



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

# MULTI-LEVEL ANALYSIS OF VISITORS' SATISFACTION FLYING TO DEBRECEN – MAIN ASPECTS OF THE RESEARCH

**Brigitta Palatinus**

*Univesity of Debrecen*  
*palatinus.brigitta@econ.unideb.hu*

**Abstract:** *This paper presents the non-exhaustive description of the main characteristics of visitors based on the filled out questionnaires during five months following the test month. These characteristics will serve the basis of a satisfaction analysis to be described in the future and they provide guidance for later analyses. I performed the testing of my questionnaire in January 2014. It turned out even from the data collected in the test phase that there were services which did not meet the expectations of visitors several times as it was worse than what they expected. This study focuses on the questionnaire research conducted among foreign visitors coming to Debrecen by flight. The main aspects were to determine foreign visitors purpose of travel to Debrecen, how many times they had already been to Debrecen, how many days they spent in the city, what kind of services did they use and whether the quality of used service met their expectations. As a result of the following five months research, I obtained input data which make it possible to examine real problems with background data. It calls for further examination to determine whether there was any difference in the extent of services living up to visitors' expectation and visitors' level of satisfaction.*

**Keywords:** *satisfaction analysis, questionnaire, services, visitors' expectation*

## Introduction

The main purpose of my research work is to find a proper measurement methodology of serving foreigners coming to Debrecen by flight and to use this method during the examination of services utilised by them. The future step of this research is the development of a process structure which contains the services used by foreigners flying to Debrecen, points out problematic areas and provides guidance in terms of the possible reorganisation of problematic processes with the aim to increase the satisfaction of visitors. The aim of this study is to introduce the main aspects of the questionnaire research conducted among foreign visitors coming to Debrecen. This paper presents the non-exhaustive description of the main characteristics of visitors based on the filled out questionnaires during five months following the test month. Various research findings showed that there is a strong correlation between the quality of services and the intention of consumers, as the quality of services have a direct and/or indirect impact on consumers' willingness by means of the intention of consumers (Zeithaml et. al 1996; Cronin et. al 2000).

I perform my examination at the Debrecen Airport, where passenger flow began to increase during the last two years due to the scheduled flights of Wizz Air. By the end of 2013, the yearly passenger flow was nearly 130 thousand people, which can be considered a significant increase compared to the nearly 48 thousand passengers in 2012. According to Veres et

al. (2012), the quality of an airport greatly contributes to the view of an entire region, since the first and last impressions of a city are strongly bound to the airport. Furthermore, friendly service, accurate organisation, attentiveness and the atmosphere of the airport play an important role in making visitors return to a given destination or even to recommend it to their acquaintances.

## 1. Research objectives

I broke down my research to different sections. This study focuses on the questionnaire research conducted among foreign visitors coming to Debrecen by flight. More specifically, the survey focuses on their characteristics and their satisfaction with reference to the services used during their stay. All these information provide guidance for the second section.

As regards the composition of passenger flow, no one has ever collected any data other than citizenship (HCSO, Debrecen Airport). There is no data about the demographic composition, the motivation to travel, the length of stay in Debrecen and the services used. For this reason, I decided to get to know the population in addition to performing the satisfaction analysis. In 2005, a similar research was conducted at the departure side of Terminal 2B of Budapest Airport. Foreign tourists coming to Budapest with discount flights were involved in the primary research. The number of interviewed passengers was 414 and data collection was conducted in April 2005. (Mundruczóné

2005). It is not clear from the published study how large population these 414 people were selected from and how many flights were involved in the analysis. In this analysis, it was my purpose to clarify the methodological basics.

## 2. Material and methods

I performed the examination with using a questionnaire. The questionnaire consists of open, closed and evaluative questions. I used a scale from 1 to 5 to examine the opinions and satisfaction level of respondents. The value scale makes it possible to perform comparative analyses (Babbie 2008). The five level intensity scale is the most useful, since adding more levels to the rating does not result in a more accurate evaluation. Scoring is an ordinal method which provides a rank which is the most frequently used qualification system, according to Tomcsányi (2000). Researchers use a scale technique to evaluate the quality of tourism services, as it makes it possible to subsequently rank services and to compare competitors (Pénzes 2011). The location of the primary questionnaire research was the waiting hall of the Debrecen Airport, in the way authorised by the airport management. However, complying with safety regulations caused difficulty during the research. It was the basic requirement of entering the research location to obtain a personal border crossing permit issued by the Border Service. This paper presents the non-exhaustive description of the main characteristics of visitors based on the filled out questionnaires during five months following the test month (February, March, April, May and June). These characteristics will serve the basis of a satisfaction analysis to be described later and they provide guidance for further analyses.

### 2.1. The range of examined people

It is important to make a distinction between the concept of tourists and visitors. According to the definition of the Hungarian Central Statistical Office (HCSO), a visitor stays in the visited place for less than 12 months and the main purpose of their visit can be any activities unless they get remunerated for performing that activity in the visited place. Tourists can be defined as a narrower concept. Visitors can be considered tourists if they visit the destination for tourism purposes. During this research, I used the concept of visitors, since it comprises both those who come to Debrecen for tourism purposes (leisure tourism, business tourism) and for non-tourism purposes (learning, purchasing services, performing work or other travel purposes). Traveller is a concept with an identical meaning as a visitor.

The range of examined people was composed of visitors with foreign citizenship who spent a certain amount of days in the city. Based on this criterion, people of Hungarian, Romanian, Ukrainian and Slovakian citizenship were excluded from the passenger flow data, since they only passed through Debrecen to travel to their destination country and city. *Table 1* shows the groups created in order to be easier to understand the departing passenger flow, in which the group of “travelling

abroad” consists of the nationals who were excluded from the research. Despite all my efforts, I could not completely exclude people only passing through Debrecen, since there were several cases when the destination of a British citizen was not Debrecen. According to the definition of HCSO, “people passing through” are foreign visitors who leave the country through a different country border within 24 hours upon arrival.

It was a commonly observed problem during the definition of the sample that there were no data about the composition of citizenships of passengers with reference to flights between Debrecen-Eindhoven. However, this shortcoming is problematic also in research performed by others. According to Kovács (2012), since there are no border inspection within the EU, the reliability of these data is restricted due to the estimation-based determination of the volume of passenger flow and they are not suitable for characterising the extent of tourist flow, especially due to the fact domestic tourism is not taken into consideration. In this case, domestic tourism is irrelevant from the aspect of the performed research. Due to the problem describe above, I restricted my research to the London-Debrecen flights, in which, due to passport handling, I could determine the citizenship composition of passenger flow on the basis of quarterly HCSO data.

Gilyán (2008) refers to the fact that commuting, cross-border and pass through passenger flow is not characteristic of flight passenger flow as one of its favourable features. However, upon examining the passenger flow of Debrecen Airport, I observed the opposite of this conclusion. The passenger flow in 2013 can be greatly characterised by pass through and cross-border passenger flow, representing 85-90% of the number of passengers. The number of visiting foreigners for either tourism or non-tourism purposes represented only 10-15% of the passenger flow between Debrecen and Luton during the last year. The same conclusion can be drawn from the first half of 2014. As regards the five examined months of 2014, *Table 1* shows the nationality-based distribution referring to the passenger flow between Debrecen and Luton.

*Table 1. Nationality-based composition of the departing passenger flow between January and June 2014*

	January	February	March	April	May	June
<b>Traveling abroad</b>	2541	2200	2434	3801	4456	5226
<b>Hungarian</b>	1609	1750	1918	2790	3179	4024
<b>Romanian</b>	915	429	507	990	1214	1161
<b>Slovak</b>	7	17	7	19	55	36
<b>Ukrainian</b>	10	4	2	2	8	5
<b>Traveling to Debrecen</b>	244	278	281	612	513	526
<b>British</b>	193	207	209	469	396	372
<b>Other</b>	51	71	72	143	117	154
<b>Total</b>	2785	2478	2715	4413	4969	5752

*Source: OWN CONSTRUCTION BASED ON HCSO DATA, 2014*

The low proportion of foreigners in 2013 can also be observed in 2014. In the examined months, the number of visitors travelling to Debrecen for tourism purposes is 8-14% of the passenger flow between Debrecen and Luton.

I performed the testing of the questionnaire in January 2014 and I spent the subsequent five months with the examination. During these five months, I conducted the questionnaire survey among the passengers of 39 flights departing to London-Luton. Table 2 shows the characteristics of the questionnaires collected in each month.

Table 2. The number and characteristics of questionnaires filled out during the examined months

Examined month	Number of examined flights	Filled out questionnaires	Evaluated	Cannot be evaluated	Did not fill it out	Refused to fill it out	Returning
February	9	52	47	5	28	3	2
March	8	34	30	4	30	4	4
April	8	50	45	5	32	3	6
May	8	42	38	4	25	2	4
June	6	32	30	2	29	2	3
Total	39	210	190	20	144	16	19

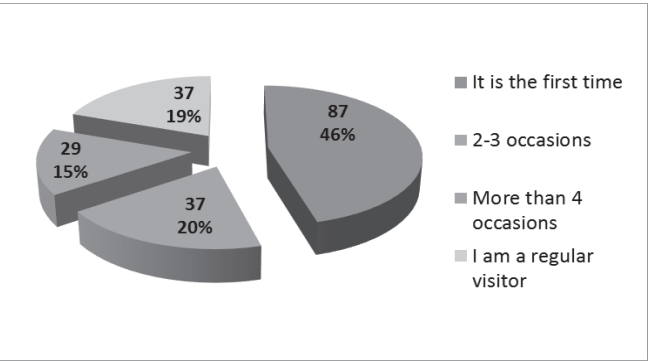
Source: OWN RESEARCH, 2014

Altogether, 210 questionnaires were filled out, 20 of which could not be evaluated. Furthermore, there were 144 visitors who could not be interviewed because they arrived into the waiting hall just minutes before take-off. 16 people did not want to comply when inquired and did not wish to fill out the questionnaire. 6 of these 16 people had British citizenship, but Hungarian nationality and they did not wish to take part in the survey of foreign visitors due to their Hungarian nationality. 19 of the respondents had already taken part in the data collection between January and June; therefore, they did not fill out the questionnaire again either. Altogether, I managed to get to know 389 foreign visitors during the five months. Furthermore, 38 visitors were either infants or underage minors.

The shortage of time available for performing the survey is one of the key restraints of this research. More specifically, data collection was bound to a certain time frame each day, as questionnaires could only be filled out in the waiting hall. The foreign passengers who arrived at the waiting hall after the security check directly before take-off could not fill out the questionnaire. Furthermore, it was not possible to perform data collection among the passengers of all flights in a given month.

Figure 1 shows respondents' distribution by age. The largest age group of the sample was those between 18-30 years of age, representing 38% (73 people) of the sample. The second largest group (19%) was those between 51-60 (36 people). The proportion of women was 39.5% and that of men was 60.5%.

Figure 1. Age composition of respondents (number of people, %) N=190



Source: OWN RESEARCH RESULTS, 2014

81% of foreign visitors interviewed in the survey had British nationality and I classified 37% of them into the group of other nationalities due to their low occurrence. The group of other nationalities contained one individual from each of the following countries: Ireland, Brazil, Australia, Japan, China, Ghana, the Netherlands, Malta, Nepal, Poland, Spain, Sweden and Portugal. 88.32% of visitors came from Europe, but a small number came from non-European countries, such as Nepal, Australia or Brazil.

2.2. Brief description of the questionnaire

The questionnaire which was first used in January can be divided into two main parts. The first part focuses on the travelling characteristics of visitors. Altogether, this questionnaire part contains eleven (both open and closed) questions. Of these questions, it is important to point out the motivation to travel which determines the range of services used by the given visitor, since these motivations are different in the case of a tourist who arrived into Debrecen for the purpose of sightseeing or a businessman with the aim to attend a conference.

The second part of the questionnaire was dealing with the measurement of visitors' satisfaction in terms of the service processes used by them. I divided satisfaction to nine dimensions and each of them represents one service. All nine dimensions can be described with indicators. According to Hofmeister et. al (2003), a dimension is a variable which can be described with several realistic and measurable indicators. The sum of these indicators provides the set of statements which respondents classify by using the selected evaluative scale. For example, the dimension established for evaluating the services in connection with accommodation contains indicators such as room equipment, the language skills of the hotel staff and other similar factors. Philip Kotler (2001) described satisfaction the following way: "satisfaction is a person's joy or disappointment which results from the comparison of the performance of a product with his/her expectation from that product. Customers are satisfied if a product lives up to their expectations. If a product exceeds customers' expectations, they are very satisfied, but if it does not live up to their preliminary expectations, they are dissatisfied." It comes from this definition that expectation is also important in addition to satisfaction, as satisfaction is



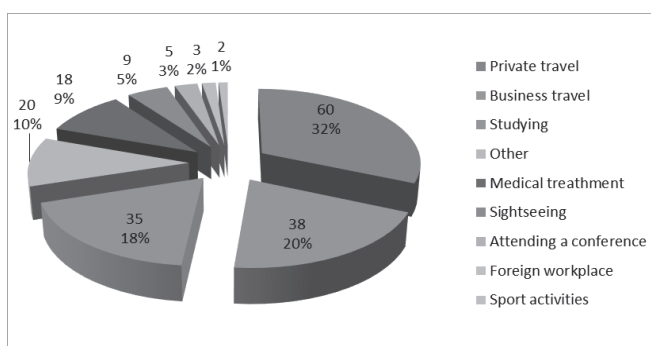
based on expectations. For this reason, I used two types of measurement in the questionnaire. The first type serves the purpose of measuring visitor satisfaction using the indicator of the service used by them while the second one measures how much the service lives up to visitors' expectations.

I performed the testing of my questionnaire in January 2014. In January, there was a total of sixteen flights to London-Luton, and the passengers of seven of these flights were asked to fill out the questionnaire. It turned out even from the data collected in the test phase that the airport service did not live up to the expectations of visitors several times as it was worse than what they expected. In most cases, the airport service was not a lasting experience, but it lived up to visitors' expectations. In order to eliminate the possibility of obtaining questionnaires which cannot be evaluated in advance, I made the necessary corrections to the formulation and I extended the questionnaire with all important explanations and instructions referring to filling it out. Following the test phase, data collection took place between February – late September 2014.

### 3. Main conclusions of the research

The first aspect of the research was to determine foreign visitors' purpose of travel to Debrecen. The concept of travel purpose can be defined as the motivation of the visitor, e.g. spending free time, health tourism, conference or a business travel, without which the travel would not have taken place. *Figure 2* shows the distribution of respondents in terms of their purpose and motivation to visit the city. Based on the filled out questionnaire, the most typical travel purpose of foreign visitors coming to Debrecen with the London-Luton/Debrecen flights of WizzAir is "private travel" which was indicated by 60 people. This group of visitors consists of parents and friends who visited a relative or acquaintance studying at the University of Debrecen. Business travel was indicated by 38 people, making it the second most frequent motivation to travel. The third largest proportion was studying, which was indicated by 18% of visitors (35 people). The proportion of visitors flying to Debrecen due to another motivation to travel is relatively high (10%). Other travel purposes included charity work, attending a wedding or funeral, education or travelling to Romania. During the six examined months, 18 people flew to Debrecen in order to use medical services which represent 9% of the whole sample. The least frequent purpose of travel was sightseeing (9 people), attending conferences (5 people), foreign workplace (3 people) and sports activities (2 people). In order to facilitate further analyses, the distinguished groups will make it possible to separately examine the services used by students, businessmen, those seeking medical treatment and further groups, as well as the level of satisfaction while using the given services. As a result of classifying visitors based on their motivations, it will be possible to compare the different levels of satisfaction of each group.

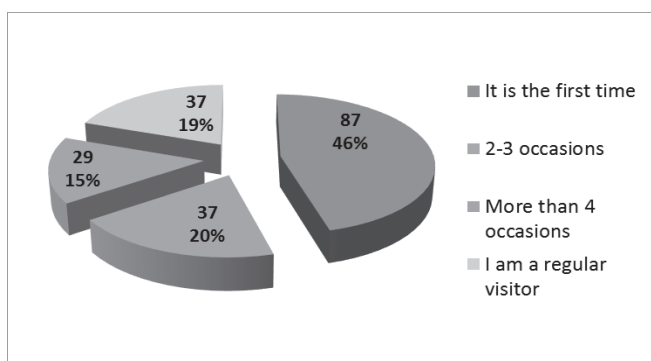
*Figure 2. Distribution of respondents in terms of their purpose of travel (number of people, %), N=190*



Source: OWN RESEARCH RESULTS, 2014

The second aspect of the research was to determine how many times foreign visitors had already been to Debrecen. Most of them (87 people – 46% of the sample) said it was their first time. 37 people said that they had been to the city 2-3 times and also 37 people responded that they were regular visitors in Debrecen. Furthermore, 27 people had been to the city more than four times. It is a surprising research finding that 64% of the visitors who did not come to Debrecen for the first time had been to Debrecen for more than four times (66 out of 103 people). Based on the responses to my questions, further examinations will make it possible to determine whether there is any difference between first time and non-first time visitors in terms of using services.

*Figure 3. Distribution of respondents in terms of the frequency of visiting Debrecen (number of people, %), N=190*

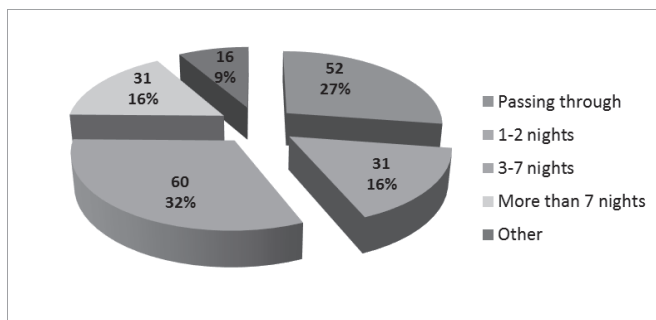


Source: OWN RESEARCH RESULTS, 2014

In addition to motivation and the frequency of visiting Debrecen, the third most important aspect was to determine how many days visitors spent in the city. *Figure 4* shows the distribution of the sample based on the number of days spent in Debrecen. The largest proportion is represented by visitors who spent 3-7 days in Debrecen (60 people). The second largest group of people are those who pass through without spending a night in the city (52 people, 27% of the sample). The range of examined people consisted of visitors with foreign citizenship who spent a certain number of days in Debrecen. The appearance of a high number of people only passing through Debrecen shows that I could not exclude all

of these visitors from the sample and it happened on several occasions that Debrecen was not the destination of British nationals. In the sample, 31 people spent more than 7 nights in Debrecen, while 31 visitors spent only 1-2 nights in the city. The smallest group consists of 16 people who spend several months in Debrecen. Based on the obtained information, future analysis will make it possible compare the groups established on the basis of various motivations in terms of the number of days spent in the city.

Figure 4. Distribution of respondents based on the number of days spent in Debrecen (number of people, %), N=190



Source: OWN RESEARCH RESULTS, 2014

The fourth aspect of the research was to determine how many people used each service. Table 3 shows the various services based on the number of occasions they were used. It can be seen in the table that airport services were used by all respondents since departure from the airport is inevitable. 129 people used transport services such as taxi, bus or tram. The remaining 61 people travelled with their own cars or company cars. The visitors who did not book any accommodation (118 people) and did not arrange meals (91 people) lived and ate at their acquaintances, relatives or friends while the group of visitors passing through also belongs to this category. Medical services involved previously planned arranged dental treatment (18 people) and 8 people requested medical treatment without any previously negotiated appointment. Of all respondents, 13 people attended conferences and also 13 people used sports-related services or attended sports events. By means of quantifying the use of services, it will become possible to examine whether the use of a given service depends on the travel motivation of visitors coming to Debrecen. In other words, I will be able to decide whether travel motivation determines the range of services used by them.

Table 3. Using services (number of people, %), N=190

	Used the service		Did not use the service	
	Number of people	%	Number of people	%
<b>Airport</b>	190	100.00%	0	0.00%
<b>Transport</b>	129	67.89%	61	32.11%
<b>Accommodation</b>	72	37.89%	118	62.11%
<b>Eating</b>	99	52.11%	91	47.89%

	Used the service		Did not use the service	
<b>Recreation</b>	30	15.79%	160	84.21%
<b>Health</b>	29	15.26%	161	84.74%
<b>Conference</b>	13	6.84%	177	93.16%
<b>Sports</b>	13	6.84%	177	93.16%

Source: OWN RESEARCH RESULTS, 2014

The fifth aspect of the research was to determine whether the used service lived up to visitors' expectations. According to Morvay and Daruka (2009), in the case of tourism services, the sense of risk is high both in the case of the service provider and those using the service, as the service itself cannot be improved while in use and it cannot be repeated either. For this reason, the expected results, i.e. achieving the satisfaction of the visitor is a much more difficult duty in the case of services than physical products. According to the definition by Kenesei and Kolos (2007), the fundamental difference between services and physical products is the fact that services cannot be taken in one's hand as they are not physical objects, but performances, processes and actions.

Table 4. How much do the used services live up to visitors' expectations? (number of people, %), N=190

	It was worse than I expected		It was just as I expected		It was better than I expected	
<b>Airport</b>	35	18.42%	142	74.74%	13	6.84%
<b>Transport</b>	17	13.18%	96	74.42%	16	12.40%
<b>Accommodation</b>	16	2.78%	44	61.11%	12	36.11%
<b>Eating</b>	13	13.13%	65	65.66%	21	21.21%
<b>Recreation</b>	7	23.33%	20	66.67%	3	10.00%
<b>Health</b>	9	31.03%	12	41.38%	8	27.59%
<b>Conference</b>	0	0.00%	11	84.62%	2	15.38%
<b>Sports</b>	2	15.38%	9	69.23%	2	15.38%

Source: OWN RESEARCH RESULTS, 2014

Table 4 contains the findings related to how much the used services lived up to visitors' expectations. It can be seen in the table that certain services did not live up to visitors' expectations on several occasions as they were worse than visitors expected. Consequently, it is important to identify which indicator caused visitors' dissatisfaction. In most cases, the used service was not a lasting experience, but it lived up to their expectations. Based on the extent to which a given service lived up to visitors' expectations, it is possible to select the service processes that will be analysed in detail.

## Summary

My research objective was to examine the travel habits of foreigners visiting Debrecen by flight, as well as their level of satisfaction concerning the city. 90% of the passengers in the airport did not use any services. The low proportion of foreign citizens in 2013 could be also observed in 2014. The number of foreigners visiting Debrecen during the examined months was 10-13% of passenger flow between Debrecen and Luton. There has not been any information about the tourism-related consumption characteristics of foreigners flying to Debrecen. As a result of the questionnaire survey, I obtained input data which make it possible to examine real problems with background data. Due to the established database, these real problems can be supported with proper data. It happened several times that the organisation/enterprise conducting the service did not manage to perform at the level expected by the visitor and the result was underperformance. Based on the gained experience, visitors could possibly conclude that they were provided a worse service than they had expected, which makes it necessary to analyse the various indicators in detail. The detailed results of the satisfaction analysis will provide a proper basis during the establishment and examination of the process structure of services. Exploring the connection between the number of days spent in Debrecen and the used services is a further aspect of analysis. In addition, it calls for further examination to determine whether there was any difference in the extent of services living up to visitors' expectations and visitors' level of satisfaction.

## REFERENCES

- Andorka, R. (2006). *Bevezetés a szociológiába*. Osiris Kiadó, Budapest. 786 p.
- Babbie, E. (2008). *A társadalomtudományi kutatás gyakorlata*. Balassi Kiadó, Budapest. 744 p.
- Cronin, J.J. Jr., Brady, M. K., Hult, T. M. (2000). Assessing the effects of quality, value, customer satisfaction on consumer behavioural intentions in a service environment. *Journal of Retailing*, Vol. 76. No. 2, pp. 193-216.
- Giddens, A. (2008). *Szociológia*. Osiris Kiadó, Budapest. p. 833.
- Gilyán, Cs.(2008). A Magyarországra repülőgéppel érkező külföldi turisták utazási szokásai. *Turizmus Bulletin XII. évf. 2. szám.* pp. 64-67.
- Hofmeister, Tóth Á., Simon, J., Sajtos, L. (2003). *Fogyasztói elégedettség*. Alinea Kiadó, Budapest. p.280.
- Morvay, M., Daruka, E. (2009). Az elvárások szerepe a szállodai vendég elégedettségben. *Turizmus Bulletin XIII. évfolyam 2. szám.* pp. 44-55.
- Kenesei, Zs., Kolos, K. (2007). *Szolgáltatásmarketing és menedzsment*. Alinea Kiadó. Budapest, p. 400.
- Kotler, P. (2001). *Marketing Menedzsment*. Műszaki Könyvkiadó, Budapest. p. 875.
- Kovács, T., Papanek, G., Papanek, Zs. (2012). A magyar turisztikai vonzerők és fejlesztésük feladatai. *Debreceni Szemle – Tudomány és Kultúra*. Debrecen és régió tudományos műhelyeinek folyóirata. XX. Évf. 3-4 szám. pp. 86-92.
- Mundruczó, Gyné. (2005). A diszkont légi járatokkal Budapestre érkező külföldi turisták jellemzői. *Turizmus Bulletin IX. évf. 2. szám* pp. 55-61.
- Pénzes I. R. *Turizmus kutatások módszertana: Az írásbeli megkérdezés turizmus-statisztikai aspektusai – kvantitatív módszerek.. Pécsi Tudományegyetem. TAMOP 4.2.5 Pályázat könyvei. Kempelen Farkas Hallgatói Információs Központ.* [http://www.tankonyvtar.hu/hu/tartalom/tamop425/0051\\_Turizmus\\_kutatasok\\_modszertana/ch03s12.html](http://www.tankonyvtar.hu/hu/tartalom/tamop425/0051_Turizmus_kutatasok_modszertana/ch03s12.html), date of retrieval: 2013.11.20.
- Tomcsányi, P. *Általános kutatómódszertan*. SZIE,Gödöllő - Budapest, p.474.
- Lampertné, Akócsi I., Raffay, Z., Veres, L. *Légi közlekedés*. In: *Turizmus és közlekedés*. (Vezető szerző: Veres L.) Pécsi Tudományegyetem, 9,5 ív <http://www.eturizmus.pte.hu/szakmai-anyagok/Turizmus%20%C3%A9s%20k%C3%B6zleked%C3%A9s/book.html> date of retrieval: 2014.10.15.
- Zeithaml, V.A., Berry, L.L., Parasuraman, A. (1996). The behavioural consequences of service quality. *Journal of Marketing*, Vol. 60. No. 2, pp. 31-46.