

A STATISTICAL AND ECONOMIC ANALYSIS OF THE HOTEL INDUSTRY FROM BIHOR AND HAJDÚ-BIHAR COUNTIES IN THE CONTEXT OF THE (EURO) REGIONAL DEVELOPMENT

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Abstract: *This research has in sight the Bihor – Hajdú-Bihar Euroregion located at the border between Romania (in the north-western part) and Hungary (in the east). The research methodology that was used consisted in the statistical data collection in order to gather representative information on the evolution of tourism for the 2008 - 2011, in Bihor – Hajdú-Bihar Euroregion. In the first part of the research is presented an analysis regarding the evolution of the number of tourists within the tourist accommodation establishments in the Bihor – Hajdú-Bihar Euroregion. The analysis is based on the following aspects: the evolution of the number of tourists within the Bihor – Hajdú-Bihar Euroregion is presented; a comparison regarding the number of national tourists registered in the two counties belonging to the Bihor – Hajdú-Bihar Euroregion and finally an analysis based on the number of foreign tourists registered within the two counties belonging to the Bihor – Hajdú-Bihar Euroregion. In the second part of the research, the study continues with the analysis of the activities of the hotel units from Bihor and Hajdú-Bihar starting from the data obtained from the Bihor County Statistics Department, for Bihor County, and from the Debrecen Central Statistics Office, for the Hajdú-Bihar data. The research covers the period from 2008 - 2011, following the indicators regarding: the number of active units, turnover, and employee related expenses, staff and gross investments in tangible assets. This statistical and economic analysis presents on one hand the centralization of the indicators used within a table, (initially, in a rough form and subsequently in a shaped form based on the annual average exchange rates of the leu and forint compared to the euro during 2008-2011) and on the other the evolution of each indicator in chart form. Due to the fact that a part of the analyzed indicators are expressed in the national currency of the two countries (Romania and Hungary), I have used the annual average exchange rates of the leu and forint compared to the euro, in order to bring them to comparable units of measurement. The sources of information for these were the websites of the National Bank of Romania, for the annual average leu/euro exchange, and The Central Bank of Hungary for the annual average forint/euro exchange rate.*

Keywords: Bihor – Hajdú-Bihar Euroregion; active hotel units; turnover of the hotel units; employee related expenses in the hotel units; number of employees within the hotel units; gross investments in tangible assets from the hotel units.

JEL classification: L83

1. General Introduction

The basis of the Bihor and Hajdú-Bihar counties collaboration is represented by the document entitled *The concept and the development program of the Romanian-Hungarian cross-border region*, designed through the PHARE CBC program in 2000. Subsequent to this document the idea regarding the set up of Bihor – Hajdú-Bihar Euroregion was outlined (in 2002), which is based on direct bilateral relationships, adapted to the development strategy of the region.

Thus, according to the Bihor County Council, the set up of the Euroregion had as purpose the stimulation of new ways of cooperation between the communities of the two countries, according to the set objectives: maintaining and developing good neighbors relationship;

- identifying the possible domains of cross border cooperation;
- organizing and coordinating the activities meant to promote the cooperation in the established domains;
- implementing solid programs in areas of mutual interest;
- promoting the Euroregion collaboration with other international organizations;
- supporting the members of the Euroregion in the European integration process.

2. The evolution of the number of tourists within the tourist accommodation establishments from the Bihor – Hajdú-Bihar

An analysis regarding the evolution of the number of tourists within the tourist accommodation establishments in the Bihor Hajdú-Bihar Euroregion is performed in the first part of the research.

The study refers to three major aspects regarding:

- The presentation of the number of tourists evolution within the Bihor - Hajdú-Bihar Euroregion;
- The realization of a comparison regarding the number of domestic tourists registered within the two counties, which are part of the Bihor – Hajdú-Bihar Euroregion;
- The realization of a comparison regarding the number of foreign tourists registered within the two counties, which are part of the Bihor – Hajdú-Bihar Euroregion.

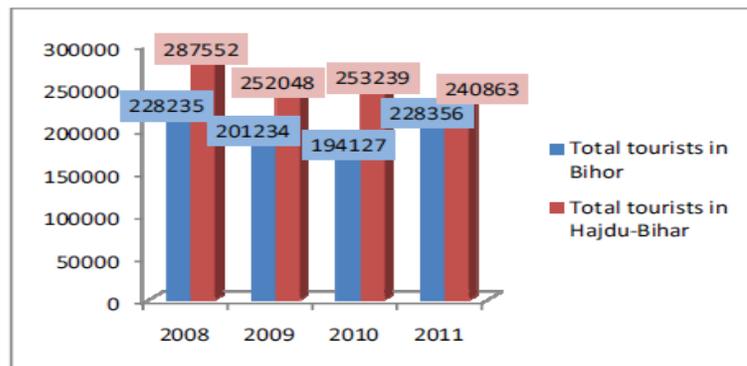


Figure 1: Tourist arrivals in the tourist accommodation establishment in the Bihor - Hajdú-Bihar Euroregion; (UM: Number of persons)

Source: made by the author based on the data obtained from the <https://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=TUR104B> (Bihor) and http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_oga012.html (Hajdú-Bihar) websites.

At Hajdú-Bihar County level, in 2009, the total number of tourists registers a decrease of 12% compared to the total of 2008, a decrease that drops in 2010 by 0,42%. Within the analyzed period (2008-2011) the lowest number of tourists is registered in 2011, which is a decrease of 16.23% compared to 2008.

In the analyzed period (2008-2011) the following situation can be noticed within Bihor County:

- In 2009 an 11% decrease is registered, which amplifies in 2010 by another 4% (resulting a decrease of 15% compared to 2008);
- In 2011 a comeback to the situation of 2008 can be observed, a number of 228,356 persons being registered.

Comparing the values of the two counties we can notice that during the analyzed period an adjustment occurred at Bihor county level, in 2011 returning to the situation of 2008. If the comparison is independently made on each year, we can observe that in each year at Hajdú-Bihar County level, the number of registered tourists increased by approximately 21% (in 2008 and 2009), respectively 23% (in 2010) compared to Bihor County. In 2011 the registered value, for the indicator regarding the *total number of tourists* in Bihor County, is lower by only 5% compared to the values registered at Hajdú-Bihar County level (the range between the values decreased by approximately 16% in comparison to the previous years), due to the fact that the number of tourists from Hajdú-Bihar County registered a continuous decrease, while at Bihor County level a spectacular comeback to the values of 2008 can be noticed.

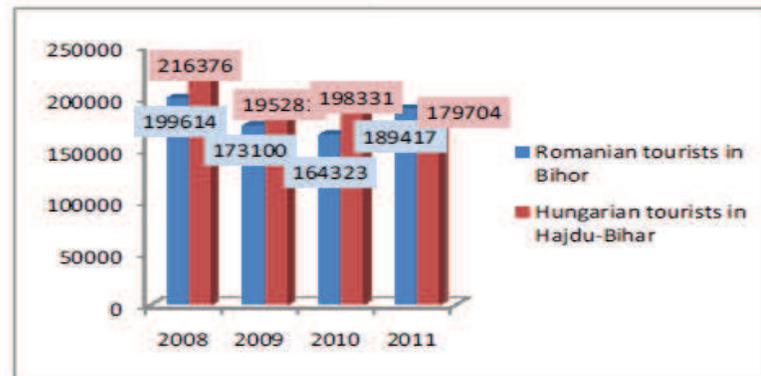


Figure 2: Domestic tourist arrivals in tourist accommodation establishments in the Bihor – Hajdú-Bihar Euroregion (UM: Number of persons)

Source: made by the author based on the data obtained from the <https://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=TUR104B> (Bihor) and http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_oga012.html (Hajdú-Bihar) websites.

During the analyzed period (2008-2011) a decrease of the number of Hungarian tourists can be observed at Hajdú-Bihar County level thus:

- In 2009 the number of Romanian tourists decreases by 9.74% compared to 2008, that is a decrease of 1.4% in 2010;
- In 2011, a decrease of 16.94% is registered, this being the highest decrease compared to 2008.

The number of Romanian tourists within Bihor County, during 2008 -2010 in comparison to 2008, registers a decrease of 13.28% (in 2009), that is 17.68% (in 2010), the decrease from 2010 being diminished by 12.57% in 2011.

A decrease of the number of domestic tourists can be observed in both counties due to the economic crisis of 2008-2009 that lead to the increase of the number of layoffs in most areas and thus to the decrease of the buying power of many families, which determined the decrease of travel package purchases.

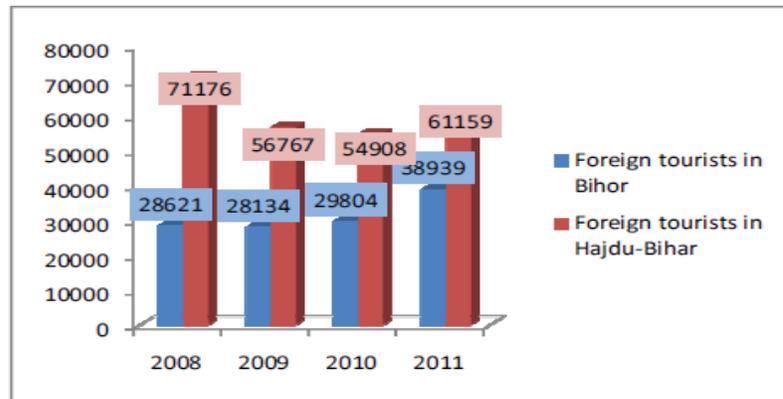


Figure 3: Foreign tourist arrivals in tourist accommodation establishments in the Bihor – Hajdú-Bihar Euroregion (UM: Number of persons)

Source: made by the author based on the data obtained from the <https://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=TUR104B> (Bihor) and http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_oga012.html (Hajdú-Bihar) websites.

At Bihor – Hajdú-Bihar Euroregion level a huge difference can be noticed between the number of foreign tourists registered in Bihor in comparison to the number registered in Hajdú-Bihar. Thus, within the analyzed period, the number of foreign tourists registered in Hajdú-Bihar is approximately 50-54% higher (in 2009, 2010) and by 64% in 2011, compared to the values registered in Bihor County. This fact is due to the quality-price relationship (for the travel offers), which is more advantageous in Hajdú-Bihar than in Bihor.

3. Analysis of the hotel units from Bihor – Hajdú-Bihar Euroregion

The study continues with the analysis of the hotel units from Bihor – Hajdú-Bihar, starting from the data obtained from the *Bihor County Statistics Department*, for Bihor County, and from *Debrecen Central Statistics Office*, for Hajdú-Bihar County.

The analysis covers the period between 2008 and 2011, following the indicators regarding:

- the number of active units;
- turnover;
- employee related expenses;
- staff;
- gross investment in tangible assets.

The above mentioned indicators are the data obtained from both sources, as common data, followed both for the Romanian part and for the Hungarian one.

Table 1: Analyzed indicators regarding the activity of the hotel units from Bihor and Hajdú-Bihar (gross value)

Analyzed indicators		2008	2009	2010	2011	
Bihor	Number of active units	64	84	73	74	number
	Turnover	140.017	145.212	129.256	153.015	thousands RON
	Employee related expenses	29.437	30.463	26.700	25.460	thousands RON
	Staff	2.121	2.170	2.017	1.766	number
	Gross investments in tangible assets	54.001	77.243	76.439	132.076	thousands RON
Hajdú-Bihar	Number of active units	114	119	115	121	number
	Turnover	5.822.322	5.430.824	5.187.505	4.803.444	thousands HUF
	Employee related expenses	2.243.554	2.110.882	1.890.583	1.786.210	thousands HUF
	Staff	1.327	1.244	1.218	1.139	number
	Gross investments in tangible assets	1.264.000	2.354.000	3.442.000	1.315.000	thousands HUF

Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*.

It can be observed that in gross form (Table 1) comparisons can be made only in respect to the indicators that present the number of active units and the employed staff. As for the other indicators no direct comparisons can be made, because these are expressed in the national currencies of the two countries (Romania and Hungary have not adopted yet the euro currency). Thus, I have used the annual average exchange rates of the two currencies compared to the euro, in order to convert them in comparable units of measure.

Table 2: Annual average exchange rates of the leu (RON) and forint (HUF) in comparison to the euro (2008-2011)

Annual average exchange rate	2008	2009	2010	2011
RON/euro	3,6827	4,2373	4,2099	4,2379
HUF/euro	251,25	280,58	251,25	251,131

Source: made by the author based on the data obtained from the National Bank of Romania (for the annual average exchange rate for RON/euro) and the Central Bank of Hungary, (for the annual average exchange rate of HUF/euro).

Subsequent to the calculation of the annual average exchange rates of the leu and forint in comparison to the euro (during 2008-2009), a new table is made, which will include the values resulted after processing the data obtained from the *Bihor County Statistics Department* and *Debrecen Central Statistics Office*.

Table 3: Analyzed indicators regarding the activity of the hotel units from Bihor and Hajdú-Bihar (processed values)

Analyzed indicators		2008	2009	2010	2011	
Bihor	Number of active units	64	84	73	74	number
	Turnover	38.020	34.270	30.703	36.106	thousand euros
	Employee related expenses	7.993	7.189	6.342	6.008	thousand euros
	Staff	2.121	2.170	2.017	1.766	number
	Gross investments in tangible assets	14.663	18.229	18.157	31.165	thousand euros
Hajdú-Bihar	Number of active units	114	119	115	121	number
	Turnover	23.173	19.356	20.647	19.127	thousand euros
	Employee related expenses	8.930	7.523	7.525	7.113	thousand euros
	Staff	1.327	1.244	1.218	1.139	number
	Gross investments in tangible assets	5.031	8.390	13.700	5.236	thousand euros
Total	Number of active units	178	203	188	195	number
	Turnover	61.194	53.626	51.350	55.234	thousand euros
	Employee related expenses	16.923	14.713	13.867	13.120	thousand euros
	Staff	3.448	3.414	3.235	2.905	number
	Gross investments in tangible assets	19.694	26.619	31.856	36.402	thousand euros

Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

From the analyzed data presented in table 3, we can notice that Bihor County has a lower number of hotel units (approximately by 30%) compared to Hajdú-Bihar County, but nevertheless, the number of employed staff is higher by almost 40%, phenomenon that we can observe even in the situation of the turnover. Also, the gross investments in tangible assets in Bihor County are by approximately 60% (in 2008 and 2009) and even by 80% (in 2011) higher than for Hajdú-Bihar County.

As follows, each indicator will be presented in a figure including the values registered, in percentage, at Bihor and Hajdú-Bihar Euroregion level, by Bihor and Hajdú-Bihar counties during the analyzed period (2008-2009).

Analysis of the number of active units

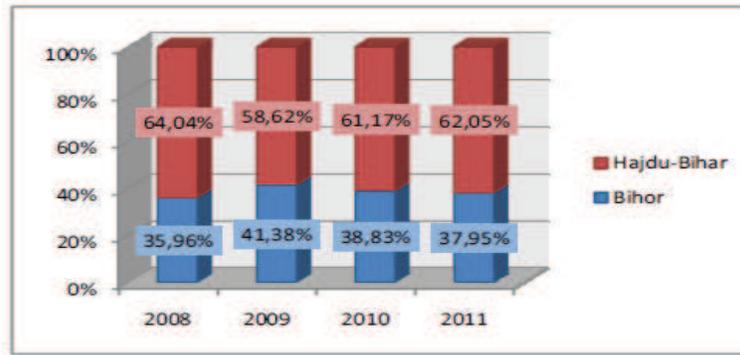


Figure 4: The number of hotel units from the Bihor – Hajdú-Bihar Euroregion
Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

During the analyzed period at Bihor and Hajdú-Bihar Euroregion level can be noticed that the weight of the hotel units from Hajdú-Bihar is higher than that in Bihor.

In 2008 the weight of the accommodation units in Hajdú-Bihar County is higher by approximately 28% compared to Bihor. This difference decreases in 2009 by 10.76%, an increase of 23.81% being registered in Bihor in comparison to 4.20% in Hajdú-Bihar.

In 2010 even if the number of accommodation units decreases in both counties, Hajdú-Bihar still has the highest weight having by 22.34% more accommodation units than Bihor County. This weight increases in 2011 by approximately 1.76%, the number of accommodation units from Hajdú-Bihar being of 3.61% higher (as compared to 2010) than in Bihor.

Turnover analysis of the hotel units

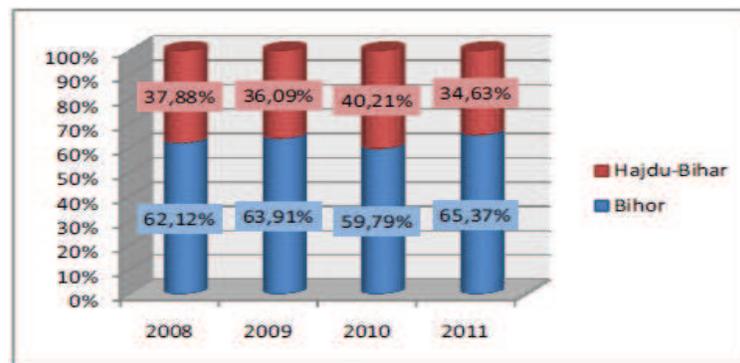


Figure 5: Turnover of the hotel units from the Bihor – Hajdú-Bihar Euroregion
Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

Even if the number of accommodation units from Bihor and Hajdú-Bihar Euroregion registers a higher weight than in Hajdú-Bihar County (an average of 23%), we cannot say the same thing about the turnover.

We notice that in 2008 the turnover of the hotel units from Bihor County is higher by 24.24%. In 2009, this weight increases by 3.58%, even if in both counties a decrease of the turnover is registered (in Bihor by 9.86% and in Hajdú-Bihar by 16.47%).

In 2010 the turnover of the hotel units from Bihor county is higher by 19.18% decreasing as compared to 2008 and 2009, due to the fact that the registered turnover in Hajdú-Bihar increased by 6.25%, while in Bihor county decreased by 10.44%. In 2011 the weight of the turnover in Bihor County is of 65.37%, which is by 30.74% higher than that for Hajdú-Bihar County.

Analysis of employee related expenses

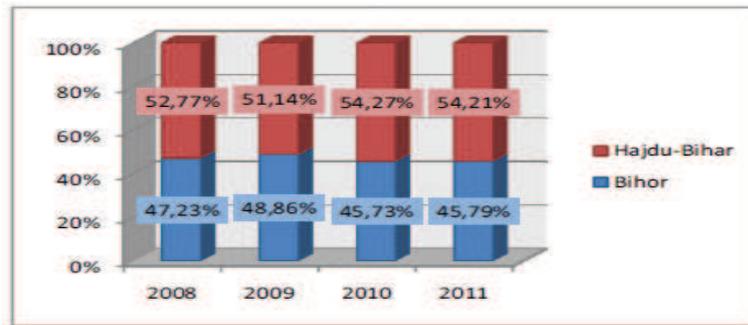


Figure 6: Employee related expenses in the hotel units from the Bihor – Hajdú-Bihar Euroregion

Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

At Bihor - Hajdú-Bihar Euroregion level, Hajdú-Bihar County has a higher weight in the total of the employee related expenses in the hotel units, fact that highlights the attempt of the management to optimize the tourist accommodation establishments and of the activities related to the managed units.

Analysis of the number of employees

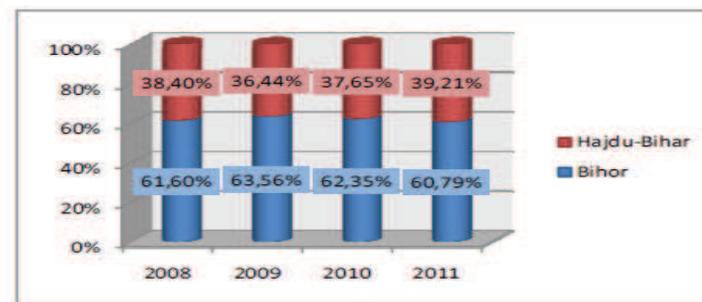


Figure 7: The number of employees within the hotel units from the Bihor – Hajdú-Bihar Euroregion

Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

Within the Bihor - Hajdú-Bihar Euroregion we notice that at Bihor County level the weight of the hotel units employees is higher (on average by 24%) than in Hajdú-Bihar County, which further emphasizes the idea that in Bihor tourist accommodation establishments offer a larger number of beds than those from Hajdú-Bihar.

Despite the 2008 - 2009 crisis we can observe a tendency to maintain the jobs in the hotel units of both counties resulting the fact that tourist services represent an important source in the development of the Bihor - Hajdú-Bihar Euroregion.

Analysis of gross investment in tangible assets

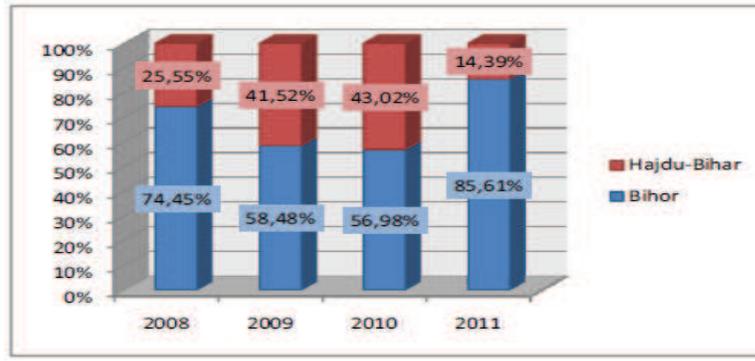


Figure 8: Gross investments in tangible assets from the hotel units of the Bihor - Hajdú-Bihar Euroregion

Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

In 2008 Bihor County represents a weight of 74.45% in the total of gross investments in tangible assets from the hotel units made at Bihor - Hajdú-Bihar Euroregion level.

In 2009 and 2010 this weight decreases at Bihor - Hajdú-Bihar Euroregion level, due to the fact that within Hajdú-Bihar County the gross investments in tangible assets from the hotel units increase by 40% (in 2009 as compared to 2008), respectively 23.27% (in 2010 as compared to 2009) in comparison to those in Bihor where the increases are much lower.

In 2011, the weight of 85% registered by Bihor County in the total of the gross investments in tangible assets from the hotel units made in Bihor - Hajdú-Bihar Euroregion are due to the fact that while in Bihor the investments have increased by 41.74% compared to 2010, in Hajdú-Bihar these have dropped by 61.78% as compared to 2010.

4. Conclusion

The higher turnover at Bihor County level was achieved due to the fact that the hotel units of Bihor County are bigger considering the occupied surface (thus offering a larger number of beds) than those in Hajdú-Bihar. Those from Bihor County also have a stronger local monopoly position than the units from Hajdú-Bihar, on one hand this is due to the existence of a larger number of balneal resorts (Băile Felix, 1 Mai, Băile Tinca) and on the other due to the mountain area of the county known as Apuseni Mountains (including Plopiș Mountains, Pădurea Craiului, Codru Moma and Bihor Vlădeasa), which represent an important tourist attraction of the county. The impressive number of caves (Bear Cave, Wind Cave, Cristal Cave, Meziad Cave, Vadul Crișului Cave) present in the area and of the ice abysses (Vivid Fire Glacier, Borțig, Bârsa, Vârtop) and of the mountain resorts renowned for the existent ski slopes: Vârtop-Arieșeni, Stâna de Vale, Valea Bogăi etc., also make the difference between the two counties because these types of attractions are inexistent in Hajdú-Bihar.

The analysis regarding the gross investments confirms the fact that Bihor County in comparison to Hajdú-Bihar pays more attention to improving existent tourist services, bringing them to European standards, thus holding the attention of both domestic and foreign tourists.

Also from the performed analysis we can notice that in Bihor County employee related expenses are lower than those in Hajdú-Bihar, therefore it can be said that the staff in Hajdú-Bihar has twice as much wage as the one in Bihor.

The quality – price relationship (in the case of tourist offers) is better in Hajdú-Bihar than in Bihor. Furthermore, the travel packages from Hajdú-Bihar are much more diversified and even customized (travel packages for newlyweds, for retired persons etc.) including a series of additional services (massage, city tour, romantic dinner, free tickets to the well-known Hajdúszoboszló swimming pool, etc.) free of charge in most tourist packages.

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