



Hungarian University of Agriculture and Life Sciences
Szent István Campus, Gödöllő
Doctoral School of Economic and Regional Sciences

Theses of doctoral (PhD) dissertation

**DEVELOPMENT OPPORTUNITIES FOR THE HOTEL
INDUSTRY IN THE NORTH-HUNGARY REGION**

Béla Benkő

Gödöllő

2022

Doctoral School

name: **Doctoral School of Economic and Regional Sciences**
Hungarian University of Agriculture and Life Sciences

field of science: **Regional Sciences**

head of school: **Dr. Lakner Zoltán DSc**
full professor
Doctoral School of Economic and Regional Sciences

Hungarian University of Agriculture and Life Sciences

Institute of Agricultural and Food Economics
Department of Agricultural and Food Business
Economics

Supervisor: **Dr. habil. Farkas Tibor PhD**
full professor
Institute of Sustainable Development and Farming
Department of Sustainable Tourism

Dr. habil. Dávid Lóránt Dénes PhD
full professor
Institute of Sustainable Development and Farming
Department of Sustainable Tourism

Signatures of approval from the doctoral school and the subject supervisors:

.....
Approval by the Head of School

.....
Approval of supervisor

.....
Approval of supervisor

TABLE OF CONTENTS

1. BACKGROUND TO THE WORK, OBJECTIVES	1.
2. MATERIAL AND METHOD	3.
3. RESULTS AND DISCUSSION	4.
3.1. The hotel industry in Northern Hungary	4.
3.2. Labour situation of hotels in North Hungary region	6.
3.3. Innovation activity of hotel industry in North Hungary region	8.
3.4. SWOT analysis	12.
3.5. Justification of hypotheses	13.
4. CONCLUSIONS AND SUGGESTIONS	14.
5. NEW SCIENTIFIC RESULTS	18.
6. THE AUTHOR'S PUBLICATIONS RELATED TO THE SUBJECT OF THE THESIS	19.
7. LITERATURE REFERRED TO IN THIS PUBLICATION	24.

1. BACKGROUND TO THE WORK, OBJECTIVES

The topic of my doctoral thesis is the relationship between the emerging spatial development opportunities in the North-Hungary region - Borsod-Abaúj-Zemplén, Heves and Nógrád counties - and the hotel industry in the region. The tourism potential of the region allows the hotel industry, and through it tourism development, in order to achieve higher economic growth than at present.

The study area has a significant tourism potential, and has shown outstanding development in recent years compared to other tourism regions of Hungary. The tourism attractiveness of a given area is determined by its characteristics. In addition to the natural and cultural-social values, the existence of quality accommodation facilities can be a motivating factor in the destination selection process, thus determining the tourism offer. "The establishment of hotels is always a major investment, a long-term investment, so a hotel project requires a responsible decision, involves risk and in many cases only pays off over a long period of time, even if it is run and managed efficiently" (ALBERT, 2018. p. 20). The choice of location therefore also plays an important role.

Based on the systems approach to tourism, the tourism exposure of a destination and its volume is essentially determined by its capacity. Accommodation providers are linked to the elements of receptiveness, which in addition include basic infrastructure, attractiveness, and the infrastructure and superstructure of tourism. The latter factor covers the effective marketing of tourist attractions and the provision of services to meet the needs of visitors, which includes accommodation providers. In all cases, the provision of facilities also involves significant costs (MICHALKÓ, 2016).

The analysis of regions and tourism regions is an important area, where I will present the North-Hungary region and describe the tourism attractiveness of the area. The counties of the region are described in detail. Secondary research results from the literature review partly helped to prove my hypotheses. According to the title of the thesis, the main topics analysed are:

- the relationship between accommodations and tourism,
- definition and types of hotels,
- characteristics of hotel operation,
- the quality, value and location of hotels,
- accommodation capacity and guest flows in Northern Hungary.

I set the following objectives for my research:

- C1:** Examination of the impact of spatial development activities within the North Hungary region and their impact on hotel developments, taking into account developments, expansions and capacity utilisation analyses by category.
- C2:** Examination of the impact of hotel developments on the socio-economic development of the Northern Hungary region.

In analysing the topic I have chosen, the experience I have gained from examining the various databases shows the relevance of the topic. Tourism, and within it the hotel industry as a sector, is experiencing increasing competition. Consumer needs are constantly changing, new fashions, trends and, not least, opportunities are emerging. Hotels have to fulfil two main functions: a core activity and a complementary activity. However, it does not matter at what quality level they do this. The main objective is to ensure that the guest leaves satisfied, making the region an attractive destination.

Spatial development and tourism are closely linked. Tourism is part of the spatial development programme, which sets out broad and specific development objectives. Together they are integrated into the National Development Plan, supporting and complementing each other. When analysing the tourism potential of the North-Hungary region, it is clear that this potential is diverse and this is precisely what gives this region its decisive strength, which forms the basis for the even more extensive development of tourism products.

Based on the literature review and my own professional experience, I formulated the following hypotheses:

- H1:** The hotel industry in the North Hungary region is diversified, but concentrated in the core tourism area.
- H2:** The social and economic impacts of the significant hotel developments of the past decades have been mainly concentrated in the development locations.
- H3:** In the North Hungary region, hotel developments have not been preceded or followed by infrastructure development and development on a similar scale.
- H4:** Despite the significant volume of hotel developments, the region is unable to provide qualified professionals.
- H5:** The region's hotel industry is not fully exploiting the potential of innovation.

2. MATERIAL AND METHOD

In my thesis I analysed the possibilities of hotel development in the North-Hungary region. The region has good potential in this field, but there has been no serious progress in the last decade. I have set two main objectives for my dissertation. These are:

- Regional developments within the North Hungary region and their impact on hotel developments, looking at the sub-regions (category by category developments, expansions, capacity utilisation assessment, etc.).
- Impact of hotel developments on regional population figures and economic changes.

In the first part of my research, I will present the development of the Hungarian hotel industry from its beginnings to the present day. On the basis of the literature review, I formulated a novel grouping and conclusions based on previous research results, thus extending the results of previous research. In the course of the research, I used the databases of KSH, EUROSTAT, OECD, STADAT, striving to use up-to-date data.

Primary research was conducted through a questionnaire survey. During the questionnaire survey, I contacted almost all hotels in the North-Hungary region in order to make an informed assessment. There are forty hotels in Borsod-Abaúj-Zemplén county, thirty-seven in Heves county and five hotels in Nógrád county, each three-star, four-star and five star. Out of the eighty-two questionnaires sent out, I received sixty-four completed questionnaires, which represents a 78% response rate. From the telephone consultation I conclude that the questionnaires were filled in by the top management of the hotel. I evaluated the questionnaire responses partly by visualisation in graphs and partly by mathematical statistical methods.

The Kruskal-Wallis test is used to assess innovation, development and investment. Three main areas were analysed in the principal component analysis:

- Innovation-related studies (principal component 1.).
- Hotel capacity analyses (principal component 2.).
- Investment and financing studies (principal component 3.).

I supplemented the questionnaire assessment with an in-depth interview analysis to get more accurate answers. For the sake of completeness, I have carried out a SWOT analysis of the hotel industry in the region, indicating the main directions for change in the strategic assessment.

3. RESULTS AND DISCUSSION

Through my studies and my chosen methods, I wanted to confirm my hypotheses, which are:

- The hotel industry in the region is diversified, but mainly concentrated in the core tourism area.
- The socio-economic impact of hotel developments is concentrated in a narrow area.
- Hotel infrastructure development is insufficient.
- There is a shortage of qualified professionals in the region.
- Innovation opportunities in the hotel industry are limited.

3.1. The hotel industry in Northern Hungary

By analysing the situation of the hotel industry in the North-Hungary region, I found that although the development opportunities of the region are related to the development of the hotel industry, the development of tourism has not had the same impact which could lead to the region's social and economic development.

Respondents were positive about the impact of hotel development on their own business performance. 72% of respondents considered that hotel developments had had a positive impact on their local economy over the past decade (Figure 1.). This is a very positive result, taking into account the given the economic performance of the region compared to the national average. 14% reported average growth and only 11% think it has not changed.

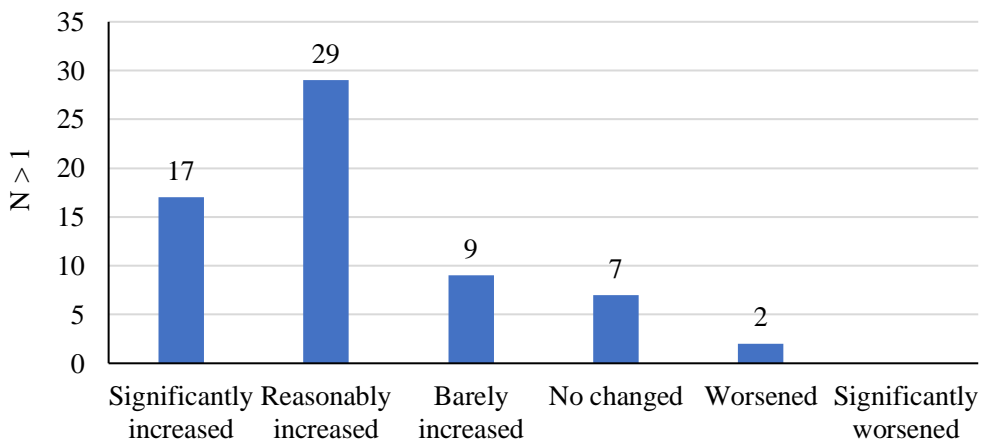


Figure 1: **The economic impact of hotel developments in the Northern Hungary region on the local economy in the last decade**

Source: own calculation, 2021.

I have analysed the impact of hotel development on the municipality, the region, the business itself, and on hotel occupancy. The analysis did not show a statistically proven correlation, so the impact of the development is mostly affected the situation of the municipality (Table 1. and 2.).

Table 1. Impact of the development on business, the municipality and the region in relation to hotel accommodation capacity

Group with 3 places		N	Ranking averages
Impact of development on business	1-50 space	16	25,38
	51-113 space	18	28,75
	114-1000 space	21	29,36
	Total	55	
Impact of development on the municipality	1-50 space	18	26,50
	51-113 space	20	34,90
	114-1000 space	21	28,33
	Total	59	
Impact of development on the region	1-50 space	19	31,42
	51-113 space	21	34,76
	114-1000 space	22	28,45
	Total	62	

Source: own calculation

Table 2. Significance values

Test Statistics ^{a,b}			
	Impact of development on business	Impact of development on the municipality	Impact of development on the region
Kruskal-Wallis H	0,755	2,931	1,510
df	2	2	2
Asymp. Sig.	0,685	0,231	0,470

a. Kruskal Wallis Test. b. Grouping Variable:

Source: Own calculation

The results of my research have shown that only specific development sites confirm positive growth. This may be due to the fact that hotel developments are linked to natural, cultural and historical attractions, while infrastructure and job creation which lead to social well-being lags are behind the economically stronger regions. Wage levels are also much lower, making it difficult to retain residents. Although the quality of hotel development is improving year on year, the supply of qualified labour is hampered. It would be advisable to offer scholarships for hard-to-fill vacancies and jobs to students, focusing on local residents.

3.2. Labour situation of hotels in North Hungary region

The in-depth interviews revealed that low pay is the main barrier of filling some jobs (Figure 2.). Most of the hotel workers have professional qualification (Figure 3.). The main jobs are filled with staff having professional qualification, but not those that are considered as background work (bellboy, kitchen assistant, stock clerk, chambermaid, gardener). In these fields, qualifications are less important.

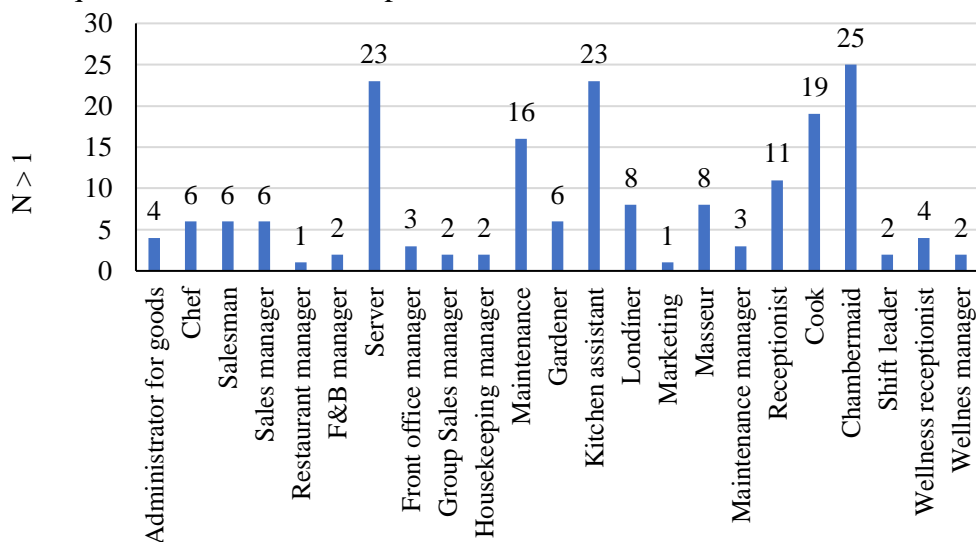


Figure 2. Number of unfilled positions in respondents' hotels (number)

Source: own calculation, 2021.

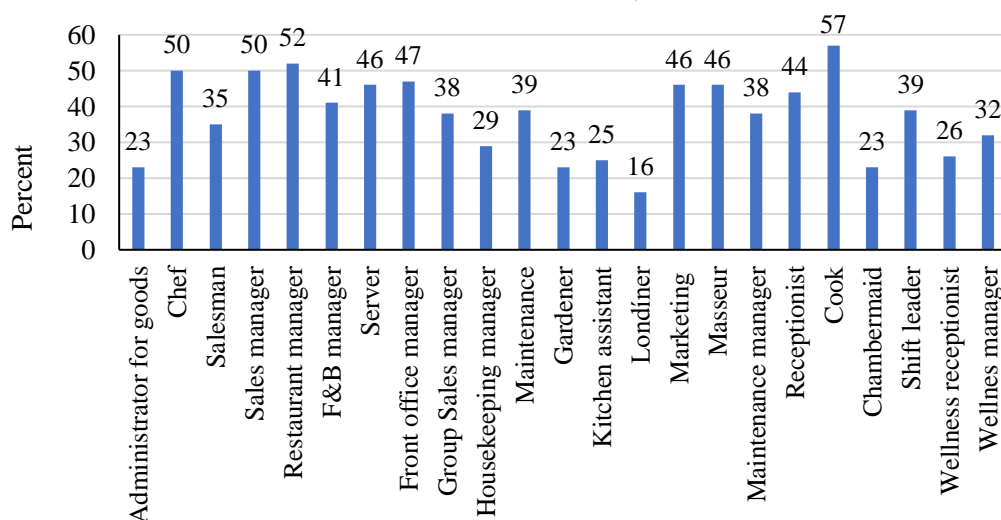


Figure 3. Proportion of people with vocational qualifications

Source: own calculation, 2021.

Labour turnover is only significant in certain jobs (cook, kitchen assistant, server, chambermaid). This is probably a consequence of hard work and low wages. In order to maintain the quality of the hotel, wages should be reconsidered and mechanisation should be increased in problem areas. With the development of digitalisation, many workflows now allow for touchless input. In addition to online booking for a hotel, it is now possible to check-in online on arrival or in advance, for example.

In many cases, the lack of local/regional labour is a problem. Such areas are sales managers, cooks, servers, chambermaids. Hiring local/regional staff is a way of expanding the possibilities of the hotel. It is advisable to look for employees who are suitable for the position and willing to work (Figure 4.).

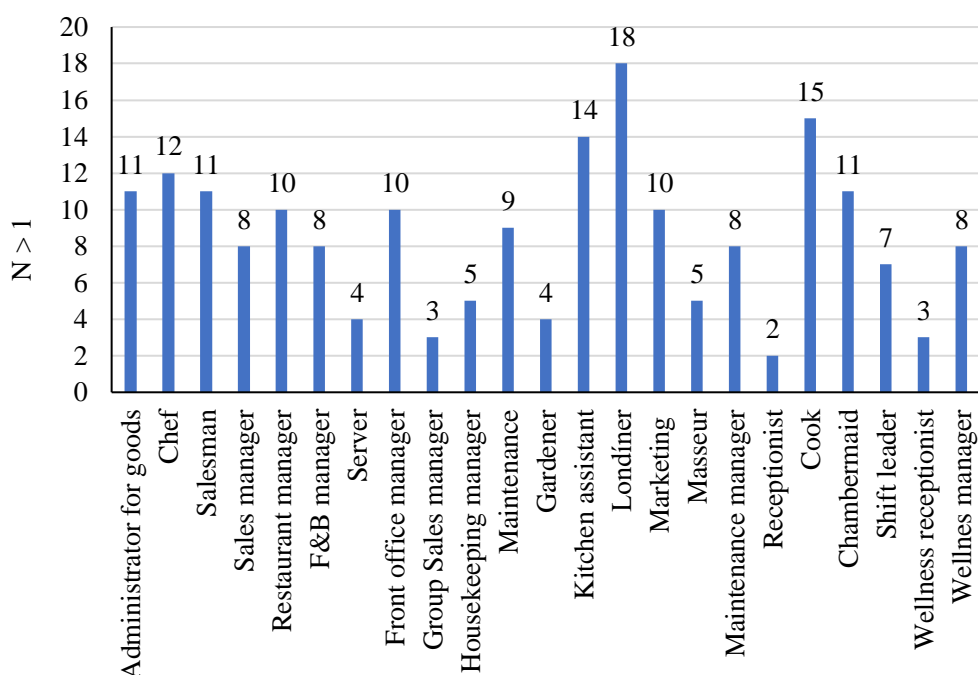


Figure 4. In which positions are you unable to employ local/regional labour?

Source: own calculation, 2021.

Despite the difficulties, statistical data shows that the economic performance of the North Hungary region has increased over the period. In my opinion, broader development and more opportunities for tendering are needed to enable the hotel industry to exploit the potential of innovation to a greater extent. In this way, tourism in the North Hungary region would not only be concentrated in core areas. The region has significant tourism potential.

3.3. Innovation activity of hotel industry in North Haungary region

Hungary performs poorly in the area of innovation, ranking 62nd among the countries surveyed in the WEF innovation ranking trend in 2017. The trend in innovation ranking has now improved, but the situation is still poor. Nearly 44% of respondents do not pay attention to innovation, while 12.5% pay little attention. Only 21.8% consider it important to apply the latest technical and technological advances and to renew the organisation.

I have examined several types of innovation, the importance of which depends on a large extent on the sector, the composition of the market and its structural changes. These also play a major role in the operation of hotels, and I therefore explored how respondents perceive the potential for innovation in their own businesses. The analysis was carried out using the Kruskal-Wallis test.

Product/service innovation is also essential in hotels, as the provision of new services or the improvement of the quality of old ones has a clear impact on competitiveness. Product/service innovation is considered a success by 48.5% of respondents, 21.9% of them usually deal with it, and only 29.7% consider it less feasible.

The perception of the implementation of **technological innovation** is less typical. Only 31.3% of respondents implement technological innovation and almost 40% do not pay enough attention to it. Yet process innovation linked to a new service or product can strengthen competitiveness.

Factors hindering **marketing innovation** include scarce resources, outdated tools and inadequate human resources. If progress could be made in this area, it would be a major positive step for the hotel industry in the region, as it would allow access to new markets linked to sales. The scattering of factors hindering marketing innovation is mixed.

The respondents are hotel managers in Heves, Borsod-Abaúj-Zemplén and Nógrád counties. When looking at the barriers to innovation, in addition to the involvement of the county, the following results were obtained. (Table 3).

Table 3. Barriers to innovation

Which county your answers refer to?		N	Ranking averages
financial problems	Heves	34	32,26
	Borsod-Abaúj-Zemplén	21	32,45
	Nógrád	9	33,50
	Total	64	
tax environment - State	Heves	34	31,59
	Borsod-Abaúj-Zemplén	21	31,07
	Nógrád	9	39,28
	Total	64	
tax environment - local government	Heves	34	32,26
	Borsod-Abaúj-Zemplén	21	34,60
	Nógrád	9	28,50
	Total	64	
lack of grants, tendering opportunities	Heves	34	30,81
	Borsod-Abaúj-Zemplén	21	35,17
	Nógrád	9	32,67
	Total	64	
return on investment risk	Heves	34	28,22
	Borsod-Abaúj-Zemplén	21	34,95
	Nógrád	9	42,94
	Total	64	

Source: own calculation

I examined the relationship between innovation opportunities and the factors that influence them. The rankings show an improvement in innovation prospects, decline can only registered in the production of a promotional film. The analysis focused on whether there is a significant difference between innovation prospects and influencing factors. In three cases the difference is significant: 'launching or innovating a website', 'producing a brochure' and 'organising events or exhibitions'.

The obstacles to implementing innovation activity were partly due to financial problems and partly to the risk of return on investment. It should also be added that innovation can only be carried out by properly trained and qualified people. The barriers and the factors affecting them are illustrated in Table 4.

Table 4. Correlation between innovation opportunities and influencing factors

How has the organisation's opportunities for innovation changed over the last 5 years?		N	Ranking averages
launch, renewal of website	The situation has improved	28	39,45
	The situation has worsened	5	21,60
	No change	22	29,02
	I cannot judge	9	25,44
	Total	64	
create a blog	The situation has improved	28	32,32
	The situation has worsened	5	38,20
	No change	22	32,59
	I cannot judge	9	29,67
	Total	64	
advertising (newspaper, radio, TV)	The situation has improved	28	32,05
	The situation has worsened	5	22,90
	No change	22	34,41
	I cannot judge	9	34,56
	Total	64	
preparation of a brochure	The situation has improved	28	36,25
	The situation has worsened	5	16,70
	No change	22	26,73
	I cannot judge	9	43,72
	Total	64	
event organisation, exhibition participation	The situation has improved	28	35,21
	The situation has worsened	5	21,90
	No change	22	27,02
	I cannot judge	9	43,33
	Total	64	
making a promotional film	The situation has improved	28	35,14
	The situation has worsened	5	36,20
	No change	22	27,36
	I cannot judge	9	34,78
	Total	64	
attending professional forums, conferences	The situation has improved	28	34,07
	The situation has worsened	5	22,50
	No change	22	30,39
	I cannot judge	9	38,33
	Total	64	
Publication of a PR article	The situation has improved	28	36,04
	The situation has worsened	5	19,10
	No change	22	29,66
	I cannot judge	9	35,89
	Total	64	

Source: own calculation

In the 5-element cluster I have listed the barriers to innovation. Among the aspects analysed, these are financial problems, state and municipal tax environment, lack of subsidies, lack of tendering opportunities, risk of return on investment. Figure 4 symbolises the lack of ongoing innovation.

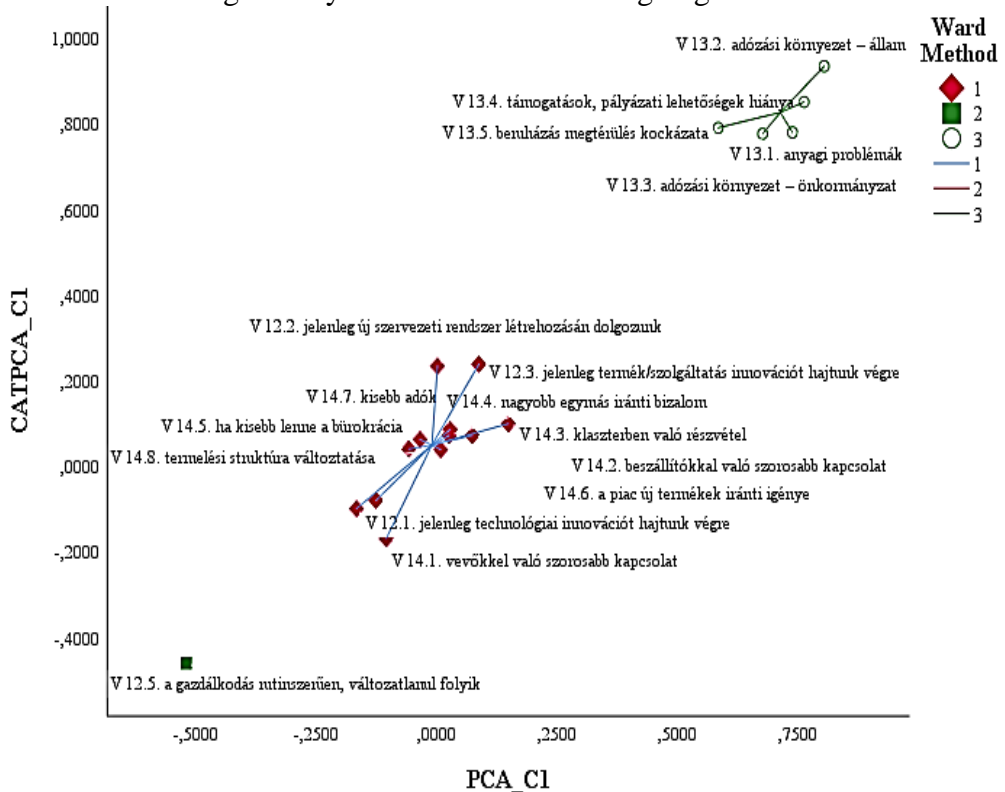


Figure 4 Analysis of the determinants of innovation by principal component coefficients

Source: own calculation

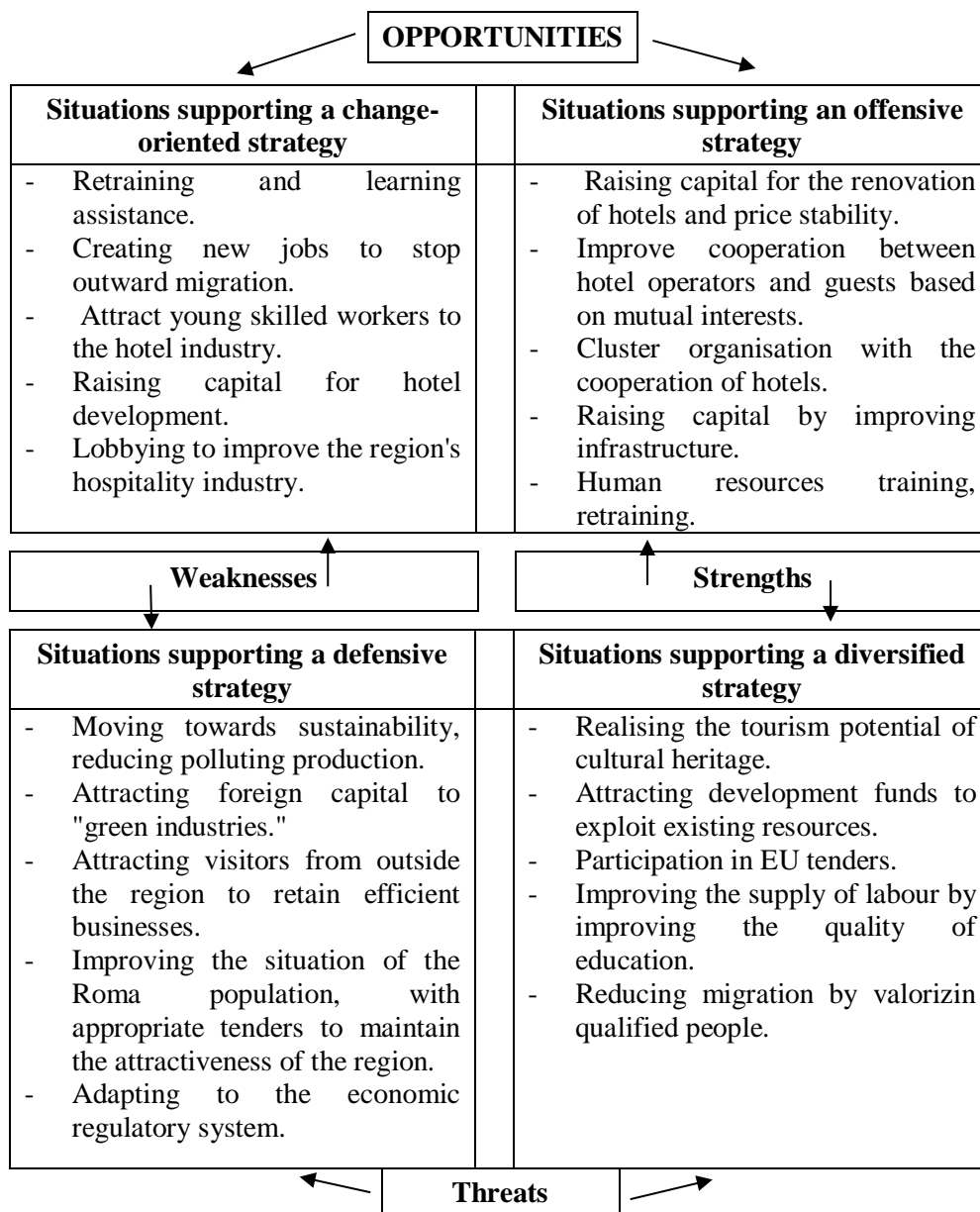
Legend

- V 12.1 We are currently implementing technological innovation
- V 12.2 We are currently working to set up a new organisational system
- V 13.1 Financial problems
- V 14.1 Closer contact with customers
- V 12.3 We are currently implementing product/service innovation
- V 13.2 Tax environment -government
- V 14.2 Closer contact with suppliers
- V 13.3 Tax environment – local government
- V 12.5 Management runs routinely continues and unchanged
- V 13.4 Lack of grants and tender opportunities
- V 14.3 Participation in a cluster
- V 13.5 Return on investment risk
- V 14.4 Greater trust in each other
- V 14.5 If there were less bureaucracy
- V 14.6 Market demand for new products
- V 14.7 Smaller taxes
- V 14.8 Changing the structure of production

3.4. SWOT analysis

By conducting the questionnaire survey and the SWOT analysis, and with the help of the answers obtained during the in-depth interview, my objectives were largely met. On this basis, I have formulated my new findings. The results of the strategic analysis of the hotel industry in the North Hungary region are summarised in Table 5.

Table 5 Possible strategies for the hotel industry in the North-Hungary region based on the SWOT analysis



3.5. Justification of hypotheses

By analyzing the situation of the hotel industry in the North-Hungary region, I found that although the development opportunities of the region are related to the development of the hotel industry, the effects that could contribute to the social and economic development of the region are not at the same level as the development of tourism.

I use primary data to verify my hypotheses, whether they are verified or not verified. The fulfilment of my hypotheses is shown in Table 6.

Table 6 Justification of hypotheses

	HYPOTHESIS	Justification
H₁	The hotel industry in the North Hungary region is diversified, but concentrated in the core tourism area.	Verified
H₂	The social and economic impacts of the major hotel developments of recent decades have been felt primarily only at the development sites.	Partly verified
H₃	In the North Hungary region, hotel developments were neither preceded nor followed by infrastructure development on a similar scale.	Verified
H₄	Despite the significant volume of hotel developments, the region is unable to provide qualified professionals.	Verified
H₅	The hotel industry in the region is under-utilising the potential of innovation.	Verified

4. CONCLUSIONS AND SUGGESTIONS

My conclusions and recommendations are linked to the objectives set out in the introduction. Accordingly, the spatial development activities within the region are partly linked to the development of the hotel industry and my research has confirmed this. Hotel developments have only a small impact on employment figures in the region. Their impact in terms of economic change is only felt in areas particularly suited to hotel development.

The topic is relevant, since there is increasing competition in the tourism and hotel industry. The development of the hotel industry can only be achieved if there is adequate infrastructure, and the region is still lagging behind in this area. A competitive advantage in the services market must be sought. Quality, local culture, customer focus and the development of local infrastructure can provide such a competitive advantage.

The general improvement in living standards helps people to enjoy their leisure time. Tourism can be an excellent source of this. The sector is developing dynamically, thanks to:

- the rapid development of transport,
- increased leisure time,
- improved financial security.

The impact of COVID-19 may encourage more cautious development by the investment community, or the development of smaller accommodation. EU and national tenders are available to help businesses to make up for shortfalls and backlogs caused by the epidemic.

Hotels have a high demand for workers to ensure personal contact with guests. Tiring, demanding jobs often lead to turnover.

The region's tourist attraction is based on its diverse natural assets, thermal waters, cultural treasures, folklore traditions and wine tourism.

By examining the development opportunities of the hotel industry in the North-Hungary region, I explored the available opportunities in the given period, and presented the difficulties and threats that hamper the activities of accommodation entrepreneurs. I summarised my findings regarding North-Hungary region in a SWOT analysis.

First, I have reviewed the factors that are the strengths of tourism in the region. The overview of the institutional framework of tourism has been improved by the designation of planning-tourism regions. The core tourist areas are easily accessible, with existing motorways and multi-lane roads. The number of accommodation facilities are adequate for the number of visitors and feedback from accommodation establishments shows that value for money is good. The region's significant natural, thermal water potential, internationally recognized wine culture and cultural heritage are outstanding

attractions. Tourism is a major source of employment and is very popular with students in both secondary and higher education. Nevertheless, although the benefits include the availability of labour as a cheap source of inputs, there are also risks, as unfilled vacancies may hamper the high quality of accommodation activity.

Rapid changes in tourism regulations could put hotels in a difficult situation for their operation and management. Prices have to be calculated before the season and hotels have to keep the published price. Regulatory changes during the economic year can limit revenue-generating capacity. Communication and marketing tools are limited and cooperation with other regions should be developed.

Boosting foreign tourism could bring in both domestic and foreign capital, which would progressively increase the region's hotel development. This could provide an excellent opportunity to promote the natural and cultural attractions of the region and to facilitate the development of the related infrastructure. This would also help to take advantage of EU and national funding opportunities, as well as to mitigate the economic downturn caused by COVID-19. Marketing tools should be explored in order to further promote the range of hospitality opportunities, such as wine tourism, rural tourism, equestrian tourism, hunting, and the development of religious tourism.

In schools that deliver professional messages directly and authentically, scholarships could be used to promote training for both students and hotel staff. This could significantly reduce the shortage of young, well-trained professionals. This is very important for the region's tourism, as the outflow of qualified hospitality professionals could reduce the attractiveness of the region. As efficient businesses cannot find their place, it may also cause an exodus of employers. The region's human resource endowment could be improved through tenders.

I have presented the statistical results of my questionnaire research in detail in the dissertation, including the conclusions of my analysis based on the in-depth interview. My main conclusions and recommendations are summarised below.

In my opinion, the main strategic steps to improve the situation are as follows:

- Develop and continuously implement a long-term hotel development strategy.
- Raising capital for the renovation and stabilisation of thriving hotels.
- Improve infrastructure in the hotel area.
- Improve cooperation between hotel owners/operators and guests based on mutual interests.
- Cluster organisation in the hotel industry in high traffic areas.

- The economic impact of hotel developments should be translated into prosperity, with a positive impact on counties and regions,
- The region has a developed wine and grape sector. There is much potential for mutual cooperation between wineries and hotels.
- There is a need to increase training for hotel work in larger cities to increase the number of qualified workers.
- It would be important to increase investment in hotel development through national and international tenders.
- The hotel industry in the region is not well placed in terms of innovation. Innovative developments involving qualified experts should be implemented.
- The quality of hotel work should be continuously assessed. Monitoring systems should be implemented.
- The role of local authorities is particularly important in urban areas, and efforts should be made to improve the hotel development activities of local authorities in villages.
- A review of the region's hospitality potential and the identification of development directions, with the involvement of professional marketing experts, is needed, with a shift towards 'green industries'.

Based on the results of my research, I developed a possible strategy for the development of the hotel industry in the North-Hungary region. I propose to exploit the opportunities in situations that are partly shift-oriented and partly supportive of an offensive strategy.

I include among the change-oriented strategic steps to promote retraining and learning, which also reduces migration. Keeping residents and businesses local will generate new jobs that can attract young skilled workers to the hotel industry. Lobbying should be strengthened, which will increase capital inflows that will improve hotel development and hospitality activity.

I have formulated the above-mentioned capital raising as an offensive strategic move, which will also bring about hotel renovations and price stabilisation, as well as infrastructure development. There is also a need to organise clusters of hotels working together.

Defensive strategic steps are also needed, such as attracting foreign capital or reducing sustainable, polluting production, green and smart cities. I have included attracting visitors from outside the region to help keep efficient businesses in place and ensure the livelihoods and living standards of the population. Putting the hotel industry in a better economic position can help it adapt to a changing economic regulatory system.

The factors for the development of the hotel industry, the solutions to the problems of tourism in the region, have been classified in the situations supporting the diversified strategy. The region's tourist attractions are

excellent and it is therefore important to realise the tourism potential of its cultural heritage. This is difficult without development resources, which are an obstacle to the full exploitation of existing resources. Raising capital will require investors and EU funding. To boost the situation of hotels, as has been repeatedly stated, qualified professionals are needed, and improving the quality of education and reducing emigration are essential to ensure this.

5. NEW SCIENTIFIC RESULTS

1. The results of the secondary research and the questionnaire surveys, as well as the in-depth interviews, confirm that development are more common in larger and better capitalised hotels. Smaller hotels are excluded from the tendering system partly due to a lack of capital and partly due to a lack of qualified staff.
2. When looking at the sub-areas of economy, labour management is the most problematic. This is partly due to inadequate skills, partly to inadequate distribution of labour and unequal pay.
3. There is progress in innovation; product/service innovation is now the most common. More than half of the respondents to the questionnaire considered this to be the case. However, there are significant barriers to innovation, e.g. financial problems, lack of grants, tenders, risk of return on investment, etc. These need to be changed. The recognition of the need for change is a new achievement.
4. The economic impacts of hotel developments in the North-Hungary region are positive and significant, their impact on the economic development of the settlement is significant in the longer term and also greatly improves local employment opportunities. Due to the strong positive effects, the use of central resources can be expected to be higher than at present.

6. THE AUTHOR'S PUBLICATIONS RELATED TO THE SUBJECT OF THE THESIS

a) Scientific articles

Scientific articles published in foreign language

- **Benkő Béla** – Dávid Lóránt – Farkas Tibor (2022): Opportunities for the development of innovation among hotels in northern Hungary. *Geojournal of Tourism and Geosites* 40:1 pp. 267-273.
- Bujdosó Zoltán – **Benkő Béla** - Patkós Csaba (2021): The role of art colonies in local development through the example of Cered Art Colony. *ECOCYCLES* 7:1 pp. 14-18.
- Bujdosó Zoltán – Gyurkó Ádám - **Benkő Béla** (2019): Tourism development in Hungary on the example of Northern Hungary Region. *FOLIA GEOGRAPHICA* 61:2.
- Zsarnóczky Martin – **Benkő Béla** – Dávid Lóránt (2018): Regional Aspects of Tourism Planning. In: *Transylvanian Journal of Tourism and Territorial Development– Befogadás alatt*.
- Gabor Michalkó - Tamara Rácz - Géza Tóth - Áron Kincses - **Béla Benkő** (2011): Research on the quality of life in the spa towns of Hungary In: *Regional Statistics (Területi Statisztika)* Vol. 14 (51) Special Issue pp. 64-79.

Scientific article published in Hungarian

- Imbeah Nicholas - **Béla Benkő** - Zoltán Bujdosó (2020): Security and protection as a part of the management of a tourist destination in a tourist area of Ghana In: *Home Affairs Review: The Professional Scientific Journal of the Ministry of the Interior*. 68: 4 Special issue pp. 49-63., 15 p.
- **Béla Benkő** - Szilvia Szőke - Ádám Gyurkó - Martin Zsarnóczky - Zoltán Bujdosó (2019): The tourist performance of Mátra and the latest tourism trends. *Acta Carolus Robertus* 9: 2 pp. 5-13.,

- **Béla Benkő** - Szilvia Domán - Zoltán Nagy - Csaba Szűcs (2019): The Mátra as a brand. In: Gyurkó Á. - Somodi-Tóth O. (ed.) Tourism, hotel, hospitality: Anniversary publication on the occasion of the 10th anniversary of the founding of the Department of Tourism of Károly Eszterházy University. Eger, Líceum Publisher, 168 p. pp. 17-30.
- **Benkő Béla** (2018): A Gyöngyös-Mátra Turisztikai Közhasznú Egyesület a mátrai turizmus szolgálatában. in: Acta Carolus Robertus. VIII. évfolyam 1. szám. ISSN 2062-8269 (Nyomtatott) ISSN 2498-9312 (Online) Befogadó nyilatkozat!
- **Béla Benkő** (2017): The 4-season Mátra. In: Benei Chronicle, XII. grade number 64. ISSN 2062-5286, online HU ISSN 2062-5294
- Keresztesi Koppány - Martin Zsarnóczky - Péter Juhász - **Béla Benkő** (2014): Recreation, Scientific Magazine of the Central and Eastern European Recreation Society, May 2014, IV. year No. 2 pp: 4-6, HU ISSN 2064-4981
- Lóránt Dávid - Géza Tóth - **Béla Benkő** (2011): Socio-economic situation of the Bodrog region, with special regard to tourism In: Heritage Values and Tourism Development Conference - Organized studies (Ed. László Dankó), Association for Tourism in Sárospatak and Surroundings, Sárospatak, CD-ROM, pp. 138-147.
- Lóránt Dávid - Bulcsú Remenyik - Géza Tóth - **Béla Benkő** - Zoltán Nagy (2011): Tourism research, developments and TDM (s) in the Mátra. In: The role of local TDM organizations in developing the tourist offer of a destination. Edited by Árpád Hanusz. City-Nyíregyháza College, pp. 13-21.
- Lóránt Dávid – Géza Tóth – **Béla Benkő** (2010): Socio-economic outline of the settlements affected by Bodrog, with special regard to tourism. In: Vidék Hangja Magazin, Gödöllő Innovation Center Ltd., Gödöllő. On-line: HU ISSN 2061-7127. <http://www.mnvh.hu/ptPortal/index.php?mod=news&action=showNews&newsid=11592&lang=en>

b) Lectures at scientific conferences published in a conference publication

Foreign language

- Gyöngyi Kovács – **Béla Benkő** (2018): Unethical practices in the hungarian hospitality and hotel industry. In: Vladimir, Trukhachev (szerk.) Sustainable development of tourism market: international practices and russian experience: Book of proceedings of VI. International scientific-practical conference. Stavropol, Russia: Sequoia (2018) 136 p. pp. 86-92.
- Zoltán Bujdosó – **Béla Benkő** – Zsolt Bambauer (2016): The system of the connection between tourism and regional development in Hungary. In: Katalin Takácsné György (ed.) Innovation challenges and opportunities between 2014-2020: XV. International Science Days. Károly Róbert College, Gyöngyös. 3/30/2016 pp. 750-756. (ISBN: 978-963-9941-92-2)
-
- Bujdosó Zoltán - **Benkő Béla** - Brambauer Zsolt (2016): The System of the connection between tourism and regional development in Hungary. In: Takácsné György Katalin (ed.) XV. International Science Days: Abstract Volume: Innovation Challenges and Opportunities 2014-2020. Gyöngyös, Károly Róbert College. p. 75. (ISBN: 978-963-9941-91-5)
- Zoltán Bujdosó – Gyöngyi Kovács – Veronika Major-Kathi – Lóránt Dávid – **Béla Benkő** (2014): A possible way to utilize the Roman Limes in tourism – The case study of Komárom. In: Antal Tóth - Zsuzsa Piskóti-Kovács (szerk.) Sustainable Regional Development: Landscape, Social, Economic, and Educational Challenges. Konferencia helye, ideje: Eger, 11. 20. pp. 1-7.

Hungarian

- Zoltán Bujdosó - Róbert Szabó - Béla Benkő - Polishschuk, Elizaveta (2021): The effect of Covid-19 on the tourism of the Mátra. In: Katalin Szalai - Tamara Rátz - Michalkó - Gábor (ed.). Székesfehérvár. Kodolányi János University, Budapest. 77 p. pp. 16-17., 2 p.

- **Béla Benkő** (2021): Development opportunities of the hotel industry in the Northern Hungary region. In: Science in Everyday Life Summaries of the presentations of the workshop organized as part of the Researchers' Night series of events. (ed.: Zoltán Bujdosó). MATE Károly Róbert Campus, Gyöngyös. 17. p.
<https://karolyrobertcampus.uni-mate.hu> ISBN 978-615-5969-03-4 (pdf)
- Zoltán Bujdosó - **Béla Benkő** (2019): Tourism cooperation in the Mátra. In: Zsarnóczky M. - Rátz T. - Michalkó G. (ed.). Orosháza, Kodolányi János University, Budapest. 106 p. p. 21
- Györgyi Kovács - **Béla Benkő** (2019): Investigation of unethical practices in the hotel and catering industry: The raison d'être of the "Yellow Tourism" theory in Hungary. In: Kátay Á. - Michalkó G. - Rátz T. (ed.) Tourism 3.0. Kodolányi János University, Institute of Geography, Hungarian Academy of Sciences, Hungarian Geographical Society, Budapest. 194 p. pp. 168-180., 13 p.
- **Béla Benkő** - Csaba Szűcs - Szilvia Domán (2018): Mátra as Brand. In: János Csapó - Viktória Gerdesics - Mária Töröcsik (ed.): Generations in tourism. Volume of the study I. International Tourism Marketing Conference, University of Pécs, Faculty of Economics (PTE KTK) (2018) 541 p. pp. 69-77.
- Kovács Gyöngyi – **Benkő Béla** (2017): A „Yellow Tourism” elmélet létjogosultsága és háttere Magyarországon. In: Kátay Á. – Michalkó G. - Rátz T. (szerk.): VI. Magyar Turizmusföldrajzi Szimpózium, Turizmus 3.0., 2017. október 6. Orosháza. Kodolányi János Egyetem, MTA CSFK Földrajztudományi Intézet, Magyar Földrajzi Társaság, Budapest. (2019) 194 p. pp. 168-180., 13 p.
- **Béla Benkő** - Koppány Keresztesi - Péter Juhász - Martin Zsarnóczky (2014): The City of Grapes and Wine: Gyöngyös / Gyöngyös and the Mátra Region /. Recreation: Scientific Journal of the Central and Eastern European Recreation Society 4: 2 pp. 4-6.
- Dávid Lóránt - Remenyik Bulcsú - Tóth Géza - **Benkő Béla** – Nagy Zoltán (2011): Turisztikai kutatások, fejlesztések és TDM(ek) a Mátrában. In: Hanusz, Árpád (szerk.) A helyi TDM szervezetek szerepe

a desztináció turisztikai kínálatának fejlesztésében. Nyíregyházi Főiskola Turizmus és Földrajztudományi Intézet. pp. 13-21.

- Dávid Lóránt - Tóth Géza - Benkő Béla (2010): The impact of the crisis on tourism in the Mátra region based on statistical data. XII. International Science Days. ISBN 978-963-9941-09-0 (CD-ROM) Lectures and posters for Science Days. Gyöngyös, Károly Róbert College (KRF) 1218 p. pp. 279-285.

c) Textbook, textbook excerpt

- Keresztesi Koppány - Kiss Balázs Levente - Benkő Béla (2012): Tourism consultant. Julianus Guidebooks Series: Gyöngyös and the Mátra, in Hungarian-English. (HU ISSN 2060-0496)

7. LITERATURE REFERRED TO IN THIS PUBLICATION

1. Albert Tóth A. (2014): Tourism spatial development in the light of the development of the hotel industry. Doctoral dissertation, Széchenyi István University, Doctoral School of Regional and Economic Sciences, Győr. 240. p.
2. Michalkó G. (2016): Tourismology - Theoretical foundations. Akadémiai Kiadó, Budapest. 266. p.
3. <https://www.mnb.hu/letoltes/versenyke-pesse-gi-jelente-s-hun-digitalis.pdf>
4. www.ksh.hu