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# THE IMPACTS OF ONLINE SOCIAL NETWORKS ON ACCOMMODATION PREFERENCES: THE CASE OF TURKEY

# ÇEVRİMİÇİ SOSYAL AĞLARIN KONAKLAMA TERCİHLERİ ÜZERİNE ETKİLERİ: TÜRKİYE ÖRNEĞİ

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### Abstract

Online social networks directly influence the sectors by shaping the preferences of individuals. In this respect, it is not a coincidence that social media is seen as a digital marketing tool today. In this context, this study aims to examine the impacts of online social networks on accommodation preferences of tourists with a country case analysis. By this purpose, a questionnaire has been conducted with a large sample of 497 respondents. Data has been analysed using the percentage shares, One-Way ANOVA Test, Tamhane t-test and Pearson Correlation Analysis. The main findings indicate that Turkish tourists use online social networks frequently, they intend to share their experiences and also there are differences in research and sharing attitudes as to education level. This study intends to contribute to the related literature by providing detailed evidence with a large sample from Turkey.

**Key Words**: Social Networks, Tourism, Accommodation, Turkey

Öz

Çevrimiçi sosyal ağlar, bireylerin tercihlerini şekillendirerek sektörleri doğrudan etkilemektedirler. Bu bağlamda, sosyal medyanın günümüzde bir pazarlama aracı olarak görülüyor olması bir tesadüf değildir. Bu çalışma, çevrimiçi sosyal ağların turistlerin konaklama tercihleri üzerine etkilerini ülke bazlı bir analiz ile araştırmayı amaçlamaktadır. Bu amaç doğrultusunda çalışmada, 497 katılımcıdan oluşan geniş bir örnekleme dair anket uygulaması sonuçlarına yer verilmektedir. Anket sonucunda elde edilen veriler yüzdelik dağılımları, Tek Yönlü ANOVA Testi, Tamhane t-testi ve Pearson Korelasyon Analizi kullanılarak analiz edilmektedir. Temel bulgular, Türk turistlerin çevrimiçi sosyal ağları sıklıkla kullandıklarını, tecrübelerini bu ağlarda paylaşma eğiliminde olduklarını ve ayrıca araştırma ve paylaşım tutumlarında eğitime göre farklılıkların söz konusu olduğunu işaret

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etmektedir. Bu çalışma, Türkiye'den geniş bir örnekleme dair veriler ile elde edilmiş detaylı bulgular sunarak ilgili literature katkı yapmayı hedeflemektedir.

Anahtar Kelimeler: Sosyal Ağlar, Turizm, Konaklama, Türkiye

### 1. INTRODUCTION

Social network phenomenon is one of the main topics of contemporary business and economics. Ever since the information and communication technologies have become enhancing with an exponential rate, the researches about social networks have also increased in number. When the background of social network concept is examined, it's seen that the first version of social network definition has been introduced by Radcliffe-Brown in the literature. Radcliffe-Brown has identified the social network as a social structure formed by relationships between two actors (Radcliffe-Brown, 1940, p. 2-3). Soon after the end of 1970s, social anthropologists and sociologists have established their studies on this conceptualization (Scott, 2000, p. 4). However, after 1980s, economists and organizational researchers have added mathematical and empirical methods to social network analyses and hence it became easy to handle empirical observations (Wasserman & Faust, 1994, p. 219). These new research methods and recent technological developments have given rise to be well understood of social network concept. What is more is the social network concept is mainly perceived as online networks today. The main reason behind this perception is the technological advancements of recent decade. With the global expansion of internet, lots of platforms reviving epistemic communities have been established in recent years. Today there are lots of studies examining the impacts and consequences of those online social networks on individuals, firms, regional/national economies and different sectors. As one of the main export industries, tourism has also been drawing high attention from the point of social networks in recent years.

As the rise of researches examining the impacts of social networks on different sectors, lots of studies analysing the roles and consequences of social networks on tourism sector have also been conducted. Some of these recent studies can be listed as Monaco (2018), Cenamor et al. (2017), Dickinson et al. (2017), Turkcan (2017), Esitti & Isik (2015), Eryilmaz & Zengin (2014), Erol & Hassan (2014), Aymankuy et al. (2013), Fotis et al. (2012), Kwon et al. (2011), Xie et al. (2011), Lo et al. (2011), Atadil et al. (2010) and Cox et al. (2009). Tourism sector has lots of macroeconomic impacts such as foreign currency inflows, income and employment creation, GDP (Gross Domestic Product) growth and positive multiplier effects through investments (Holden, 2006, p. 90). Tourism economics —as a sub branch of economics—is a research field examining the people going out their hometowns, the industries trying to satisfy the needs of those people and the impacts of all those actors on socio-cultural, economic and physical environments (Jafari, 1977).

In contemporary world, people use online social networks in order to search travel & tourism related information and share their personal experiences (Nusair et al., 2013, p. 458). This study also attempts to examine the role and influences of social networks on Turkish tourists'

accommodation preferences. Turkey is a country in which tourism sector provides a remarkable contribution to its GDP. World Travel & Tourism Council announced that total contribution of travel and tourism activities was 11.6% of GDP (USD 98.4bn) in 2017 and it was estimated that it would rise by 4.1% in 2018. Moreover, it was announced that Turkey's tourism sector employment was 7.4% of its total employment (2.093.500 jobs) in 2017 (WTTC, 2018, p. 1). There is no doubt that tourism has two different dimensions: international tourism and domestic tourism. Turkey has been experiencing high rates of domestic tourism in recent years. In this respect, check-ins of domestic tourists in touristic facilities was 40.822.111 in 2018 (Turkish Republic Culture and Tourism Ministry, 2018). Moreover, Turkish tourists travel all around the world and they make a high rate of expenditures. As some indicators, the number of overnights of Turkish tourists in foreign countries was 78.546.189 in 2018. Also, tourism expenditures of Turkish tourists in foreign countries have been calculated as approximately 4 billion dollars in 2018 (TSI, 2018). Consequently, analysing preferences of Turkish tourists is quite important for both Turkey and other countries focusing on tourism. The empirical literature implies that the analyses conducted for Turkey are either local [such as Turkcan (2017), Erol & Hassan (2014), Aymankuy et al. (2013)] or are of small samples [such as Eryilmaz & Zengin (2014) and Atadil et al. (2010)]. Moreover, the other studies conducted for other countries have similar problems [such as Fotis et al. (2012), Kwon et al. (2011), Xie et al. (2011) and Lo et al. (2011)].

In this manner, the main purpose of this study is examining the influences of social networks on accommodation preferences with a country case analysis. In this context, the study intends to contribute to the related literature by conducting a detailed and well-attended survey. In this respect, this study has three main sections. The first section is devoted to a brief introduction and then, the empirical literature is given in the second section. Third section is reserved for empirical analysis. Hence in this section firstly, data, method and empirical results are explained. Thereinafter, percentage shares of survey responses, One-way ANOVA Analysis results, Tamhane t-test results and Pearson Correlation Analysis results are given. Lastly in the conclusions, empirical findings are discussed.

### 2. EMPIRICAL LITERATURE

Empirical literature analysis can help to clarify the roots of studies on the impact of social networks on the tourism sector. Beyond any doubt, there are lots of studies examining this topic in the literature. However, the studies predicated on questionnaire implications have been chosen to manifest the contribution of this study. Moreover, these studies are classified in this section as the researches about Turkish tourists and the rest of the papers in the related literature.

As one of the most recent studies about Turkish tourists, Turkcan (2017) has conducted a survey of 400 Turkish tourists living in Izmir (the third metropolitan city of Turkey). The results underlined that Turkish tourists use online social networks frequently before and after their accommodation choices. Moreover, their research and sharing behaviours change as to the education level. Also, Cetinsoz & Akdag (2015) have conducted a survey on academic and administrative staffs working at Mersin University. In this local survey is of 193

respondents, the main evidence has been found that online social networks determine the accommodation preferences of tourists. Moreover, Eryilmaz & Zengin (2014) have had a sample of 410 observations with the results underlining that tourist attitudes towards social network sharings change as to the qualifications of accommodation establishments. As another study, Erol & Hassan (2014) have obtained the results of a well-attended survey is of 524 undergraduate students from 6 different cities of Turkey. According to the results, it's found that young Turkish people's accommodation choices are directly affected by social networks. Aymankuy et al. (2013) have also applied another questionnaire with 181 academicians working in two different Turkish universities. Up to the results of this local application, social networks determine accommodation choices of Turkish tourists. Atadil (2010) has also conducted a questionnaire with 225 people and found that most of the tourists search on social networks before deciding accommodation establishment.

When the related literature about other countries or foreign tourists, it's observed that the empirical results are similar. As a recent study, Monaco (2018) has conducted a survey of 200 Italian web users. The results indicated that younger generations would change the tourism demand with the rise of the information society. In this context, social networks would be decisive in Italian tourism sector soon. As another study which has been applied in Turkey on foreign tourists, Esitti & Isik (2015) have conducted a survey of 90 foreign tourists visiting Izmir and Istanbul – as two attraction centres of Turkey. As a result, they have investigated that social networks were important factors while determining the accommodation destination. Fotis et al. (2012) have conducted a survey is of 346 respondents and they have indicated that tourists used social networks to determine their vacation destinations, to stay connected with their friends and to share their experiences after vacation. Moreover, Kwon et al. (2011) have conducted a questionnaire of 200 respondents and found that positive interpretations about accommodation establishments directly affect tourists' destination choices. Also, Xie et al. (2011) have taken a poll is of 274 undergraduate students and had similar results with Kwon et al. (2011).

It's seen that most of the studies conducted surveys in the related literature are with mainly small samples. Although Erol & Hassan (2014) have conducted a survey of 524 respondents, they have only taken into account university students. Consequently, one of the main contributions of our study is on the point that we have a large sample size with people from different occupations and ages. Moreover, it's seen that until now at most 6 different cities have been taken into account while applying surveys in Turkey. However, in this study, Turkish tourists from 17 different cities of Turkey are taken into account. Those cities can be listed: Ankara, Antalya, Balikesir, Bilecik, Bursa, Denizli, Erzincan, Hatay, Istanbul, Izmir, Kocaeli, Konya, Malatya, Manisa, Muğla, Tekirdağ and Tunceli. Hence it is expected to reflect Turkish tourists' social network utilization and accommodation preferences relationships more precisely with this study.

### 3. METHODOLOGY

#### 3.1. Data and Method

Surveys are one of the most reliable data collection tools and they are widely used in social sciences due to their advantages. They are generally low-cost applications and provide ease to access the necessary information. Especially studies about social networks frequently use surveys for their analyses (Scott, 2000: 3). Survey method has also been used in this study by following the related literature. In this context, the survey in this study consists of 19 questions. Moreover, 4 questions have five-point likert scale and the others are multiplechoice questions. The questionnaire has been established by following similar surveys conducted for different studies in the literature as Turkcan (2017), Esitti & Isik (2015), Eryilmaz & Zengin (2014), Fotis et al. (2012) and Cox et al. (2009). The first 7 questions are the demographic questions that ask for gender, marital status, age, education level, occupation, income level and city. The following multiple-choice questions are: How many times do you accommodate in a touristic facility during a year? What is/are your preferred touristic facility(ies)? What are your accommodation purposes? What is your online social network usage frequency? Which of the following social network(s) do you use? Which social network sharings affect your accommodation choices? Which of the following social networks mostly determine your accommodation choices? If you are used to share your touristic experiences on social networks, what are the basic reasons? Moreover, five-point likert scale statements are: 'I make researches on online social networks if I will choose a touristic facility for the first time.'; 'Contacting me about a tourist accommodation facility through social networks affects my purchasing behaviour.'; 'I prefer to participate in the campaigns organized by touristic accommodation facilities in social networks.'; 'I share my positive and/or negative touristic experiences on online social networks.'. Likert scales starts from strongly disagree and ends up with strongly agree. After the survey formation process, it has been presented to 5 experts to have feedbacks and suggestions. Then focus group rationing with 20 people has been made.

In this study, the research population is Turkish tourists using online social networks. 384 observations are sufficient for the analyses of a population size more than 1.000.000 (as to %95 confidence interval). However, as the sample gets larger, the results approximate through the true population results. Consequently, large samples are preferred to be able to produce better results in the survey analyses. In this respect, over 500 surveys have been collected and 497 survey results have been analysed in our study.

The main research subjects of this study can be listed as; the demographic characteristics of Turkish tourists, the types of accommodations that Turkish tourists choose to attend; their social network utilization frequency; the types of social networks that they use; their researching attempts on social networks before making any accommodation choices; the types of social networks affecting their preferences, and their social network utilization behaviours about their accommodation experiences. Moreover, the main hypotheses of this study are threefold. First of all, online social networks have a high influence on the accommodation preferences of Turkish tourists. Secondly, accommodation choices are in a correlation with

the income level. Lastly, accommodation choices are in a correlation with the education level. These hypotheses can be expressed as follows:

H<sub>1</sub>: Online social networks have a high influence on the Turkish tourists' accommodation preferences

H<sub>2</sub>: Turkish tourists' accommodation choices are in a correlation with the income level

H<sub>3</sub>: Turkish tourists' accommodation choices are in a correlation with the education level

## 3.2. Empirical Results

Random sampling used to select respondents of the survey. Although more than 500 surveys have been responded, some data has been dropped due to the inconsistent or insufficient answers. As a result, 497 surveys have been taken into account in this study. In this section, the the percentage shares, One-way ANOVA Test results and Pearson Correlation Analysis results are expressed.

### 3.2.1. Percentage Shares

Percentage shares give preliminary information about the sample. Hence in this section percentage shares of basic indicators are given. In this context, percentage shares as to gender seem as 41.9% of the respondents are men and 58.1% of them are women. Also, it has been observed that 23.3% of respondents are married and 76.7% are single. Moreover, 6.2% has primary and secondary education, 3.6% is upper secondary student, 4.4% upper secondary degree, 47.9% undergraduate student, 20.7% has bachelor's degree, 8.7% graduate student, 8.5% graduate degree. Lastly, 59.2% of respondents have an income with 2000‡ and under; 40.8% has income level higher than 2000‡. Undoubtedly, percentage shares as to other indicators of the survey are quite important to observe the inclinations of Turkish tourists about accommodation choices and social network utilization. In this respect, Table 1 shows the percentage shares of Turkish tourists' accommodation preferences.

Table 1: Percentage Shares of Turkish Tourists' Accommodation Preferences

Tourist facility	Shares (%)	Tourist facility	Shares (%)	
B&B*	25.8	Boutique Hotel	38.2	
1 Star Hotel	1.8	Camping Facility	13.7	
2 Stars Hotel	2.0	Floating Touristic Establishment	1.0	
3 Stars Hotel	15.3	Motel	4.6	
4 Stars Hotel	27.0	Hostel	12.3	
5 Stars Hotel	36.4	Boutique Holiday Villas	8.7	
4 Stars Holiday Village	6.8	Rural Tourism Facility	5.2	
5 Stars Holiday Village	12.9	Apart-Hotel	20.3	

<sup>\*</sup> Bed and Breakfast

Note: More than one selection is allowed.

Results indicate that the first choices of Turkish tourists are boutique hotels, 5-star hotels and 4-star hotels. Also, B&B and apart hotels are other highly preferred accommodation places. Moreover, Table 2 shows the accommodation purposes of the Turkish tourists as another important indicator. The results show that the main accommodation purpose of Turkish tourists is a vacation. Other important purposes can be listed as business trips, conference, seminar or congress participation and friends or relatives visit.

**Table 2: Purposes of Accommodations** 

Purpose	Share (%)
Vacation	92.6
Business trip	16.7
Conference/seminar/congress participation	13.9
Friends/relatives visit	11.7
Sportive activities	5.4
Healthcare	2.2
Other	0.6

Note: More than one selection is allowed.

As another important indicator, Table 3 summarizes the opinions of respondents about social networks affecting their accommodation choices. Results express that Instagram has the highest impact on the accommodation choices of Turkish tourists and other social networks can be listed as Facebook, TripAdvisor and Trivago. These results are remarkable since Instagram and Facebook have moved ahead of the social networks formed for touristic contents.

**Table 3: Social Networks Affecting Accommodation Preferences** 

Social Network	Share (%)
Instagram	46.3
Facebook	40.2
TripAdvisor	32.0
Trivago	24.9
Youtube	21.7
Twitter	13.5
Google Plus	13.7
Other	13.5
Swarm	12.5

Note: More than one selection is allowed.

Moreover, Table 4 includes the results for the types of social network sharings affecting accommodation choices. The results show that the evaluation of services and facility is the most influential sharing type. Furthermore, photograph or video sharings and dialogs in forums are other sharing types affecting accommodation choices.

Table 4: Types of Social Network Sharings Affecting Accommodation Preferences

Type of Sharing	Share (%)
Evaluation of services and facility	75.66
Photograph/video	70.83
Dialogs in forums and social groups	66.59
Advertisements	11.46
Other	1.20

Note: More than one selection is allowed.

Table 5 captures the results for the question about reasons of social network sharings about the tourist facility. And the results show that 'giving information about the facility' is the most important reason of sharings of Turkish tourists about their accommodation experiences. Other important reasons are 'sharing (un)happiness level' and 'sharing a high quality photograph or video'.

Table 5: Reasons for Social Network Sharings about Tourist Facility

Reason of Sharing	Share (%)
To give information about the facility	56.9
To share the happiness/unhappiness level	39.0
To share a high quality photograph/video	33.6
To show personal prosperity	2.0
Other	0.8

Note: More than one selection is allowed.

## 3.2.2. One-Way ANOVA Test Results

One-Way Analysis of Variance is a widely used procedure testing the equality of population means ( $\mu$ ). If it's supposed that there are independent random samples of  $n_1, n_2, ..., n_k$  observations from K populations, then the One-Way ANOVA framework is designed to test the following null hypothesis against the latter alternative hypothesis.

$$H_0 = \mu_1 = \mu_2 = \dots = \mu_k$$
 (1)

$$H_1 = \mu_i \neq \mu_i$$
 for at least one pair. (2)

Here, the test of the population mean values' equality is based on a comparison of two types of variability. The first one is the variability of individual sample means and it's called within groups variability. The second one is the variability among K-group means and it's called as between groups variability (Newbold et al., 1994, p. 627-628). One-way ANOVA test is the basic variance analysis method a106nd it is based on the interpretation of F statistics. In this study, one-way ANOVA test is applied on following relationships: 'making researches on social networks and education level', 'making researches on social networks and income level', 'participating in campaigns on social networks and education level' and 'participating in campaigns on social networks and income level'.

Table 6 shows One-way ANOVA Test results of making researches on social networks as to both education and income levels<sup>2</sup>. Before the application of test the homogeneity of

<sup>&</sup>lt;sup>2</sup> Normality Test has been applied before One-Way ANOVA Test and normal distribution has been observed.

variances has been analyzed by Tamhane t-test. As to the Levene Statistics, variances show heterogeneity in their distribution. Those results are given in Table A1 and Table A2 in the appendix. Moreover, Tamhane t-test results show that there are statistically significant differences between primary school graduates and other people who have higher education levels (See Table A3). Moreover, the ANOVA test results in Table 6 indicate that research behaviour on social networks changes as to education level but it does not change as to income level. These results support the third hypothesis but rejects the second hypothesis.

Table 6: One-Way ANOVA Test Results about Researching on Social Networks

Researching on	Social Networks an	d Education L	evel		
	Sum of Squares	d.f.	Mean Square	F	Sig.
Between	47.524	7	6.789	7.841	0.000
Groups					
Within	423.417	489	0.866		
Groups					
Total	470.942	496			
Researching on	Social Networks an	d Income Leve	el		
	Sum of	d.f.	Mean Square	F	Sig.
	Squares				
Between	8.553	5	1.711	1.816	0.108
Groups					
Within	462.389	491	0.942		
Groups					
Total	470.942	496			

Source: Author's own calculations.

Furthermore, Table 7 summarizes One-way ANOVA Test results about participating in campaigns on social networks and education and income levels. As to the Tamhane t-test results given in Table A4 and Table A5, homogeneity of variances is valid. One-way ANOVA Test Results indicate that there is no difference as to neither education level nor income level. Consequently, the second and the third hypotheses are rejected.

Table 7: One-Way ANOVA Test Results about Participating in Campaigns on Social Networks

Participating i	in Campaigns on Soc	ial Networks a	nd Education Level		
•	Sum of Squares	d.f.	Mean Square	F	Sig.
Between Groups	14.234	7	2.033	1.271	0.263
Within Groups	782.321	489	1.600		
Total	796.555	496			
Participating i	in Campaigns on Soc	ial Networks ar	nd Income Level		
	Sum of Squares	d.f.	Mean Square	F	Sig.
Between Groups	7.795	5	1.559	0.970	0.435
Within Groups	788.761	491	1.606		
Total	796.555	496			

### 3.2.3. Pearson Correlation Analysis Results

Pearson Correlation Coefficient is used to measure the linear relationship of two continuous variables. In other words, it is used to measure the validity of a meaningful relationship between two variables. Pearson Coefficient is always between -1 and +1. If its value is -1, then it means pure negative linear relationship. If its value is +1, then it means pure positive linear relationship. Moreover, if it takes the value of 0, then it means that there is no linear relationship between two variables (Sungur, 2010, p. 116). Table 8 shows the Pearson Correlation Analysis Results for the variables of researching on social networks and the number of accommodations per year. Results indicate that there is no correlation between researching on social networks and number of accommodations. So these results show that the first hypothesis of this research is rejected.

Table 8: Pearson Correlation Analysis Results for Researching on Social Networks and Number of Accommodations

		Researching on social	Number of
		networks	accommodations
Researching on social	Pearson Correlation	1	0.054
networks	Sig. (2-tailed)		0.231
	N	497	497
Number of	Pearson Correlation	0.054	1
accommodations	Sig. (2-tailed)	0.231	
	N	497	497

Source: Author's own calculations.

Moreover, Table 9 summarizes the Pearson Correlation Analysis results for researching on social networks and participating in campaigns.

**Table 9: Pearson Correlation Analysis Results for Researching on Social Networks and Participating in Campaigns** 

		Researching on social networks	Number of accommodations
Researching on social	Pearson Correlation	1	0.200**
networks	Sig. (2-tailed)		0.000
	N	497	497
Number of	Pearson Correlation	0.200**	1
accommodations	Sig. (2-tailed)	0.000	
	N	497	497

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed).

Source: Author's own calculations.

Table results show that there exists a positive correlation between researching on social networks and participating in campaigns at %1 significance level.

#### 4. CONCLUSION

Social media, which is perceived as a destination marketing tool to reach the global audience, has been gaining prominence in tourism (Hays et al., 2013, p. 211). In this context, the impacts of online social networks on accommodation preferences of Turkish tourists have

been analyzed in this study. A survey application has been implemented and a large sample of 497 Turkish tourists from 17 different cities have been analysed. Consequently, this study intends to make some contributions by the help of the results drawn from a large sample size constructed by data from different geographical locations of Turkey. Empirical results indicate that Turkish tourists prefer mainly boutique hotels, 5-star and 4-star hotels. Also, it's seen that their main purpose of accommodation is a vacation. Moreover, it seems that Facebook and Instagram have higher impacts on their accommodation choices than tourism-oriented social networks like TripAdvisor. This result is especially important for tourism companies trying to attract Turkish tourists since they may use Facebook and Instagram denser than tourism-oriented social networks in order to reach a larger mass.

As another important indicator, the results underline that Turkish tourists are impressed by experiences of other social network users, photographs and videos, and dialogs in social networks. Also, while sharing about the tourist facility, their main purpose is to provide information to their network. These results underline that Turkish tourists densely use webbased social networks while deciding their accommodation locations. These evidences are in the same line with Turkcan (2017), Cetinsoz & Akdag (2015), Isik (2015), Aymankuy et al. (2013), Fotis et al. (2012), Kwon et al. (2011), Xie et al. (2011) and Atadil et al. (2010).

Moreover, One-way ANOVA Test results show that online researching behavior shows differences as to education level but it seems there is no relationship with income level. Moreover, participation in campaigns on social networks shows no differences as to neither education nor income levels. Consequently, it seems that the second and the third hypotheses of this study are partially accepted. Education has an impact only on online researching behaviour. Also, Pearson Correlation Analysis results show that there is no correlation between researching on social networks and the number of accommodations. However, it seems that there is a positive correlation between researching on social networks and participating in campaigns. These correlation results are in the same line with Cetinsoz & Akdag (2015) and Aymankuy et al. (2013) and these results show that Turkish tourists' accommodation preferences are affected by cost-aware social network applications. This result is particularly important for tourist facilities because it is seen that they can reach Turkish tourists with well-designed campaigns. Furthermore, tourist facilities should take into account the education level of their target audience since there exist statistically significant differences between primary education and higher education levels. Touristic facilities may design different types of advertisements and marketing strategies appealing to people with different education levels. However, further research can be conducted by reaching a larger sample size and by covering a large number of Turkish cities.

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# **APPENDIX**

Table A1: Making Researches on Social Networks and Education Level Tamhane t-test Results (Test of Homogeneity of Variances)

Making		Levene	df1	df2	Sig.
Researches		Statistic			
	Based on	3.889	7	489	0.000
	Mean				
	Based on	2.116	7	489	0.041
	Median				
	Based on	2.116	7	430.637	0.041
	Median and				
	with adjusted				
	df.				
	Based on	3.862	7	489	0.000
	trimmed mean				

Source: Author's own calculations.

Table A2: Making Researches on Social Networks and Income Level Tamhane t-test Results (Test of Homogeneity of Variances)

Making		Levene	df1	df2	Sig.
Researches		Statistic			
	Based on	3.816	5	491	0.002
	Mean				
	Based on	1.816	5	491	0.108
	Median				
	Based on	1.816	5	459.935	0.108
	Median and				
	with adjusted				
	df.				
	Based on	3.758	5	491	0.002
	trimmed mean				

Table A3: Multiple Comparisons as to Tamhane t-test

Dependent \	√ariable: mak ⊤	ing researches				
		Mean Difference			95% Confide	ence Interval
(I) educ	(J) educ	( <b>I-J</b> )	Std. Error	Sig.	Lower Bound	Upper Bound
1.00	2.00	-1.25714	0.39371	0.090	-2.6077	0.0934
	3.00	-1.78889 <sup>*</sup>	0.33935	0.000	-2.9700	-0.6078
	4.00	-2.12727*	0.29036	0.000	-3.1567	-1.0979
	5.00	-1.85378 <sup>*</sup>	0.22918	0.000	-2.8046	-0.9030
	6.00	-1.91456*	0.23725	0.000	-2.8605	-0.9686
	7.00	-2.07442*	0.25315	0.000	-3.0284	-1.1204
	8.00	-2.04286*	0.25484	0.000	-2.9987	-1.0871
2.00	1.00	1.25714	0.39371	0.090	-0.0934	2.6077
	3.00	-0.53175	0.41520	0.999	-1.9283	0.8648
	4.00	-0.87013	0.37622	0.539	-2.1481	0.4079
	5.00	-0.59664	0.33130	0.919	-1.7746	0.5813
	6.00	-0.65742	0.33693	0.840	-1.8448	0.5299
	7.00	-0.81728	0.34831	0.534	-2.0265	0.3920
	8.00	-0.78571	0.34954	0.612	-1.9975	0.4261
3.00	1.00	1.78889*	0.33935	0.000	0.6078	2.9700
	2.00	0.53175	0.41520	0.999	-0.8648	1.9283
	4.00	-0.33838	0.31888	1.000	-1.4206	0.7438
	5.00	-0.06489	0.26439	1.000	-1.0223	0.8925
	6.00	-0.12567	0.27141	1.000	-1.0934	0.8421
	7.00	-0.28553	0.28542	1.000	-1.2797	0.7086
	8.00	-0.25397	0.28691	1.000	-1.2513	0.7433
4.00	1.00	2.12727*	0.29036	0.000	1.0979	3.1567
	2.00	0.87013	0.37622	0.539	-0.4079	2.1481
	3.00	0.33838	0.31888	1.000	-0.7438	1.4206
	5.00	0.27349	0.19762	0.996	-0.4137	0.9607
	6.00	0.21271	0.20692	1.000	-0.4938	0.9192
	7.00	0.05285	0.22498	1.000	-0.6992	0.8049
	8.00	0.08442	0.22687	1.000	-0.6728	0.8417
5.00	1.00	1.85378*	0.22918	0.000	0.9030	2.8046
	2.00	0.59664	0.33130	0.919	-0.5813	1.7746
	3.00	0.06489	0.26439	1.000	-0.8925	1.0223
	4.00	-0.27349	0.19762	0.996	-0.9607	0.4137
	6.00	-0.06078	0.10504	1.000	-0.3924	0.2709
	7.00	-0.22064	0.13722	0.965	-0.6669	0.2257
	8.00	-0.18908	0.14031	0.996	-0.6463	0.2682

Notes: \*. The mean difference is significant at the 0.05 level.

1: Primary education 2: Secondary school 3: Upper secondary student 4: Upper secondary degree 5: Undergraduate student 6: Bachelor's degree 7: postgraduate student 8: postgraduate degree Source: Author's own calculations.

Table A3 – continued: Multiple Comparisons as to Tamhane t-test

		Mean Difference	Std. Error	Sig.		
(I) educ	(J) educ	( <b>I-J</b> )			95% Confidence Interval	
6.00	1.00	1.91456*	0.23725	0.000	0.9686	2.8605
	2.00	0.65742	0.33693	0.840	-0.5299	1.8448
	3.00	0.12567	0.27141	1.000	-0.8421	1.0934
	4.00	-0.21271	0.20692	1.000	-0.9192	0.4938
	5.00	0.06078	0.10504	1.000	-0.2709	0.3924
	7.00	-0.15986	0.15031	1.000	-0.6436	0.3239
	8.00	-0.12829	0.15314	1.000	-0.6219	0.3653
7.00	1.00	2.07442*	0.25315	0.000	1.1204	3.0284
	2.00	0.81728	0.34831	0.534	-0.3920	2.0265
	3.00	0.28553	0.28542	1.000	-0.7086	1.2797
	4.00	-0.05285	0.22498	1.000	-0.8049	0.6992
	5.00	0.22064	0.13722	0.965	-0.2257	0.6669
	6.00	0.15986	0.15031	1.000	-0.3239	0.6436
	8.00	0.03156	0.17677	1.000	-0.5377	0.6008
8.00	1.00	2.04286*	0.25484	0.000	1.0871	2.9987
	2.00	0.78571	0.34954	0.612	-0.4261	1.9975
	3.00	0.25397	0.28691	1.000	-0.7433	1.2513
	4.00	-0.08442	0.22687	1.000	-0.8417	0.6728
	5.00	0.18908	0.14031	0.996	-0.2682	0.6463
	6.00	0.12829	0.15314	1.000	-0.3653	0.6219
	7.00	-0.03156	0.17677	1.000	-0.6008	0.5377

Notes: \*. The mean difference is significant at the 0.05 level.

<sup>1:</sup> Primary education 2: Secondary school 3: Upper secondary student 4: Upper secondary degree 5: Undergraduate student 6: Bachelor's degree 7: postgraduate student 8: postgraduate degree

Table A4: Participating in Campaigns on Social Networks and Education Level Tamhane t-test Results (Test of Homogeneity of Variances)

Making		Levene	df1	df2	Sig.
Researches		Statistic			
	Based on	0.986	7	489	0.441
	Mean				
	Based on	0.856	7	489	0.541
	Median				
	Based on	0.856	7	465.493	0.541
	Median and				
	with adjusted				
	df.				
	Based on	0.977	7	489	0.447
	trimmed mean				

Source: Author's own calculations.

Table A5: Participating in Campaigns on Social Networks and Income Level Tamhane t-test Results (Test of Homogeneity of Variances)

Making		Levene	df1	df2	Sig.
Researches		Statistic			
	Based on	0.823	5	491	0.534
	Mean				
	Based on	0.513	5	491	0.767
	Median				
	Based on	0.513	5	460.410	0.767
	Median and				
	with adjusted				
	df.				
	Based on	0.765	5	491	0.575
	trimmed mean				