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Chances for tourism development and function change in the rural settlements with brown fields of Hungary

Tourism, due to its regional development effect, can endow the areas with new functions by creating new, recreational or tourism zones. Among the numerous impacts of the tourism function changes of the brown fields maybe the most important is that a successful revitalisation program can trace back the given area to the functioning texture of the settlement. These revitalisation processes can promote the creation of a more reasonable spatial management advancing the reorganisation of the spatial structure. Those Hungarian towns are in the focus of this research where tourism, recreation was the main direction of the development.

Keywords: brownfields, tourism development, function change, Hungary

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Introduction

From the second half of the 20th century, over the recent decades, brownfields have appeared in a growing extent in Hungary, as well as in the international scene. As a consequence of this numerous rural and urban regions and settlements should raise the attention on solving the complex problems of these areas by handling them in the different development and operative programs or the settlement development strategies as a priority for regional development. We believe that due to the development possibilities, the diversified environmental, social and economic aspects, it is always relevant to deal with these areas.

Out of the renewal possibilities of the analysed spaces we have to mention their function change which can also be the prime mover factor for revitalisation processes (Babidomics 2007, Csapó – Balogh 2012, Ferber – Grimski 2002, 2006). Tourism, due to its regional development impacts, can endow the areas with new functions creating new recreational and leisure zones (Aubert 2011, Michalkó – Rátz 2009). Out of the numerous advantageous outputs of the tourism function change of brown fields maybe the most important is that the successful revitalisation program can trace back the certain region to the texture of the settlement (Barta 2004). The revitalisation programs with tourism purposes can promote the creation of a more reasonable space utilisation reorganising also the structure of the space (Győri 2006, Biczó 2013, Trócsányi – Pirisi 2012).

Those Hungarian rural settlements provide the basis for this research where in the former brownfield areas there was a tourism purpose revitalisation. The already published scientific papers, of course, dealt with some formerly highly industrialised regions or settlements from many perspectives: among others we elaborated the Pécs-Mecsek region (Hungary) (Berki et al. 2006), Northern Hungary, USA (Biczó 2013), Silesia (Czech Republic and Poland) (Martinát et al. 2014), Moravia (Pavolová et al. 2012) and Ostrava (Novorsák et al. 2013) (Czech Republic).

The decisive aim of this paper is to reveal the connections among the social, economic, tourism development level of the analysed settlements, their geographical allocation and the certain brown field's investment success with the help of different secondary and primary research methods. According to our hypothesis tourism is able to provide the function lost, discarded areas with tourism and leisure-recreation functions making a possibility for tourism from the regional development issue even raising the settlement or region to the level of becoming a destination through time.

During our investigations we selected the rural towns with brownfields in Hungary then separated those where the tourism developments are dominant. An important result of the study is the comparison of the revitalization projects – grouped by the categories of tourism supply –, and the surveying of their efficiency. Moreover, we have revealed the relationship between the geographical location, the level of social-economical-touristic development and the efficiency of the projects in these towns.

1. Research methods

Here we have to highlight that there is no such full database in Hungary yet about the existing brown fields which would provide a reliable source for research. The already created regional (Hönyi 2006, ÉMOP 2007-2013) or national (Környezettudományi Központ 2004-2005, Nagy et al. 2003) data can provide no adequate and punctual database due to the incomplete data provision.

As for the first step of the primary researches we impounded those Hungarian settlements where the brown field revitalisation was led by tourism or recreation purposes. The basis for this method was provided by a project observing and browsing web page of the Government of Hungary¹ and the thorough investigation and overview of the topic specific development plans and programs. For the second step at the impounded settlements we

¹ <http://palyazat.gov.hu/>

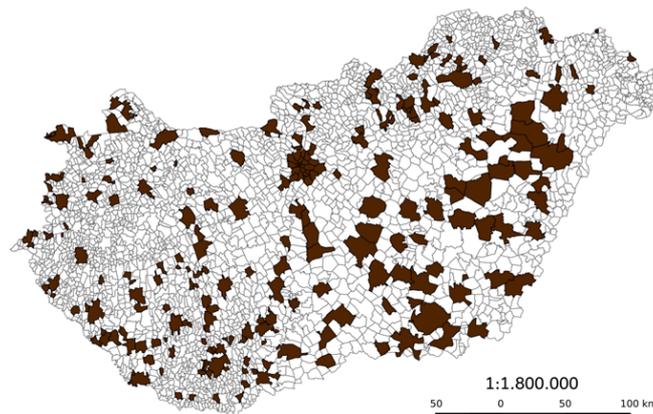
carried out primary information collection by questionnaires and interviews between October-December, 2014, questioning the local governments and the tourism offices.

In addition to these we gathered information from the owners and managers of the tourism attractions and the commercial accommodations covering altogether 10 settlements. The questionnaires contained closed and open questions alike. With their evaluation we received a comprehensive knowledge on the topic both with objective and subjective opinions. In the case of numerous settlements we used the “snowball” method for the basis of the sampling. During our research work the figures and maps were elaborated by Arc Gis 10.1 and Open Office. org 3.1 GIS programs.

2. Results

The investigations of the brownfields have been represented at a national level (Környezettudományi Központ 2004-2005, Nagy et al. 2003) and a regional level (ÉMOP 2007-2013, Hőnyi 2006) in Hungary. These surveys were based on objective and subjective research methods (questionnaires). Therefore, the results can be hardly compared with each other. As a result, it was inevitable for us to create an own brownfield database at the local level as well.

Figure 1. Hungarian settlements with brownfield areas



Source: own editing

Figure 1 represents those Hungarian settlements where brownfield areas can be appraised. Altogether it means 744 areas at 217 settlements. It is important to highlight the fact that our database may not cover the Hungarian brownfield areas completely, due to difficulties of the given topic.

3. The renewal possibilities of brownfields with special regard to tourism

Generally brownfields can be characterised by the same natural, social, economic and juristic difficulties. In order to fit into the local development projects, the process of function change – searching and settling down of the new function – has to be environmentally friendly, sustainable and complex (Győri 2006, Egedy – Kovács 2003, Csapó 2010).

Actually, the abandoned and usually contaminated areas can successfully find their way back to the natural texture of the settlement through two methods: (1) through the preservation and renewal of the original function or (2) through function change. Our study deals with the tendency of rehabilitation of settlements which emphasizes their tourism character. As a result of function change, the former industrial, military and urban territories can obtain brand new utilization possibilities (Ctirad 2011, Dabasi et al. 2012, Harfst et al. 2014). Therefore new tourism fields, recreation zones can come into being as well as can contribute to develop a new settlement structure. (Orosz et al. 2010).

According to OROSZ (2012) there is a chronological shift in the field of the function change of brownfields. The tourism renovation projects have been present from the beginning of the 2000s in Hungary. We have to take into consideration that not all of the brownfields are suitable for a certain tourism supply causing the prosperity of the city. Based on BICZÓ (2013 pp. 49) the selection of the proper territory should be done at two levels, determined by each other. After determining the new function, we have to size up the advantages and disadvantages of the territory, which would become its welfare or drawback.

It can be generally declared that development of brownfields of a tourism purpose can contribute to reduction of environment threats, can cause more favourable settlement aspect and tourism image, can increase the attractiveness of the destination, can create workplaces, increase the city income and can have a result in appearing other services, too (Lane et al. 2013). However, it is significant to emphasise that every project is an individual project with its own attributes, therefore it is hard to compare them (Pavolová et al. 2012, Ferber et al 2006).

The efficiency of the investments can be examined on the one hand by functional – removal of contaminated materials, remediation, landscaping – and on the other hand by aesthetic point of view – tourism image, quality of the buildings (Martinát et al. 2014). On the basis of MARTINÁT et al (2014), the typical brownfield areas have typical tourism regeneration potential. We can attribute the highest potential to the industrial and agricultural lands, while the mines, housing estates, territories of army and transportation have the lowest values. Naturally, the architectural, industrial values, historic monuments are the best examples for utilization from the point of view of tourism, because they can enrich the supply of cultural and heritage tourism.

4. The determination and delimitation of the examined territories

During our examinations we were able to identify that brownfield regeneration with a tourism purpose is quite a rare phenomenon in Hungary. On the one hand, local governments, private enterprises give preference to greenfield areas and on the other hand the revitalization processes do not prefer overall the tourism purposes in case of abandoned, ran down parts of the settlement. Furthermore, it is important to mention the geographical allocation –within the settlements – of the brownfields, as well. From the point of view of attendance and utilization, the suburban, industrial territories, storehouses, barracks, abandoned

transportation areas are places hard to reach. Therefore, it means a weakness in the field of tourism supply.

The delimitation of the settlements – where brownfields were renovated with tourism purpose – was an outcome of a multi-level process. As we have already mentioned, the lack of an official brownfield base chart meant a great obstacle to our investigations, that is why the extent of the examined territories is not full-scale and due to the continuous development projects, tend to need permanent updates.

At the first step, it was inevitable to read up on the national development projects and concepts, concerning the brownfield revitalizations. The most significant ones referred to Hungarian and European Union development plans are: Phare Programme (2000-2003), Hungarian National Development Plan (2004-2006), Regional Operation Programmes (2004-2006), Environmental Protection and Infrastructure Operational Programme (2004-2006), New Hungary Development Plan (2007-2013) as well as the brownfield development documents of the European Union (2007-2013).

The framework of our secondary resources were the publication of VÁTI lead by NAGY (2003), the investigation of Environmental Science Centre, the North Hungary Operational Programme (2007-2013), the document operated by HŐNYI (2006) and the Hungarian Government's online project search programme. We concentrated on the wider concept of brownfields during the analysis evaluation of winner projects. As a result, apart from the contaminated, former industrial and military territories, we have taken into consideration the abandoned transportation spaces, the former territories of city management, the under-utilized warehouses and forwarding zones. That is why we have managed to obtain a complex background, completed with smaller, recreation guided investments as well.

The database of the utilized projects, based on the quoted development plans, provided a national scale and a reliable source for our investigations. Apart from the national and the

European Union programmes, it seems to be important to enrich our survey with brownfields of private investments as well.

During our primary investigations, after restricting the settlements, we have gained ten settlements (Table 1) with three types of tourism functions (tourism attraction, tourism infrastructure and tourism suprastructure). It is also significant to mention the reason why Budapest, the capital city, is not in our list of cities. On the one hand, there is a widespread bibliography about its revitalized brownfields (Barta 2002, 2004, Földi et al. 2002, Kukely et al. 2006), and on the other hand, 75% of the Hungarian brownfields concentrate on Budapest, moreover, we have set ourselves to analyse the rural settlements of Hungary.

Table 1: The classification of brownfield areas revitalised with tourism purposes based on the supply

Settlement	The original function	The new function
Tourism attraction		
Celldömölk	Warehouse	Kemenes Volcano Park Visitor Centre
Gyöngyös-Sástó	Stone pit	Oxygen Adrenalin Adventure Park
Szeged	Water tower	Look-out tower
Pécs	Zsolnay Manufactory	Zsolnay Cultural Quarter
Tourism infrastructure		
Szeged	Water tower	Conference room
Tokaj	Synagogue	Conference room
Pécs	Zsolnay Manufactory	Conference room
Marcali	Industrial zone	Open air cultural functions
Tourism suprastructure		
Orosháza-Gyopárosfürdő	Barrack	Alföld Gyöngye Superior Hotel and Conference Centre***
Békéscsaba	Barrack	Hotel Arcanum***
Tolna	Barrack	Hotel Thelena***
Bükkszentkereszt	Barrack	Hegyi Camping and Youth Hostel
Pécs	Zsolnay Manufactory	Zsolnay Guesthouse, RooMBistro&Club, Zsolnay Restaurant and Café, Bárcsak Café, Café Griff, artisan shops, bike rental

Source: own editing

5. The tourism utilization of new functional zones due to brownfield revitalization

Based on our researches we could also admittedly point out, that due to the new investments, the structure and utilization of the territories have changed, moreover new part of the cities have appeared, ruled by tourism and recreation. In this case tourism, as a regeneration instrument, has an effect on the tourism image and morphology of certain settlements. The utilisation of certain urban zones, formerly ruled by industries, mines, warehouses, army, is characterised by the dominance of tertiary sector nowadays.

We could also identify that among the new tourism functions, first of all tourism attractions and primary tourism suprastructure elements can be found. We also have to highlight the ratio of the complex investments. There are only a few settlements or projects where recent tourism functions can be ranked among more tourism supply elements as well (e.g.: Zsolnay Cultural Quarter, Pécs). All in all, on the former depreciated and uninhabited urban industrial area now there is a real recreation and cultural zone with tourism attractions, infra- and suprastructure elements. Most of the revitalised brownfields have mono-functions, so have only a special kind of role within tourism supply. We could also determine a special tendency in the field of military zones or barracks. Characteristically, in their areas different types of accommodations were established. The accommodation investments – greater than 40 ha – have been able to make use of the given buildings, infrastructure and roads.

6. The efficiency and measurement possibilities of brownfield revitalizations

The efficiency of the revitalizations can be grouped by natural and economic considerations. The analysis of natural environment does not constitute the foundation of our study; therefore we only concentrated on the effects of remediation and landscaping works, on the behalf of the environmental aesthetics changes. According to this, remediation works referred to all of the settlements, except for Szeged, however, landscaping works were

inevitable in every city. Briefly, the improvement of the landscape can be seen in all of the four cities, nevertheless in Celldömök a 7 ha area can be still freely used so it is only a partially utilized territory. Clearly, Szeged, Pécs and Gyöngyös are effective; Celldömök is partially effective cities regarding the natural landscaping.

The evaluation of the efficiency of the projects can be approached by several aspects, regarding economic and tourism points of view. Our aim was to take into consideration those most characteristics factors that can be already quantified. On the basis of our research (Table 2), the most effective project was the Zsolnay Cultural Quarter (Pécs) which has been causing a positive impact on its direct surroundings and economic, tourism life of Pécs. So the Pécs – Celldömök – Gyöngyös – Szeged sequence can be determined based on the professional answers and secondary sources.

Table 2: The aspects of efficiency of the tourism attractions

Settlements Viewpoints	Celldömök	Szeged	Pécs	Gyöngyös
Price increasing role in the real estate market	No	Yes	Yes	No
Workplace creation	Yes	Yes	Yes	Yes
The appearance of services	Yes	Yes	No	Yes
Chances for networking	Yes	No	Yes	Yes
Authenticity (1-5)	5	4	5	4
Uniqueness (1-5)	5	2	5	5
Marketing (1-5)	4	2	5	3
Appearance, facade (1-5)	4	4	5	3
Attendance (1-5)	5	4	4	3
Contribution to the increase of guest nights	Yes	No	Yes	No
Contribution to a more advantageous tourism image, milieu	Yes	Yes	Yes	Yes
Improvement of tourism image	Yes	No	Yes	Yes

Source: own editing

The creation of the tourism infrastructure elements contributed to the enrichment of the tourism supply in 3 regions. Within the analysed settlements, besides Pécs, only Marcali is part of the so called accentuated tourism zones of Hungary but in these cases the modernisation of brown field areas do not strongly correlate with the development of tourism either. In Marcali the revitalisation process at the run-down areas was initiated also in order to improve the settlement image. Both the Tokaj and Marcali micro regions can be classified into the underdeveloped, lagging areas of Hungary and we can also clearly state that the other two regional centres (Szeged and Pécs) exceed by far the complex indicators of these smaller towns.

In order to dispose the polluting materials and create a more favourable town image – except for Szeged – all the necessary claim works have been elaborated. Landscaping covered the renewal of buildings and the establishment of basic infrastructure in every settlement. In this sense, taking into consideration the natural perspectives, these investments were successful. Based on the economic and tourism factors every analysed development contributed to the development of economy and tourism but in altering degrees.

Table 3: The aspects of efficiency of the tourism infrastructure

Viewpoints \ Settlements	Tokaj	Szeged	Pécs	Marcali
Price increasing role in the real estate market	No	Yes	Yes	No
Workplace creation	Yes	Yes	Yes	Yes
The appearance of services	Yes	Yes	No	Yes
Chances for networking	No	No	Yes	No
Authenticity (1-5)	5	4	5	3
Uniqueness (1-5)	4	2	5	3
Marketing (1-5)	3	2	5	2
Appearance, facade (1-5)	4	4	5	3
Attendance (1-5)	4	4	4	3
Contribution to the increase of guest nights	Yes	No	Yes	No
Contribution to a more advantageous tourism image, milieu	Yes	Yes	Yes	Yes
Improvement of tourism image	No	No	Yes	Yes

Source: own editing

The geographical allocation of the established tourism suprastructure elements in the former brown field areas is also strongly connected to the already mentioned regions of South Transdanubia and Northern Hungary, but the creation of hotels is strongly characteristic to

the Southern Great Plains Region. Besides the Mecsek and Villány accentuated tourism zones the only village is Bükkszentkereszt which is part of the Mátra-Bükk accentuated tourism zone. Only the investment at the Bükk National Park can be highlighted from the point of view that there is a univocal correlation between the legal status, the geographical allocation and the former military barrack development. In the area with rich tourism supply, due to the increasing demand, the accommodation development was favoured against landscaping.

Table 4: The aspects of efficiency of the tourism suprastructure

Settlements Viewpoints	Orosháza	Békés- csaba	Pécs	Tolna	Bükkszent- kereszt
Price increasing role in the real estate market	Yes	No	Yes	Yes	Yes
Workplace creation	Yes	No	Yes	Yes	Yes
The appearance of services	Yes	No	Yes	Yes	No
Chances for networking	Yes	Yes	Yes	Yes	No
Authenticity (1-5)	3	2	5	5	5
Uniqueness (1-5)	3	4	5	4	3
Marketing (1-5)	4	2	5	4	3
Appearance, facade (1-5)	3	5	5	5	2
Attendance (1-5)	3	2	4	3	2
Contribution to the increase of guest nights	Yes	Yes	Yes	Yes	Yes
Contribution to a more advantageous tourism image, milieu	Yes	Yes	Yes	Yes	Yes
Improvement of tourism image	Yes	No	Yes	Yes	No

Source: own editing

Conclusion

During our research, we realised that in Hungary, in order to improve competitiveness, the revitalisation and function change of certain brownfield areas has been initiated. However, tourism function was only associated in a limited number of settlements. So the developments of brownfields to leisure or free time zones are only in their infancy period but definitely show an increasing tendency and characteristically are not connected to great state investments.

We can state that among the new functions we can find tourism attractions, infra- and suprastructural elements, however, there were only a few complex investments in the settlements that would be able to ensure longer stays of visitors. Taking into consideration the tourism attractions, the thematic parks, at the tourism infrastructure, the event and conference centres, and within the scope of tourism suprastructure, the commercial accommodations were dominating. Based on our primary research, such tendency can be demonstrated that the most prevailing method is the allocation of cultural role to the under-capitalized, special purpose, town operational areas and the accommodation development at former military barracks.

In general, we can say that the tourism and recreation aimed developments traced back the underutilised, abandoned areas to the texture of the settlement. Only the spatially greater developments had an impact on the morphology of the settlement, but the exchange of the population cannot (yet) be observed in the case of any settlements, so the process of gentrification is not dominant. During our research, we also determined that the rehabilitations concentrated to the physical and economic renewal as well in an integrated approach. However, the new functions – due to the characteristics of the developments – cannot expect for a national scope of attraction, they can be only destinations to the local, micro-regional or regional tourism flows. As a consequence of this, they can only contribute in a limited measure to the higher guest night statistics and income of the settlements.

Anyhow, we should also highlight the fact that the valorisation and investment inclination of the run-down – primarily urban – spaces and their tourism image show a growing tendency by which these districts of the settlements can step into a new phase of development.

We can also say that our hypothesis was confirmed only partially. We could prove that those run-down areas losing their former function can alter the settlement development problem to a tourism-recreation purposed possibility. But that part of the hypothesis can be disproved according to which the tourism development of the brownfield areas has an impact on the certain settlement's entire tourism, so in other words, they can make the settlement to become a destination. Only those developments can have a favourable impact on the economy and tourism of the settlement that were born within the framework of an integrated development, are suited to the structure and the tourism products of the settlement and also to the local needs, taking into consideration the actual tourism demand trends as well.

Summing up, the Hungarian tourism purpose brownfield developments are only in their initial phase both concerning development and researches. The Hungarian results of revitalisation and function change are far lagging behind compared to the Ruhr Region or to Silesia. On the contrary to the countries with rich industrial heritage Hungary does not possess a national brown field development concept which can also put difficulties in the way of future brown field renewals. However, we have to highlight the fact that the developments until now show a favourable tendency utilising the existing basic infrastructure. From a geographical point of view in the Northern Hungarian and Southern Transdanubian regions the industrial, while in the Great Plains region the revitalisation results of the former military areas are the most conspicuous ones.

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