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THESIS STATEMENTS OF

ISSUES OF THE REGIONAL PROCESSES OF TOURISM WITH SPECIAL REGARD TO THE NORTH HUNGARIAN REGION

PH.D. DISSERTATION

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1. CHOICE AND JUSTIFICATION OF RESEARCH TOPIC

'Tourism is one of the most significant categories of foreign trade. Its turnover is the first after that of fuels, chemical and automobile industry products in the world. International tourism generated a 11 billion dollar income in the world's countries in 2008. The largest proportion of export comes from tourism in many developing countries' (World Tourism Organization 2009 2. old.).

'The direct and indirect tourism sector produced 8.76% of the gross added value of the Hungarian national economy in 2002, which provided jobs for 12% of the Hungarian employed population, 328 thousand people' (Adler J. - Akar L. - Petz R. 2004 4. old.).

'Tourism is continuously growing except for some shorter periods of time due to economic and political crises' (Mester T. 2003 39. old.).

'The economic, social and environmental effects of tourism are significant in many developed regions of the world; its typically positive role in the regional economies is undisputed' (Stynes D. J. 2000 1. old).

We can often come across statements similar to the above quotes in the introduction of the literature on the topic. However, the spatially differentiated presentation of attributes of tourism such as "growing", "developing", "significant", dynamic" and positive" does not happen in most cases.

In my work I have come to the conclusion that the majority of planning documents gives priority to tasks associated with tourism development, even in the case of regions, that presumably cannot attract significant number of tourists.

The following question has arisen in me: is it realistic that the leaders of settlements and regions treat tourism development as a priority in each case; do some (mainly extraordinarily underdeveloped) regions even view tourism as (the only) opportunity for advancement.

In my opinion not every region possesses a (potential) tourism supply that could result in significant positive effects. It does not mean that a good idea, a committed expert, enterprise or local government cannot bring about a fundamental change in the tourism position of a (smaller) region (or settlement); however, learning the growth chances of tourism needs the available and potential success factors to be explored.

2. RESEARCH BACKGROUND

I began my PhD studies at the University of Miskolc in 2000, as a staff-member of the Department of Regional Economics. In the first years of my research, I dealt, under the guidance of my supervisor, with examining, analysing and evaluating documents of regional development (mainly concerning the North Hungarian Region) within the "National Research and Development Program" project, titled "Competitiveness of Hungarian Regions and Settlements in the European Economy". I got to know the concepts, processes and institutional system of regional development. I published on the regional effects of working capital investment and the development of – developing – micro-regions. I made use of my research results in teaching; I took part in developing teaching materials for the seminars of the "Regional Economics" course.

I focused my attention on exploring the various issues and regional processes of tourism from 2005. The topic of my first publication in tourism was the processes of tourism in the North Hungarian region and its counties.

I taught the "Tourism in the European Union" course to the post-graduate students of the "European Studies" specialisation from 2005 to 2008; I published a course manual of the same title in 2005.

I took part in a study trip in Wales within the "European Cultural Tourism Network" project implemented with the participation of the North Hungarian Regional Development Agency in 2006. The work of the "Welsh Tourism Development Agency" made it clear for me that developing tourism on a scientific basis is more effective than the planning based on "intuitions", concentrating exclusively on the positive effects of tourism.

Since 2007 I have taught "Tourism in Regional Development" for students of "Regional and Settlement Manager" specialisation and "Economics of Tourism" for students of the Faculty of Arts. I published my textbook titled "Exercises of network and cluster organising – tourism", within a project of the Institute titled "Hálózatban könnyebb" ("Easier in Network") in the same year.

I took part in the DEPURE2 Interreg IIIC project as a sub-project manager under the guidance of my supervisor in 2007-2008. The objective of the project was identifying and analysing the situation and opportunities of cluster policy on the area of tourism (as well as regional development and environmental management) in the North Hungarian region. The project relied to a great extent on the information available from the regional databases.

I have used the results of my research work in developing the contents of several courses of mine (e. g. "Methods of regional and environmental analyses I", "Tourism and regional development").

3. RESEARCH PURPOSE

I analyse the regional processes of tourism in my dissertation. The aim of my research work is to answer the following questions:

- What are the typical regional tourism disparities in Hungary and the North Hungarian Region?

- What are the explanatory factors of visitor turnover beyond the tourism supply?

- Are the objectives set up in the planning documents concerning tourism reconciled with the opportunities of the regions? Are they appropriate for the orientation of stakeholders?

The dissertation consists of four chapters.

In Chapter 1 chapter I summarise the development of the concept and models of tourism and its regional aspects using the relevant literature.

Chapter 2 is concerned with introduction of the regional disparities of tourism on the basis of specific (appropriate for regional comparisons) and time series (for the 1990-2007 period) data. I identify those settlements/micro-regions in which tourism may bring about considerably economic effects. I introduce the development of tourism in the counties of the North Hungarian region.

In Chapter 3 I introduce, using shift-share analyses the differences between the evolution of domestic and international visitor turnover. On the basis of 2007 data, comparing to 2000, I examine the changes occurred in the structure of the accommodation supply in the case of the regions and counties, as well as the micro-regions of the North Hungarian Region. I define those peripheral (economically underdeveloped) micro-regions that were able to demonstrate a visitor turnover over the regional average.

In Chapter 4 I isolate the growth factors of tourism and interpret the differences between the national and regional results with the help of linear regression models using the eigenvalues of factors derived through principal components analysis of 24 indicators introducing tourism supply, incomes, individual and social activity, welfare and social situation, on the basis of year 2007 data. I typify the micro-regions of the North Hungarian Region. I compare the characteristics of the micro-regions with the objectives and priorities declared in the documents of tourism and regional development. I make recommendations to their micro-region specific refinement.

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

I grouped the (thesis) statements of the dissertation around three topics:

- the regional disparities of tourism in Hungary,
- connections between factors influencing the performance of tourism (visitor turnover, domestic/foreign accommodation nights),
- micro-regional characteristics of tourism development.

4.1. REGIONAL DISPARITIES OF TOURISM IN HUNGARY

(H1) I suppose that Hungary's visitor turnover is limited to a narrow range of settlements/micro-regions; tourism has no significant economic effect in most of the settlements/micro-regions.

Tourism generated 8.76% of the Hungarian GDP in 2002, according to the last overall study on the estimate concerning the direct and indirect effect of tourism on economic growth, employment, state-budget and balance of payment (Pál T., Rácz A., Hauksz M. 2006). After 2002 the continuous expansion of visitor turnover has brought about a growth of incomes. Therefore, we can certainly assert that tourism is an important economic branch (**Table 1**).

Table 1: Number of accommodation nights in Hungary and the North Hungarian region

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Borsod-Abaúj-Zemplén County	797386	699780	563887	531343	537667	491862	494758	529336	551343
Heves County	642871	473946	499702	518730	574987	594170	620760	595676	653448
Nógrád County	202170	155587	156871	152621	154320	166868	179651	178395	170622
North Hungary	*1642427*	*1329313*	*1220460*	*1202694*	*1266974*	*1252900*	*1295169*	*1303407*	*1375413*
Magyarország	**22386526**	**17595905**	**16314567**	**16685535**	**16973761**	**16340060**	**17141754**	**17446481**	**16915849**
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén County	603072	644429	628706	663346	738372	692297	717025	737719	744134
Heves County	731692	719525	679589	683501	649575	645296	669602	686082	696874
Nógrád County	155568	162520	166063	166739	146670	122597	106530	109302	94097
North Hungary	*1490332*	*1526474*	*1474358*	*1513586*	*1534617*	*1460190*	*1493157*	*1533103*	*1535105*
Hungary	**17327041**	**18369319**	**18648371**	**18449925**	**18611114**	**18899483**	**19737358**	**19652026**	**20128534**

Source: Own compilation on the basis of HCSO[1] data

Tourism turnover, i.e. incomes has a strong spatial concentration. My settlements-based surveys verify that there is no visitor turnover in 77% of the settlements and not even a single visitor has stayed overnight in 82.1% of them according to the official statistics (**Table 2**).

I classified settlements into six categories on the basis of the specific values of tourism turnover. I argue that values over 10 accommodation nights per capita refer to economic effects felt in a wider range. Only 2.8% of the settlements exceeded this value in 2007.

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[1] Hungarian Central Statistical Office (KSH)

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

I analysed the specific accommodation night-values in the case of micro-regions as well. Only in 7 micro-regions was measured more than 10 accommodation nights per capita. Less than one accommodation night per capita could be observed in 67.9% of the micro-regions (**Table 3**).

Table 2: Distribution of accommodation nights per capita by settlements in Hungary (2007)

Accommodation nights per capita	Domestic		Foreign		Total	
	Number of settlements (N)	Distribution of settlements %	Number of settlements (N)	Distribution of settlements %	Number of settlements (N)	Distribution of settlements %
0	2439	77.4%	2587	82.1%	2428	77.0%
0.01-1	419	13.3%	459	14.6%	378	12.0%
1.01-10	213	6.8%	78	2.5%	254	8.1%
10.01-30	51	1.6%	18	0.6%	47	1.5%
30.01-100	27	0.9%	7	0.2%	35	1.1%
100.01-	3	0.1%	3	0.1%	10	0.3%
Total	3152	100%	3152	100%	3152	100%

Source: Own compilation on the basis of HCSO data

I measure the performance of tourism with the indicators of visitor turnover (domestic, foreign, total) in my dissertation. I estimate the economic effects of tourism on the basis of the questionnaire survey of HCSO analysing visitor's expenditure structure.

Table 3: Distribution of accommodation nights per capita by micro-regions in Hungary (2007)

Accommodation nights per capita	Domestic		Foreign		Total	
	Number of settlements (N)	Distribution of settlements %	Number of settlements (N)	Distribution of settlements %	Number of settlements (N)	Distribution of settlements %
0	3	1.8%	8	4.8%	8	4.8%
0.01-1	122	72.6%	141	83.9%	106	63.1%
1.01-10	37	22.0%	16	9.5%	47	28.0%
10.01-30	6	3.6%	2	1.2%	5	3.0%
30.01-100	0	0.0%	1	0.6%	2	1.2%
100.01-	0	0.0%	0	0.0%	0	0.0%
Total	168	100%	168	100%	168	100%

Source: Own compilation on the basis of HCSO data

The 2007 data suggest that 31,000 forints are spent by tourists per an accommodation night. They spend specifically 111,000 forints on transport, purchasing fuels, food, drinks, medical and health-care services, and other services. The reason for the values being unrealistically high at first sight is that the data collection treats tourists (who spend at least 24 hours in Hungary) together with transit-tourists and one-day visitors.

(T1): The regional distribution of the visitor turnover data have justified that tourist arrivals are concentrated to a narrow range of settlements/micro-regions (80% of accommodation nights belonged to 50 settlements and 10 micro-regions in 2007). On the basis of the specific values of visitor turnover we can assume that tourism results in significant economic effects in only 3-4% of the settlements/micro-regions.

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

(H2) Carrying on the previous thought, I hypothesised that there are significant differences in the tourism performance of the North Hungarian region's counties (on the basis of the tourism demand and supply indicators). I intend to prove that the tourism of the counties follow distinct tracks.

I evaluated the tourism processes of the Region's counties on the basis of time-series data (**Figure 1**) and the results of shift-share analyses.

Figure 1: Accommodation nights at commercial accommodations in the percentage of the national value (1990-2007)
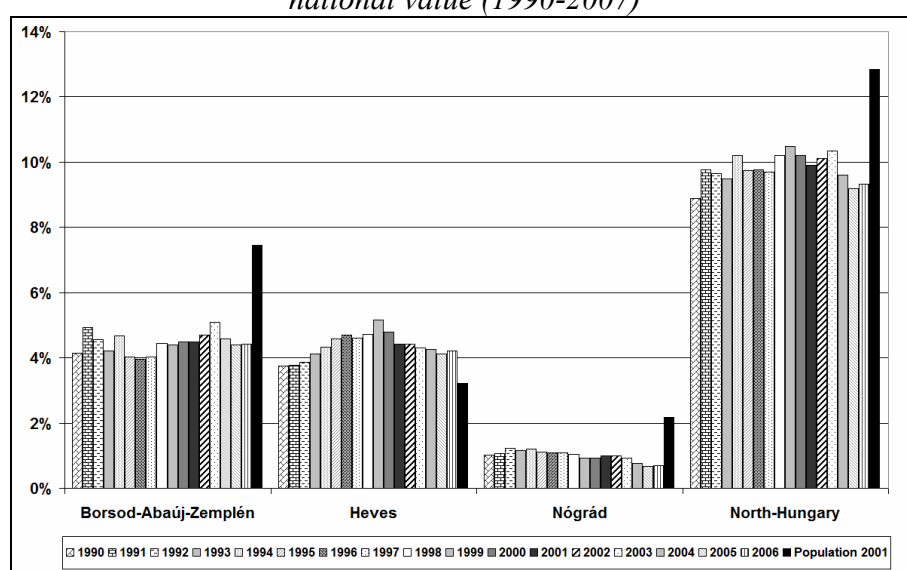
Source: Own compilation on the basis of HCSO data

Most of the indicators of tourism demand and supply (number of accommodation nights, number of commercial accommodations, rate of accommodation nights of hotels) in Borsod-Abaúj-Zemplén County showed an obvious growth between 2000 and 2007. Worsening trend can only be seen in the case of indicators (e.g. utilisation of commercial accommodations, average visiting time, proportion of foreign accommodation nights) where similar national trends have had been observed for a longer time.

Table 4: Results of shift-share analysis according to accommodation nights in the North Hungarian region (2007/2000)

County	In hotels	In pensions	In tourist hostels	In youth hostels	In resort houses	In camping	Sr regional	Sa branch	Si total
Borsod	12846	6813	11621	54087	2356	8382	96106	-58117	37989
Heves	-52463	5666	-11355	3234	-7975	-9421	-72315	-19244	-91559
Nógrád	-15681	-33391	-1793	-14980	-7040	-745	-73631	-10357	-83987

Source: Own compilation on the basis of HCSO data

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

The shift-share analysis concerning accommodation nights showed that an expansion above the national growth level had been experienced (**Table 4**).

Totally distinct processes are characteristic of Heves County's tourism where the turnover of foreign visitors considerably decreased. It was only partially counterbalanced by the increasing number (below national average) of domestic visitors.

The hotels of the County, although increased their turnover by more than 10% between 2000 and 2007, were unable to reach the national growth of 23%. The shift-share analysis, relating to the number of accommodation nights, indicated expansion above national average only in the case of pensions and youth hostels.

Nógrád County's position worsened in every area apart from rural tourism, growth above the nation al average was not experienced in any of the accommodation types.

(T2): The time-series of tourism indicators (number of domestic/foreign accommodation nights, utilisation of accommodations, number of accommodations) and the results of the shift-share analysis have proven that the tourism of the North Hungarian region's counties move on different tracks. The tourism indicators of Borsod-Abaúj-Zemplén County show an obvious growth; Heves County's indicators show stagnation or rather decline; whereas those of Nógrád County indicate a trend of marginalisation.

I elaborate on the issues of and connections between the factors of performance of tourism in Chapter 4 of my dissertation.

(H3) I assumed at the beginning of my analyses that there were strong distinctions between the regional characteristics of the turnover of domestic and foreign visitors. I wish to prove that a distinct analysis of factors determining the dynamics of domestic and foreign tourism helps understanding the regional processes of tourism.

The time series analysis of the Hungarian tourism indicators have brought me to the conclusion that the regional processes of the turnover of domestic/foreign visitors possess well separable features.

Having set up a working hypothesis I sought methods of analysis that can be appropriate for testing my hypotheses. I needed a method that is able to display the changes and their components at the same time.

In Chapter 1 of my dissertation I numerically expressed the changes of tourism indicators with the help of shift-share analysis at regional, county and micro-regional levels.

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The method performs the numerical expression of the regional processes of tourism along three dimensions:

- The "total effect" is the extent to which a region's performance differs from the value that would be expectable at a national average performance change. In our case the "total effect" shows the extent of change of the accommodation nights spent in the region (between 2000 and 2007) from the national value of change being experienced hypothetically in every region,

- The "regional effect" means, in the case of accommodation types (e.g. hotels), the extent to which the number of accommodation nights of hotels differ from the value that is presumable at an average regional dynamics. By summing up the values concerning the accommodation categories we come to the "regional effect" of a given region that means the regional advantages and disadvantages,

- The "branch effect" is "total effect" minus "regional effect" that can be interpreted as the structural advantages and disadvantages of the accommodation supply of tourism.

Altogether eight different variations can be outlined along the three dimensions (Table **4**).

Table 5: Categories of the shift-share analysis

No.	Category	Total effect (Si)	Regional effect (Sr)	Branch effect (Sa)	Relationship between the size of variables
1.	Greater than average change Positive regional factor Positive structural factor	+	+	+	Sr>Sa
2.					Sr<Sa
3.	Greater than average change Negative regional factor Positive structural factor	+	-	+	|Sr|>|Sa|
4.	Greater than average change Positive regional factor Negative structural factor	+	+	-	|Sr|<|Sa|
5.	Smaller than average change Negative regional factor Positive structural factor	-	-	+	|Sr|>|Sa|
6.	Smaller than average change Positive regional factor Negative structural factor	-	+	-	|Sr|<|Sa|
7.	Smaller than average change Negative regional factor Negative structural factor	-	-	-	Sr>Sa
8.					Sr<Sa

Source: Nemes Nagy József (ed.): Regional analysis methods, 2005.

The above-average growth of foreign accommodation nights have been registered in 8 counties, whereas domestic visitors have shown increasing interest in 10 counties (**Figure 2**).

The results of the shift-share analysis well demonstrate that there are significant differences in the dynamics of the turnover of both domestic and foreign visitors. The national growth of the foreign accommodation nights predominantly comes from the

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

above-average turnover of foreign visitors of the capital and, to a lesser extent, five counties (Vas, Győr-Moson-Sopron, Csongrád, Pest, Szabolcs-Szatmár-Bereg, Borsod-Abaúj-Zemplén).
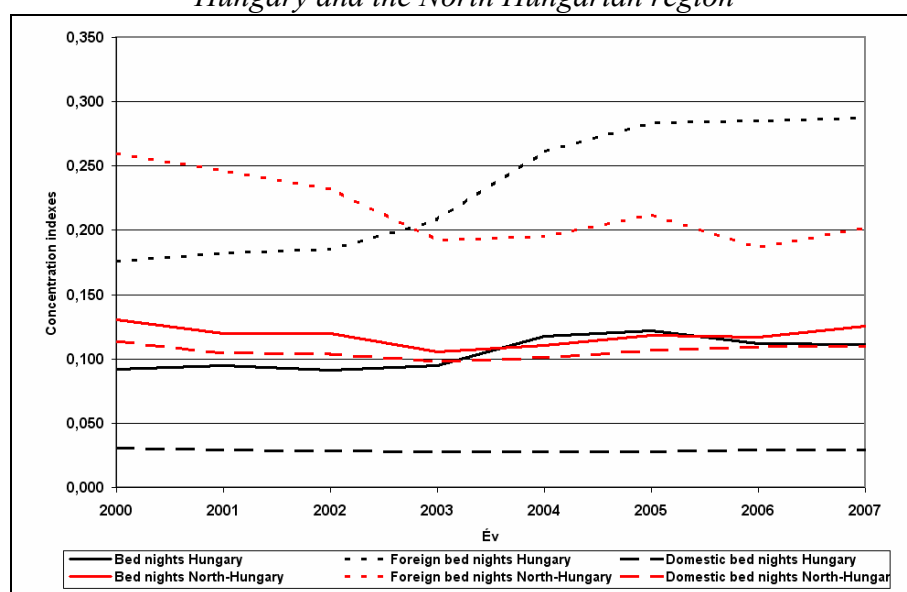
Figure 2: Result of the shift-share analysis performed according to the accommodation nights spent by foreign and domestic visitors (2007/2000)
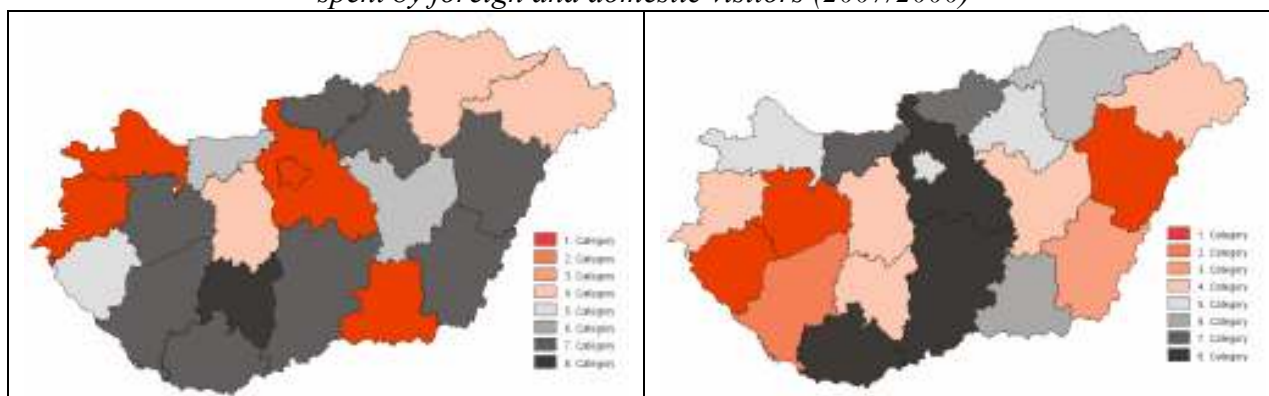
Source: Own calculations on the basis of the 2000 and 2007 data of HCSO

The above-average growth of domestic accommodation nights is less concentrated spatially. Nine counties (Zala, Hajdú-Bihar, Veszprém, Jász-Nagykun-Szolnok, Tolna, Békés, Fejér, Somogy, Vas, Szabolcs-Szatmár-Bereg) share the positive values of the "total effect", whereas the position of the capital, as well as Győr-Moson-Sopron, Nógrád and Heves counties is strong. The performance of Csongrád, Bács-Kiskun, Pest, Borsod-Abaúj-Zemplén, Komárom-Esztergom, Baranya counties worsened to a lesser extent.

Figure 3: Change of the Hirschman-Herfindhal concentration index in the micro-regions of Hungary and the North Hungarian region

Source: Own calculations on the basis of HCSO data

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

The results of the shift-share analysis have led me to examining the concentration of the domestic and foreign visitor turnover. I used the Hirschman-Herfindhal (K) concentration index to demonstrate the spatial destiny:

$$K = \sum_{i=1}^{n} \left\{ \frac{x_i}{\sum_{i=1}^{n} x_i} \right\}^2$$

My survey refers to the 2000-2007 period: (**Figure 3**).

(T3): The shift-share analyses aiming at getting to know the regional processes of tourism highlighted the explicit differences between domestic and foreign tourism. The growth of domestic visitor turnover, typical country-wide (except Nógrád and Győr-Moson Sopron counties), partially (6 counties) or totally (7 county) counterbalanced the decrease of foreign visitor turnover (14 counties). The value of the Hirschman-Herfindhal index indicate a growing concentration of foreign visitor turnover, whereas the territorial distribution of the domestic accommodation nights did not change to a significant extent in the 2000-2007 period.
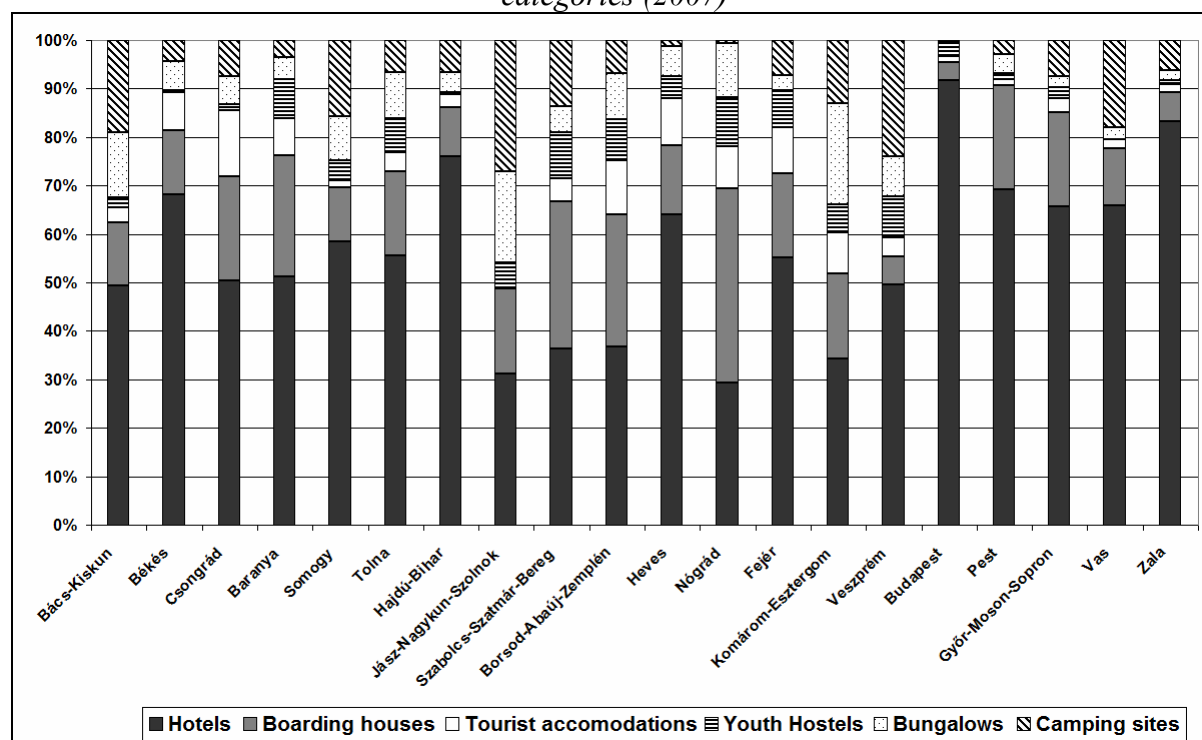
4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

(H4) According to my hypothesis there are considerable differences in the distribution of visitor turnover in terms of accommodation categories. I wish to prove that the nationally observable move towards higher-class accommodations can mainly be experienced in the capital and some counties.

In the course of mapping up the regional dynamics of visitor turnover I collected the data of counties according to accommodation categories (**Figure 4**). The county values have justified the existence of the explicit differences. The accommodation supply of Budapest mainly consists of hotels. The proportion of accommodation nights spent in hotels can be regarded as high in Zala, Hajdú-Bihar, Pest, Győr-Moson-Sopron and Vas counties, while, at the same time, the lowest values are observed in Nógrád, Jász-Nagykun-Szolnok, Komárom-Esztergom, Szabolcs-Szatmár-Bereg, and Borsod-Abaúj-Zemplén counties.

The above-national-average growth of the rural regions (Si; "total effect") is predominantly due to the regional attraction (Sr; "regional effect"). Only in several counties one can observe more dynamic change in the mix of accommodations than that of the national average (i. e. towards higher-class accommodations) (**Table 6**).

Figure 4: Distribution of accommodation nights among commercial accommodation categories (2007)

Source: Own calculation on the basis of HCSO data A KSH

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The expansion of those counties being able to enhance domestic visitor turnover happened in a way that the level of the everywhere observable favourable structural changes lag behind the average national level (**Figure 2**).

Table 6: Distribution of "total", "regional" and "branch" effects in the counties according accommodation nights (2007/2000)

County	Si+	Si-	Sr+	Sr-	Sa+	Sa-
Budapest	55.8		25.0		82.6	
Hajdú-Bihar	12.9		14.9		2.6	
Vas	5.2		11.1			8.2
Jász-Nagykun-Szolnok	4.6		11.1			9.5
Csongrád	4.5		7.0			2.4
Békés	3.6		3.0		2.8	
Pest	2.8		4.2			1.2
Borsod-Abaúj-Zemplén	2.6		8.3			9.1
Tolna	2.5		3.6			0.7
Szabolcs-Szatmár-Bereg	1.9		3.1			1.2
Zala	1.9			1.6	7.2	
Fejér	1.7		5.9			6.9
Komárom-Esztergom		1.6	2.9			8.8
Bács-Kiskun		2.2		0.4		4.2
Nógrád		5.7		6.4		1.6
Heves		6.3		6.3		3.0
Baranya		9.5		9.5		4.4
Győr-Moson-Sopron		11.4		17.0	4.7	
Veszprém		27.4		18.8		28.8
Somogy		35.9		40.0		9.9
Country Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Own calculations on the basis of HCSO data A KSH

(T4): The results of the shift-share surveys relating to the structure of accommodation supply have proven that mainly the capital (which shares 82.6% of the "branch" effects) and, to a lesser extent, four counties (Hajdú-Bihar, Békés, Zala, Győr-Moson-Sopron) were able to respond to the move of demand towards higher-class accommodations faster than the national average. The structural change into favourable direction can be observed in the whole country, except Szabolcs-Szatmár-Bereg county, in 2000-2007 period

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

(H5) I hypothesise that an outstanding tourism performance change (above-average visitor turnover, growth of accommodation nights) can take place in peripheral (economically underdeveloped) regions as well. I wish to prove that there are economically underdeveloped regions in the North Hungarian region that have demonstrated an above-average visitor turnover.

In my dissertation, I expressed the tourism processes numerically in the micro-regions of the North Hungarian region beyond analysing the national and regional data. I compared the tourism performances of the micro-regions with the regional average.

The visitor turnover of our region has showed an undiminished growth in the past 1.5 decade. 25.8% more accommodation nights were registered in 2007 than in 1993, which reached a value of 1535105. The favourable tendencies, however, are overshadowed by the 28.3% decrease of the turnover of foreign visitors (**Tables 1 and 7**).

One can observe at a micro-regional level that accommodation nights spent at higher-class accommodations increase more dynamically in regions possessing more significant visitor turnover.

Table 7: Number of foreign accommodation nights in the North Hungarian region

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Borsod-Abaúj-Zemplén	263203	234644	172323	180592	186315	147654	142930	141937	140607
Heves	213407	182914	147140	150617	132777	124725	141002	133421	162563
Nógrád	35519	21209	19771	20831	20903	14607	12337	13454	15204
North Hungary	*512129*	*438767*	*339234*	*352040*	*339995*	*286986*	*296269*	*288812*	*318374*
Hungary Total	**13618495**	**11501013**	**10397542**	**10501658**	**10536133**	**9997713**	**10675519**	**10655647**	**10137686**
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén	140728	139282	136199	126141	135822	133095	126817	136240	135146
Heves	167688	175521	172468	147451	111766	110043	121672	101344	100463
Nógrád	15317	13765	12301	12837	10546	10018	10061	10700	7781
North Hungary	*323733*	*328568*	*320968*	*286429*	*258134*	*253156*	*258550*	*248284*	*243390*
Hungary Total	**9942697**	**10513825**	**10894493**	**10360959**	**10040338**	**10508109**	**10778899**	**10045891**	**10170808**

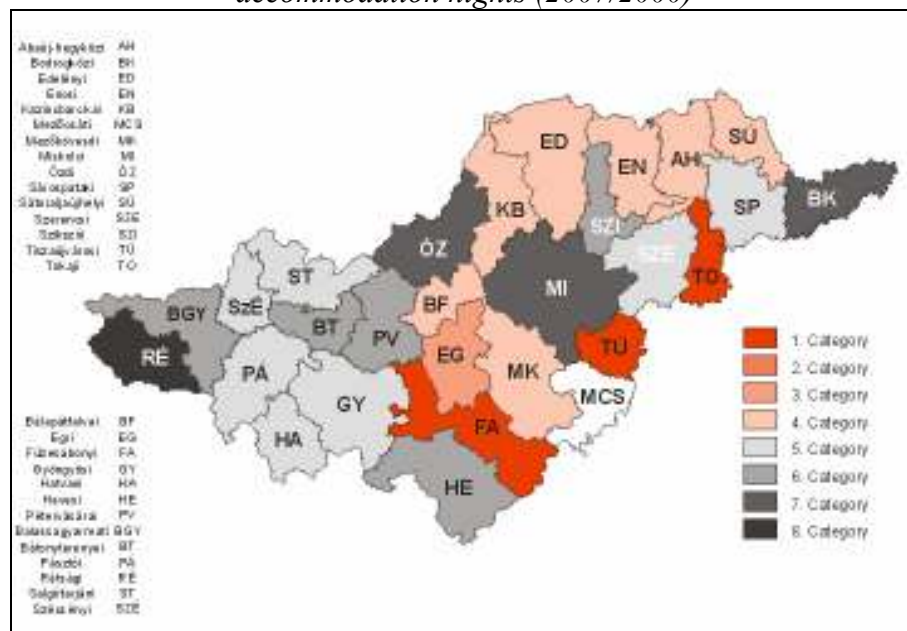Source: Own calculations on the basis of HCSO data

Not more than in the case of four micro regions the above-average regional attracting power was coupled with the demand growth for quality accommodations.

The demand for increased for lower-class accommodations in most micro-regions demonstrating above-average visitor turnover (**Figure 5**).

Setback can be experienced in every micro region of Nógrád County, however, the increase of demand for higher-class accommodations can be regarded as a favourable trend.

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Figure 5: Results of shift-share analysis performed according to the number of accommodation nights (2007/2000)

Source: Own calculations on the basis of HCSO data

The visitor turnover of Edelény, Encs and Abaúj-hegyköz micro-regions (labelled as ones of the most underdeveloped micro-regions by Government Decree No. 311/2007 /XI 17/) demonstrated an above-average growth, although starting from extremely low values. Unfortunately however, the growth of visitor turnover does not reach the regional average in most of the most underdeveloped micro-regions.

(T5): The surveys aiming at getting to know the regional tourism processes of the North Hungarian region have verified that the visitor turnover experienced between 2000 and 2007 was above the regional average in the peripheral (economically underdeveloped) Edelény, Encs, Abaúj-hegyköz and Füzesabony micro-regions (mainly coming from the expansion of the turnover of lower-class accommodations).

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4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

4.2. CONNECTIONS BETWEEN FACTORS INFLUENCING TOURISM PERFORMANCES

(H6) I hypothesise that apart from tourism supply (commercial accommodations, catering units and service providers) other factors also significantly influence the trend of visitor turnover. I wish to prove that economic, welfare and social factors, as well as the level of service provision exert influence on the tourism performances of micro regions.

I analysed, on the basis of settlement and micro-regional data, the connection between the indicators of visitor turnover and the indicators of tourism supply, economic/social situation of settlements and social conditions of the population. The linear correlation coefficients demonstrate, at national level, on the basis of micro-regional data, a medium-strong positive connection between the number of accommodation nights and the number of registered enterprises, resort houses, local governmental tax per inhabitant, number of telephone lines per thousand inhabitants and the number of non-profit organisations. I measured a weak positive connection between the water consumption per inhabitant, automobiles per thousand inhabitants, proportion of registered automobiles, specific values of built flats, and the proportion of flats connected with the public utility water system. I experienced a weak negative connection between the number of crimes per thousand inhabitants, proportion of flats connected with the public drainage system, proportion of people granted regular social allowance, number of live births and the number of criminals per thousand inhabitants (according to place of living).

I separated the factors of tourism growth with the help of regression models and principal components method, interpreting the discrepancies between the national and regional analyses.

Table 8: Summary data of the linear regression model of visitor turnover (Hungary, micro-regional data of 2007)

Model	R	R^2	Corrected R^2	Standard deviation of the estimate	Explanatory variables of the model*
1	.861[a]	.741	.740	3.17905	Constant, A
2	.868[b]	.753	.750	3.11698	Constant, A,B
3	.874[c]	.763	.759	3.06139	Constant, A,B,C
4	.883[d]	.779	.773	2.96748	Constant, A,B,C,D
5	.888[e]	.788	.781	2.91387	Constant, A,B,C,D,E,

Explanatory variables:
  Constant
  A: number of accommodation nights of commercial accommodations per thousand inhabitants
  B: number of resort houses per thousand inhabitants
  C: local-governmental tax per inhabitant (thousand Ft)
  D: number of crimes per thousand inhabitants
  E: neonatal mortality in proportion of live births

Source: Own calculations on the basis of HSCO data

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

Descriptive model of the visitor turnover of micro-regions:

$$Y= 2,185+ 0,58A – 3,409B + 0,00007292C - 0,81D -104,925E$$

In the micro-regional model explaining Hungary's visitor turnover, the number of accommodation nights per thousand inhabitants explained the variance of the specific values of visitor turnover in 74.1% (**Table 8**). Variables like the number of resort-houses per thousand inhabitants, local-governmental tax (thousand forints), number of crimes per thousand inhabitants, and neonatal mortality in proportion of live births contributed a further 4.1% to the explanatory power of the model.

In the micro-regional model describing the North Hungarian region's visitor turnover, again, it is mainly the number of accommodation nights per thousand inhabitants that explains the variance of the specific values of visitor turnover (55.4%). The proportion of people graduated from higher education contribute 16.1%, the proportion of flats with all modern conveniences contribute 4.9%, whereas the number of lending firms contribute 3% to the explanatory power of the model.

Table 9: Summary data of the linear regression model of visitor turnover (Hungary, micro-regional data of 2007)

Model	R	R^2	Corrected R^2	Standard deviation of the estimate	Explanatory variables of the model*
1	,755[a]	,571	,554	,90652	Constant, A
2	,859[b]	,738	,717	,72256	Constant, A,B
3	,890[c]	,792	,766	,65618	Constant, A,B,C
4	,909[d]	,827	,796	,61257	Constant, A,B,C,D

Explanatory variables:
Constant
A: number of commercial accommodation nights per thousand inhabitants
B: proportion of people graduated from higher education
C: proportion of flats with all modern conveniences
D: number of lending firms per thousand inhabitants

Source: Own calculations on the basis of HCSO data

Descriptive model of the visitor turnover of the Region's micro-regions:

$$Y= -0,125 + 0,17A + 32,6B + 4,977C + 4,043D$$

I found it necessary to simplify the factors influencing visitor turnover because of the complexity of economic and social aspects associated with tourism. I grouped the data-content of the 24 indicators concerning visitor turnover into four factors. "Economic activity", "tourism supply", regional attractiveness" and "regional social" factors contain the data-content of the indicators in use in 75.8%. I set up linear regression models explaining visitor turnover of the regions, using the factors of the principal components analysis (**Table 10**).

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

Table 10: Independent variables of the micro-regional models of visitor turnover in the regions

Region	Accommodation nights per capita		Foreign accommodation nights per capita		Domestic accommodation nights per capita	
Southern Great Plain	**R²=0,527**		**R²=0,579**		**R²=0,482**	
	Tourism supply	52.7%	Tourism supply	46.9%	Tourism supply	48.2%
			Regional attractiveness	11%		
Southern Trans-Danubia	**R²=0.794**		**R²=0.613**		**R²=0.84**	
	Tourism supply	79.4%	Tourism supply	51.3%	Tourism supply	84%
			Regional attractiveness	10%		
Northern Great Plain	**R²=0.362**		**R²=0.320**		**R²=0.385**	
	Tourism supply	36.2%	Tourism supply	32%	Tourism supply	38.5%
Northern Hungary	**R²=0.683**		**R²=0.473**		**R²=0.679**	
	Tourism supply	49.1%	Economic activity	47.3%	Tourism supply	56.9%
	Economic activity	19.2%			Economic activity	11%
Central Trans-Danubia	**R²=0.761**		**R²=0.685**		**R²=0.825**	
	Tourism supply	76.1%	Tourism supply	68.5%	Tourism supply	82.5%
Central Hungary	**R²=0.857**		**R²=0.708**		**R²=0.747**	
	Tourism supply	76.6%	Regional social situation	70.8%	Tourism supply	43.9%
	Regional attractiveness	9.1%			Regional social situation	30.8%
Western Trans-Danubia	**R²=0.761**		**R²=0.707**		**R²=0.818**	
	Tourism supply	76.1%	Tourism supply	70.7%	Tourism supply	81.8
Hungary	*R²=0.520*		*R²=0.318*		*R²=0.681*	
	Tourism supply	*52%*	*Tourism supply*	*31.8%*	*Tourism supply*	*67.3%*
					Regional social situation	*0.8%*

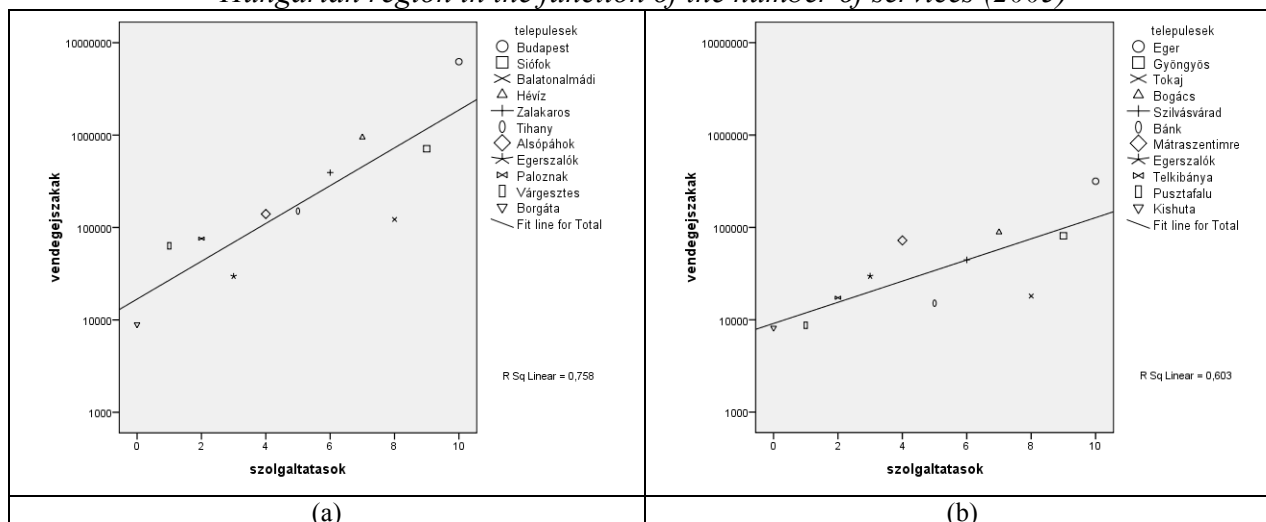Source: Own calculations on the basis of HCSO data

The "tourism supply" and "economic activity" factors are able to explain the specific values of visitor turnover of the North Hungarian region in 68.3%.

The question whether the basic service provision (post office, general practitioner, pharmacy, train station, etc.) of settlements/regions have any effect on the trend of visitor turnover. I prepared the Guttmann scale of the North Hungarian region's micro-regions and then numerically expressed the service supply of the micro-regions with the help of the Bennet-method. In the course of my survey I have come to the conclusion that there is no direct connection between the service supply of settlements/micro-regions and the size of visitor turnover.

First it appeared to me that it was impossible to draw further conclusions in connection with the (basic) services and the extent of visitor turnover. Then my attention was focused on the maximum values of accommodation nights.

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

Figure 6: Settlements with maximum visitor turnover in (a) Hungary and (b) North Hungarian region in the function of the number of services (2005)

| (a) | (b) |

Source: Own calculations on the basis of HCSO data

My survey has led me to the conclusion that, in the case of the national settlement-data there is a strong connection, whereas in the case of the region there is a medium-strong connection between the service supply and the maximum values of the accommodation nights (**Figure 6**).

(T6): The linear regression models have proven that, apart from tourism supply, economic, welfare and social factors significantly influence the trend of tourism performances. The fundamental services provided by settlements do not influence directly the number of accommodation nights, they only affect their maximum values.

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

4.3. CHARACTERISTICS OF TOURISM DEVELOPMENT ON MICRO-REGIONAL LEVEL

(H7) I started from the working hypothesis that the (favourable) effects of tourism development can hardly been demonstrated at micro-regional level; the relative positions of the micro-regions hardly changed between 2000 and 2007, in spite of the tourism developments of the recent years.

When setting up my working hypothesis, I expected to verify it by summing up the tourism tenders of the recent years at micro-regional level. I took part in the evaluation of the 2007-2008 action plan of the North Hungarian Operative Program (NHOP – ÉMOP) by the assignment of the North Hungarian Regional Development Agency with several of my colleagues at the Institute of World and Regional Economics. I recognised in the course of the survey that collecting the micro-regional data of tourism support is a hard task even in the case of one or two year old data since the data bases containing the tenders are not reliable, their data content demonstrate significant discrepancies at regional levels as well. Summing up several years' tenders sponsoring tourism is almost unfeasible.

Table 11: Transition matrix of Hungary's micro-regions according to the number of accommodation nights, in percentages (2000-2007)

2007 Accommodation night/capita 2000	100.01-	30.01-100	10.01-30	1.01-10	0.01-1	0	Number of micro-regions (2000)
100.01-							0
30.01-100		66.7%	33.3%				3
10,.01-30			100%				4
1.01-10				88.4%	11.6%		43
0.01-1				7.8%	90.4%	1.8%	115
0					66.7%	33.3%	3

Source: Own calculations on the basis of HCSO data

I have come to the conclusion, on the basis of the available data, that implicitly I can evaluate the effects of tourism development with the help of the changes in the visitor turnover of micro-regions (**Tables 11 and 12**).

Table 12: Transition matrix of Northern Hungary's micro-regions according to the number of accommodation nights (2000-2007)

2007 Accommodation night/capita 2000	100.01-	30.01-100	10.01-30	1.01-10	0.01-1	0	Number of micro-regions (2000)
100.01-							
30.01-100							
10,.01-30							
1.01-10				72.7%	26.3%		11
0.01-1				12.5%	87.5%		16
0						100%	1

Source: Own calculations on the basis of HCSO data

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

In order to demonstrate the changes I set up the transition matrices for the micro-regions of Hungary and the North Hungarian Region, applying the previously used categories, for the 2007/2000 period.

On the basis of the transition matrices I have come to the conclusion that the downward and upward changes basically extinguish one another both at national and regional levels.

> **(T7): The transition matrices of the specific values of visitor turnover justify that the effects tourism at micro-regional level development are not significant either at national or regional level. The relative position of micro-regions hardly changed, in spite of tourism development, in the 2000-2007 period.**

> (H8) The development ideas put forth in the micro-regional planning documents of tourism development tend to be too general. I wish to prove that the micro-regional tourism concepts, strategies, as well as their objectives and priorities slightly orientate the (potential) stakeholders work in their current form.

When I surveyed the planning documents of tourism development (or that of regional development when the former was not available) even concrete goal-indicators were not identified relating to tourism development goals (**Table 13**).

Table 13: Micro-regional characteristics of tourism development

Characteristics of tourism development goals	Micro-region
No concrete goal-indicators are identified.	Abaúj-hegyköz, Bátonyterenye, Füzesabony, Mezőcsát, Miskolc, Ózd, Pásztó, Rétság, Salgótarján, Szikszó, Tokaj
Partially identified goal-indicators.	Mezőkövesd
No numerical goal-indicators.	Bodrogköz, Edelény, Encs, Gyöngyös, Hatvan, Heves, Pétervására, Szerencs
Goal-indicators partially numerical.	Balassagyarmat,
Precisely defined goal-indicators.	Bélapátfalva, Eger, Kazincbarcika, Sárospatak, Sátoraljaújhely, Tiszaújváros

Source: Own compilation on the basis of the micro-regional planning documents

Only several indicators were named in the case of the Mezőkövesd micro-region. There were goal-indicators in further 8 micro-regions, although they were not expressed numerically. Some indicators were numerically expressed in the Balassagyarmat micro-region; and not more than 6 micro-region's planning documents contained precisely defined numerical goal-indicators.

Having scrutinised the planning documents I realised that that their situation analysis is made from an internal point of view. Typically, they were not compared with other regions. In most cases the sincere introduction of the potential internal and external resources did not happen.

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

I attempted to plot Northern Hungary's micro-regions on a tourism destination life-cycle curve on the basis of the specific visitor turnover of the micro-regions and the tendencies of the period between 1990 and 2007 (**Figure 7**).

- Curve "A": those micro-regions are here the specific visitor turnover of which is among the highest; they are likely to have significant growth reserves on the basis of their capabilities and the past years' tendencies.

- Curve "B": micro-regions on this growth track are in the mid-range in terms of their specific values; stagnating (or minor growth or decline) is typical in their case.

- Curve "C": those micro-regions can be found on this curve the visitor turnover of which is among the lower, compared to the number of inhabitants. Their positions tend to decline slowly.

- Curve "D": its micro-regions' tourism performance is insignificant, further processes of marginalisation can be expected.

Figure 7: The Region's micro-regions on the tourism destination life-cycle curves
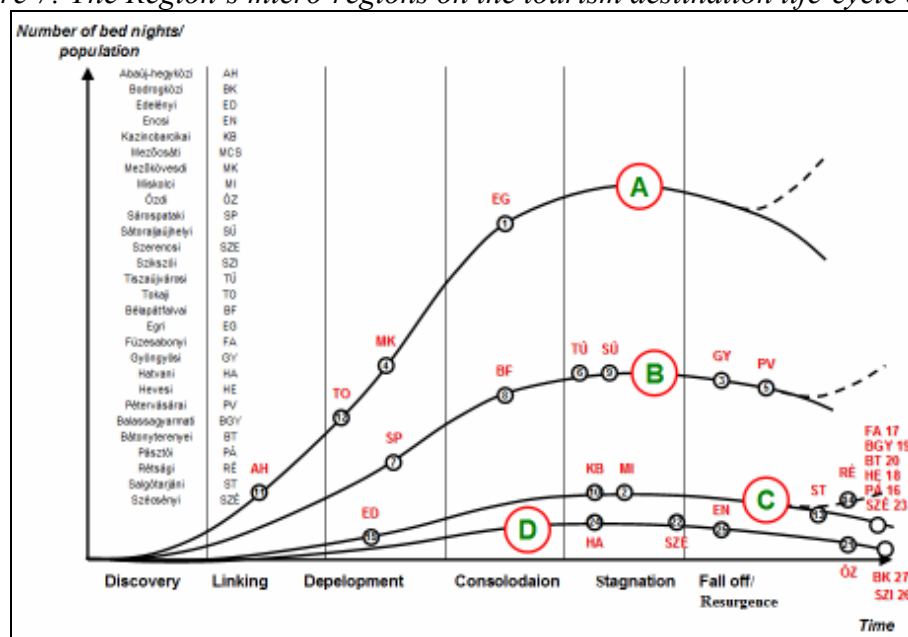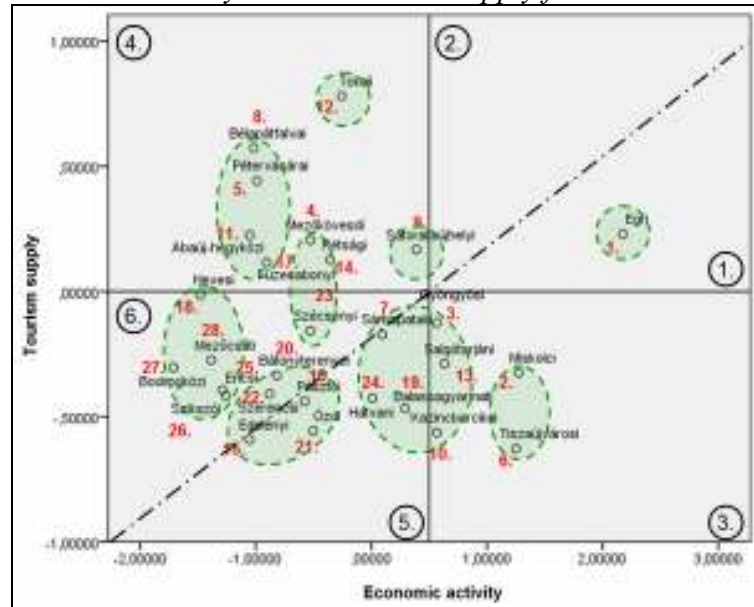

Source: Own compilation on the basis of HCSO data

Using the own values of the principal components analysis, and with the help of cluster analysis, I grouped the micro-regions along "economic activity" and "tourism supply" dimensions (**Figure 8**). On the basis of the relation of the own values of the two dimension to each other and to the national average, I formulated recommendations concerning the refinement of the tourism development goals of micro-regions. The recommendations refer to the availability of the internal and external sources, the direction of the developments and their spatial nature.

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

Figure 8: The Region's micro-regions on the basis of the own values of the "Economic activity" and "Tourism supply factors

Source: Own calculations on the basis of HCSO data

(T8) I have come to the conclusion, on the basis of the micro-regional planning documents of tourism development that the micro-regional concepts and strategies, as well as their objectives and priorities slightly orientate the (potential) stakeholders work in their current form. Efficient planning requires the exploration of tourism performances and the clear numerical expression of the objective set. Plotting the micro-regions on the destination life-cycles may help positioning the tourism performances. Setting up the feasible and sustainable directions of development may contribute to position the (micro-) regions along the tourism supply and economic activity dimensions.

4. NEW AND QUASI-NEW STATEMENTS OF THE RESEARCH

(H9): According to my hypothesis most of the micro-region of Northern Hungary have suffered considerable decrease in visitor turnover in the recent years. I wish to prove that enhancing the number of foreign visitors do not enjoy appropriate attention at micro-regional level.

The turnover of foreign visitors indicated growth in 2007 compared to 2000 only in the case of 11 micro-regions, while the number of foreign accommodation nights decreased in 17 micro-regions of Northern Hungary (**Table 14**.)

Table 14: Number of foreign accommodation nights in 2007, in the percentage of the 2000 value

Szikszó	829.4	Encs	108.0	Bélapátfalva	39.3
Bátonyterenye	719.5	Abaúj-hegyköz	103.4	Ózd	38.6
Rétság	455.5	Kazincbarcika	89.8	Szécsény	36.2
Sárospatak	278.0	Miskolc	87.0	Salgótarján	35.1
Edelény	246.1	Gyöngyös	79.4	Pétervására	31.2
Tiszaújváros	187.1	Szerencs	61.9	Heves	30.3
Tokaj	165.1	Eger	57.6	Pásztó	28.0
Balassagyarmat	124.5	Mezőkövesd	41.6	Bodrogköz	22.2
Sátoraljaújhely	110.5	Füzesabony	40.4	Hatvan	19.3

Studying the micro-regional planning documents have brought me to the conclusion that, in spite of the unfavourable processes, the micro-regions do pay enough attention to increasing the number of foreign visitors.

(T9): **Having learned the objectives and priorities of the planning documents of tourism development, I could formulate my statement that while most of the micro-regions of the North Hungarian region (17 out of 27) are the losers of the "battle" fought for foreign visitors, the concepts, strategies rarely (2 cases) contain concrete goals and tasks relating the expansion of foreign visitor turnover.**

5. AREAS OF USE OF RESEARCH RESULTS

The results of my research aiming at getting to know and mapping up the regional aspects of tourism can be used in the education and also by practitioners.

I added statistics and calculations concerning Hungary and the North Hungarian region to my teaching material titled "Tourism in regional development".

I plan to elaborate a tourism module within the course titled "Regional and environmental methods of analysis 1" using the results of my dissertation.

I view the results of my research useful in preparing the planning documents of micro-regional tourism development. Positioning the micro-regions along the "economic activity" and "tourism supply", as well as plotting them on the destination curves may contribute to formulating realistic, feasible and sustainable tourism goals.

More directions of the survey have not been elaborated because of the size-limits of the dissertation. My current research results indicate that models can be set up at regional and national levels that can explain tourism performances (indicators of demand and supply) more precisely. My short-term future objective is to conduct a research aiming at exploring the reasons for the phenomenon.

Furthermore, mapping up the temporal changes of factors influencing tourism and the reasons for the modifications are challenging research tasks.

My surveys can be expanded not only in time but also in space: the analogy of the research conducted in the North Hungarian region may be used in researches done in the rest of the regions as well, thus, these analyses become useful in comparative analyses.

REFERENCES

311/2007. (XI. 17.) Kormányrendelet

Adler J. - Akar L.-Petz R. 2004: A turizmus makrogazdasági szerepe. Budapest, 105 p.

Mester T. 2003: Turisztikai trendek Európában. Turizmus Bulletin 2003/4. sz., pp. 39-42.

Nemes N. J. - Jakobi. Á. - Németh N. 2001: A jövedelemegyenlőtlenségek térségi és településszerkezeti összetevői. Statisztikai Szemle, 79. évfolyam, 10–11. szám. pp. 863-884.

Nemes N. J. (szerk.) 2005: Regionális elemzési módszerek. Regionális Tudományi Tanulmányok, 11. sz., ELTE, 284 p.

Pál T., Rácz A., Hauksz M. 2006: Magyarország turizmus szatellit számlái 2004, Magyarország. Központi Statisztikai Hivatal, Budapest, 48 p.

Stynes D. J. 1999: Approaches to Estimating the Economic Impacts of Tourism; Some Examples. 18 p.

World Tourism Organization 2009: Tourism Highlights 2009, 19 p.
http://www.unwto.org/facts/eng/pdf/highlights/UNWTO_Highlights09_en_HR.pdf

AUTHOR'S DISSERTATION RELATED PUBLICATIONS

Turisztikai trendek Magyarországon a 90-es évek közepétől, különös tekintettel az Észak-magyarországi Régióban bekövetkezett változásokra. „Környezetvédelem/regionális versenyképesség/fenntartható fejlődés" Konferencia; Konferencia-kiadvány I. kötet 2005. május 19-21. Pécs, pp. 279-287.

Tourism Trends in Borsod-Abaúj-Zemplén County since the Middle of the Nineties. – International Conference: The Impact of the European Integration on the National Economy. 28-29 October 2005. Kolozsvár.

Idegenforgalom az Európai Unióban (oktatási segédlet). Miskolc, 2005, 30 p.

Kastélyturizmus az Észak-magyarországi régióban. Észak-magyarországi stratégiai Füzetek. Miskolc, 2006. III. évfolyam 1. szám. Miskolc, pp. 69-81.

A hálózatosodás szerepe jelentősége a hazai turizmusban. XXVIII. OTDK Közgazdaságtudományi Szekció – Doktoranduszok konferenciája. Miskolc, 2007. május 26. Konferenciakiadvány p. 9

Hálózat és klaszter szervezési gyakorlatok – turizmus. Miskolc, 2007, 57 p.

Foreign Direct Investments and the Counrtries of the European Union. Konferenciakiadvány – The Future of Europe A View from the Danube Region. (Proceedings of the 3rd DRC Summer School, Dubrovnik, 2006. Pécs, 2007, pp. 177-188.

Regional Cluster policy mapping-Tourism policy of the North Hungarian Region. In Recommendations on institutional adjustments regarding regional cluster policy. DEPURE project Interim Report. 2007.

Formula for the Creation of a Regional Public Administration Cluster - Tourism. In DEPURE project Final Report. 2008.

A közigazgatás lehetőségei a turisztikai klaszterek fejlődésében. In Stratégiai Füzet a DEPURE projekt kutatásairól. Miskolc, 2008. pp. 7-30.

A hálózatosodás szerepe jelentősége a hazai turizmusban. In Hálózatok és Klaszteresedés elméleti és tapasztalati háttér az Észak-magyarországi régió példáin keresztül. Miskolc, 2008. pp. 146-154.

Tókörnyéki turisztikai igények és lehetőségek felmérése, turisztikai fejlesztési koncepció kidolgozása „Természetesen vízi világ" (Társszerző: Kocziszky György) FA KF/07. projekt. Miskolc, 2008.

Meszes község falufejlesztési programja. (Társszerző: Kocziszky György, Győrffy Ildikó) Miskolc, 2008.

Az Észak-magyarországi régió turizmusának esélyei globális gazdasági válság időszakában. In Észak-magyarországi stratégiai Füzetek. VI. évfolyam 2. szám. Miskolc, 2009. pp. 89-107.