

EVALUATION OF THE DEVELOPMENT OF TOURIST ACCOMMODATION IN THE REGIONS OF LATVIA

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Abstract

Research hypothesis: The number of tourist accommodation in the regions of Latvia has gradually increased over the research period but their distribution is uneven. The research aim is to evaluate the changes in the placement of tourist accommodation in the statistical regions of Latvia. Research novelty is scientifically evaluated development of tourist accommodation in the regions of Latvia.

From 2005–2007 the number of tourist accommodation in the regions of Latvia has fluctuated, but since 2007 it has been constantly increasing in all the regions. The fastest chain increase rates can be observed in the regions with a small concentration of tourist accommodation – in Zemgale and Latgale. Findings of the authors' research allow concluding that the placement of tourist accommodation in the regions of Latvia is uneven: 50% of all the tourist accommodation is located in Riga and Pieriga regions, but about one fifth of them – in Kurzeme region. Zemgale and Latgale regions have little tourist accommodation. Riga and Pieriga regions also hold the largest number of beds – more than 65% of the total number of beds in Latvia, thus the number of beds in the other regions is small. On average it does not exceed 50 beds per region. From 2005–2008 the number of serviced tourists has gradually increased in the entire Latvia, as well as in Riga, Pieriga, Kurzeme and Latgale regions, but it has reduced in Vidzeme and Zemgale regions in certain periods. The fastest chain increase rate can be observed in Latgale and Kurzeme regions, but fastest decrease – in Zemgale region. In the research period, more than half of the total number of clients in tourist accommodation was concentrated in Riga region, but more than 10% - in Pieriga and Kurzeme regions. The number of clients in other regions does not exceed 6% of the total number. 70% of the clients in tourist accommodation are local tourists (from Latvia). The values of Defert's function prove that among the researched regions of Latvia, tourism has a significant role in the regional economics of Riga and Pieriga regions. In Latgale and Zemgale regions the role of tourism in regional economics is small, but it is gradually increasing. Results of the cluster analysis indicated that the capital of Latvia, i.e. Riga region, present the most beneficial conditions for the tourist accommodation sector. It is followed by Pieriga region and Kurzeme. Vidzeme, Latgale and Zemgale regions lag behind the other regions significantly, regarding the development of tourist accommodation.

Keywords: tourism, tourist accommodation, development.

Introduction

Tourism is considered to be one of the most competitive sectors of European economy, which on average makes 4% of EU GDP, varying from 2% to 12% in different Member States. In Europe 2.2 million tourism enterprises employ 5.3% of the total labour force, constituting 10.8 million work places. (Basic Positions of ..., 2008)

Across the regions, 37% of all the foreign travellers of Europe go to the countries of South Europe, 32% - to West Europe, 19% - to Central and East Europe, but 12% - to North Europe. (Basic Positions of ..., 2008)

Central and East Europe region, which comprises Latvia, has become a significant tourist destination over the last years. (Basic Positions of ..., 2008)

In Latvia, the overall situation in the tourism industry changed sharply after Latvia accessed European Union in May 2004 – the recognition of Latvia increased, the “old” European countries developed interest in their “new” neighbours. (Report on Tourism ..., 2007)

Tourism enterprises, especially tourist accommodation establishments, have a significant role in tourism development.

An economic crisis in the world and Latvia, the value added tax rate raised fourfold in the beginning of 2009 from 5% to 21%, negative information regarding Latvia

in foreign countries, and tough competition among tourist accommodation establishments in the Baltic countries are the main reasons for a sharp downturn for tourism businesses in Latvia in 2009. The number of foreign visitors at hotels and other tourist accommodation establishments, which reached 944 thousand in 2008 or the highest indicator in the history of re-established Latvia, declined to the level of 2005 in 2009. The number of local (Latvian) visitors at tourist accommodation establishments declined even sharper, reaching the level of 2004. The number of tourist accommodation establishments in Latvia has not adapted to this declining trend, as their number as well as the number of bed-places at tourist accommodation establishments in Latvia continue increasing. In the period 2005–2008, the number of tourist accommodation establishments increased by 73 units or 17%. In 2009 this increase continued and was 13%. (Tourism in Latvia..., 2007; 2010; Ancitis, 2010).

Specialists of the hotel sector believe that given the demand in 2009, the number of tourist accommodation in Latvia is too large. The director of the hotel “Radi un draugi”, Evita Zvarte, believes that the present number of tourist accommodation “probably is appropriate for the south of Spain where the sun shines all year long, but not in Latvia”. (Ancitis, 2010) The average occupancy rate of hotels in Latvia in 2009 was

28.6%; it is the lowest indicator at least during the recent 10 years. Besides, the occupancy rate of hotels in Latvia is lower than in Lithuania and Estonia. (Tourism in Latvia..., 2010;) The occupancy rate fell to a critical level not only due to the economic crisis, but also due to the imprudent construction of tourist accommodation establishments, i.e., demand was not adjusted to supply in a long term.

Research hypothesis: The number of tourist accommodation in the regions of Latvia has gradually increased over the research period but their distribution is uneven.

Research aim: to evaluate the changes in the placement of tourist accommodation in the statistical regions of Latvia.

The following research **objectives** have been set to achieve the research aim:

1. to research the dynamics of the development of the main indicators characterising tourist accommodation in the regions of Latvia;
2. to evaluate the value of Defert’s function in the regions of Latvia;
3. to perform the cluster analysis of tourist accommodation across the regions of Latvia.

The research is based on the data obtained by the Central Statistics Bureau. The survey comprises hotels and resort hotels that have at least 10 rooms, guest houses that have at least 5 rooms, as well as motels, rest-houses, sanatoriums, tourist and recreation centres, campsites, youth hostels and other tourist accommodation. (Tourism in Latvia..., 2009)

To attain the research aim and objectives and to prove the hypothesis the planning documents and reports of the Ministry of Economics were also used.

The monographic method, the multi-factor statistical analysis method – cluster analysis, economically statistical methods, synthesis and analysis were applied in the research.

The monographic method, analysis and synthesis methods for problem research of elements and their synthesized

association or formulated regularities are widely used in the research. The economically statistical methods are used for statistical data analysis. The cluster analysis is conducted to classify cluster of similar tourist accommodation development of Latvia district and to elaborate the conclusions. This analysis is received with the aid of the computer programme SPSS excluding division of the regions to the clusters. Also the computer programme SPSS presents the following characteristics: the cluster centres, the distance between any object and cluster centre, the distance between clusters, and dispersion analysis results that assists to analyse the importance of clusterisation.

The **research** covers the **time period** after Latvia had accessed European Union, i.e. from 2005 till 2009.

Limitations

The research comprises accommodation service providers of commercial character in the regions of Latvia. However, it has to be admitted that along with the commercial sector, non-commercial sector also operates in tourism industry: friends and relatives, “second” home, “flat swap”, vans. The non-commercial sector has not been included in the research.

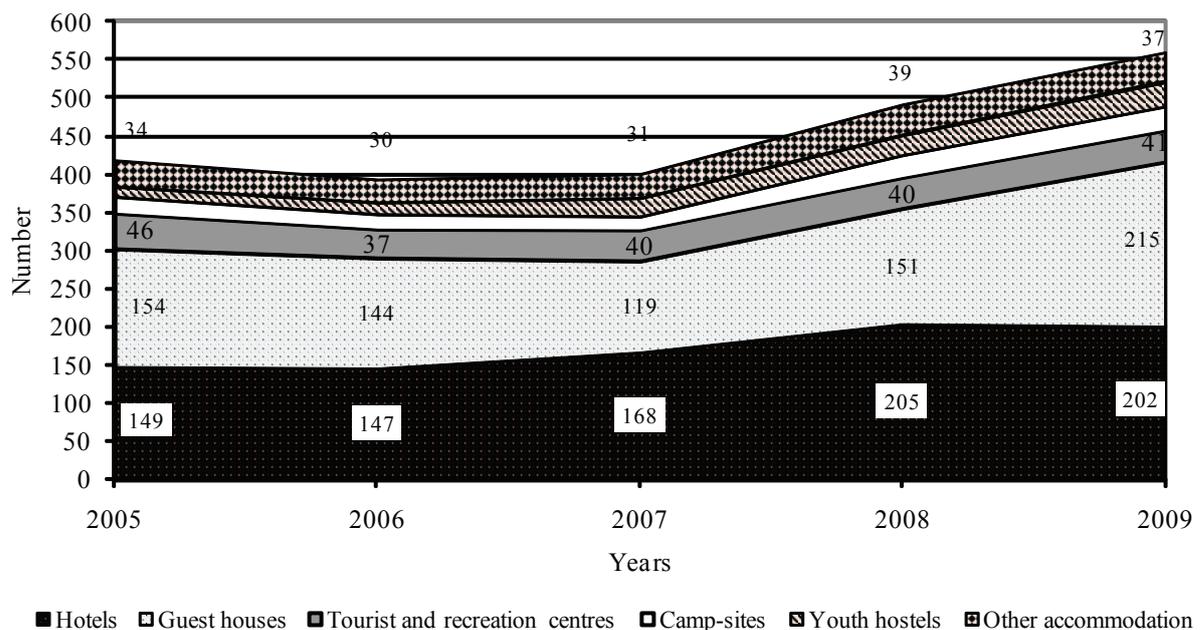
The present paper reveals the main conclusions. The research was performed across the statistical regions of Latvia.

Research novelty – scientifically evaluated development of tourist accommodation in the regions of Latvia.

Results and discussion

There is a wide variety of tourist accommodation in Latvia. Tourists stay in hotels, resort-hotels, guest houses, as well as motels, rest-houses, sanatoriums, tourist and recreation centres, campsites, youth hostels and other places.

During the research period the number of tourist accommodation has increased from 418 units in 2005 to 559 units at the end of 2009 or by 34%, but this increase has not been even. (see Fig. 1)



Source: Tourism in Latvia..., 2007; 2008; 2009; 2010

Figure 1. The dynamics of the number of the most popular tourist accommodation in Latvia from 2005- 2009 (end of the year)

Figure 1 presents the most widespread types of tourist accommodation in Latvia, the number of which at least once exceeds 30 units a year. The group 'other accommodation' comprises motels, resort-hotels, rehabilitation centres, rest-houses (pensions) and other accommodation, the number of which is small in Latvia.

The data in Figure 1 indicate that in 2006 the total number of tourist accommodation has decreased by 6%. The most rapid decrease can be observed in the group of motels (19%), tourist and recreation centres (20%). Only the number of hostels has increased by 15%.

Since 2007, the number of tourist accommodation in Latvia has gradually increased. A fast chain increase rate of the number of tourist accommodation was observed in 2008 – 23%. Irrespective of the fact that the growth tendency continued also in 2009, the chain increase rate reduced by 9%. The increase of the total number of tourist accommodation in 2009 took place on the account of guest houses. The authors consider that this increase can be explained with finishing building and launching of the guest-houses started in the

previous years. Whereas, the groups of hotels, motels and other tourist accommodation already exhibited a tendency: chain increase rates are negative.

The analysis of the structure of tourist accommodation revealed that hotels and guest houses are the dominating tourist accommodation in Latvia. The proportion of hotels in the total number of tourist accommodation is 40%. (Tourism in Latvia..., 2007; 2008; 2009; 2010) It can be explained with the fact that hotels are the most important and more recognized type of tourist accommodation in the entire world and in most cases it is one of the main elements of holiday packages. (Platace, 2000) The proportion of guest houses exceeds 30% in the total number (Tourism in Latvia..., 2007; 2008; 2009; 2010) The distribution of guest houses approves of the development of rural tourism in the country, where a significant role is played by the activities of "Lauku ceļotājs". (Report on Tourism..., 2007)

It is important to research the placement of tourist accommodation in the regions of Latvia. (see Table 1)

Table 1. The number and proportion of tourist accommodation in the regions of Latvia from 2005-2009

Region	2005		2006		2007		2008		2009	
	Number	Structure, %								
Total in Latvia	418	100	393	100	400	100	491	100	559	100
Riga	84	20	92	23	99	25	118	24	121	22
Pieriga	116	28	105	27	103	25	127	26	153	27
Vidzeme	69	17	63	16	60	15	64	13	78	14
Kurzeme	68	15	59	15	70	18	96	20	104	19
Zemgale	36	9	32	8	29	7	36	7	52	9
Latgale	45	11	42	11	39	10	50	10	51	9

Source: Hotels and Other Tourist ...in 2005- 2008, Hotels and Other Tourist ...in 2009 and authors' calculations

Data in Table 1 reveal that in total the number of tourist accommodation has increased in all regions of Latvia since 2007, but the distribution of tourist accommodation is uneven. 50% of all tourist accommodation is located in Riga and Pieriga region. During the research period the proportion of tourist accommodation was decreasing in Pieriga region until 2007 but in Riga region – increasing. In the period from 2006-2008 the proportion of tourist accommodation has increased in Kurzeme region, and in 2008 this region already comprises one fifth of all the tourist accommodation. A small part of tourist accommodation establishments is located in Latgale and Zemgale regions. In Vidzeme region the proportion of tourist accommodation has been gradually decreasing during the research period.

Along with the growth of the number of tourist accommodation, the number of beds there has also increased during the research period.

The chain increase rate of the studied indicator – number of beds – has increased in total in Latvia during the research period, but irrespective of the fact that in 2009 the number of beds in tourist accommodation increased, the chain increase rate decreased. The increase in the number of beds can be observed in Latgale and Riga regions during the entire research period, but the chain increase rates are fluctuating in these regions. In Zemgale, Kurzeme, Vidzeme and Pieriga regions the number of beds has decreased along with the decrease of the number of tourist accommodation. The fastest decrease can be observed in Pieriga region – by 20% in 2006 and by 8% in 2007.

Table 2. The number of beds in tourist accommodation and their proportion in the regions of Latvia from 2005-2009

Regions	2005		2006		2007		2008		2009	
	Number	Structure, %								
Total in Latvia	24045	100	24489	100	25696	100	29591	100	32496	100
Riga	9212	38	10395	42	11329	44	12738	43	12920	40
Pieriga	7194	30	6451	26	5906	23	6632	22	8136	25
Vidzeme	2216	9	2105	9	2156	8	2418	8	2626	8
Kurzeme	2845	12	2791	11	3465	13	4426	15	5002	15
Zemgale	1227	5	1128	5	1114	4	1288	4	1621	5
Latgale	1351	6	1619	7	1726	7	2089	7	2191	7

Source: Hotels and Other Tourist ...in 2005- 2008, Hotels and Other Tourist ...in 2009 and authors' calculations

Table 2 reveals that Riga region holds more than 40% of the total number of beds since 2006, but Riga and Pieriga regions together comprise more than 65% of beds, thus the proportion of beds in the other regions of Latvia is small. Kurzeme region stands out among the other regions of Latvia. A small part of beds is concentrated in Zemgale region – about 5% of the total number of beds.

Most of the beds are located in hotels. The data of the Central Statistics Bureau about the period from 2005 till 2009 attest that 60% of the total number of beds is concentrated in hotels. Along with the decrease in the number of both hotels and beds in 2009, the number of beds concentrated in hotels has also decreased to 54%. (Tourism in Latvia..., 2007; 2008; 2009; 2010)

The analysis of the average number of beds revealed that the most capacity tourist accommodation is located in Riga region. The average capacity of tourist accommodation is above 100 beds in Riga region. In the other regions the average capacity of tourist accommodation does not exceed 50 beds. The lowest capacity tourist accommodation is located in Zemgale and Vidzeme regions. Significant changes in the capacity of tourist accommodation in the regions of Latvia have not been observed during the research period.

Clients of tourist accommodation services are tourists, therefore it is important to research the dynamics of the serviced people in tourist accommodation in both the entire Latvia and the regions of Latvia.

Table 3. The number and proportion of the serviced people in tourist accommodation in the regions of Latvia from 2005- 2009

Regions	2005		2006		2007		2008		2009	
	Number	Structure, %								
Latvia	1154700	100	1329890	100	1487379	100	1555936	100	1113898	100
Riga	663800	57	733535	55	825419	55	869975	56	689330	62
Pieriga	198600	17	239637	18	247969	17	253625	16	167105	15
Vidzeme	73800	6	86069	6	83100	6	81301	5	46362	4
Kurzeme	131700	11	156577	12	199144	13	228116	15	133363	12
Zemgale	39300	3	47538	4	50458	3	38407	2	27093	2
Latgale	47500	4	66534	5	81289	5	84512	5	50645	5

Source: Hotels and Other Tourist ...in 2005- 2008, Hotels and Other Tourist ...in 2009 and authors' calculations

The analysis of the people serviced in the tourist accommodation indicated that from 2005-2008 the number of serviced tourists has gradually increased both in Latvia and in Riga, Pieriga, Kurzeme and Latgale regions, but it has reduced in Vidzeme and Zemgale regions during certain periods.

In 2009 the number of the serviced tourists reduced in both the entire Latvia and the regions of Latvia. The fastest

decrease can be observed in Vidzeme region (43%) and Kurzeme region (42%), as well as in Latgale region (40%). In Latvia, in total, the number of serviced tourists reduced by 28%.

The analysis of the structure of the serviced tourists by regions revealed that more than half of all the serviced people in tourist accommodation are concentrated in Riga region,

but more than 10% - in Pierīga and Kurzeme regions. In the other regions the proportion of the serviced people does not exceed 6% of the total number. Data presented in Table 3 indicate that in 2009 when the number of serviced people in tourist accommodation in Latvia reduced both in entire Latvia and in the regions of Latvia, the proportion of the serviced people in tourist accommodation in Riga region increased by 6%-points.

During the research period from 2005-2009 the analysis of the structure of the serviced people in tourist accommodation revealed that more than 60% of the people serviced in tourist accommodation establishments are foreign tourists. The proportion of foreign tourists in tourist accommodation establishments in Riga exceeds even 80%, but in Pierīga region it is around 50%. In the other regions of Latvia the

proportion of foreign tourists is around 30%. It means that 70% of the guests in tourist accommodation outside Riga and Pierīga regions are domestic tourists (from Latvia). (Tourism in Latvia..., 2007; 2008; 2009; 2010) Irrespective of the increase in the number of tourists in entire Latvia and in several regions of Latvia, the average length of stay of foreign travellers has decreased from 1.5 days in 2005 to 1.4 days in 2008, whereas the average length of the travel of tourists from Latvia to foreign countries has significantly increased. It has to be admitted that in 2004 foreign tourists stayed for 1.7 days on average in Latvia. It means that the year 2005 experienced a significant reduction in this indicator. In 2009 the length of stay reduced to 1.3 days on average. (Tourism in Latvia..., 2007; 2008; 2009; 2010)

Table 4. The main indicators characterising tourism industry in Latvia from 2005-2009

Indicators	2005	2006	2007	2008	2009
Average stay of foreign tourists, days and nights	1.5	1.5	1.4	1.4	1.3
Average length of travel of tourists from Latvia, days and nights	3.2	3.8	3.8	4.0	4.7
Travel service balance, mill. LVL	-132.0	-138.4	-146.8	-181.9	-64.3

Source: Action Plan for ..., n.d.

Table 4 presents that irrespective of the increase in the number of serviced people in the tourist accommodation of Latvia, the travel service balance is negative during the entire research period and the difference has constantly increased until 2008. Along with the reduction in tourist activity both in Latvia and in the world, the difference has dropped to LVL 64.3 mill. in 2009.

The reduction in the length of the travel can be explained with similar tendencies in the entire world, i.e. with the increase of the proportion of short holiday trips that are facilitated by the development of air traffic, especially in the budget flight sector, as well as with the increase of society's busyness and load. (Basic Positions of..., 2008)

1. Thus, most of the studied indicators characterising tourist accommodation have increased from 2005-2008. During this period the development of tourism industry and commercial activity of tourist accommodation establishments in Latvia has been affected by several factors (Report on the Development ..., 2007; Report on the Development ..., 2009; Results and Tendencies ..., n.d.):
2. strengthening of Latvia as a tourist destination after accessing European Union;
3. availability of the financial resources of European Union;
4. marketing Latvian tourism in high priority countries, priority countries and perspective countries;
5. increase of the number of direct flights;
6. increase of the number and volume of budget airline services;
7. the development of the ports of Latvia;
8. international cooperation of the tourism industry of Latvia: participation in the European Travel Commission of UN NTO, the work of the Tourism Consultant Committee and Sustainable Tourism group of the European Commission;

9. economic growth in Latvia, which means that people earn more and may spend their money on travelling;
10. development of international and local business activities, which facilitates the increase of business trips;
11. big international undertakings held in Latvia.

Statistical data that characterise the operation of tourist accommodation establishments in 2009 have decreased or their chain increase rates have reduced. These decreases have been caused by mainly three factors (In Hotels and Tourist..., n.d.; Armands Slokenbergs: "The...", 2010; Basic Positions of ..., 2008):

1. recession in Latvia, which significantly reduced the domestic demand and purchasing capacity;
2. demand for the Latvian tourism product has reduced in the main target markets of Latvian tourism (Germany, Estonia, Finland, Lithuania, Russia, Sweden);
3. VAT increase for hotel and tourist accommodation services (from 10% to 21%) reduced the competitiveness of Latvian tourist accommodation establishments in Europe.

The above studied data allow concluding that the number of tourist accommodation establishments, beds and serviced people in Latvia is concentrated in Riga region; therefore, it is necessary to calculate the Defert's function. "Defert's function characterises the importance of tourism in the economy of a particular region ... Defert's function characterises a value indicating to n tourist accommodation establishments per capita in the given region." When calculating Defert's function, the offer of individual tourist accommodation establishments is not taken into account. Defert's function is calculated by dividing the number of beds in tourist accommodation establishments with the number of population in the region and then multiplied by 100. (Silineviča, 1999)

Table 5. The size of Defert's function in the regions of Latvia and in Jurmala, from 2005-2009, %

Regions	2005	2006	2007	2008	2009
Latvia	1.0	1.1	1.1	1.3	1.4
Riga	1.3	1.4	1.6	1.8	1.8
Pieriga	1.9	1.7	1.6	1.7	2.1
Jurmala	6.7	5.8	5.7	6.1	6.5
Vidzeme	0.9	0.9	0.9	1.0	1.1
Kurzeme	1.1	0.9	1.1	1.5	1.7
Zemgale	0.4	0.4	0.4	0.5	0.6
Latgale	0.4	0.5	0.5	0.6	0.6

Source: Authors' calculations applying, Hotels and Other Tourist ...in 2005- 2008, Hotels and Other Tourist ...in 2009, Resident Population by Region ... 2005- 2009

As Riga region concentrates one third of the permanent residents of the country and more than 40% beds of tourist accommodation establishments, the value of Defert's function is not significantly different from the average indicators of Latvia, but yet, if compared to other regions of Latvia, differences can be observed.

Comparing the value of Defert's function in Riga and Pieriga regions, it can be observed that the importance of tourism in the economy of the region has been slightly higher in Pieriga region until 2007. This indicator is significantly increased by the city of Jurmala. In 2007 the value of Defert's function is equal in both regions, but in 2008 the contribution of tourism industry of Riga region to the economy of the region is larger.

The value of Defert's function for Jurmala city included in Pieriga region is the highest in the country; however, the value is gradually decreasing until 2007, but in 2008 and 2009 the contribution of tourism to the city economy increased.

The value of Defert's function has increased in Kurzeme region. The data of Table 5 reveal that in Latgale and Zemgale regions the value of Defert's function has been gradually growing but the importance of tourism in the economy of the region is small as both the number of tourist accommodation establishments and beds and the number of serviced people in them is small.

The cluster analysis of tourist accommodation establishments was also performed during the research.

5 statistical indicators were selected for the cluster analysis: the number of tourist accommodation establishments, the number of beds per tourist accommodation establishment, the number of serviced people, the number of businesses and entrepreneurs in the accommodation and catering service sector, the value of Defert's function. Statistical indicators reflect the situation in 2009.

The above mentioned statistical data were gathered for all 26 districts of Latvia and the capital of the country separately.

Dispersion analysis (ANOVA) that is included in the module "Cluster analysis" of the statistical data processing system of *SPSS for Windows* revealed that all the chosen indicators are statistically significant for grouping districts in clusters. Their significance does not exceed the 0.05 margin.

Several cluster variants were considered while performing the statistical data analysis: from 2 to 10 clusters. The division of Latvia into 8 clusters turned out to be the most suitable because then the number of districts of Latvia included in clusters was more even.

In addition to the results of clustering, ranking of clusters was performed for all statistical indicators to determine the total development degree of each cluster against the other clusters. The development degree is the highest in Cluster 1, the lowest – in Cluster 8. (see table 6)

Ranking revealed that Cluster 1 presents the most favourable situation concerning the development of tourist accommodation establishments at the beginning of 2009. Cluster 1 comprises only the capital Riga. Values of all the statistical indicators were placed as number 1 during ranking, except the indicator "Defert's function". This indicator occupies the 3rd place, as it was established already earlier that this indicator is reduced by the large concentration of the population in the city of Riga.

It is also approved by the statement of the regional manager in Latvia and Poland of *SIA EMCM Baltic* Santa Rozenkopfa that "in comparison with other cities of Latvia, Riga has historically developed with a too large number of population and capital concentration, as a result of which the sign of equality could be placed between the country and the capital for a long time". (Skrejija, 2008)

Cluster 2 comprises Riga district without the capital city. All the indicators used in the cluster analysis are ranked in the high second place. When the values of statistical indicators of Cluster 1 and Cluster 2 are compared, it can be observed that there are significant differences. Cluster 1 values are much higher, except for the value "Defert's function".

Cluster 3 comprises Ventspils district, where Ventspils city plays a big role, in which tourism marketing activities have been actively implemented over the last years, as well as tourism infrastructure and man-made attractions have been developed. (Tourism in Ventspils, n.d.) The indicator "Defert's function" ranked number 1 and the indicator "the number of people serviced" ranked number 3. The rest of the indicators occupied the 4th place.

Cluster 4 comprises another district of Kurzeme region – Liepaja district. The highest valued indicators are "the number of tourist accommodation establishments", "the number of beds", and the number of businesses and entrepreneurs in the group of accommodation and catering service.

Cluster 5 comprises a district of Vidzeme region – Cesis district with the centre Cesis in it, which is popular among the inhabitants of Latvia and many foreign tourists as a tourism centre with explicitly low seasonality, and with a successfully developed favourable environment for the development of tourism infrastructure. (Development Programme of ..., n.d.)

Table 6. Average values and ranks in the cluster analysis of tourist accommodation in Latvia in 2009

Indicators	Cluster 1		Cluster 2		Cluster 3		Cluster 4		Cluster 5		Cluster 6		Cluster 7		Cluster 8	
	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank
Number of tourist accommodation	118	1	80	2	20	4	30	3	19	5	16	6	9	7	4	8
Number of beds	12738	1	5106	2	1419	4	1497	3	829	5	552	6	321	7	115	8
Number of serviced people	869975	1	209038	2	97580	3	84683	4	33072	5	18964	6	9300	7	2821	8
Number of entrepreneurs in the distribution and catering service group	1408	1	327	2	89	4	143	3	73	5	57	6	44	7	23	8
Defert's function	1.80	3	2.20	2	2.50	1	1.20	4	1.03	6	1.12	5	0.76	7	0.40	8
Total	-	7	-	10	-	16	-	17	-	26	-	29	-	35	-	40
Districts included in the clusters, by the region	Riga region: Riga		Pieriga region Riga district		Kurzeme: Ventspils district		Kurzeme: Liepaja district		Vidzeme: Cesis district; Latgale: Daugavpils district Rezekne district		Pieriga region: Ogre district Tukums district Kurzeme: Kuldiga district Talsi district Vidzeme: Valmiera district		Pieriga: Limbazi district Kurzeme: Saldus district Vidzeme: Madona district Valka district Latgale: Preiļi district Zemgale: Aizkraukle district Bauska district Jelgava district Jekabpils district		Vidzeme: Aluksne district Gulbene district Latgale: Balvi district Kraslava district Ludza district Zemgale: Dobele district	

Source: authors' research applying the data of the Central Statistics Bureau

In addition to Cesis district, Cluster 5 also comprises two economically most developed districts of Latgale region – Daugavpils and Rezekne districts. (Muška, Ozoliņa, 2009) The average values of all statistical indicators, except “Defert’s function” are ranked as number 5.

Cluster 6 comprises Ogre and Tukums districts of Pieriga region, Kuldīga and Talsi districts of Kurzeme region and Valmiera district of Vidzeme region. “Defert’s function” has a higher value in this cluster than in Cluster 5.

Cluster 7 comprises Aizkraukle, Bauska, Jelgava, Limbazi, Madona, Preiļi, Saldus, Valka districts, thus most of the districts of Zemgale region, as well as some districts from the other regions of Latvia. The average values of all indicators are ranked only as number 7.

Cluster 8 comprises Alūksne, Balvi, Dobele, Gulbene, Kraslava and Ludza districts and the average values of all indicators are ranked number 8, the lowest.

Thus, the results of the cluster analysis also revealed that the capital of the country possesses the most favourable situation in the tourist accommodation sector, i.e. in Riga region. It is followed by Pieriga region and Kurzeme. The development of tourist accommodation in Vidzeme, Latgale and Zemgale regions significantly lags behind the other regions.

Conclusions

- From 2005-2007 there have been fluctuating changes in the number of tourist accommodation in the regions of Latvia, but since 2007 it has been gradually growing in all the regions. The fastest chain increase rates can be observed in the regions with a small concentration of tourist accommodation.
- The distribution of tourist accommodation in the regions of Latvia is uneven: 50% of all the tourist accommodation is located in Riga and Pieriga regions, but almost one fifth – in Kurzeme region. A small number of tourist accommodations are located in Zemgale and Latgale regions. There have not been any significant changes in the distribution of tourist accommodation in the regions of Latvia during the research period.
- The distribution of the number of beds of tourist accommodation is uneven in the regions of Latvia: 40% of the total number of beds is located in Riga region, around 25% - in Pieriga region, about 15% - in Kurzeme region, but the proportion of beds in the other regions of Latvia (Zemgale, Vidzeme, Latgale) is small. From 2005-2009 there have not been any significant changes in the distribution of beds in the regions of Latvia.
- During the research period more than half of all the people serviced in tourist accommodation are concentrated in Riga region, but more than 10% - in Pieriga and Kurzeme regions. The proportion of the serviced people does not exceed 6% of the total number in the other regions. Foreign tourists are the main guests in tourist accommodation in Riga and Pieriga regions, but local tourists – in the other regions.
- Among the studied regions of Latvia, the variables of Defert’s function approve that the importance of tourism in the regional economy is significant in Riga and Pieriga regions. In Latgale and Zemgale regions tourism has a small significance in the regional economy, but it is increasing gradually.
- The results of cluster analysis indicated that the capital of the country, i.e. Riga region, is in the most beneficial situation concerning tourist accommodation. It is followed by Pieriga region and Kurzeme region. The development of tourist accommodation in Vidzeme, Latgale and Zemgale regions significantly lags behind the other regions.
- It is necessary to continue the research and to evaluate the impact of economic activities on the development and distribution of tourist accommodation in the regions of Latvia.

References

- Action Plan for Facilitating the Development of Tourism in Latvia for 2010. On-line: http://www.em.gov.lv/images/modules/items/rp_turisms_2010.doc
- Ancitis T. (2010) The Present Number of Hotels in Latvia is More Appropriate for the South of Spain. On-line: http://www2.la.lv/lat/latvijas_avize/jaunakaja_numura/?doc=75344
- Armands Slokenbergs: “The drop of tourism indicators is etiological”.- Tourism. Journal for tourism professionals.- 2010, No.1 (12)- pp. 15.
- Basic Positions of Tourism Development of Latvia for 2009-2015. Project.– Riga: Ministry of Economics, 2008.
- Cluster Analysis. On-line: <http://www.statsoft.com/textbook/cluster-analysis/>
- Development Programme of Cesis Town for 2008-2014. Tourism. On-line: <http://www.cesis.lv/?d=1136>
- Economically Active Statistical Units in Statistical Regions, Cities under State Jurisdiction and Districts by Main Kind of Activity (NACE rev 2.), 2005 – 2008. On-line: <http://data.csb.gov.lv/Dialog/varval.asp?ma=SR0060a&ti=SR06.+ECONOMICALLY+ACTIVE+STATISTICAL+UNITS+IN+STATISTICAL+REGIONS%2C+CITIES+UNDER++STATE+JURISDICTION+AND+DISTRICTS+BY+MAIN+KIND+OF+ACTIVITY+%28NACE+REV+2.%29%2C+2005+-+2008&path=../DATABASEEN/rupnbuvn/Annual%20statistical%20data/23.%20Statistical%20business%20register/&lang=1>
- Hotels and Other Tourist Accommodation Establishments by Statistical Region, City and District in 2005.- 2008. On-line: <http://data.csb.gov.lv/Dialog/varval.asp?ma=TU0090a&ti=TU09.+HOTELS+AND+OTHER+TOURIST+ACCOMMODATION+ESTABLISHMENTS+BY++STATISTICAL+REGION%2C+CITY+AND+DISTRICT+&path=../DATABASEEN/transp/Annual%20statistical%20data/20.%20Tourism/&lang=1>
- Hotels and Other Tourist Accommodation Establishments by Statistical Region, City and County in 2009. On-line: <http://data.csb.gov.lv/Dialog/varval.asp?ma=TU0091a&ti=TU091.+HOTELS+AND+OTHER+TOURIST+ACCOMMODATION+ESTABLISHMENTS+BY+STATISTICAL+REGION%2C++CITY+AND+COUNTY&path=../DATABASEEN/transp/Annual%20statistical%20data/20.%20Tourism/&lang=1>

- In Hotels and TouristA – for a Third Less Customers. On-line: <http://diena.lv/lat/business/hotnews/viesnicas-un-turisma-mitnes-par-tresdalu-mazak-apmekletaju>
- Muška A., Ozoliņa I. (2009), *Locations of Shopping Centres in the Regions of Latvia* // Economics Science for Rural Development 2009: International Scientific Conference, Jelgava, Latvia, April 23-24, 2009: Proceeding of the International Scientific Conference „Primary and Secondary Production, Consumption”, №19- Jelgava: LLU, 2009- pp. 189- 197
- Number of Visitors in Hotels and Other Accommodation Establishments. On-line: <http://data.csb.gov.lv/Dialog/varval.asp?ma=TU0030ca&ti=TU03.+NUMBER+OF+VISITORS+IN+HOTELS+AND+OTHER+ACCOMMODATION+ESTABLISHMENTS&path=../DATABASEEN/transp/Short%20term%20statistical%20data/20.%20Tourism/&lang=1>
- Platace M. (2000), *Basic Principles of Operation of the Reception Service.*- Riga, 6 p.
- Report on Tourism Development in Latvia in 2006. Informative report. - Riga: Ministry of Economics, 2007
- Report on Tourism Development in Latvia in 2007. Informative report. - Riga: Ministry of Economics, 2008.
- Report on Tourism Development in Latvia in 2008. Informative report. - Riga: Ministry of Economics, 2009.
- Resident Population by Region, City Under State Jurisdiction and District at the Beginning of the Year, 2005.- 2009. On-line: <http://data.csb.gov.lv/Dialog/varval.asp?ma=AI02a&ti=IS02A.+RESIDENT+POPULATION+BY+REGION%2C+CITY+UNDER+STATE+JURISDICTION+AND+DISTRICT+AT+THE+BEGINNING+OF+THE+YEAR%2C+1990+.-+2009&path=../DATABASEEN/Iedzoc/Annual%20statistical%20data/04.%20Population%20F%20Archive/&lang=1>
- Results and Tendencies of Tourism Development in Latvia in 2008. On-line: www.tourism.ventspils.lv/.../A.RAMATA_TAVA
- Silineviča I. (1999), *Analysis of Tourism.*- Rezekne: Rezeknes Augstskola, 52 p.
- Skreija D. (2008), *Potential shown for developing shopping centres in the regions.* – Dienas bizness, June 10, pp. 16-17.
- Tourism in Latvia in 2006. A Collection of Statistical Data. - Riga: Central Statistical Bureau of Latvia, 2007 – pp. 44- 49
- Tourism in Latvia in 2007. A Collection of Statistical Data. - Riga: Central Statistical Bureau of Latvia, 2008 – pp. 45-50
- Tourism in Latvia in 2008. A Collection of Statistical Data. - Riga: Central Statistical Bureau of Latvia, 2009 – pp. 45-51
- Tourism in Latvia in 2009. A Collection of Statistical Data. - Riga: Central Statistical Bureau of Latvia, 2010 - pp. 35- 40
- Tourism in Latvia. On-line: http://tava.gov.lv/userdate/File/Prezentacijas/turisms_latvija_2010_LV.pdf
- Tourism in Ventspils. On-line: <http://www.tourism.ventspils.lv/?p=27>

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