



Segmentation of Tourist Using Demographic and Travel Characteristics: The Case of Istanbul

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ABSTRACT

The purpose of this study is to analyze and segment tourists who visit Istanbul and to identify tourist profiles based of those demographic and travel characteristic. The questionnaire, in four languages (German, English, Russian and Turkish) was applied by the researcher to departing tourists between 13 and 18 January, 2015 at Istanbul International Airport using face to face technic. A total of 508 usable questionnaires were collected and analyzed applying arithmetic mean, t-test, crosstabulation, ANOVA, factor analysis, k-means cluster and multiple correspondence analysis. Factor analysis revealed six different factors among tourists visiting Istanbul. "Destination security" have been identified as the most important factor affecting tourists visiting Istanbul. Then, K-means cluster method was applied and produced three meaningful market segments. The clusters are named "natural beauty and information seekers," "price sensitives" and "independents." Finally, multiple correspondence analysis was applied to identify statistical relationship among these clusters.

Keywords: Segmentation, Factor Analysis, K-Means Cluster Analysis, Multiple Correspondence Analysis, Tourist Profile

JEL Classification: L83

1. INTRODUCTION

This study is conducted to explore segments of tourist visiting Istanbul, one of the most visited cities in the world and to segment these tourist into meaningful and manageable groups. Segmentation has been emerged as a very powerful and useful tool to market goods and services to targeted markets and targeted groups (Berrigan et al., 1992). As stated by Chen (2003. p. 310), "with fast-changing consumption patterns, it is a great challenge to keep up with the expectations of consumers because the development of new services and products are rather costly and time-consuming."

When segmentation is well-constructed and effectively utilized to understand and serve markets, firms/destinations are able to direct their resources much more efficiently to reach the target markets and their efforts to compete against their rivals becomes much more fruitful. Why segmentation is such a powerful tool to better compete and better market goods and services lays behind many aspects of this innovative approach. By utilizing market segmentation effectively and meaningfully, a tourist destination may gain many

impressive benefits including competitive advantage (Dolnicar et al., 2005; Berrigan et al., 1992). According to Dolnicar (2008. p. 2), some of the important benefits of segmentation are;

1. Competition can be reduced from the global market to tourism destinations specializing on the same segment (e.g. all ecotourism destinations),
2. Efforts can be focused on improving the product in a specific way rather than trying to provide all things to all people at high cost (e.g. a family destination is unlikely to need extensive nightlife options),
3. Marketing efforts can be focused by developing the most effective message for the segment targeted (e.g. a sun and fun message for young tourists traveling with friends) and by communicating the message through the most effective communication channel for the segment (e.g. in national geographic or other nature magazines for ecotourists), and finally,
4. Tourist experiencing a vacation at a destination that suits their special needs are likely to be more satisfied with their stay and, consequently, revisit and advertise the destination among like-minded friends.

It is clear from the benefits stated above, segmentation is a strong tool to compete better and effectively, so that destinations must do the work to better understand their visitors and shape their products and services accordingly. As stated by Dolnicar (2008, p. 2), "... the expected outcome from market segmentation is competitive advantage. Consequently, the aim of the actual segmentation task is to group tourist in the way that is of most managerial value."

There are a number of requirements to make the segments managerially useful Dolnicar (2008, p. 3);

- The segment should be distinct meaning that members of one segment should be as similar as possible to each other and as different as possible from other segments.
- The segment should match the strengths of the tourism destination
- The segment should be identifiable. While female travellers can be identified very easily, identification of those visitors who are motivated by rest and relaxation may not be as simple.
- The segment should be reachable in order to enable destination management to communicate effectively. For instance, surf tourists are likely to read surf magazines which could be used to advertise the destination.

A segment should be suitable in size. This does not necessarily imply that a bigger segment is better. A tourism destination may choose to target a small niche segment that represents a large enough market for the particular destination and has the advantage of having very distinct requirements.

Therefore, the objectives of this current study are designated to be;

1. To identify the profile of the tourists who vacation in Istanbul,
2. To examine the factors influencing them to choose Istanbul,
3. To explore how many market segment consists and,

To identify what are the segments profiles.4.

2. LITERATURE REVIEW

A destination image is impacted by destination features and tourists' variables (such as age, income, past experiences) (Woodside and Lysonski, 1989). Mill and Morrison (1985), for example, indicated that tourists from different countries usually have different perceptions for tourists attractions and differences in perception require different marketing topic for those and different market segments. Finding out why people decide to visit different places and what influences their choice of destination are very important insights for developing suitable marketing strategies and managing market segments (Heung et al., 2001, p. 260).

In general, natural and man-made characteristics of tourist destination (climate, beaches, scenery, hotels, mountains, transportation, package tours, historical and cultural buildings) may identify the tourist segments and these segments can be adapted to tourist preferences by tourism marketers to satisfy the tourists segments (Heung et al., 2001, p. 260-261).

Identifying segments has been a strong marketing management tool that caught attention of many practitioners and researchers.

Using and benefiting from results of various segmentation studies, destination managers, officers and firm owners are able to better position their destinations which in turn enables them to attract larger numbers of tourists to their destinations and establishments. Baloğlu (1997) for example studied motives of West German tourists to the United States and found six image factors that attracts Germans to visit United States. These factors loosely named to be;

1. Friendly environment,
2. Adventure, nature and resort,
3. Urban environment,
4. Budget and value,
5. History and culture, and,
6. Active outdoor sport.

According to Baloğlu (1997), different marketing strategies should be employed to cater different market groups.

Rudez et al. (2013, p. 138) wanted to explore what attracts of visitors to Portorož. They found four different segments of visitors. These segments are labelled "well-being visitors," "friends-oriented visitors," "curious passive visitors" and "multifarious visitors." The largest segment, "well-being visitors," for example are people who are looking for physical activity and convenience. "Friends-oriented visitors" on the other hand, are people who sought benefits linked to passive ways to spend time with friends during the visit to Portorož.

Van der Merwe et al. (2011) want to explore travel motivations of tourists in the South African coast. The study concluded with four factors which are named destination attractiveness, escape and relaxation, time utilization and personal safety.

Cha et al. (1995) researched the travel motivation of Japanese overseas travelers and defined six motivational factors such as relaxation, knowledge, adventure, family, travel bragging and sports. Researchers have demonstrated that Japanese were motivated by two important factors of knowledge and adventure traveling.

On the other hand, Weaver et al. (1994) found that age is a distinctive demographic factor that affecting destination choice. While younger people seek fun and cheap places, older people tend to seek comfort and security. Weaver et al. (1994) also found that tourist under 45-year-old tend to be novelty-seeking.

Veisten et al. (2015, p. 487-504) present a market segmentation analysis of tourists (domestic and foreign) in Norway about tourists preferences for new amenities in an Alpine National park region. The study results show that varied characteristics tourist segments such as activity interests, nature orientations, spending, length of stay, income, education, and nationality.

Barroso-Castro et al. (2007) wanted to identify segment in their study and they found four clusters of tourists. According to their results, there significant differences among segments about the effects of a destination's image on tourists' tendency to revisit their previous destinations and their tendency to recommend it to their relatives and close friends.

Dey and Sarma's (2010) study focused on tourists travel motivation in North-East India. This study revealed three segments: "Nature-loving explorers," "nature-loving vacationers," and "change seekers." The travel motivation factors found in this study are: Vacation, fun and independence, health and recognition, nature and wander thirst.

Inbakaran and Jackson's (2005, p. 53-61) study focused on the characteristics and segmentation of tourists who visit resorts. They found four segments and were named: "Resort incidental, recreation focused (Romantics)," "resort-centred, utilities focused (Immersers)," "resort-centred, family-focused (Tasters)" and "resort-incident, safety-focus (Veterans)." According to Zimmer et al. (1995), choice of tourists destinations is also affected by income and education. People with high income and education levels spent their free time much more differently from other people. Zimmer et al. (1995) reported that tourists want to travel further away if they have more disposable income and better education.

3. OBJECTIVES OF THE STUDY

The purpose of this study is to put forth demographics of tourists visiting Istanbul and to identify tourist profiles based of those demographic and travel characteristic. A questionnaire was developed and a survey was conducted benefiting from quota sampling and convenience sampling method. According to Neuman (1994, p. 197) "Quota sampling is an improvement over haphazard sampling." and "...quota sampling is easier, cheaper, and quicker than probability sampling" (Neuman, 1994, p. 198). On the other hand, "as the name implies, a "convenience sample" is one chosen purely for expedience (e.g. items are selected because they are easy or cheap to find and measure)" (Boyd et al., 1985, p. 409). As the researchers clearly states, "convenience sampling is sometimes useful in marketing research for certain, rather specialized purposes" (Boyd et al., 1985, p. 409).

The main objectives of this study/research are:

1. To identify the profile of the tourists who vacation in Istanbul,
2. To examine the factors influencing them to choose Istanbul,
3. To explore how many market segment consists and,
4. To identify what are the segments profiles.

3.1. Research Questions

Research Question 1: What is the profile of the tourists who vacation in Istanbul?

Research Question 2: What are the factors influencing tourists to choose Istanbul?

Research Question 3: How many market segments consist and what are the segments profiles?

3.2. The Population and the Sample of the Study

The population of the investigation constitutes tourists leaving the Istanbul Ataturk Airport. In this study, for the selection of the sample mass numbers obtained from Istanbul Tourism Statistics of Istanbul Provincial Directorate of Culture and Tourism of 2014 were utilized. Table 1 shows the foreign tourist arrivals

Table 1: Quota number and percentage of tourist arrivals Istanbul

Country	Most countries sending tourists to Istanbul		
	2013	2014	Quota rate
Germany	1,179,397	1,205,976	10.2
Russian Federation	573,528	589,950	5.0
U.S.A.	503,019	533,442	4.5
France	478,258	494,315	4.2
Great Britain	456,172	497,561	4.2
Italy	437,552	466,030	3.9
Iran	386,339	590,920	5.0
Netherlands	284,748	298,959	2.5
Libya	261,476	265,115	2.2
Ukraine	246,950	257,560	2.2
Iraq	241,262	354,063	3.0
Azerbaijan	228,630	240,433	2.0
Saudi Arabia	223,150	322,508	2.7
Spain	201,065	235,834	2.0
Syria	172,449	228,379	1.9
Other	4,600,872	5,261,938	44.4
Total	10,474,867	11,842,983	100

Source: Istanbul Tourism Statistics (January-December 2014). Istanbul Provincial Directorate of Culture and Tourism

and quota rate for Istanbul between 2013 and 2014. Istanbul has been a popular destination for tourists. Table 1 represents that in total German visitor arrivals was ranked the number one inbound market and German tourists had a rate of 10.2% for Istanbul in 2014. Russian and Iranian tourists had a rate of 5%, Americans had a rate of 4.5% and English and French tourists had rates of 4.2% respectively in 2014. This quota analysis results showed that quota rate for Germans to be 10%, for Russian and Iranian tourists 5%, for Americans 4.5% and for English and French tourist, 4.2%. Thus, while the questionnaire was employed, quotas were aimed to validate a proper sample distribution of tourists visiting Istanbul.

3.3. Data Collecting Methodology

In this study, questionnaire was developed by the researcher based on previous studies (Ball and Giakoumis, 2003; Kastenholz et al., 1999; Sarıgöllu and Rong, 2005; Öztürk, 2001; Baloğlu, 2004; Birdir, 2009). In addition, in arranging the form Buhalis (2003, p. 290)'s 6A framework of tourist destinations is also used. The 6A that Buhalis formulated (2003, p. 290) are; (1) Attractions, (2) accessibility, (3) amenities, (4) available packages, (5) activities and (6) ancillary services.

The questionnaire consisted of totally 22 questions to gather respondents' demographic and travel characteristics such as gender, age, occupation, income level, number of visiting times to Istanbul and Turkey, accommodation type and sources of information and to rate 32 destination motives for tourists to choose a destination on a five-point Likert scale (1 = not important at all, and 5 = very important).

The questionnaire was initially designed in Turkish and then translated to English, German and Russian languages by translators who are experts in the field. The questionnaires, in four languages (German, Russian, English and Turkish), were applied to departing tourists by the Researcher between 13 and 18 January 2015 at Istanbul International Airport using face to face technique. In current study, only tourists visiting Istanbul for a holiday were

chosen as the sample. A pilot test was carried with 50 tourists at Istanbul International Airport to make certain the reliability of the scales.

Researcher has received all necessary regulatory approvals for the implementation of the survey from Istanbul Governorship, Istanbul Ataturk Airport Civil Administration and Ataturk Airport Authority. In current study, 600 questionnaires were distributed to tourists and 560 questionnaires were collected back and 508 usable questionnaires (85%) were considered valid and used in the necessary analysis.

In the study, the standard deviation of the mean and descriptive statistics were used for the analysis of the data. In addition, t-test, crosstabulation, ANOVA, factor analysis, k-means cluster and multiple correspondence analysis were also utilized.

4. FINDINGS

4.1. Research Question 1 What is the Profile of the Tourists who Vacation in Istanbul?

Table 2 shows the demographics of the tourists contributed to the current study. It was found that 41.1% were “women” and 58.1% were “men.” The married group dropped to 48% and 36% were “alone” travellers.

Age groups of the tourists in this study were found to be 32.5% for “21-30” age group, 29.9% for “31-40,” 15.7% for “41-50” age group and 10.6% for “51-60” age group.

Based on Table 2, it was found that nationality of tourists were scattered very differently. In the study, the nationality of tourist were found to be 13% “Germans,” 11.2% “Russians,” 6.3% “Americans” and 5.7% “English” respectively. More than 4.5% of the tourist joined the study were “Canadians,” 4.1% “Ukranian” and 3.5% “Iranian.” Occupation of the tourists in current study were found to be 19.7% for “self-employed,” 15.6% for “managers,” 13.6% for “student” and 11.6% for “academician” respectively.

More than 49.2% of the tourist joined the study were “university” graduates. “Masters” graduates were 22%. “High” school graduates, on the other hand, were 15.7%, and elementary graduates were 10.6%. Education level among the tourist visiting to Istanbul seems to increase dramatically.

Income levels of the tourist in current study were found to be 51% for “middle incomers,” 27.2% for “above middle” income groups and 9.6% for “high” income groups. In an intensively competitive industry where more and more destinations develop strategies to attract tourist, keeping middle and high income level tourist to visit Istanbul might be an achievable target.

The major travel characteristic findings of this study are presented in Table 3. It can be said that, tourists mostly prefer quality accommodation establishments when they have holiday in Istanbul. Accommodation preferences in this study show us that 24.2% of the tourists reported to stay at “four-star” hotels. Four-star hotels were followed by “five-star hotels (18.9%),” “relatives/friends (15.7%)” and “three-star hotels (15%)” are

Table 2: Demographic characteristic of participants tourist

Tourists demographic characteristic visiting istanbul								
Characteristics	F	%	Characteristics	F	%	Characteristics	F	%
Nationality			Age			Occupation		
German	66	13.0	20 and below	31	6.1	Academician	59	11.6
Russian	57	11.2	21-30	165	32.5	Self-employed	100	19.7
American	32	6.3	31-40	152	29.9	House wife	28	5.5
English	29	5.7	41-50	80	15.7	Worker	31	6.1
French	9	1.8	51-60	54	10.6	Officier	29	5.7
Iranian	18	3.5	61+	24	4.7	Retired	11	2.2
Italian	16	3.1	Not specified	2	0.4	Student	69	13.6
Dutchman	5	1.0	Total	508	100	Unemployed	10	2.0
Chinese	8	1.6	Education level			Manager	79	15.6
Egyptian	9	1.8	Elementary	54	10.6	Other	90	17.7
Swedish	8	1.6	High school	80	15.7	Not specified	2	0.4
South Korean	9	1.8	University	250	49.2	Total	508	100
Kazakhstani	10	2.0	Masters	112	22.0	Marital status		
Israelite	1	0.2	Not specified	12	2.4	Single	183	36.0
Libyan	9	1.8	Total	508	100	Married	244	48.0
Spanish	4	0.8	Income level			Divorced	6	1.2
Iraqi	3	0.6	Low	15	3.0	Live together	23	4.5
Saudi	3	0.6	Below middle	38	7.5	Not specified	40	7.9
Turkish	19	3.7	Middle income	259	51.0	Other	12	2.4
Azerbaijani	3	0.6	Above middle	138	27.2	Total	508	100
Syrian	1	0.2	High	49	9.6			
Ukrainian	21	4.1	Not specified	9	1.8			
Canadian	23	4.5	Total	508	100			
Finn	11	2.2	Sex					
Pakistani	8	1.6	Female	209	41.1			
Other	124	24.4	Male	295	58.1			
Not specified	2	0.4	Not specified	4	0.8			
Total	508	100	Total	508	100			

Table 3: Travel features of participants tourist

Tourists travel characteristic visiting Istanbul								
Characteristics	F	%	Characteristics	F	%	Characteristics	F	%
Have you been in Turkey for a holiday before?			Holiday reservation periods			With whom did you travel?		
Yes	292	57.5	Last minute	67	13.2	Alone	150	29.5
No	214	42.1	Between 1 and 4 weeks	159	31.3	With my family	215	42.3
Not specified	2	0.4	Between 1 and 4 months	124	24.4	With my friends	91	17.9
Total	508	100	Before 5 month and up	110	21.7	Other	25	4.9
Times to Turkey			Not specified	48	9.4	Not specified	27	5.3
First time	58	11.4	Total	508	100	Total	508	100
2-4 times	93	18.3	Source of information			Satisfaction level		
5 times and up	123	24.2	Travel agencies	41	8.1	Not satisfied at all	7	1.4
Not specified	234	46.1	Family/friends/collages	281	55.3	Not satisfied	11	2.2
Total	508	100	Media (book, internet, newspapers, TV, travel magazines/brochures)	94	18.5	Neither satisfied nor dissatisfied	58	11.4
Have you been in İstanbul for a holiday before?			Tourism information office	7	1.4	Satisfied	244	48.0
Yes	213	41.9	Other	50	9.8	Very satisfied	142	28.0
No	61	12.0	Not specified	35	6.9	Not specified	46	9.1
Not specified	234	46.1	Total	508	100	Total	508	100
Total	508	100	Accommodation type			Is this a package tour?		
Times to İstanbul			Five star hotel	96	18.9	Yes	78	15.4
First time	55	10.8	Four star hotel	123	24.2	No	406	79.9
2-4 times	71	14.0	Three star hotel	76	15.0	Not specified	24	4.7
5 times and up	70	13.8	Motel	40	7.9	Total	508	100
Not specified	312	61.4	Relatives/friends	80	15.7			
Total	508	100	Other	56	11.0			
			Not specified	37	7.3			
			Total	508	100			

ranked respectively. This result seems to be in line with the income levels of the tourist represented in this study.

Sociodemographic variables (such as age, occupation, income) are important factors influencing the tourist travel experience (Goodall and Ashworth, 1988). “family/friends/collages” was number one information source with 55.3%. This result seems to be parallel to the findings of Gitelson and Crompton’s (1983) study, which shows “friends and relatives” was the biggest (74%) travel information source also. The second information source was “media (book, internet, newspapers, TV, travel magazines/brochures)” with 18.5% and the third information source with 8.1% was “travel agencies.”

It is clear that 42.3% of the tourists visiting Istanbul were “with their family” and 29.5% of them travel “alone.” This might also be showing that people see Istanbul as a safe destination to travel with their family and alone. This result could be an indicator why Istanbul receives such a high revisit percentages (between 2 and 4 times 14% and 5 times and up 13.8%).

On the other hand, holiday planning periods seem to change for tourists dramatically. The major holiday planning period was “between 1 and 4 weeks” (31.3%). “Between 1 and 4 months” is 24.4%, and “before 5 months and up” is 21.7% respectively. “Last minute” planning period was 13.2%. Tourists seem to prefer short term reservation periods to take advantages of last minute deals.

This study shows that 48% of the tourists visiting Istanbul were “satisfied” and 28% of them were “very satisfied” with this

holiday. In total, 76% of the tourist indicated satisfaction with their holidays. Satisfaction levels trigger to perform future travelling (Woodside and Lysonski, 1989; Gyte and Phelps, 1990; Karaman, 1999). In this study, 79.9% of tourists indicated that they want to revisit Istanbul for another holiday in the future.

4.2. Research Question 2 What are the Factors Influencing Tourists to Choose Istanbul?

Based on the ranking and mean scores of the effective components there seems to be 26 attractiveness factors that affect tourists to choose Istanbul. The results showed that “destination security (4.1181)” has been identified as the most important factor for tourists influencing their Istanbul choice. The other four factors at the top five are; (respectively, in descending importance) “the friendliness of the local people (4.0591),” “comfort at place of accommodation (4.0413),” “low local crime rate (4.0138)” and “natural beauty and scenery (3.9350).” Four of this attractiveness factors scored above 4.0 in a five-point scale (with 5.0 being very important). On the other hand, the lowest mean score was “hunting.”

Factor analysis with varimax rotation was conducted to see the summability of effective factors in choosing Istanbul of tourists participating in the study. While factor analysis is performed, factor in the selection of Eigen values >1 and at least have a correlation of .400 level were included. Factor analysis was applied to a total of 32 items in the scale. If any item was loaded on two different factors (items 18, 23, 28 and 29), no factor loading (item 31) and factors with less than three items loaded (items 4, 5, 6 and 30) removed from the scale. Later, factor analysis was applied again

to the remaining 23 items. Cronbach's alpha was calculated 0.879, which is greater than Nunnally's (1978) reliability principle of 0.7, and a good of construct reliability (Nunnally, 1967). The factor analysis produced six factors. The total variance of the factors that have been found to explain was found to be 62.146%.

To understand the features that tourists' prefer most in Istanbul, an exploratory factor analysis was conducted. The value of the Kaiser–Meyer–Olkin was found 0.854 (>0.7), which is a well-considered value (Hair et al., 1995) and the significance is 0.000 ($P < 0.05$). The results showed that the structure of the questionnaire was valid and reliable. The results obtained from the analysis are shown in Table 4.

Table 4 summarizes the factor analysis which consists of six factors. The factors respectively were named as “comfort elements,” “special interest and entertainment elements,” “security and economic factors,” “cultural elements,” “elements of environment and natural beauty” and “elements of communication and transportation.”

As it's shown in Table 4, the first factor is labeled “comfort elements” and explained 28.4% of the total variance with eigenvalue of 6.53 and consists of comfort elements such as “service quality in restaurants at place of accommodation,” “service quality in restaurants outside the place of accommodation,” “comfort at place of accommodation,” “friendliness of local people” and “suitability for family vacation.”

When analysing all the items in the first factor, it is safe to claim that, tourist mostly prefer Istanbul because of its tourist-friendly features. These features as listed above might easily be cited as the “Strengths of Istanbul” and should closely be watched and studied to improve the attractiveness and image of Istanbul. Additionally, this factor's average (3.894) seems to have the largest average compared to other factors. On the other hand, the explained variance of 28.4% by this factor shows the importance of these attributes for picking Istanbul as their holiday destination.

Factor two, “special interest and entertainment elements” connected five items which are related with “fair,” “finding thrills and excitement,” “nightlife and entertainment,” “convention” and “visiting family members and relatives.” The results and items of this factor seems to be similar to Öztürk's (2001, p. 47-48) study factor which was called “those who want to relax and have fun.” Therefore, it can be claimed that tourists seek similar elements during a trip/holiday. On the other hand, Hosany et al. (2007) study found a similar factor which is called “conviviality” and includes friendly, family oriented and charming items.

Factor three was named “security and economic factors,” consisted of three important items; safety, shopping and value of money. When the internal structure of the factors examined, tourists seem to include the features you need to have at a destination they want to spend their time. This factor bears similarities with the “economic” factor in Zhang's (2012, p. 63) study. Shih (1986),

Table 4: Factor analysis results on attributes effect tourists to choose Istanbul

Destination attributes	Load	Eigenvalue	Explained variance	Mean	Reliability coefficient
I. Comfort elements (five item)		6.532	28.402	3.894	0.779
15- Service quality in restaurants at place of accommodation	0.799				
16- Service quality in restaurants outside the place of accommodation	0.742				
14- Comfort at place of accommodation	0.726				
13- Friendliness of local people	0.573				
17- Suitability for family vacation	0.450				
II. Special interest and entertainment (five item)		2.154	9.363	2.903	0.746
26- Fair	0.750				
27- Finding thrills and excitement	0.737				
24- Nightlife and entertainment	0.722				
25- Convention/congress	0.709				
32- Visiting family members and relatives	0.450				
III. Security and economic factors (four)		1.732	7.531	3.884	0.795
20- Value for money	0.830				
21- Local price level	0.788				
19- Shopping facilities	0.694				
22- Safety while staying at destination	0.583				
IV. Cultural elements (three item)		1.485	6.458	3.327	0.761
8- Museums	0.776				
7- Religious places	0.754				
9- Cultural shows	0.730				
V. Elements of environment and natural beauty (three item)		1.267	5.508	3.726	0.713
3- Natural beauty and scenery	0.725				
2- Environment	0.713				
1- Climate and weather	0.655				
VI. Elements of communication and transportation (three item)		1.123	4.884	3.465	0.708
11- Tourist information centre	0.850				
10- Accessibility	0.719				
12- Guided city tour	0.540				

Varimax rotation explained total variance: 62.146%. KMO: 85.4%; Bartlett's test of sphericity: $\chi^2=4277.505$, d.f.: 253, $p<0.0000$; general means: 3.533; alpha: 0.879; mean scale: 1 - Not important at all... 5 - Very important. KMO: Kaiser-Meyer-Olkin

on the other hand, seems to identify similar vacation attributes, including visitor safety, reasonable prices, good accommodation, and a relaxing vacation in his study.

The fourth factor which consists elements that recognizing the cultural values of the places (museums, religious places and cultural shows) they want to see during they travel is called “cultural elements.” This result is similar to Zhang’s (2012, p. 63) study factor “tourist appeal and activities” and Öztürk’s (2001, p. 47-48) study factor “the history and the relevant culture” and Kastenholz et al. (1999) “culture and tradition” factor. Moreover, Formica and Uysal (1998) studied tourists of the Spoleto Festival in Italy and specified six benefit factors that tourists find benefit to attend the festival. Among these six motivation factors “cultural/historical significance” was found to be the most important motivating factor to attend the festival.

Fifth factor based on three items about climate, environment and natural beauty that’s why this factor called “elements of environment and natural beauty.” These results produce similar factor attributes that are at Frochot’s (2005, p. 340) study’s factor named “tourist appeal and activities.”

The findings of factor six focused on communication and transportation attributes that are especially important for today’s constantly moving and communicating tourist. The factor is named “elements of communication and transportation” and be formed by three items “tourist information centre”, “accessibility” and “guided city tour.”

All six factors strongly and clearly point out that safety, value of money, friendliness, comfort, culture, tourist areas images (Crompton, 1992; Heung et al., 2001, p. 259), knowledge and information (Riddick, 1986) and accessibility could strongly influence a turist’s destination choice (Chen and Xiao, 2013, p. 357).

4.3. Research Question 3 How Many Market Segments Consist and What are the Segments’ Profiles?

Cluster analysis has used widely in tourism industry studies to identify unknown tourist market segments and to find out which cases in a data set are similar (Jurovski and Reich, 2000, p. 68-69).

After the factor analysis, for the second stage of the analysis, K-means cluster method was applied. Cluster analysis was performed based on six factors emerged. At the end of the analysis, K-means cluster analysis produced three meaningful market segments. K-Means cluster analysis was produced “low,” “medium” and “high” cluster. Then, the clusters are labeled “natural beauty and information seekers”, “price sensitives” and “independents.” Multiple correspondence analysis was used to describe statistical relationships of these clusters. “Multiple correspondence analysis is the multivariate extension of correspondence analysis to the joint analysis of multiway tables” (Kaciak and Louviere, 1990, p. 455).

After multiple correspondence analyses, it is found that 60.6% is explained with the obtained six factors and the new qualitatively

created variables for low, medium and high sets. There are two dimensions and the first dimension explains 34.5%, and the second dimension explains 26%.

When we examine Figures 1 and 2 obtained after multiple correspondence analysis, we can discuss the relations among demographics and travel characteristics and the clusters as below.

High cluster is named “natural beauty and information seekers.” In this segment, “elements of environment and natural beauty,” “elements of communication and transportation,” “cultural elements,” “comfort elements,” “security and economic” and “special interest and entertainment” elements are quite close to each other. Therefore, it is possible to claim that there is a relationship between them. This segment comprises 53.9% of the

Figure 1: Two-dimensional correspondence analyses of some demographics

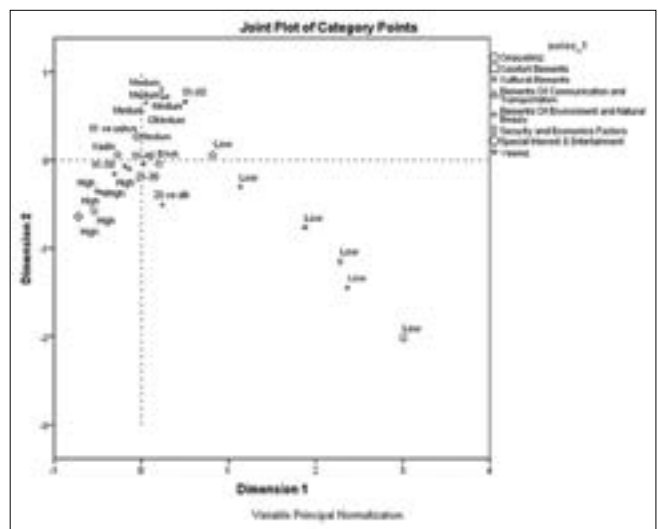
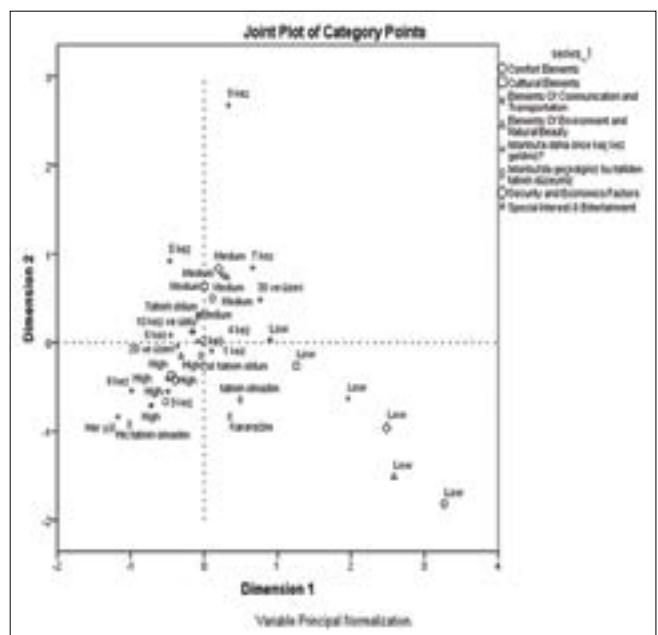


Figure 2: Two-dimensional correspondence analyses of some travel characteristics



respondents and the largest one. According to these results, women between ages “41 and 50” and women between ages “21 and 30” give importance to this factor. In this segment, tourists who come to Istanbul 3 times and up were found to be very satisfied with their holiday. The majority has stayed in four-star hotels and they mostly visited historical places, art galleries and museums and they did shopping. The largest proportion of “natural beauty and information seekers” came from Russia (33%), Germany (22%), England (17%), America (16%), Iran (14%), Canada (12%) and Ukrain (9%).

Medium cluster is labelled “price sensitives.” In this segment, “security and economic,” “elements of communication and transportation,” “elements of environment and natural beauty,” “cultural elements,” “comfort elements” and “special interest and entertainment” elements are quite close to each other and there is a relationship between them. Price sensitives segment consists of 22.8% of the respondents. According to results, “51-60 age” men and “61 age and up” women give importance to this factor. In this segment, it is determined that men and women at “31-40 ages” give a close importance to “special interest and entertainment” features. Additionally, tourists who come to Istanbul 4 times and up, were determined to be satisfied in this holiday. The majority has made accommodation in five-star hotels and they mostly visited historical places, art galleries and museums and they did shopping. Price sensitives came from Germany (18%), Canada (9%), England (6%), America (6%), Ukrain (6%), Russia (5%), Italy (5%) and Spain (4%).

Low cluster is named “independents.” But, it was encountered at different result in this segment. In this segment, elements (“cultural elements,” “elements of communication and transportation,” “security and economic,” “elements of environment and natural beauty” and “comfort elements”) were observed not to be in a very strong relationship with each other. This segment comprises of 23.2% of the respondents. It was observed that “20-year-old and younger” male tourists have the poorest relation with “cultural elements.” In this segment, tourists who come to Istanbul for first time were found to be very satisfied with their holiday. The majority has made accommodation in 4-star hotels and mostly visited historical places, art galleries and museums and they did shopping. “Independents” segment visitors came from Germany (26%), Russia (19%), America (10%), England (6%), Italy (6%), Ukrain (6%) and Finland (5%).

5. CONCLUSION

Examining segments has been a very important act recently because comprehensively studied segments provide specific information about tourists’ purchasing patterns to managers and destination administrators in the tourism industry (Park, 2009. p. 45).

The goal of the current study was focused on the characteristics and segmentation of tourists who visited Istanbul. Factor analysis detected six factors. After examining the results throughly “destination security,” “the friendliness of the local people,” “comfort at place of accommodation,” “low local crime rate” and

“natural beauty and scenery” have been identified as the most important factors affecting tourists visiting Istanbul.

Findings in this study have produced three market segments. These segments called “natural beauty and information seekers,” “price sensitives” and “independents” and indicated some major and important findings.

- Tourists seem to be quite satisfied with this holidays at every segment
- Tourists heavily accommodated in four and five-star hotels
- Tourists mostly visited historical places, art galleries and museums and they did shopping for each segment
- Natural beauty and information seekers mostly came from Russia
- Price sensitive segment and independents segment visitors primarily came from Germany
- The information sources used are principally “friends”, “family” and “internet” for this holiday for each segment and
- They plan this holiday between “1 and 4 months” for each segment.

The study results clearly show that the tourism industry managers and administrators in Istanbul must closely watch potential tourists and the tourists visiting Istanbul to be able to serve them better and be able to cope with the intense competition in the Global Tourism Industry. Similar studies must be done almost every year and in different time periods. This is actually one of the limitations of the current study because the questionnaire was applied in a limited time period, between 13 and 18 January, 2015 to be exact. Seeing the differences presented by each market segments makes studying different market segments individually to better serve each and every different segment properly.

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