

**ISSUES OF THE REGIONAL PROCESSES OF TOURISM WITH SPECIAL
REGARD TO NORTHERN HUNGARY**

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1. THEORETICAL ANTECEDENTS

1.1. Models exploring the social and economic aspects of tourism

Researchers dealing with tourism have devoted great attention to putting the ideas, processes and characteristics of tourism into models, in addition to problems of definition. Numerous conceptual ideas have been formulated to describe the processes, participants and the relationships among the participants. The resulting models (similarly to the definitions of tourism) clearly reflect the scientific backgrounds of their makers. Basically, the models of tourism fall into two groups. The first group includes comprehensive models containing the broadest range of the processes and participants of tourism, while the models in the second one add the dimensions of space and time.

1.1.1. General models of tourism

Tourists and travel are indispensable elements of tourism models. Following from the complexity of tourism, the use of a so-called “other factors” category may be necessary, since tourism indirectly influences the public sector, communities, the economy of nations and regions, as well as their citizens. Sessa, in his piece of writing titled “The character of tourism” (1989) uses this tripartite approach. Pearce’s model from 1979 is based on Miossec’s approach, titled “spatial dynamics of tourism,” that dimensionalized the system of tourism according to holiday venue, transportation, behaviour of tourists, attitudes and decisions of the population and of decision makers of the recipient regions. The model interprets the change of the dimension characteristics as a function of time (Table 1.1).

Table 1.1:

Model of tourism in Pearce’s interpretation, based on Miossec’s work

Phases	Holiday venue	Transportation	Behaviour of tourists	Attitudes and decisions of the population and decision makers of the recipient regions.
1.	Distance is an obstacle of establishing holiday venues.	Regions are characterised by separation.	Total lack of interest and knowledge.	Daydreaming or refusal.
2.	First holiday venues are established.	Tourists travel in a targeted way.	General perception of the area.	Observing.
3.	The number of holiday venues multiplies.	Transport routes are created between holiday venues.	Perception of venues and routes in the regions.	Purposeful development of infrastructure.
4.	The self-organisation of holiday venues begins. The holiday venues begin to get specialised and classified into hierarchy.	Round trips become general.	Spatial competition and separation.	Separation and taking the best practices of successful areas.
5.	Specialisation gets completed and the hierarchical relationships become clear.	The intensity of relationships between holiday venues reaches maximum.	Total diversification of the perceived area. Appearance of typical tourist types. The areas are substitutable, saturated, the signs of crisis appear.	Total tourism of purposeful development taking environmental aspects into account.

Source: Pearce D. G. 1981, p. 260.

Mathieson and Wall, in their 1982 book on the economic, physical and social effects of tourism, distinguish between three elements of tourism. Travel as a dynamic factor, staying at a give location as a static factor and anything else these two dimensions may cause their effects (Mathieson A. – Wall G. 1982, p. 65). Following some reconsideration these three factors can be called demand, supply and effects (**Table 1.2**).

Tourist demand is determined by individual characteristics, motives and psychological factors, the choice of the travel location, the characteristics of the destination, the planned activities, and the consequences of all these. The development of the demand is significantly influenced by travel costs, price level, characteristics of tourist attractions, and the marketing of holiday venues. The institutions of the public sector indirectly influence the demand. The hospitality of the local population and the development level of the recipient regions also determine the demand.

Supply, from the point of view of the tourists, is made up of factors such as trip duration, the occupancy of accommodations, satisfaction levels, return propensity and the extent of spending money. The supply quickly follows the changes in needs of tourists; however, at the same time, it may also limit the extent of the demand. The role of demand in influencing supply should definitely be highlighted, since the expectations of tourists determine the structure of the supply (Tasnádi J. 2006a, p. 113).

Table 1.2:

Model of tourism in the interpretation of Mathieson és Wall

	Tourists	Travel	Other factors
De-mand	<ul style="list-style-type: none"> Individual characteristics Motives Psychological factors 	<ul style="list-style-type: none"> Prices Travel cost Promotion and marketing Attractions 	<ul style="list-style-type: none"> Governmental policy Society and culture Technology Social atmosphere Politicians Social trends Economic trends
Supply	<ul style="list-style-type: none"> Length of travel Activities Treatment Satisfaction Spending of money 	<ul style="list-style-type: none"> Resources: <ul style="list-style-type: none"> natural, built, cultural. Tourism services: <ul style="list-style-type: none"> catering, transport, welcome, accommodation, entertainment, hospitality. 	<ul style="list-style-type: none"> Infrastructure: <ul style="list-style-type: none"> roads, sewage network, electric network, police, airports, etc.. Communication Economy, trade Society
Im-pacts	<ul style="list-style-type: none"> Experience Knowledge Entertainment 	<ul style="list-style-type: none"> Income Depletion, devaluation of resources Investments 	<ul style="list-style-type: none"> Environmental Economic Physical

Source: Morley C. 1990, p. 6

An important feature of the tourism supply is that tourists never take advantage of a single service but rather of a service package; therefore, their satisfaction is a result of a kind of aggregation of experiences (Kaspar C. - Fekete M. 2002, p. 68).

A distinction can be made between two groups of tourism supply. The original supply contains those components that are not aimed directly at meeting the needs of tourism, however, their attraction influences the development of tourism. The derived supply means those services that are kept in stock for use in tourism (Krippendorf J. 1980, p. 22; Kaspar C. - Fekete M. 2002, p. 65).

The effects of tourism appear, directly or indirectly, in the income and investments of stakeholders, as well as in the use of and depletion of resources. It is worth highlighting the economic, social and physical effects of tourism that designate clearly distinct areas

of investigation for researchers. One merit of the outlined model is that it identifies and organizes the most important tourism-related concepts and factors.

Many tourism-related research studies focus on the effects associated with travel and “other factors.” The model defines the individual effects exerted on tourists also as a research area. Unfortunately, when measuring the effects of tourism, difficulties are often encountered due to the scarcity of samples found in the literature, the shortcomings of the models, the complexity of the effects, and the often contradictory research goals, as well as the lack of the databases that are reliable in the long run (Butler R. W. 1993, p. 140).

Culpan attempted to set up an international tourism model in his 1987 article in which, apart from the demand category, marketing also appears as a factor facilitating the satisfaction of tourist demand. His choice was not accidental – it reflects the author’s scientific background as someone who attributes significance to marketing because of its effect on creating and enhancing demand. Culpan wished to establish a model that is open enough and where the factors are interrelated and in close relationship with their environment.

Many marketing-oriented models have been created in the past decades. Mill and Morrison called their 1985 model “tourism system” (**Figure 1.1**). The four components of tourism are market, travel, destination, and marketing.

The model adopts a marketing approach in that it examines the processes of tourism from the point of view of the tourist, with the tourist’s demands predicted from surveys aimed at consumer behavior. Mill and Morrison consider the process of travel and the means of transport chosen by the travel category of the earlier models, while the supply and tourism-policy are seen as part of the destination as an umbrella concept (Mill R. C. - Morrison A. M. 1985, p. 83).

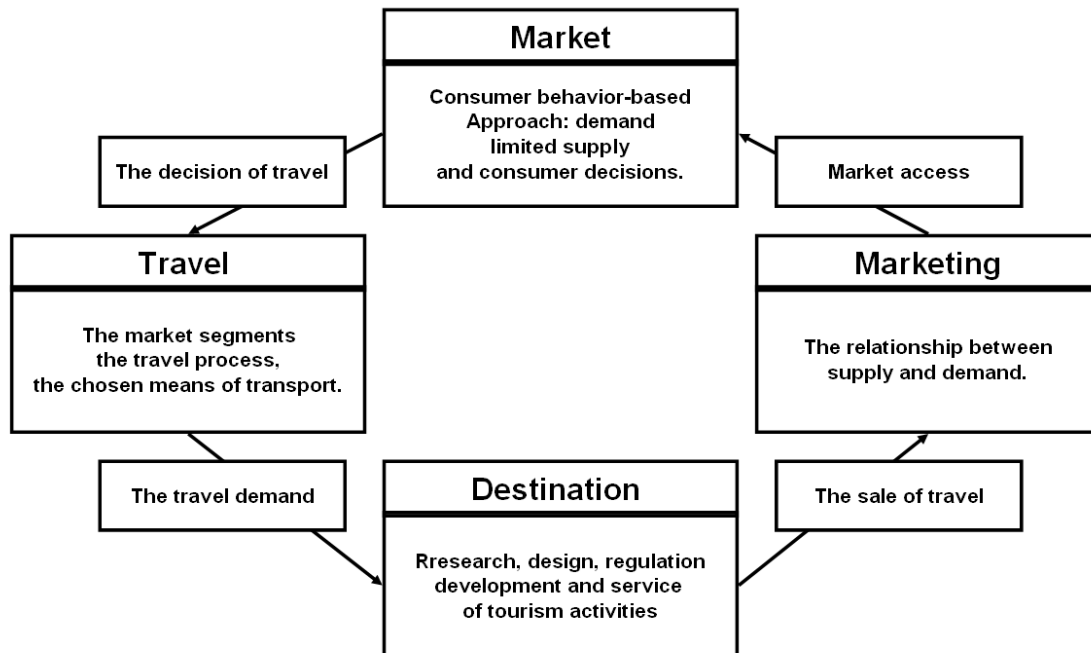


Figure 1.1: „The Tourism System”
Forrás: Mill R. C. – Morrison A. M. 1985 83. old.

The “travel decision model” reflects a strong marketing orientation that also introduces the processes of tourism from the tourists’ perspectives (**Figure 1.2**). Marketing

creates the link between the travellers and the actors of the tourism sector in each stage of the circular process.

Although Mill and Morrison called their model a system, it can hardly be regarded as such because it is basically a linear approach. Their debatable statement is that every tourism-related process is part of some sort of market. Nevertheless, the model may help experts in their work dealing with tourism because it makes the market processes of tourism visible.

Jafari (1990) describes tourism as a kind of circular process: he focuses on the flow between the everyday (sender area) and the non-everyday (tourism destination) areas. The everyday life pattern of tourists becomes a non-everyday one for the time period of the journey, and then, having returned, they return to the habits of their everyday lives. The author argues that one should not overlook the influences exerted on tourists either.

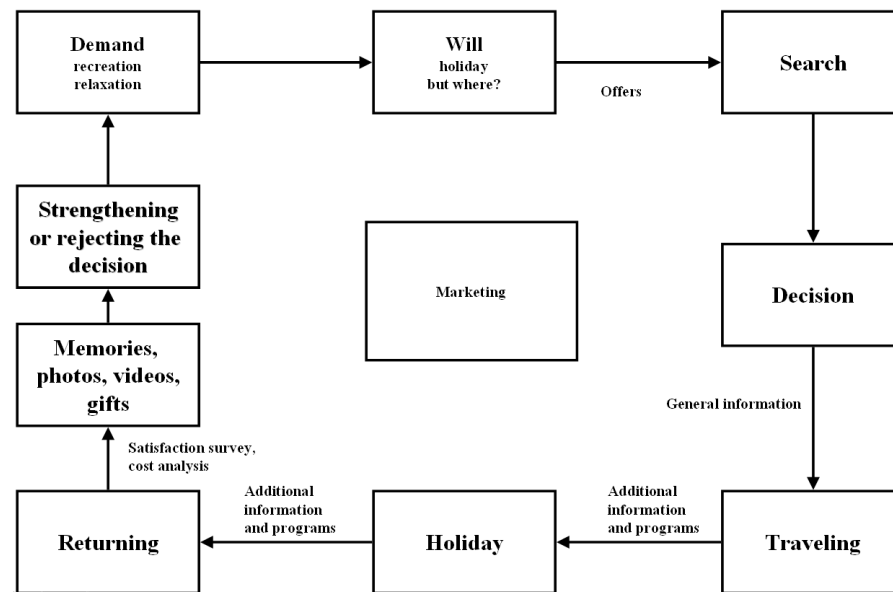


Figure 1.2: Model of travel decision

Source: Puczko L. - Rätz T. 2002 p. 35.

The concept of Goeldner and Brent Richie’s model, which views tourism as a phenomenon, is totally different; the tourist is at the center of it (Figure 1.3). The high-level satisfaction of tourists’ needs makes it essential that the actors of both public policy and private sector understand the tourists’ motives and the factors influencing travel decisions.

One of the basic dimensions of the model is natural resources and environment. The destinations all have several unchangeable or almost unchangeable factors (landscape, climate conditions and population).

Human activities have led to the creation of a built environment that strongly indicates the cultural background of people living in that region, and that significantly influences the past and present activities of people. The cultural characteristics are difficult to change for tourism development reasons.

The infrastructure of the regions serves primarily the satisfaction of local needs, while the so- called “super-structure” specifically mean the accommodations, dining facilities and programs for tourists (Fekete M. 2006, p. 35). Both have considerable capital requirements: this causes their rigidity and inflexibility, which is opposed to the sensitivity and variability of the tourism demand (Tasnádi J. 2006a, p. 111).

The technological development of the period after the Second World War fundamentally changed the built environment. Developments in information–technology expanded the tourists’ communication and information tool-kit. No destination can be successful today that does not collect, analyse and use efficiently the available tourism information. The globalising tourism competition requires easily identifiable tourism products and destinations (Horkay N. 2003a, p. 1).

Special attention should be paid to the effects of the community level on tourism development. Several factors may justify the role of the state (e.g. shortage of capital; coordination requirements due to the trans-sectoral nature of tourism; advertising and image-building tasks; as well as effects exerted on environment, culture and health) (Soproni Gy. 2004, p. 21). The central and local government, the institutional system responsible for tourism development, as well as the legal and financial environment significantly influence the domestic and international competitiveness of service providers (Puczkó L. - Rátz T. 2002, p. 67). The market-opening and deregulation processes of the past decades have necessitated quick and efficient responses; separate ministries have been established in many countries (e.g., Italy, Romania, and Greece) to coordinate tourism tasks.

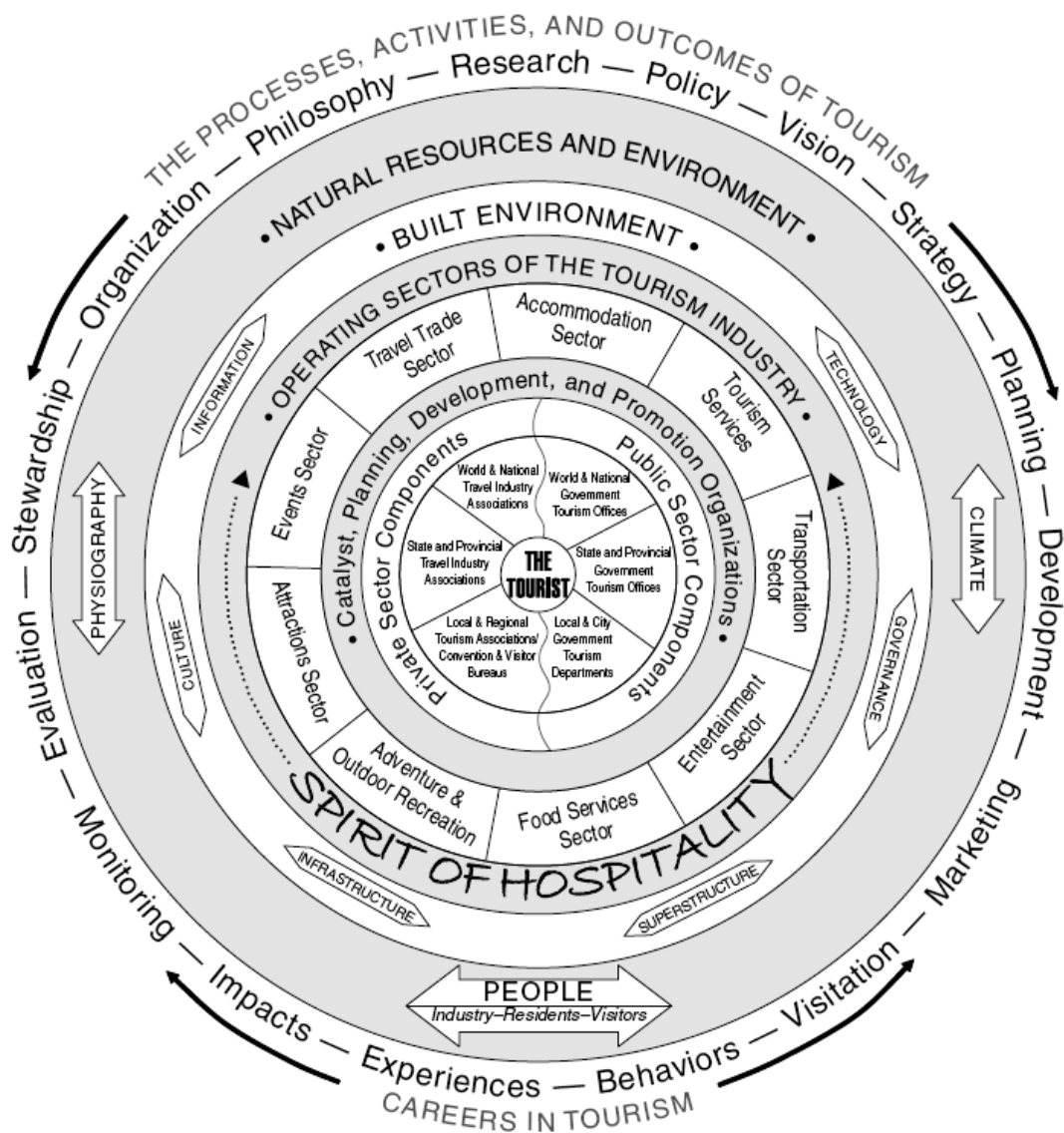


Figure 1.3: The tourism phenomenon: components of tourism and tourism management
 Source: Goeldner C. R. – Brent-Richie. J. 2005, p. 14

“The strengthening of regionalism significantly weakens the role of the state in the European economic space, which means that the intervention chances decrease on exactly that level that could be vital in the establishment and development of the vital infrastructure of tourism.” (Michalkó, 2002, p. 155).

The continuous renewal of the institutional system of tourism is required for the efficient implementation of planning and organizational tasks. (Hjalager A-M. 2010, p. 4) However, the approach that views tourism exclusively as a potential area of income generation is flawed (Lanfant M-F. 1993, p. 78).

The actors of the tourism sector encompass enterprises mainly in the area of the accommodation and hospitality industry. There are firms with global networks in both cases nowadays that provide standard services independently of the local culture and customs.

The role of well-known firms and brands are important as tourist attractions as well, e.g. sights such as Uffizi, Stonehenge, the Acropolis, and Niagara Falls are known by everyone.

Interest in alternative tourism types (adventure, eco-, and rural tourism) has significantly increased due to the accelerated rhythm of urban life and the growing need for natural experiences.

Completely different experiences are offered by aquaparks and thematic amusement parks, which pick tourists out of the usual rhythm of their everyday life.

Tourist satisfaction is significantly influenced by the quality of work of the tourism offices, tour operators and tourism agencies.

These factors are not sufficient without the considerably subjective factor of hospitality. The tourist has to feel that he/she is welcomed happily, and it is not just the income that he/she represents that is important for tourism service providers. Those local people who directly come into contact with tourists should be trained to receive their guests with due respect, courtesy and honesty. The population has to be motivated to be friendly and to inform and help visitors if needed. All these acts fundamentally influence the satisfaction and sense of comfort of tourists.

Organizations dealing with planning, developing and promoting tourism have a less spectacular but nonetheless important role in making tourism successful. “Tourism policy” managers should be aware of the needs of target groups to ensure that an appropriate quality and composition of supply is developed. Naturally, these should be determined in accordance with the resources of the region.

Excellent planning alone is not sufficient without its systematic and comprehensive implementation embodied in services, events and programs, due to the work of the destination management organizations. The only regions that can be successful in the competition of the destinations are those that know the needs of their target groups, are aware of domestic and international best practices, and couple product development with consequent positioning and differentiation strategies (Horkay N. 2003b, p. 1).

There are institutions, private or financed from public funding, that deal with tourism development and organization at international, national, regional and local levels (Eadington W. - Smith V. 1995, p. 2).

The tourist offices are responsible for developing the frameworks of “tourism policy”, while, typically, the private sector establishes associations for promoting tourism. In order to satisfy the high-level demand, the service supply has to be developed at the national, regional and community level alike (Gunn, C. - Turgut W. 2002, p. 35).

The methodology of tourism development has journeyed along a long path. While at the beginning primarily the operation and management of the tourism sector was in focus, later regional development, the analysis of spatial relations, and then the economic,

social, cultural, political and environmental impacts of development have come to receive more attention (Alipour H. 1996, p. 368). Tourism development has become one of the key elements of regional policy by now, especially in peripheral regions possessing resources that meet the tourists' interests and needs (Giaoutzi M. - Nijkamp P. 2006, p. 52).

The wavy line between the organisations of the state and private sector means that one of the keys to competitiveness is close cooperation between stakeholders. Its lack may cause conflicts, fragmented strategy creation and implementation processes (Bramwell B. - Sharman A. 1999, p. 395).

The processes and activities of tourism are a new dimension of the model that characterises both its system and environment.

Successful tourism requires destination management organisations to formulate the vision they want to reach and the necessary strategic framework needed. Its first step should be developing the institutional system itself, which should be designed with great care (Dredge D. 1999, p. 773).

The "experience elements" a region can provide are developed in the course of the planning and development process. These are widely promoted with the help of marketing tools and organisations. Branding the tourism supply helps make it unique and different from the products of other regions.

Due to a lucky combination of the factors, large numbers of tourists arrive in the region. The positive effects of their coming are felt primarily in the economy, while tourism usually adversely affects the natural and built environment, the culture and quality of life of the local population.

In addition, the results achieved have to be systematically analysed and evaluated; the satisfaction of the tourists and the impact of tourism on the region should be continuously monitored in order to meet the long-term criteria of sustainability.

The implementation of tourism processes requires people who serve the needs of tourists by performing tasks from the simplest to those necessitating the most sophisticated knowledge. Many of the people directly meet the tourists, while others work in the background. Tourism is a potential area of career development that may bring considerable income and recognition to those who take a long-term view and purposefully build up their professional performance.

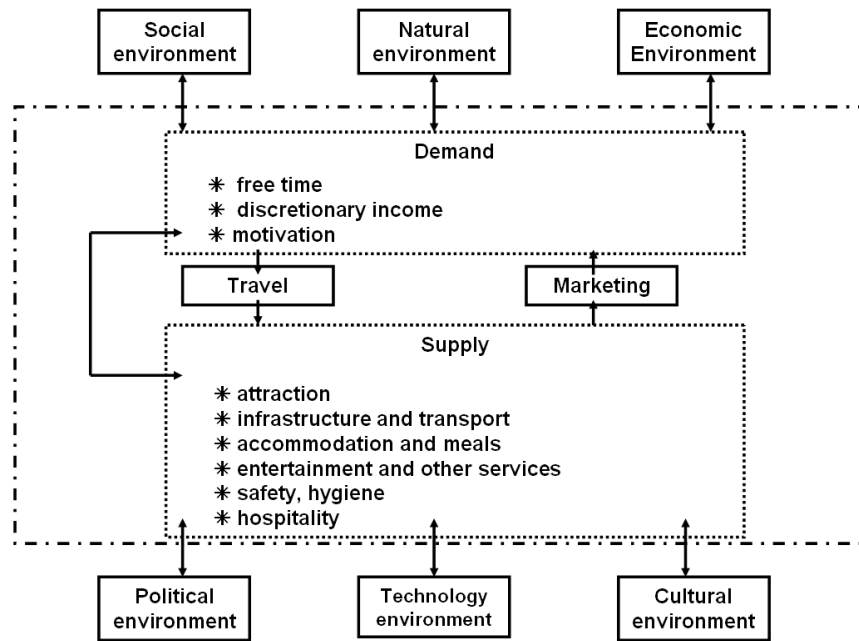


Figure 1.4: System and environment of tourism
 Source: Lengyel, M. 2005, p. 102

Márton Lengyel puts demand and supply at the center of the tourism system. The two sub-systems are then connected by marketing, the agency sector and the travel itself (Figure 1.4).

Disposable income, leisure time and motivation are needed for travel. Tourism supply is characterised by attractions, infrastructural tools, means of transport, accommodations, prices, entertainment opportunities, safety, cleanliness and hospitality.

Tourism is an open dynamic phenomenon that interacts with its environment. This interaction, however, should not be regarded as balanced. “Tourism benefits more from the natural environment than vice versa” (Tasnádi J. 2006, p. 11).

Both sending and receiving areas can be characterised by their economic development, which significantly influences the level of demand, expectations and the quality of supply. The most often measured effects of tourism are those exerted primarily on the GDP, budget, balance of payments and employment (Tasnádi J. 2006, p. 12). The economic environment is significant mainly because of its impact on the expected return of investments (Dávid L. - Jancsik A. - Rátz T., p. 95).

Political stability and the need for safety are among the basic expectations of tourists. Destinations crowded by tourists can empty overnight as a result of any kind of disaster or rumour.

One of the main attracting powers of destinations is the culture. The distance between cultures can be attracting or off-putting for different groups of tourists. Tourism can remain a permanent phenomenon only in those regions where the economic conditions are given, the level of infrastructure is at least satisfactory.

Another attracting power is nature. Areas unsuitable for economic areas can also become valuable due to tourism, as people living in urban areas increasingly esteem natural values. The development of the technological environment, infrastructure, transport and communication networks fundamentally influences the processes of tourism.

The social environment is not a frequent focus of research. Tourism affects the receiving population – it may lead to significant inward and outward migrations, that may considerably change the composition of the population of host areas (McGehee N. G.

2002, p. 125). Frequently, however, these negative effects are rarely spoken of when mentioning the favourable economic effects (Hauenschild V. - Grub P. D. 1978, p. 161).

1.1.2. Emergence of spatiality and the time dimension in tourism models

In his model, Andreas Papatheodorou (2004) describes the typical directions of tourist movement (**Figure 1.5**). The upper large ellipse indicates that areas sending the most tourists are also significant tourism destinations. The mutual dependency between the sending areas is usually asymmetric, that is, there are regions that tend to be either sending or receiving regions. The lower left part of the model contains the tourism destinations having a central role, while the peripheral areas are on the right hand side. Papatheodorou classified travel motives into two groups. In his opinion, the tourists desire relaxation and recreation, or to acquire experiences. The thickness of the arrows is proportional to the number of tourists; the destinations with a central role receive far more visitors than those in the periphery. The arrows between destinations indicate the spatial interaction of the locations, the destinations of “relaxation,” similarly to the regions of “experience acquisition,” tend to relate to each other, and the “relaxation – experience acquisition” type of connections are rarer. The “center-center” relationships are more intensive than the “center-periphery” relations.

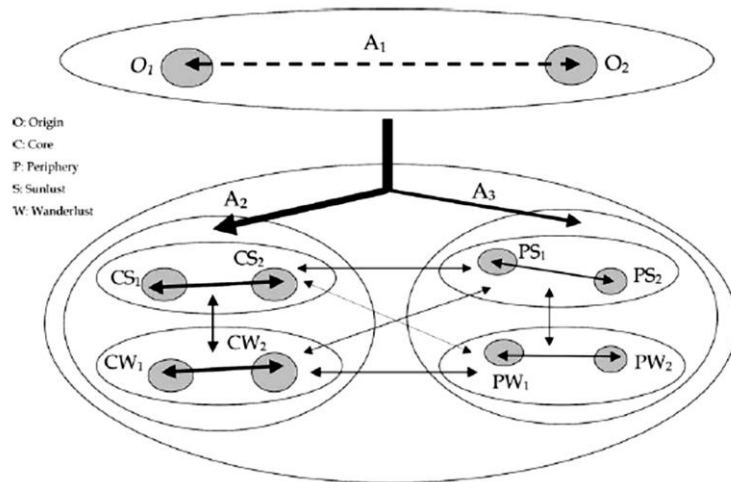


Figure 1.5: Model of spatial flow of tourists
Source: Papatheodorou A. 2004, p. 228

Butler's life-cycle model (1980), often mentioned in the literature, describes the number of visitors of tourism destinations as a function of time, and is somewhat complementary to Papatheodorou's static model (Figure 1.6).

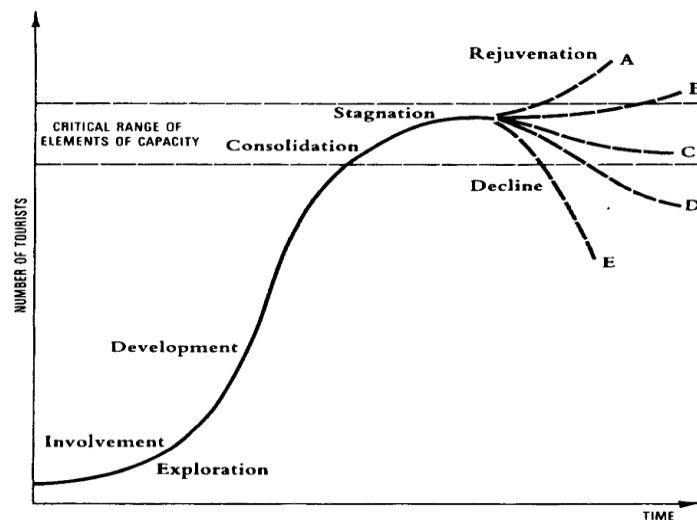


Figure 1.6: Life-cycle curve of tourism destinations
Source: Butler R. V. 1980.

The model assumes that no considerable investment or state-subsidy comes into the region from outside (Holloway J. C. 1994, p. 80). The theory suggests that the development of the tourism destinations shows similar characteristics, although the pace of growth and the potentially maximum number of visitors can be quite different (Lundtorp S. – Wanhill S. 2001, p. 948). Butler argues that there are six distinct phases of development, from discovery to decline.

In the discovery phase a small number of tourists come irregularly. The major attractions of the area are the untouched natural environment and the culture of the receiving community. The relationships between the tourists and the local population are personal in nature. The impact of tourism on the environment is negligible. Christaller holds that tourism is a special sector where it is specifically possible that formerly peripheral areas move into a central role due to their special natural and cultural endowments (Christaller W. 1963, p. 99).

In the phase of involvement the number of tourists gradually grows, their visits become regular, the tourism season begins. The host-tourist relationship remains mainly of a personal nature. There are more and more service providers, and the economic impacts of tourism become perceptible. The influence exerted on the environment is increasingly more significant.

The number of tourists considerably increases in the phase of the development – they outnumber the local population from time to time. (Foreign) investors arrive from outside the region. The environmental load increases to a significant extent and the infrastructure serving the tourists becomes overloaded in certain periods.

The phase of consolidation brings a decreasing growth in the number of tourists, the economic impact is outstanding, and the area may develop a dependence on tourism. The oversized visitor turnover becomes burdensome for those not involved in tourism.

The number of tourists reaches its maximum in the phase of stagnation. The negative economic, social and environmental impacts of tourism are obvious. The original natural and cultural attractions are replaced by artificially established ones.

In the decline/revival phase, the host location may become obsolete in the course of decline, losing its main markets; however, the visitor turnover of the area can grow again or can obtain a desirable level through implementing a well-considered tourism development strategy and establishing new, artificial attractions (Butler R. V. 1980, pp. 5-12).

Perhaps the aptest characterisation of tourism-related models may be found in Morley's article "What is Tourism? Definitions, Concepts and Characteristics":

„The advantage of this model, as opposed to other models is... that it synthesises a wider, than previous, spectrum of areas affecting and factors determining tourism” (Morley C.. 1990, p. 7).

The makers of tourism models strive to publicize (apparently) more precise ideas, including more factors, than their predecessors, and to explicate their appropriateness and relevance. In my opinion, models containing too many actors, factors, or institutions (e.g. Goeldner C. R. – Brent Richie. J. 2005, p. 14) can often be misinterpreted when taken out of their original context. It is more expedient to use models that have clear meanings for all representatives of academic areas dealing with tourism. In this way a common basis of knowledge on tourism can develop more easily.

1.2. The place of tourism research in the system of sciences

Although the scientific quest into tourism can be viewed as relatively new, a vast amount of literature is already available to researchers (Matias A. - Nijkamp P. – Neto P. 2007, p. 2). This is true, despite the fact that [i]t has been approached only in the past several decades, by the representatives of sociology, psychology, economy, anthropology, geography, management science, history and political science among others” (Michalkó G. - Rátz T. 2003, p. 747). This is in contrast to earlier times: “The basic concepts of tourism came into existence in the first half of the 19th century, the majority of the tourism-related scientific studies were realised on the basis of five main disciplines (economic science, sociology, psychology, geography and anthropology) in the 20th century” (Michalkó G. - Rátz T. 2003, p. 747).

“The practical side of tourism is more important, but recently its theoretical bases have become stronger. Researching it is difficult since tourists' activities are diverse: they travel, learn, experience, dive, collect, see, watch, criticise, make films and collect knowledge (Bodnár L. 2005, p. 45).

“Tourism is dominated by strategic and methodological (know-how) elements that are necessary but not sufficient conditions for the essential renewal of the practice” (Michalkó G. 2005, p. 22).

“The weight of tourism in the past does not predestine it yet to be compared with the results of mathematics, geography or medicine; however, on the basis of its fifty-year development it rightly has moved into the focus of scientific interest” (Michalkó G. 2005, p. 21).

Jafari and Aaser stated in their research conducted in 1988 on the topics of doctoral dissertations made in the United States and Canada that dissertations in the area of tourism fall within the scope of 15 disciplines.

According to the “lyre model” of Gábor Michalkó, the collection and systemisation of the knowledge elements of at least 20 disciplines is necessary for fruitful research outcomes in tourism. “Certain sciences monopolise dealing with tourism while others have not even discovered the numerous issues inherent in it” (Michalkó G. 2005, p. 16).

In spite of the large number of disciplines, tourism-related issues fall into groups defined by various topics, facts and methodologies (Pearce P. L. 1993, p. 26; Ballantyne R. - Packera J. - Axelsena M. 2009, p. 151).

Meethan, in his book “Tourism in Global Society,” considers tourism to be an eclectic area that lacks theory (Meethan, K. 2001).

To date, significant debates are taking place between the researchers of tourism concerning methodological issues and research directions. Mainly two approaches have gained strength. The first one views tourism as a distinct discipline while those belonging to the second one wish to answer tourism-related questions with the help of other disciplines (Xiao H. - Smith S. 2008, p. 63).

Jovovic, in his essay titled “The theory and methodology of tourismology,” advocated the establishment of a new “Tourism Science” (Tourismology). In his opinion the complex phenomenon of tourism cannot be studied within the framework of a single discipline. “Tourism Science” could be suitable for unifying the current research being made in numerous scientific areas. In his interpretation the current approach to tourism (i.e., tourism is an economic, geographical, social, etc. phenomenon) is erroneous, the fragmented nature of its research has hindered it so far and will continue to hinder the development of the theories of tourism in the future (Jovicic Z. 1988, p. 3).

One cannot expect the studies of tourism to be properly focused and comprehensive as long as there are no general theoretical models and ideas (Rogozinski K. 1985, p. 10).

Tourism as an independent discipline could define those frameworks and tools that may lead to the scientific-level appearance of tourism-related knowledge, and the representatives of the new knowledge could create the conditions of the new discipline’s quality assurance via the network of scientific references (Xiao H. - Smith S. 2008, p. 64).

Authors advocating tourism as an independent discipline emphasise that there are many differences of opinion between experts dealing with tourism from distinct scientific areas due to their different definitional approaches (Xiao H. - Smith S. 2008, p. 65).

The situation is further complicated by the fact that tourism is also used in everyday language, it is diverse in terms of its semantic content, and it is not a properly defined concept. All these call for the realisation of the quality assurance of the tourism-related knowledge.

Tribe belongs to the group of researchers considering tourism to be an area of study. In his view the concept of tourism is different from concepts used in the area of physics, philosophy and economic science, whose description uses well-defined methods. Tour-

ism can be viewed as an area or areas of study rather than a system of analysis (Tribe J. 1997, p. 639).

First of all, the ideas concerning the interpretations of tourism should be clarified. For many people tourism is a kind of phenomenon related to the “outside world” that means visiting friends and relatives, relaxation and visiting distant lands (the 1st dimension of tourism = phenomenon). Second, the actors of academe have shown an increasing interest in tourism, and the theoretical bases concerning tourism have considerably expanded (The 2nd dimension of tourism = research). The third dimension is the growing interest of institutions of higher education towards launching programs in tourism (The 3rd dimension of tourism = education) (Tribe J. 1997, p. 640).

Other authors do not consider the formation of integrated theories and concepts of tourism to be important, they rather suggest interdisciplinary research that helps eliminate conceptual and methodological difficulties (Pearce P. L. 1993, p. 25; Williams S. (ed.) 2004, p. 6).

Although social sciences was making the phenomena of tourism a focus of study already in the 1970s, the question is still in dispute whether it is necessary to form conceptual and methodological ideas exclusively concerning this area. Pearce argues that the lack of significant tourism theories is tied to the relative youth of the science (Pearce P. L. 1993, p. 26).

Jafari argues for a more scientific approach to research than the current one. He calls for a platform across disciplines that could contribute to the development of generally accepted theories and ideas (Jafari J. 1990, p. 38).

To date, relatively few interdisciplinary research studies are known in the area of tourism. One, however, dealt with the elaboration of the definition of tourism. Morley strove to set up a model that is dynamic and multidimensional and thus can make the complexity and system of relations of tourism more understandable (Morley C. 1990, p. 6).

Tourism-related research falls into two categories: intradisciplinary research that deals with an aspect of tourism within a specific discipline, or interdisciplinary approaches, where research is conducted by the cooperation of several scientific areas.

Although the internal debates of the specific disciplines concerning tourism have significantly contributed to the theory of tourism, the newly developed models, methods and approaches cannot be always interpreted by the representatives of other disciplines. The question arises: would the development of tourism to an independent discipline eliminate the debates about the disciplines?

Kuhn, in his study on science philosophy titled “The Structure of Scientific Revolutions,” considers tourism to be an area in its pre-paradigmatic phase before the scientific period, when wide non-agreement and constant debate about the basic issues arises (Chalmers A. 1982, p. 87).

The diverse and improperly systematized research, the lack of fundamental theoretical bases, the scarcity of guiding examples and models, as well as the debates aiming at identifying widely accepted methods are typical in the pre-paradigmatic phase. Kuhn basically suggests that the existence of the debates about the definitions of tourism verify its pre-paradigmatic phase.

Kuhn suggests that an independent disciplinary matrix should be created that includes tourism-related beliefs, methods, examples and models (Kuhn T. 2000, p. 52). The only problem with this is that the sciences dealing with tourism already possess an independent, moreover reasonably complicated, well-defined disciplinary matrix. As a result, it is difficult to carry out research across disciplines since they consist of incom-

parable or almost incomparable parts that often contradict each other in their approaches and that are based on distinct theoretical foundations.

Taking Kuhn's approach as a basis, it can be expected that tourism will continue being an area of research rather than an independent area of science until a group of researchers triggers the "scientific revolution of tourism," in which they overlook the disciplinary barriers created by the different areas of science and form their own disciplinary matrix, which will not be an easy task due to the diversity and distinct scientific approaches of the disciplines dealing with tourism (Cooper C. - Fletcher J. - Gilbert D. - Wanhill S. 1993, p. 2).

Hirst, in his study titled "Knowledge and curriculum: collection of philosophical studies" set out the conditions typical of independent disciplines (Tribe J. 1997, p. 643). These suggest that tourism cannot be regarded as an independent discipline at its level of development since its theoretical background is too diverse, the relevant research focuses on destinations, tourism multipliers, impacts, tourist motivation, etc. applying methods already in use by other sciences/disciplines. The concepts used in tourism are the products of other sciences/disciplines, and their use in tourism are basically adaptations. Tribe also highlighted the fact that a relatively widely accepted range of tourism-related ideas has not yet developed (Tribe J. 1997, p. 642).

Cotgrove expressed his concerns in relation to the scientific development of tourism, since he considers the marked differences between the researchers' values to be a significant hindering factor. While some studies have emphasised the influences primarily exerted on economic growth, others focus on the sustainability of (natural) resources necessary (for tourism) (Cotgrove S. 1983, p. 51).

In Bernstein's opinion, tourism is treated essentially in the same way as other social sciences that are often regarded as primitive and undeveloped by the exponents of natural and social sciences. Since scientific standards cannot be used in all forms of knowledge, it is wrong to speak of the pre-paradigmatic phase of tourism. Bernstein finds the categorisation as natural and social sciences to be mistaken since, in his view, there is no sharp demarcation line between natural and social sciences, and thus it is not correct to split knowledge into "scientific" and "not scientific" categories. Bernstein suggests that the diversity of disciplines focusing on tourism contributes to better understanding and it is unnecessary that those dealing with tourism force themselves to use the methods applied in natural science (Bernstein R. 1983, p. 71).

Other approaches suggest that, although tourism cannot be seen as an independent discipline, it can become one, using appropriate frameworks. The most important is that the tourism-related knowledge comes from a scientific/academic source, that is, quality has a paramount significance that can be ensured by way of continuous monitoring (Gunn, C. 1987, p. 5). Due to the application of scientific methods, many phenomena have to be deliberately excluded from tourism-related studies.

Hirst emphasises the significance of the "study areas" that, in his view, cannot be regarded as either disciplines nor parts of disciplines because they are not coherent enough and do not possess the required properties, such as systematically collected and organised knowledge, well-defined concepts and methodology that are typical of those disciplines (Hirst P. 1965, p. 128).

The approach of the "knowledge areas" is completely different from the disciplines, they typically concentrate around a given phenomenon, process, such as tourism, home construction, or engineering tasks. Solving the problems posed by the "knowledge areas" requires the joint effort of the representatives of several disciplines (Hirst P. 1993, p. 185). Many researchers have called tourism an "area" since the publication of Hirst's ideas.

Henkel states that disciplines are well-defined group of theories, concepts and methods, whereas “knowledge areas” mean the totality of all knowledge necessary to understand a specific phenomenon, topic (Henkel M. 1988, p. 5.).

Gunn identified those disciplines which, in his opinion, contribute most to the development of the academic literature on tourism (marketing, geography, anthropology, behavioural science, historical science, political sciences, planning and future research).

“Tourism-related knowledge is expanding by way of a wide range of tools. Those who deal with tourism obtain knowledge primarily through their diligence, secondarily through their expertise, thirdly with the help of their intuition. The fourth way is scientific study.” (Gunn, C. 1987, p. 3).

Jafari and Brent Richie interpret tourism as an “area” in their model, highlighting its multidisciplinary nature (Cooper C. - Fletcher J. - Gilbert D. - Wanhill S. 1993, p. 2). They base the knowledge in the area of tourism from the courses offered in tourism (inner circle) and the related disciplines / departments (outer circle).

The interpretation of their model is made complicated by the complexity of the outer circle, including disciplines and departments in the same model. Separating the inner circle would have been expedient, as that contains the potential sources of obtaining knowledge, while the outer circle would include exclusively the areas to be surveyed. According to Tribe, transport/transportation and agriculture are not disciplines; placing marketing in the outer circle is also debatable as it is based on the practice of several discipline (economic sciences, sociology and psychology) (Tribe J. 1997, p. 649).

In spite of its practical nature, the model raises the necessity of separating studies/research in the area of tourism. Tourism marketing, tourism corporate strategy, tourism law and tourism management belong to the group of tourism-related business studies. The “non-commercial” areas comprise the studying of the tourism-related prejudices and load-bearing capacities.

The clear separation of the two groups is not in all cases simple. Tribe’s model was created by fine tuning Jafari and Brent Richie’s ideas. The outer circle displays disciplines that, due to their developed methodology, contribute to answering the questions of tourism. Ring “k” (knowledge) of the model is the area where knowledge is created in the form of tourism-related theories and concepts (**Figure 1.7**).

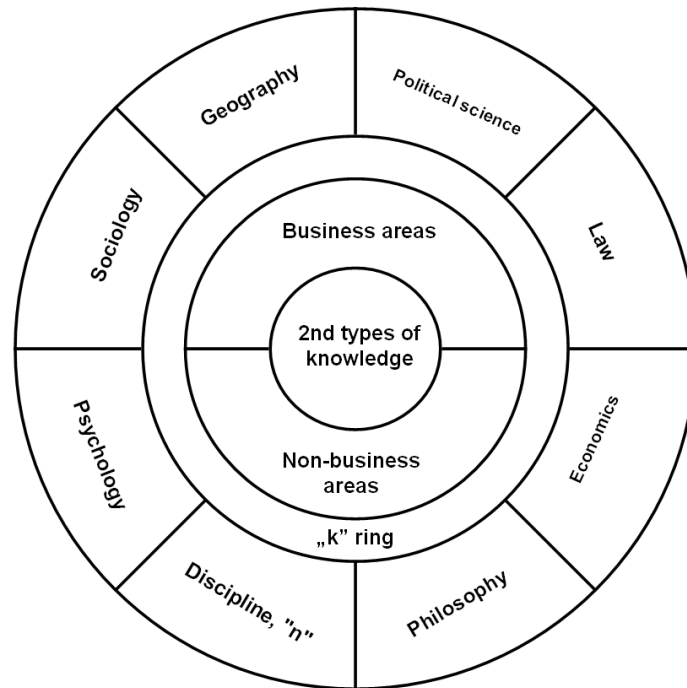


Figure 1.7: “Knowledge” formation in tourism

Source: Tribe J. 1997, p. 650

As an example, when economists, during their tourism-related research, created the tourism multipliers, recognising that the tourists’ expenditures cannot be limited to the area of accommodation and hospitality, they influenced directly and indirectly a broad spectrum of the economy (Henry E. W. – Deane B. 1997, p. 536; Hüttl A. - Probáld Á. 2000, p. 8).

Knowledge created in this manner in the area of tourism can be regarded as multidisciplinary. Ring “k” is the place where the disciplines meet and where new approaches suitable for studying tourism are developed. The conceptual frameworks based on the different disciplines and the common methodology come into existence.

Specific tourism-related approaches, such as tourism marketing, tourism finances and tourism entrepreneurship are created as a result of the collaboration of practitioners and academic experts (**Table 1.3**).

The majority of the tourism-related knowledge results from the replies to questions arising in practice, and most of the replies are interdisciplinary in nature (Holden A. 2006, p. 1). Unfortunately, many of the experts studying tourism rely on their intuitions and previous experience instead of scientific research results (Xiao H. - Smith S. 2007, p. 312).

A common phenomenon is that the tourism sectors solve the problems (e. g. setting up an airline ticket reservation system) on their own. In this case the knowledge comes from outside the disciplines, the enterprises do not build upon the knowledge of higher institutions or research institutes (knowledge of the second type).

A frequent problem in the area of tourism is that the results are not reviewed, that is, their quality is not assured. Business itself carries out the assessment of the studies and task solutions focusing on aspects of economic returns and efficiency. The nature of assignments and the expected quality are fundamentally dependent upon the individual customers (Tribe J. 1997, p. 654; Michalkó G. 2005, p. 22).

Table 1.3:

Possible approaches to tourism research

	Nature of approach	Theory of knowledge	Example
Scientific life	Multidisciplinary	Ensured by one discipline	Tourism multiplier
	General interdisciplinary	Based on the agreement of many disciplines	Destination bearing capacity
	Business interdisciplinary	Originates from a particular discipline	Tourism marketing
Practical life	Extradisciplinary	Ensured by practical life The ability of the sector to individually solve particular problems	Viability studies

Source: Tribe J. 1997, p. 654

A series of studies have come to the conclusion that tourism journals have only a limited effect on the spread of knowledge, and that expert practitioners are specific barriers to the spread of the most up-to-date knowledge (Xiao H. - Smith S. 2007, p. 312). “In tourism it is widely said that many people strive to publish knowledge coming from their own subjective opinion. This sort of “opinion knowledge” may be refutable and can be discredited even by the simplest surveys” (Michalkó G. 2005, p. 22).

Leiper imagined the research of tourism in multidisciplinary and interdisciplinary frameworks. A study is multidisciplinary if it is defined by one discipline but the information necessary for the research are from several areas, while interdisciplinary research is the joint product of several disciplines (Leiper N. 1979, p. 28). In his view “tourism can only manage to get through the state of fragmentation if its basic values are defined in the framework of a new discipline, particularly in the area of scientific study” (Leiper N. 1981, p. 71-73). The dimensions of tourism in his model are tourists, sending areas, travel, destination and tourism sectors (**Figure 1.8**).

Today, the use of a wide spectrum of theoretical approaches is typical in tourism research. A common platform of theories, ideas and models would foster the expansion of the tourism-related scientific knowledge. The aim is not to formulate a general science philosophy approach, it is rather to have the fact accepted that the various research problems demand different approaches in the philosophy of science.

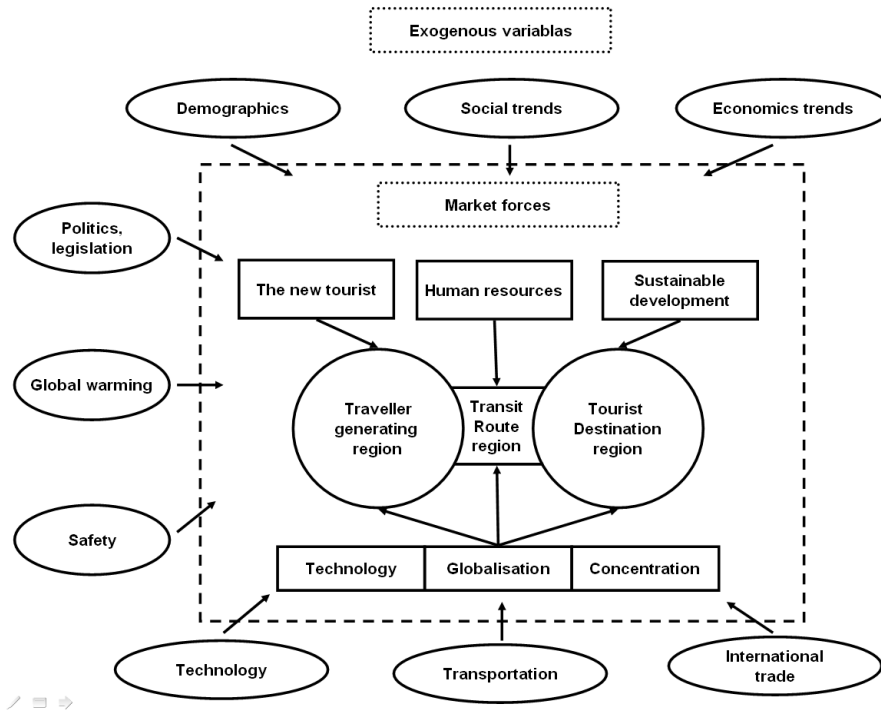


Figure 1.8: The system of tourism
Source: Leiper N. 198, p. 75

Jafari, in his article titled “The basis of tourism education”, identifies four research platforms frequently referred to in the domestic literature as well (Table 1.4) (Jafari J. 1990, p. 39). Representatives of the “cognition-based school of thought” imagine the scientific research of tourism within an independent discipline, the way to their formation leads through rather interdisciplinary than multidisciplinary approaches.

Members of the advocating school of thought typically operate in the areas of economics; they view tourism as a tool of economic policy (Liu A. 2006, p. 880), in their opinion the impact of tourism on economic revitalisation is above average (GKI Gazdaságkutató Rt. 2005, p. 44).

Most sceptics deal with environmental issues, they attempt to quantify factors that are difficult to measure with market methods, so that the impacts of tourism are not defined exclusively in the light of direct economic costs and benefits (Godbey G. C. 2001). They can accept the phenomenon of tourism only in a way that its negative impacts on the environment and the host community are minimised while visitors’ satisfaction and long-term economic growth are maintained (Lane B. 2005, p. 13). One of the first representatives is Jost Krippendorf, whose work led to deeper study of the interaction between development and tourism in the tourism literature (Puczko L. - Rátz T. - Lengyel M. 1999, p. 1).

Table 1.4:

Platforms of tourism-research

Advocatory approach	Sceptical approach
<p>Its representatives highlight advantages primarily coming from tourism:</p> <ul style="list-style-type: none"> • tourism generates significant incomes, • the foreign currency income of countries involved grows due to foreign tourists, • it creates jobs, tourism is labour-intensive, • it may contribute to the development of underdeveloped areas, • to the conservation of natural and built environment, • to revive traditions, • it has a positive impact, due the multiplier effect, on sectors directly not participating in tourism. 	<p>Its representatives highlight disadvantages primarily coming from tourism:</p> <ul style="list-style-type: none"> • tourism provides, often seasonal, jobs mainly for people having low qualifications, • it contributes to the destruction of natural and built environment, • the host community's culture commercialises, • the relationships between hosts and tourists become formal, • it leads to deviant social behaviour.
Adaptive approach	Cognition-based approach
<p>Its representatives suggest that those tourism forms should be developed that have no adverse effects, that is:</p> <ul style="list-style-type: none"> • they do not contribute to the destruction of natural and built environment, • they respect the host population's interests, • they take their habits and values into account. 	<p>Its representatives place tourism on scientific foundations,</p> <ul style="list-style-type: none"> • their research focus on tourism "as a whole", • at the same time they keep close relationships with the representatives of other approaches.

Source: Jafari J. 1990, p. 22

The adaptive school of thought focuses on those forms of the alternative types of tourism that do not exert adverse effects on the host regions and communities. The cognition-based school of thought aim to adopt a systems approach to the phenomenon of tourism.

At the beginning, its exponents generally included teachers and researchers of educational institutions, who had followed another approach, and now set the aim to adopt a systems approach to the phenomenon, while maintaining a close relationship with the representatives of other views.

Echtner and Jamal suggests that increasing the recognition of tourism research requires holistic integrated research, the creation of theoretical foundations, an interdisciplinary approach, a clearly explained theory and methodology and the application of qualitative and quantitative tools (**Figure 1.9**).

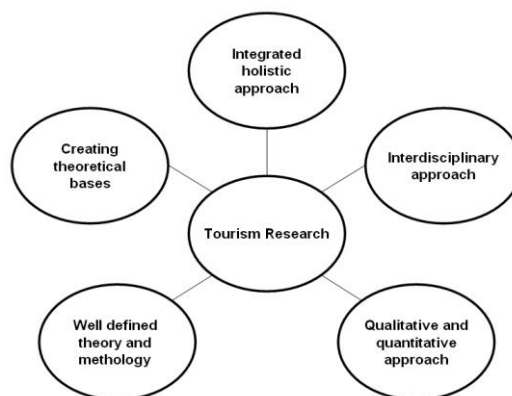


Figure 1.9: Factors supporting the development of tourism research

Source: Echtner C. M.- Jamal T. B. 1997, p. 880

Although the development of tourism as a distinct discipline would be desirable, several practical questions arise concerning this process. Where will the position of this new scientific area be? Should it be among social sciences or should its business side be emphasised, thus should it rather be a business science? In what way should its interdisciplinary character be realized in teaching tourism? Should the participants of teaching programs learn tourism through the approach of a discipline and then come across other approaches, or should their teaching should be arranged on an interdisciplinary basis from the beginning?

The processes of the tourism research in the past decades demonstrate that, although tourism cannot be regarded as an independent discipline in its current form, there have been steps taken to this end. Numerous books and scientific journals have been published on the phenomenon of tourism, scientific associations have started their work and higher education institutions have launched courses in tourism. Tourism has the chance to become an independent discipline, in spite of the drawbacks due to its multidisciplinary nature. It requires further interdisciplinary and cross-disciplinary co-operations that may enforce the partial breakdown and reconsideration of the boundaries of disciplines.

1.3. Methodological issues

My first aim during my empirical research is discovering the regional disparities of tourism. I prepared the analyses using the regional database of the Hungarian Central Statistical Office (HCSO), which contains the data of 3,174 settlements in 2007. I prepared the micro-regional, county, regional and national analyses by aggregating settlement data.

I mapped up the regional disparities of the tourism of Hungary and Northern Hungary by analysing the settlement and micro-regional concentration of tourism performance indicators (accommodation nights, foreign and domestic visitor turnover).

The change in the number of settlements causes a methodological problem during settlement surveys (**Table 1.5**), and thus I chose one base year in order to have a steady data set. In addition, I rely on the data of only those settlements where the database contained data relating the population in 2007, reducing the number of elements of my settlement survey to 3152.

*Table 1.5:
Number of settlements between 1996 and 2008*

Year	Number of settlements	Year	Number of settlements
1990	3 091	2000	3 157
1991	3 095	2001	3 157
1992	3 113	2002	3 157
1993	3 129	2003	3 167
1994	3 135	2004	3 167
1995	3 147	2005	3 167
1996	3 148	2006	3 167
1997	3 149	2007	3 174
1998	3 153	2008	3 174

Source: Population registration leaflets 2008

The HCSO did not have any record of accommodation nights in 2428 settlements in Hungary in 2007. A large number of units of analysis with 0 value strongly distorts the

results when computing correlation coefficients and setting up linear regression models. Therefore, I analyse the tourism characteristics of only the 725 settlements in which there is statistically significant tourism.

The problem of creating class intervals emerged when summing up the tourism performance indices of settlements and micro-regions. The class interval types, known from the literature (equi-interval, containing same number of elements, comprising same quantity, relating to average values) (Nemes, 2005, p. 16) cannot be used due to the logarithmic distribution; therefore I defined the class intervals on the basis of the distribution curve, on an intuitive basis, in a way such that meaning can be attributed to them.

In the second chapter of my work I describe the tourism performances of Northern Hungary and its counties with time-series analyses. The time horizon of the analyses is the period between 1990 and 2007 and, in the case of several indicators, it is between 1999 and 2007 due to the lack of data, which differs from the period used in other parts of this work (e.g. during the shift-share analysis). However, this gives a more comprehensive understanding of the main tourism trends of the region.

In the third chapter I analyse the tourism of the micro-regions in Northern Hungary using shift-share analysis, which is a relatively rarely used method in Hungary (L. - Kovács B. - Tóth G. 2009 p. 22). Originally, the method was developed to separate the regional and sectoral factors of economic growth; it has been used only in a few cases in the Hungarian literature. It has been used for analysing long-term regional development in the United States, in Hungary it has been in use since the 1970s. The method is based on double standardisation; the calculations require data collected according to regional and sectoral dimensions, where the “sector” dimension means economic sectors, age groups and settlement size groups. The method helps analyse the components of the growth of income (Nemes N. J. - Jakobi. Á. - Németh N. 2001, p. 886).

The shift-share analysis groups the components of the growth of the analysed phenomena into three categories:

- The “total effect” (S_i) is the difference of a region’s performance from the value that would be expected if the national average change were taken as a basis (e.g. the “total effect” shows how much the change, from 2000 to 2007, in the number of the accommodation nights spent in the regions differ from the value that would be characteristic if the value of the national change were taken as a basis)
- The “regional effect” (S_r) means, in the case of accommodation categories (e.g. hotels), how much the number of accommodation nights of the hotels differ from the value that would be expected at an average dynamics of the region. We get the so called “regional effect”, which means the advantages and disadvantages of the region, by summing up the values relating to the accommodation categories.
- The “sectoral effect” (S_a) is the difference of the total effect (S_i) and the regional effect (S_r), which can be interpreted as the structural advantages and disadvantages of the accommodation supply of tourism.

The results of the shift-share analysis are suitable for display on map. Eight categories can be set up on the basis of the (positive or negative) sign of the “total”, “regional” and “sectoral” effects, as well as the size of the “total”, “regional” and “sectoral” factors measured against each other, as shown in Table 1.6.

In categories 1-4 the values of the “total effect” of regional units are positive, in categories 5-8 they are negative. In categories 1, 5 and 7 the “regional effect” is greater in absolute value, in groups 2, 4, 6 and 8 it is smaller than the “sectoral effect” that embodies structural factors.

The colour intensity of the maps are independent of the size of the effects’ absolute values. The particular categories can be divided into four main groups on the basis of their favourable or unfavourable perceptions:

- in categories 1 and 2 all “sectoral”, regional” and total effects are positive;
- in categories 3 and 4 the “sectoral” or the “regional” effect is positive and the “total” effect is also positive,
- in categories 5 and 6 the “sectoral” or the “regional” effect is positive but the “total” effect is negative,
- in categories 7 and 8 all “sectoral”, “regional” and “total effects” are negative.

In my work I analyse the growth factors of tourism with the help of linear correlation coefficients, using the indicators of tourism supply, the social and economic situation of settlements, as well as the social conditions of the population. I prepared my analyses on the basis of settlement and micro-regional database relating to Hungary and Northern Hungary.

The relationships revealed by way of the linear correlation coefficients acts as the basis for the regression calculations in later chapters of this study, as well as for the principal component analysis. In my work I concentrated on the reliability of the revealed relationships, therefore I used a 95% level of significance in each case.

Table 1.6:

Categories of the shift-share analysis

No.	Category	Total effect (Si)	Regional effect (Sr)	Sectoral effect (Sa)	Relationship between the size of variables
1.	Greater than average change Positive regional factor	+	+	+	$Sr > Sa$
2.	Positive structural factor				$Sr < Sa$
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	-	-	-	$Sr > Sa$
8.	Negative structural factor				$Sr < Sa$

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

In the course of my correlation analyses I used Pearson’s correlation coefficient, which can be interpreted as a kind of inequality indicator as well (Nemes-Nagy J. (ed.) 2005, p. 138). It ranges between -1 and +1, the relationship is linear for the extreme values, -1 refers to inverse while +1 refers to direct proportion. In all other cases the relationship between the variable is stochastic, with its strength depending on the size of the correlation coefficient: the indicator, in absolute value, means a weak relationship below 0.3, medium strong between 0.3 and 0.7 and strong above 0.7. The direction of the relationship is determined by the sign of the coefficient: the positive sign refers to co-movement while the negative one relates to movement in opposite directions. The use of the correlation coefficients is limited by the fact that it quantifies the strength of relationship between the variables, it is not suitable for the exploration of the causal relationships between the phenomena; however, it helps differentiate those indicators that will be useful in setting up models enabling the exploration of deeper relationships.

Linear regression models are also suitable to learn the relationships between economic and social (regional) phenomena. In this study I prepared my models describing visitor turnover for Hungary and Northern Hungary using settlement and micro-regional data. I pay attention to avoiding the phenomenon of multicollinearity when setting up the models, that is, each correlation coefficient between the explanatory variables has to be lower than 0.7 (Sajtos L. - Mitev A. 2007, p. 219).

The determination coefficient of the linear regression models show to what extent the independent variables can explain the evolution of the values of the dependent variables (0.7-0.8 are regarded as good results in the area of social sciences). In addition to the determination coefficient, the explanatory power of the independent variables has a special significance. It is reasonable to omit independent variables having insignificant explanatory power.

The performance indicators of tourism (number of visitors, number of visitor nights, also their specific values) may be associated with a multitude of economic and social phenomena. Using overly many indicators may overshadow important aspects, and may make it difficult to draw clear conclusions. Therefore, it is reasonable to decrease the number of indicators, one tool of which is principal component analysis, which belongs to the family of factor-extraction methods (Sajtos L. - Mitev A. 2007, p. 247; Kóródi M. - Dudás P. 2005, p. 454).

Principal component analysis compresses the information content of the indicators into fictional variables without significant information loss. According to the basic hypothesis of the factor analysis (principal component analysis), all standardized variables can be depicted as a linear combination of factors, i.e., fictional variables possessing independent meaning. The task of the factor analysis is to provide the best possible estimate for factor-values and factor-weights, starting from the values of the original variables.

“Principal component analysis reduces the number of variables at minimum information loss, thus its use is reasonable when the number of variables is high. It is characteristic of the method that each component explains the variance of the observed variables in the order of eigenvalue, where the first factor contributes the most while the rest of the factors contribute in a descending order to the total variance” (Sajtos L. - Mitev A. 2007, p. 253).

While in the case of regression analysis the smallest possible autocorrelation of the explanatory variables is desirable, it is reasonable to use inter-related variables in the course of principal component analysis. It may occur that variables not correlating with the system are also part of the analysis; however, the number of factors cannot be reduced beyond a point. An overly strong (deterministic) relationship is not acceptable among the variables either, since in this way the information content of the variables involved in the research essentially overlaps (Nagy Z. 2007, p. 99).

The factors of the principal component analysis are uncorrelated with one another, and contain those elements of the indicator system that are in a relatively close stochastic relationship with one another (Beluszki P. - Sikos T. 1982, p. 143).

The first step of principal component analysis is the collection of the indicators that can be brought into connection with Hungary's visitor turnover. Based on the examination of the correlation coefficients and the experiences of the linear regression models, I identify the indicators to be applied.

I only calculate with the specific values of the indicators during the principal component analysis. Although the literature often refers to analyses using both specific and absolute values, it is also reasonable just one type of indicator.

The principal component analyses found in the literature are often based on data series of different years due to the lack of data. “This kind of data use is permissible within an interval of 1-3 years” (Nemes N. J. (ed.) 2005, p. 189).

HCSO collects some of the indicators according to a pre-determined schedule every few years instead of on a yearly basis. Since I was unable to get hold of many indicators from 2007 (e.g. total tax or income per inhabitant), I calculate with the most up-to-date data available (from 2004 and 2005) in the case of the missing indicators.

It is important to strive to avoid the use of variables that can be calculated from each other or that are too closely linked to one another (e.g. personal income and personal income tax) in the course of the principal component analysis; in such a case, omitting one of the indicators is reasonable.

A frequent mistake of those unfamiliar with the limitations of the method is adding the values of the factors, which should be avoided because the principal components are uncorrelated with one another (Nemes N. J. (ed.) 2005, p. 190).

In phases following the principal component analysis I test the usability of the indicators. A correlation matrix contributes to the selection of indicators that are correlated with each other in pairs; however, the degree of correlation must not be too high (in this case the variables would merge one factor) (Sajtos L. - Mitev A. 2007, p. 254).

Table 1.7:
Evaluation of the KMO test results

$0,9 \leq \text{KMO}$	excellent
$0,8 \leq \text{KMO} < 0,9$	very good
$0,7 \leq \text{KMO} < 0,8$	sufficient
$0,6 \leq \text{KMO} < 0,7$	medium
$0,5 \leq \text{KMO} < 0,6$	weak
$0 \leq \text{KMO} < 0,5$	unacceptable

Source: Sajtos L. - Mitev A. 2007, p. 258

The values of the Kaiser-Meyer-Olkin (KMO) indicator range between 0 and 1 and refer to the uncorrelatedness of the variables. The KMO value of the indicator-structure said to be ideal is close to 1 (**Table 1.7**).

Principal analysis gives the researcher great freedom; therefore there are no two identical analyses, even among those prepared for the same purpose. It is the researcher’s task to determine the number of factors, the maximum of which is the initial amount of the variables. The number of the principal components can be determined in advance on the basis of an *a priori* criterion (Sajtos L. - Mitev A. 2007, p. 259); however, it is common that the factors are selected on the basis of the Sree-Plot Chart and the Kaiser criterion.

The Kaiser criterion suggests that those factors should be left in the analysis with an eigenvalue greater than one, otherwise the factor does not bear the information content of even one variable. “Some researchers argue that the Kaiser criterion should be applied if the number of the variables is between 20 and 50” (Sajtos L. - Mitev A. 2007, p. 260).

The (unrotated) component matrix contains the correlation values between the original variables and the given factor, its values range between -1 and 1. One problem, however, is that the variables may correlate with a factor that is actually not related. Rotation helps solve this problem (Sajtos L. - Mitev A. 2007, p. 264). Two main groups of rotation methods are known (orthogonal rotation methods and non-orthogonal rotation methods) (**Table. 1.8**) (Sajtos L. - Mitev A. 2007, p. 267). In my research I use the

Varimax rotation method, most often applied in the literature, to maximize the explained variance (Nemes N. J. (ed.) 2005, p. 188).

Table 1.8:

Factor rotation procedures

Orthogonal rotation methods			Non-orthogonal rotation methods	
Varimax	Quartimax	Equimax	Direct Oblimin	Promax
Maximises the variance explained by the factors and distributes more proportionately among them.	Reduces the number of factors necessary for “explaining” one variable.	A combination of the Varimax and Quartimax procedures, which reduces the number of high factor-number variables per factor and also reduces the number of factors necessary for interpreting one variable.	Factors received as a result of non-orthogonal rotation are not uncorrelated, however, they are easier to identify in certain cases. (Ketskeméty L. - Izsó L. 1996)	

Source: Sajtos L. - Mitev A. 2007, p. 267

The rotated component matrix contains the factor weights belonging to the indicators. A minimum expectation associated with a factor weight is that its absolute value be at least 0.3, and indicators having a weight of more than 0.5 are regarded as significant.

The so-called communality of the variables, which shows how great a part of the variable’s variance is explained by the total factor, should also be considered in the course of the analysis. The value of communality should be at least 0.5, otherwise the variable does not have enough explanatory power (Sajtos L. - Mitev A. 2007, p. 270).

It follows from the nature of the method that the researchers have great freedom when interpreting the results. Knowledge of similar surveys, intuition and creativity are necessary for the appropriate, professional evaluation of the results. The factors (principal components) are named with the help of the variable in them; a factor structure is produced, as a result of the appropriate selection of the rules of the principal component analysis and the preparation of several alternatives, that clearly distinguishes among meaningful groups of variables. When naming the factors, it is important that they contain the meanings of all included variables (Sajtos L. - Mitev A. 2007, p. 274).

An advantage of principal component analysis is that it makes it possible to create variables independent of one another that can serve as a basis for further multi-factor analyses (regression models, cluster analyses). In my study I test the influence on Hungary’s visitor turnover (domestic/foreign/total) using linear regression models based on the eigenvalues of principal component analysis.

In my research I also aim at exploring the relationships between the basic infrastructure of settlements and micro-regions, as well as tourism. I test the closeness of the relationships using the Bennett method, often used in regional analyses, which is based on the Guttman scale, specifically known from the sociological surveys. The Guttman scale was developed by Louis Guttman in the 1950s. Its essence is that the factors taken into account (e.g. the existence of certain services in a settlement) prove to be an indicator of varying strength of the dependent variable (e.g. role of the settlement, attracting power, level of development). It can be formulated as a hypothesis in the case of services that any service available in a settlement can be found, with great probability, in a more developed settlement as well (Nemes N. J. (ed.) 2005, p. 33).

The Guttman scale, after setting up the order according to services, outlines the settlement hierarchy of micro-regions; the columns from left to right contain services available in progressively fewer settlements, while the rows from up to down show settlements endowed with progressively fewer services (**Table 1.9**)

Table 1.9:

Example to the Guttman scale of services

Settlements	1st most frequent service	2nd most frequent service	3rd most frequent service	4th most frequent service	5th most frequent service	6th most frequent service
settlement having the most services	1	1	1	1	1	1
settlement having the 2nd most services	1	1	1	1		
settlement having the 3rd most services	1	1		1		
settlement having the 4th most services	1	1	1			
settlement having the 5th most services	1	1	1			
settlement having the 6th most services	1				1	
settlement having the 7th most services	1					

Source: Own work

Empirical surveys underpin that sooner or later the missing services will appear in the gaps observed along the arch, while the still existing services (e.g. an industrial goods store in a peripheral settlement with small and declining population) located away from the arch will be very likely to disappear (Nemes N. J. (ed.) 2005, p. 41).

An everyday problem of regional analyses is that they attempt to compare regions of more or less different significance (in terms of size, population, economic role, etc.). When setting up the Guttman scale for micro-regions the comparison is made difficult also by the fact that they are territorial units made up of different numbers of settlements. To solve the problem I standardized the results of the Guttman scales using the Bennett method. First, I define where a particular type of service is located in the highest proportion, expressed in percentage of the settlements of micro-regions; next I take the performance of the selected micro-region as 100% and then, related to this figure, I calculate in percentage form the endowment-level of the rest of the micro-regions. A value will be generated by micro-regions and services, as a result of the calculations, the unweighted arithmetic average of which is the Bennett-indicator itself (**Table 1.10**). The value of the complex indicator may fall between 0 and 100%, although the extreme values are very rare in practice (Nemes N. J. (ed.) 2005, p. 183).

Table 1.10:

Example to the application of the Bennett method

Settlements	Service 1	Service 2	Service 3	Service 4	Bennett indicator (average)
Micro-region 1	100%	100%	100%	80%	95%
Micro-region 2	80%	80%	80%	100%	85%
Micro-region 3	60%	50%	50%	60%	55%

Source: Own work

In the fourth chapter I assess the effects of recent tourism developments, group the micro-regions of the region using the results of the factor analysis, and then I set up tourism goals using the findings of the surveys.

I examine the change in the concentration of guest nights between 2000 and 2007, illustrating the shifts using Lorenz curves. The Lorenz curve is a possible tool of the representation of regional disparities, which represents the cumulative relative sum of the values (z_i) as a function of cumulative relative frequencies (g_i). The size of the area between the diagonal and the curve indicates the degree of concentration. The interpretation of the results is complicated when the curves intersect because it refers to the different distribution of the analysed indicators.

Changes in concentration must be followed using other methods, due to the above-mentioned problems. In order to analyze the concentration of guest nights I use the Hirschman-Herfindal concentration index. where x_i is a regional feature given in natural measure.

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

The value range of the index is $1/n \leq K \leq 1$, where n is the number of micro-regions (this indicates considerable concentration over 0.6) (Tóth G. 2009, p. 1044).

$$h = \frac{1}{2} \sum_{i=1}^n |x_i - f_i|$$

I examine the regional disparities of the tourism performances using the Hoover index as well. This indicator expresses what percentage of a socioeconomic phenomenon (e.g. visitor turnover) should be re-allocated among regional units so that its regional distribution is equal to its other feature (e.g. number of inhabitants).

The value range of the indicator is $0 \leq h \leq 100$ where x_i and f_i are distribution ratios, for which the followings are true: $\sum_{i=1}^n x_i = 100$ and $\sum_{i=1}^n f_i = 100$ (Nemes N. J. (ed.) 2005, p. 112).

The apparent unchangedness of concentration may overshadow significant shifts as well, provided the positive and negative performance change of similar regional units offset each other in terms of number and weight, Therefore, apart from the changes of concentration, it is vital to map the shifts as well, using transition matrixes (**Table 1.11**).

Table 1.11:

Example to the transition matrix (t_0-t_1)

	t ₁			
Indicator	Category 1	Category 2	Category 3	Category 4
t ₀				
Category 1	100%			
Category 2	5%	90%	5%	
Category 3		15%	80%	5%
Category 4		10%	10%	80%

Source: Own work

The transitional matrixes classify the territorial units into categories on the basis of indicators analyzed (e.g. number of visitor nights); its cells show what chance a territorial unit has of staying in the original category at time-point t_1 (matrix diagonal), and whether the direction of the shift from time-point t_0 is positive (above diagonal) or negative (below diagonal) from the original category.

If there are many territorial units it may be necessary to select those with similar characteristics and classify them into categories. The basis of classification is the eigenvalue of the factors, using the results of the principal component analysis,.

Cluster analysis is a wide-spread method of multi-dimensional classification based on calculating the distance between points. The method is not overly complicated, however, it is used exclusively with the help of computer software because of the significant amount of calculations. One limitation of the method is that no conclusion can be drawn regarding the statistical universe on the basis of the sample; and that the classification

may lead to different results depending on the chosen procedure. It might be a problem that the procedure creates groups even if there are no similarities in the data. Following from the above-listed facts, the risk of formulating professionally unfounded statements is high.

First we analyse outlier data when using the method, and then we standardise our variables due to the different data scales. This step is omitted in my survey because the eigenvalues of the factors of the principal component analysis are already standardized variables.

The similarity and distance matrixes serve as starting points for the cluster algorithms. The applied cluster procedures can be hierarchical and non-hierarchical. The hierarchical type can be divided into sub-types based on agglomeration or division, depending on whether we order units into a larger cluster or break down the set containing all elements into smaller groups. The literature refers most frequently to the agglomerative procedure (Sajtos L. - Mitev A. 2007, p. 295). Due to the small number of dimensions (two), I use the method based on the minimum distance and the nearest neighbour.

Similarly to factor analysis, the results of cluster analysis are heavily dependent on the professional preparedness of the researcher. He or she has to decide about the number of clusters. The decision may take into account theoretical and practical considerations, based on an agglomerative scheme (dendogram) with the help of representation of coefficients, or it may be based on the relative size of clusters. I identify the micro-regions belonging into one group, capitalising on my knowledge associated with the economic situation and tourism of micro-regions, and on the basis of the agglomeration scheme.

2. REGIONAL TOURISM DISPARITIES IN HUNGARY AND NORTHERN HUNGARY

In this first part of the empirical survey my aim is to determine the regional tourism differences and disparities typical in Hungary, and especially in Northern Hungary..

According to my hypotheses:

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

H2: There are significant differences in the tourism performance of Northern Hungary'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 prepared the analyses necessary to verify my hypotheses using the T-Star database of the Hungarian Central Statistical Office (HCSO). I made micro-regional, county and regional analyses by aggregating the settlement indicators, using specific data in most cases, which became appropriate for comparison in spite of the diversity of the settlement and regional dimensions.

2.1. Tourism disparities at settlement level in Hungary

In order to understand the regional disparities of tourism I hold it necessary to learn the characteristics of the settlement-level data series. I illustrate the distribution of guest nights on a logarithmic scale, because the outstanding performance of Budapest and the low performance of many settlements significantly undermine the our ability to evaluate settlement data.

The distribution of the settlement data values of guest nights approximately follows a normal distribution (**Figure 2.1**), that is, the number of guest nights, similarly to those of incomes (Nemes, 2005, p. 24), display a lognormal distribution. Only settlements of approximately 1,000 guest nights are over-represented compared to the normal distribution curve.

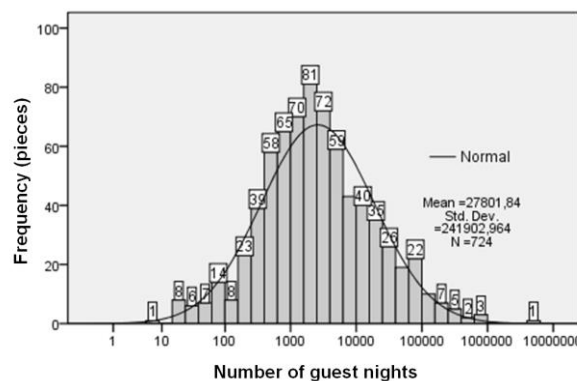


Figure 2.1: Number of guest nights in Hungary's settlements (2007)

Source: Own work based on HCSO data

The distribution of the number of domestic guest nights is similar to the curve of the total guest night values, with the difference that in some settlements (11) only foreign visitor turnover exists. Budapest well approximates the normal distribution curve (**Figure 2.2**).

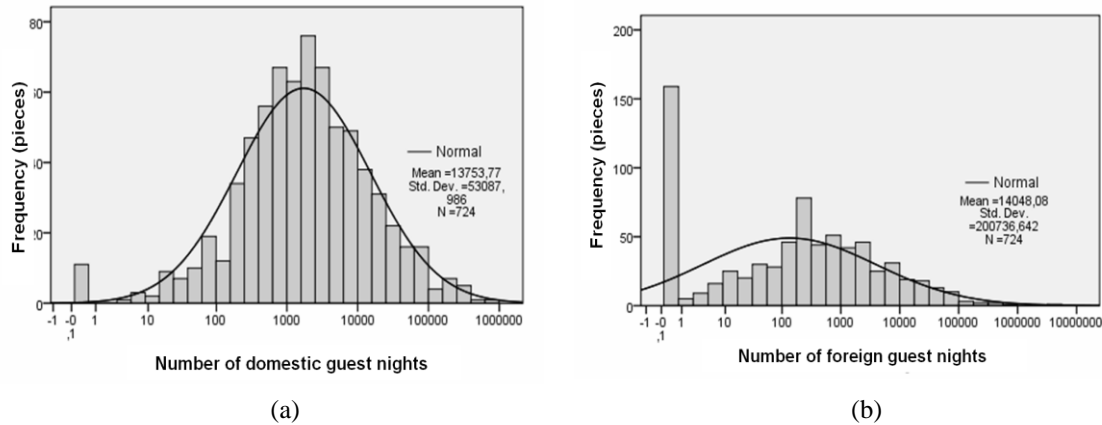


Figure 2.2: Number of domestic (a) and foreign (b) guest nights in Hungary's settlements (2007)

Source: Own work based on HCSO data

The distribution of the number of foreign guest nights significantly differs from the distribution of the total guest night numbers. Foreigners did not spend guest nights at all in 159 out of the analysed 724 settlements (30%); Budapest's value of 6,233,093 is clearly away from the normal distribution curve (**Figure 2.2**).

It is important to become familiar with the distribution of the specific indicators beyond analysing the absolute values of the indicators, since in this way, on the one hand, the discrepancies arising from the settlement sizes can be screened out, and, on the other hand, the specific values indicate the degree of the economic effect exerted on the host community by the visitor turnover.

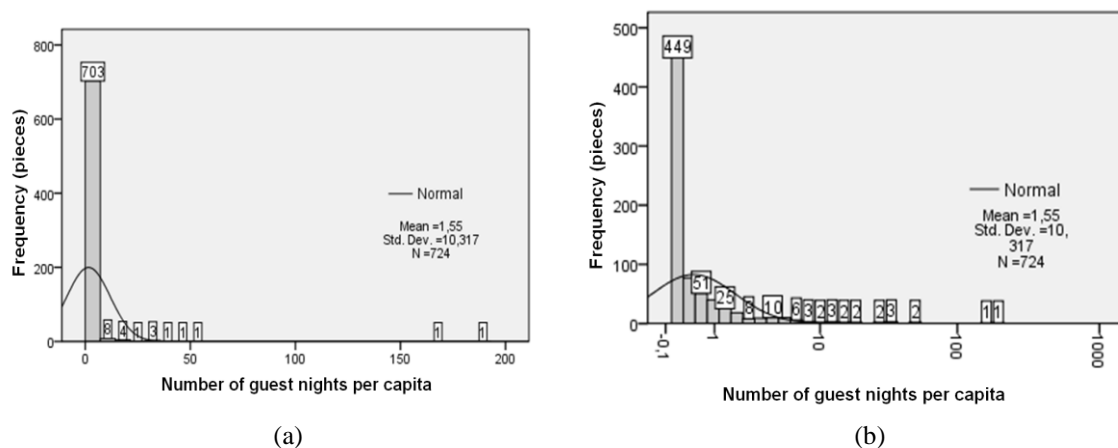


Figure 2.3: Number of guest nights per capita in Hungary on linear (a) and logarithmic (b) scale (2007)

Source: Own work based on HCSO data

The linear scale-based representation, in the case of specific data, was not adequate for drawing far-reaching consequences, thus subsequently I chose the logarithmic scale for display.

In Hungary the number of settlements where the visitor turnover is basically negligible relative to the population is outstandingly high. The distribution of guest nights per capita significantly differs from the normal distribution curve (**Figure 2.3**).

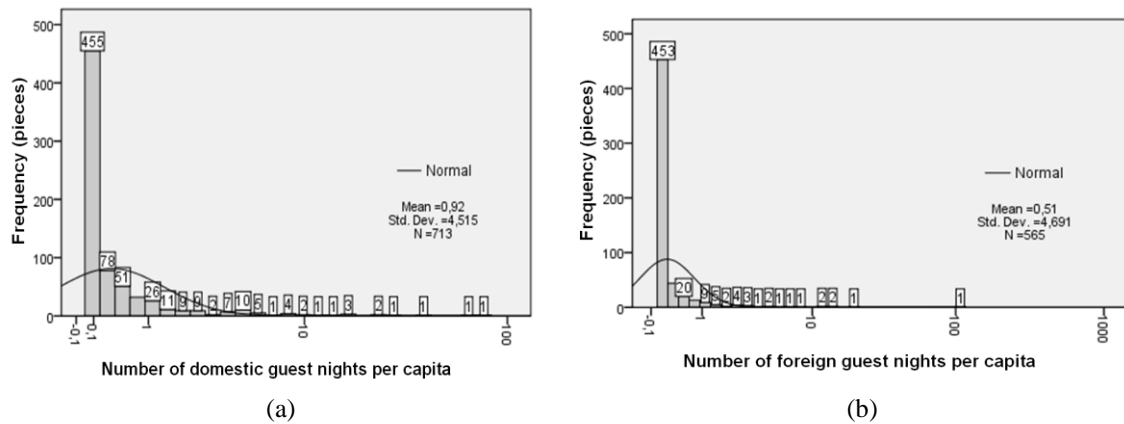


Figure 2.4: Number of domestic (a) and foreign (b) guest nights per capita in Hungary's settlements (2007)

Source: Own work based on HCSO data

The specific values of domestic guest nights indicate that in the majority of settlements, practically, there is no significant visitor turnover (**Figure 2.4**).

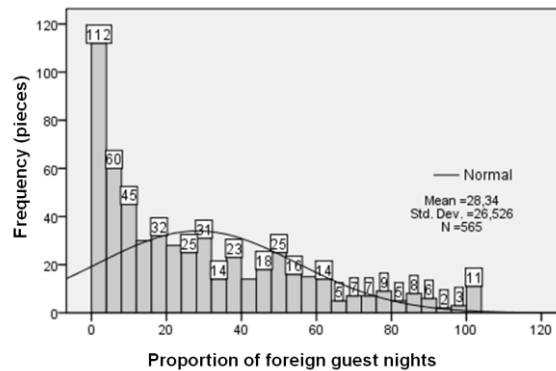


Figure 2.5: Proportion of foreign guest nights in Hungary's settlements (2007)

Source: Own work based on HCSO data

We come to a similar result on the basis of the foreign guest nights. The number of guest nights per capita is below 1 in 459 settlements, between 1 and 10 in 96, between 10 and 100 in 25, and a value over 100 was measured in only three settlements (**Table 2.1**).

Table 2.1:

Hungary's settlements according to the number of guest nights (2007)

Number of guest nights	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%
1-100	51	1.6%	133	4.2%	36	1.1%
101-1000	216	6.9%	219	6.9%	193	6.1%
1001-10000	305	9.7%	144	4.6%	325	10.3%
10001-100000	123	3.9%	60	1.9%	142	4.5%
100001-	18	0.6%	9	0.3%	28	0.9%
Total	3152	100%	3152	100%	3152	100%

Source: Own work based on HCSO data

The proportion of foreign guest nights is below 20% in 274 settlements, while values over 50% can be observed in only 110 cases (**Figure 2.5**).

Table 2.2:

Hungary's settlements according to the per capita values of guest nights (2007)

Number of guest nights per inhabitant	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 work based on HCSO data

The majority of foreigners visiting Hungary use the services of the accommodations of several dozens of settlements; the concentration of the foreign visitor turnover is considerably larger than that of the domestic. This can also be stated on the basis of the distribution of the specific values (**Table 2.2**).

2.2. Tourism disparities at settlement level in Hungary in Northern Hungary

Similarly to the country-wide (national) survey, I analysed only those settlements in Northern Hungary for which population-related data were available. The number of settlements in the region where extremely low visitor turnover was recorded is outstandingly high. With the omittance of settlements without measurable visitor turnover (467 of them) the distribution of guest nights is lognormal, similarly to the domestic and foreign guest nights (**Figure 2.6**).

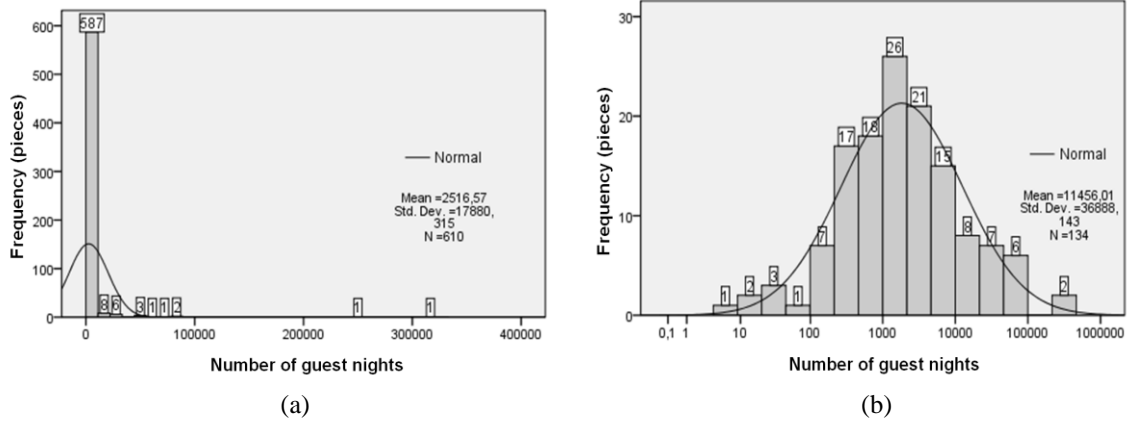


Figure 2.6: North Hungarian Region's settlements according to the number of guest nights on linear (a) and logarithmic (b) scale (2007)

Source: Own work based on HCSO data

The regional values of foreign guest nights are similar to the national distribution, with the exception that no foreign guests were recorded in only 22% of the settlements with measurable tourism, whereas this number was 39% in the case of Northern Hungary.

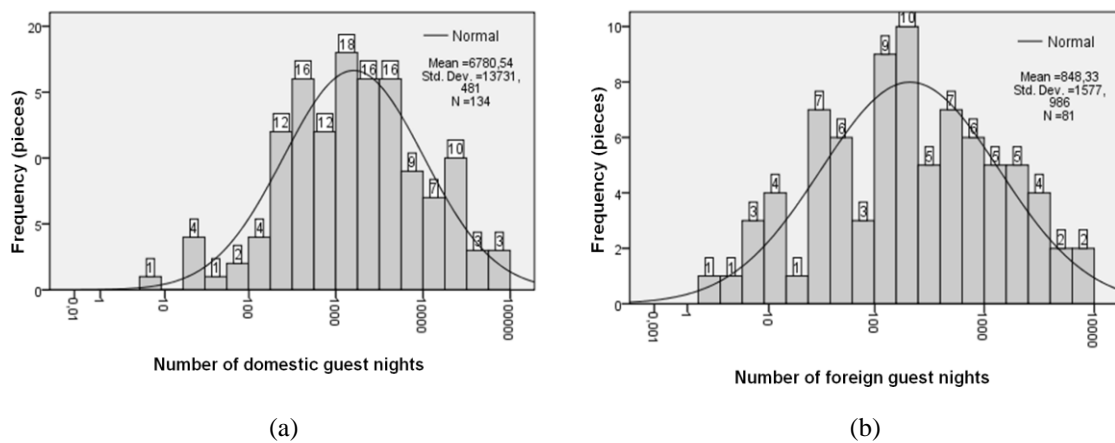


Figure 2.7: North Hungarian Region's settlements according to the number of domestic (a) and foreign (b) guest nights (2007)

Source: Own work based on HCSO data

In order for the national and regional analyses to be compared, as well as because of the similarity of the distribution curves, I used the same class intervals in the summary tables as in the case of the national data.

Table 2.3:
North Hungarian Region's settlements according to the number of guest nights (2007)

Number of guest nights	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	476	78.0%	529	86.7%	476	78.0%
1-100	8	1.3%	26	4.3%	7	1.1%
101-1000	44	7.2%	37	6.1%	42	6.9%
1001-10000	59	9.7%	13	2.1%	62	10.2%
10001-100000	21	3.4%	5	0.8%	21	3.4%
100001-	2	0.3%	0	0.0%	2	0.3%
Total	610	100%	610	100%	610	100%

Source: Own work based on HCSO data

The proportion of settlements in the region where no guest nights were registered in 2007 is similar to the national proportion; however, the proportion of settlements where foreign guests did not spend a single night is somewhat higher (86.7%) (Table 2.3).

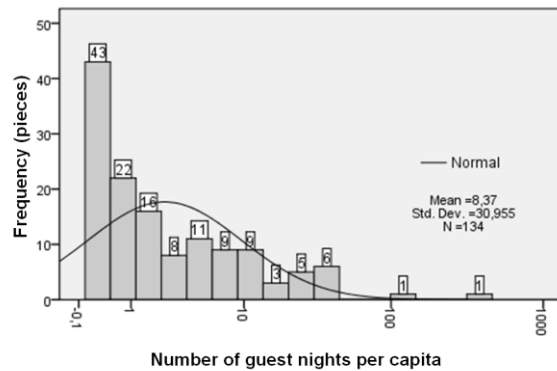


Figure 2.8: Number of guest nights per capita in the settlements of Northern Hungary (2007)

Source: Own work based on HCSO data

The distribution of the specific data significantly differs from the lognormal distribution curve, due to the high number of those settlements where the specific values are extremely low. In Northern Hungary 84.9% of visitor turnover is concentrated in 23 settlements (Figure 2.8).

Following from the fact that 84.1% of the guest nights can be attributed to domestic tourists, the distribution of domestic guest nights is practically identical with that of the total values. This cannot be stated about the foreign visitor turnover; where, differently from the previous ones, I chose the representation on linear scale again, the reason for which was the maximum value (3.33 guest nights per person) measured among the region's settlements (in Aggtelek) (Figure 2.9).

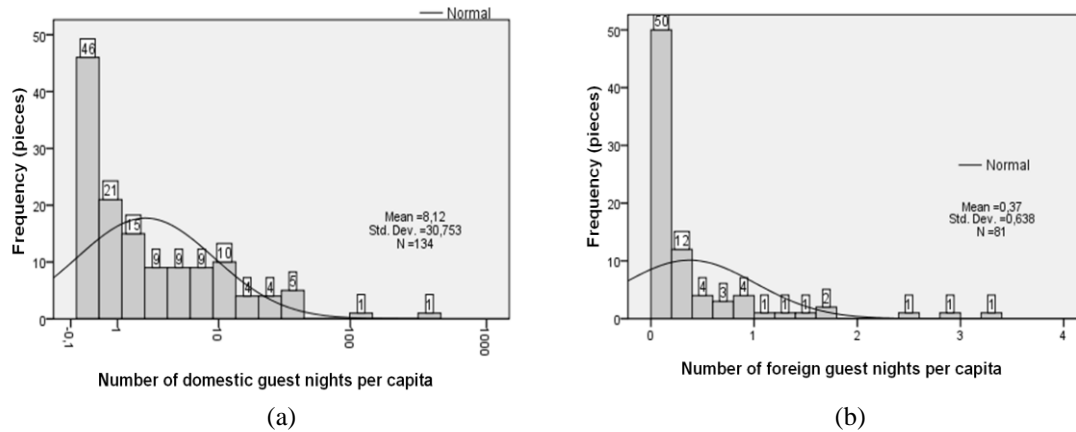


Figure 2.9: Number of domestic (a) and foreign (b) guest nights per capita in the settlements of Northern Hungary (2007)

Source: Own work based on HCSO data

The situation outlined above can be refined by Table 2.4. The values of the total and domestic guest nights are similar to those observed at national level; however, Northern Hungary has a significant gap in the area of foreign visitor turnover.

Table 2.4:

North Hungarian Region's settlements according to the values of guest nights per capita (2007)

Number of guest nights per inhabitant	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	477	78.2%	534	87.5%	477	78.2%
0.01-1	62	10.2%	68	11.1%	62	10.2%
1.01-10	48	7.9%	8	1.3%	48	7.9%
10.01-30	15	2.5%	0	0.0%	15	2.5%
30.01-100	6	1.0%	0	0.0%	6	1.0%
100.01-	2	0.3%	0	0.0%	2	0.3%
Összesen	610	100%	610	100%	610	100%

Source: Own work based on settlement data of HCSO

2.3. Tourism disparities at micro-regional level in Hungary

The changing number of micro-regions, similarly to that of the settlements, was a problem in the course of the micro-regional analyses. The current micro-regional classification keeps count of 174 micro-regions. The Central Statistical Office has collected data in this structure since 1 January 2008.

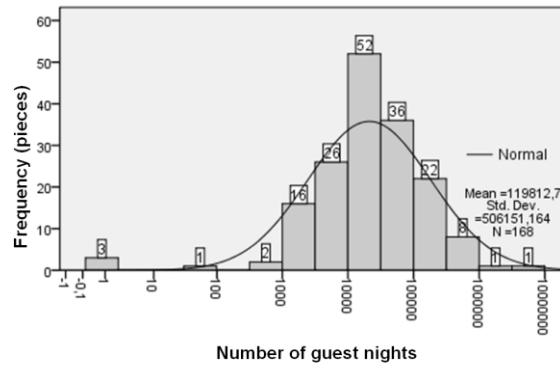


Figure 2.10: Number of guest nights in Hungary's micro-regions (2007)

Source: Own work based on HCSO data

When gathering the data for this study, the most up-to-date data in the HCSO's regional database related to 2007; therefore, in the case of the micro-regional analyses I found it reasonable to compile a database corresponding to the former (2004) micro-regional structure of 168 micro-regions.

The frequency distribution of the micro-regional guest nights, similarly to the settlement data, approximates lognormal distribution in the case of both total and domestic visitor turnover. However, it has to be remarked that, in both cases, the number of micro-regions having between 1,000 and 10,000 guest nights is over-represented compared to the normal distribution (**Figure 2.10**).

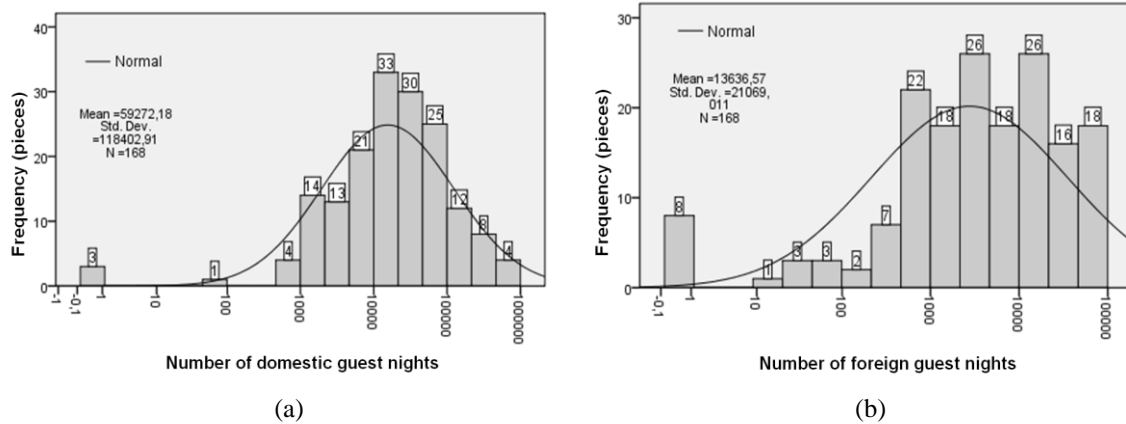


Figure 2.11: Number of domestic (a) and foreign (b) guest nights in Hungary's micro-regions (2007)

Source: Own work based on HCSO data

The HCSO data indicate that there is no measurable visitor turnover in three micro-regions, while outstandingly high values were measured in 11 micro-regions (**Table 2.5**).

The distribution of foreign guest nights is almost identical with the total values, due to the strong concentration of the foreign visitor turnover.

There was no statistically measurable visitor turnover at all in eight micro-regions; the frequency distribution significantly differs from the lognormal distribution curve, although the occurrence of higher values evens out somewhat in the micro-regions.

As to the number of foreign guest nights, there is no measurable visitor turnover in three micro-regions, while outstandingly high values were observed in only six cases.

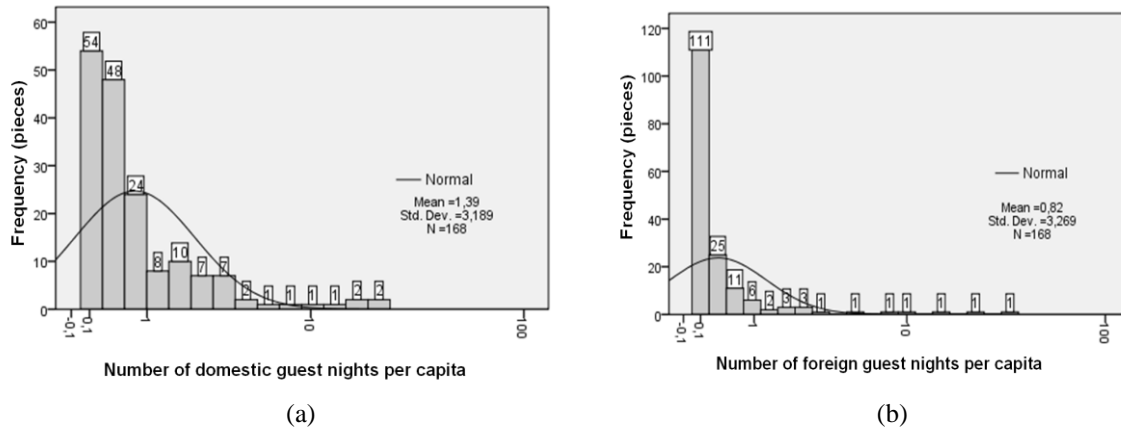


Figure 2.13: Per capita values of the number of domestic (a) and foreign (b) guest nights in Hungary's micro-regions (2007)

Source: Own work based on HCSO data

Considerable differences can be observed when comparing the figures of the domestic and foreign guest nights. Foreign guest nights are concentrated more strongly in several micro-regions of the country. The 10 most visited micro-regions share the total foreign visitor turnover.

Table 2.6:
Hungary's micro-regions according to the per capita value of guest nights (2007)

Guest nights per inhabitant	Domestic		Foreign		Total	
	Number of micro-regions (n)	Distribution of micro-regions %	Number of micro-regions (n)	Distribution of micro-regions %	Number of micro-regions (n)	Distribution of micro-regions %
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 work based on HCSO data

Domestic visitor turnover is much less concentrated. The first 10 micro-region shares "only" 45.1% of the total visitor turnover, and a further 41 micro-regions are necessary to reach a 80% share.

The frequency distribution of micro-regional foreign guest nights underpins my earlier statements concerning concentration. There is a very high proportion of foreign guests in some micro-regions.

The frequency distribution differs remarkably from the lognormal distribution curve for values close to 0, in the case of micro-regional data. In fact, there is no foreign visitor turnover of any significant extent in 39 micro-regions.

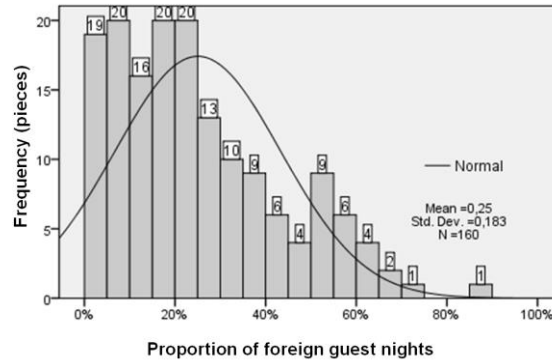


Figure 2.14: Hungary's micro-regions according to foreign guest nights (%) (2007)
Source: Own work based on HCSO data

2.4. Tourism disparities at micro-regional level in Northern Hungary

I quantified the tourism performance indicators of 28 micro-regions in the course of the analysis of Northern Hungary. In one micro-region, the Mezőcsát micro-region, there was no functioning commercial accommodation in 2007.

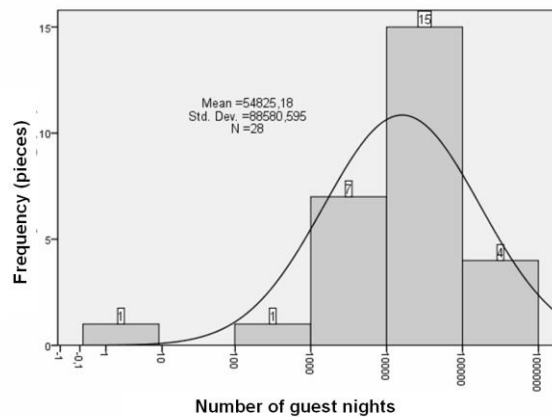


Figure 2.15: Number of guest nights in the micro-regions of Northern Hungary (2007)
Source: Own work based on HCSO data

The distribution of guest nights of Northern Hungary's micro regions also approximates the lognormal distribution curve (**Figure 2.15**).

Since the characteristics of this region's tourism are basically determined by the domestic visitor turnover, it is not surprising that the distribution of the number of domestic guest nights strongly resembles that of the total values (**Figure 2.16**).

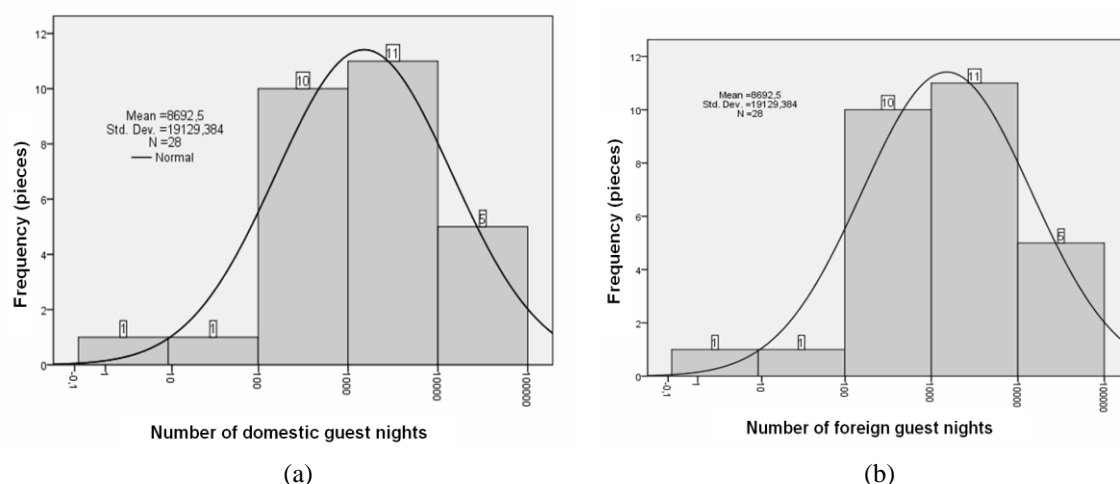


Figure 2.16: Number of domestic (a) and foreign (b) guest nights in Northern Hungary's micro regions (2007)

Source: Own work based on HCSO data

The majority of the foreign visitor turnover is concentrated on a few micro-regions of Northern Hungary. In 19 cases we found practically negligible foreign visitor turnover (Table 2.7). Over 10,000 foreign guest nights were recorded only in the micro-regions of Eger (86,664), Miskolc (53,534), Tiszaújváros (31,933), and Mezökövesd (13,251).

Table 2.7:

Northern Hungary's micro-regions according to the number of guest nights (2007)

Number of guest nights	Domestic		Foreign		Total	
	Number of micro-regions (n)	Distribution of micro-regions %	Number of micro-regions (n)	Distribution of micro-regions %	Number of micro-regions (n)	Distribution of micro-regions %
0	1	3.57%	1	3.57%	1	3.57%
1-5000	3	10.71%	19	67.86%	3	10.71%
5001-30000	12	42.86%	5	17.86%	12	42.86%
30001-100000	8	28.57%	3	10.71%	8	28.57%
100001-1000000	4	14.29%	0	0.00%	4	14.29%
1000001-	0	0.00%	0	0.00%	0	0.00%
Total	28	100%	28	100%	28	100%

Source: Own work based on HCSO data

We can further refine the picture shaping up so far by introducing the specific values. I plotted the data on a linear scale on the basis of the range of the small specific values and the variance (Figure 2.17).

The number of guest nights per inhabitant is extremely low in every micro-region of Northern Hungary, not even reaching 1 in 18 of the micro-regions.

The same can be stated about 18 micro-regions in the case of the specific values of domestic guest nights, due to the low proportion of foreign visitor turnover. (Figure 2.18(a)).

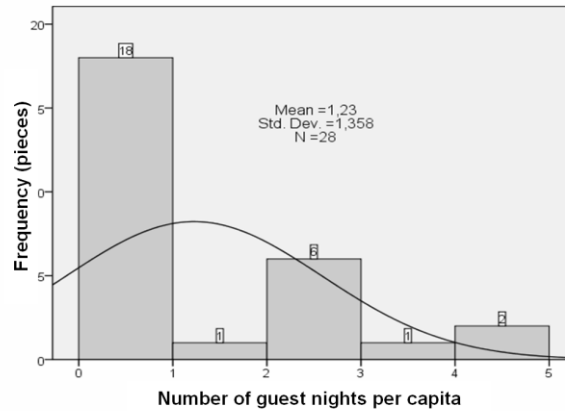


Figure 2.17: Per capita values of the number of guest nights in Northern Hungary's micro-regions (2007)

Source: Own work based on HCSO data

We cannot speak of a significant foreign visitor turnover, compared to the population size, in any micro-region of the Region, seeing as 1.25 was the highest measured value for foreign guest night per inhabitant (**Figure 2.18(b)**).

Table 2.8:

Northern Hungary's micro regions according to the per capita values of guest nights (2007)

Guest nights per inhabitant	Domestic		Foreign		Total	
	Number of micro-regions (n)	Distribution of micro-regions (%)	Number of micro-regions (n)	Distribution of micro-regions %	Number of micro-regions (n)	Distribution of micro-regions %
0	1	3.57%	3	10.71%	1	3.57%
0,01-1	17	60.71%	24	85.71%	18	64.29%
1,01-10	10	35.71%	1	3.57%	9	32.14%
10,01-30	0	0.0%	0	0.0%	0	0.0%
30,01-100	0	0.0%	0	0.0%	0	0.0%
100,01-	0	0.0%	0	0.0%	0	0.0%
Total	28	100%	28	100%	28	100%

Source: Own work based on HCSO data

Table 2.8 classifies the micro-regions into categories on the basis of per capita values. The categories are the same as those used in the national survey, so that the data of the region's micro-regions are comparable with those of the national ones.

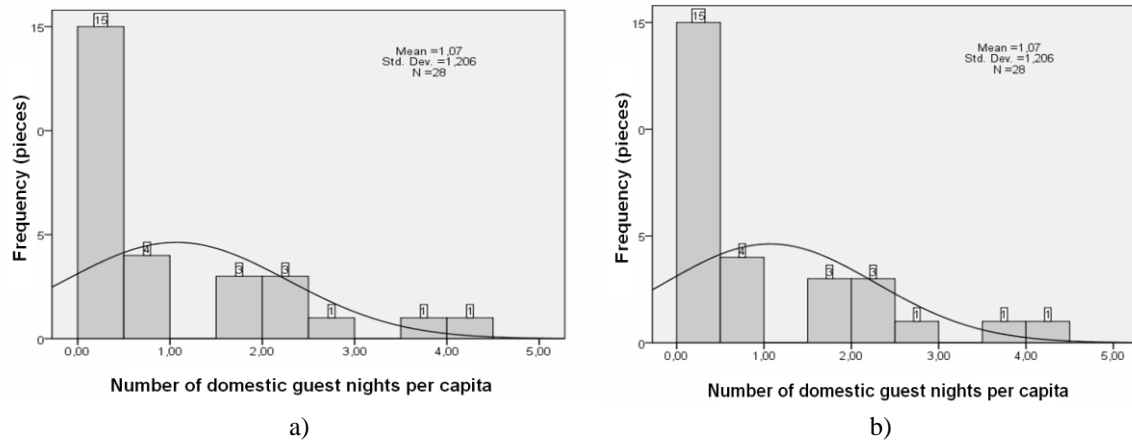


Figure 2.18: Per capita values of the number of domestic (a) and foreign (b) guest nights in Northern Hungary's micro-regions (2007)

Source: Own work based on HCSO data

There is no micro-region in Northern Hungary where tourism performance was on a significant level; its effects can be perceived rather at the local than at the regional level.

The proportion of foreign visitor turnover is below 20% in 24 micro-regions, as opposed to the national average of 50.4%. The proportion of the visitor turnover of the micro-regions of Eger, Sárospatak and Ózd micro-regions is somewhat over 20%. Only Tiszaújváros' micro-region exceeded the national average with its performance of 54.7%.

T1: The regional distribution of the visitor turnover data have confirmed that tourist arrivals are concentrated within 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.

2.5. Place and role of Northern Hungary in Hungary's tourism, with special regard to the Region's counties

Following the static analyses referring to 2007 I considered it important to become familiar with the tourism processes characteristic of the region and its counties. I strove to choose the widest time-horizon possible for the time-series studies. Thanks to the T-Star database of HCSO I was able to prepare most of my analyses for the time-period of 1990 to 2007; in only a few instances I relied on data referring to 1998-2007.

In the course of my analyses I applied specific indicators that also made regional comparisons possible.

Table 2.9:

Number of guest nights in Northern Hungary (1990-2007)

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

Source: Own work based on HCSO data

Within the time-period between 1990 and 2007, the highest visitor turnover was measured in Hungary in 1990 (**Table 2.9**). Tourism was not immune to the effects of economic restructuring and the permeability of borders. The indicators of the sector correspond to the country's economic performance in the initial years of the '90s.

The turning point occurred in 1993. From this time, apart from slight declines in one or two years, the number of guest nights clearly increased, although by 2007 it had not reached the level of 1990.

Changes corresponding to the national trends can be observed in Borsod-Abaúj-Zemplén and Heves counties, where visitor turnover began to increase again after a nadir in 1993. The same cannot be stated about Nógrád county at all. We can speak of growing visitor turnover from 1993; however, the favourable processes lasted only till 1996. Afterwards, till 2007, the county's visitor turnover gradually and drastically decreased to 46.5% of its performance of 1990.

Table 2.10:

Number of domestic guest nights in Northern Hungary (1990-2007)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Borsod-Abaúj-Zemplén	534183	465136	391564	350751	351352	344208	351828	387399	410736
Heves	429464	291032	352562	368113	442210	469445	479758	462255	490885
Nógrád	166651	134378	137100	131790	133417	152261	167314	164941	155418
Northern Hungary	1130298	890546	881226	850654	926979	965914	998900	1014595	1057039
Hungary Total	8768031	6094892	5917025	6183877	6437628	6342347	6466235	6790834	6778163
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén	462344	505147	492507	537205	602550	559202	590208	601479	608988
Heves	564004	544004	507121	536050	537809	535253	547930	584738	596411
Nógrád	140251	148755	153762	153902	136124	112579	96469	98602	86316
Northern Hungary	1166599	1197906	1153390	1227157	1276483	1207034	1234607	1284819	1291715
Hungary Total	7384344	7855494	7753878	8088966	8570776	8391374	8958459	9606135	9957726

Source: Own work based on HCSO data

When studying the tourism-related regional processes, it is essential to separately display the domestic and foreign visitor turnovers due to their different characteristics (**Tables 2.10 and 2.11**).

Table 2.11:

Number of foreign guest nights in Northern Hungary (1990-2007)

	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
<i>Northern Hungary</i>	<i>512129</i>	<i>438767</i>	<i>339234</i>	<i>352040</i>	<i>339995</i>	<i>286986</i>	<i>296269</i>	<i>288812</i>	<i>318374</i>
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
<i>Northern Hungary</i>	<i>323733</i>	<i>328568</i>	<i>320968</i>	<i>286429</i>	<i>258134</i>	<i>253156</i>	<i>258550</i>	<i>248284</i>	<i>243390</i>
Hungary Total	9942697	10513825	10894493	10360959	10040338	10508109	10778899	10045891	10170808

Source: Own work based on HCSO data

Domestic visitor turnover shows similar characteristics to the total values; the year 1993 was the turning point, following which (apart from slight declines in one or two years) we can report steady growth. In Hungary, similarly to other European countries, the expansion of domestic tourism is the key to the growth of tourism (Schmidt H. W. 2005, p. 1). Northern Hungary's counties (due to the low number of foreign guests) performed similarly to the total values.

Significantly different processes can be observed in foreign visitor turnover, which showed a decline of 23.6% from 1990 to 1992, as opposed to a decrease of 32.5% in the domestic visitor turnover. While 1993 was the nadir in the case of the foreign guest nights as well, we cannot speak of continuous growth, since the domestic visitor turnover later stabilised at a value over 10 million.

Foreigners' interest in Northern Hungary continuously decreased from the change of regime, and in 2007 the number of foreign guest nights was only 47.4% of that in 1990. The process varies county by county: compared to the market loss of 78.1% of Nógrád County, "only" 48.7% fewer tourists came to Borsod-Abaúj-Zemplén County in 2007. Borsod-Abaúj-Zemplén's relative position has strengthened, as the most tourists came to this county of the three, starting in 2003.

Table 2.26 illustrates the relative positions of the counties and their changes over time. Heves County's positions are the most favourable compared to the national level in proportion to the population number. Nógrád County's practically insignificant tourism continuously becomes ever more marginalized. Quite slow growth has been experienced in Borsod-Abaúj-Zemplén County. While 13% of Hungary's population lives in Northern Hungary, only 8% of the guest nights were recorded in the three counties.

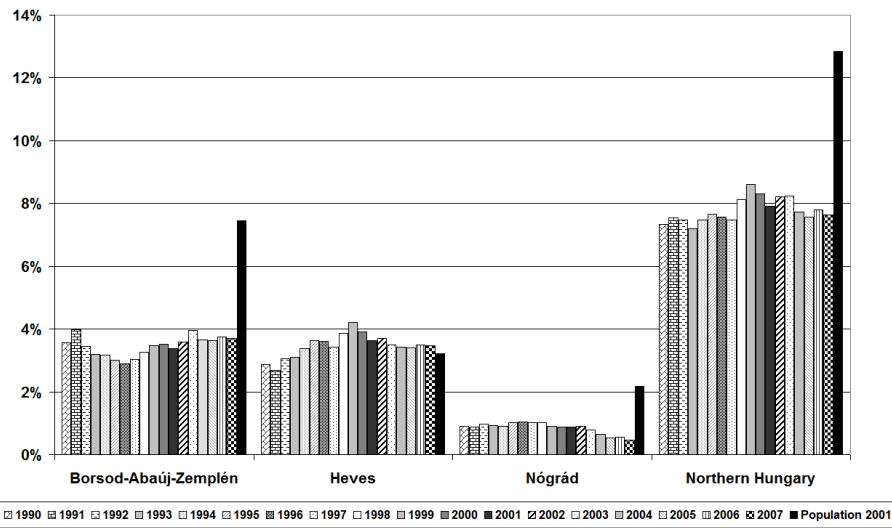


Figure 2.19: Number of guest nights in commercial accommodations as a percentage of the national value (1990-2007)

Source: Own work based on HCSO data

The negative image formed in regard to the relative position of visitor turnover is somewhat modified by the statements made on the basis of domestic guest night values. The proportion of domestic guest nights exceeded the proportion of population throughout the whole studied period. Despite the growth in domestic visitor turnover in recent years, the relative positions of Northern Hungary have deteriorated (Figure 2.20).

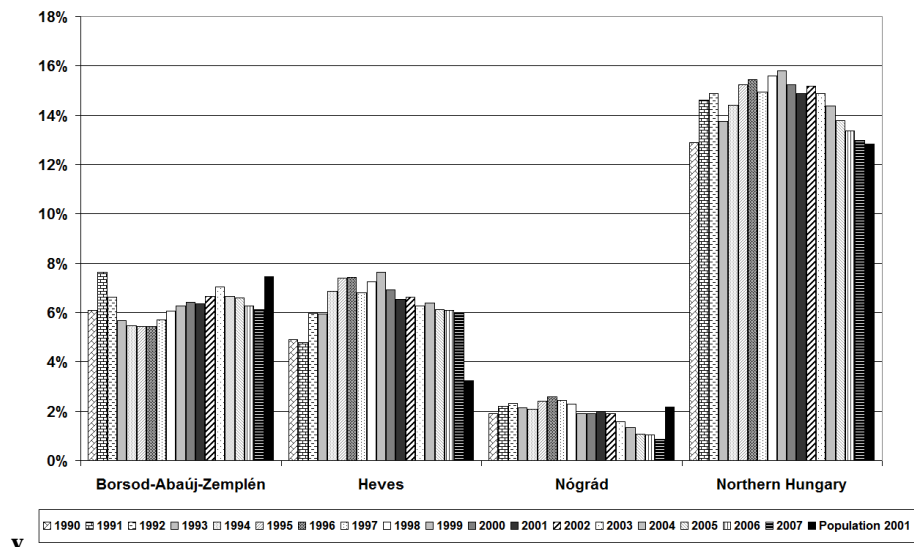


Figure 2.20: Number of domestic guest nights in commercial accommodations as a percentage of the national value (1990-2007)

Source: Own work based on HCSO data

Borsod-Abaúj-Zemplén County came closest to the national average relative to its population in 2003, Heves exceeded this level mainly in 1999, while Nógrád County's relation has shown a clear decline since 1997.

The three counties of Northern Hungary follow completely independent paths in terms of the relative values of foreign guest nights. Heves County's foreign visitor turn-

over corresponds to the proportion of its population. Borsod-Abaúj-Zemplén's relative position has shown some improvement (although, the positive change is partly due to a decrease in population by 100,000 persons), while Nógrád County's foreign visitor turnover further decreased (**Figure 2.21**).

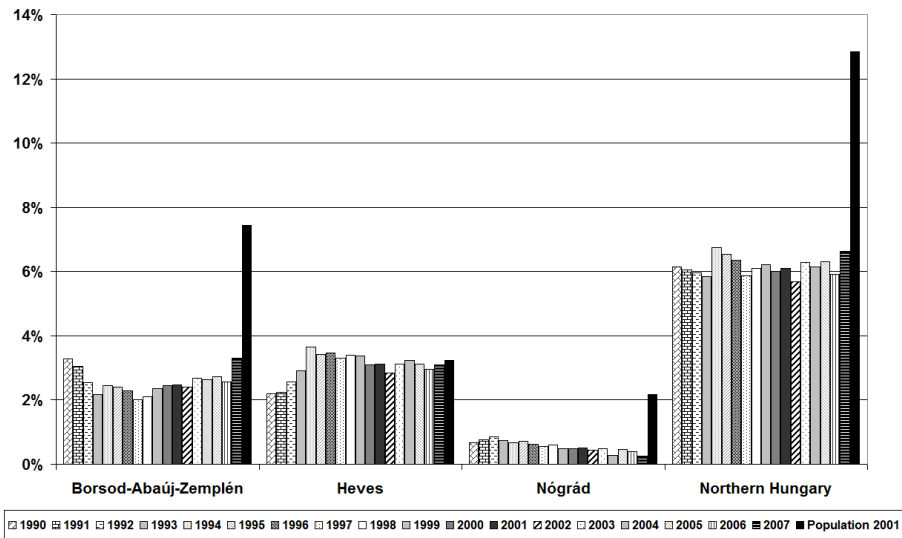


Figure 2.21: Number of foreign guest nights in commercial accommodations as a percentage of the national value (1990-2007)

Source: Own work based on HCSO data

The above described processes can be understood better by analysing the foreign visitor turnover (**Figure 2.22**). The proportion of foreign visitor turnover has continuously declined from 1991 till now due to the gradual expansion of domestic demand and the decreasing number of foreign tourists. These national processes are characteristic of Northern Hungary as well, with the difference that the proportion of foreigners did not exceed 40% in any of the counties in the studied period: it has been very low (about 10%) in Nógrád County, while in Borsod-Abaúj-Zemplén and Heves counties the values have been below 20% since 1995.

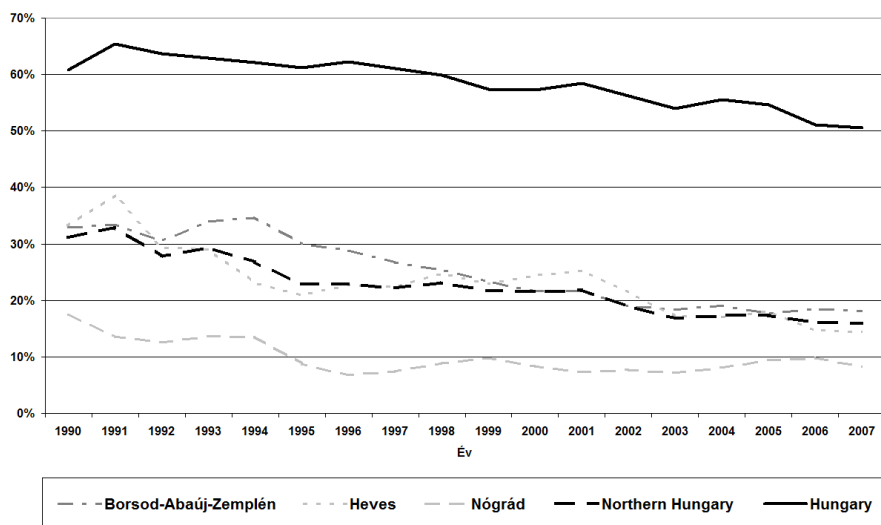


Figure 2.22: Proportion of foreign guest nights in commercial accommodations (%) (1990-2007)

Source: Own work based on HCSO data

The decrease in foreign visitor turnover was offset by the increase in domestic tourism according to the time-series of the guest night numbers, thus Northern Hungary retains its relative position. It is questionable, however, how much growth reserve remains in domestic tourism.

An eternal question of tourism development is whether the number of tourists is low because there is insufficient quantity and quality of accommodation in the area, or the reason for the low number of beds is that the tourist attractions and services do not attract enough guests. My research results cannot give a fully detailed answer to this question; however, my research may provide some additional information.

The decrease in the number of commercial beds was in accordance with the decline in demand, although it decreased less rapidly (9.2%). Afterwards, a continuous expansion could be observed till 2003 (except for 1998); after 2004 a clear decrease is experienced (**Table 2.12**).

The growth path of Northern Hungary's accommodation supply differs from the national processes. Despite the decrease in the national supply, the number of beds in the region grew as early as in 1991. In essence, the continuous growth can be monitored throughout the whole studied period. The 2007 value means a growth rate of more than 59% compared to the initial time point (**Figure 2.23**).

Table 2.12:

Number of commercial bed places in Northern Hungary (1990-2007)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Borsod-Abaúj-Zemplén	12712	13242	12426	12368	14219	12746	13061	13803	12966
Heves	8878	8755	9964	9937	10177	10988	11236	10960	12266
Nógrád	3198	3418	3888	3782	3615	3750	4497	4198	4050
<i>Northern-Hungary</i>	<i>24788</i>	<i>25415</i>	<i>26278</i>	<i>26087</i>	<i>28011</i>	<i>27484</i>	<i>28794</i>	<i>28961</i>	<i>29282</i>
Hungary Total	305970	277885	284222	280063	288620	292413	303313	309392	287102
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén	14478	16405	17437	17947	19058	17954	18795	17761	19798
Heves	11645	12425	12847	11747	14173	13938	13744	13500	16010
Nógrád	4137	4592	4738	4403	4267	3946	4092	4457	3802
<i>Northern Hungary</i>	<i>30260</i>	<i>33422</i>	<i>35022</i>	<i>34097</i>	<i>37498</i>	<i>35838</i>	<i>36631</i>	<i>35718</i>	<i>39610</i>
Hungary Total	300782	312714	317629	335163	347277	336494	329290	315284	314742

Source: Own work based on HCSO data

Heves County's supply expanded to the greatest extent, almost by 80%, Borsod-Abaúj-Zemplén County's growth was 55.9% and that of Nógrád County was 18.8% in the studied period. Nógrád County's accommodation supply again shows a decline from 2001

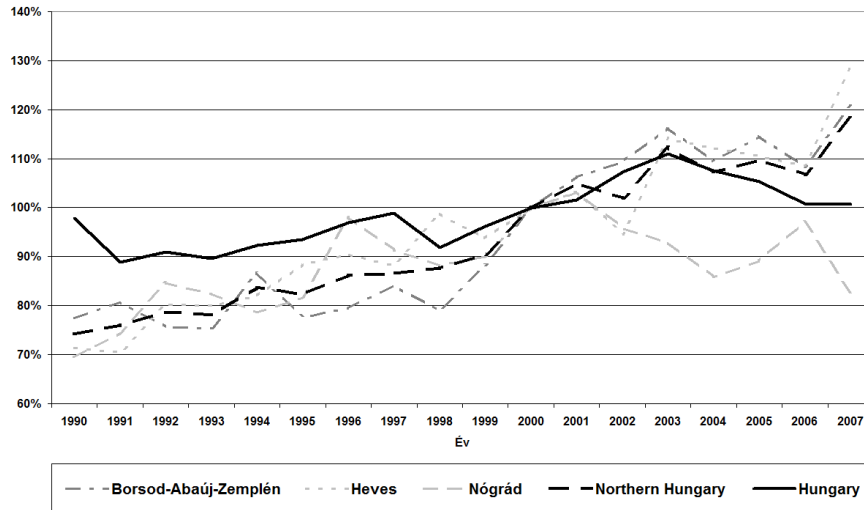


Figure 2.23: Number of bed places of commercial accommodations (2000=100%) (1990-2007)

Source: Own work based on HCSO data

The number of beds, compared to the region’s population came close to the national average by 2007, which is primarily due to the expansion of supply in Borsod-Abaúj-Zemplén and Heves Counties (Figure 2.24). In Heves County the number of beds is higher compared to the proportion of the population, in Nógrád the values stabilised at relatively lower level.

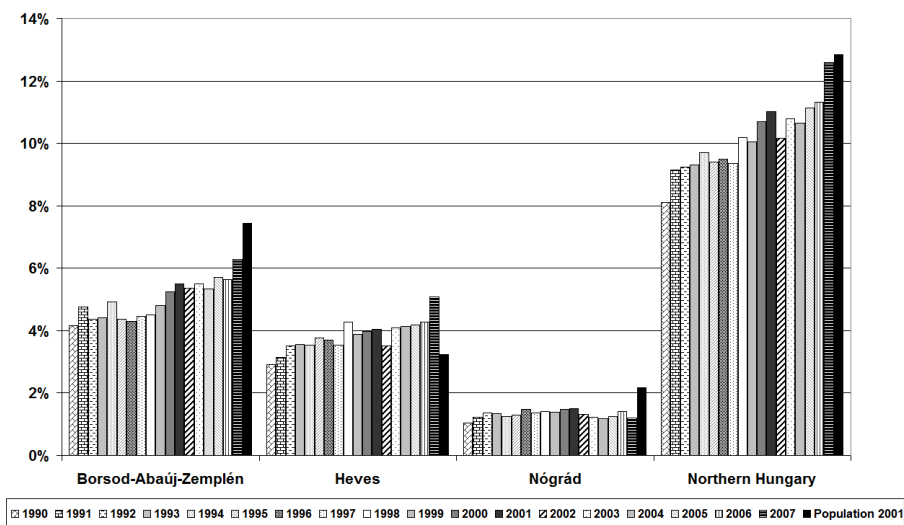


Figure 2.24: Number of bed places of commercial accommodations as a proportion of the national average (1990-2007)

Source: Own work based on HCSO data

Comparing the changes in the number of guest nights and in bed spaces, an over-supply is typical in Northern Hungary. It seems that accommodation providers here are optimistic and trust in the expansion of the demand for the region, since the number of bed places of the accommodations grew in excess of visitor turnover.

Unfortunately, the expansion of accommodation supply did not go hand in hand with an increase in its quality, while accommodations providing high-standard services have

become preferred in both the domestic and international tourism market (Ács P. - Laczkó T. 2008, p. 348).

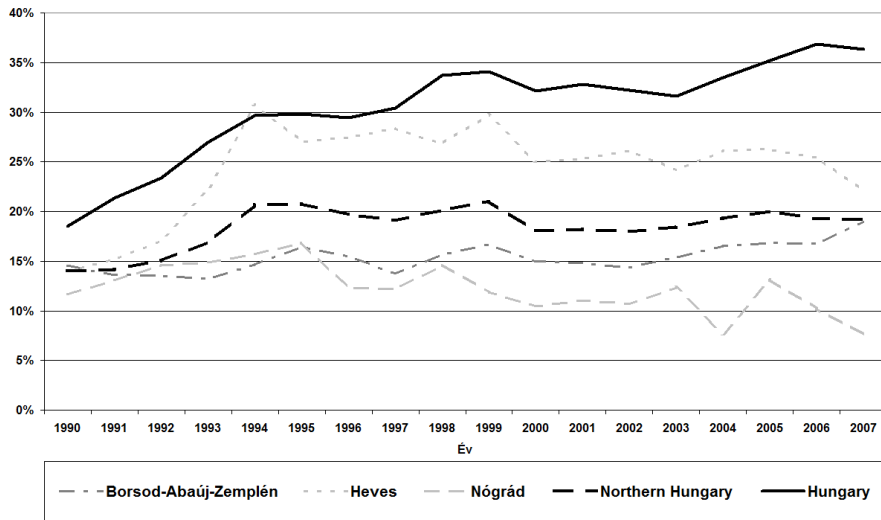


Figure 2.25: Hotel bed spaces as a proportion of the commercial bed spaces (%) (1990-2007)

Source: Own work based on HCSO data

While the proportion of bed spaces in hotels exceeded 35% in Hungary by 2007, it has been around a stable 20% since 1994 in Northern Hungary. The favourable structural changes present in the initial years of the 90s did not continue after 1994. Nógrád County keeps falling short of the national and regional trends, and its proportion of bed spaces in hotels has decreased since 1995 (Figure 2.25).

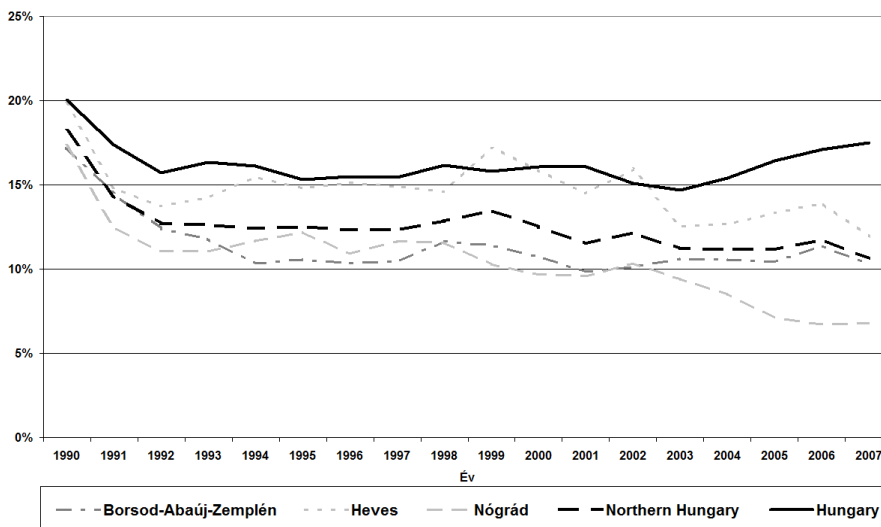


Figure 2.26: Utilisation of bed places of commercial accommodations (%) (1990-2007)

Source: Own work based on HCSO data

The occupancy rate of accommodations is the intersection of demand and supply. The national data of 15-17% and the regional figures of 11-13% (both following a decreasing trend) indicate low utilisation of facilities. The occupancy rate is the lowest in Nógrád County, the values in Borsod-Abaúj-Zemplén were around 10% from 1994,

whereas the indicator of Heves measured in 1999 (17%) had markedly worsened by 2007 (Figure 2.26).

Despite the increasing number of guests and guest nights, analysts report shorter times of stay than previously in most of the tourism markets of the world (National Tourism Development Strategy 2005-2013, p. 5). The phenomenon is due to the fact that the number of working hours has grown in recent decades, and employers are increasingly reluctant to allow their employees leave for longer holidays (Rones P. – Ilg R. – Gardner J. 1997, p. 6). This is especially true for the economically most active age group of 25-44 years (Schmidt H-V. 2002, p. 1). On the other hand, the relative price decrease in air travel (compared to incomes) made seemingly distant destinations attractive and available to many people. Tourists tend to choose shorter and, in terms of gaining experience, more intensive trips (Behringer Zs. - Mester T. 2001, p. 58-59).

This well-known trend can be experienced in Hungary as well. The length of the once average 4-day trip has shortened to 2.7 days (Figure 2.27).

Unfortunately, the ability of Northern Hungary and its counties to retain guests is low even compared to national values. The average time of stay decreased from 3.3 to 2.3 guest nights from 1990 to 2007. Nógrád County was not affected by the overall decline in the time period between 1994 and 1996; however, afterwards the pace of its performance deterioration was above average, and in 2005 it was the county where tourists stayed for the shortest time (Figure 2.27).

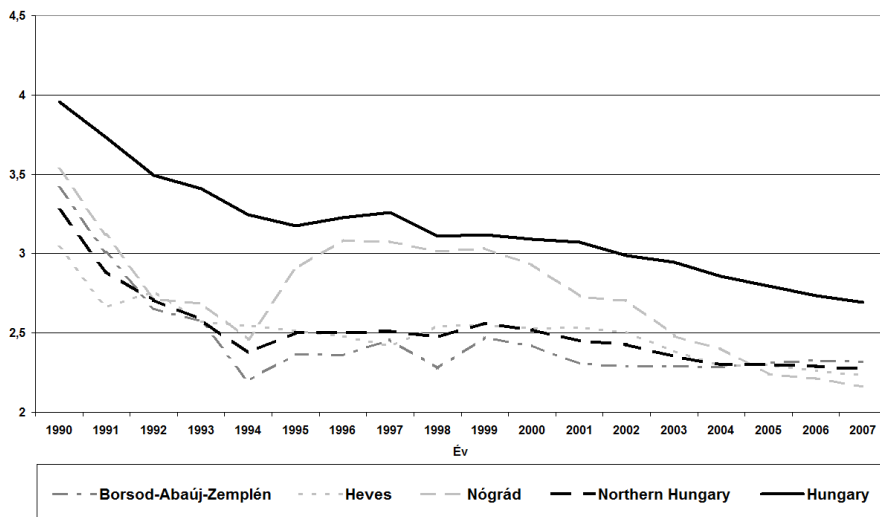


Figure 2.27: Average time of stay commercial accommodations (guest night) (1990-2007)

Source: Own work based on HCSO data

The utilisation of hotels, within the category of commercial accommodation, showed a somewhat more positive image. The national level began to improve in 2003 after a long period of stagnation, reaching 34% by 2007 (Figure 2.28).

The occupancy rate in Heves County was higher than the national average in the periods between 1993 and 2003 as well as 2006 and 2007. Nógrád County reached the lowest point in 2003 with 13%; afterwards, followed by significant fluctuations, it improved its situation by decreasing the bed spaces. At the same time, Borsod-Abaúj-Zemplén County's hotels typically worked at a 20-25% occupancy rate in the 1993-2007 period.

2. REGIONAL TOURISM DISPARITIES IN HUNGARY AND NORTHERN HUNGARY

While only 34.6% of the total guest nights were recorded in hotels in 1990, the value went up to 70.1% by 2007. In the period after the change of regime the demand has moved towards accommodations satisfying higher-level needs (**Table 2.13**).

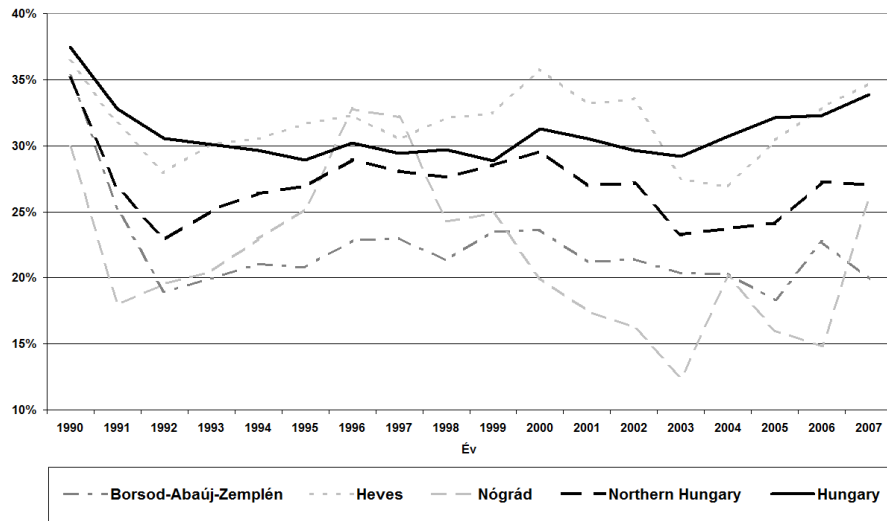


Figure 2.28: Utilisation of bed places of hotels (%) (1990-2007)

Source: Own work based on HCSO data

The processes characteristic of the North-Hungarian region are more or less similar to the national trends. The number of guest nights in hotels, following the decline in 1991, continuously expanded till 1999, then stagnated until the accession to the European Union, showing clear and positive growth from 2005.

Table 2.13:

Number of guest nights in hotels in Northern Hungary 1990-2007)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Borsod-Abaúj-Zemplén	239542	166816	116408	119798	160929	159508	169050	159560	157928
Heves	165276	154386	173751	241994	348274	343314	364034	346674	385253
Nógrád	40808	29365	40492	42214	47611	58064	66149	60132	52458
Northern-Hungary	445626	350567	330651	404006	556814	560886	599233	566366	595639
Hungary Total	7748564	7100628	7407930	8281692	9267962	9186920	9833845	10108343	10491006
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén	207224	211833	199908	202213	218929	220356	211593	247212	273546
Heves	410729	405423	394092	375609	344412	357730	400453	413319	446485
Nógrád	44859	35200	33527	27932	23948	22160	31324	24548	27639
Northern Hungary	662812	652456	627527	605754	587289	600246	643370	685079	747670
Hungary Total	10798198	11480284	11625638	11680842	11698560	12638477	13598733	13700998	14128626

Source: Own work based on HCSO data

The favourable processes are especially characteristic of Borsod-Abaúj-Zemplén and Heves Counties; Nógrád can report a drastic decline in turnover following the “peak” in 1996.

Staying in hotels was a privilege of foreigners back in 1990. The same cannot be stated nowadays, since 45% of the guests are domestic by 2007. Unfortunately, Northern Hungary could be said to be “too much ahead” of the national trends, since the proportion of foreigners was below 20% in 2007 (**Figure 2.29**).

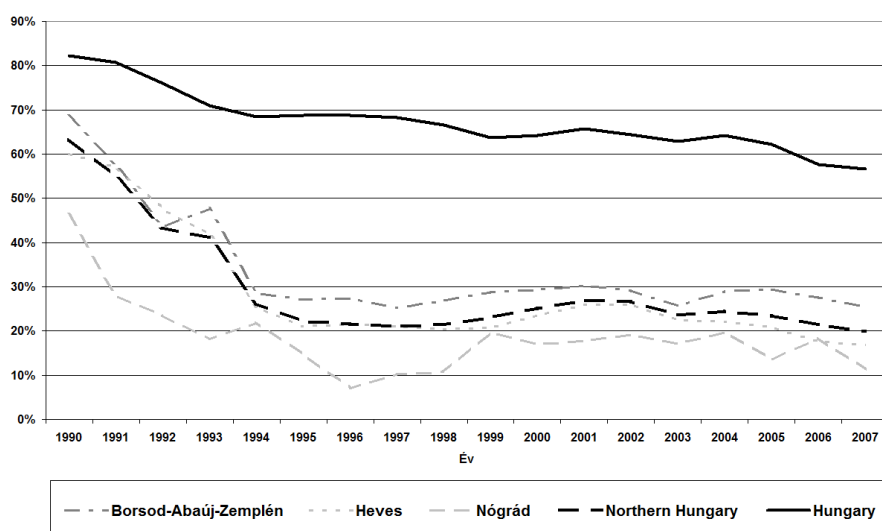


Figure 2.29: Proportion of guest nights spent by foreigners in hotels (%) (1990-2007)

Source: Own work based on HCSO data

Table 2.14 shows the strengthening of the domestic “quality” tourism, meanwhile bearing witness to the decrease of the proportion of foreigners. Due to the drastic decline in the number of guests coming from the ex-socialist countries, Northern Hungary’s hotels experienced a dramatically smaller foreign visitor turnover in the years following the change of regime. The growth of domestic visitor turnover was able to offset the decrease starting from 1994.

Table 2.14:

Number of domestic guest nights in hotels in Northern Hungary (1990-2007)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Borsod-Abaúj-Zemplén	75166	70577	65540	62742	114918	116281	122615	119102	115324
Heves	65923	66296	90869	140640	259478	270770	285790	273897	306521
Nógrád	21876	21170	30957	34547	37178	49516	61436	54000	46764
Northern Hungary	162965	158043	187366	237929	411574	436567	469841	446999	468609
Hungary Total	1375162	1365390	1781017	2404544	2927063	2864005	3064296	3202245	3511010
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén	147673	149752	139399	143314	162388	156483	149218	178882	203903
Heves	325844	309459	292103	278094	266487	278821	316914	339955	371007
Nógrád	36049	29234	27541	22565	19830	17796	27052	20022	24500
Northern Hungary	509566	488445	459043	443973	448705	453100	493184	538859	599410
Hungary Total	3925262	4115045	3985197	4151727	4352740	4532337	5134097	5795553	6120737

Source: Own work based on HCSO data

The international and national phenomenon of the decline in the average time of stay could be perceived less in hotels than in the case of the total values of commercial accommodation. The quality improvement of hotel supply, and the increase of the number of bed spaces apparently met the market expectations, which resulted in an increasing average time of stay till 1999. This process is also present in the counties of the region. Nógrád County’s performance seems unpredictable due to the changes in very small values; the other two counties show similar trends to each other (Figure 2.30).

Perhaps the most successful area of Northern Hungary’s tourism is rural tourism (in the category of non-commercial accommodations), although the socio-economic development of the settlements involved is less favourable in many respects than the rural

average of settlements providing this kind of accommodation (Dávid L. - Tóth G. - Kelen N. - Kincses Á. 2007, p. 38).

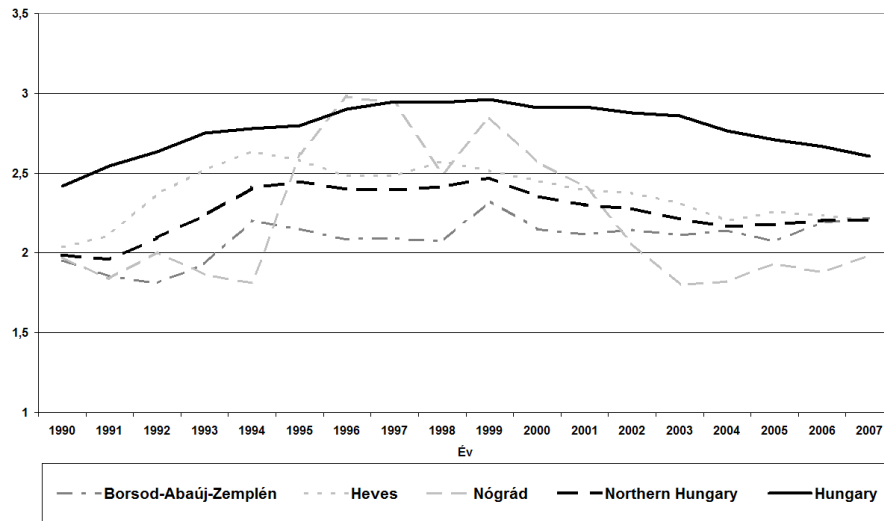


Figure 2.30: Average time of stay in hotels (guest nights) (1990-2007)

Source: Own work based on HCSO data

While the national values grew, with minor fluctuations, by only 33% from 1999 to 2007, Northern Hungary was able to produce an expansion of 165% in rural tourism. Growth was extremely fast in Heves and Borsod-Abaúj-Zemplén Counties in the studied period, although Nógrád's expansion of 81% is also remarkable (Table 2.15).

It should be noted, however, that rural tourism provides opportunity for development for only a few small settlements, and is not a comprehensive solutions to the social and economic problems of larger regions (Bajmócy P.- Balogh A. 2002, p. 388). Still, it is worth dealing with, since unutilised resources that may seem worthless for local inhabitants, also located in non-priority areas in terms of tourism, can be marketed this way (Kovács D. 1998, p. 162; Dávid L. - Jancsik A. - Rátz T., p. 49).

Rural tourism is programmatic in nature, its development is only possible through local communities, and one of its essential component is a regional approach, since one settlement alone cannot provide enough attractions for longer stays (Bodnár L. 2005, p. 243).

Table 2.15:

Number of guest nights in rural tourism, in Northern Hungary (1990-2007)

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén	29461	26878	43074	41844	43289	46553	51804	58037	70462
Heves	26805	65191	43215	47444	72341	84097	77094	72968	90344
Nógrád	12500	10509	19927	16060	13032	15284	17794	19852	22608
Northern Hungary	68766	102578	106216	105348	128662	145934	146692	150857	183414
Hungary Total	431272	530485	518488	528489	575530	586529	495637	567880	572949

Source: Own work based on HCSO data

Rural tourism changes tourists to guests who can retain privileges arising from his or her role, without feeling alienated, like in the cases of other forms of tourism (Kovács D. 2003, p. 9).

Unfortunately, rural tourism has lost some of its attraction for foreigners, as opposed to domestic demand. The period from 1999 to 2007 basically witnessed decreasing in-

terest, although with fluctuations, by foreigners; the process can be observed with some delay in Northern Hungary from 2002 (**Table 2.16**).

Table 2.16:
Number of foreign guest nights in rural tourism, in Northern Hungary (1990-2007)

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén	1486	3197	3857	13395	7126	5126	3107	3940	3062
Heves	6571	10713	8689	10706	11481	14287	13766	12225	14758
Nógrád	425	584	1973	1237	1921	3327	3676	4759	3821
Northern Hungary	8482	14494	14519	25338	20528	22740	20549	20924	21641
Hungary Total	220669	255944	221126	232810	215151	188300	106970	171299	98065

Source: Own work based on HCSO data

The expansion in the supply of rural accommodations was faster than the growth of visitor turnover in Northern Hungary. Compared to the average growth of 243% in the region, the expansion was 306% in Borsod-Abaúj-Zemplén, 212% in Heves and 161% in Nógrád (**Table 2.17**).

Table 2.17:
Number of bed places in rural tourism in Northern Hungary (1990-2007)

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Borsod-Abaúj-Zemplén	1534	1956	2944	3522	4198	4517	5345	5735	6224
Heves	1655	1870	2603	3011	3230	4205	4686	4376	5175
Nógrád	488	298	477	650	786	919	1058	1201	1274
Northern Hungary	3677	4124	6024	7183	8214	9641	11089	11312	12673
Hungary Total	26340	29768	33502	36884	38740	41960	44365	44453	41604

Source: Own work based on HCSO data

The proportion of bed spaces of rural tourism exceeded the proportion of population in all three counties by 2007, along with a tendency towards growing visitor turnover (**Figure 2.31**).

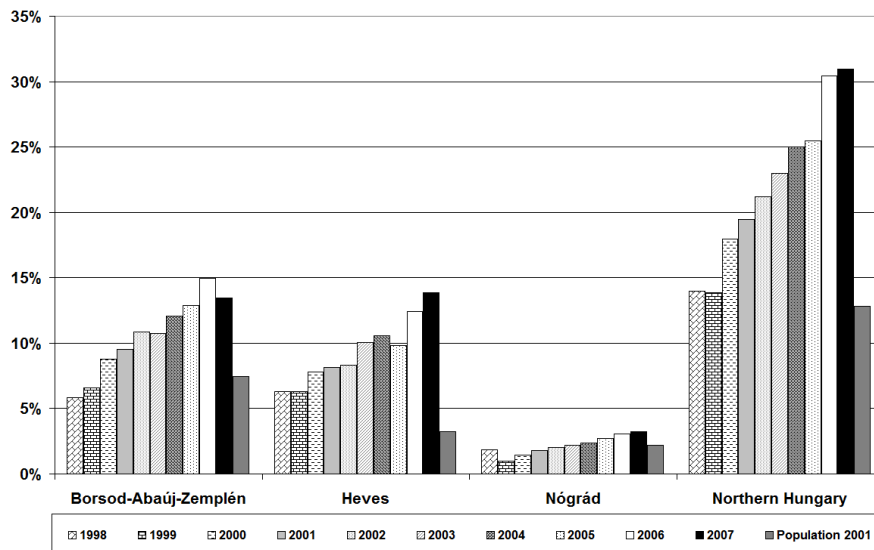


Figure 2.31: Number of bed place of rural tourism as a percentage of the national value (1990-2007)

Source: Own work based on HCSO data

Tourists stay considerably longer in the accommodations of rural tourism than in other commercial accommodations (**Figure 2.32**). However, a decrease in the length of stay can be experienced in this area as well. The average time of stay decreased from 5.4 to 3.7 guest nights from 1990 to 2007. This value, however, is still higher than the average of the commercial accommodations.

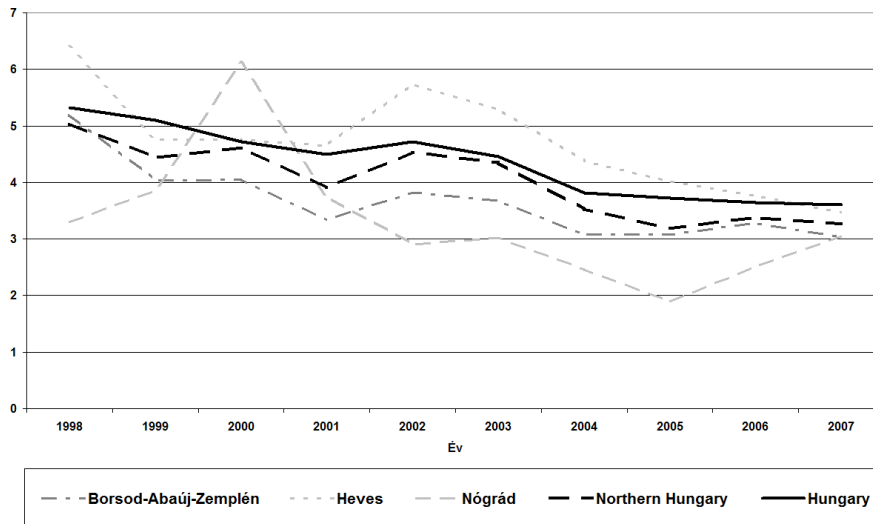


Figure 2.32: Average time of stay in the accommodations of rural tourism (guest nights) (1990-2007)

Source: Own work based on HCSO data

The average lengths of trips registered in rural tourism approximated the national value in the whole period. The performance registered in Heves County was typically above, whereas in Borsod-Abaúj-Zemplén and Nógrád Counties it was below the national value.

I have come to the conclusion on the basis of Borsod-Abaúj-Zemplén County's time-series indicators that they reflect clear growth from the beginning of 1990, with the number of guest nights both in the case of domestic and foreign visitor turnover moving into first place. It outperformed Heves County also in terms of the number of commercial bed spaces.

The view of Heves County's tourism is much more complex. The increase in domestic visitor turnover was accompanied by a significant decline in the number of foreign guest nights. The average time of stay is the lowest here among the three counties in 2007. The number of bed spaces grew steadily, although unfortunately not in the hotel category, in the period studied.

Nógrád County's tourism indicators practically reflect a decline in each case. Only the bed spaces and visitor turnover of rural tourism accommodations grew. The positive economic and social impacts of tourism are strongly local in this segment of tourism, due to the relatively lower spending of tourists coming to small settlements.

I regard hypothesis H2 as verified in the light by the data in Section 2.5 and I also formulate it as a thesis on the basis of the research results.

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

3. PROSPECTS OF GROWTH IN NORTHERN HUNGARY'S TOURISM

The previous studies have made it clear to me that in order to become more familiar with the regional processes of tourism it is also necessary to analyse the processes characteristic of the different types of accommodations, beyond only describing the foreign and domestic visitor turnover. The results of the regional and county-level analyses, making the processes of tourism better understood, are refined by intra-regional or micro-regional analyses.

The research results of the second chapter lead me to formulate new working hypotheses.

According to my hypotheses:

H3: There are 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 is an aid in understanding the regional processes of tourism.

H4: In Hungary 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.

H5: 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 Northern Hungary that have demonstrated above-average visitor turnover.

After formulating the hypotheses I found methods of analysis that may be appropriate for testing my hypotheses. I needed a method that was capable of displaying both changes and their components at the same time. I came to the conclusion during my literature review that one method to verify my hypotheses is shift-share analysis. I approached the exploration of the various aspects from the demand and supply side.

3.1. Regional and sectoral structure related aspects of tourism demand on the basis of guest nights

In Hungary tourists spent 18,369,319 guest nights in 2000 and 20,128,534 guest nights in 2007, which means a growth of 9.6%. In 2000, 62.5% of the guest nights were spent in hotels, 12% in guesthouses, 5.3% in tourist hostels, 3.9% in youth hostels, 5.2% in resort houses and 11.8% in campsites. In 2007, the proportion of guest nights spent in hotels had increased to 70.2%, at the expense of the turnover of tourist hostels and campsites. The process, considering that the number of guest nights increased in absolute value, can be regarded positively, since visitor turnover increased in the higher-category segments, which leads to the assumption that specific incomes (per guest night, per day) had grown at the national level.

3. PROSPECTS OF GROWTH IN NORTHERN HUNGARY'S TOURISM

The increase of Northern Hungary's visitor turnover did not approximate the national 9.6% between 2000 and 2007, which meant a relative position decline among the regions.

Visitor turnover increased in hotels by 14.6% and in youth hostels by 69.8%; it insignificantly decreased in guest houses, while tourist hostels, resort houses and campsites experienced considerable decrease in visitor turnover (23.6%, 14%, and 30.8%, respectively).

The growth of interest in higher-class accommodations is less characteristic of Northern Hungary. Despite the increasing number of guest nights spent in hotels (+14.6%) and youth hostels (+69.9%), this increase exceeded the national dynamics (-0.4%) only in youth hostels. The turnover of youth hostels expanded by more than 69.9%, while the increase of visitor turnover in other segments lagged behind the national values.

Table 3.1:
Shift-share analysis according to the number of guest nights (2007/2000)

Region	<i>in hotels</i>	<i>in guest-houses</i>	<i>in tourist hostels</i>	<i>in youth hostels</i>	<i>in resort houses</i>	<i>in campsites</i>	Sr regional	Sa sectoral	Si total
Central Hungary	326998	-34688	-30431	99652	-25697	514	336347	519627	855974
Northern Great Plain	217185	9463	3676	11821	33826	59711	335682	-51632	284050
Southern Great Plains	8753	-14867	43928	12194	32620	28469	111096	-23949	87147
Western Transdanubia	-41076	-7319	-85487	7763	-21598	60930	-86786	23735	-63052
Northern Hungary	-55299	-20912	-1527	42341	-12660	-1784	-49841	-87718	-137558
Central Transdanubia	-62848	49587	43683	-74873	1936	-73106	-115620	-284192	-399813
Southern-Transdanubia	-393712	18735	26159	-98898	-8427	-74734	-530878	-95871	-626749

Source: Own calculations based on HCSO data

Calculations indicate that the growth dynamics of the region's tourism lags behind the national value (-137,558 guest nights, assuming the national level of growth), which has components arising from regional characteristics (-49,841 guest nights) and from the structure of the sector (-97,718 guest nights) (**Table 3.1**).

Table 3.2:
Values of "total", "regional", and "sectoral" effects in Northern Hungary, by the number of guest nights (2007/2000)

Region	Si+	Si-	Sr+	Sr-	Sa+	Sa-
Central Hungary	69.8%		42.9%		95.6%	
Northern Great Plain	23.1%		42.9%			9.5%
Southern Great Plain	7.1%		14.2%			4.4%
Western Transdanubia		5.1%		11.1%	4.4%	
Northern Hungary		11.2%		6.4%		16.1%
Central Transdanubia		32.6%		14.8%		52.3%
Southern Transdanubia		51.1%		67.8%		17.6%
Country Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Own calculations based on HCSO data

In the regional comparison, the majority of the positive values of “total effect” (69%) were concentrated in Central Hungary, and somewhat less in the Northern Great Plain (23.1%) and Southern Great Plain (7.1%). In contrast, lower values than the national level were mainly experienced in Southern Transdanubia (51.1%), Central Transdanubia (32.6%) (Lake Balaton is located in the area of those two regions) and, to a lesser extent, Northern Hungary (11.2%) and Western Transdanubia (5.1%) (**Table 3.2**).

The numbers of the “regional effects” are basically the same as those of the “total effects”, with the difference that a lower proportion of the positive values will refer to Central Hungary, and a higher proportion to the Northern Great Plain (42.9%) and the Southern Great Plain (14.2%). Unfortunately, in the case of the negative values, we encounter Northern Hungary again (6.4%), while the shares of South Transdanubia (67.8%), Central Transdanubia (14.8%), and Western Transdanubia (11.1%) are the highest.

The positive values of the “sectoral effects” occur almost entirely in Central Hungary (95.6%), while the negative values, less concentrated spatially, can be observed in South Transdanubia (17.0%), Central Transdanubia (52.3%), and Northern Hungary (16.1%).

It is worth noting that the role of South Transdanubia and Central Transdanubia are inverse in the case of the negative “regional and sectoral” effects. In Southern Transdanubia unfavourable regional factors prevail, while in Central Transdanubia unfavourable structural problems are dominant.

unfavourable regional, in Central Transdanubia unfavourable structural problems are dominant.

Table 3.3:

Shift-share analysis by the number of guest nights in Northern Hungary (2007/2000)

County	<i>in hotels</i>	<i>in guest-houses</i>	<i>in tourist hostels</i>	<i>in youth hostels</i>	<i>in resort houses</i>	<i>in campsites</i>	Sr regional	Sa sectoral	Si total
B.-A.-Z.	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 calculations based on HCSO data

Northern Hungary’s regional processes of visitor turnover can be better understood if the analysis is carried out at county level as well. Borsod-Abaúj-Zemplén was the first among the counties where the growth of visitor turnover exceeded the national average (29.1%); a slight decrease in Heves (-3.9%) and drastic decrease in Nógrád County (-42.1%) was experienced.

Every accommodation type produced a growth rate above the national level in Borsod-Abaúj-Zemplén, and the 640% growth of youth hostels is remarkable. It is particularly unfortunate that Heves County lost ground compared to national growth rates in terms of hotel guest nights (-52473). Nógrád County’s visitor turnover decreased by 21.5 to 70.5% in the case of each type of commercial accommodation (**Table 3.3**).

The negative “total effect” of Heves and Nógrád is predominantly due to “regional” factors, i.e., it can be explained by the general, rather than tourism-specific, characteristics of the two counties.

Borsod-Abaúj-Zemplén County shares 2.6% of “total effect” and 8.3% of the positive part of “regional effect”, while the value of the negative “sectoral effect” is also significant (-58117 guest nights). While the visitor turnover showed an above-average

growth, the demand for accommodations able to satisfy higher needs proved to be lower than the national trends.

Heves and Nógrád Counties share 6.3% and 5.7% of the negative values of “total effect”, which is mainly due to regional reasons.

I found that carrying out analyses at micro-regional level is indispensable for the better understanding of the spatial processes of Northern Hungary's tourism, since in this way regions with outstanding dynamics can be identified, and also those regions whose development/growth is below expectations.

The micro-regions of Tokaj, Encs, Abaúj-hegyköz, Edelény, Sárospatak, Mezőkövesd and Tiszaújváros significantly outperformed the minimal regional growth of 0.6% in terms of guest nights in the time period from 2000 to 2007.

Unfortunately, some of the regions could achieve outstanding growth only compared to the extremely low reference value of year 2000. Micro-regions with really significant visitor turnover (Gyöngyös, Miskolc and Salgótarján) have declining indicators, and they are at the end of the rank of micro-regions in terms of the “total effect” values. It is reassuring, however, that the “sectoral effect” values of the micro-regions of Gyöngyös and Salgótarján are positive.

Having compared my research findings with other authors' studies of micro-regional development (Bíró P. - Molnár L. 2004; Faluvégi A. 2004a), it appears that there is no close relationship between the overall development level of micro-regions and the dynamics of the increase of tourism demand. It seems that tourism is a potential breakout point for the region's less developed (micro-) regions. Apart from the micro-regions of Balassagyarmat and Szikszó, the “regional effect” is higher than the sectoral factor in each case, which means that the growth factors of tourism are clearly local in the region (at micro-regional level).

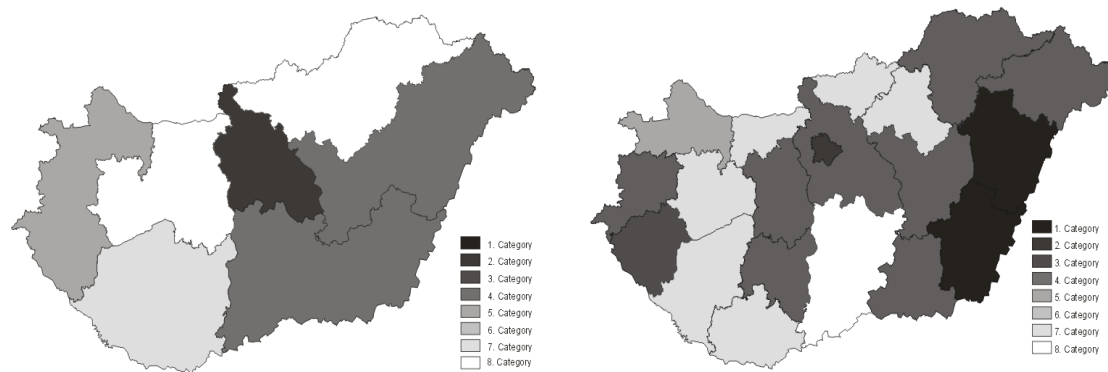


Figure 3.1: Regions and counties according to the number of guest nights according to shift-share analysis (2007/2000)

Source: Own calculations based on HCSO data

In regional comparison, growth of the number of guest nights above that of the national level predominantly occurred in the eastern part of Hungary, and this finding is refined or rather underpinned by the county-level results, according to which growth above the national level could be experienced rather in the eastern counties of the country (Figure 3.1).

The “sectoral effects” values, in absolute values, exceeded “regional effects” in Central Hungary, Central Transdanubia and Northern Hungary.

This means, in the case of Northern Hungary, that growth not exceeding the national level can be attributed to the joint effect of the below-average regional and structural factors.

Borsod-Abaúj-Zemplén's growth, the dynamics of which are above national level due to its regional characteristics, cannot offset Heves and Nógrád Counties' negative processes.

Northern Hungary's tourism processes can be further refined using micro-regional analyses.

Most of the micro-regions performing better than the region's average growth are located in Borsod-Abaúj-Zemplén, a few of them are in Heves (and on the borders of Borsod-Abaúj-Zemplén County), while all micro-regions of Nógrád performed below the regional dynamics (**Figure 3.2**).

It is worth noting that many micro-regions (Salgótarján, Miskolc, Gyöngyös, Ózd) possessing larger populations and higher economic potential also performed below the regional level, while, the growth of micro-regions that are in many respects peripheral (near the Slovakian border) is above average.

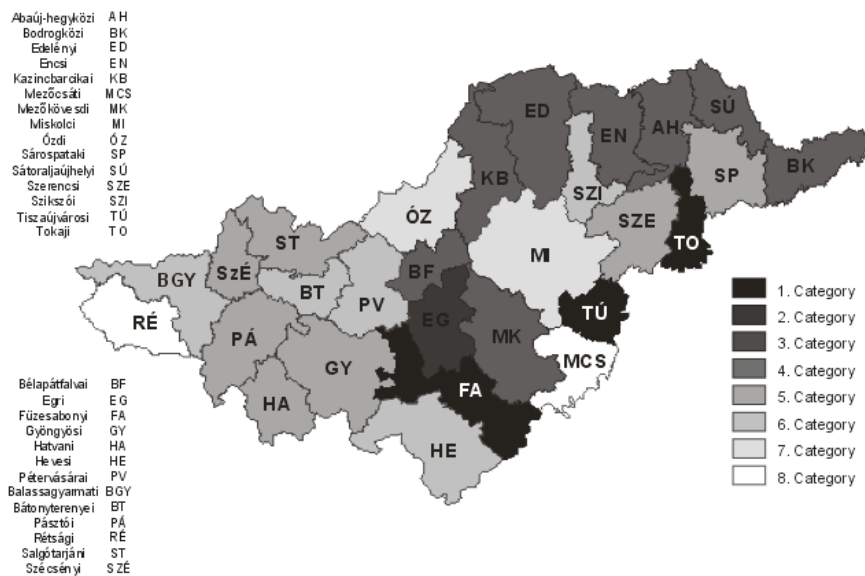


Figure 3.2: Northern Hungary's micro-regions by the number of guest nights based on shift-share analysis (2007/2000)

Source: Own calculations based on HCSO data

The regional analysis underpinned my hypothesis that less developed regions can also be able to achieve outstanding tourism performances.

3.2. Regional and structural characteristics of tourism demand on the basis of the number of guest night spent by foreigners

In 2000 foreign tourists spent 10,513,825 guest nights and in 2007 they spent 10,170,808 guest nights in Hungary, which is a 3.6% decline in the studied period (the number of total guest nights increased only to a small extent). The proportion of foreign visitor turnover decreased from 57.2% in 2000 to 50.4% in 2007. The dynamic increase of domestic tourism was able to offset the slightly decreasing foreign visitor turnover.

In 2000, 70.1% of foreign guest nights were recorded in hotels, 6.6% of them in guesthouses, 1.4% in tourist hostels, 2.1% in youth hostels, 3.4% in resort houses and 16.5% in campsites.

By 2007 the proportion of hotel guest nights had increased to 78.7%, at the expense of the visitor turnover of other categories (campsites in particular).

It is not easy to assess the processes of foreign demand due to the 3.6% decrease in foreign visitor turnover, despite the fact that visitor turnover of the highest-class hotels grew by 9% in the studied period.

Based on shift-share analysis, and given the national decrease of 3.6%, foreigners should have spent 664,295 more guest nights in Southern Transdanubia and 494,984 guest nights more in Central Transdanubia (**Table 3.4**).

Foreigners increasingly choose the services of hotels, although at declining absolute values and, compared to the national proportion, smaller intensity (in 2007 only 60.9% of hotel guest nights were spent by foreigners, compared to the national 70.1%).

The dynamics of the number of foreign guest nights (-74,458 guest nights) is below the national level, which has regional components (-41,328) and also those arising from the composition of accommodation supply (-33,130).

Table 3.4:

Shift-share analysis according to the number of foreign guest nights (2007/2000)

Region	in hotels	in guest-houses	in tourist hostels	in youth hostels	in resort houses	in campsites	Sr regional	Sa sectoral	Si total
Central Hungary	861189	38788	-4506	80187	-4582	-651	970425	414997	1385422
Southern Great Plains	-22148	7228	5971	252	5243	10101	6646	-11165	-4519
Western Transdanubia	-	-16457	-1563	-777	-9751	87865	-66536	-4633	-71169
Northern Hungary	-30062	-4339	-8225	-3004	8554	-4252	-41328	-33130	-74458
Northern Great Plains	-39348	-11993	-2269	200	5456	24861	-23093	-52904	-75997
Central Transdanubia	-	22434	7562	-45791	-2088	-51264	-250095	-244889	-494984
Southern-Transdanubia	-	-35661	3030	-31066	-2832	-66659	-596020	-68275	-664295

Source: Own calculations based on HCSO data

“Total effect” had positive value only in Central Hungary, while values below the national level appeared mainly in Southern Transdanubia (47.9%) and Central Transdanubia (35.7%), to a smaller extent in the Northern Great Plain (5.5%), Northern Hungary (5.4%) and Western Transdanubia (5.1%) (**Table 3.5**).

Table 3.5:

Values of “total”, “regional” and “sectoral” effects in the regions according to the number of foreign guest nights (2007/2000)

Region	Si+	Si-	Sr+	Sr-	Sa+	Sa-
Central Hungary	100.0%		99.3%		100.0%	
Southern Great Plain		0.3%	0.7%			2.7%
Western Transdanubia		5.1%		6.8%		1.1%
Northern Hungary		5.4%		4.2%		8.1%
Northern Great Plain		5.5%		2.4%		12.9%
Central Transdanubia		35.7%		25.6%		59.7%
Southern Transdanubia		47.9%		61.0%		16.6%
Country Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Own calculations based on HCSO data

“Regional effects” show similar features to the “total effect” values, with the difference that Southern Transdanubia shares 61% of the negative values, whereas Central Transdanubia shares “only” 25.6%.

The positive values of the “sectoral effects” are entirely concentrated in Central Hungary, while the negative values are scattered all over the country. The majority of them fall in Central Transdanubia (59.7%), South Transdanubia (16.6%), and the Northern Great Plain (12.9%).

It is worth noting that the role of Southern Transdanubia and Central Transdanubia is inverse also in terms of foreign guest nights. Once again, South Transdanubia displays unfavourable regional factors, and in Central Transdanubia the sectoral components are dominant.

In order to describe Northern Hungary’s tourism processes more precisely I prepared county analyses as well; there are remarkable differences in the three counties (**Table 3.6**).

The number of foreigners decreased to a smaller extent in Borsod-Abaúj-Zemplén than the national level in the period 2000-2007. The negative value (-13,960 guest nights) of the “sectoral effect” was offset by the greater “regional effect” (14,368 guest nights). Foreign visitor turnover in the county’s hotels, youth hostels, resort houses and campsites was more favourable than the national trends.

Table 3.6:

Shift-share analysis according to the number of foreign guest nights in Northern Hungary (2007/2000)

County	n hotels	in guest-houses	in tourist hostels	in youth hostels	in resort houses	in campsites	Sr regional	Sa sectoral	Si total
B.-A.-Z.	2145	-3069	-285	2705	10399	2473	14368	-13960	408
Heves	-28859	118	-8391	-4602	-1783	-6710	-50228	-19104	-69332
Nógrád	-3348	-1388	451	-1107	-62	-16	-5469	-66	-5535

Source: Own calculations based on HCSO data

Only the growth of the visitor turnover of guesthouses exceeded the average (+118 guest nights), while hotels registered a significant decline in turnover.

In Heves County, similarly to Nógrád, the negative values of the “regional effects” dominate the “total effect”.

, similarly to Nógrád, the negative values of the “regional effects” dominate the “total effect”.

Table 3.7:

Distribution of “total”, “regional” and “sectoral” effects in all counties by the number of foreign guest nights (2007/2000)

County	Si+	Si-	Sr+	Sr-	Sa+	Sa-
Budapest	87.4%		76.2%		94,8%	
Vas	4.0%		7.2%			6.0%
Győr-Moson-Sopron	3.9%		4.2%		2,3%	
Csongrád	2.6%		3.2%		0,1%	
Pest	1.8%		2.2%		0,3%	
Szabolcs-Szatmár-Bereg	0.2%		0.5%			0.8%
Borsod-Abaúj-Zemplén	0.03%		1.2%			3.2%
Komárom-Esztergom		0.2%	2.9%			9.1%
Tolna		0.3%		0.2%		0.6%
Nógrád		0.4%		0.4%		0.02%
Fejér		0.7%	0.6%			4.1%
Jász-Nagykun-Szolnok		0.7%	1.9%			7.9%
Békés		1.0%		1.2%		0.3%
Bács-Kiskun		1.8%		1.5%		2.4%
Hajdú-Bihar		4.3%		4,2%		3.4%
Heves		4.5%		4.1%		4.4%
Baranya		7.9%		9.2%		2.0%
Zala		12.6%		16.7%	2,7%	
Veszprém		31.0%		23.7%		42.9%
Somogy		34.6%		38.8%		13.1%
Country Total	100.0%	100.0%	100.0%	100,0%	100.0%	100.0%

Source: Own calculations based on HCSO data

In Nógrád County values exceeding the national dynamics can only be experienced in the case of the visitor turnover of tourist hostels.

Overall, it can be stated that the relative deterioration in the region's tourism performance is predominantly due to Heves County's performance, which was offset only partly by the improvement of Borsod-Abaúj-Zemplén's relative position.

The county-level analyses make the overly one-sided image produced by the regional analyses more colourful. The capital shares 87.4% of the positive values of “total effect”; a further five counties (Győr-Moson-Sopron, Csongrád, Vas, Pest and Borsod-Abaúj-Zemplén) can report more favourable performance than the national trends. The most severe deterioration in position was suffered by Somogy, Veszprém, and Zala Counties (they share 34.6%, 31% and 12.6% of the negative “total effect” value, respectively).

The positive values of the “regional effects” are similar to the “total effect numbers”, with the difference that the share of the capital is of lesser extent (furthermore Komárom-Esztergom, Fejér, and Jász-Nagykun-Szolnok have positive values as well).

Budapest dominates the positive values of “sectoral effects” (94.8%), and while the negative values are more scattered in space, the last positions are occupied by Veszprém (42.9%), Somogy (13.1%) and Komárom-Esztergom (9.1%) counties (**Table 3.7**).

Nógrád County's share of the national negative values is small in the case of all three effects due to its relatively insignificant role in tourism. The same is less true for Heves County, which shares about 4% of the negative values. Borsod-Abaúj-Zemplén County's share of the positive “total” and “regional”, and the negative “sectoral” values is even smaller.

The findings associated with foreign visitor turnover were similar to the results of the shift-share analyses of guest nights. In Somogy “regional effects” and in Veszprém “sectoral effects” were dominant; these counties occupy the last two positions of the negative (regional and sectoral) values.

While the positive values of “sectoral effects” are concentrated in Budapest even now, the negative values are scattered spatially.

The appropriate responses to the realignment of market needs were given by the accommodation supply of the capital and, to lesser extent, that of four counties.

Similarly to the logic of the analyses of guest nights, I perceived the processes, also in the case of foreign guest nights, taking place in the micro-regions of the Region.

The analysis helped me identify those micro-regions whose dynamics stands out of their environment, and also those whose development/growth is below average.

In all, 14 micro-regions could reach the level of dynamics of visitor turnover of the region, which unfortunately meant a 25.4% decline. The number of foreign guest nights increased in only 11 micro-regions, mainly in areas which had low base values in 2000 (except for the micro-regions of Tiszaújváros and Sárospatak).

We could see extremely high growth rate in several cases: the number of foreign guest nights was higher by 729% in the micro-region of Szikszó, by 719% in Bátorfőnyéki, by 356% in Rétság, by 178% in Sárospatak, by 146% in Edelény, by 87% in Tiszaújváros, by 65% in Tokaj and by 25% in the Balassagyarmat micro-region.

Most of the positive values of the “total” effect (79.4%) were concentrated in three micro-regions (Tiszaújváros, Sárospatak and Miskolc), which meant an actual increase of visitor turnover in the Tiszaújváros and Sárospatak micro-regions, with the Miskolc micro-region performing “only” better than the regional average.

The visitor turnover of hotels increased by 21%, that of tourist hostels increased by 413% (we speak of a very small value increase here) in the Miskolc micro-region, and we can speak of a significant decrease in the case of all other accommodation types.

A high proportion of the negative values of the “total effect” occurred in the Eger micro-region (51.7%), to a lesser extent in the Mezőkövesd one (21.5%), and in further 11 micro-regions.

I found that 95.5% of the positive values of the “regional effect” are concentrated in seven micro-regions, while 70.5% of the negative values are concentrated in the Eger, Mezőkövesd and Salgótarján micro-regions.

“Sectoral effects” are more scattered compared to the spatial distribution of “regional effects”; 18 out of 27 micro-regions have positive values. Of the total positive values, 44% are concentrated in the Miskolc micro-region, and to a lesser extent in the Tiszaújváros (14.2%) and Gyöngyös (12.6%) micro-regions.

As for the values of the negative “sectoral effect,” 62.1% appear in the micro-region of Eger, 23.4% in Mezőkövesd, 7.8% in Sátoraljaújhely and 5.4% in Kazincbarcika micro-regions.

Similarly to the experiences with the shift-share analyses, “regional effect” is dominant in almost every micro-region in terms of the foreign guest nights, in the case of micro-regions disposing of both positive and negative “total effect” values (exceptions are the Gyöngyös and Mezőkövesd micro-regions).

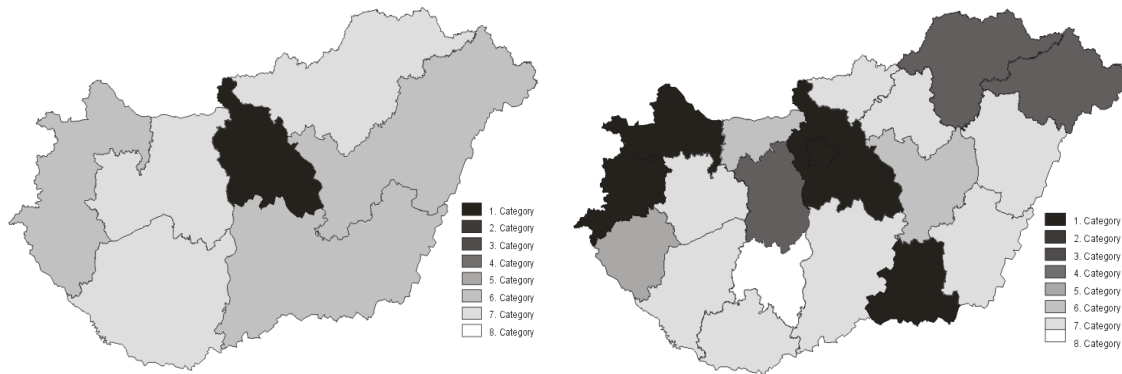


Figure 3.3: Regions and counties according to the foreign guest nights, on the basis of shift-share analysis (2007/2000)

Source: Own calculations based on HCSO data

The above national average increase of guest nights spent by foreigners appears only in Central Hungary (**Figure 3.3**).

This earlier statement is refined by the county-level findings. Performance exceeding average dynamics (the 3.6% decrease) can be experienced in Budapest, as well as in Pest, Győr-Moson Sopron, Vas, Fejér, Borsod-Abaúj-Zemplén, Szabolcs-Szatmár-Bereg, and Csongrád Counties.

While the number of guest nights (domestic and foreign together) decreased in each micro-region of Nógrád County, there are positive trends in foreign visitor turnover in the Rétság, Balassagyarmat, and Bátorfyerenye micro-regions (**Figure 3.4**).

The number of foreign guest nights declined in each micro-region of Heves County. The apparently positive position of the Gyöngyös micro-region is due to its shrinking turnover of visitors that, however, does not reach the regional decrease.

In Borsod-Abaúj-Zemplén County, the Miskolc (-13%) and the Kazincbarcika (-10.2%) micro-regions, similarly to the Gyöngyös micro-region, can only “show off” a below-regional average decrease (-25.9%) of visitor turnover.

Actual growth was measured in the Szikszó (+729%), Sárospatak (+178%), Edelény (+146%), Tiszaújváros (+87%), Tokaj (+65%), Sátoraljaújhely (+10%), Encs (+8%) and Abaúj-Hegyköz (+3%) micro-regions, although among them only the Tiszaújváros, Sárospatak and Tokaj micro-regions have relatively significant visitor turnover.

Unfortunately, among micro-regions disposing of the highest visitor turnover, the Eger (-43%), Miskolc (-13%), Mezőkövesd (-58.4%), Gyöngyös (-20.6%), Kazincbarcika (-10.2%) micro-regions suffered a significant decline in turnover.

The findings of the micro-regional analysis indicate that an improvement can be observed in a few micro-regions starting from a very low base, while micro-regions involved more in foreign visitor turnover are losing ground rather dynamically.

Katalin Antal, in her work titled “Tourism and rural development,” comes to a similar conclusion. She argues that “overall, there is an increasing chance for levelling those underdeveloped regions that have some sort of tourism attraction” (Antal K. 2000, 15 p.).

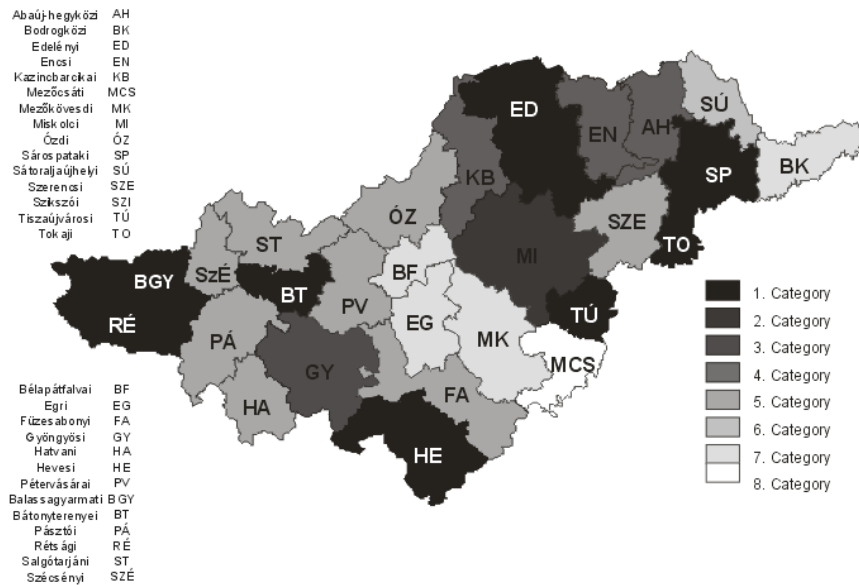


Figure 3.4: Northern Hungary's micro-regions by the number of foreign guest nights, based on shift-share analysis (2007/2000)

Source: Own calculations based on HCSO data

Both favourable and unfavourable total effect values are dominated by the “regional” factor, except for two micro-regions, i.e., the growth factors of visitor turnover are to be sought at regional level.

3.3. Regional and structural characteristics of tourism demand on the basis of the number of guest night spent by Hungarians

In 2000 domestic tourists spent 7,855,494 guest night and in 2007 they spent 9,957,726 guest nights in Hungary, which means a 26.8% increase in the period investigated (the number of total guest nights increased to a lower extent, by 9.6%).

The proportion of domestic visitor turnover changed from 42.8% of 2000 to 49.6% of 2007, domestic visitor turnover dynamically increased as opposed to the slight decrease of foreign visitor turnover (-3.3%)

In 2000 52.4% of domestic guest nights were spent in hotels, 17.5% of them in guesthouses, 10.7% in tourist hostels, 6.4% in youth hostels, 7.6% in resort houses and 5.6% in campsites. The proportion of the guest nights of hotels increased to 61.5%, at the expense of the visitor turnover of the other accommodation types.

Domestic tourists spent fewer guest nights in hotels and campsites than foreigners, but more of them stayed at guesthouses, tourist and youth hostels. The numbers indicate that domestic visitor turnover also moved towards higher-class accommodations (hotels and, to a lesser extent, guesthouses), which contributed to the (specific) growth of income from tourism.

The number of domestic guest nights increased in every region, the most in the Northern Great Plain (61.8%) and the least in Northern Hungary (7.8%). Domestic tourists' interest in Northern Hungary increased to a lesser extent than the national expansion. The extent of the expansion did not reach the national dynamics in any accommodation types apart from tourism hostels and youth hostels.

The processes of domestic turnover significantly differ from the growth features of foreign guest nights (Table 3.8). The Northern Great Plain, Central Transdanubia, the Southern Great Plain and Southern Transdanubia differ from the national average performance growth in a positive direction by 305,517; 118,134; 11,255 and 2,681 guest nights, respectively. Northern Hungary and Central Hungary benefited the least from the revival of domestic tourism. The increase in the visitor turnover of hotels (23%) is considerably behind its national change (+49%).

The increase in demand for higher-class accommodations is the most characteristic of the region compared to the national level. In 2007 only 46.4% of domestic guest nights were spent in hotels, compared to the national 61.5%.

Table 3.8:
Shift-share analysis according to the number of domestic guest nights (2007/2000)

Region	in hotels	in guest houses	in tourist hostels	in youth hostels	in resort houses	in campsites	Sr regional	Sa sectoral	Si total
Northern Great Plain	197609	20609	8534	9963	25502	29144	291361	14156	305517
Central Transdanubia	85631	25919	34638	-24805	39266	4371	165020	-46886	118134
Southern Great Plain	-37360	-26253	36431	11837	20922	3592	9168	2086	11255
Southern Transdanubia	40379	59667	22306	-73770	-4960	-24845	18778	-16097	2681
Western Transdanubia	8473	13041	-91449	7061	-11175	-6646	-80695	54563	-26132
Central Hungary	-167628	-60588	-21064	26396	-25042	1176	-246749	62061	-184689
Northern Hungary	-127105	-32395	10604	43318	-44512	-6792	-156883	-69884	-226766

Source: Own calculations based on HCSO data

The dynamics of the number of domestic guest nights falls behind the national value (-226,766 guest nights compared to the national growth), which has both regional (-156,883) components and those arising from the structure of accommodation supply (-69,884).

The majority of the positive values of “total effect” were realized in the Northern Great Plain (69.8%) and Central Transdanubia (27.0%); percentages below the national level were registered predominantly in Northern Hungary (51.8%) and Central Hungary (42.2%), and, to a lesser extent, in Western Transdanubia (Table 3.9).

Table 3.9:
Values of „total”, „regional” and „sectoral” effects according to the number of domestic guest nights in the regions (2007/2000)

Region	Si+	Si-	Sr+	Sr-	Sa+	Sa-
Northern Great Plain	69.8%		60.2%		10.7%	
Central Transdanubia	27.0%		34.1%			35.3%
Southern Great Plain	2.6%		1.9%		1.6%	
Southern Transdanubia	0.6%		3.9%		0.0%	12.1%
Western Transdanubia		6.0%		16.7%	41.1%	
Central Hungary		42.2%		50.9%	46.7%	
Northern Hungary		51.8%		32.4%		52.6%
Country Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Own calculations based on HCSO data

The “regional effects” are similar to the “total effect” values, with the difference that the Northern Great Plain shares 60.2% and Central Transdanubia shares 34.1% of the positive values, whereas Central Hungary’s share of the negative values is 50.9%, Northern Hungary’s share is 32.4%, and Western Transdanubia’s share is 16.7%.

For “sectoral effects,” 46.7% of the positive values appear in Central Hungary and 41.1% in Western Transdanubia, whereas Northern Hungary (52.6%), Central Transdanubia (35.3%), and Southern Transdanubia (22.9%) share the negative value of 12.1%.

I analysed the processes associated with domestic guest nights at the county level as well (Table 3.10). Although performance growth was behind the national average in the case of all three counties, we can account for some positive phenomena as well. Domestic visitor turnover expanded by 20.6% in Borsod-Abaúj-Zemplén and by 9.6% in Heves, while it fell by 42% in Nógrád.

In B.-A.-Z. and Heves Counties the domestic visitor turnover of hotels (+36% and +20%) and guesthouses (+14 and +15%) significantly increased. Outstanding growth was experienced in Borsod-Abaúj-Zemplén County’s youth hostels (+7611%), whereas the demand for the services of campsites significantly declined in Heves and Nógrád (-43% and -73%).

Table 3.10:

Shift-share analysis by domestic guest nights in Northern Hungary (2007/2000)

County	in hotels	in guest houses	in tourist hostels	in youth hostels	in resort houses	in campsites	Sr regional	Sa sectoral	Si total
B.-A.-Z.	-18839	1605	9713	50775	-18292	-398	24564	-55907	-31343
Heves	-89284	1866	3853	7895	-15261	-5167	-96098	2923	-93176
Nógrád	-18983	-35866	-2962	-15352	-10959	-1227	-85348	-16899	-102248

Source: Own calculations based on HCSO data

None of the counties reached the national growth level of domestic visitor turnover. The growth of the number of domestic guest nights spent in hotels is considerably below the expectations (by -89,284 guest nights in Heves County). In Nógrád County the dynamics of all accommodation types is below the national level, apart from the not very significant tourist hostel category.

The values of “total effects” are dominated by the unfavourable structural factors, while in the other two cases by the “regional effect”.

The county level analyses (not shown here in detail) further specify the processes of domestic tourism in this case as well. For “total effect,” 77.2% of the positive values were concentrated in Zala, Hajdú-Bihar, and Veszprém counties; 80.7% of the negative values in Győr-Moson-Sopron, Budapest, Nógrád, and Heves Counties.

The values of “regional effect” and “total effects” are similar to each other; the same counties can be found in the first four and the last four positions, with one difference in order.

The image is more complex in the case of the “sectoral effects”. Counties, apart from Hajdú-Bihar and Zala, also share the positive values in the case of which “total effect” is negative (e.g., Budapest, Győr-Moson-Sopron).

Unfortunately, 21.3% of “negative effects” fall on Borsod-Abaúj-Zemplén County, which refers to the lack of the structural change that was favorable at national level.

The spatial distribution of the negative values is more even than that of the positive ones. The accommodation supply of only a few counties could give appropriate responses to the realignment of market needs in the case of domestic tourism as well.

Similarly to the logic of the earlier analyses, I evaluated the processes of domestic guest nights taking place in the Region's micro-regions.

Twelve micro-regions exceeded the 7.8% growth of the Region's domestic visitor turnover. The visitor turnover of Mezőkövesd, Eger, Abaúj-hegyköz, Tokaj and Sárospatak micro-regions was more favourable than the average regional growth, while that of Miskolc, Salgótarján, Gyöngyös, Ózd and Pétervására micro-regions lagged the most behind it.

In 23 out of 27 micro-regions "regional effects" are dominant in the change of domestic guest nights (except for Szikszó, Hatvan, Pétervására and Bátorterenyé micro-regions). All these refer mainly to the fact that the changes in demand for the micro-regions, whether the changes are expansion or decline, have regional causes.

For "total effect," 84.8% of the positive values were concentrated in four micro-regions (Mezőkövesd, Eger, Abaúj-hegyköz and Tokaji), whereas 82.5% of the negative values were also concentrated in four micro region; 15 micro-regions performed better than and 12 performed below the regional growth.

Essentially, the same micro-regions have the largest proportion of both positive and negative values (an exception is the Pásztó micro-region's significant negative performance of 7%).

Similarly to the analyses of the values of foreign guest nights and total values, it can be seen in the case of domestic guest nights that the positive values of the "sectoral effects" are more concentrated, while the negative ones are more scattered spatially. The accommodation supply of only a few micro-regions in Northern Hungary were able to make an appropriate response to the realignment of market needs.

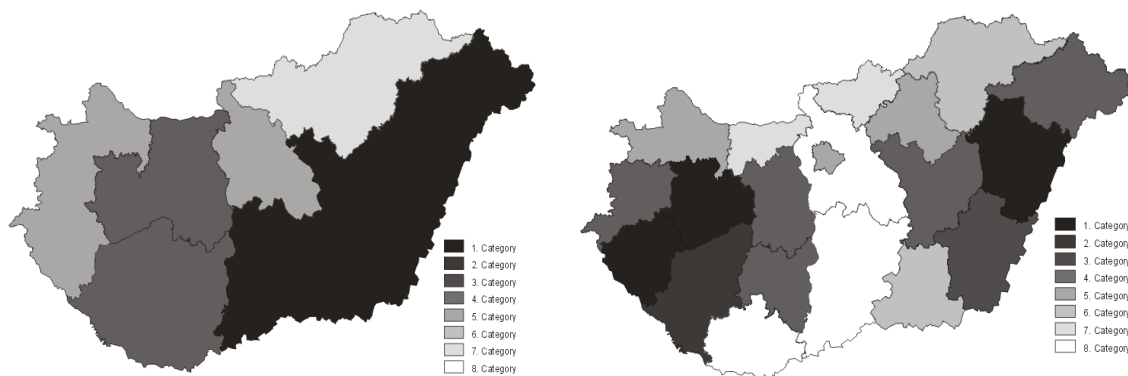


Figure 3.5: Regions and counties according to the number of domestic guest nights on the basis of shift-share analysis (2007/2000)

Source: Own calculations based on HCSO data

Growth above the national average in the number of domestic guest nights (+26,8%) can be observed in four regions, which meant a 61.2% expansion in Northern Great Plain (Figure 3.5).

It is remarkable that Central Hungary could produce only below-average (11.2%) growth, while in the same period, its foreign visitor turnover expanded by 29.2%. In my opinion, Central Hungary tends to be a sender region (its share of domestic tourism was 13.2% in 2007), on the basis of the inter-related proportions of population and guest nights, whereas South Transdanubia (a 15.9% share) and Western Transdanubia (20.9%) can be rather regarded as host regions.

The map illustrating the county-level survey is almost the inverse of the results based on the number of foreign guest nights. In 14 out of 20 counties (Békés, Csongrád, So-

mogy, Tolna, Hajdú-Bihar, Jász-Nagykun-Szolnok, Borsod-Abaúj-Zemplén, Komárom-Esztergom Veszprém, Budapest, Pest, Győr-Moson-Sopron and Zala), counties performing better in the area of foreign turnover developed more in domestic turnover, while those performing below average developed more dynamically (**Figure 3.5**).

The same phenomenon is less characteristic of Northern Hungary's micro-regions; the dynamics of foreign and domestic visitor turnovers have inverse directions in only 12 micro-regions.

The values of domestic guest nights determine the changes in the number of total guest nights in Northern Hungary; since the proportion of the foreign guest nights was higher than the national average (50.7% in 2007) only in the Tiszaújváros micro-region (54.7%). In all the other micro-regions the values were below 26% (below 10% in 17 cases).

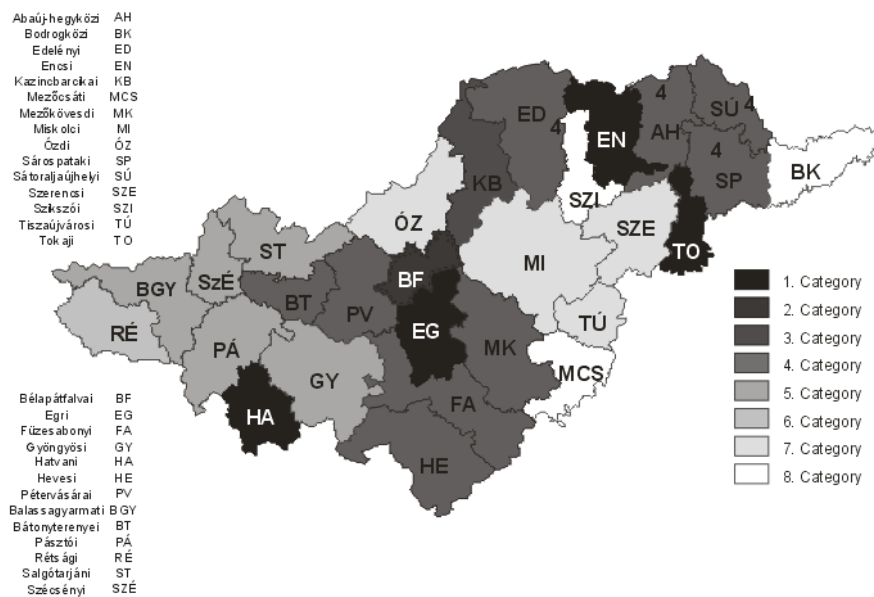


Figure 3.6: Northern Hungary's micro-regions by the number of domestic guest nights, based on shift-share analysis (2007/2000)

Source: Own calculations based on HCSO data

The majority of micro-regions producing growth above the regional average are in Borsod-Abaúj-Zemplén, while some of them are in Heves County (most of which border Borsod-Abaúj-Zemplén County); each micro-region of Nógrád County performed below the regional dynamics (**Figure 3.6**).

It is worth noting about domestic tourism that many micro-regions with relatively more significant populations and economic potential (Salgótarján, Miskolc, Gyöngyös and Ózd) also performed below the regional level, while growth is above average in other – in many respects peripheral – micro-regions (near the Slovakian border).

On the basis of the analyses in Sections 3.1-3.5 and the statements regarding the concentration of visitor turnover in Section 4.6, I view hypothesis H3 as verified and, in the light of the research findings, I formulate it as a thesis below. Based on shift-share analysis, I also consider Hypotheses H4 and H5 to be proven, and formulate them below.

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) counter-balanced 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.

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

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).

4. GROWTH FACTORS OF TOURISM

In chapter 4 I wish to map the growth factors of Northern Hungary's tourism.

H6: I hypothesize that apart from tourism supply (commercial bed spaces, 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 an influence on the tourism performance of micro-regions.

In this chapter I analyze, using settlement and micro-regional data, the relationship that exists between the indicators of visitor turnover and the indicators of tourism supply, the economic and social situation of settlements, as well as the population's social circumstances.

I separate the growth factors of tourism using linear regression models and principal component analysis, interpreting the discrepancies between the national and regional analyses. I type Northern Hungary's micro-regions and analyze the influences that service provision exerts on tourism.

Afterwards I compare the results with the goals and priorities set up in tourism and regional development documents. With regard to the tourism development of the Region's micro-regions I hypothesize that

H7: The (favorable) effects of tourism development can hardly be demonstrated at micro-regional level; despite the tourism developments of the recent years the relative positions of the micro-regions hardly changed between 2000 and 2007.

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 and strategies, as well as their objectives and priorities slightly orientate the (potential) stakeholders work in their current form.

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

Based on my research findings, I make recommendations for the micro-region specific refinement of the tourism development objectives.

4.1. Growth factors of tourism with special regard to Northern Hungary

First, I analyze the relationship between the specific values of domestic, foreign and total visitor turnover and the indicators of tourism supply, economic and social situation of settlements, and the social circumstances of the population. Then I rank the indicators on the basis of the value of the correlation coefficients of guest nights per inhabitant.

I calculated the correlation coefficients of domestic, foreign and total values by pairs as well. The values show that, because of the strong concentration of guest nights, the number of guest nights per inhabitant is more closely related to the specific values of domestic than foreign visitor turnover. The specific values of foreign visitor turnover

4. GROWTH FACTORS OF TOURISM

are in a weak-medium correlation with the domestic data, the value of the correlation coefficient is 0.36.

Indicators measuring tourism supply may produce high correlation coefficient figures. This is not surprising, as from the nature of the analysis there is a strong correlation between the specific values of commercial accommodations and the number of guest nights per thousand inhabitants (corr = 0.81). It seems clear that one can expect higher specific visitor turnover in areas where the number of bed spaces per population is higher.

Table 4.1:
Linear correlation coefficients with foreign and domestic guest nights, as well as their total values in the settlements of Hungary

	Foreign guest nights per one inhabitant	Domestic guest nights per one inhabitant	Guest nights per one inhabitant
Number of guest nights per inhabitant, 2007	0.69	0.92	1
Number of domestic guest nights per inhabitant, 2007	0.36	1	0.92
Number of bed spaces of commercial accommodations per thousand inhabitants, 2007	0.54	0.75	0.81
Number of foreign guest nights per inhabitant, 2007	1	0.36	0.69
Number of restaurants and confectioneries per thousand inhabitants, 2007	0.41	0.5	0.6
Number of catering units per thousand inhabitants, 2007	0.39	0.49	0.54
Enterprises in the area of accommodation hospitality per thousand inhabitants, 2007	0.4	0.35	0.43
Number of registered enterprises per thousand inhabitants, 2007	0.36	0.18	0.38
Number of non-profit organizations per thousand inhabitants, 2007	0.08	0.45	0.38
Water consumption per inhabitant (m3), 2007	0.26	0.28	0.32
Local government tax per inhabitant (thousand forints), 2004	0.32	0.18	0.27
Number of telephone lines per thousand inhabitants, 2007	0.17	0.26	0.27
Number of built resort houses per thousand inhabitants, 2007	0.23	0.19	0.25
Number of flats in 2007 as a percentage of 2001	0.25	0.14	0.21
Proportion of r connected to public water network, 2007	0.13	0.17	0.19
Number of rentals per thousand inhabitants, 2007	0.19	0.13	0.18
Number of automobiles per thousand inhabitants, 2007	0.19	0.13	0.18
Number of flats built in 2007 compared to the total number of flats	0.11	0.08	0.11
Total tax per inhabitant (thousand forints), 2004	0.11		0.1
Proportion of flats with cable TV, 2007	0.18		0.08
Number of crimes per thousand inhabitants, 2005			0.08
Proportion of people receiving regular social allowance, 2007	-0.11	-0.14	-0.11
Balance of migration per thousand inhabitants, 2007		-0.18	-0.13
Number of live births per thousand inhabitants, 2007	-0.08	-0.14	-0.14
Number of criminal offenders per thousand inhabitants (by residence), 2005	-0.08	-0.15	-0.15
Size of green area per inhabitant (m2), 2006		0.23	-0.2
Income per inhabitant (thousand forints), 2004	0.08		
Proportion of flats with all modern conveniences, 2007	0.08		
Proportion of registered automobiles, 2007			
Proportion of higher education graduates, 2001	0.11		
Proportion of people enrolled in library, 2007			
Number of infant mortality per thousand inhabitants, 2007			
Proportion of unemployed, 2007	-0.1		
Number of recipients of social meal service per thousand inhabitants, 2007			
Proportion of flats connected to public sewage system, 2007	0.12		
Proportion of population of working age, 2007			

Source: Own calculations based on HCSO data

A moderately strong correlation can be observed in the case of restaurants and confectioneries (corr = 0.6), catering units (corr = 0.54) and enterprises in the area of accommodation hospitality (corr = 0.43) (Table 4.1).

The degree of enterprise density is also associated with the trend of specific visitor turnover (corr = 0.38). We may assume correlations between the number of non-profit organizations, referring to social activity and self-motivation, and the specific values of visitor turnover as well (corr = 0.32).

A weak positive correlation can be observed between the value of local government taxes, number of telephone lines, number of built resort houses, number of rentals, number of automobiles, total tax, specific values of the number of crimes, change of the number of flats, built flats, the proportion of flats connected to public water network, and the per-inhabitant values of the number of guest nights.

A weak negative correlation may be discovered with the proportion of the recipients of regular social allowance, the migration balance per thousand inhabitants, the number of live births and criminal offenders per thousand inhabitants, and the specific values of the green area size. On the basis of the results it may be assumed that the indicators associated with social situation also have some influence on tourism.

Having compared the correlation coefficients concerning the total values with the results of calculations in the area of foreign and domestic guest nights, it can be stated that they typically indicate weaker relationships. A typical exception is the correlation coefficient of the number of non-profit organizations, which indicates a stronger relationship for domestic visitor turnover and a considerably weaker one for foreign visitor turnover.

Table 4.2:
Linear correlation coefficients with foreign and domestic guest nights, as well as their total values in the settlements of Northern Hungary

	Foreign guest nights per person	Domestic guest nights per person	Guest nights per person
Number of guest nights per one inhabitant 2007	0,19	1	1
Number of domestic guest nights per one inhabitant 2007	0,17	1	1
Number of bed places of commercial accommodations per thousand inhabitants 2007	0,19	0,91	0,91
Number of restaurants and confectioneries per thousand inhabitants 2007	0,43	0,72	0,72
Number of catering units per thousand inhabitants 2007	0,42	0,66	0,67
Number of non-profit organisations per thousand inhabitants 2007		0,65	0,65
Number of telephone lines per thousand inhabitants 2007	0,21	0,51	0,51
Water consumption per one inhabitant (m3) 2007	0,32	0,42	0,48
Proportion of flats connected to public water network 2007		0,42	0,42
Number of built resort houses per thousand inhabitants 2007	0,28	0,3	0,3
Number of registered enterprises per thousand inhabitants 2007	0,42	0,27	0,28
Enterprises in the area of accommodation hospitality per thousand inhabitants 2007	0,43	0,19	0,2
Number of foreign guest nights per one inhabitant 2007	1	0,17	0,19
Number of offenders per thousand inhabitants (by residence) 2005	-0,17	-0,22	-0,22
Number of live births per thousand inhabitants 2007		-0,23	-0,23
Number of crimes per thousand inhabitants 2005		-0,31	-0,31
Balance of migration per thousand inhabitants 2007		-0,39	-0,39
Working age population		-0,4	-0,4
Income per one inhabitant (thousand forints) 2004	0,19		
Total tax per one inhabitant (thousand forints) 2004	0,2		
Local government tax per one inhabitant (thousand forints) 2004			
Number of rentals per thousand inhabitants 2007			
Number of flats in 2007 as a percentage of year			

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2001			
Number of flats built in 2007 compared to the total number of flats			
Proportion of flats with all modern conveniences 2007			
Number of automobiles per thousand inhabitants 2007	0,19		
Proportion of flats with cable TV 2007			
Proportion of registered automobiles 2007			
Proportion of higher education graduates 2001	0,3		
Proportion of people enrolled in library 2007			
Proportion of people receiving regular social allowance 2007	-0,2		
Number of infant mortality per thousand inhabitants 2007			
Proportion of unemployed 2007			
Number of recipients of social catering per thousand inhabitants 2007			
Proportion of flats connected to public sewage system 2007	0,19		
Size of green area per one inhabitant (m2) 2006			

Source: Own calculations based on HCSO data

The specific values of foreign guest nights have a very weak (although significant) correlation with the magnitude of incomes, proportion of flats with all modern conveniences, proportion of higher education graduates, proportion of unemployed and proportion of flats connected to public sewage system. **Tables 4.1-4.2** do not include those correlation coefficients which are not significant at least at a 95% level.

4.2. Regression models describing visitor turnover trends

Analyzing the correlation coefficients allowed me to test the social phenomena influencing the development and growth of tourism.

The research results anticipated that some indicators cannot be used (e.g. proportion of people enrolled in library, number of infant mortality per thousand inhabitants, size of green area per inhabitant), while others (e.g. proportion of unemployed, proportion of people receiving social allowance) are of limited use in further analyses.

Table 4.3:
Summary data of the linear regression model of visitor turnover (Hungary, 2007 settlement data)

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variable of the model*
1	.788 ^a	.621	.621	5.96526	Constant, A
2	.792 ^b	.627	.627	5.91779	Constant, A,B
3	.794 ^c	.631	.630	5.89084	Constant, A,B,C
4	.795 ^d	.632	.631	5.88450	Constant, A,B,C,D

Explanatory variables:
 Constant
 A: number of bed places of commercial accommodations per thousand inhabitants
 B: local government tax per one inhabitant
 C: number of flats in 2007 as a percentage of year 2001
 D: number of restaurants and confectioneries per thousand inhabitants

Source: Own calculations based on HCSO data

I explained the trends of visitor turnover with the help of a linear regression model. I carried out my analyses using specific indicators in this case as well. The linear regression models are based on settlement and micro-regional data of Hungary and Northern Hungary.

One dilemma occurred also in the case of the regression models, as to whether I should take those settlements into account that have statistically insignificant visitor turnover.

I compiled the model describing the specific values of guest nights in both ways (i.e., with and without the settlements with minimal visitor turnover) however, I did not experience considerable differences. The model containing all settlements of Hungary explains the variance of the specific values of guest nights at 63.2%, while the model taking the 713 settlements having visitor turnover into account can explain that at 62.2% (Table 4.3). The only difference between the two models is that the variables explaining the visitor turnover of all of Hungary's settlements also include the number of restaurants and confectioneries per thousand inhabitants. I set up the model using the data of 2006 as well. The explanatory variables of the model are the same as the indicators of the 2007 model, with the difference that the 2006 model does not include the number of restaurants and confectioneries per thousand inhabitants.

The model based on involving all settlements was made using the stepwise method (Tables 4.3, 4.4) The stepwise method removes from the model those indicators that do not influence significantly (below the 95% confidence level) the evolution of the values of the explanatory variables (Sajtos L. - Mitev A. 2007, p. 223).

Table 4.4:

*Coefficients of the linear regression model of visitor turnover
(Hungary, 2007 settlement data)*

Model	Non-standardised coefficients		Standardised coefficients	t	Significance.
	B	Standard error	Beta		
Constant	-10.036	1.951		-5.144	.000
Number of bed spaces of commercial accommodations per thousand inhabitants	.040	.001	.738	48.177	.000
Local government tax per inhabitant (thousand forints)	2.708E-5	.000	.066	5.603	.000
Number of flats in 2007 as a percentage of 2001	9.374	1.896	.057	4.944	.000
Number of restaurants and confectioneries	.086	.032	.042	2.700	.007

Source: Own calculations based on HCSO data

Equation of the model describing the visitor turnover of settlements:

$$Y = -10,036 + 0,04A + 0,00002708B + 9,374C + 0,086D$$

The four independent variables of the model having the greatest explanatory power, can explain the variance of the number of guest nights at 63.2%.

The evolution of the number of guest nights is predominantly explained by the specific values of bed spaces and, to lesser extent, by the local-government tax, the number of flats in 2007 as a percentage of the year 2001, and the number of restaurants and confectioneries

The model suggests that the evolution of the specific values of visitor turnover is influenced, apart from the values of bed spaces per thousand persons, by

- financial conditions of local governments (which is related to the economic potential of settlements),
- optimism of the real estate market, and
- elements of tourism supply.

Table 4.5:

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

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variable 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 bed spaces of commercial accommodations per thousand inhabitants
 B: number of built resort houses per thousand inhabitants
 C: local government tax per inhabitant (thousand forints)
 D: number of crimes per thousand inhabitants
 E: infant mortality as a percentage of live births

Source: Own calculations based on HCSO data

I prepared the model describing the specific values of guest nights for micro-regions as well. Not surprisingly, the variable having the greatest explanatory power was the number of bed spaces of commercial accommodations per thousand persons in this case as well ($R^2 = 0.741$), i.e., this can alone explain the variance dependent variable at 74.1% (Tables 4.5. and 4.6.).

Equation of the model describing the visitor turnover of micro-regions:

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

The micro-regional model includes the specific value of the local-government tax. It differs from the settlement model in the appearance of indicators concerning the number of built resort houses, number of crimes and infant mortality.

Building resort houses is typically coupled with lower specific visitor turnover, and the number of crimes negatively influences the evolution of the specific values of guest nights. Interestingly, the model includes the infant mortality indicator. It is known from the literature that, apart from reflecting the development of the health-care system, it is a typical indicator of the development of a region and the society as a whole (Csoboth Cs. 2003, p. 1; ÁNTSZ¹ 2008, p. 6; Élő A. 2008).

Table 4.6:

Coefficients of the linear regression model of visitor turnover
(Hungary, 2007 micro-regional data)

Model	Non-standardized coefficients		Standardized coefficients	t	Significance.
	B	Standard error	Beta		
Constant	2.185	.792		2.759	.006
Number of bed spaces of commercial accommodations per thousand inhabitants	.058	.003	.919	19.454	.000
Number of built resort houses per thousand inhabitants	-3.409	1.222	-.126	-2.790	.006
Local government tax per inhabitant (thousand forints)	7.292E-5	.000	.161	3.799	.000
Number of crimes per thousand inhabitants	-.081	.022	-.157	-3.766	.000
Infant mortality as a percentage of live births	-104.925	39.824	-.098	-2.635	.009

Source: Own calculations based on HCSO data

¹ National Public Health and Medical Officer Service (NPHMOS)

The model including the five indicators explains at 78.8% the variance in the number of guest nights per thousand persons, which is definitely a good value in the practice of social sciences (Babbie E. 1996).

Table 4.7:

Summary data of the linear regression model of visitor turnover
(Northern Hungary, 2007 settlement data)

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variables of the model*
1	.739 ^a	.546	.545	4.56597	Constant, A
2	.782 ^b	.611	.610	4.22765	Constant, A,B
3	.785 ^c	.617	.615	4.20138	Constant, A,B,C

Explanatory variables:
 Constant
 A: number of restaurants and confectioneries per thousand inhabitants
 B: number of bed spaces of commercial accommodations per thousand inhabitants
 C: local government tax per inhabitant (thousand forints)

Source: Own calculations based on HCSO data

I prepared the linear regression model describing the evolution of the number of guest nights for the settlement data of Northern Hungary as well.

The variables of the model could explain only at 61.7% the evolution of the number of guest nights per thousand persons (**Tables 4.7. and 4.8.**). The model is somewhat different from the experiences at the national level. The strongest explanatory power (54.6%) can be attributed to the number of restaurants and confectioneries per thousand inhabitants, followed by the number of bed spaces of commercial accommodations per thousand inhabitants and the local government tax per inhabitant.

Table 4.8:

Coefficients of the linear regression model of visitor turnover
(Northern Hungary 2007 settlement data)

Model	Non-standardised coefficients		Standardised coefficients	t	Significance.
	B	Standard error	Beta		
Constant	-1.642	.216		-7.607	.000
Number of restaurants and confectioneries per thousand inhabitants	1.056	.072	.508	14.656	.000
Number of commercial bed places per thousand inhabitants	.017	.002	.337	9.797	.000
Local government tax per one inhabitant (thousand forints)	2.565E-5	.000	.075	2.833	.005

Source: Own calculations based on HCSO data

Equation of the model describing the visitor turnover of the Region's settlements:

$$Y = -1,642 + 1,056A + 0,17B + 0,00002565C$$

It seems that in Northern Hungary visitor turnover is determined by the services supply (beyond providing accommodation) to a higher extent than in the case of the national data.

The model describing the visitor turnover of Northern Hungary's micro-regions has somewhat different features than the national results. It is also apparent in the case of the micro-regional data that social development also plays an important role in the evolution of tourism performance. The model set up on the basis of 2006 data is able to explain at 87.4% the variance of the values of guest nights by only two variables (number of bed spaces of commercial accommodations per thousand inhabitants, balance of migration per thousand inhabitants). The appearance of the balance of migration and the

proportion of flats with all modern conveniences indicates that tourism performance is related to the “livability” and attractiveness of micro-regions (Tables 4.9 and 4.10).

Table 4.9:

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

Model	R	R ²	Adjusted R ²	Standard error of 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 bed spaces per thousand inhabitants
 B: proportion of higher education graduates
 C: proportion of flats with all modern conveniences
 D: number of rentals per thousand inhabitants

Source: Own calculations based on HCSO data

The micro-regional model is capable of explaining at 82.7% the evolution of visitor turnover, which seems definitely a good value as a “special” indicator, which is the proportion of higher education graduates.

Equation of the model describing the visitor turnover of the Region’s micro-regions:

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

The model suggests that the higher level of “social activity” implied by the larger number of higher education graduates positively influences tourism performance.

Table 4.10:

Coefficients of the linear regression model of visitor turnover
(Northern Hungary, 2007 micro-regional data)

Model	Non-standardized coefficients		Standardized coefficients	t	Significance.
	B	Standard error	Beta		
Constant	-.125	.427		-.294	.772
Number of commercial bed spaces per thousand inhabitants	.017	.002	.714	8.152	.000
Proportion of higher education graduates	32.600	6.532	.576	4.991	.000
Proportion of flats with all modern conveniences	4.977	1.521	.400	3.272	.003
Number of rentals per thousand inhabitants	4.043	1.898	.220	2.131	.044

Source: Own calculations based on HCSO data

Overall, it seems true that more reliable models describing the specific values of visitor turnover can be formulated at micro-regional than settlement level. More indicators associated with social situation, regional attractiveness and social activity appear in the models relating to Northern Hungary than in those concerning the whole country.

4.3. Relationships among factors determining the evolution of visitor turnover

During my analyses aiming at exploring the regional aspects of tourism, I had to face the problem that tourism performance indicators (number of guests, number of guest nights, and their specific values) may be associated with a multitude of economic and social phenomena.

The previously known methods of analysis were made using multiple. The large number of indicators makes it difficult to formulate clear and explicit conclusions. It is necessary, therefore, to reduce the number of variables, and one possible way to do so is principal component analysis, which belongs to the family of factor-extraction methods (Sajtos L. - Mitev A. 2007, p. 247; Kóródi M. - Dudás P. 2005, p. 454).

Table 4.11:

Descriptive statistics of the indicators of principal component analysis

	Average	Std. Deviation
Indicators relating to tourism		
Number of enterprises in accommodation hospitality per thousand inhabitants	8.4918	14.36001
Number of rentals per thousand inhabitants	.26030	.176223
Number of catering units per thousand inhabitants	5.90732	3.234122
Number of restaurants and confectioneries per thousand inhabitants	3.59488	2.852251
Number of commercial bed spaces per thousand inhabitants	44.2712	98.66639
Number of built resort houses per thousand inhabitants	.1021807	.22880360
Indicators concerning incomes, individual and social activity		
Income per inhabitant (thousand forints)	456085.82	119353.535
Local government tax per inhabitant (thousand forints)	17857.61	13686.489
Number of registered enterprises per thousand inhabitants	92.1892	35.32355
Number of non-profit organizations per thousand inhabitants	6.8193	1.89697
Proportion of higher education graduates	.05869	.027371
Proportion of population of working age	.60472	.015322
Proportion of unemployed (as a percentage of working age population)	.09663	.055126
Indicators concerning consumption and welfare		
Proportion of flats with all modern conveniences	.3975562	.13230900
Number of automobiles per thousand inhabitants	272.443	50.2419
Number of telephone lines per thousand inhabitants	206.185	42.1279
Number of flats with cable TV per thousand inhabitants	164.847	78.4204
Water consumption per inhabitant (m ³)	31.17	6.640
Flats built in 2007 as a proportion of the total number of flats	.0067559	.00600043
Indicators concerning social situation		
Number of live births per thousand inhabitants	9.1806	1.25186
Balance of migration per thousand inhabitants	-3.2164	8.71398
Number of people receiving regular social allowance per thousand inhabitants	26.917	23.5083
Number of crimes per thousand inhabitants	34.493	12.0269
Number of criminal offenders per thousand inhabitants	12.457	2.9602

Source: Own calculations based on HCSO data

On the basis of my previous surveys I collected the indicators associated with tourism supply, incomes, individual and social activity, consumption, welfare and social situation into the database for principal component analysis (**Table 4.11**).

I carried out the principal component analysis using 24 specific variables. As a first step I made a correlation matrix of the indicators involved in the analysis.

The selected indicators were appropriate for carrying out the principal component analysis, since the variables weakly or only moderately strongly correlated with each other.

The Kaiser-Meyer-Olkin value of the principal component analysis was 0.869 (**Table 4.12**), which falls into the “very good” category (Sajtos L. - Mitev A. 2007, p. 258).

Table 4.12:

<i>KMO and Bartlett test</i>		
	Kaiser-Meyer-Olkin value	.869
Bartlett's Test of Sphericity	Approx. Chi-Square	4743.020
	df	276.000
	Significance	.000

Source: Own calculations based on HCSO data

When carrying out the principal component analysis, on the basis of practical experiences, I tried to achieve the following:

- the factors explain at least 70-80% of the total variance of the variables,
- the eigenvalues of the factors are not smaller than 1,
- on the basis of a scree plot (**Figure 4.1**), the maximum number of factors is defined as a number following which a relatively significant break can be observed (the use of four factors seems ideal in our case),
 - the number of factors should be no less than 1/3 or 1/4 of the number of variables (Jahn W. - Wahle H. 1974), and
 - the number of units of analysis should be at least 3-4 times higher than that of the variables.

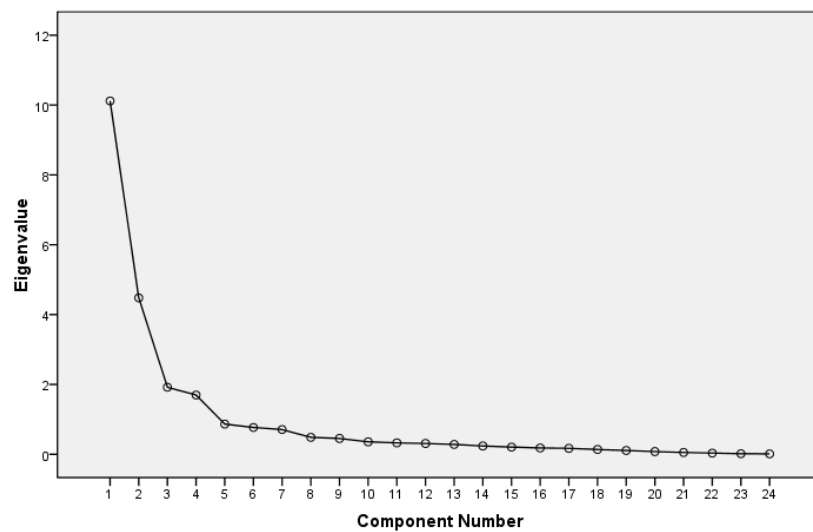


Figure 4.1: Scree plot chart of the principal component analysis of Hungary's micro-regions

Source: Own calculations based on HCSO data

In accordance with my previous analyses, I could have carried out the principal component analysis in four versions:

- at national level using settlement data
- at national level using micro-regional data,
- in Northern Hungary using settlement data,
- in Northern Hungary using micro-regional data.

I rejected the use of principal component analysis with settlement data, due to the nature of the method analysis (it is sensitive to the large number of zeros), while the mi-

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cro-regional analysis in Northern Hungary was not possible because of the small number of units of analysis (compared to the number of indicators).

Table 4.13:

Summary data of the principal component analysis of Hungary's micro-regions

Factor	Eigenvalues	Variance explained by factors	Total variance explained by factors
1	7.180	29.915	29.915
2	6.051	25.214	55.129
3	2.636	10.982	66.111
4	2.346	9.774	75.885

Extraction Method: Principal Component Analysis.

Source: Own calculations based on HCSO data

Taking all criteria of principal component analysis into account, and on the basis of the scree plot chart, the 4-factor model, which can explain 75.85% of the information content of the original 24 variables, seemed ideal. Factor 1 explains 29.9%, factor 2 explains 25.2%, factor 3 explains 11% and factor 4 explains 9.8% of the total variance of the original variables (**Table 4.13**); accordingly, the explanatory power decreases with the increase of the sequential number.

For better interpretation of the results of the principal component analysis, it was necessary to carry out the so-called rotation procedure.

Table 4.14:

Rotated component matrix

	Factor			
	1	2	3	4
Income per inhabitant (thousand forints)	.896			
Proportion of higher education graduates	.881			
Flats with cable TV per thousand inhabitants	.820			
Proportion of flats with all modern conveniences	.795			
Local government tax per one inhabitant (thousand forints)	.762			
Proportion of population of working age	.719			
Number of registered enterprises per thousand inhabitants	.676			
Number of automobiles per thousand inhabitants	.639			
Number of telephone lines per thousand inhabitants	.604			
Water consumption per one inhabitant (m ³)	.520			
Number of non-profit organizations per thousand inhabitants	.509			
Number of restaurants and confectioneries per thousand inhabitants		.960		
Number of catering units per thousand inhabitants		.959		
Number of enterprises in accommodation hospitality per thousand inhabitants		.940		
Number of commercial bed spaces per thousand inhabitants		.904		
Number of rentals per thousand inhabitants		.746		
Number of built resort houses per thousand inhabitants		.720		
Number of flats in 2007 as a proportion of the total number of flats			.791	
Balance of migration per thousand inhabitants			.782	
Number of criminal offenders per thousand inhabitants				.785
Number of people receiving regular social allowance per thousand inhabitants	-.606			.604
Number of crimes per thousand inhabitants				.603
Number of live births per thousand inhabitants				.603
Proportion of unemployed (as a percentage of working age population)	-.663			.545

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

Source: Own calculations based on HCSO data

The factors of the principal component analysis were outlined following the rotation performed using the Varimax method (**Table 4.14**). I considered two indicators (number of people receiving regular social allowance per thousand inhabitants, proportion of

unemployed) to belong to factor 4, despite the fact that the variance of both would be better explained by factor 1. The reasons for that were the meaning-content of the variables and the negative performance belonging to the greater values.

Naming the factors is possible with the help of the variables included. Therefore, I separated them into “economic activity”, “tourism supply”, “regional attractiveness” and “regional social situation” factors.

The names are meaningful. Factor 1 includes variables concerning a given region’s economic potential, the resulting incomes, taxes and consumption. In factor 2 those indicators are isolated that determine tourism supply. Factor 3 refers to the ability of micro-regions to retain population and the optimism of the real estate market. Factor 4 includes variables associated with crime and social support.

Table 4.15:
Northern Hungary's micro-regions in the national rank, on the basis of the factors' eigenvalues

economic activity factor			tourism supply factor			regional attractiveness factor			regional social situation factor		
1	Budapest	3.86	1	Balatonföldvár	6.53	1	Veresegyház	5.62	1	Csorna	-2.11
2	Veszprém	2.58	2	Fonyód	6.14	2	Dunakesz	5.08	2	Tét	-2.04
3	Debrecen	2.43	3	Balatonfüred	5.30	3	Ráckeve	3.51	3	Óriszentpéter	-1.98
				
4	Eger	2.17	12	Tokaj	0.78	42	Heves	0.35	14	Rétság	-1.23
19	Miskolc	1.27	14	Bélapátfalva	0.57	57	Füzesabony	0.14	34	Hatvan	-0.81
22	Tiszaújváros	1.25	18	Pétervására	0.44	63	Encs	0.07	45	Bélapátfalva	-0.70
42	Salgótarján	0.63	22	Eger	0.23	66	Hatvan	0.01	58	Pásztó	-0.55
47	Kazincbarcika	0.57	23	Abaúj-hegykőz	0.23	87	Szerencs	-0.22	63	Gyöngyös	-0.44
48	Gyöngyös	0.57	27	Mezőkövesd	0.21	95	Szikszó	-0.29	67	Mezőkövesd	-0.40
56	Sátoraljaújhely	0.39	29	Sátoraljaújhely	0.17	97	Mezőcsát	-0.33	87	Balassagyarmat	-0.12
60	Balassagyarmat	0.29	35	Rétság	0.13	98	Bodrogekőz	-0.33	95	Pétervására	0.04
67	Sárospatak	0.10	36	Füzesabony	0.12	100	Pásztó	-0.34	108	Tiszaújváros	0.29
72	Hatvan	0.01	44	Heves	-0.01	101	Mezőkövesd	-0.35	113	Sárospatak	0.37
87	Tokaj	-0.26	66	Gyöngyös	-0.13	104	Rétság	-0.36	116	Kazincbarcika	0.45
94	Rétság	-0.36	72	Szécsény	-0.16	106	Gyöngyös	-0.37	128	Sátoraljaújhely	0.71
109	Ózd	-0.50	79	Sárospatak	-0.17	112	Tiszaújváros	-0.40	134	Füzesabony	0.81
110	Mezőkövesd	-0.53	96	Mezőcsát	-0.27	121	Ózd	-0.51	135	Tokaj	0.83
111	Szécsény	-0.53	97	Salgótarján	-0.29	126	Bátonyterenye	-0.55	140	Bátonyterenye	0.91
114	Pásztó	-0.58	100	Bodrogekőz	-0.30	129	Edelény	-0.58	141	Salgótarján	0.95
129	Bátonyterenye	-0.82	106	Miskolc	-0.33	134	Miskolc	-0.63	142	Eger	0.99
131	Szerencs	-0.88	108	Bátonyterenye	-0.34	136	Abaúj-hegykőz	-0.67	143	Szerencs	1.00
134	Füzesabony	-0.91	120	Encs	-0.39	139	Szécsény	-0.72	148	Szikszó	1.21
138	Pétervására	-0.99	125	Szerencs	-0.41	145	Eger	-0.79	150	Szécsény	1.31
141	Bélapátfalva	-1.02	129	Szikszó	-0.42	146	Bélapátfalva	-0.80	151	Heves	1.35
145	Abaúj-hegykőz	-1.05	132	Hatvan	-0.43	151	Pétervására	-0.85	152	Mezőcsát	1.42
146	Edelény	-1.06	133	Pásztó	-0.44	154	Balassagyarmat	-0.93	156	Miskolc	1.62
159	Szikszó	-1.26	141	Balassagyarmat	-0.47	159	Sárospatak	-1.16	158	Edelény	1.80
161	Encs	-1.29	151	Ózd	-0.56	161	Kazincbarcika	-1.28	159	Bodrogekőz	1.93
163	Mezőcsát	-1.38	153	Kazincbarcika	-0.56	165	Salgótarján	-1.56	163	Encs	2.01
165	Heves	-1.48	156	Edelény	-0.59	166	Tokaj	-1.68	167	Ózd	2.56
168	Bodrogekőz	-1.71	158	Tiszaújváros	-0.63	168	Sátoraljaújhely	-1.74	168	Abaúj-hegykőz	3.19

Source: Own calculations based on HCSO data

Table 4.15 contains Hungary's three most advantaged micro-regions, on the basis of the factors' eigenvalues, in addition to all of Northern Hungary's micro-regions.

I highlighted those micro-regions in the table that are in the first half of the rank, i.e., that have above-average performance according to the eigenvalues of the factor analysis.

On the basis of the "economic activity" factors 10 micro-region's characteristics were above average (out of 28 micro-regions), according to the "tourism supply" factor 9 regions were, for "regional attractiveness" 4 micro-regions met this criterion, and in the case of the "regional social situation" factor, there were 7 micro-regions with above-average scores.

On the basis of the "economic activity" factor, the following micro-regions of Northern Hungary were in the most favorable situation: Eger (4th), Miskolc (19th), Tiszaújváros (22nd), Salgótarján (42nd), and Kazincbarcika (47th); whereas the following

micro-regions were in the worst positions: Szikszó (159th), Encs (161st), Mezőcsát (136th), Heves (165th) and Bodrogek (168th), which also belong to the ten micro-regions in the worst situation in Hungary.

Péter Bíró and László Molnár published similar research results in 2004, and so did Albert Faluvégi. They argue that the socio-economic development of one of Hungary's most underdeveloped regions is characterized by considerable regional inequalities. The micro-regions of Eger, Miskolc, Tiszaújváros, Gyöngyös and Hatvan display above-national-average development in Northern Hungary (Bíró P. - Molnár L. 2004, p. 1050). "The majority of the underdeveloped regions are located in Northern Hungary and the Northern Great Plain. Almost two-thirds of Northern Hungary's micro-regions are stagnating or underdeveloped, the 'developing' Miskolc emerges from among them as an island" (Faluvégi A. 2004b, p. 323).

In particular, micro-regions with significant population (populous micro-regional centers) are in a better position, while those micro-region's positions are the worst whose centers have a small population (below 5,000) or sometimes if they do not even have an urban title (e.g., Heves and Abaúj-Hegyköz micro-regions.) The correlation between the values of factor 1 and the population size of micro-regional centers is moderately strong (corr=0.566, at 99% significance level).

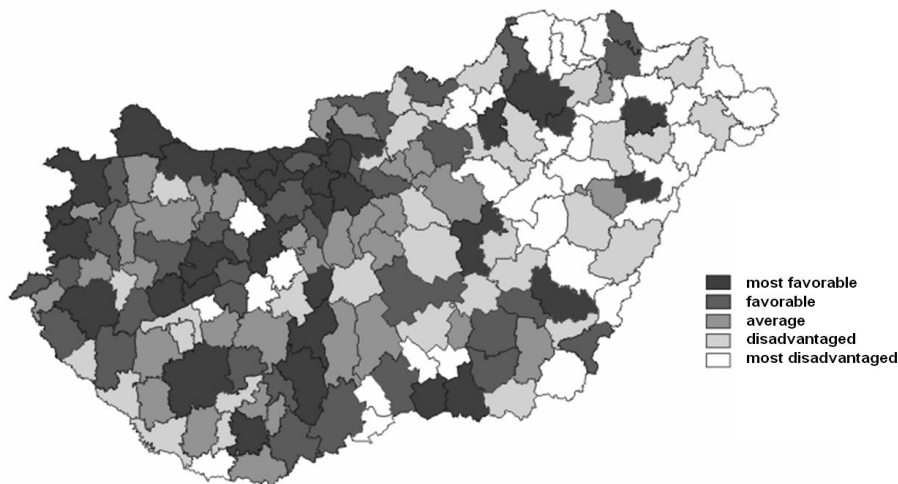


Figure 4.2: Hungary's micro-regions on the basis of factor 1 of the factor analysis (2007)

Source: Own calculations based on HCSO data

The results of factor 1 (**Figure 4.2**) underpin the East-West slope often mentioned in spatial economic studies, according to which economic performances increase from East to West (Harsányi E. - Harsányi G. - Nagy A. J. 2005, p. 62). The fact that factor 1 is in accordance with the location of the most underdeveloped regions listed in Annex 2 of Gov. Decree 311/2007. (XI. 17.) seems to verify my research results.

Nationally, it can be concluded that the most advantaged micro-regions are mainly in the central and northwestern areas of the country, whereas the majority of the most disadvantaged ones are located in Hungary's eastern regions.

The special structure outlined by the tourism supply factor significantly differs from the picture determined by factor 1. This is due to the nature of principal component analysis, since the factors do not correlate with each other.

The most advantaged areas from the point of view of tourism supply are in the Budapest and Balaton regions, but there are a number of micro-regions having significant (specific) tourism supply in Eastern Hungary as well.

The capital's 'drain' effect is remarkable. Due to its weight and its wide supply in the area of tourism services, micro-regions located in the immediate vicinity provide average or below-average performance. There is no large number of accommodations and tourism enterprises capable of satisfying high-level needs, even though there are significant tourism attractions in the settlements around Budapest (e.g. the Formula 1 track and Aquapark in Mogyoród) (**Figure 4.3**).

Nine micro-regions of Northern Hungary provide above micro-regional average performance according to the values of the tourism supply factor. According to the factor compiled using specific indicators, the positions of the Tokaj, BÉlapátfalva, Pétervására, Eger and Abaúj-hegyköz micro-regions are the most favourable, while the Balasagyarmat, Ózd, Kazincbarcika, Edelény and Tiszaújváros micro-regions are in the worst situation (due, among others, to their larger population size).

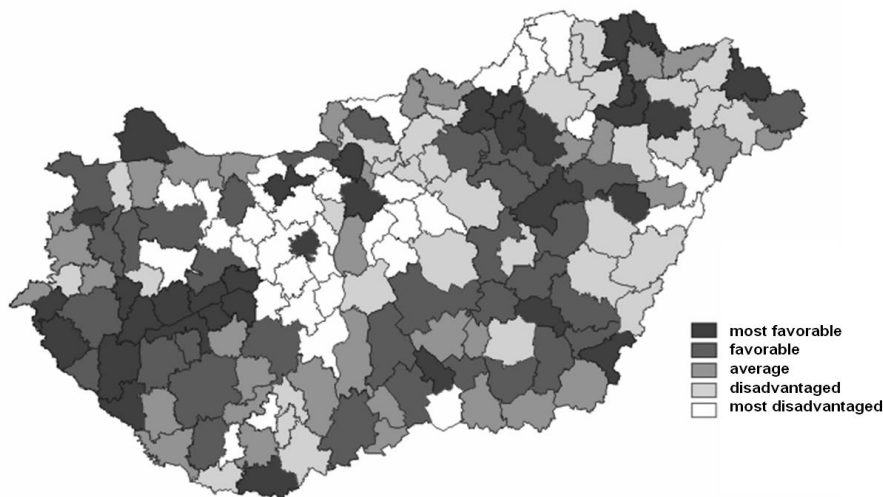


Figure 4.3: Hungary's micro-regions on the basis of factor 2 of the factor analysis (2007)

Source: Own calculations based on HCSO data

The spatial structure outlined by the regional attractiveness factor presents a much more homogeneous picture. On the basis of the eigenvalues of the only two indicators (flats built in 2007 as a percentage of all flats, balance of migration per thousand inhabitants) we can state that attractive micro-regions for the population are located around Budapest, in the bands between Balaton-Budapest, Vienna-Budapest and Budapest-Szeged, as well as in Szabolcs-Szatmár-Bereg (**Figure 4.3**).

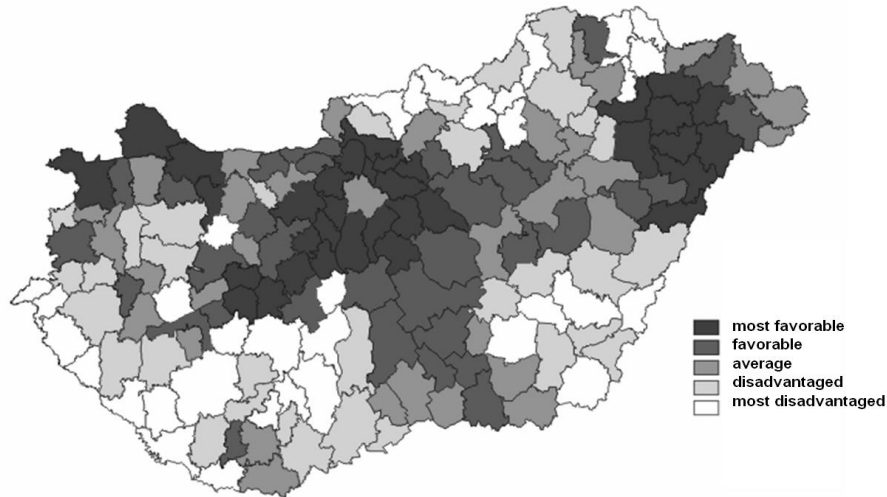


Figure 4.4: Hungary's micro-regions on the basis of factor 3 of the factor analysis (2007)

Source: Own calculations based on HCSO data

Northern Hungary is in a considerably disadvantaged position on the basis of factor 3, as only four micro-regions (Heves, Füzesabony, Encs and Hatvan) have eigenvalues exceeding the micro-regional average. Similarly to the observations in the case of the economic activity factor, one of Northern Hungary's micro-regions (the Sátoraljaújhely micro-region) occupies the last position. On the basis of the factor values, 12 micro-regions of Northern Hungary (the Miskolc, Abaúj-hegyköz, Szécsényi, Eger, Bélapátfalva, Pétervására, Balassagyarmat, Sárospatak, Kazincbarcika, Salgótarján, Tokaj, Sátoraljaújhely micro-regions) belong to the worst 20% according to the national ranking (**Figure 4.4**).

Factor 3 is in apparent contradiction with the results of the economic activity factor, since in many cases those micro-regions are less attractive which perform relatively well from economic point of view. The phenomenon is primarily due to the characteristics of the real estate market. The real estate of the economically well-performing regions can be marketed more easily and the selling prices are higher, as a result of which emigration is easier. The availability of used homes or apartments determined by the supply of the real estate market discourages construction, since used residences are relatively cheap when compared to construction costs for a new residence.

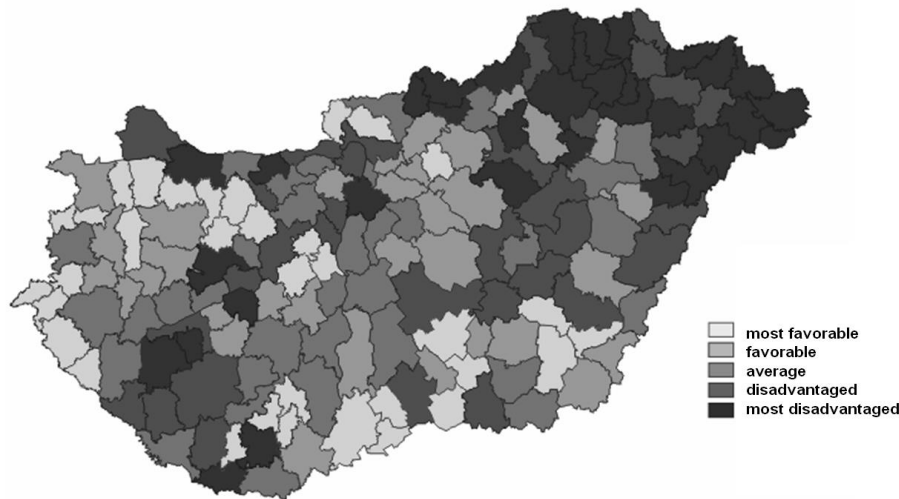


Figure 4.5: Hungary's micro-regions on the basis of factor 4 of the factor analysis (2007)

Source: Own calculations based on HCSO data

On the basis of factor 4, encompassing the indicators of the regional social situation (number of criminal offenders per thousand inhabitants, number of recipients of regular social support, number of crimes per thousand inhabitants, number of live births per thousand inhabitants, proportion of unemployed) Northern Hungary is in an extremely unfavorable situation. Only 7 of its micro-regions (Rétság, Hatvan, BÉlapátfalva, Pásztó, Gyöngyös, Mezőkövesd and Balassagyarmat micro-regions) have values above the national average, while 16 micro-regions belong to the worst 20% category. One of Northern Hungary's micro-regions (Abaúj-hegyköz) is in the 168th position. Every micro-region of Borsod-Abaúj- Zemplén County, with one exception (Mezőkövesd), is of "disadvantaged" or "most disadvantaged" situation (**Figure 4.5**).

4.4. Factors of the principal component analysis, aspects of the evolution of visitor turnover

I tested the relationships between the factors, produced using principal component analysis, and the evolution of visitor turnover using linear regression models based on the eigenvalue of the factors.

Since the eigenvalues of the factors are fictive, calculated, dimensionless quantities, standardized variables with "0" average and "1" variance (Nemes N. J. 1995, p. 100), therefore, they can be used for setting up the model of the specific values of guest nights.

First I determined the relationships concerning the evolution of the number of guest nights per inhabitant. The only variable of the regression model, the tourism supply factor, is able to explain at 52.1% the variance of the specific values of guest nights, which can be regarded as a moderate result in the social sciences (**Tables 4.16 and 4.17**).

Table 4.16:

Summary data of the linear regression model containing the factors of principal component analysis (dependent variable: number of guest nights per capita)

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variables of the model*
1	.722 ^a	.521	.518	4.29437	Constant, A

Explanatory variables:
Constant
A: Tourism supply factor

Source: Own calculations based on HCSO data

The equation of the model describing the visitor turnover of Hungary’s micro-regions is:

$$Y = 2.21 + 4.461A$$

I emphasized in earlier chapters that the domestic and foreign visitor turnover bears different characteristics.

Table 4.17:

National regression model containing the factors of principal component analysis (dependent variable: number of guest nights per capita)

Model	Non-standardized coefficients		Standardized coefficients	t	Significance
	B	Standard error	Beta		
Constant	2.210	.331		6.671	.000
Tourism supply factor	4.461	.332	.722	13.425	.000

Source: Own calculations based on HCSO data

For this reason I made separate linear regression models for the specific values of domestic and foreign visitor turnover.

Table 4.18:

Summary data of the national regression model containing the factors of principal component analysis (dependent variable: number of foreign guest nights per capita)

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variables of the model*
1	.565 ^a	.319	.315	2.70602	Constant, A

Explanatory variable:
Constant
A: Tourism supply factor

Source: Own calculations based on HCSO data

The equation of the model describing the foreign visitor turnover of Hungary’s micro-regions is:

$$Y = 0.82 + 1.846A$$

The explanatory power of the model describing domestic visitor turnover is quite low (R²=0.319), and its only independent variable is the tourism supply factor (**Tables 4.18 and 4.19**). The weakness of the model is due to the significant concentration of Hungary’s foreign visitor turnover. Six micro-regions (Budapest, Keszthely-hévíz, Balatonfüred, Csepreg, Siófok, and Hajdúszoboszló) share almost 75% of the foreign visitor turnover.

Table 4.19:

National regression model containing the factors of principal component analysis (dependent variable: number of foreign guest nights per capita)

Model0	Non-standardized coefficients		Standardized coefficients	t	Significance.
	B	Standard error	Beta		
Constant	.820	.209		3,928	.000
Tourism supply factor	1,846	.209	.565	8,815	.000

Source: Own calculations based on HCSO data

The model describing the specific values of domestic turnover has considerably better, 67.3% explanatory power (Tables 4.20 and 4.21).

The equation of the model describing the domestic visitor turnover of Hungary's micro-regions is:

$$Y = 1.403 + 2.613A - 0.293B$$

Table 4.20:

Summary data of the national regression model containing the factors of principal component analysis (dependent variable: number of domestic guest nights per capita)

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variables of the model*
1	.820 ^a	.673	.671	1.84368	Constant, A
2	.825 ^b	.681	.677	1.82569	

Explanatory variables:
 Constant
 A: Tourism supply factor
 B: Regional social situation factor

Source: Own calculations based on HCSO data

Table 4.21:

National regression model containing the factors of principal component analysis (dependent variable: number of domestic guest nights per capita)

Model	Non-standardized coefficients		Standardized coefficients	t	Significance
	B	Standard error	Beta		
Constant	1.403	.142		9.872	.000
Tourism supply factor	2.613	.141	.820	18.481	.000
Regional social situation factor	-.293	.142	-.091	-2.057	.041

Source: Own calculations based on HCSO data

The independent variable of the model is the tourism supply factor, and to a very small extent (0.8%), the regional social situation also contributes to the variance in the number of domestic guest nights.

Using the eigenvalues of the factors produced by the principal component analysis, I set up for every region the micro-regional models describing the specific values of visitor turnover (Table 4.22).

The explanatory power of the models is greater than the national, except for Southern Great Plain, due to the smaller regional discrepancies of the regional level. The greater precision of the regional models concerning micro-regions is due to the appearance of factor 2.

Each factor of principal component analysis is present in one of the models. The R² values of the models verified the hypothesis I formulated in the case of the linear regression models that more reliable models describing tourism performances can be set

up at regional level. The determinant factors of the regional processes of tourism can be more accurately determined using the results of regional micro-region factor analysis.

Table 4.22:

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

Region	Guest nights per capita		Foreign guest nights per capita		Domestic guest 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 Transdanubia	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 attractiveness	47.3%	Tourism supply	56.9%
	Economic attractiveness	19.2%			Economic attractiveness	11%
Central Transdanubia	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 Transdanubia	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 based on HCSO data

I prepared, using the eigenvalues of the factors, the descriptive model of the visitor turnover of Northern Hungary's micro-regions (Tables 4.23 and 4.24).

Table 4.23:

Summary data of the model of Northern Hungary containing the factors of principal component analysis (dependent variable: number of guest nights per capita)

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variables of the model*
1	.701 ^a	.491	.471	.99093	Constant, A
2	.827 ^b	.683	.657	.79766	Constant, A,B

Explanatory variables:
 Constant
 A: Tourism supply factor
 B: Economic activity factor

Source: Own calculations based on HCSO data

The equation of the model describing the visitor turnover of Northern Hungary's micro-regions is:

$$Y = 1.620 + 2.516A + 1.826B$$

Only two factors were significant in the model. The evolution of visitor turnover is primarily due to tourism supply; this factor determines the variance of the number of

guest nights in 49%. The role of the economic activity factor is of lower importance, with a value of ‘only’ 19.2%. The explanatory power of the model is 68.3%.

Table 4.24:

Model of Northern Hungary containing the factors of principal component analysis (dependent variable: number of guest nights per capita)

Model	Non-standardized coefficients		Standardized coefficients	t	Significance
	B	Standard error	Beta		
Constant	1.620	.204		7.960	.000
Tourism supply factor	2.516	.512	.701	4.910	.000
Economic activity factor	1.826	.172		10.586	.000

Source: Own calculations based on HCSO data

The model describing the number of foreign guest nights of Northern Hungary bears considerably smaller explanatory power (47.3%) (Tables 4.25 and 4. 26), which is primarily due to the small number and concentrated appearance of foreign guests coming to the region. More than three-quarters of the foreign visitor turnover was concentrated in four micro-regions (Eger, Miskolc, Tiszaújváros, and Sáropatak) in 2007.

The equation of the model describing the foreign visitor turnover of Northern Hungary’s micro-regions:

$$Y = 0.221 + 0.202A$$

Table 4.25:

Summary data of the model of Northern Hungary containing the factors of principal component analysis (dependent variable: number of foreign guest nights per capita)

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variables of the model*
1	.688 ^a	.473	.452	.20502	Constant, A

Explanatory variables:
 Constant
 A: Economic activity factor

Source: Own calculations based on HCSO data

Similarly to the national model, in Northern Hungary, the appearance of foreigners is expected primarily in the developed micro-regions. Other factors, however, did not appear significantly in the model; therefore drawing new conclusions is not possible on the basis of the available data.

Table 4.26:

Model of Northern Hungary containing the factors of principal component analysis (dependent variable: number of foreign guest nights per capita)

Model	Non-standardized coefficients		Standardized coefficients	t	Significance.
	B	Standard error	Beta		
Constant	.221	.041		5.339	.000
Economic activity factor	.202	.043	.688	4.736	.000

Source: Own calculations based on HCSO data

Similarly to the regression models relating to Northern Hungary in Section 4.3, in the case of the relationships containing the factors of principal component analysis, the factors determining the evolution of domestic guest nights are basically identical with

the factors describing the aggregated values (Tables 4.27 and 4.28). All these are due to the low proportion of foreign guest nights.

The equation of the model describing the domestic visitor turnover of Northern Hungary’s micro-regions is:

$$Y = 1.578 + 2.506A + 0.442B$$

Table 4.27:

Summary data of the model of Northern Hungary containing the factors of principal component analysis (dependent variable: number of domestic guest nights per capita)

Model	R	R ²	Adjusted R ²	Standard error of estimate	Explanatory variable of the model*
1	.753 ^a	.567	.550	.80908	Constant, A
2	.829 ^b	.687	.662	.70167	Constant, A,B

Explanatory variables:
 Constant
 A: Tourism supply factor
 B: Economic activity factor

Source: Own calculations based on HCSO data

The model explains at 68.7% the variance of the number of domestic guest nights. The evolution of the region’s visitor turnover is primarily influenced by tourism supply and secondarily the level of economic development, similarly to the national model. Other factors have no significance in the model.

Table 4.28:

Model of Northern Hungary containing the factors of principal component analysis (dependent variable: number of domestic guest nights per capita)

Model	Non-standardized coefficients		Standardized coefficients	t	Significance
	B	Standard error	Beta		
Constant	1.578	.151		10.426	.000
Tourism supply factor	2.506	.363	.775	6.908	.000
Economic activity factor	.442	.143	.347	3.093	.005

Source: Own calculations based on HCSO data

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

4.6. Objectives of tourism development in the light of the processes of Northern Hungary’s tourism

In this section I deal with recent years’ tourism development and the effectiveness and impacts of tourism planning, relating to Northern Hungary in particular. I review the tourism development plans the micro-regions of the region, and when these are not available, I discuss any documents dealing with the development of tourism in that region. The tourism development concept of Northern Hungary, accepted in 2000, and its strategic programs, as well as the tourism development documents titled “Tourism Development Strategy of Northern Hungary 2007-13,” marked the region’s tourism objectives.

The National Tourism Strategy 2005-2013 and the tourism development strategies relating to Northern Hungary have created the background of micro-regional tourism planning. Many strategy development plans were prepared accordingly.

Currently 12 micro-regions have existing planning documents specifically designed for tourism development. The Szerencs micro-region's "Economic Development Program of Tourism" was in force up to 2006, while the "Tourism Development Concept of Pásztó and Cserhát" was prepared in 1997, but there is no information in VÁTI's micro-regional information module concerning the period of its force.

Tourism-related objectives and ideas were placed in regional development plans of diverse labels (strategic and operative, agriculture structure and rural development, equalization and development, economic development, complex development, rural development, and integrated regional development– rural development plans).

The Institute of World and Regional Economics of the University of Miskolc has been collecting planning documents of Northern Hungary in its "REGISTAR public administration decision-making support system"; therefore, they will be available in one place for researchers and experts in regional development. Unfortunately, most of the planning documents cannot be found on the Internet, or only after a lengthy search. In my opinion, currently the micro-regional development ideas are available to only a small professional group; their implementation is hindered by the fact that they are not well-known among potential 'implementers'.

I have come to the conclusion when studying the micro-regional (tourism) development plans that they display significant heterogeneity in terms of their content, scope, professional foundation, the nature of their objective set and their precision.

Most of them define the strategic objectives of tourism development based on situation analysis, or more precisely, on a SWOT analysis. The formulation of concrete programs was not always involved, and even rarer was the inclusion of specific objective indicators and their quantification.

I have come to the conclusion when studying the regional development/tourism development documents that, at the micro-regional level, apart from a few exceptions of course, the direct objectives aiming at enhancing foreign visitor turnover did not appear markedly enough.

In order to prepare for the implementation of the micro-regional development ideas, the micro-regional associations set up micro-regional activity plans (MRAP – Hungarian abbreviation: KCST) by order of the Ministry of Local Governments and Regional Development (in cooperation with micro-regional coordinators).

"The MRAPs collected the projects planned in the micro-regions prepared according to central (VÁTI) methodology. Out of 168 micro-regions, 151 prepared the plan. The projects explored exceeded 14,000, the majority of which were local-government projects. MRAP wished to support the EU and domestic planning process, indicating local development plans and needs, so that they could be taken into consideration when drawing up the 2007-2008 and further EU action plans. Despite the methodological preparation, the MRAP planning came to a halt, the 2009-2010 MRAP was not prepared and the preparation of the 2011-2013 MRAP did not even begin" (VÁTI, 2009).

The above also shows that regional development at the micro-regional level is struggling with numerous problems; however, it is definitely welcomed that a kind of need has appeared (even though in a top-down manner) for regularity and systematic implementation.

I attempt to analyze the tourism development of micro-regions, as well as the effectiveness and impact of tourism planning, and due to the large number of units of analysis, I do so only on the basis of the national and regional visitor turnover values.

4. GROWTH FACTORS OF TOURISM

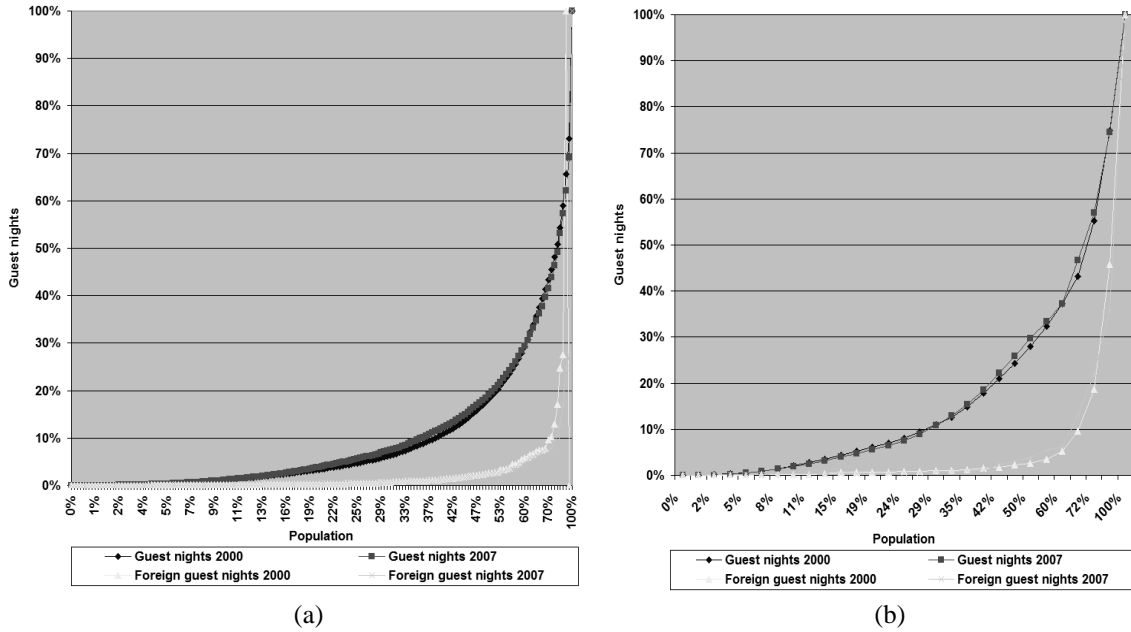


Figure 4.6: Lorenz curve of Hungary's (a) and Northern Hungary's (b) micro-regions
Source: Own calculations based on HCSO data

First I studied the changes in the concentration of guest nights. Significant changes cannot be experienced in the case of Hungary's and Northern Hungary's micro-regions (Figure 4.6).

In order to evaluate the concentration of guest nights, I calculated the Hirschman-Herfindhal concentration index for the period 2000-2007, for the total, foreign and domestic guest nights, using national and North-Hungarian micro-regional data

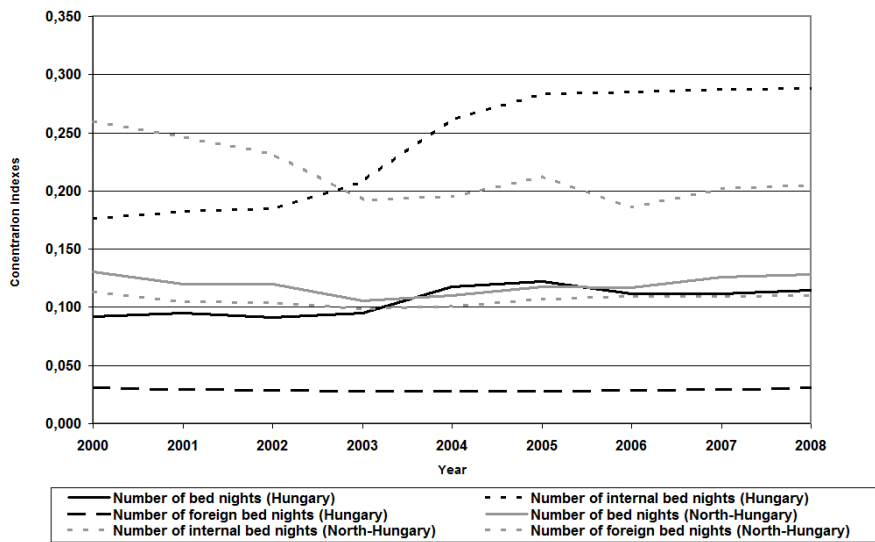


Figure 4.7: Changes in the Hirschman-Herfindhal index values in the case of the micro-regions of Hungary and Northern Hungary
Source: Own calculations based on HCSO data

The concentration index of the number of guest nights showed a slight increase in the period till 2005, and it began to decrease again from 2006. Similar research results were published by Géza Tóth in his article titled "An attempt to estimate the regional tourism GDP in Hungary", in connection with the concentration index of the estimated tourism

GDP (Tóth G. 2009, p. 1044). Decreasing concentration values can be observed in Northern Hungary up to 2003, afterwards the spatial concentration of the number of guest nights increased some.

The concentration index of domestic visitor turnover is considerably lower than the aggregated value (approximately 0.03), which indicates a more even spatial distribution of domestic guest nights. The indicator displayed values of 0.1 to 0.13 throughout the whole period studied.

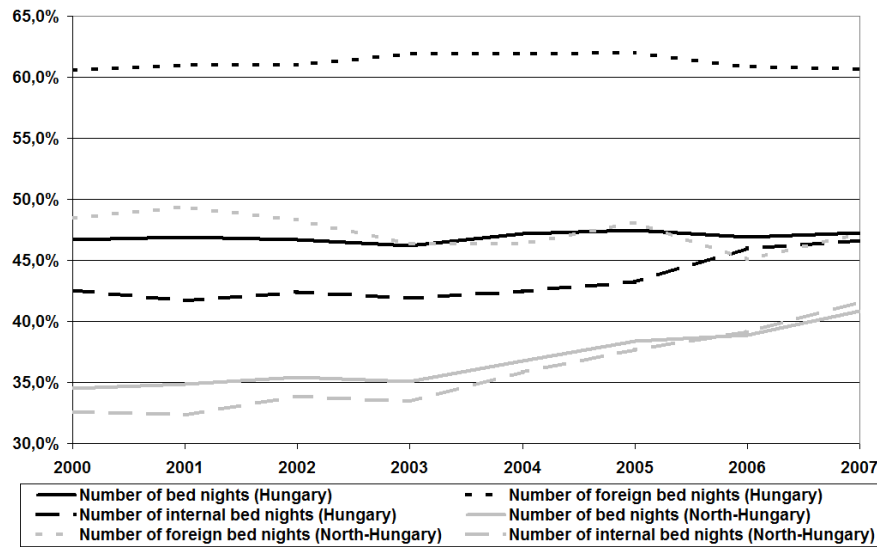


Figure 4.8: Changes in the Hoover index values in the case of the micro-regions of Hungary and Northern Hungary

Source: Own calculations based on HCSO data

The changes in the concentration of foreign guest nights bear completely different characteristics. The national and regional data series indicate more significant spatial concentration than in the case of domestic visitor turnover.

At national level the concentration index grew significantly, from 0.176 to 0.287 within seven years. The improvement experienced in Northern Hungary is only apparent; it is primarily due to the significant decline in foreign visitor turnover (by -85,178 guest nights) which especially affected the Eger and Mezőkövesd micro-regions, with relatively developed tourism (Figure 4.7).

Beyond studying the concentration of tourism, I attempted to monitor the changes having taken place in the regional significance of tourism. I illustrated the changes using a one-step transition matrix. I analyzed the changes of the specific visitor turnover of settlements and micro-regions according the categories used in Section 2.1. The percentage values in the rows of the table show what percentage of the micro-regions in the given category stayed in place or shifted from one category to another from 2000 to 2007.

I determined the class intervals in the manner already mentioned in Chapter 2. The meaning of the categories is “high-level”, “significant”, “perceptible” “not very significant”, “negligible” and “no” tourism.

There were 10 settlements in Hungary in 2000 where the visitor turnover was of “high level” according to the specific values of guest nights (Table 4.29).

Two out of the 26 settlements having between 30.01 and 100 guest nights per person appeared in the “high level” category, while the situation of 8 settlements worsened.

4. GROWTH FACTORS OF TOURISM

10 settlements within the “10.01-30 guest nights per person” category shifted one “class” upwards; while a slight deterioration of position was experienced in 12 settlements and a rather significant one in 9 settlements.

Only 15 out of 246 settlements of the “not very significant” category improved their position, while 67 settlements moved at least one class back

Table 4.29:

Transition matrix of Hungary’s settlements according to the number of guest nights (2000-2007)

2007 Guest nights/person 2000	100.01-	30.01-100	10.01-30	1.01-10	0.01-1	0	Number of settlements (2000)
100.01-	80%	10%	10%				10
30.01-100	3.8%	61.7%	23.1%	7.7%	3.8%		26
10.01-30		20.4%	36.7%	24.2%	2.4	16.3%	49
1.01-10		2%	4%	56.6%	22.1%	15.3%	246
0.01-1			1%	12.1%	60.9%	26%	342
0	0.04%	0.12%	0.2%	2%	4.6%	93%	2462

Source: Own calculations based on HCSO data

In 45 out of the 342 settlements with “negligible” visitor turnover the ‘municipal’ significance of tourism grew, whereas it completely ceased in 89 settlements.

Out of the 2,462 Hungarian settlements where no tourists spent guest nights in 2000, some degree of visitor turnover was measured in 147 in 2007. Only one settlement, Sima, with its 25 inhabitants, moved into the category of settlements with “high level” visitor turnover.

I prepared the transition matrix for the settlements of Northern Hungary as well. There was no change in the “high level” and “significant” categories. Four settlements in the “10.01-30 guest nights per person” category improved their position, although the same number of settlements moved one class back (**Table 4.30**).

Table 4.30:

Transition matrix of Northern Hungary’s settlements according to the number of guest nights (2000-2007)

2007 Guest nights/person 2000	100.01-	30.01-100	10.01-30	1.01-10	0.01-1	0	Number of settlements (2000)
100.01-	100%						1
30.01-100		100%					3
10.01-30		23.5%	53%	23.5%			17
1.01-10			9.6%	52.4%	19	19%	42
0.01-1			2.1%	8.7%	67.4%	21.7%	46
0	0.2%		0.4%	3.2%	4.9%	91.3%	494

Source: Own calculations based on HCSO data

The situation of 4 settlements out of the 42 in the “1.01-10 guest nights per person” category improved, and the guest turnover of 8 settlements marginalized, whereas it completely ceased in 8 settlements.

There was no measurable visitor turnover in 494 settlements in 2000, whereas tourists stayed overnight in 42 of them in 2007.

North Hungarian Sima, with its population of 25, entered the category of settlements with “high-level” (compared to population) visitor turnover.

I prepared the micro-regions’ transition matrix to the analogy of the settlement data analysis. Specific tourism performances are not as outstanding at micro-regional level as

in the case of settlement data. The highest specific visitor turnover was measured in Balatonfüred in 2000 (55 guest nights per person), and in the Csepreg micro-region in 2007 (19.4 guest nights per person).

There were 3 micro-regions in Hungary in 2000 where “significant” visitor turnover was recorded on the basis of the specific values of guest nights. The “significance” of tourism decreased in one of them by 2007 (**Table 4.31**).

*Table 4.31:
Transition matrix of Hungary’s micro-regions according to the number of guest nights
(2000-2007)*

2007 Guest nights/person 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 based on HCSO data

There was no significant change in the number of visitors in any of the 4 settlements in the “10.01-30 guest nights per person” category.

Decline was experienced in 5 out of the 43 micro-regions of “perceptible” visitor turnover; 9 out of the 43 micro-regions having “negligible” specific values got into higher classes, while no visitors stayed overnight in 2 micro-regions (according to HCSO data).

A very small number of tourists appeared in two micro-regions in 2007 where completely no guests were recorded in 2000.

The highest specific visitor turnover in Northern Hungary was measured in the Eger micro-region both in 2000 (4.8 guest nights per person) and 2007 (5 guest nights per person).

*Table 4.32:
Transition matrix of Northern Hungary’s micro-regions according to the number of
guest nights (2000-2007)*

2007 Guest nights/person 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 based on HCSO data

Three micro-regions belonging to the “1.01-10 visitor turnover per person” category in 2000 moved into the “negligible visitor turnover” class by 2007, from where only two micro-regions could rise to the “not very significant” level (**Table 4.32**).

I have come to the conclusion, as a result of the national and regional studies, that the developments and also the changes taking place in the characteristics of supply have led primarily to the realignment of the tourism market, and to a lesser extent, to its expansion.

sion. Visitor turnover has appeared in many settlements/regions where it had not existed previously or had not been significant. Unfortunately, however, a process of marginalization has begun in settlements/regions having very small numbers of visitors.

Using the linear regression models describing the trends of visitor turnover, I determined the factors relating to the visitor turnover trends of Hungary's regions, on the basis of the principal component analysis comprising the information content of the indicators used.

The appearance of tourists at regional level is influenced, to a greater degree and more frequently, by tourism supply (availability of accommodations, catering units and other service providers) and economic activity (incomes of individuals and local governments, number of enterprises and non-profit organizations, proportion of economically active people, welfare-related indicators) of the regions (**Figure 4.9**).

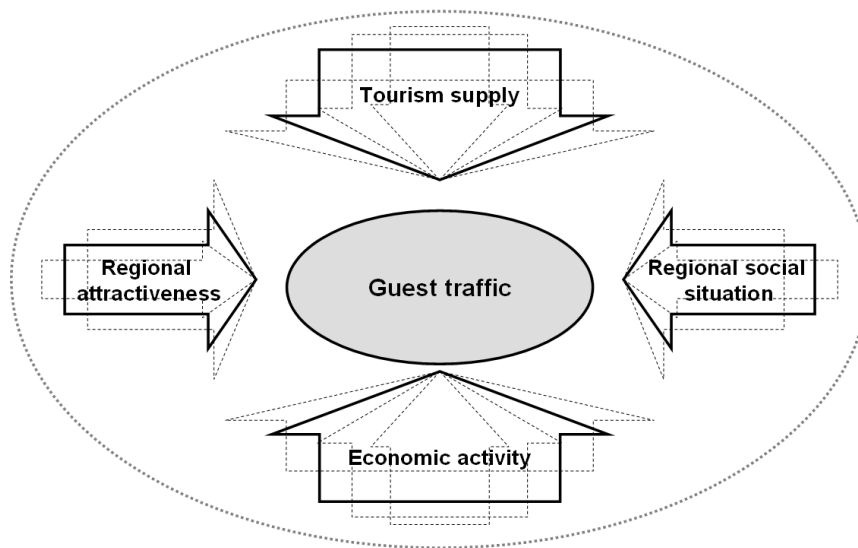


Figure 4.9: General regional model of the factors of visitor turnover
Source: Own work

Guest traffic is influenced to a lesser extent and less frequently by regional attractiveness (strengthening of regional real estate market, degree of the balance of migration) and regional social situation (crime, proportion of the recipients of social allowance).

In my model, I did not deal with the general condition of tourism called the ‘safety factor’ by Gábor Michalkó (**Figure 4.10**). Hungary, as an OECD country and European Union member state, is not subject to military danger; the chances of terrorist activities affecting tourists are small. Public health-care and hygienic issues will probably not deter travelers to different regions of the country. Although the country has settlements and parts of settlements reminiscent of third-world conditions, the largest part of Hungary has the image of an acceptable level of development, tidiness and living standards in the eyes of travelers from developed countries.

I compiled the factors of the total, domestic and foreign visitor turnover using linear regression equations for all seven regions (**Table 4.22**). However, due to the topic area of this study I present the models concerning Northern Hungary only (**Figures 4.11 and 4.12**).

The “tourism supply” and “economic activity” factors appeared significantly in the model based on the results of the principal component analysis. The model can explain the specific values of the micro-regional guest night numbers at 68.3%.

Only the “economic activity” factor had a measurable influence over the specific values of foreign visitor turnover; in the case of the domestic visitor turnover (due to the less than 16% proportion of foreign guest nights) the factors of the total values had an explanatory power of 67.9%. Foreigners are more likely to visit regions in better positions in terms of economic activity; the existence of accommodations, catering units and other service providers has a weaker effect on their demand.

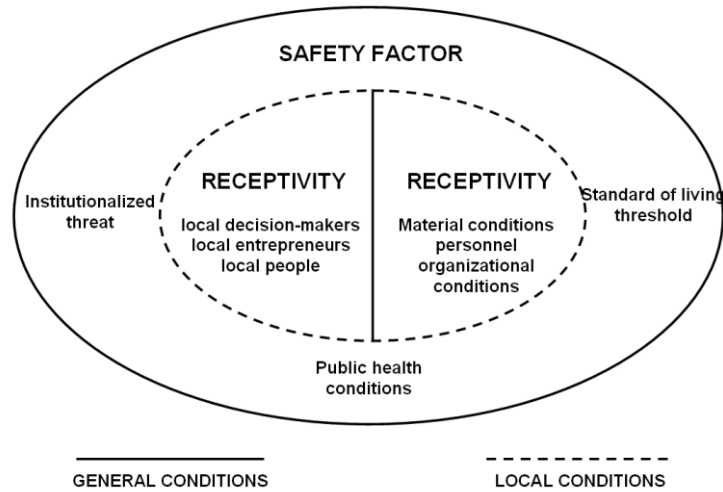


Figure 4.10: System of conditions of tourism
Source: Michalkó G. 2005, p. 72.

I tested the apparently controversial result using a linear regression model that explains the values of the foreign guest nights.

The variance of the specific values of foreign visitor turnover is best explained by the tax income per inhabitant and, to lesser extent, the number of enterprises in the area of accommodation/hospitality (59% altogether). The result underpinned the appropriateness of the model based on the eigenvalues of the factors.

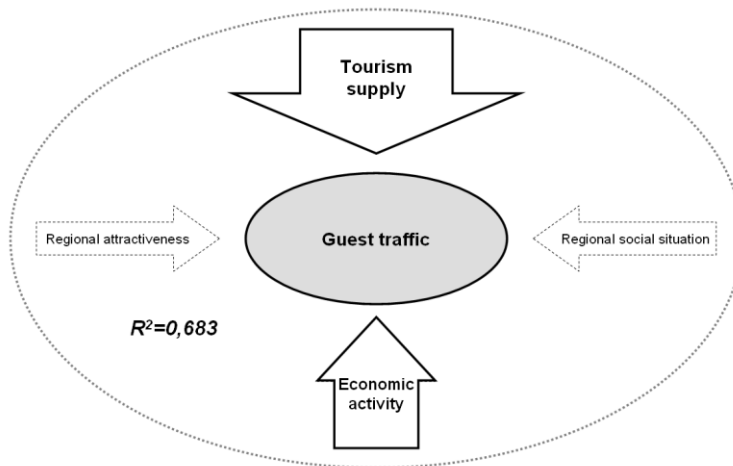


Figure 4.11: Northern Hungarian model of the factors of visitor turnover
Source: Own calculations

I placed the micro-regions of Northern Hungary in the system of coordinates determined by the “tourism supply” and “economic activity” (Figure 4.13). I positioned the micro-regions on the basis of the eigenvalues of the principal component analysis. The

Using the dendrogram of the cluster analysis I defined groups of micro-regions bearing similar regional positions (**Figure 4.13**).

Table 4.33:

Micro-regional categories set up according to the “economic activity” and “tourism supply” factors

Number of category	Description of category	Micro-regions in the particular categories
1.	Greater than average “economic activity” and “tourism supply” The micro-region’s positions are more favorable in terms of “economic activity”.	Eger
2.	Greater than average “economic activity” and “tourism supply” The micro-region’s positions are more favorable in terms of “tourism supply”	-
3.	Greater than average “economic activity” and below average “tourism supply”	Miskolc, Gyöngyös, Tiszaújváros, Kazincbarcika, Salgótarján
4.	Above average “tourism supply” and smaller than average “economic activity”	Mezőkövesd, Pétervására, Bélapátfalva, Sátoraljajuhely, Abaúj-hegyköz, Tokaj, Rétság, Füzesabony
5.	Smaller than average “economic activity”, below average “tourism supply”. The micro-region’s positions are more favorable in terms of “economic activity”	Sárospatak, Edelény, Pásztó, Balassagyarmat, Ózd, Hatvan
6.	Smaller than average “economic activity”, below average “tourism supply”. The micro-region’s positions are more favorable in terms of “tourism supply”	Heves, Bátortereny, Szerencs, Szécsény, Encs, Szikszó, Bodrogköz, Mezőcsát

Source: Own work

In order to evaluate the positions and formulate my recommendations, I plotted the micro-regions on one of the destination life-cycle curves characteristic of them (**Figure 4.14**). I positioned the micro-regions with the help of the direction and dynamics of the specific values between 1990 and 2007.

I slightly modified the original model, created by Butler by plotting the specific values instead of the number of guest nights on the y axis (Butler R. V. 1980, p. 8).

Butler’s model positions only one tourism destination/area, on the basis of previous years’ data, the characteristics of the tourism environment, and the direction and dynamics of changes. In his interpretation one curve can be made per region.

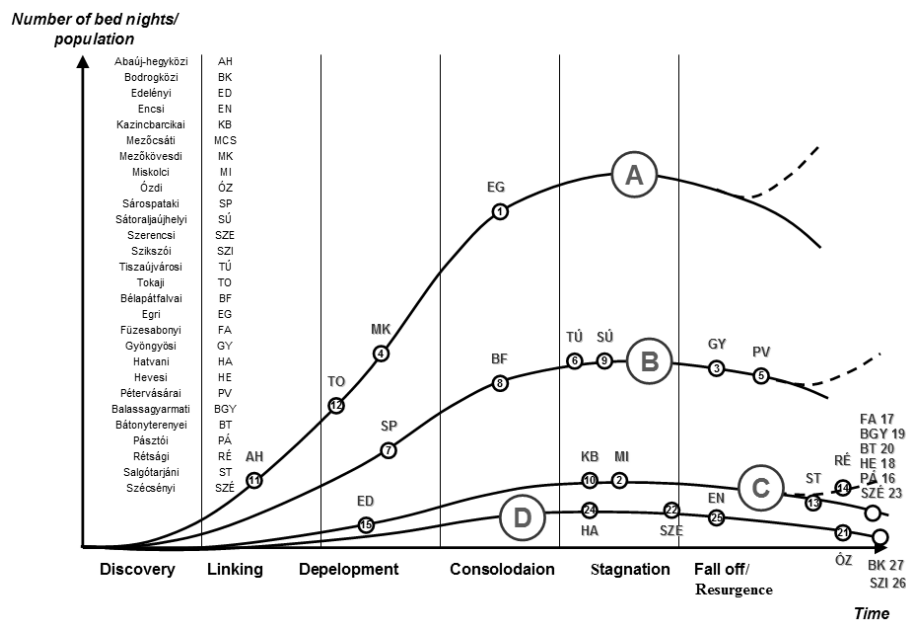


Figure 4.14: Northern Hungary's on the tourism destination life cycle curves

Source: Own work based on HCSO data

As a first step of positioning the small regions, I separated the typical life-cycle curves (**Figure 4.14**).

- Those micro-regions are plotted on curve A whose specific visitor turnover is among the highest; it is probable on the basis of recent years' growth and their characteristics that they have significant growth reserves.

- The micro-regions of growth track B are in the mid-level group on the basis of their specific values; they are characterized by slight growth or decline, or stagnation.

- Those micro-regions are plotted on curve C whose visitor turnover, compared to the population, is among the lowest in the region; slight changes can be observed, mainly pointing towards decline, in their positions.

- The tourism of micro-regions of curve D is insignificant, further processes of marginalization can be expected.

Afterwards, I plotted the micro-regions on the curves on the basis of individual characteristics. In this regard, the time-dimension of the x axis has to be interpreted from micro-regions' point of view. The micro-regions' position on the previously defined A, B, C, and D curves shows the stage of growth of a given micro-region.

The *Eger micro-region* is a distinct 'group' on the basis of the eigenvalues of the "economic activity" and "tourism supply" factors, where the "economic activity" and "tourism supply" are above average. The micro-region's level of "economic activity" is more favorable than its (at regional level) already outstanding "tourism supply". The capital necessary to develop tourism supply may come from internal sources as well. There are investors from outside due to its fame, visitor turnover and growth potential, and further investment is expected. It is necessary to improve the efficiency of the sector, to enhance the region's (foreign) recognition and to establish new (artificial) tourism attractions in order to keep up the pace of growth.

The *Tokaj micro-region* is a similar 'group' with its, outstanding tourism supply (for the region), that far outweighs its economic potential. The resources of tourism development come from the region only to a lesser extent. There are a significant number of domestic and foreign investors, primarily in the area of wine production and accommodation, due to its growth potential as well as the domestic and international awareness of the name "Tokaj". There is a chance to gain resources for the establishment of new/artificial attractions from state sources in order to enhance to a greater extent the micro-region's visitor turnover. Due to the nature of the tendering systems, primarily local governmental initiatives will bring quality change in the region. Care should be taken, however, that the developments implemented comply with the sustainability criteria. The private sector should take steps mainly towards establishing a reliable and high-quality tourism supply. My personal experience is that I consumed the best and worst tasting wine ever there. It is beneath the dignity of Tokaj wine, called the "wine of kings" and "king of wines," that apart from being able to satisfy the highest needs, it also serves consumer groups less demanding of quality.

Miskolc and Tiszaújváros micro-regions' tourism supply significantly falls short of their economic performance. The capital necessary for tourism development may come only partly from internal resources. Developments implemented several years ago have had their effects on the Tiszaújváros micro-region. The level of development of the tourism sector, however, does not justify the appearance of a large number of investors from outside. I view the greatest opportunities in the area of developing services and attractions related to the Tisza River in order to maintain growth, since this kind of 'through traffic' is less likely to interfere with the industrial nature of the region. The

development necessary for further growth is expected from the local government of Tiszaújváros.

The role played by tourism in the local economy is low in the Miskolc micro-region, despite that fact that the most guests come here after the Eger micro-region. This is due to the relatively high population. Its economic power due to its role as a regional center exceeds the level of “tourism supply”. In my opinion, internal resources may cover developments, primarily those requiring minor investments. Its tourism has been stagnating since the mid- 1990s, and the investments to place the region on a higher growth track may occur from national government fundings, via tenders. There are still a low number of quality accommodations in the micro-region, although steps have been taken in a positive direction in recent years. The tourism experts of the region often argue that several 4 or 5-star hotels of large capacity are necessary, which could meet the demands of conference tourism and could be starting points of star-tours aiming at the tourism sights of the region. The micro-region has a number of hidden natural and cultural values. Mapping them and utilizing them for tourism purposes could contribute to the growth of visitor turnover.

The *Sátoraljaújhely micro-region* is alone in its group with around-average “economic activity” and above-average “tourism supply”. The development of tourism supply seems to have come to a halt in the past 4-5 years; therefore, it is likely that the number of guests cannot be significantly increased without the continuous involvement of resources (primarily from grant funding). Only developments of minor volume, necessary for tourism development, may come from regional resources. Its exceptional natural endowments, diverse built and cultural heritage provide a good basis for the implementation of development projects financed mainly from grants. The intelligent, coherent and persistent development of tourism has brought outstanding results (in Sátoraljaújhely, Füzér, and Pálháza). The expansion of commercial accommodations is necessary, apart from rural accommodation in the region.

The *Gyöngyös and Sárospatak micro-regions* have about-average economic opportunities and about-average “tourism supply”. The Sárospatak micro-region is in the period of dynamic growth, the Gyöngyös micro-region is in a period of slight decline. Only minor investments are expected from internal resources; they can expect central regional development sources for maintaining and launching growth.

The *Salgótarján, Balassagyarmat, Kazincbarcika and Hatvani micro-regions*’ about-average “economic activity” is coupled with below-average “tourism supply”. Their low-level tourism performance is stagnating, or shows the signs of decline. Investments necessary for tourism developments of minor significance can be financed rather from internal resources. The micro-regions have to designate those narrow areas of development that carry the chances for sustainable tourism growth (e.g. villages in extraordinary landscapes at the foot of the Bükk Mountains). An increase of the significance of tourism cannot be expected without the systematic co-operation of local governments and micro-regional centers.

The tourism supply of *Bélapátfalva, Pétervására, Abaúj-hegyköz, Füzesabony micro-regions* far outweighs the economic opportunities. The Abaúj-hegyköz micro-region is in the period of fast growth, whereas the Bélapátfalva micro-region is in the period of slowing growth. The signs of decline can be experienced in the Pétervására and Füzesabony micro-regions. The sources of the further development of tourism can come almost exclusively from external, primarily domestic resources. The narrow sources of the local governments and the small number of highly skilled professionals form a barrier to winning tender sources. Further results can be expected from invest-

ment incentive, investment supporting programs that promote regional tourism potential.

The *Mezőkövesd, Rétság, Szécsény micro-regions* have less significant “tourism supply” than the previous group but have somewhat more favorable economic potential. The Mezőkövesd micro-region is in the period of dynamic development, the Rétság micro-region in ‘revitalization’, whereas the Széchenyi micro-region is in decline. The Mezőkövesd micro-region is on growth track B due to its tourism supply; the regional significance of tourism is less significant in the other two cases. It is predominantly the Mezőkövesd micro-region that can expect grant funding; in the case of the other two, their location near Budapest and utilizing the Old Village of Hollókő and its Surroundings to a greater extent may bring results. The Mezőkövesd micro-region, capitalizing on its excellent availability, should expand its catchment area, both inside and outside the region.

The *Heves, Mezőcsát, Bodrogköz, Szikszó and Encs micro-regions* belong to those lagging behind in the national rank on the basis of their economic power. Their tourism supply and performance is negligible, which is even coupled with decline. There is a small chance for the regional-level development of tourism. The Mezőcsát and Heves micro-regions are in the best position, as they can utilize their excellent accessibility, the proximity of Lake Tisza and a thermal water supply. The tourism developments can come almost exclusively outside the region. In my opinion, only isolated development can be expected. For the majority of the micro-region’ settlements, it would be worth trying to find other means of encouraging development/growth.

The “tourism supply” and economic performance of the *Bátonyterenye, Pásztó, Szerencs, Edelény and Ózd micro-regions* are deeply below average. The visitor turnover is negligible compared to the population, and processes of marginalization have been typical for long years. Apart from some exceptions (e.g. Edelény), significant tourism investments cannot be expected from internal and external (private or budgetary) resources. Special attention has to be paid in the case of tourism development so that the criteria of sustainability are complied with. The Szerencs micro-region undeservedly belongs to this group, since its settlements belonging to the wine-region, the architectural and cultural heritage of Szerencs would justify tourism development. The development of the micro-region’s accommodation supply is reasonable, especially in the core area of the Tokaj Wine Region (historic cultural landscape -World Heritage Site). On the other hand, it is difficult to justify tourism development in the majority of the settlements of the group; it would be more reasonable to seek the factors of regional development/growth elsewhere.

The transition matrixes, based on the specific values of guest nights and compiled at national and regional levels, do not indicate significant positive (or negative) changes. Many regional development and tourism development planning documents are available today. The available documents show significant differences in terms of their professional foundation, the nature and preciseness of objectives set. The public availability of the ready planning documents is limited. VÁTI Regional Development and Urbanism Non-profit Limited Organization collects and records these documents; however, it does not make them public in electronic form. The implementation of the micro-regional development plans is ad-hoc. The micro-regional plans are reminiscent of a kind of ‘brainstorming’, rather than a record of projects to be implemented. In practice, the evaluation of plans not yet in force does not take place.

The model, based on the eigenvalue of the factors of the principal component analysis, identified the “economic activity” and “tourism supply” factors as significant. Based on the two dimensions, using cluster analysis, I classified micro-regions into groups and

positioned them on tourism destination curves with the help of the data series of visitor turnover between 1990 and 2007; afterwards I formulated recommendations for clarifying the micro-regional level objectives.

On the basis of my research findings, I regard hypothesis H7 as verified and formulate it as a thesis.

T7: The transition matrixes of the specific values of visitor turnover justify that the effects of tourism at the micro-regional level of 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 period 2000-2007.

In the light of the information on the objectives and priorities of the planning documents concerning the micro-regions' tourism development, I also regard hypothesis H8 as verified and formulate it as a thesis.

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 in positioning tourism performance. Setting up feasible and sustainable directions of development may contribute to position the (micro-) regions along the tourism supply and economic activity dimensions.

On the basis of studying the tourism positions related to foreign visitor turnover, as well as the objectives/priorities of the planning documents of Northern Hungary's micro-regions, I regard hypothesis H9 as verified and formulate it as a thesis.

T9: Having learned the objectives and priorities of the planning documents of tourism development, I can 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 and strategies rarely (in 2 cases) contain concrete goals and tasks relating to the expansion of foreign visitor turnover.

SUMMARY

I have surveyed the main issues of the regional processes of tourism and the relationships among those processes.

In the first part of my work I summed up the development of the concept, model-development of tourism and their regional aspects. My main statements, on the basis of the literature, are as follows:

- Attempts to set up complex definitions can be traced back several decades, yet nobody has managed to create a definition that is generally acceptable for all areas of science. The interpretations in use, which are often different in their concept, will keep causing problems, especially in the case of multidisciplinary topics.
- The makers of tourism models made efforts to publish more precise idea containing more factors than their predecessors; they proved the significance and rationale of those ideas. I think the models listing too many actors/factors/institutions (e.g. Goeldner C. R. – Brent-Richie J. 2005, pp. 14) can be misinterpreted when taken out of their context. Using models that have a clear meaning to every expert of science areas dealing with tourism is more sensible; in this way a common knowledge base of tourism can develop more easily.
- The tourism surveys of the past decades indicate that, although tourism cannot be regarded as a distinct discipline in its today's form, steps have been taken to this end. Many comprehensive books and scientific journals have come out on tourism; scientific associations began their operation; institutions of higher education launched tourism programs. Tourism has got a chance to become a distinct discipline, despite the setback factors stemming from its multidisciplinary nature. This requires further interdisciplinary co-operations that may force the partial dismantling or re-thinking the borders of the disciplines.

First, in the course of the empirical research, I dealt with the regional disparities typical in Hungary and Northern Hungary. My analyses based on the HCSO database have indicated that:

- Tourist arrivals are concentrated in a narrow range of the settlements and micro-regions (80% of the guest nights were registered in 50 settlements and 10 micro-regions in 2007). We can assume on the basis of the specific values of the visitor turnover that tourism results in significant effects in only 3-4% of settlements/micro-regions.
- The time-series of tourism indicators (number of domestic/foreign guest nights, utilization of accommodations, number of accommodations) and the results of the shift-share analysis have proven that the tourism of Northern Hungary'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 marginalization.
- 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 nationwide (except Nógrád and Győr-Moson-Sopron counties), partially (6 counties) or totally (7 county) counterbalanced the decrease of foreign visitor turnover (14 counties). The values of the Hirschman-Herfindhal index indicate a growing concentration of foreign visitor turnover, whereas the territorial distribution of the domestic guest nights did not change to a significant extent in the period 2000-2007.

- Mainly the capital and, to a lesser extent, four counties (Hajdú-Bihar, Békés, Zala, Győr-Moson-Sopron) were able to respond to the move in demand towards higher-class accommodations faster than the national average. Structural change in a favorable direction can be observed throughout the country, except for Szabolcs-Szatmár-Bereg County, in the period 2000-2007.

- My surveys have verified that the visitor turnover experienced between 2000 and 2007 was above the regional average in the peripheral (economically underdeveloped) micro-regions of Edelény, Encs, Abaúj-hegycső and Füzesabony (mainly coming from the expansion of the turnover for lower-class accommodations).

- In Chapter 4 I answered the question as to what factors, beyond tourism supply, can explain the visitor turnover of settlements and regions. I examined the problem using thirty-three indicators and several methods (linear regression models, principal components analysis).

- 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 guest nights; they only affect their maximum values.

One of the key questions was whether the objectives set up in the planning documents concerning tourism are reconciled with the opportunities of the regions. Are they appropriate for the orientation of people working in tourism?

My surveys have led me to the following conclusions:

- The effects of tourism development are not significant either at national or micro-regional level. The relative positions of the micro-regions did not change in the period 2000-2007, in spite of developments in tourism.

- Neither the micro-regional concepts and strategies, nor their objectives and priorities, serve to orientate the (potential) stakeholders. Efficient planning requires the exploration of tourism performance indicators and the clear numerical expression of objectives. The positioning of tourism performance may be aided by plotting the micro-regions on a destination life-cycle curve. Identifying the feasible and sustainable directions of development may contribute to positioning the micro-regions along dimensions like tourism supply and economic activity.

Having mapped the objectives and priorities of the planning documents of micro-regional tourism development, I have come to the conclusion that:

- While most of the micro-regions of Northern Hungary's (17 out of 27) are losers of the 'battle' fought for foreign visitors, the concepts and strategies in just a few cases (2) contain concrete goals and tasks relating to the expansion of foreign visitor turnover.

Hopefully, the results aiming at mapping up the regional issues of tourism will be useful for practitioners.

I view the results of my research as useful in the course of drawing up the planning documents of tourism development. Positioning the micro-regions on the basis of "economic activity" and "tourism supply", as well as plotting them on the destination curves, may contribute to setting up feasible and sustainable tourism goals.

My current research results indicate that models can be set up at regional and national levels that can explain tourism performance (indicators of demand and supply) more precisely. My short-term future objective is to conduct research aiming at exploring the reasons for the phenomenon I have identified. Furthermore, mapping the temporal changes of factors influencing tourism and the reasons for the modifications are interesting research tasks.

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

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