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THE CONSUMERS' PROCLIVITY FOR HOTEL REVIEW POSTING: HOW DO WE DIFFER?

Sklonost hotelskih gostiju ka publikovanju onlajn hotelskih recenzija – po čemu se razlikujemo?

Abstract

This study aims to determine international differences in hotel guests' proclivity for posting online hotel reviews. By using TripAdvisor reviews of Vienna, Belgrade and Zagreb hotels, the proclivity coefficient is constructed. By employing the panel regression model, a direct correlation between the proclivity coefficient and the internet penetration is determined. The values of the Spearman correlation coefficient support the statistically significant direct correlation between the proclivity coefficients and the Hofstede's indexes for the individualism/collectivism dimension. The results show that the proclivity coefficient values are higher for the consumers from countries with higher values of internet penetration and individualism/collectivism index values. Results of this research offer practitioners an insight into the factors moderating hotel guests' proclivity for posting online hotel reviews and thus enables them to adapt e-WOM strategies to different groups of consumers.

Keywords: *electronic word-of-mouth (eWOM), cross-cultural study, online hotel reviews, proclivity coefficient.*

Sažetak

Cilj ovog rada je da utvrdi sklonost hotelskih gostiju iz različitih zemalja ka publikovanju onlajn hotelskih recenzija. Korišćenjem recenzija hotela iz Beča, Beograda i Zagreba sa portala TripAdvisor konstruisan je koeficijent sklonosti ka publikovanju recenzija. Primenom panel regresionog modela utvrđena je direktna korelacija između vrednosti koeficijenata sklonosti i stope internet penetracije. Vrednosti Spirmanovog koeficijenta korelacije potvrđuju postojanje statistički značajne direktne korelacije između koeficijenata sklonosti i Hofštedovog indeksa za dimenziju nacionalne kulture individualizam/kolektivizam. Rezultati ukazuju da se više vrednosti koeficijenta sklonosti registruju u slučaju potrošača iz zemalja sa višim registrovanim vrednostima internet penetracije i višim vrednostima Hofštedovog indeksa za dimenziju individualizam/kolektivizam. Rezultati ovog istraživanja omogućavaju praktičarima uvid u faktore koji utiču na sklonost hotelskih gostiju ka publikovanju onlajn hotelskih recenzija, omogućavajući im da prilagode e-WOM strategije različitim grupama potrošača.

Ključne reči: *elektronska komunikacija od usta do usta (eWOM), kros-kulturna studija, onlajn hotelske recenzije, koeficijent sklonosti.*

Introduction

The rapid development of modern information technologies makes tourists more informed and sophisticated [9]. It is vehemently contributed by the growth of the second generation of the internet, the so-called Web 2.0. Practically, it is about the word-of-mouth (WOM) information distribution, but not in its traditional sense, but via the use of Web 2.0 technology which is in tourism also referred to as Travel 2.0 [74]. Buhalis and Law [9] state that Web 2.0, with the concepts of social networking and virtual communities, is widely applied in the tourism industry. Such contents are also deemed as user-generated content (UGC). Xiang and Gretzel [74] identify several different forms of UGC: virtual community sites (i.e. Lonely Planet), consumer review sites (i.e. TripAdvisor), media sharing sites (i.e. YouTube), social networks (i.e. Facebook), and blogs. Such portals enable horizontal communication between the users who have the opportunity to exchange different content. If such contents refer to product and service consumption, such type of communication is called electronic word-of-mouth – eWOM [7], [22], [25], [40], [57]. eWOM is a very popular source of information for trip planning/organising [11], [58] and it considerably affects the tourist industry, especially the hotel industry [10]. The reviews severely affect the consumers who are keen on using the internet [67], [81], that is, such an influence is more prominent in the case of those products and services which are more frequently purchased online, which applies to hotel services [64]. Consumer review sites are the most influential form of eWOM in the hotel industry [5], [26] with a strong influence on hotel guest behaviour [64], [70], and therefore on hotel performances [32], [52], [54], [76].

Even though the question of the consumers' motivation for participation in the eWOM content creation has captured the attention of a certain number of researchers [22], [27], [40], [73], [78], Wilson et al. [73] and Bore et al. [6] point out that little of the research refers to the impact of nationality on motivation for participation in the eWOM. From a general point of view, some papers [16] investigate the influence of the national culture features on the tourist service evaluation by the consumers, as well as their influence on the probability of positive offline word-of-mouth. To the best of our knowledge, merely few studies have considered the effect of tourist cultural orientation on their proclivity for tourist related eWOM [73].

In 1980, Geert Hofstede defined different cultural dimensions [27]: power distance (PDI), individualism vs. collectivism (IDV), masculinity vs. femininity (MAS), and uncertainty avoidance (UAI). Since cultural differences are a significant factor that affects consumers' engagement in eWOM [14], motives for participation in eWOM [79], customer behaviour in tourism [49], as well as their complaint behaviour regarding hotel services [51], it is reasonable to expect that the influence of cultural differences will make members of different cultures exhibit different behaviour in comparison to their proclivity for making online hotel reviews. In the literature [10] there is a call for further research that will respond to the following questions: Do cultural differences influence the creation of online hotel reviews? and What aspects contribute to the generation of online hotel reviews in different nationalities? This paper is a response to that call.

Studies that investigate the relation between hotel-related eWOM and the nationality are usually based on a limited sample [73]. This study is centred on a large sample consisting of 151,019 hotel reviews that have been collected and analysed in order to:

- Determine and quantify the proclivity of hotel guests from different countries for posting online hotel reviews.
- Determine if the ascertained different tendencies towards posting hotel reviews can be explained by different availability of the internet in the observed countries.
- Ascertain whether cultural differences between specific nations are the factor which could explain different tendencies towards posting hotel reviews by exploring the relationships between the proclivity of hotel guests from different countries for posting online hotel reviews and the Hofstede's national cultural dimension index values. This objective is viable because Hofstede's cultural dimensions, initially determined in 1980, are predominantly used in the relevant literature for defining national cultures [16], and are one of the most popular frameworks aimed

at investigating the effects of culture in marketing [36], which are considerably accepted and quoted in the cross-cultural management literature [53]. It is important to note the publication of a certain number of recent scientific papers whose authors dispute the coherence and utility of certain cultural dimensions of the Hofstede model. Thus Minkov [47] states that the PDI based on the results of this study is a logical facet of IDV, and that the MAS dimension lacks coherence, whereas claiming that UAI lacks internal reliability even though the previous investigation of the same author [48] reached the opposite conclusions regarding this cultural dimension. Despite the aforementioned opposite statements [47], we have decided to include all of the Hofstede's original cultural dimensions in the analysis. Considerable insight into some of the scientific papers published over the last year in the most prominent multidisciplinary journals, as well as the journals in the field of cross-cultural and strategic management research and hospitality and tourism [2], [13], [18], [33], [35], [38], [42], [44], [50], [65], [69], [75], has provided us with the fact that the original Hofstede model is still being widely applied.

Literature review and hypotheses

eWOM is a field that has been thoroughly investigated in the literature [26], [40], [66], [73], [78]. Cantallops and Salvi [10] point out that the literature on the subject features two basic directions of eWOM research: the research of the motivation which contributes to eWOM creation and the impact of eWOM both from the perspectives of the consumers and companies. Having in mind the fact that a small number of eWOM providers affects a large number of consumers in the purchasing process [66], it is vital to ascertain the factors behind motivating the consumers to post reviews on product and service quality.

The research conducted by Fu et al. [21] indicates that the level of consumers' satisfaction with products/ services purchased exhibits limited association with eWOM intentions. eWOM requires some time and effort. Therefore, consumers opt for making product/service reviews only

when highly motivated [31]. The literature encompasses the following frequent motives for eWOM posting: desire for social interaction, desire for economic incentives [26], concern for other consumers [12], [26], altruism [8], [63], potential to enhance their own self-worth [17], [26], [78], platform convenience and problem-solving support - platform assistance [26], status seeking [37], consumer empowerment [8], helping the company [8], and revenge [24], [63]. Yen and Tang [77] indicate that motives are not universal and that there are different factors that motivate users in comparison to the used eWOM platform.

The question arises as to whether there are factors which affect the consumers from different countries having different proclivities for publishing online hotel reviews. Bearing in mind that reviews are published online, it is reasonable to expect the hotel guests from countries with higher percentage of individuals using the internet to have better opportunities to publish reviews, so our initial hypothesis is:

H1: Hotel guests from countries with a recorded higher percentage of individuals using the internet show a higher proclivity for posting online hotel reviews.

However, even with the same internet availability, it can be used in different ways with regard to both frequency and contents [23]. It could be attempted to account for such behaviour differences with cultural differences. Lam et al. [36] have analysed the influence of cultural differences on offline WOM and concluded that individualism, masculinity, uncertainty avoidance and power distance have a significant impact on in-group and out-group WOM engagement. We could ask a question whether these four cultural dimensions also influence eWOM, especially hotel related eWOM.

Individualist societies are deemed as societies in which the relations between individuals are weaker, and in which individuals are expected to take care of themselves and their nuclear family, whereas collectivist societies are the ones in which strong cohesive in-groups are formed providing protection in exchange for unquestioning loyalty [27]. Since eWOM is a communication which is carried out in the online environment, in order to hypothesize whether IDV dimension affects the hotel guests' proclivity for posting online reviews or not, it is initially necessary to

determine whether IDV affects the consumers' proclivity for using information and communication technologies (ICT) and the internet whatsoever. Hofstede et al. [27] state that, in essence, the internet is an individualistic tool. In addition, they also claim that information and communication technologies are more often and more enthusiastically used in individualist societies. However, the influence of culture does not cease at the point of determination of the degree to which people tend to use the internet, but it includes the way of using it, as well. As Goodrich and Mooij [23] claim, the way people use the internet varies worldwide, which applies to usage frequency, number and type of contacts, interactivity, and content. Frequent usage of the internet does not necessarily imply greater proclivity for posting online hotel reviews. It is vital to identify whether the IDV cultural dimension influences the willingness of hotel guests to share their product/service purchase experience with strangers or not.

The relationships between the IDV cultural dimension and WOM have been the subject of several studies. Luo et al. [43] analyse the effects of individualism–collectivism cultural orientation on eWOM information processing and conclude that it affects eWOM readers' perception of information credibility. Lam et al. [36] conclude that individualism has a strong and positive effect on out-group WOM. Koh et al. [34] investigate online movie reviews in different cultures and conclude that the individualism/collectivism dimension affects the willingness of the consumers to assess the movie, with the consumers from collectivist cultures being more willing to publicly express their opinion in a situation when they like the movie in comparison to the situation in which they dislike the movie. Triandis [68] states that the size of in-groups is different: in collectivist cultures they are smaller and usually include the family, whereas in individualist cultures they are larger and can include all individuals who we share significant views with, as well as that members of the collectivist cultures are more inclined to share resources with in-group members, simultaneously exhibiting mistrust and unwillingness to cooperate with out-group members. Since information is regarded as a resource, it can be concluded that members of collectivist cultures are less inclined to share information with strangers who are not part of their in-group. Members of collectivist cultures have a more intensive contact with other people, and the information exchange regarding product/service purchasing is more frequently carried out interpersonally within an in-group. Taking into account the abovementioned views, we put forward the following hypothesis:

H2: Hotel guests coming from countries with high IDV index scores are more inclined to post online hotel reviews.

According to Hofstede et al. [27], power distance (PDI) is defined as the degree to which the less powerful institution and organisation members within a country expect and agree that power is distributed unequally. The people from countries with low PDI index scores are induced to express their opinion, to be independent, early on in life. It is logical to expect the members of such societies to show initiative for evaluating hotel service quality, as well as for exchanging useful information between equal members of online virtual communities. The results of the research carried out by Lam et al. [36] indicated that low PDI index score is related to a higher willingness to participate in WOM with out-group members. Schumann et al. [60] advocate that it is expected of people from national cultures with low scores of PDI to be more comfortable with making assessments based on their own experiences. Pornpitakpan and Francis [56] state that people from cultures scoring high on PDI are more influenced by experts than the people from cultures with low PDI index scores. Hotel-related consumer review sites are not expert platforms. Based on that, one may assume that people from high PDI cultures are less inclined to believe the information obtained via these non-expert, informal sources. Therefore, they are less likely to visit such portals because they do not pose a relevant information source for them, so it may be assumed that they are less inclined to post reviews on such portals. Goodrich and Mooij [23] point out that high IDV is usually correlated with low PDI, so that correlations relating to one dimension are consequently often related to the other. Therefore, the following hypothesis is formulated:

H3: Hotel guests originating from countries with low PDI index scores are more inclined to post online hotel reviews.

Masculine society is regarded as a national culture in which assertiveness, toughness and focus on financial success prevail, whereas a feminine society is one in which modesty, tenderness and concern with the quality of life are predominant [27]. Hofstede et al. [27] claim that the use of the internet for private purposes correlates with low MAS, and posting online hotel reviews certainly qualifies as using the internet for personal purposes. Hofstede further indicates that low MAS is related to the internet usage for "rapport" purposes, whereas in high MAS, the internet is more frequently used for "report" purposes. The rapport purpose involves using the internet for sating personal views, opinions and feelings, whereas the report purpose is linked to information conveyance [27]. Can the communication on hotel-related consumer review sites be regarded to be more of a "rapport" or a "report" character? It is evident that hotel guests will not use hotel reviews to convey solely objective information, but they will often express personal views, opinions and feelings so that the contents that are exchanged on the consumer review sites essentially stand as subjective experiences gained during consumption. Blackshaw and Nazzaro [4] state that social network content is a combination of different elements, such as facts and opinions, impressions, sentiments, experiences, and even rumours. Therefore, the following hypothesis is put forward:

H4:   Hotel guests originating from countries with low MAS index scores are more inclined to post online hotel reviews.

Hofstede et al. [27, p. 191] define uncertainty avoidance (UAI) "as the extent to which the members of a culture feel threatened by ambiguous or unknown situations". Consumers coming from cultures with high UAI index scores generally show greater resistance against changes [59]. Therefore, we argue that the same resistance is expected to be present against the communication channel changes. The usage of electronic communication and online platforms for information exchange is surely an innovative form of communication between people who are unfamiliar to each other. Consequently, they are less likely to adopt electronic communication and are hesitant to use modern technologies. On the other hand, consumers originating from cultures with a low level of uncertainty avoidance use the internet sources more frequently for the comparison of different alternatives when purchasing services [27]. Taking into consideration the abovementioned, we put forward the following hypothesis:

H5:   Hotel guests originating from countries with low UAI index scores are more inclined to post online hotel reviews.

Research methodology

The initial step in the research involved the identification of the categorised hotels in Vienna, Belgrade and Zagreb as selected destinations for the analysis. With regard to that, the following official publications were used: "Hotel Guide" issued by the Vienna Tourist Organization [71] and a lists of categorised hotels retrieved from the portals of the Ministry of Trade, Tourism and Telecommunications of the Republic of Serbia [46] and The Ministry of Tourism of the Republic of Croatia [45].

The research for the purpose of this study was carried out from September 2018 to December 2018. The analysed sample consists of all categorised hotels in Vienna, Belgrade and Zagreb.

The next step involved the identification of the reviews on TripAdvisor portal for each hotel respectively, which was, then, followed by the classification based of the country of origin of the reviewers within the 2010-2017 period. TripAdvisor was selected because it is by far the most popular hotel-related consumer review site [1], [3], [11], 74], [80]. There is a possibility of publishing hotel reviews on the portals of numerous online intermediaries (e.g. Booking.com). However, such a portal allows only the consumers who use the portal itself to make a booking to subsequently make a hotel review. Contrary to that, the TripAdvisor portal allows posting reviews regardless of the booking channel. It was an additional factor behind the selection of TripAdvisor portal as the centre of this research.

There was an attempt to extract data by way of a web crawler, but since during their registration to the TripAdvisor portal, a large number of reviewers had failed to record their country of origin, but primarily only their place (city/town) of residence, the application of the

automated method of data extraction did not contribute to the efficiency of the research. So, in the case of the reviewer's entry only of his/her place of residence (city/town), Google Maps service was used to pinpoint the country of origin based on such data. The reviews whose authors mentioned no data about the place of residence were classified into a separate group and were not included in the analysis. The analysed sample includes 151,019 reviews. It was possible to determine the origin of the reviewer for 136,099 reviews, that is, 90.12 percent of them.

With a view to identifying and measuring the differences of the proclivity of hotel guests from different countries for online hotel review posting, it was necessary to identify the total number of guests from different countries who visited Vienna, Belgrade and Zagreb during the analysed period. The data was obtained from the official statistical publications – Vienna Tourist Organization: Arrivals and Bednights in All Types of Accommodation [72], Statistical Yearbooks of Belgrade 2011-2017 [29] and Statistical Yearbooks of Zagreb 2011-2018 [15]. The data on Percentage of Individuals Using the Internet during 2010-2017 period were obtained from the International Telecommunication Union portal [30].

One may expect to record a higher number of hotel reviews whose authors come from countries for which a higher number of visits to the analysed destinations has been recorded, as well. In order to rule out the impact of the abovementioned, the number of hotel reviews from individual countries is compared to the number of guests from every individual country and then multiplied by a thousand. As a result, the proclivity coefficient represents the number of the posted guest reviews from every individual country for a thousand recorded guests coming from that particular country.

It could be expected that a higher number of guests coming from countries with a higher level of disposable income will be recorded, but it will not necessarily entail a higher number of hotel reviews made by these guests. Internet penetration and cultural differences between nations could influence the value of the proclivity coefficient by affecting the number of reviews from individual countries.

Proclivity coefficients are determined only for the consumers originating from the countries for which all the necessary statistical data were available. The ascertained coefficients were then compared to the Hofstede index values [27] of different countries for each of the main four analysed cultural dimensions, as well as to the rates of internet penetration in those countries, in order to determine whether cultural differences and the internet penetration could account for the perceived differences in consumers' proclivity for posting reviews on TripAdvisor.

Results and discussion

The proclivity coefficients for posting reviews on the TripAdvisor portal are determined for consumers coming from 26 countries, with a sample of all the categorized hotels in Vienna, Belgrade and Zagreb. Proclivity coefficients by country have been ascertained as aggregate for the observed period of eight years, that is, these are calculated for the eight years in total. Using the data obtained from the three cities, we construed an aggregate proclivity coefficient for posting reviews. An aggregate proclivity coefficient is construed by summarising the number of reviews of the recorded guests coming from individual countries to all three cities, and then compared to the overall number of guests in all three cities. The results for the proclivity coefficients are presented in Table 1.

The goal of the next part of this research is to determine whether there is a correlation between the proclivity coefficient and internet penetration. For each of the years mentioned, proclivity coefficient and internet penetration are analysed. The data under examination are the panel data, which are suitable for hierarchical modelling. Within the panel data, it is possible to perceive a certain irregularity, that is, the effects among the countries either within a time period or finally between the countries and the time. Due to the nature of the data, it is necessary to employ panel regression. In this case, panel regression model involves two variables, that is, proclivity coefficient as a dependent variable and percentage of individuals using the internet (internet penetration) as an independent variable. These panel regression models which encompass the abovementioned variables for 26 observed countries for an eight-consecutive-year period can be viewed as stable and acceptable, provided they are in accord with

the initial assumptions of the regression. With a view to obtaining reliable evaluations of the regression coefficients, therefore a valid model, a preliminary analysis has been carried out including the following: the detection of unusual and influential data, heteroscedasticity testing, multicollinearity and linearity.

First, a preliminary analysis of the panel regression model is conducted. Unusual sequence data are those which noticeably deviate from the average (outliers), and they are identified based on the value or the residual, Cook's D and DFITS values, whereas the influence of the independent variable data is calculated by the value of DFBETE. The abovementioned values of the analysed data meet the initial assumptions of the model. The assumption of the heteroscedasticity is tested by the Cook-Weisberg test, and based on the obtained results (p-value=0.072), the zero hypothesis is not dismissed, which indicates a

stable regression model. Since the initial assumptions of the regression model are met, the next step is the selection of an adequate type of the panel regression model. With regard to that, first the Hausman test is carried out; as Hausman's statistic is 16.47 and p-value=0.000, the zero hypothesis is dismissed, that is, the application of the fixed effects (FE) model is recommended. Table 2 presents the assessed regression coefficients of the abovementioned model.

The research included the proclivity coefficients of hotel guests from 26 countries established for each year for the eight-year period. For that reason, the panel

Table 1: Proclivity coefficients for posting reviews on the TripAdvisor portal during the 2010-2017 period

Country	Proclivity coefficients for the 2010-2017 period			
	Vienna	Belgrade	Zagreb	Aggregate proclivity coefficients
Australia	5.92	5.59	5.78	5.87
Austria	0.65	2.17	1.09	0.67
Belgium	3.10	4.04	2.51	3.08
Bulgaria	0.92	0.93	0.49	0.80
Canada	5.35	4.37	4.27	5.07
Czech Republic	1.36	2.08	1.25	1.40
Denmark	2.20	2.88	2.52	2.31
France	3.50	3.90	1.97	3.32
Germany	1.33	2.39	1.17	1.35
Great Britain	7.00	10.03	7.31	7.22
Netherlands	2.18	3.34	1.70	2.21
Hungary	1.04	1.66	1.16	1.10
Italy	5.33	5.99	3.40	5.13
Japan	1.53	2.99	1.52	1.56
Norway	2.47	4.17	2.83	2.74
Poland	1.21	1.58	0.87	1.20
Portugal	3.17	5.43	2.19	3.07
Romania	1.33	1.99	1.25	1.41
Russia	3.38	5.15	3.03	3.54
Slovakia	0.81	1.26	1.29	0.92
Slovenia	1.25	0.80	0.79	0.94
Spain	2.44	4.33	1.81	2.40
Sweden	2.11	3.62	1.86	2.34
Switzerland	2.62	5.21	1.49	2.66
Turkey	1.73	1.88	1.67	1.78
USA	4.37	7.89	6.75	4.80

Source: Authors' calculations.

Table 2: Panel regression model – Proclivity coefficient (dependent variable) and percentage of individuals using the internet (independent variable)

Proclivity coefficient	Coefficient	Std. err.	t-stat.	p-value	[95% Conf. Interval]	
Internet	0.135	0.016	8.600	0.000	0.104	0.167
Intercept	-5.238	0.878	-5.960	0.000	-6.971	-3.504
Australia	-0.280	0.740	-0.380	0.705	-1.740	1.180
Austria	-5.148	0.729	-7.060	0.000	-6.587	-3.709
Belgium	-3.038	0.745	-4.080	0.000	-4.508	-1.567
Bulgaria	-1.366	0.543	-2.520	0.013	-2.437	-0.296
Canada	-1.496	0.784	-1.910	0.058	-3.044	0.051
Czech Republic	-3.460	0.656	-5.280	0.000	-4.754	-2.166
Denmark	-5.268	0.874	-6.030	0.000	-6.993	-3.543
France	-2.350	0.714	-3.290	0.001	-3.759	-0.942
Germany	-4.789	0.765	-6.260	0.000	-6.300	-3.279
Great Britain	-0.159	0.827	-0.190	0.847	-1.790	1.472
Netherlands	-4.951	0.850	-5.830	0.000	-6.628	-3.274
Hungary	-3.544	0.643	-5.510	0.000	-4.814	-2.275
Italy	2.498	0.550	4.540	0.000	1.413	3.584
Japan	-4.886	0.781	-6.260	0.000	-6.427	-3.345
Norway	-5.016	0.892	-5.620	0.000	-6.777	-3.254
Poland	-2.677	0.598	-4.480	0.000	-3.856	-1.498
Portugal	-0.448	0.578	-0.770	0.440	-1.588	0.693
Romania	-0.291	0.539	-0.540	0.589	-1.355	0.772
Russia	-0.012	0.582	-0.020	0.984	-1.160	1.136
Sweden	-5.049	0.856	-5.900	0.000	-6.738	-3.360
Slovakia	-4.462	0.694	-6.430	0.000	-5.832	-3.092
Slovenia	-3.617	0.640	-5.650	0.000	-4.880	-2.355
Spain	-2.511	0.658	-3.810	0.000	-3.810	-1.211
Switzerland	-4.022	0.794	-5.060	0.000	-5.588	-2.455
Turkey	(omitted)					
USA	-0.088	0.649	-0.130	0.893	-1.367	1.192
Number of observations	207					
Adj. R-squared	0.717					
F-statistic	21.03					
p-value	0.000					

Source: Authors' calculations.

regression model contains 207 observations. Throughout this research, the Least Squares Dummy Variable 1 model (LSDV1) of panel regression is used. This model always drops a dummy variable (in our case it is Turkey, which has been automatically chosen by STATA software), that is, the parameter of the eliminated dummy variable is set to zero and is used as a baseline.

The obtained model is statistically significant (F=21.03, p-value=0.000). The empirical model shows that there is a statistically significant effect of internet penetration on the proclivity coefficient. It stems from the statistical significance of the incline or the regression coefficient (p-value=0.000). Results of the panel regression model lead to the conclusion that the increase of proportional use of the internet causes a rise of the proclivity coefficient values, which proves H1. Namely, if the use of the internet increases by 1% on average, a proclivity coefficient rise of 13.5% is expected.

Finally, in order to test the remaining hypotheses, Spearman's correlation coefficient is calculated between the aggregate proclivity coefficient and the main Hofstede's indexes (IDV, PDI, MAS and UAI).

As shown in Table 3, a strong direct correlation is evident between the aggregate proclivity coefficients and IDV index value. The value of the correlation coefficient is 0.596, and it is statistically significant because p-value=0.001. The presented result corroborates H2, thus the claim is relevant for the entire population.

Table 3: Correlation between aggregate proclivity coefficients by country and the Hofstede's indexes

|	Correlation coefficient	p-value
Individualism (IDV)	0.596	0.001
Power distance (PDI)	-0.246	0.226
Masculinity (MAS)	-0.024	0.907
Uncertainty avoidance (UAI)	-0.370	0.063

Source: Authors' calculations.

Based on the data presented in Table 3, we may infer that there is no sufficient evidence to suggest a statistically significant correlation between the aggregate proclivity coefficients and the Hofstede's indexes for PDI, MAS and UAI.

On the basis of this study, it can be concluded that hotel guests coming from countries for which Hofstede recorded a high level of individualism and that are recorded to have high percentages of individuals using the internet are more inclined to post online hotel reviews. It is important to emphasise that these two factors are frequently simultaneous. Namely, a higher percentage of individuals using the internet is recorded in more developed countries, and Hofstede et al. [27, p. 132] state that "richer countries are associated with higher IDV".

On the basis of the results obtained, H1 and H2 are supported, whereas hypotheses H3, H4 and H5 are dismissed.

These findings are considerably in line with the findings recorded in the previous studies. Such studies,

Figure 1: The hypotheses tested and the results obtained
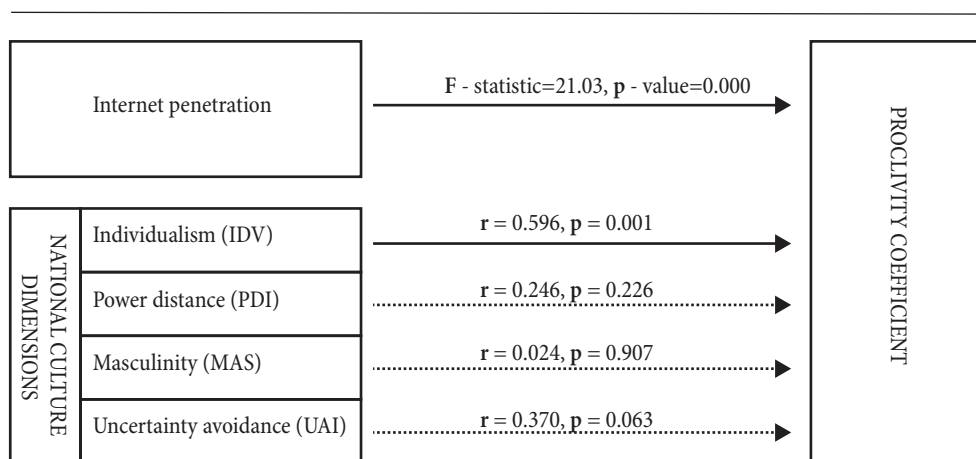
NOTE: Dashed lines indicate that hypothesis is rejected

Source: Authors' calculations.

which are aimed at analysing the cultural dimension impact on the consumers' proclivity for sharing information regarding the consumed products and services [20], [41], have indicated the impact of the IDV cultural dimension on the consumers' motivation to share their impressions of the consumed products and services in an online environment. The results of such studies point out that the consumers who are a part of predominantly individualist societies are more motivated to share their experiences in an online environment in comparison to the consumers coming from collectivist societies, who are less inclined to do so. Nevertheless, the abovementioned studies do not relate specifically to the analysis of hotel guest behaviour and, bearing in mind the specific features of the hotel product, it would be a just question to ask whether the results would be somewhat different if the analysis was focused solely on such subjects. With regard to that issue, a study carried out by Seval Ergun and Kitapci [61] might be of some significance. They analysed the relationships between the cultural dimensions of Hofstede and customer complaint behaviour in the hotel industry, and concluded that there was a positive impact of PDI, UAI and IDV on consumers' "public action" which they defined as "actions where the customer desires other to be aware of their dissatisfaction" [61, p. 63]. The results of our study confirm the impact of the IDV cultural dimension on the consumers' willingness to share their impressions, either positive or negative, of the hotel product with other consumers in an online environment, and simultaneously, point out to the interrelatedness between other cultural dimensions to this proclivity.

Concluding remarks

It is the determination of the novel quantitative indicator – proclivity coefficient and the factors which moderate its values that make a contribution to the existing literature.

Our findings suggest that the perceived differences in the consumers from different countries' behaviour and their proclivity for posting online hotel reviews can be partially explained by different internet availability. Thus, an increase in internet availability implies the rise in the proclivity coefficient for posting reviews on the

TripAdvisor portal. The research shows that the increase in internet penetration of 1% implies a rise in the proclivity coefficient values of 13.5%. According to the ITU data [30], at the beginning of the analysed period, that is, the year of 2010, there were approximately 1.99 billion internet users, whereas, according to the same source, the number of the users in 2017 was estimated at around 3.65 billion. Taking these results into account, one may expect that the anticipated future increase in internet availability will contribute to a higher consumers' proclivity for posting hotel reviews.

Nevertheless, the difference in the coefficient values between consumers from different countries cannot be accounted for only by different internet availability. Besides the similarities in internet penetration rates, consumers from different countries can exhibit completely different behaviour in terms of their proclivity for posting online hotel reviews. For instance, the cases of Japan and Great Britain prove that similar values of percentage of individuals using the internet [30] can, on the contrary, exhibit considerably different proclivity for posting hotel reviews (Table 1).

The very data on the percentage of individuals using the internet per countries do not yield any information about the way in which the internet is used. Intercultural differences affect different behaviour of an individual. By analysing the ascertained values of the Spearman's correlation coefficient between the proclivity coefficients and the Hofstede's indexes, one may conclude that individualism/collectivism is the cultural dimension which affects the behaviour of hotel guests and their proclivity for posting online reviews. A strong direct correlation is perceived, and it indicates that hotel guests from countries with higher values of the individualism index (IDV) imply higher values of the proclivity coefficient for posting online reviews.

The findings of our research are also important for the practitioners who may find this insight into the factors moderating the guests' proclivity for posting online hotel reviews to be of certain significance. Hotel management can use IDV values and internet penetration rates and can accordingly adapt the eWOM strategies to different consumer groups in order to induce them to participate in

eWOM, leading to the enhancement of the visibility and recognisability of the hotel in the online setting. It is also important to bear in mind the type of consumers who are more inclined to post online hotel reviews. An increased proclivity of hotel guests from certain countries for posting online reviews provides the hotel management with a possibility to be proactive in terms of potential reduction in the number of negative reviews and protection from their adverse effects on the hotel operation.

This study does have certain limitations. First, the country of origin, i.e. a certain cultural group a person belongs to, is determined based on the data provided by the TripAdvisor users during the registration process. Some reviewers could state the country they live in, and still originate from a different country. For instance, members of certain highly collectivist cultures could live in a country with a predominantly individualist culture and vice versa. It may lead us to conclude that they could have kept the cultural pattern of their country of origin. This could cause the abandonment of the framework of the expected cultural pattern typical for the stated country of origin. Also, the simplicity of anonymous review publishing on TripAdvisor tempts the management of a certain number of hotels into posting fake reviews with a view to promoting their own business, attack the competition or protect themselves from negative reviews [28]. Such reviews are presented to be authentic so as to misguide consumers and make some good use of it businesswise [39]. Such reviews are often published using the accounts created only to make fake reviews. Given the fact that the entire review is fake, quite often the stated country of origin is fake as well. One can also find a certain number of fake reviews on TripAdvisor, e.g. [19], [55], [62]. While carrying out this investigation, it was not possible to identify fake reviews. As a result, they were taken into account when determining proclivity coefficients of the guests coming from individual countries, which can potentially affect the obtained results. Still, taking into account the size of the examined sample, we can infer that this limitation has no significant influence of the results obtained in the research.

Second, owing to the specific features of the hotel services consumption, the consumptive behaviour of hotel guests is a specific category, as well. Namely, the purchase of hotel services ought not to be compared to the purchase of other goods and services due to the fact that hotel facilities are intended for temporary "stay" and the satisfaction of the existence-related and psychological needs, which primarily stem from out-of-the-place-of-residence stay. Therefore, this study should not be taken as a basis for formulating general conclusions about consumers' proclivity for posting online reviews which could be linked to other business activities and purchases.

Third, this study could not include hotel guests from a larger number of countries because the official statistical publications lacked the data regarding the number of tourist arrivals coming from individual countries in the analysed destinations, therefore it was impossible to determine the proclivity coefficient values for the guests coming from those countries.

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