

## Posting Travel Selfies: Harm or Blessing?

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### Abstract

Social networks are responsible for the success of selfie travel, that is, photo of yourself in connection with a tourist attraction. The nature of the dominantly shared content of travel photos indicates the formation of a new segment of travelers, for whom the goal is not only to experience the atmosphere of a unique place, but the desire to create the most liked selfie photo on the social network. The goal of our study was to identify factors which significantly affecting tourist's self-presentation, as well as to examine the homogeneity of the selfie travel segment of travelers. The obtained data were processed using the methods of regression analysis and cluster analysis. The result is the creation of a regression model of causal dependencies as well as the determination of group clusters of respondents who have similar attitudes, preferences and behavior depending on their relationship to the creation of selfies. The results of the study of tourists' behavior during a visit to a destination can be helpful for managers of tourist destinations.

**Keywords:** Travel selfies; social media; tourists' photo-sharing behavior; tourism

### Introduction

A smartphone with a front camera and internet connection has definitively changed the way tourist's behave. Social networks are constantly filled with photos of travel destinations from every corner of the world. It is no longer the catalogs of travel agencies that guide the choice of vacation, but social networks filled with photos of ordinary tourists, which manage to direct the flow of visitors to places where the marketing budget of travel agencies could not reach. However, mobile applications, the use of hashtags or folksonomies can move an ordinary passive traveler into the position of an active one, who presents themself against the background of a tourist destination. The selfie has become a new phenomenon, the goal of which is instant self-presentation - "here I am, this is how I look now, this is what I did, I met..." Several authors state that the selfie is fully dependent on modern technology (Merriam-Webster, 2014; Kwon & Kwon, 2015; Safna, 2017). They also identify with definition of this phenomenon, the essence of which they perceive as a photograph that is taken with a digital or phone camera as a self-portrait (Merriam-Webster, 2014; Kwon & Kwon, 2015; Safna, 2017).

Selfie phenomenon has evoked a new concept, "Selfie Tourism" (Arpaci et al., 2018). It is a modern tourist activity when someone visits a destination, takes a picture, then shares it with an audience through social media. A selfie tourist, according Trinanda and Astri, (2019) is a person who is interested in posting a perfectly staged selfie in the latest trending travel destination. He aims to take a picture in front of a trendy landmark, to show off to those who stayed at home, or just to show that he was there. It is a modern tourist activity when someone visits a destination, takes a picture, then shares it with an audience through social media. By social media we mean a set of Web 2.0 e-platforms used to "socialize, gossip, share information, and hang out" (Boyd, 2014) with other platform users, on different levels, easily accessible via mobile technologies: smart phones and tablets. According to Yin and Xia (2018) travel selfies are characterized by tourists taking photos using mobile devices such as smartphones or webcams and shared via online social networks. The perception that people taking selfies are widely watched has also changed the way they behave in destinations (Magasic, 2016). Selfie tourism revolutionizes tourism behavior, where initially it was just sightseeing tourism, turned into communication with others in the form of Electronic Word of Mouth (Chang et al., 2019).

Tourists' behavioral responses toward a destination are shaped by their perceptual filters (Majeed et al., 2019b). The relationship between an individual's perceptions and behaviors has been explored in marketing and psychology literature (Xue et al., 2020). In addition, referring to self-presentation theory, people who desire positive recognition, seek prestige, and a high place in society are willingly sharing their consumption experiences with others as a form of conspicuous self-presentation (Amatulli et al., 2015; Bian & Forsythe, 2012). Posting a travel selfie is an ideal form of self-presentation. The driver, which can be described as "everyone is watching me", has changed the way people behave on their roads. They edit their online profiles to emphasize positive aspects, socially desirable and attractive experiences and present themselves in an idealized form. For good selfies, they are willing to go to extremes to create a perfect image of themselves. More and more tourists die while taking selfies (Bansal et al., 2018) or disrupt the cultural or spiritual values of the country, or damage nature. On the other hand, certain informants admitted that they share their selfies because they simply want to communicate to others that "I've been there" (Christou et al., 2020). Subur et al. (2021) found that selfie tourists really consider the availability of unique and contemporary attractions, the goal is that they can document and share their experiences through photos or videos on their Instagram accounts. People are increasingly turning to social media content to find, select and evaluate a tourist destination in terms of its ability to look "trendy" enough. Lo and McKercher (2016) stated in their study that at least more than 500 million photos per day are uploaded through social media.

A separate chapter is the absolute loss of respect in places associated with death or huge tragedies. As Urry, Larsen (2011) states, At Ground Zero Portraits of Grief have been replaced with selfies. In front of the gates of Auschwitz death camp, teenagers joyfully play with poses, nicely captured under the ill-famed slogan, to post their selfies later on Instagram or Facebook with light-hearted captions, like: "Arbeit Macht Freiii". Similarly, they map the behavior of tourists in the Netherlands (2017): "Girls make duck faces, boys have a giggle at the front gate of the death camp or pose with funny things, like a block of ice and a young selfie-taker was biting in Majdanek. However, their activity does not end there. In an effort of self-promoting, modern travelers are willing to resort to fraud and share edited or unrealistic photos.

Changes in consumer behavior due to the development of information technologies fundamentally change the content of marketing activities. A large network of friends, opportunities for discussion and interaction create space for user participation in the creation and development of marketing strategies. Gone are the days when destinations had control over

image creation and communication. Once used as a travel souvenir, social media has transformed the selfie into a significant source of travel inspiration and the most popular way of online communication, self-expression and identity formation, leading to a constant reshaping of the destination's image. Technology has changed the way humans talk, communicate, act, and make decisions (Prasetyo, 2019), but above all it has enabled one person to communicate with people all over the world. Selfie photos uploaded to social networks are able to provide quick information to the wider community through sharing information in groups. Communication and the mentioned sharing of content in groups increasingly emphasizes the importance of segmentation of tourist flows. If the destination management is to be effective, it must accept the selfie phenomenon and ultimately use it appropriately not only to avoid conflicts and misunderstandings between groups of tourists or residents, but also for the appropriate setting of the destination's promotional activities.

Therefore, we decided to contribute to a better understanding of this phenomenon, so that destination management can find the right way to contribute to more sustainable tourism through a better balance between the needs of tourists and the needs of the destination. Our goal was to identify factors which significantly affecting tourist's self-presentation, as well as to examine the homogeneity of the selfie travel segment of travelers.

This study is divided into six sections. A review of the previous literature focused on travel selfie is made. Secondly, a deductive research approach based on the selfie travelers using a mixed method is introduced in the methods section. The fourth part contains the main contribution of our research. Finally, some limitations of the research and tips about the use of travel selfies by tourism destinations are proposed.

## Literature review

Photography is widely used in the context of tourism (Höckert et al., 2018; Pearce & Wang, 2019). In addition to promotional reasons such as postcards, other reasons for travel photography are to capture a moment or to make attractions and experiences tangible (Christou et al, 2020). The photograph provides indisputable proof that the journey took place. People are increasingly eager to document, replicate and preserve travel memories into tangible visual images which can be brought home and shared with others (Belk & Yeh, 2011). With the introduction and expansion of digital mobile media, photography has become an integral part of the tourist consumer's life. The use of new photographic methods of communication platforms has significantly modified tourist behavior (Oki & Astri, 2019). The combination of digital media and the Internet, especially smartphones, photography and tourism with the possibility of directly sharing their experiences during their tourist activities has produced the phenomenon of "selfie tourism" (Dinhopl & Gretzel, 2016; Arpaci, Yalçın, Baloğlu, & Kesici, 2018). Initially, selfie exclusively known as a form of narcissistic behavior (Marshall et al., 2015; Ryan & Xenos, 2011; Buffardi & Campbell, 2008; Carpenter, 2012; DeWall et al., 2011), uploading attractive photos and promoting one's own visual content (Mehdizadeh, 2010). According to Sorokowski et al. (2015) a selfie is a self-portrait photograph of oneself (or of oneself and other people), taken with a (phone) camera held at arm's length or pointed at a mirror, that is usually shared through social media. Soerjoatmodjo (2016) defines a selfie as a self-generated, self-selected picture to communicate the transitory message about oneself at a particular moment in time taken to be immediately distributed to others via social media networks. Sigala (2018a) perceives a selfie as an activity, where someone takes their own pictures, preferably with an interesting background as a token that he/she has already visited a destination or has an interesting experience. Paris & Pietschnig (2015) define selfie in tourism is a complex phenomenon in need of critical examination that has "evolved from the continued convergences of travel, digital culture, and communication technologies."

It is evident that the success of the travel selfie will only increase with time. Increasingly sophisticated devices will contribute to this, which will offer images in increasingly better technical equipment. Social media plays a key role in shaping the image of a destination, therefore change the process of information creation and communication, which affects consumer behaviour, marketing strategies, and brand image (Hays, Page, Buhalis, 2013). According to Munar (2012), Iglesias-Sánchez et al. (2020a, 2020b)) tourists become co-creators of the image of a destination through social media platforms. Destination management will have to accept this phenomenon and create rules for tourist behavior in time. Regarding the regulation of tourists' selfie-taking behavior in a destination, Pearce & Moscardo (2015) proposed 3 possible strategies for how destinations can react. The simplest strategy is (1) to create an information set that would establish the boundaries for the behavior and should be focused on avoiding the physical, cultural, and legal consequences of inappropriate and unsafe photographic behaviors; (2) the strategy would include a more proactive approach, which would consist in assisting to create travel selfie of a better quality. Retelling specific stories through travel selfies would to some extent replace the destination's marketing activities and (3) a strategy that involves the provision of physical support for tourist photographs such as the selection and development of specific locations for taking photographs/selfies and the provision of props and backdrops which can engage tourists in the stories of the place. However, knowledge of tourists' behavior is a basic prerequisite for the application of any strategy. As we mentioned above, the goal of our study was to identify factors significantly affecting tourist's self-presentation as well as to examine the homogeneity of the selfie segment travelers. In accordance with this purpose, we formulated the following hypotheses:

*H1: Individual socio-demographic characteristics of the respondent will be characterized by different intensity of influence on the manifestation of selfies.*

*H2: Factors (reasons) accompanying the creation of travel selfies will manifest themselves with varying degrees of probability.*

## **Methods**

The method used in our research is descriptive quantitative research. This type allows for the research to be conducted in the respondent's natural environment, which ensures that high-quality and honest data is collected. The survey was conducted by adopting a non-probability sampling technique involving 503 respondents. We used the possibility of data collection through an online questionnaire that allowed us to reach thousands of people with common characteristics in a short amount of time, despite possibly being separated by great geographic distances (Bachmann and Elfrink, 1996; Garton et al., 2003; Taylor, 2000; Yun & Trumbo, 2000). Data collection took place through an electronic questionnaire during February 2022. The questionnaire consisted of 13 questions, of which 4 were socio-demographic questions (gender, age, average net monthly income and economic status) and 8 content questions oriented at: factors accompanying and influencing at selfies (motivators of creation a travel selfie, identification of object-selfie, places preferring in selfie, motivators of creation life-threatening selfies, forms of posting selfies).

The questionnaire was distributed via social networks Facebook a Instagram a travel communities named Turista (Tourist), Cestovanie po Slovensku (Traveling in Slovakia) and Srdcom turista (Heart of a Tourist). After agreeing to participate to research, participants were directed to a web questionnaire, and asked to sign a consent form. They received general instructions about the survey and were informed that their anonymity would be preserved. The study sample comprised Slovak travelers aged from 18 and more years who had taking their travel selfies in the last 12 months. This age group is believed to be more willing to take and

share travel selfies. The data that have been collected were processed and presented through descriptive statistical data, where the numerical data were narrated according to the interpretation of the phenomena that occur in the object of research.

A logistic regression model was used to identify relationships between respondents' socio-demographic characteristics (independent, input variables) and taking selfies (dependent variable with variations 1 = taking selfies and 0 = not taking selfies). In our research distinction between taking and posting selfies is important. Selfie taking is a private act, while selfie posting is public act (Katz and Crocker, 2015). Logistic regression is a special case of the generalized linear model. It is used in situations where the modeled (dependent) variable is categorical. The essence of this method is the investigation of the dependence between the probability of a specific change of the explained variable and the values of the independent variables. If  $\mathbf{x}$  is a vector of values of the independent variables  $X_1, X_2, \dots, X_k$  and  $Y$  is a binary dependent variable, then  $p = P(Y = 1|\mathbf{x})$  expresses in our model the conditional probability that the respondent takes a selfie under the condition of the occurrence of a specific variation of the vector  $\mathbf{x}$ . To transform the dependent categorical variable into a continuous variable and also to achieve a linear relationship between the dependent variable and the explanatory variables, the logarithm of the chance is expressed, the so-called *logit* ( $p$ ) =  $\ln\left(\frac{p}{1-p}\right)$ . The equation of the logistic regression model then has the following form:

$$\text{logit}(p) = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k \quad (1)$$

where  $\beta_0, \beta_1, \dots, \beta_k$  are model parameters.

The expression  $\frac{p}{1-p}$  is called the chance (*odds*). For a binary dependent variable, it is the ratio of the probability that the respondent takes a selfie ( $Y = 1$ ) and the probability that such an event will not occur ( $Y = 0$ ). The interpretation of the values of the estimated parameters of the logistic regression model uses the odds ratio (OR = *Odds Ratio*), which in the case of a binary explanatory variable is expressed as follows:

$$OR = \frac{\text{odds}_1}{\text{odds}_2} \quad (2)$$

where  $\text{odds}_1$  is the chance for the compared case and  $\text{odds}_2$  is the chance for the second case we are comparing with it.

When testing the statistical significance of a regression, the validity of the null hypothesis is verified:

$H_0$  : The regression is not statistically significant (each regression coefficient is equal to zero)

against the alternative hypothesis

$H_1$  : The regression is statistically significant (at least one regression coefficient is not equal to zero).

The likelihood ratio test uses the so-called likelihood ratio as a test statistic

$$G = -2 \ln \left[ \frac{L(\text{model with no variable})}{L(\text{model with a variable})} \right] \quad (3)$$

where  $L$  is the likelihood function.

In addition to this test, the Wald test or the Rao score test can also be used (details in Terek, Horníková & Labudová, 2010).

Furthermore, the statistical significance of the regression, the significance of the input variables (main effects of the model) is also tested. It verifies the validity of the null hypothesis:

$H_0 : \beta_j = 0$  (Variable  $X_j$  is not statistically significant)

$H_0 : \beta_j \neq 0$  (Variable  $X_j$  is statistically significant)

The test characteristic (Wald variable) has the form, assuming the validity of the null hypothesis:

$$W(\beta_{0j}) = \left( \frac{\hat{\beta}_j}{S_{\hat{\beta}_j}} \right)^2 \quad (4)$$

where

$S_{\hat{\beta}_j}$  is an estimate of the standard deviation of the point estimate  $\hat{\beta}_j$  of the parameter  $\beta_j$  (Terek, Horníková & Labudová, 2010).

In the second part of the analysis, we segmented the sample of respondents who take selfies (384 respondents) using answers to eight content questions (Appendix). The aim of the used cluster analysis was to identify similar respondents, to divide them into the most similar ones, i.e., homogeneous groups so that these groups are mutually heterogeneous. Mathematically, we can formulate this goal as follows: it is a grouping of objects  $X_i$  ( $i = 1, 2, \dots, n$ ) into clusters  $C_1, C_2, \dots, C_q$  ( $2 \leq q \leq n$ ) so that the objects belonging to a certain cluster were close (similar), but objects belonging to different clusters were distant (different) (Vojtková & Stankovičová, 2020).

For clustering, we used Ward's clustering method, which is based on analysis of variance. Clusters are formed by maximizing intra-cluster homogeneity. The measure of homogeneity is the within-cluster sum of squared deviations from the cluster mean (ESS). The algorithm ensures that when connecting objects to clusters at all levels, the minimum increase in ESS is achieved, which corresponds to the Euclidean distance:

$$ESS = \sum_{i=1}^{n_h} \sum_{j=1}^q (X_{hi} - \bar{X}_{C_h})^2, \quad (5)$$

where

$n_h$  is the number of objects in the cluster,

$X_{hi}$  is a vector of character values in the  $i$  object of the cluster  $C_h$

$\bar{X}_{C_h}$  is a vector of average values of the character in the cluster  $C_h$  (Vojtková & Stankovičová, 2020).

The method should result in creation of clusters of relatively similar size.

To determine the optimal number of homogeneous clusters, we used the statistical method of pseudo-T-squared (PTS index), which uses the idea of decomposing the total sum of squares into individual components.

It is based on the evaluation of the connection of the  $k$  and  $l$  clusters.

$$Pseudo\ T - square = \frac{B_{KL}}{((W_K + W_L) / (N_K + N_L - 2))} \quad (6)$$

Where

$N_K, N_L$  = the number of observations in cluster  $k$  and  $l$

$W_K, W_L$  = within cluster sum of squares of clusters  $k$  and  $l$ .

$B_{KL}$  = between cluster sum of squares. This index quantifies the difference between two clusters that are merged. If the value of this index is greater for  $k$  clusters than for  $(k - 1)$  and  $(k + 1)$  clusters at the same time, the optimal number of clusters is  $(k + 1)$ .

All content questions were used for clustering (Appendix 1). As a result, five clusters were formed.

## Research finding

The results of the primary analysis showed that travel selfie posting is the domain of women (76.94%). Men prefer this form of presentation to a lesser extent (23.06%). In terms of age, the highest proportion of people taking selfies is in the age group of 21-25 years (88.89%) and the smallest proportion is in the age group of 36 years and over (64.33%). Regarding economic activity, the largest share of respondents was in the group of students (86.22%), followed by the group of persons on maternity/parental leave 76.47%, employees 71.43%, entrepreneurs 60.61% and the lowest in the group of pensioners (58.33%). The relationship between the variable's income and the creation of travel selfies was inversely proportional - the lower the income, the more intense creation, in the range with income up to 646 Euro, 44.3% of respondents created selfies, in the range 647-1,293 Euro 35.75% of respondents, in the range 1,294- 1,940 Euro 14.7% of respondents, 1,941-2,587 Euro 3.11% of respondents and above 2,587 Euro 2.07% of respondents.

Verification of H<sub>1</sub>: Individual socio-demographic characteristics of the respondent (gender, age, income, economic activity) are characterized by different intensity of influence on the manifestation of selfies.

All socio-demographic characteristics of the respondents had a categorical nature: economic activity (maternity, entrepreneur, student, employed and retired), age (under 20, 21-25, 26-35, 36 and over), net monthly income (0-646, 647 – 1,293; 1,294 – 1,940; 1,941 and more Euro). We analyzed their influence on the selfie-taking variable using the Chi-square test of independence, and the strength of the influence was measured using Cramer's V (Table 1).

Table 1 Analysis of the influence of socio-demographic indicators on taking selfies

Statistic	Age by Selfie		Gender by Selfie		Income by Selfie		Occupation by Selfie	
	Value	Prob	Value	Prob	Value	Prob	Value	Prob
Chi-Square	29,772	< 0,0001	6,51	0,0085	16,7140	0,0008	20,5527	0,0004
Likelihood Ratio	31,0199	< 0,0001	6,31	0,01	16,1386	0,0011	20,9944	0,0003
Phi Coefficient	0,2433		6,13	0,0086	0,1823		0,2021	
Contingency Coefficient	0,2364		-0,1173		0,1793		0,1981	
<b>Cramer's V</b>	<b>0,2433</b>		<b>0,165</b>		<b>0,1823</b>		<b>0,2021</b>	

Source: SAS enterprise guide, own processing

The strongest influence was age (Cramer's V = 0.2433) and economic activity (Cramer's V = 0.2021).

In addition to identifying the intensity of the influence, we were interested in predicting the probability that the respondent, whose characteristics we can describe using independent variables (age, gender, economic activity, income), takes a selfie. We used a logistic regression model to predict this probability.

The model as a whole was statistically significant, which means that at least one of the input socio-demographic variables was an important predictor for taking selfies (Table 2).

Table 2 Testing the statistical significance of the model

Testing Global Null Hypothesis: BETA=0		
Test	CHI-Square	Pr>ChiSq
Likelihood Ratio	39,4142	< <b>0,0001</b>
Score	38,9437	< <b>0,0001</b>
Wald	35,3188	<b>0,0002</b>

Source: SAS enterprise guide, own processing



In order to identify statistically significant regression predictors (main effects), the Wald test was used. Of the input independent variables, only gender (p-value = 0.0537) and age (p-value = 0.0239) had a statistically significant effect (Table 3).

Table 3 Testing the statistical significance of the main regression effects

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr>ChiSq
Gender	1	3,21	<b>0,0537</b>
Age	3	9,38	<b>0,0239</b>
Income	3	2,72	0,4849
Occupation	4	1,057	0,901

Source: SAS enterprise guide, own processing

When estimating the parameter values of the logistic regression model, all four input variables were replaced by false variables. Odds ratios are used to interpret the values of the point estimates of the parameters which correspond to these variables. Table 4 contains their point estimates and 90 percent confidence limits.

Table 4 Values of point estimates of the odds ratio and their confidence limits

Parameter	Estimate	Standard Error	Wald Chi-square	Pr>ChSq	Poin Estimate	90% Wald Confidence Limits		
Intercept	-0,2828	0,6961	0,1651	0,6845				
Gender	female	<b>-0,4736</b>	<b>0,2455</b>	<b>3,21</b>	<b>0,0537</b>	<b>1,606</b>	<b>1,072</b>	<b>2,405</b>
	man	ref. Category						
Age	< 20	<b>1,1216</b>	<b>0,6225</b>	<b>3,67</b>	<b>0,0716</b>	<b>3,07</b>	<b>1,103</b>	<b>8,547</b>
	21-25	<b>1,26</b>	<b>0,5159</b>	<b>8,96</b>	<b>0,0032</b>	<b>4,584</b>	<b>1,962</b>	<b>10,71</b>
	26-35	0,3635	0,2913	1,7	0,2121	1,438	0,891	2,323
	36>	ref. category						
Income	0-646	0,1485	0,5526	0,0722	0,7882	1,16	0,467	2,879
	647-1293	0,4788	0,395	1,97	0,2254	1,614	0,843	3,091
	1294-1940	0,5894	0,4344	1,6	0,1749	1,803	0,882	3,684
	1941>	ref. category						
Occupation	On parent.	0,1784	0,8656	0,00425	0,8367	1,195	0,288	4,964
	Self-emp.	-0,2005	7163	0,0783	0,7796	0,818	0,252	2,658
	Student	0,261	0,8276	0,0994	0,7525	1,298	0,333	5,065
	Employee	0,1883	0,6303	0,0892	0,7652	1,207	0,428	3,404
	Retired	ref. category						

Source: SAS Enterprise guide, own processing

The given values show that the chance that a woman will take a selfie is 1.6 times higher than that of a man. In terms of age, this chance is about 3.1 times higher for people under 20 years of age and about 4.6 times higher for people from the 26 to 35 age category than for the over 35 year old category.

In the next part of the analysis, we only worked with a sample of respondents who said they take selfies. We used cluster analysis for their segmentation.

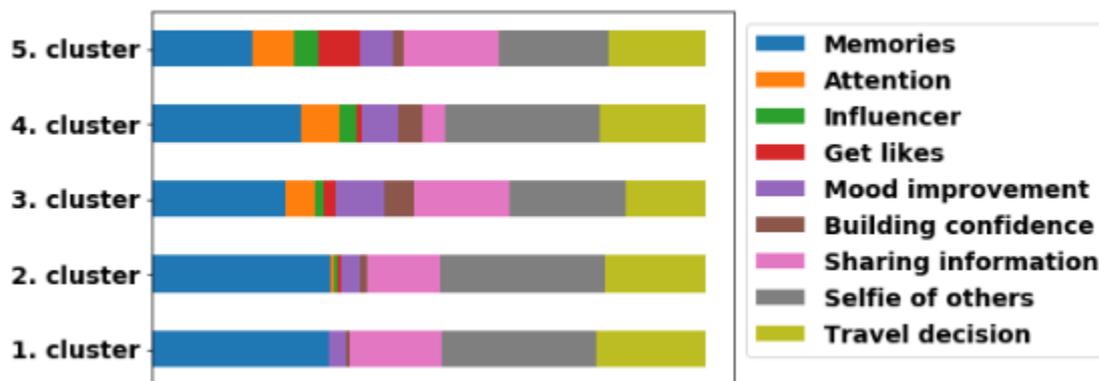
***Verification of H<sub>2</sub>: Factors (reasons) accompanying selfies will show different degrees of probability***

In the cluster analysis, we identified five significant clusters which differ in the level of the average score according to the selected segmentation criteria. Each cluster is characterized by a certain degree of similarity in all classification parameters. Objects were joined to clusters in

the case of the minimum within-group sum of squared deviations, resulting in the formation of clusters of approximately the same size.

The first cluster, called Motivation and Travel Selfie, consists of significantly older respondents, with incomes in the highest income category. The gender ratio slightly inclines in favor of women, but women are generally more willing to participate in surveys. The predominant age structure is 35+. From the point of view of economic activity, this cluster is made up of employees, but it also includes a large part of retirees. This group creates selfies, the greater part of which they place on social media and post from them. The main motive is the preservation of memories. People from this group like to prefer selfies which have an incredible and panoramic view in the background, while these places are widely known and taking a selfie near them is proof that they have visited the destination. In a certain way, these selfie photos can also be a pretext to compliment themselves and show off in front of friends or followers on social networks. Despite their older age, the respondents of this cluster were the most willing to take risks for taking travel selfie. In accordance with their preference for panoramic views, the ideal place for such a risk for taking travel selfie are high points such as cliffs, building roofs, bridge structures, rock formations, ladders or wooden bridges in the mountains. Likewise, people in this cluster most prefer taking photos near dangerous animals living in the wild. This group of people absolutely refuses to take pictures near the train or rails.

Chart 1 Motivation of travel selfie (variable - character space)

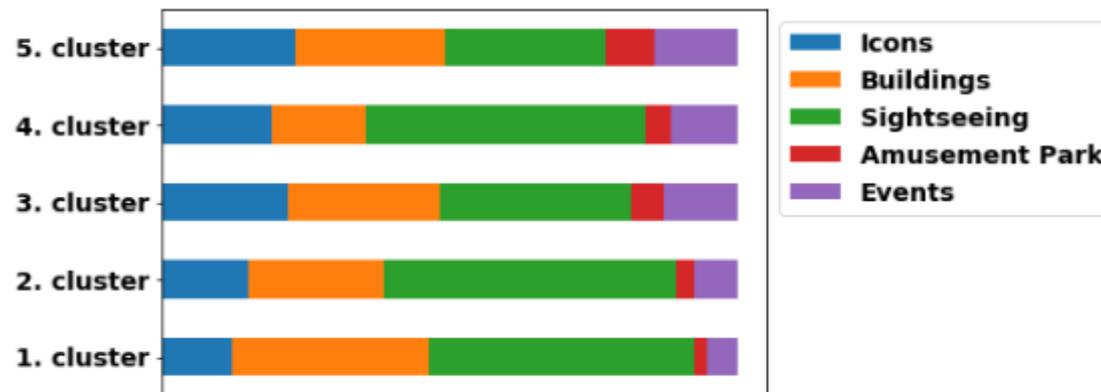


N=384

Source: own processing

The second cluster of Popular Selfie Spots declared less willingness to post travel selfies. The gender ratio is relatively balanced. In terms of age, the age groups are represented relatively proportionally, even if we observe a shift towards an older age of the respondents. The group is dominated by students and employees. The motivation here is the well-being and satisfaction of creating a travel selfie. Prospects were clearly mentioned as favorite by the respondents. The overall characteristics of preferred activities are completed by selfies from festivals or icons which represent symbols of cities. A distinct specific characteristic of this cluster is the absolute refusal to create risky travel selfies.

Chart 2 Popular selfie spots (variable - character space)

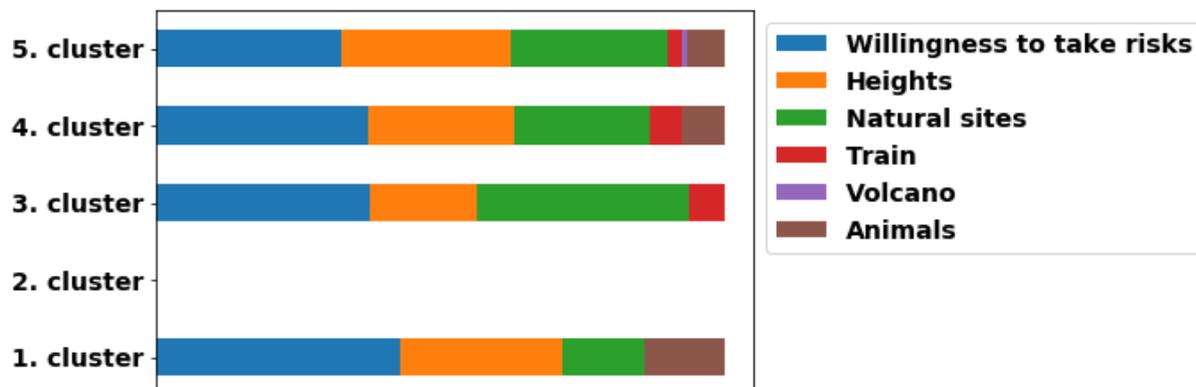


N=384

Source: own processing

The third cluster Risk Selfie Spots, according to respondents, is not very inclined to post travel selfies. According to gender, there is the largest representation of women. The age structure is significant in the range from 21 to 25 years old, which also corresponds to the status of a student. In accordance with the age structure in the group, other types of motivation appear, such as the need to share one's experiences among one's friends, family, acquaintances and other users on social networks and the need to show off to others or to gain attention and social recognition. In order to get a selfie, the respondents were also willing to take risks and create selfies in risky places such as heights, natural scenery or trains, but no respondent spoke in favor of creating selfies near dangerous animals.

Chart 3 Risk Selfie Spots (variable - character space)



N=384

Source: own processing

The fourth cluster Sightseeing travel was the most balanced in terms of gender. It was also the most differentiated, whether in terms of age, income or economic activity. The cluster was open to communication on social networks, as evidenced by the interest in other people's travel selfies, the effort to get likes. They are lovers of sightseeing, interesting about selfie others. They are active on social networks. There was also the willingness of the respondents to create risky selfies outside the safe zone at the cost of endangering health or life.

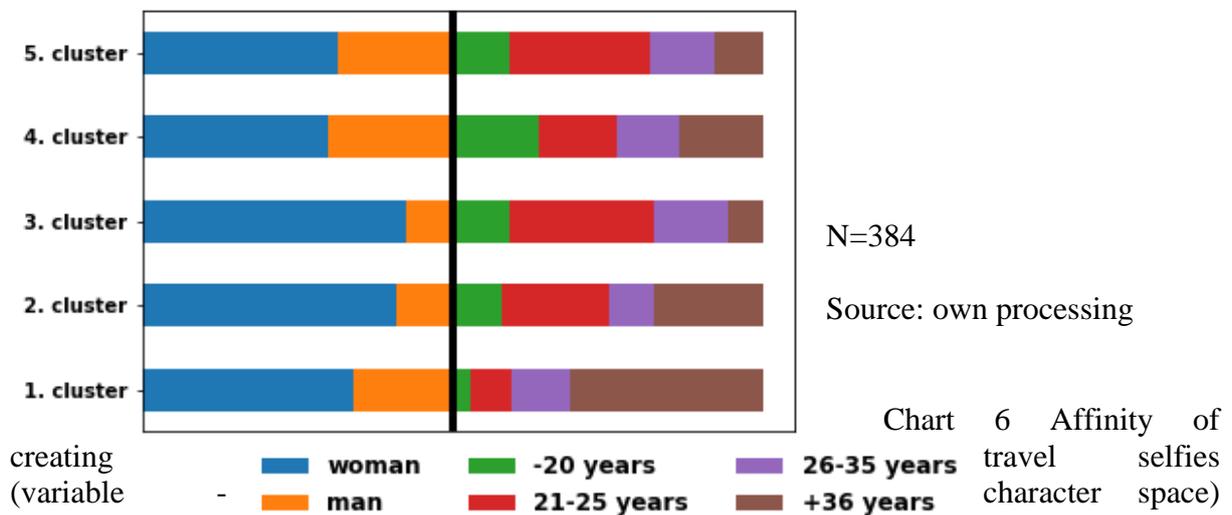
Chart 4 Sightseeing travel (variable – character space) in terms of gender and age



N=384  
 Source: Own processing

The fifth cluster **Affinity of creating travel selfies** was contradictory. Although the questionnaire was anonymous, some answers from the respondents were contradictory. The fifth cluster was most characterized by reluctance to post their travel selfies on social networks, however, when examining the motivation why they take selfies, the respondents mentioned all the offered types of motivation, including gaining attention, the opportunity to show themselves in front of others and getting a positive response in the form of likes. However, these two activities are complementary, i.e., it is not possible to get likes without posting a selfie on social networks.

Chart 5 Affinity of Creating Travel Selfies (variable - character space) in terms of gender and age)



N=384

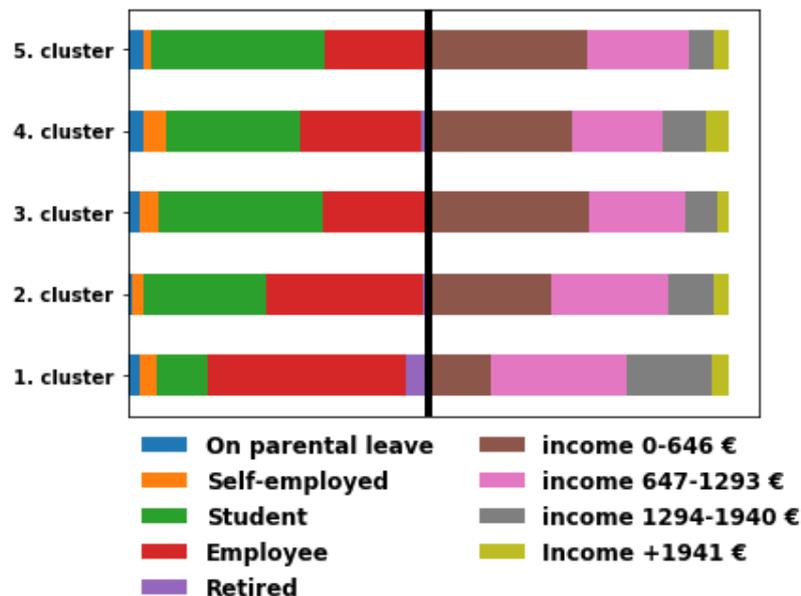
Source: own processing

Chart 6 Affinity of travel selfies character space)

creating (variable

- woman man -20 years 21-25 years 26-35 years +36 years

in terms of income and economic activities



N=384

Source: own processing

Likewise, this group of people preferred all offered selfie spots, as well as being willing to create risk selfies in all risky places, even near volcanoes, for the desire to gain attention, in which the participants of other clusters did not show interest. From the point of view of economic activity, students aged 21-26 were the most represented, which also corresponded to the income of the most frequented category up to 646 Euros. From the above data, we can conclude that these are mostly university students who, on the one hand, are aware of the narcissistic nature of posting selfies, which corresponds to their negative response to posting selfies, but on the other hand, this age group actively creates social media content. The relationship between the declared attitude and the manifested behavior is thus not consistent. According to the Theory of Planned Behavior, the immediate determinant of behavior is human intention (Fishbein & Ajzen, 1975). The theory assumes that the stronger the intention is, the more likely the person will actually behave according to it (Ajzen, 2005). According to this theory, a person's intention is determined by several factors. One of these factors is attitude, which represents internal beliefs about a given behavior. However, according to many authors, attitude alone is not a satisfactory determinant of behavior (Fishbein & Ajzen, 2011). The Theory of Planned Behavior therefore works with two additional factors: subjective norms and perceived behavioral control. Subjective norms represent individuals' beliefs about whether people close to them (family, friends, community) will evaluate the given behavior as favorable or unfavorable. It is basically a kind of social pressure. Another factor that indirectly affects behavior is perceived control, which represents the personal perception of the difficulty of the given behavior. It is about the extent to which the person perceives the behavior as challenging or even feasible. Controlled behavior in the case of this cluster was shown not to associate one's person with narcissistic self-presentation against the background of tourist destination attractions. However, the cluster also declared a high affinity to the desire to get likes, gain attention as an influencer and strengthen an identity, which is not possible without participation in social networks. According to some authors (Ajzen & Fishbein, 2005), verbal declaration (in our case written declaration) of a general attitude without showing corresponding behavior is a manifestation of hypocrisy. Based on the given information, we can confirm H2 in the

wording that "factors (reasons) accompanying selfies will show different degrees of probability".

## Discussion

The results of our study provide important information regarding tourists' selfie behavior that is beneficial to stakeholders, especially travel agencies and tourism destination managers. We conclude that an individual's set of socio-demographic characteristics show a significant association with the selfie activities themselves. Age (Cramer's  $V = 0.2433$ ) and occupation (Cramer's  $V = 0.2021$ , slightly weaker income (Cramer's  $V = 0.1823$ ) showed the strongest effect. The weakest association was shown by gender (Cramer's  $V = 0.165$ ).

It was also confirmed that socio-demographic characteristics are significant predictors (Likelihood Ratio 39.4142). In terms of gender, a woman is 1.6 times more likely to take a selfie. For people under the age of 20, this chance is approximately 3.1 times higher and for people from the age category 26 to 35 years, and 4.6 times higher than for the category older than 35 years.

The results of our research showed that the most active selfie group consists of young people under the age of 20, while in terms of gender, females represent especially active subgroup. Sorokowski et al. (2015) found that measures of narcissism were significantly and positively correlated with posting of selfies on social media sites and that the link between narcissism and posting of selfies was stronger among males than females. In further research however, Sorokowski et al (2016) investigated the differences between men and women in selfie posting behavior and found that women posted more selfies than men, which was also confirmed by our research. Selfies can be a source of self-confidence increasing (Walker, 2013). Extreme selfies from traveling and getting to know new places are also becoming a trend in social networks. Travel Selfie brings a revolution in the behavior of tourists. Traditional forms of tourism are undergoing a rapid change, represented by the need for "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig- Thurau et al. 2004).

The motivations for traveling are varied, but more and more people feel the need to share their experiences on social networks. For some tourists, the experience of the given destination is not a motivating reason. Their need is to take a selfie and post it on social media to show everyone that they were there, to boost their ego and self-confidence (Sigala 2018 (b)). Canavan (2017) claims that tourism is becoming more narcissistic as we are likely to witness an increase in tourist self-objectification, such as travel undertaken for the purpose of self-presentation through social media. Wismayer (2014) in his travel article entitled "Tourism Is Just Another Form of Narcissism" shares his concerns regarding the link between travel selfies and narcissism.

Through cluster analysis, we identified 5 significant clusters in our research, which we called: Motivation and Travel Selfie, Popular Selfie Spots, Risk Selfie Spots, Selfie Good Spirit and Affinity of Creating Travel Selfies. At the same time, they represent groups of people with different selfie tendencies. We will briefly summarize our conclusions.

In the first cluster (Motivation and Travel Selfie) there are relatively elderly people with a relatively high income, who like panoramic views and beautiful landscapes in the background, were grouped together. The second cluster (Popular Selfie Spots) represents tourists who focus on festival selfies from visiting cities. They refuse to take risky travel shots. In the third cluster (Risk Selfie Spots) there are very young people only aged 21-25, who share their photos widely and are willing to take risks when creating them. In the fourth cluster Sightseeing travel there are people very differentiated by age, income and economic activity. They are lovers of

monuments, also willing to take risks when creating selfies. The last fifth cluster (Affinity of Creating Travel Selfies) was manifested inconsistently. On the one hand, most individuals showed reluctance to post travel selfies on social networks, but they wanted to receive positive likes, which cannot be obtained without a willingness for publicity.

We can also state that cluster analysis of the travel segment (travelers aged from 18 and more years, who had taken their travel selfies in the last 12 months) based on demographic, psychographic and behavioral variables, showed that it is a structured cluster within which there are concrete, identifiable groups (segments). Based on this finding, the specifics of individual segments, should be taken into account in creation the marketing strategy of destination tourism organizations, as a result of which a high degree of orientation of marketing tools to the requirements of specific segments will be achieved.

## Conclusion

The findings of this study provide empirical knowledge to concerned authorities in formulating marketing strategies and policy-making decisions and also contribute to the existing body of knowledge, especially in establishing rules for creating travel selfies. From this point of view, it is necessary to consider not only the psychological profile of visitors, but also the cultural specificities of tourists, which will further deepen the complexity of this problem. While in the previous stages the management of destinations struggled with noisy drunken tourists, prostitution, or petty theft (Bhati & Pearce, 2017), nowadays they face more sophisticated tasks.

It's not enough just by merely relying on a beautiful scenery, great service, good culinary and so on, but the managers must also be able to provide good locations or objects for selfies. Especially there is a tendency that an interest in visiting a tourist location is driven by information obtained from social media. Photos of beautiful and "Instagramable" tourist destinations would encourage people to visit the location (Mostafanezhad & Norum, 2018). Last but not least, the situation is complicated by the social aspect of sustainability, which requires the setting of rules not only in the tourist segment, but also in relation to the local population. Selfie travel concept can be the right way to have good tourism, but if this phenomenon is not managed, it can develop into a new segment of narcissistic tourists who, in the pursuit of likes, will damage the environment in unexpected places at unexpected time. As a result, many tourist destinations are required to promote more creatively and innovatively, especially when "selling" their products, both through photos and videos (Donaire, et al., 2014; MacKay K. J. and Couldwell, C. M., 2004)). For this reason, we welcome the interest from the professionals of this research topic and we believe that further research will help the positive formation of this phenomenon.

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