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### MARKETING INSTRUMENT OF IMPROVING HOTEL MANAGEMENT SERVICE: EVIDENCE OF VISEGRAD GROUP COUNTRIES

**Abstract.** Successful operation of hotels and their development depends on satisfying customer needs. The Internet has brought significant changes in everyday life. It creates new opportunities and challenges in a world that is constantly changing but also for companies that operate in it. The Internet has also significantly changed the operating environment of the hotel industry. The objective of this article is to determine the link between online customer reviews expressing the quality of hotels and the willingness of customers to recommend the accommodation, based on the research conducted within the Visegrad Group. In view of the existing research gap on factors affecting customer satisfaction in accommodation facilities, the article helps to broaden the theoretical basis of the issue and helps hotel and accommodation establishments to establish marketing strategies that will lead to a better understanding of indicators affecting their customers' satisfaction. Research is based on customer reviews of hotel services published by Expedia.com, which focus on rating hotels in the Visegrad countries. Within the selected hotel ratings, we used automatic data collection for monitored variables (ratings). 345175 ratings have been analysed for 1500 hotels. The focus was on the percentage of guests recommending hotels in relation to selected variables. Data collection took place in the first half of 2017. The outputs of our research point to the fact that in the Visegrad Group countries there is a significant impact of specific variables expressing the quality of the hotel on the percentage of customers recommending the accommodation. Hotels that have a marketing philosophy primarily or secondarily built for achieving a good reputation should not neglect activities that have a positive effect on Room cleanliness, Service and staff, Room comfort or Hotel condition as they reflect the increasing value of the recommendation in the theoretical but especially practical, and thus a steadily increasing competitive advantage.

**Keywords:** tourism, reputation, marketing communication, hotels, Visegrad Group.

**Introduction.** Successful operation of hotels and their development depends on satisfying customer needs. The Internet offers a very sophisticated option of reviewing accommodation facilities. Guests are considering these reviews when they are choosing a hotel. Hotel services can be rated in multiple attributes. Various review portals have built their own «user-friendly» hotel quality rating questionnaires, the outputs of which are freely available on the Internet. This modern one can be seen as very positive because it takes into account the true idea of marketing and thus the satisfaction of customer's needs.

The Internet has brought significant changes in everyday life. It creates new opportunities and challenges in a world that is constantly changing but also for companies that operate in it. This continued growth of the Internet has also significantly changed the operating environment of the hotel industry. No doubt, it has become an innovative marketing tool for providing information and online transactions (Doolin, et al., 2002). The informational character of tourism products means that the Internet, which offers global reach and multimedia capabilities, is an increasingly important means of promoting and distributing the services of this sector. Online marketing tools are not just for big hotel chains. Websites that are well

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designed and easy to use provide cheap and efficient platforms for online marketing and advertising, potentially increasing the hotels' market competitiveness (Lituchy and Rail, 2000; Merono-Cerdan and Soto-Acosta, 2007).

In order to maintain competitiveness, customer satisfaction and loyalty has become one of the main goals in all areas of business, especially in tourism (Gavurova et al., 2016). This is due to higher expectations of experience than to other sectors like banking or other financial sectors where customers are looking for more functional advantages (Aminu, 2012). High customer satisfaction is related to market share, loyalty and consequently higher company profits (Szymanski and Hise, 2000). For tourism providers, it is extremely important to ensure customer satisfaction as it is assumed that such efforts will lead to a higher level of redemption and customer loyalty (Yoon and Uysal 2005).

Consumer behaviour includes, according to Clement (2004) or Soltes and Gavurova (2015) the identification of people's needs, the exploration of their motivations and the processes that play a role in preference for one product before another. Nowadays, product satisfaction and customer retention are the most significant values (Vysekalova, 2004), as they are one of the cornerstones of long-term business success (Schiffman and Kanuk, 2004).

The growing importance of online reputation is also reflected in the increasing number of scientific and research contributions dealing with this issue. However, our research, in comparison with others, focuses on describing the impact of online customer reviews that express the quality of the hotel on the willingness of customers to recommend the accommodation, while the key factors of our research were Room Cleanliness, Service and Staff, Room comfort and Hotel condition. The objective of this article is therefore to fill an existing research gap and to expand the factors influencing customer satisfaction in accommodation facilities.

**Literature Review.** The authors of the first scientific publications focusing on the before-mentioned issues are Dellarocas (2003) and Godes and Mayzlin (2004). The relationship between customer reviews and sales have been investigated by many authors (Chevalier and Mayzlin, 2006; Clemons et al., 2006; Dellarocas et al., 2007). Later on, the area of forged online customer reviews (Hu et al., 2011; Li and amp; Hitt, 2008) and a study on the usefulness of online reviews were examined (Mudambi and Schuff, 2010).

However, studies and researches dealing with online hotel reputation can be divided into studies exploring the organizational implications of online reviews and those that analyse antecedents, i.e. those that affect customers when writing online reviews. In the first category (outcomes), there are many studies that show how beneficial is the reputation of online hotels through online customer reviews and that it positively influences sales and business performance as well as customer attitudes towards the industry (Sparks and Browning, 2011; Qiang et al., 2009). Li et al. (2008), however, found that the good reputation of vendors positively impacts on the volume of their sales, but the marginal effect of this impact has fallen sharply, and some scientists have even concluded that reputation has only a low impact on sales. Zhang and Zhang (2011) demonstrated in their studies that if the reputation level is lower than a certain threshold, sales are negatively affected by the reputation and if the seller's reputation exceeds a certain critical value, a better rating will certainly help to increase sales.

In the second category (antecedents), the research focuses on one side on the factors of the customer, such as satisfaction, dissatisfaction, re-visit or sense of community affiliation (Crotts et al., 2009, Bronner and Hoog, 2011) (Inversini et al., 2010; Getz and Carlsen, 2005; Morrison et al., 2010), and, on the other hand, on hotel characteristics such as image, innovation, product and service quality, management functions (Inversini et al., 2010; Getz and Carlsen, 2005; Morrison et al., 2010). By developing e-commerce, online reviews became increasingly important for consumers when deciding to buy products. It is currently estimated that around 82% of consumers are reading reviews before making a decision (The research was conducted by ECC-Net (2013) in December 2012). Respondents were from 19 European countries – Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Estonia, Finland, France, Germany,

Latvia, Luxembourg, Spain, Greece, Iceland, Italy, Malta, Netherlands, Sweden and Slovakia. In total, 573 respondents were involved in the research). In today's global context, 46% of the population is using social media to help with purchasing decisions. Nielsen (2012) conducted a global survey to determine the credibility of ads between 31st of August and 16th of September 2011. More than 28000 online consumers were involved from 56 countries across the Asian-Pacific region, Europe, Latin America, the Middle East, Africa and North America, with a sample based on age and gender for each country. As a result, people increasingly rely on online product ratings provided by consumers who bought these products earlier and consider them as sources of information to derive the quality of available purchasing options (Li and amp; Hitt, 2008; Simonson and Rosen, 2014; Svec, Olsovskva and Mura, 2015). Online reputation is especially important in the hospitality industry and is extremely important in the context of hotel companies due to the high sensitivity and enormous impact of customer's electronic activities on online hotel reputation (Cantallops and Salvi, 2014; Gonzalez et al., 2013).

Researches also show that more than 60% of consumers trust in information obtained from partners, rather than in information obtained from companies. In addition, more than 50% of consumers consider reviewed websites to be more trustworthy sources than companies' official websites (Consumer Focus, 2012). A study at the University of Applied Sciences Worms in Germany suggests that nearly 96% of Internet users consider online reviews to be important (Conrady, 2014). Similarly, data from the USA show that over 80% of respondents surveyed consider Internet reviews valuable. The PeopleClaim (2013) survey was conducted on a sample of 2 445 US respondents in May 2013.

It is very important for businesses to have a look at post-purchasing consumer behaviour and try to limit the so-called post-purchasing dissonance as much as possible. Dissonance represents a post-purchasing discrepancy that consumers experience when purchasing the product (Richterova, et al., 2005). However, according to Koller and Salzberger (2007), cognitive dissonance may occur not only at the post-purchasing stage but is also occurring at the decision-making. It is also known because it is created mainly in three ways – firstly it can be created by any logical discrepancy. Secondly, it can arise when the person experiences disunity between his/her attitude and behaviour, or between his/her own behaviours, and thirdly, the discrepancy can occur when excessive expectations are not met, note Loudon and Della Bitta (2002).

We are of the opinion that, with the growing popularity of e-commerce, the dynamics of consumer behaviour is also changing. Research suggests an extraordinarily important role for customer ratings, which are also becoming supportive elements of consumer's decision-making in the online environment. Whether the positive or negative opinions of customers, the evaluation of the provided service, and last but not least, recommending the hotel to others, are now regarded as a valuable source of information available to consumers at various online portals through which these customers booked the hotels. The world's most famous portals are undoubtedly the Tripadvisor, Booking and Expedia.

TripAdvisor was founded in 2000 and has become the most popular travel and accommodation destination in the United States (Statista, 2018a) with more than 600 million user reviews, with an average of 270 user reviews per minute. It provides an overview of 7.5 million accommodation, airlines, attractions or restaurants. It compares prices from more than 200 hotel portals and the company's revenue reached 1 556 billion dollars (Expandedrambling 2018) in 2017. According to Statista (2018b), from April 2018, Tripadvisor reaches 37.7 million visitors per month. According to the declared facts, it can be said that the type of portal is not only an online reputation tool but is also an important tool for e-commerce.

Booking is the company, which provides travel services in more than 220 countries, recorded travel bookings of 81.2 billion dollars and revenue of 12.7 billion dollars (Sorells, 2018) in 2017, with net revenues reaching 2.34 billion dollars in 2017 (Statista 2018d). According to the Statista portal (2018b), from April 2018 it reaches 20.1 million visitors monthly.

Expedia was established in the United States in 1996 and in 2017 exceeded 88 billion dollars in reservations. In the same year, Expedia generated revenue of 10.06 billion dollars, of which 5.53 billion dollars in the US (Statista, 2018c). The number of visitors from April 2018 is, according to Statista (2018b), at 18.8 million.

Given that the objective of our research was the Visegrad Group, we also mapped some hotel-related statistics. According to Willoughby (2018), 2017 was a very good year for the tourism industry in the Czech Republic, with a total number of guests in hotels and other facilities at 20.1 million, a year-on-year increase of 9.1% in 2016. Four-star hotels were a category that pulled the largest number of guests in 2017 with 1.6 million, an increase of 8.3% two years ago. Three-star hotels and «boarding houses» recorded an increase in reservations of 7.4%.

In 2017, the number of nights spent in Hungarian accommodation facilities increased by 6.7% to 25.7 million year-on-year. The number of nights spent in accommodation facilities by foreign and domestic guests grew by 8% (to 13 million) and 5.4% (to 12.7 million), but each country in the Visegrad Region increased in this direction (Kormany, 2018).

According to Kozon and Cuper (2016), the number of accommodation facilities fluctuated during 2012-2014 and slightly decreased (by 0.5%) compared to 2012 to 26 232 units with a bed capacity of 1 777 895, which means that this number increased (2.4%). From the point of view of countries, the decrease in the number of accommodation facilities in the monitored period was recorded only in the Czech Republic (8.9%), and the largest increase in facilities was in Poland (5.7%). Both domestic and foreign visitors used the accommodation services of these facilities. The number of visitors to these accommodation facilities in the monitored period (excluding Slovakia in 2014) has gradually increased, but the highest number of visitors was recorded by all Visegrad Group countries in 2015. In the V4 countries, more than 58.9 million visitors (Index 2015/2012 – an increase of 18%) used accommodation services in 2015. Hungary recorded the highest growth rate in the monitored period (24.1%). In 2015, the highest year-on-year growth was recorded in Slovakia (16.2%). The analysis of selected statistical indicators from tourism confirmed the steady trend of growth in the share of domestic and foreign visitors in tourist accommodation facilities. At the same time, however, it confirmed the long-term unfavourable, decreasing trend of the average number of overnight stays in tourist accommodation facilities.

**Methodology and research methods.** Our research focuses on the issue of online reviews, specifically focusing on customer buying habits in terms of their quality assessment of accommodation services within the Visegrad group – V4 (i.e. Slovakia (SK), Hungary (HU), the Czech Republic (CZ) and Poland (PL)). An online customer is a user who has experience with services purchased through the Expedia portal and has subsequently left feedback about the evaluation of this service. Expressing the opinion and experience is a customer's own decision, not the responsibility of every user who has purchased services through that portal. For this reason, not every customer wants to share his/her experiences by leaving a review.

The aim of the research was to verify the existence of a significant association of customer ratings expressing the quality (rated variables: Room cleanliness, Service and staff, Room comfort, Hotel condition) to the percentage of willingness to recommend the accommodation.

The following research problem has been formulated in relation to the above-mentioned main research goals: «Is there a significant impact of the specific elements of the quality of hotel services (rated Room cleanliness, Service and staff, Room comfort, Hotel conditions) on the percentage of recommendations in the individual countries of the Visegrad Group»?

The first step of the analysis was the identification of online portals focusing on the human evaluation of accommodation providers. The decisive factor in this selection was the data completeness condition for the subsequent analysis (absolute values). The choice of suitable portals also affected their popularity, more precisely the number of active entities providing accommodation, as well as the technical capability

for automated data collection. Based on our selection criteria, we were able to identify one online portal. The main reason for not linking multiple portals was the inconsistency of the rated variables given by the portals.

In particular, the Expedia.com portal has been identified by Expedia, Inc, is also a publicly traded company listed under the ticker symbol EXPE on the NASDAQ Global Market? There are currently 200+ separate brands under the heading of travel booking sites. Among the most significant ones is the portal mentioned above, Expedia, and others like Hotels.com, Trivago.com, or Hotwire.com.

Expedia.com is one of the world's leading full-service online travel brands helping travellers easily plan and book travel from the widest selection of vacation packages, flights, hotels, rental cars, rail, cruises, activities, attractions, and services (Expedia 2017). This portal was founded in 1996. Nowadays, it has localized sites in 33 countries. Expedia.com has over 40 million post-stay reviews and more than 30 million real-time reviews.

Total revenue for Expedia in 2017 reached 10.06 billion dollars, which is a 15% year-on-year increase. Expedia is an online travel agency characterized by several predominant business models, such as Merchant, Agency, Advertising and media, HomeAway. Expedia helps to book hotel rooms, airlines, car rentals, or other travel services from travel agencies. Expedia records such reservations. However, most of the business transactions are related to hotel reservations. According to Expedia's 2017 annual report in 2017, Merchant reached \$ 5.394 billion dollars, an 11% year-on-year increase, with a 54% share of total revenue. As part of the Agency model, Expedia makes travel reservations easier and acts as the agent in the transaction, passing reservations booked by the traveller to the relevant travel provider. Expedia receives commissions or ticketing fees from the travel supplier and/or traveller. Agency reached 2.687 billion dollars in 2017 (an 11% increase compared to 2016), and its share of the company's total revenue is 27%. Under the advertising model, Expedia offers travel and non-travel advertisers' access to a potential source of transactions through various media and advertising offerings on Trivago and from transaction-based websites. The cost of the campaign placed on the Expedia portals varies depending on the timeframe, location, impressions, and exposure range, but the value is at least 10.000 dollars (Advertising, Expedia, 2018). Revenue from the Advertising and Media business model rose 33% over the previous year and reached 1.073 billion dollars in 2017. In total, this business model is shared by 11%. Under the HomeAway, Expedia earns revenue related to subscription-based vacation rental listing and other ancillary services provided to property owners and managers as well as from the traveller service. HomeAway reached 0.906 billion dollars in revenue (33% year-on-year increase), accounting for 9% of its total revenue for the year 2017.

For the purpose of the research, the following rated variables were identified as Number of customer reviews, Guests recommendations percentage, overall rating, Room cleanliness, Service and staff, Room comfort, Hotel condition. We have selected variables that are directly tracked by the Expedia.com, we have not created own variables in our research. The above variables are the main rated variables with which Expedia.com presents hotel ratings. This fact was the reason for choosing these variables.

The next step of the analysis was the identification of the subjects providing accommodation services within the monitored portal for subsequent data collection, i.e. customer reviews. For data collection purposes, we used the automatic data collection method using the script in PHP 5.6.17, MySQL 5.7.10 databases, phpMyAdmin, 4.4.15.2 MySQL database manager and Apache 2.4.16 web server. With the help of the above-mentioned technologies, a script has been created (we used PHP Simple HTML DOM Parser), which has been identified in the source code on the sub-pages of the summarizing rated entities providing the accommodation and subsequently records the selected monitored variables within the database. Selected technologies and procedures have been chosen based on our previous personal experience in the given area. Implementation of this step took place in several phases in April 2017. As

part of this step, we were able to identify 1500 profiles of accommodation providers suitable for further analysis.

The third step of the analysis was the control of the monitored variables (ratings) within the identified profiles of the investigated subjects. The aim of this step was to identify suitable subjects (accommodation facilities) for further in-depth analysis, identifying entities which included customer ratings and were not identified as inactive. Only the valid entities were registered. At this stage, the selective condition of the subjects was implemented; specifically, subjects included in the survey whose profile contained at least 20 customer reviews. As in the previous step, the automatic data collection method was used in this script. The implementation of the data collection took place in May 2017.

From the data obtained in this step, 1942 entities with customer ratings were identified. The survey included 1500 (77.24%) subjects – subjects with more than 20 customer reviews. The analysis of the variables is based on the total sample of 345 175 customer reviews. It should be emphasized that all hotel reviews are taken into account, we did not focus on a certain period. A closer look at the data obtained is given in Table 1 and Table 2, which describe the basic characteristics of the research file.

**Table 1. Characteristics of the research file – by country**

Country	Valid subjects (N)	Valid subjects (%)	Reviews (N)	Reviews (%)
SK	107	7.13	13 934	4.04
CZ	545	36.33	154 685	44.81
PL	642	42.80	101 752	29.48
HU	206	13.73	74 804	21.67
Total	1500	100.00	345 175	100.00

Sources: developed by the authors.

**Table 2. Characteristics of the research file – by country**

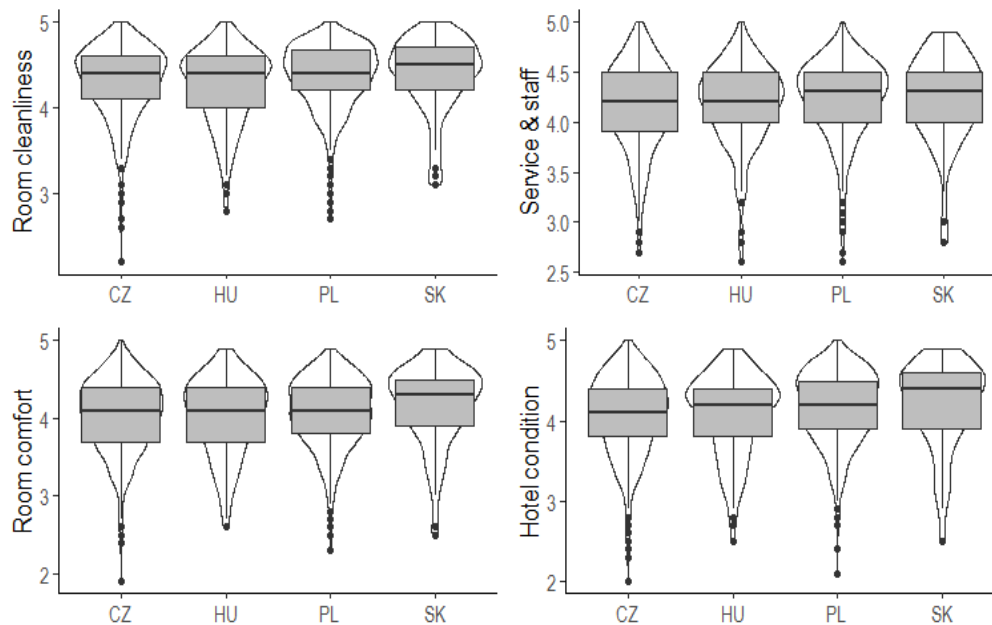
Hotel stars	CZ		HU		PL		SK	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
1	0	0.00	1	0.49	9	1.41	0	0.00
1.5	0	0.00	1	0.49	5	0.78	1	0.93
2	15	2.75	11	5.34	73	11.41	9	8.41
2.5	4	0.73	2	0.97	10	1.56	1	0.93
3	176	32.29	64	31.07	263	41.09	36	33.64
3.5	46	8.44	29	14.08	74	11.56	8	7.48
4	244	44.77	72	34.95	169	26.41	42	39.25
4.5	16	2.94	7	3.40	1	0.16	2	1.87
5	44	8.07	19	9.22	36	5.63	8	7.48
Total	545	100.00	206	100.00	640	100.00	107	100.00

Sources: developed by the authors.

The variables entered in the ordinal scale in the range from 1 to 5. The variables were the Room cleanliness, Service and staff, Room comfort, Hotel condition and the percentage of Guests recommending a particular hotel. In the statistical processing of the file, we proceeded to describe the variables by visualizing Boxplot later by descriptive statistics in the diameter and by the standard deviation of the minimum and the maximum of the given variable. The associations were derived by the Kendall coefficient correlation coefficient since it was an ordinal scale with unequal abilities of the individual categories of the analysed variables. In order to reduce the association between individual evaluations, we used Spearman's correlation coefficient  $\rho$ . Cronbach's  $\alpha$  was used to calculate reliability. To find the exact measure of the aggregate variable association created from the separate evaluations, we will use

the above-mentioned Kendall coefficient  $\tau$ . 1500 subjects were investigated. The following Boxplot chart visualizes the user rating of the individual rated variables (Room cleanliness, Service and staff, Room comfort, Hotel condition) and the percentage of recommendations between the countries of the Visegrad Group.

**Results.** Visualizations of individual element ratings along with Boxplot's standard outputs also show the relative abundance defined by the width of the figure (Figure 1). As can be seen below, in general, the best hotels are in Slovakia, then in Poland. There is a very small difference between the Hungarian and Czech hotels. Moreover, Hungary has achieved a much better rating referring to Hotel condition. The most frequent evaluations were in the range of about 4 to 4.5. The range of the file is quite large, starting with remote and extreme values in the low score area around level 2 passing through the statistical minimum located in the area around the value of the rating 3 and ending at the maximum fluctuating at the value of 5, i.e. at the theoretical maximum of the evaluation interval.



**Figure 1. The output of separate ratings between the V4 countries**

Sources: developed by the authors.

The following Figure 2 shows the percentage of the recommendations. As can be seen, the recommendations materialize in higher values. Extreme values begin approximately at about 10%. The statistical minimum starts at 60%, the lower quartile is relatively high, about 85%, and the median is at 90% and in the case of Poland and Slovakia, the majority of the rating reaches the theoretical maximum.

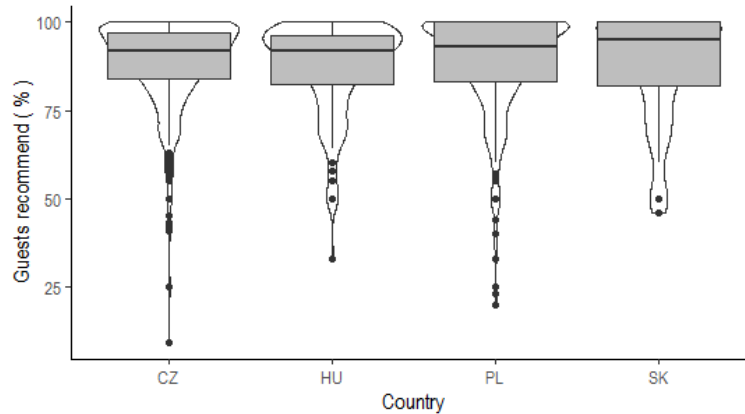


Figure 2. Hotel recommendations between the V4 countries

Sources: developed by the authors.

The following table 3 shows the basics of the descriptive statistics of the analysed variables between individual hotels in the Visegrad Group.

Table 3. Descriptive statistics of the analysed variables

	CZ				HU			
	Min	Max	Mean	Std. Dev	Min	Max	Mean	Std. Dev
Room cleanliness	2.2	5	4.31	0.41	2.8	5.0	4.24	0.43
Service & staff	2.7	5	4.16	0.43	2.6	5.0	4.18	0.41
Room comfort	1.9	5	4.04	0.47	2.6	4.9	4.02	0.50
Hotel condition	2.0	5	4.07	0.50	2.5	4.9	4.08	0.51
Guests recommend	9.0	100	88.37	12.47	33.0	100	87.43	13.01
	PL				SK			
	Min	Max	Mean	Std. Dev	Min	Max	Mean	Std. Dev
Room cleanliness	2.7	5.0	4.36	0.38	3.1	5.0	4.38	0.44
Service & staff	2.6	5.0	4.23	0.40	2.8	4.9	4.23	0.44
Room comfort	2.3	4.9	4.07	0.44	2.5	4.9	4.15	0.51
Hotel condition	2.1	5.0	4.16	0.46	2.5	4.9	4.18	0.56
Guests recommend	20	100	88.46	13.99	46	100	87.68	15.34

Sources: developed by the authors.

The Room Cleanliness variable was best rated in Slovakia with an output of 4.38, with a difference of two hundredths in the ranking of the given variable in the second place. Polish hotels followed the Czech Republic with an output of 4.31 and a fourth one is Hungary with an average rating of 4.24. The lowest deviation was recorded in Poland; thus we can assert that the data has the highest confidence level. The Czech Republic, Hungary and Slovakia have a deviation varying in the range of three hundredths. Similar results can be seen in other variables (Service and staff, Room comfort, Hotel condition), with a difference of the order in the Czech Republic and Hungary. The Guest recommendations percentage achieved the best rating in Poland with an output value of 88.46% and the Czech Republic followed it with a difference of nine hundredths. Slovakia was placed in a third place on average Guest recommendations with an output value of 87.68%. Hungary is the fourth one of the V4 countries. The least varied were the outputs in the Czech Republic and the highest deviation was recorded in Slovakia.

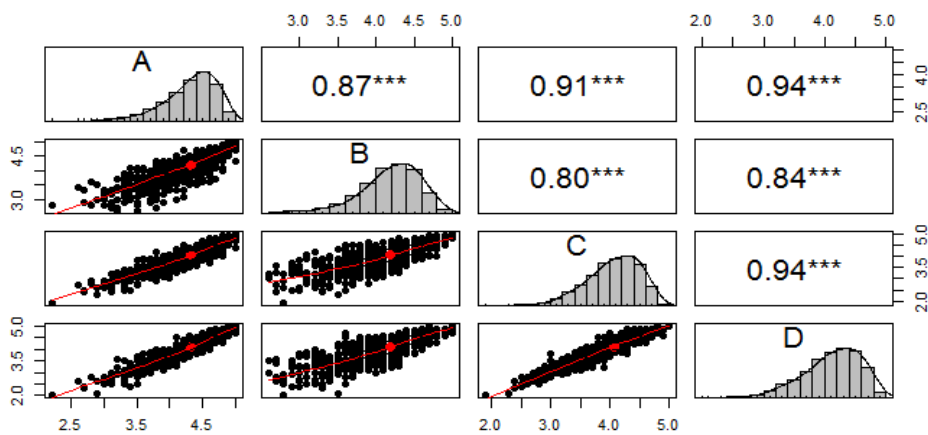


**Table 4. Separate rating association as a percentage of the recommendation**

Guests recommend (%)		Room cleanliness	Service & staff	Room comfort	Hotel condition
CZ	Approximate Sig.	0.000	0.000	0.000	0.000
	Kendall's $\tau$ -c	0.520	0.539	0.511	0.522
HU	Approximate Sig.	0.000	0.000	0.000	0.000
	Kendall's $\tau$ -c	0.496	0.465	0.430	0.474
PL	Approximate Sig.	0.000	0.000	0.000	0.000
	Kendall's $\tau$ -c	0.377	0.388	0.375	0.375
SK	Approximate Sig.	0.000	0.000	0.000	0.000
	Kendall's $\tau$ -c	0.509	0.543	0.435	0.463
Total	Approximate Sig.	0.000	0.000	0.000	0.000
	Kendall's $\tau$ -c	0.451	0.461	0.432	0.444

Sources: developed by the authors.

The table above accurately defines the rates of the Room Cleanliness, Service and Staff, Room comfort and Hotel condition variables. As can be seen, the p-value is in all cases less than 0.05 and even 0.01, which means that in all cases we are talking about a significant association. We interpret the rate of association in Poland as weak, although its outcomes fluctuate at the middle level, in other countries we are talking about the middle rate of the association. Such outputs may be caused by the nature of the service but also by other variables, i.e. if the rated hotel had very positive ratings, in Room cleanliness it can be assumed that it will have positive ratings also for other variables. The following table verifies this assumption.



**Figure 3. Association (Rho) of separate ratings between each other**

Note: \* A – Room cleanliness, B – Service & staff, C – Room comfort, D – Hotel condition.

Sources: developed by the authors.

As we can see in the above figure, the p-value is in all cases smaller than 0.01 (\*\*\*) , which means that in all cases we are talking about a significant association. The intensity of the association is interpreted as strong in the case of Service and staff and Room comfort. For other combinations, we are talking about very strong ratings. Separate ratings represent individual items defining the perceived quality of the accommodation. Similarly, it is possible to create a single aggregate variable expressing quality by grouping the partial ratings.

The Cronbach's  $\alpha$  reliability output is sufficient to modify the separate items. The admission limit is 0.7 and our output is 0.966, so its representativeness, and therefore the suitability of adjusting the variables, is not unreasonable. The separate ratings were adjusted by the arithmetic mean, and thus the new variable, the aggregate quality, was obtained. The following table provides exact information about the significance and the degree of association of the above-mentioned variables.

**Table 5. Associating the average of the individual ratings together with the percentage of the recommendation**

Guests recommend % AND quality mean	Value	Asymptotic Standardized Error	Approximate T	Approximate Significance
Kendall's $\tau$ -c	0.462	0.015	30.962	0.000
N of Valid Cases	1500			

Sources: developed by the authors.

As we can see, the p-value is marginal equals to zero, thus we are talking about a significant degree of quality association on Guests recommendation percentage. The association rate with the output of 0.462 is understood as the medium to large association rate. From these outputs, the quality is significant and moderate largely on Guests recommendation percentage.

**Conclusions.** The issue of online customer reviews and the issue of building a positive online reputation for tourism stakeholders is an important part of the process of enforcing both the virtual market and the offline market. It is not necessary to emphasize that customers are the basis of the market. From this point of view, online reputation has a tremendous impact on tour operators, more precisely on accommodation facilities. Based on this online reputation, also represented in the form of online customer reviews, it greatly affects consumer decision-making while purchasing goods and services. From the point of view of competitiveness, the issue can be considered as highly topical.

The outputs of our research described in the previous sections of this article positively answer our research question. We take the view that there is a significant impact of specific variables expressing the quality of the hotel in the individual countries of the Visegrad Group on the percentage of customers recommending the accommodation.

The conclusion from this article is a separate Hotel Quality rating (Room cleanliness, Service and staff, Room comfort, Hotel condition) which significantly influences hotel recommendation (Guests recommend %). Separate rating treated by the arithmetic mean, which is, the variable defining the quality also affects the recommendation rate.

Hotels that have a marketing philosophy primarily or secondarily built for goodwill, recommendations should not neglect activities that have a positive impact on Room Cleanliness, Service and Staff, Room Comfort, Hotel Condition, rewarding the increasing value of recommendations in theoretical but especially in the practical level, and thus reach a steadily increasing competitive advantage. We solved the problem and it offers a relatively wide range of questions and creates scope for a number of analyses. The possibility of analyzing the association is found in a more detailed sorting of variables, but with respect to the outcomes that have been shown to be high by the association, no significant deviations are expected.

It is important to look at the matter in a serious way. The greatest risk to tour operators or other market players is that the long-term online reputation of the entity, built on customer reviews, can damage the review of a single dissatisfied customer.

As well as the results of many other studies on this issue, the outputs of our research coincide with undeniable facts and provide relevant insight into how rapid changes in consumer behaviour are directly observed with the rapid development of e-commerce. Nowadays, building a good online reputation seems more important than ever before. Particularly if we are thinking of companies in the tourism industry, where

the competition is huge and the interest of the target customer is extremely demanding. In order to maintain a steady trend in domestic and foreign visitor growth in Visegrad Group accommodation, it is more than necessary to take into account the factors that customers regard as relevant and which are the subject of customer evaluation on available platforms in the form of online customer portal reviews. This tool acts not only as an unmistakable, extraordinarily valuable source of user-generated information based on personal experience but can also be considered as a support pillar or effective e-commerce tool for building trust or positive online reputation. For this reason, we conclude that companies operating in the hotel industry, not just in the Visegrad Group countries, should increase their focus on continually raising the level of online reputation management.

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**R. Bacik, L. Kmeco, F. Richard, M. Olearova, M. Rigelsky. Marketing Instrument of Improving Hotel Management Service: Evidence of Visegrad Group Countries.**

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**Маркетингові інструменти підвищення ефективності управління готельним бізнесом: досвід країн Вишеградської групи**

На ефективність управління готельним бізнесом, в першу чергу, впливає рівень задоволення потреб споживачів. Окрім цього розвиток інтернет-послуг зумовлює появу нових можливостей та послуг, що в свою чергу, вимагає від готельного менеджменту швидкої реакції та адаптації до змін. Головною метою статті є визначення взаємозв'язку між онлайн-відгуками клієнтів щодо якості наданих послуг та їх бажанням рекомендувати даний готель. Об'єктом дослідження є готелі країн Вишеградської групи. Актуальність даного дослідження пояснюється необхідністю аналізу факторів, які впливають на рівень задоволення клієнтів умовами проживання у готелях. Авторами запропоновано маркетингові стратегії, які враховують фактори впливу на рівень задоволення клієнтів наданими послугами. Емпіричні результати роботи ґрунтуються на відгуках та оцінках споживачів щодо якості готельних послуг, що опубліковані на туристичному сайті *Expedia.com*. Автори зазначають, що *Expedia.com* фокусується на якісній оцінці готелів країн Вишеградської групи. Масиви даних для аналізу було сформовано на основі 345175 опублікованих рейтингів клієнтів по 1500 готелям. У ході роботи автори проаналізували частку споживачів, які у першому півріччі 2017 року рекомендували готелі згідно обраних факторів. Автори відмічають, що згідно результатів дослідження для країн Вишеградської групи характерним є прямо пропорційна залежність між факторами, які відображають якість послуг готелю, та питомою вагою клієнтів, які рекомендують проживання в готелі. Дослідження показало, що готелі, маркетингова політика яких, прямо чи опосередковано спрямована на підвищення іміджу та репутації, мають зосереджуватись на наступних факторах: чистота кімнати, обслуговуючий персонал, комфортність приміщення чи умови проживання у готелі. Вищезазначені фактори позитивно впливають на зростання кількості позитивних відгуків про готель, що тим самим формує позитивний імідж готелю та постійне зростання його конкурентних переваг на ринку готельного бізнесу.

**Ключові слова:** туризм, репутація, маркетингові комунікації, готель, Вишеградська група.

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