS 23" program helped me analyse the indicators and shows the relationship between them. In many aspects of examination, evaluation and coordination of the different variables, a multivariate statistical analysis method was used. I chose the correlation calculation method to analyze the correlation between the elements. In addition to the correlation calculation I checked the adequacy of the data which is based on the Kaiser-Meyer-Okin (KMO) criterion and the Bartlett test. The different categories were created by the use of hierarchical cluster analysis. So I had the opportunity to create variables cluster classifications.

2.3. The primary aim – tourism penetration index

Tourism is a complex, multi-dimensional phenomenon, therefore its impacts should be measured by a multi-dimensional index, called tourism penetration index. In my dissertation I focused on Hungary's LAU 1 level units to see how the abovementioned methods can be applied to measure the impacts of tourism. The essence of the index is that it is a complex index integrating three dimensions at the same time (economic, social and environmental).

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|--|
| <ol style="list-style-type: none">1. Economic effect: the expenditure of incoming tourists per capita;2. Environmental effect: number of hotel rooms per square km;3. Social effect: average number of visitors per day per 1,000 citizens. |
|--|

- Economic effects: ($ecoTPI_k$)

$$\frac{(ecoX_k - ecoX_{kmin})}{(ecoX_{kmax} - ecoX_{kmin})}$$

- Environmental effects: ($envTPI_k$)

$$\frac{(envX_k - envX_{kmin})}{(envX_{kmax} - envX_{kmin})}$$

- Social effects: ($socTPI_k$)

$$\frac{(socX_k - socX_{kmin})}{(socX_{kmax} - socX_{kmin})}$$

X_{eco} or X_{env} or X_{soc} the value of the given indicator in the given region

$ecoX_{min}$ or $envX_{min}$ or $socX_{min}$ the minimum value of the given indicator among the data of all the regions analyzed

$ecoX_{max}$ or $envX_{max}$ or $socX_{max}$ the maximum value of the given indicator among the data of all the regions analyzed

The mathematical average of the three abovementioned indices gives the „Tourism Penetration Index” for each area, where the TPI reflects the volume of the tourism effects

„Tourism Penetration Index”

$$\Sigma TPI_k = \frac{ecoTPI_k \left(\frac{(ecoX_k - ecoX_{kmin})}{(ecoX_{kmax} - ecoX_{kmin})} \right) + envTPI_k \left(\frac{(envX_k - envX_{kmin})}{(envX_{kmax} - envX_{kmin})} \right) + socTPI_k \left(\frac{(socX_k - socX_{kmin})}{(socX_{kmax} - socX_{kmin})} \right)}{TPI_n}$$

$ecoTPI_k$ or $envTPI_k$ or $socTPI_k$: the value of the given index in the given region;

TPI_n : number of given indexes,

ΣTPI_k : the value of tourism penetration index in the given region

During data collection, I faced many obstacles, which made it difficult to use a clear indicator, because of the incomplete data below the national level, so I had to change the method of calculation.

Economic effects

$_{\text{eco}}\text{TPI}_k$ = The number of guest nights in hotel rooms and private accommodations, 1,000 citizens
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The environmental effect assessment has been revised slightly compared to the original index.

Environmental effects

$_{\text{env}}\text{TPI}_k$ = number of hotel rooms and private accommodations per square km;

The third major component part of the index is the social impacts. This sub-index is not required change.

Social effects

$_{\text{soc}}\text{TPI}_k$ = average number of visitors, 1,000 citizens.

The correlation measure showed strong positive correlation ($0.7 < r < 1$) among the indicators, which confirmed that the analyzed variables are suitable for calculating the complex development index sub-regional level.

2.4. The secondary aim – complex development index

Based on the variables of the first pillar, I thought that the indicator needs some modification. Therefore, the second pillar of my research was the involvement of 32 variables of the complex development index into my examination. The complex development index defines what development gaps are among the settlements. The index considers economic, social, infrastructural, employment situation of the areas, containing sub-indicators based on the Annex 3 of parliamentary resolution 67/2007. (VI. 28.). After the calculation of the correlation values, I added 9 variables to the index, shown in *Table 1*.

Table 1: Integrated indicators

Complex Development Index	
I. Economic indicators	1. Number of operating enterprises per 1000 citizens
	2. Number of retail shops per 1000 citizens;
	3. The share of employees in service sector within the total employment, %;
	4. Income of municipality from local taxes, HUF;
II. Environmental indicators	5. The share of households using gas through pipes within the total number of households, %;
	6. The number of phone-stations (including ISDN) per 1000 citizens;
III. Social indicators	7. The number of cars per 1000 citizens;
	8. Population density, citizens/km ² ;
	9. The rate of 18-x years old population with secondary school certificate, %.

Source: own construction based on parliamentary resolution 67/2007. (VI. 28.), 2015.

In order to distinguish the two indicators, the latter one was named as tourism potential index, since it includes economic, social, infrastructural indices that have impact on tourism competitiveness. The enlargement gave me a complex system of indicators consisting of 12 sub-index. The index calculation formula was modified as follows due to the change in the number of sub-indices:

Tourism Potential Index (IPI)

$$IPI_t = \frac{\sum_{i=1}^{n=12} r_i IPI_t \left(\frac{vX_t - v_{min}X_{t0}}{v_{max}X_{t0} - v_{min}X_{t0}} \right)}{r_i IPI_{n=12}}$$

t: the given region;

r_iIPI_t: the value of the given index in the given region;

vX_t: the value of the given indicator in the given region

v_{min}X_{t0}: the minimum value of the given indicator among the data of all the regions analyzed

v_{max}X_{t0}: the maximum value of the given indicator among the data of all the regions analyzed

n: number of given indices.

With adding more indicators, my aim was to see whether the results of the first pillar are similar or different from those of the second one. My aim was to define regions which are not among the top ones based on the data of 2007 and 2013, but they have the potentials to grow.

2.5. Third pillar of the research – examination of the factors influencing the first two pillars

In the third pillar, I intended to evaluate the results of the first two pillars. I tried to list up those factors which influence the complex penetration index or the tourism potential index.

Firstly, I wanted to see how the large cities influence the situation of periphery from tourism aspect and whether the regional poles have significant advantages compared to other regions in tourism. Considering the settlement structure of Hungary, I think it is important to see the territorial concentration of urban and rural areas. Thus I calculated the urban-rural index of Hungarian micro-regions, which shows that what percentage of the population lives in settlements with over 120 people/km² population density. I wanted to highlight that regional poles play determining role in tourism, thus making the situation of rural areas more difficult.

Apart from the examination of the impact of the variables, I also analyzed the funds from the European Union. I analyzed the data collected by the national Development Authority about the development funds under the New Hungary Development Plan and the New Széchenyi Plan, within the Regional operational Programs for tourism development purposes. Parallel, I also did a research on the projects realized under the New Hungary Rural Development Program, with special focus on Axis 3 financed by EARDF. In addition to tourism-targeted projects, I did research on economic, infrastructural, rural- and spatial development projects as well, by collecting data from the New Hungary Development Plan and the New Széchenyi Plan. My aim was to highlight whether the tourism investments themselves can be realized efficiently or they can be successful in long terms only with using other development funds.

3. RESULTS

3.1. The primarily aim

The primarily aim was to see the tourism penetration index tendencies between 2007 and 2013. It can be stated out of 174 micro-regions, 110 showed increase from 2007 to 2013, while in 64 micro-regions, the index decreased. By 2013, the number of mature destinations decreased, (only four remained in the category instead of the former 6 ones) even in the popular micro-regions like Hévíz, Balatonfüred, Budapest and Keszthely. The micro-regions were put into categories based on their TPI values (*Figure 1.*). The categories were created in cluster analysis. In addition, the methods called „neraest neighbour” and „Ward-method” were also applied, thus helped to create four clusters. Since this method is very sensitive to extreme values, some of the micro-regions had to be excluded (micro-regions under 0,01 as well as Hévíz with really high tourism sector).

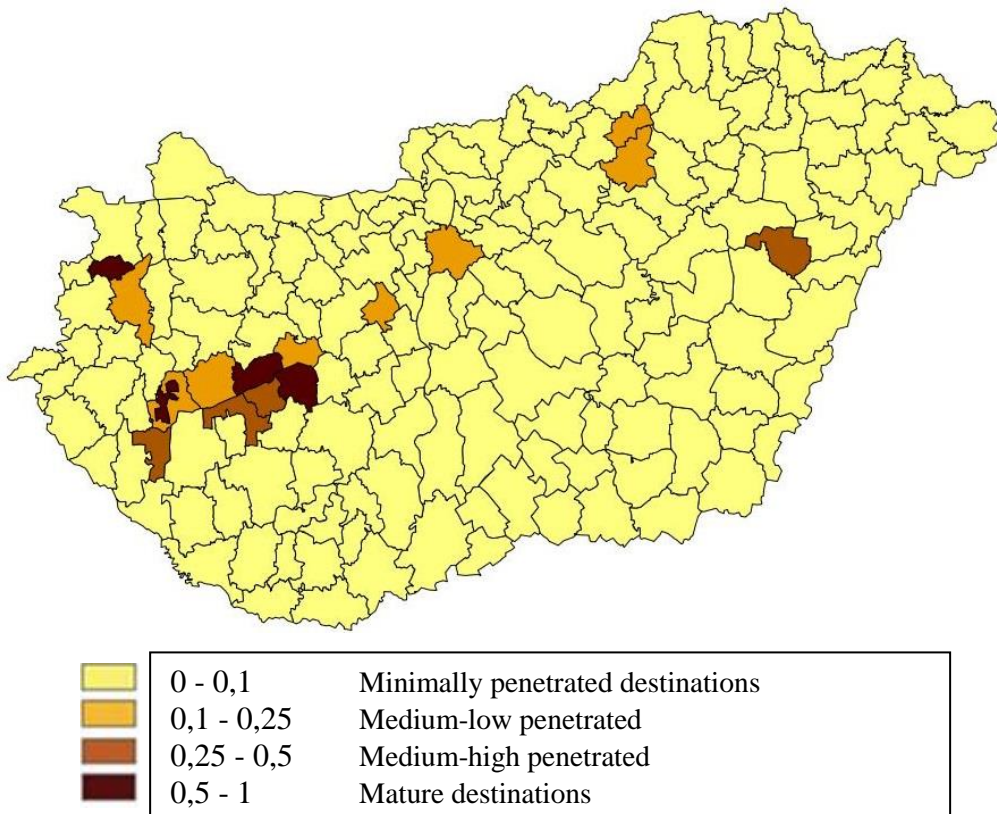


Figure 1. The TPI in the micro-regions of Hungary in 2013

Source: own editing, based on CSO, TEIR data, 2015.

On the *Figure 1.* above can be clearly seen, namely that the Hungarian tourism is significantly influenced by the Lake Balaton and Budapest, i.e. they are visited by the most visitors. Unfortunately, larger cities and their agglomerations have more moderate role in tourism. Hungary is known as a popular destination of tourists, however, based on the index, it is clear that there are significant discrepancies in the country. The larger cities and other attractions are not able to attract tourists in sufficient amount. However, in most of the rural areas, where the economic, social conditions are not favourable, tourism is considered as the number one and sometimes the only tool to break out and achieve progress. Most of the rural areas intend to start tourism activity, despite of the fact that they do not have the necessary services and resources available.

Major errors in the method:

- The data-collection methods are not uniform;
- The specific expenditures are not calculated for the domestic tourists;
- Data calculated for the size of the area distort the real results (small-sized countries with significant tourism have outstanding data which distort the data of larger-sized countries with similarly significant tourism);
- Research carried out for NUTS 0 level does not highlight the regional differences within the borders, in addition, there is no data available for NUTS II or lower levels in all the countries

Overall, we can see that the examination of tourism effects is really complicated, but very useful. There have been several attempts to measure the impacts of tourism because the sector has gained more and more importance globally and its contribution to the GDP has been also increasing. But a question is raised: is it only its share in the GDP what makes tourism important from economic point of view, and is it only the economic factor that is important in relation with the tourism or are there any other factors which determine its significance?

3.2. The secondary aim

After analyzing the TPI in the micro-regions, I added 9 indicators to the basic ones to be able to cover more various aspects. It was needed because the tourism is a multi-factoral economic sector, therefore it has impacts on various sectors and industries as well on the society and environment. Based on the correlation analysis, I modified the original indicator with the factors was named as tourism potential index, since it includes economic, social, infrastructural indices that

have impact on tourism competitiveness. Micro-regions were put into categories according to their TPI with cluster analysis. The aim of this analysis was to create relatively homogenous groups from the micro-regions. Hierarchical method has been chosen. „Ward-method” was applied during the analysis to create 4 clusters.

2013 IPI data show (Figure 2.) that the gap between the categories moderated. Mature destinations kept their leading position proving that successful tourism requires sufficient economic, social and infrastructural stability. It proves that the competitiveness of tourism depends on not only the attraction (like in the case of the abovementioned popular touristic destinations) but it requires various economic, social and environmental resources to achieve long-term developments.

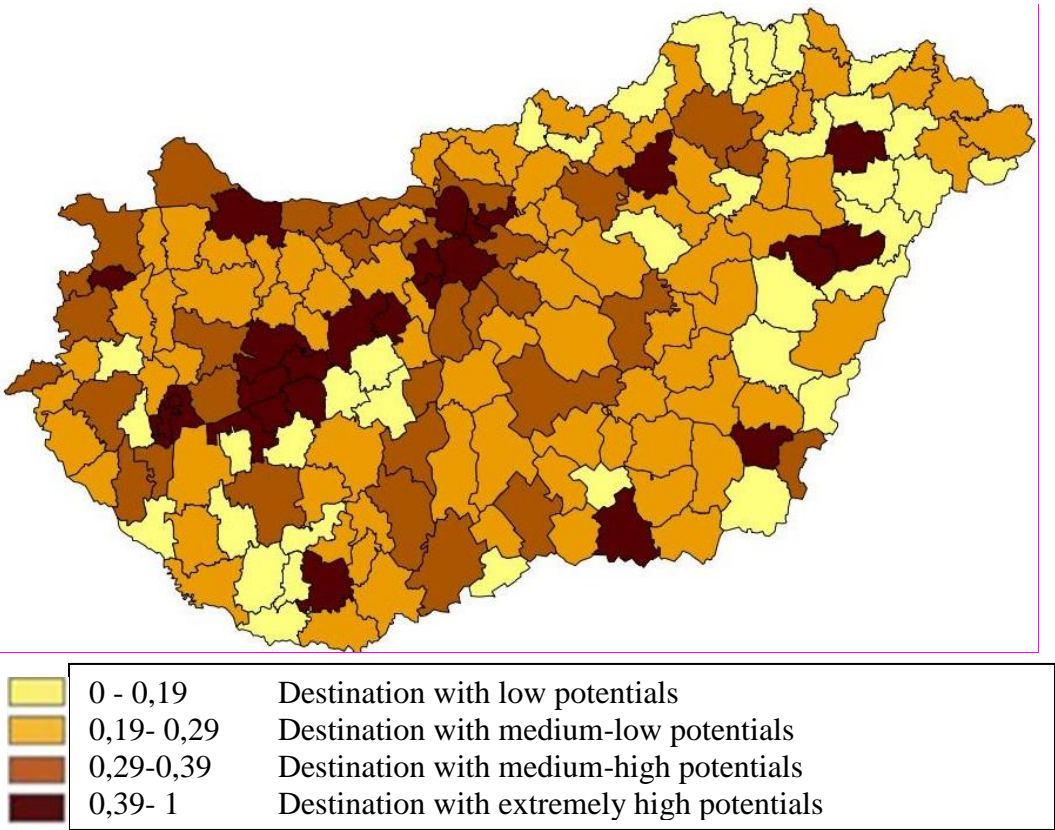


Figure 2: The tourism potential index of the micro-regions of Hungary in 2013

Source: Own construction based on CSO, TEIR data (2015)

If the data of 2007 and 2013 is compared, some improvements can be observed. Out of 76 micro-regions with low potential 39 were able to get into the medium-low category which comprised the highest number of micro-regions in 2013, namely 80. The number of the leading micro-regions also increased. 25 had extremely high, while 32 had medium-high potentials. Consequently, 57 micro-regions have the sufficient conditions and potentials to implement and develop tourism. *Figure 2* shows that there are centers located in various points of the country, e.g. near Lake Balaton and Lake Velence, Budapest- Pest county, areas along the Western border, the Danube and the Northern mountains.

In this chapter I intended to focus on the complex indicator which has been created to take the economic, social and environmental impacts of tourism into account. There have been various attempts by Hungarian and foreign scientists to find/create an indicator that is suitable to reflect the intersectoral impacts of tourism and can be adapted to any countries, but experts usually face challenge regarding the availability of statistical data, country-specific characteristics of tourism, as well as the complexity of the sector itself. It is really difficult to list up all the sectors, activities which are influenced by tourism.

3.3. The third aim

After examining the tourism potential indices for the year 2013 we can see (based on the *Maps 3 and 4*) that the location of the leader regions in tourism greatly match the location of regional poles defined in the National Spatial Development Concept passed in parliamentary resolution 97/2005.OGY. Moreover, it is true for the indices of 2007 as well. The economic, social and infrastructural development of poles is an advantage compared to the other regions, but the role of regional centers is also determining. The regions which do not have strong tourism are between the poles, quite far from the centers.

In 2013, there were 17 micro-regions where 85% of the population lives in settlements with over 120 people/km². These include Budapest with its agglomeration as well as large centers e.g. micro-regions of Miskolc, Debrecen, Nyíregyháza, Szeged and Pécs, dominantly urban areas. Out of 174, 50 are considered rural areas, where min. 50% and max. 85% of the population lives in settlement with higher population density. In the case of 61 rural destinations, we can see that there are settlements with high population density, but the population does not reach 50% of the total. Additional 46 micro-regions do not have any settlements where the population density would exceed 120 people/km², which means that 61.5% of the country is rather rural. Since my aim was to examine whether these data have correlation with the tourism potentials, I compared the data with the tourism potential index of the micro-regions for the year 2013. On *Figure 5*, I indicated the micro-regions with high or moderately high potentials by brown colour.

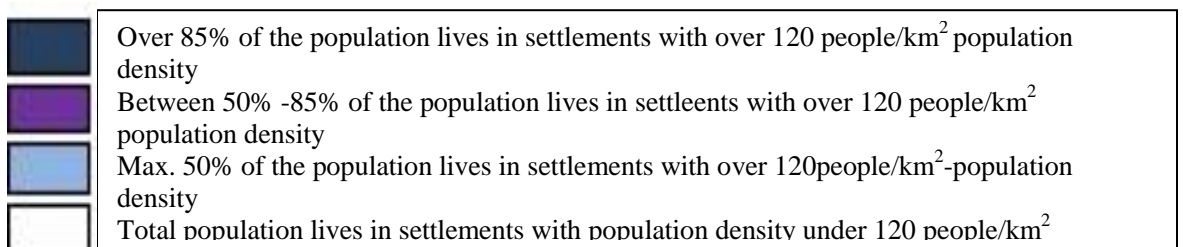
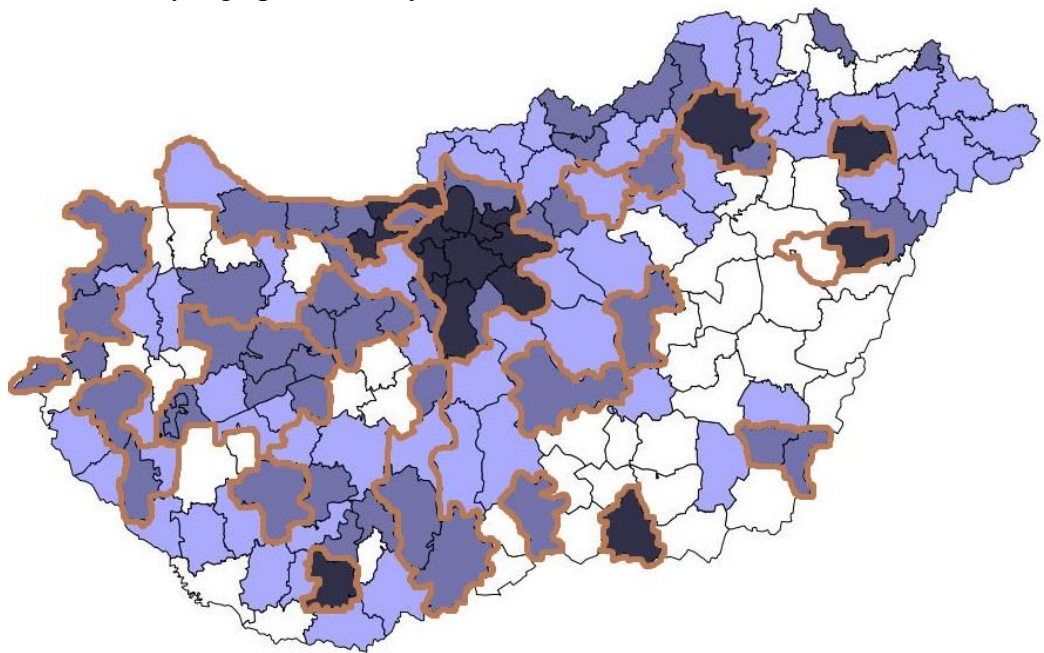


Figure 5: The relationship between the urban-rural index and the tourism potential index of the micro-regions in 2013

Source: own construction, based on CSO, TEIR data, 2015.

Most of the leading areas in tourism consist of higher population density settlements. We can see regions where at least 50% of the population lives in urban areas, yet they do not perform well. It can be observed that near such areas there is usually a center, which is a touristic potential and they also have favourable situation from highway or population density point of view. In regions with moderate-low or low potentials, max. 50% of the population lives in urban areas. Most of the micro-regions do not reach 120 people/km². It is really characteristics to the settlements in the Great Plain. Based on the results it can be stated that it is much more difficult to strengthen the role of rural regions in tourism than that of the urban ones.

Based on the results, I could justify my assumptions; however, the urban-rural index does not provide relevant information in each case because there are settlements especially in Northern-Hungary where the population density is high in settlements, but the development level is low and they cannot be considered urban regions. Therefore, I examined the settlements with over 120 people/km² to find out which have population over 10,000. I recalculated the data and found out what percentage of the population live in settlements of over 10,000 or 5,000 population (*Figure 6*).

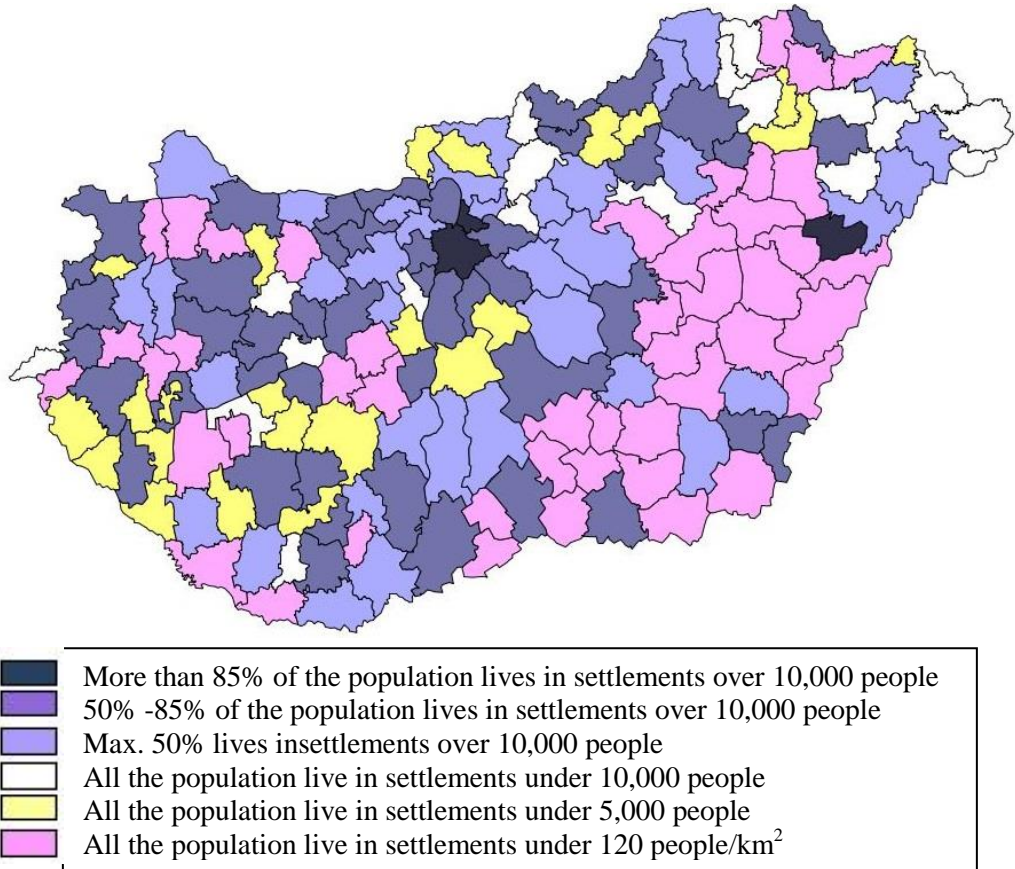


Figure 6: Urban-rural index of settlements with population over 5,000 and 10,000 in 2013

Source: own construction based on CSO, TEIR data, 2015.

As examining the two lowest categories of the tourism potential index, I could state that the population of micro-regions with higher population density preferably live in settlements over 5,000, while there are only some where it improves to 10,000 cities. Based on the modified calculation, I can state that appropriate tourism potential is characteristic more to the urban regions. There is a strong correlation where at least 40% of the population lives in settlements over 120 people/km² and in cities with over 10,000 people. However, this statement is true only if there is not a center nearby which has better results considering all the other factors. It can be observed that micro-regions with high population density but with settlements under 10,000 are not among the top ones. At the same time, 50% of the destinations with density under 120 people/km² have poor or moderately poor potentials, except for Hajdúszoboszló.

3.3.2. The analysis of EU funds

In addition to analyzing the complex tourism indicator, I considered the analysis of EU funds very important to prove that EU funds had great influence on the improvements of the micor-regions by 2013. Data show that each micro region received some kind of EU funds related to tourism development between 2007 and 2013. My aim was to examine whether the funds have been used in the most suitable micro-regions to the most appropriate extent and whether the investments may lead to long-term benefits in the tourism sector. Most of the funds were used within the „Tourism attraction-development” priority, including various calls (*Figure 7.*)

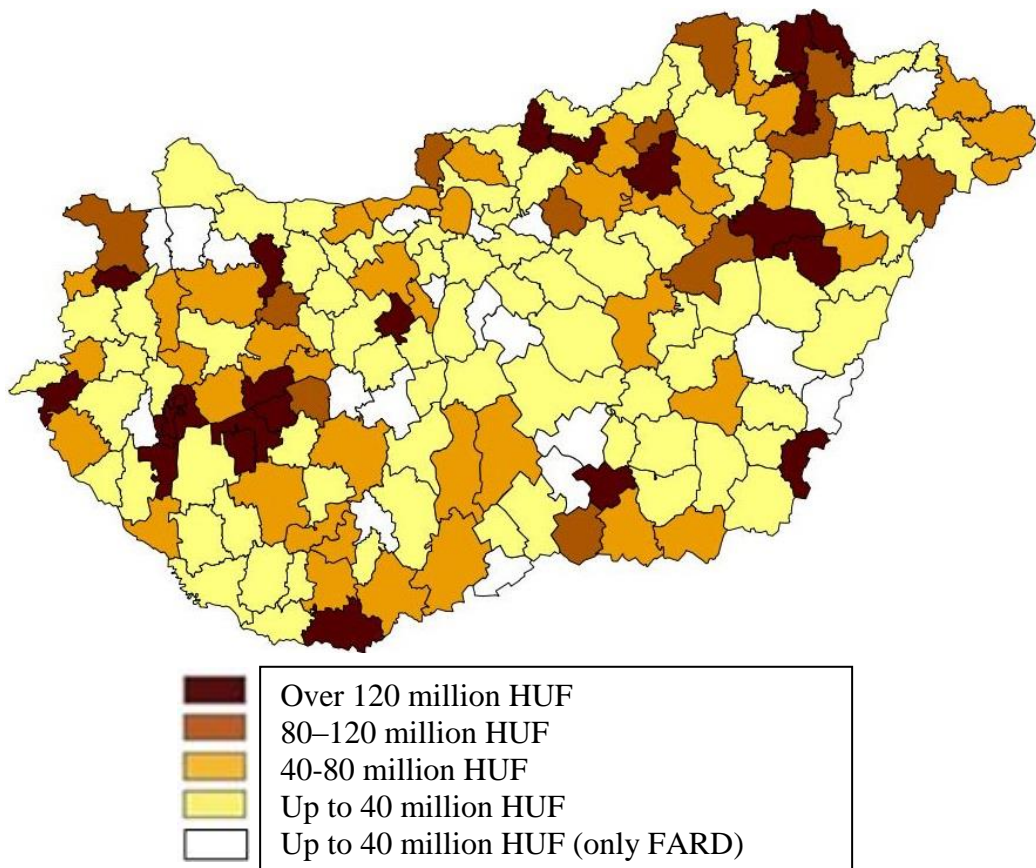


Figure 7. Tourism-related development funds received by the micro-regions between 2007 and 2014

Source: Own construction based on TEIR data, TÉRKÉPTÉR (2015)

Figure 7. shows that 99 micro-regions received under 40 million HUF funds, meaning that two-thirds of the micro-regions have not received sufficient

amount to develop the economy. 19 micro-regions received only funds from FARD (Fund for Agriculture and Rural Development).

From touristic attraction-development funds, the micro-region of Balatonfüred received the highest amount, more than 264 million HUF per 1,000 citizens. Micro-regions of Tokaj, Abaúj-Hegyköz and Pannonhalma also received funds over 200 million HUF, while the Tokaj and the Abaúj-Hegyköz are the least-developed rural areas requiring complex development programs. In the category of touristic accommodation and services, Balatonfüred was the number one with 85 million HUF. As an opposition, there were much lower amounts available for the development of TDM organizations. Hévíz, Csepreg and Balatonfüred received funds over 10 million HUF, the rest (52 micro-regions) could spend less than 8 million HUF each.

Thus, we can see that 19 micro-regions received funds over 120 million HUF between 2007 and 2014. By 2013, the tourism potential improved in 74 micro-regions, which helped them to get into a higher category. By 2013, 15 micro-regions managed to get into the outstanding category, including 6 that only needed less than 40 million HUF. Additional 6 micro-regions received funds of 40-80 million HUF, and 3 micro-regions received extremely high amounts: Eger micro-region nearly 130 million HUF, Gárdony 148 million HUF and Hajdúszoboszló 181 million HUF.

From 2007, 20 micro-regions managed to step forward from medium-low to medium-high category. Zalakaros micro-region and Gyula could use significant amount of funds for the developments, 164 million HUF and 150 million HUF, respectively. It is really interesting that Ajka-Devecser micro-region was able to use 10 million HUF to step forward to the category of medium-high potential from the category of low potential. Data show that approx. 50 million HUF was enough to generate development. Actually, the average development fund in micro-regions with extremely high potential was 135 million HUF.

Figure 8. shows the micro-regions that did not manage to step forward to a higher category and are still in the category of micro-regions with low potential. It is interesting to see how much funds they gained and to see why the funds did not generate any development. Out of 37 micro-regions, 12 received fund over 40 million HUF (5 received even over 120 million HUF). On the map it can be seen that those micro-regions are concentrated along the North-East and Eastern border and in the Southern-Transdanubia region. Such regions

comprise primarily the least-developed micro-regions of Hungary with unstable economy, social handicaps, high unemployment rates and low real wages.

In my opinion, the break out for such regions could be linking their potentials and realize joint projects that are mutually beneficial. If such regions rather compete with each other instead of working together, they will not be able to catch up and improve their economic and social conditions. Considering the abovementioned, we also examined the location of micro-regions that managed to improve their situation by 2013, except for the ones with extremely-high and high potential (*Figure 8.*).

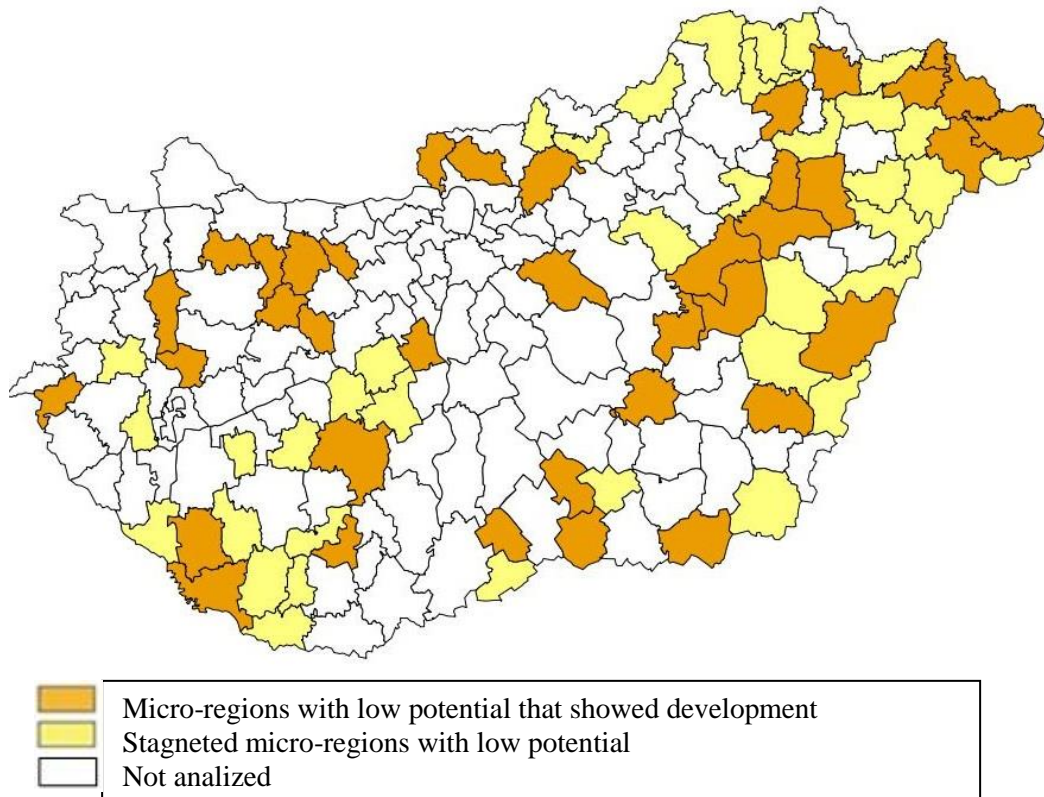


Figure 8. The performance of the micro-regions with low touristic potential from 2007 to 2013

Source: Own construction based on TEIR data, TÉRKÉPTÉR (2015)
Figure 8. shows that the least-developed micro-regions are surrounded by the ones which managed to improve their potential, so their cooperation is inevitable to achieve long-term development. In our opinion, the creation of clusters could be the solution and the most appropriate form of cooperation for such regions. In our research, in addition to touristic funds, we also analyzed the

allocation of economic development funds in the micro-regions of Hungary. Based on the results we should state that in micro-regions using general economic development funds, the performance of tourism was better. It means that if we want to achieve successful tourism, the economic environment should be also developed to achieve stability.

Since tourism is an intersectoral activity, it depends on and has impact on various sectors of the national economy. Therefore, in disadvantaged rural areas, focusing on only tourism may not bring the expected results.

Based on my research results, the efficient use of economic development and touristic funds by the micro-regions cannot be proven clearly. There is no direct correlation between the amount of funds received and the rate of improvement. However, it can be stated that the allocation of touristic funds can be successful only along with the development of the economy.

The major objective of 2014-2020 programming period is the efficient use of development funds in areas smaller than NUTS 2 regions that face similar challenges or should build on similar conditions. This approach also encourages the cooperation between areas. In addition to municipalities, Touristic Destination Management bodies also have an important role in elaborating successful development strategies built on local endowments. In our opinion, linking products to each other and selling them as complex packages are essential elements of tourism development.

3.4. New scientific findings

1. Based on the detailed study on the tourism penetration index used in the European Union, I defined the deficiencies and experience that I observed during the research regarding the index. The methodological structure of the tourism penetration index does not allow to be used at LAU1 level in Hungary. In order to use it at micro-regional level, two out of the three elements should be modified. I suggest to measure the number of nights spent (while examining the economic impact) and to add the data for private accommodations to the commercial accommodations to measure the social impact.

2. I created an indicator system – which is more complex than the penetration index – that provides more overall picture about tourism, since it includes economic, social, infrastructural factors which have close connection to the sector. I named this expanded indicator as tourism potential index. It has to be calculated as follows:

$$IPI_t = \frac{\sum_{i=1}^{n=12} r_i IPI_{it} \left(\frac{v^{X_t} - v^{min X_t \delta}}{v^{max X_t \delta} - v^{min X_t \delta}} \right)}{r_i IPI_{n=12}}$$

3. Funds available and used for tourism in the programming period 2007-2013 did not result in success without the economic development funds and measures. In addition to the economic measures, tourism may be a help to promote the diversified economy, however, the strong dependence of rural areas on tourism does not help to catch up.

4. If the underdeveloped areas compete with each other with their endogenous resources instead of cooperating with each other on mutually beneficial issues, it may lead to deeper peripheral situation in long terms. Based on cooperation, small touristic centers can be created whose joint projects may slow down the pace of break off and can have positive impact on the local economy, urging stability. Peripheral areas which show development may be suitable to function as centers or bases of development. Because of their leading function, I named such areas as centers of periphery.

4. CONCLUSIONS, RECOMMENDATIONS

Based on my research, I drew the following conclusions that serve as a basis for my recommendations. In my dissertation, I selected Hungary as a research target. The Hungarian micro-regions were in the focus of my research. The huge number of available data for LAU 1 level helped my research very much, but the fact that micro-regions contain heterogenous settlements, making recommendations for economic development was a difficult task.

H1: The real impacts of tourism are difficult to measure due to its intersectoral character. The methods to measure the direct and indirect impacts do not provide information about the real operation of the whole sector.

Tourism, as economic sector, is difficult to define exactly and requires the consideration of several factors. Competitiveness indices, usually used internationally, are suitable to compare rather countries or regions of countries. Countries have various touristic attractions, cultural traditions, natural endowments and historical values. The differences in e.g. accommodation capacities, number of nights spent can be reflected easier than doing the same in neighboring small regions of a country. In my opinion, such indices need to be modified and specified at local levels. As examining the tourism of Hungary, I realized that some elements related to the sector usually are not defined clearly. It is considered as the part of the economy, which is not considered as a separate sector of the national economy according to international standards. In order to analyze the sector, we need to use data about accommodations and catering sector but such information does not provide total picture about the real conditions and potentials. There are several companies operating, which do not belong to those categories, but they generate income related to tourism. For example, catering is not a typically touristic activity, so its impact on tourism is difficult to measure. The most important positive impacts of tourism include job creation. However, we do not have exact information about the employment in tourism, since employees of companies indirectly linked to tourism (e.g. services, transportation etc) are not considered as tourism employees. It means that it may occur that we do not have exact information about the job creation effects of some tourism investments. Its real impact on the increase on the investments or the real wages cannot be measured either. **Based on the abovementioned, I consider this hypothesis as justified.**

H2: The tourism and its environment have very close relationship. Tourism requires stable external environment. The development of the external environment has positive effect on the development of rural economy, generating increasing tourism potential as well.

Based on my research results, it can be stated that there are important requirements of successful tourism. Without the economic, social, infrastructural stability of an area, the development of the sector is difficult. The success of developed regions within the country is due to their strong economic role. For the internal or external peripheries, the first priority is to create their stability. I think that it is a misleading concept if tourism is considered as the basic pillar of the economy in the regions lagging behind. Tourism can only be successful in long terms if all the necessary resources and conditions are available. In my opinion, if such conditions are not available, tourism is not able to achieve the required results despite of the huge funds used. **This hypothesis is also justified based on my research results.**

H3: Without the development of the tourism's external environment, tourism development attempts cannot reach the expected results either. The special allocation of tourism development sources is often not sufficient to realize long-lasting sustainable development.

Regional poles also have important role in tourism, which makes the situation of rural areas more difficult. I stated that rural areas lagging behind should not focus on only tourism development when defining the way out from the peripheral situation. In such regions, the economy can be diversified with tourism, but the strong dependence of the area on the sector does not bring economic and social development in long terms. Focusing on the objectives of local economic development, it is important to discover what problems the local economies face, what capacities and resources are available, what potentials are hidden in the local structures, also considering external resources. I stated that handicapped regions with some or no resources for tourism can only improve their market positions if they cooperate with other regions. Without cooperation, it is much more difficult or even impossible. **I consider this hypothesis partly justified.** Tourism itself is not able to halt the break off, but based on internal resources and involving external ones may be a way out from the peripheral status.

H4: The developments in tourism have outstanding role in the development of rural economy in Hungary, however, in the peripheral rural areas lagging behind, tourism is not always able to offer solution for the way out.

In my opinion, the real impact of the use of development funds cannot be described clearly. Tourism sector has strong relationship with projects aiming at the improvement of competitiveness, economic or social development, environment or infrastructural investment, but their impacts on the sector can be hardly measured. Among touristic investments, there are some whose impacts cannot be measured. As for touristic attraction development, there are some, whose aim is to protect the historical and cultural values. Such activities are important, but they usually do not result in new incomes or jobs, or the improvement in competitiveness. The tourism related funds did not generate sufficient results in regions which had poor allocation of economic development funds between 2007-2013. Such regions were the ones where no development could be observed in tourism despite of the funds allocated. Tourism has strong relations to other sectors of the national economy, so to have a successful tourism, the development of the environment should also be developed. It can be stated that in the case of Hungarian micro-regions, the development of only the tourism sector does not create stable background in long terms, thus it is not able to substitute the spatial and economic development measures. **Based on the abovementioned, I consider this hypothesis as partly justified.**

Based on my conclusions, I made the following recommendations to solve the discovered problems:

In my opinion, tourism is highly concentrated in Hungary in space and in time as well. I think that the moderation of such concentration is an important task. Health tourism is a determining sector of the national tourism. It is important to get it acknowledged internationally. This development type gets enough emphasis in the concepts in effect, since it is aimed in Hungary to become the most popular destination in health tourism in Europe by 2024. In addition, the diversification of supply could mitigate the strong concentration in the sector.

Moreover, the expansion of strategies on other types of tourism included in the National Tourism Development Concept, is also important, thus horse-tourism, bicycle tourism, youth tourism, cultural tourism, ecotourism and rural tourism also get emphasis. To maintain health condition, the significance of health tourism is high, but I think various programs can be offered jointly with sports, active tourism, excursions etc. The cooperation of service providers from

various tourism types may offer more favourable conditions for the customers. Such cooperation is also beneficial from the partners' point of view. Partnership, however, can be interpreted not only at local level.

There are such touristic attractions which are linked to places (e.g. natural resources: thermal water, excursion routes, National Parks, plants and animals, built heritage, monuments etc.). The existence of such factors may be favourable for certain areas. However, there are such attractions, products and services which are not area-specific, e.g. historical and cultural traditions, unique gastronomy, cultural tourism, conference and festival tourism. Linking of such fields into complex packages is a potential for most of the micro-regions.

In my opinion, national values and hungaricums do not get sufficient attention in the marketing activity. Emphasizing the national values is an important element in creating the country image. The strategic management of national values and the creation of an overall marketing concept is inevitable task. In addition to bath culture of centuries, there are several unique products, services or heritage characterize our country. The attractions of Budapest, the pálinka, the Tokaj wine region, the goulash are well-known by foreign tourists, but e.g. the arching method on horse by Kassai, one of the hungaricums, is not so much well-known. In order to meet the international and national requirements, high quality local resources and products are needed. In the food industry, there is a lack of motivation to produce high quality products, despite of the fact that we have rich natural endowments, suitable for excellent quality food. The preservation of traditions, cultural heritage as well as handcrafting should be emphasized in all touristic developments.

Compared to developed centers, peripheral micro-regions are in more difficult situation. In the case of such micro-regions, the aim is not to become market leaders, but to use the local economic development potentials. In my opinion, primary target groups are domestic tourists whose number is gradually increasing – not only due to the introduction of the Széchenyi Pihenőkártya. The Szép-card is a program which has effects on economic development, job creation, health preservation and changing in approach of the society. Its economic development impact should be emphasized especially in the rural areas, since 80 % of the expenditure is realized in the countryside. Regarding the vulnerable areas with rich natural endowments, national strategic aims are related to managing the natural resources sustainably. We should mention tourism forms that bring income to the local population, attract few tourists instead of mass-tourism and have moderate burden on the environment.

Ecotourism and certain active tourism types are emphasized in the national strategy (resources like water or landscape).

To achieve the development of attractions in peripheral regions, complex packages of settlements or micro-regions have determining role. In order to exploit the local conditions the most, such cooperations are needed by the micro-regions that create a complex supply in tourism. Such touristic districts should be created that are not defined by public administration borders but are based on the optimal combination of internal resources and real cooperation willingness. In my opinion, product-linkage is an important element in tourism. I think that joint use of internal and external resources of peripheries brings more favourable conditions to develop their economies. From the touristic regions, regional card systems already exist in Budapest, at the Lake Balaton as well as in the Southern Transdanubian region. To create complex program packages, such card systems could serve as a good basis (as a good practice).

The creation of balanced and spreading international relations is also an important task to attract external resources. Tourism has unique potentials from this aspect, too. The National Tourism Development Concept links a separate strategic objective to the development of international relations, including the strengthening of professional and institutional relations in Central-Europe and in the Carpathian basin. Strengthening the relations with Eastern regions is a priority as well, both on the markets (encouraging the incoming tourists) and in the field of investments.

In addition to wider scope of territorial cooperations, the cooperation with areas near the border is also important. I think the volume, the intensity of cross-border cooperations are not sufficient enough yet, so they should be motivated by targeted funds. Cooperating areas can have more efficient marketing activity by using the same image. Due to the willingness for cooperation by accommodations, restaurants along the touristic routes, museums or cafés, packages for more than one day can be offered with extra discounts or additional extra services.

One of the major objectives of the 2014-2020 programming period is to use the development funds efficiently by areas smaller than regions with the same problems or similar circumstances. This new direction supports such cooperations in which the active participation of areas as well as the realization of joint objectives in mutually beneficial ways are inevitable.

Apart from the municipalities, TDMs also play important role in encouraging cooperations because they have knowledge on the region and are able to create the relevant marketing strategy. Strengthening the TDMs which are based on regional and local cooperation, coordinate the domestic tourism, is really important. By now, we have sufficient information and knowledge to see that TDMs play significant role in the institutional system.

In my opinion, encouraging real cooperations of TDM organizations should be improved by developing communication. The roles of tourism management are the regulation of TDMs and the definition of competencies and responsibilities. Further challenges for touristic organizations are to get acknowledgement by local players. In order to establish real professional and responsible cooperations, necessary professional forums have to be created. To create the institutional system based on TDMs is an important task.

In order to boost the domestic tourism, a stable Hungarian institutional system should be created. To provide sustainable operation, the necessary legislation is inevitable. Regarding the increasing importance of tourism, the creation of the legal regulation is a must.

5. LIST OF PUBLICATIONS RELATED TO THE DISSERTATION

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