

WHAT ATTRIBUTES ARE IMPORTANT FOR TRAVELLERS IN DESTINATION SELECTION? A RESEARCH ON EASTERN BLACK SEA REGION IN TURKEY

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Abstract

Tourism is one of the leading sectors in terms of contributing to the global GDP and world's total exports. The figure in Turkey was more spectacular. Turkey was the sixth most visited holiday destination in the world with more than 41.6 million people in 2015. Moreover, approximately 9 million of domestic tourists moved inside Turkey in 2015. Turkey successfully enriched its tourism potential for decades. The sector revealed its potential by diversifying travel themes with the concrete. This research investigates the important attributes that travellers prefer in their destination selection of Eastern black sea region. For this aim, five attributes and its levels were defined and their importance was surveyed on the travellers. Convenience sampling method was used in collecting the data and Conjoint analysis with SPSS statistics programme were used in the analysis. The main findings are as follows. Travel theme as having the highest relative importance followed by length of stay, destination, transport and price per night. Highland tourism found as the highest utility in travel theme followed by short (3-4 nights) length of stay, combined travel to Eastern black

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sea region with Batumi city, by coach travel and cheaper price. The research presents valuable findings to the parties involved in tourism sector as the region has vast potential for domestic and foreign tourists.

1. Introduction

With the increasing number of tourists travelling to international and domestic destinations every year, tourism has become one of the leading sectors by contributing 10% of global GDP and 6% of the world's total exports [1]. According to OECD Tourism Trends and Policies 2016 report[2], tourism is a major contributor to national economies in the OECD area. Tourism exports add higher value from the most of other sectors into domestic market in terms of GDP and employment. Domestic tourism is also indicated as highly important in the area, representing more than 80% of tourism expenditures in some countries. Because of its importance, making destinations distinctive has been an ultimate goal for countries. Many of the countries try to benefit from customised experiences by making customers' destination experiences more personalised. Because of the fact that, tourism activities focused on three fundamental areas: Thematic product development and promotion, targeted and co-ordinated marketing and harnessing the digitalisation of tourism. It is reported that, by 2015, Mexico had registered 111 'Magical Towns' that offer distinctive cultural heritage experiences. A useful guide was produced by Germany for destinations that include how to strengthen rural tourism, disseminated through a nationwide [2].

Tourism is accepted as a saviour of the rural areas by many governments in fostering regional economic development [3]. Attraction of big cities by the huge investments and migration of the young people made countryside desperate. In order to find a way out for rescuing the regions from the situation, own characteristics and advantages may help to develop. In such regions, economy is not usually at desired levels, tourism activity has not reached to an adequate level.

Therefore, each tourism product that exists in such regions should be utilised in order to achieve a sustainable economic growth [4].

The tourism figures in Turkey are also sharpening; Association of Turkish Travel Agencies (TURSAB) report indicates that tourism accounts for 15% of total exports in Turkey [5]. According to World Bank 2015 statistics, more than 1.3 billion people moved internationally and more than 41.6 million of them preferred Turkey as their holiday destination, which makes Turkey World's most visited sixth destination [6]. In the concrete case of the domestic market, 8 millions of domestic tourists moved inside Turkey in the year of 2016 [7]. Today the competition in the tourism industry is not only among the countries, the regions are also competing for a bigger share of this vast economical industry. Dozens of destinations in Turkey try to attract tourists and enhance their chance in the competition and Eastern black-sea region is one of the most critical regions in terms of domestic and foreign tourism activities.

The Black sea region has a great potential for tourism because of its spectacular values. The tourism industry in the region has begun to develop just after the second half of the 90's as a result of Soviet Union's dissolution. However, the majority of the purposes of the visits were based on business, in other words "suitcase trade" and this played a big role in developing the region. In addition to that, domestic tourists' interest has also leveraged the development of the region. In particular, increased number of certified facilities and the concept of their quality service has become progressively important during the time. These triggered the developments of the regional tourism in the last decades.

The information obtained and compiled from the Turkish Statistical Institute indicates that about 2 million people visited the region and approximately 1/8 of them were foreign tourists and rest of them were domestic in 2015 [8]. The average length of stay of the tourists was calculated from the statistics as only about 1.5 days. The reason of short length of stay may be based on solely business not sightseeing purpose. The figure, whatever the reason, is very far from the region's tourism potential. Whereas the role of the geographical factors that make life difficult in the Eastern black sea region have big advantage and influence on the region's tourism potential. High Mountains offer competitive advantage for trekking, climbing and hunting, glaciers located

at high mountain peaks allow for highland activities and skiing tourism, rivers descending rapidly from high mountains allow for water sports such as rafting.

The competition between the regions has reached at the highest levels. The regions of Mediterranean and Aegean have led to the country economy mostly with the sea tourism. On the one hand, Black-sea region is considered to be disadvantageous since the most of its coasts are not suitable for the sea tourism. On the other hand, the region is a significant alternative to the sea tourism with its unique nature and culture. Tourism investments made in recent years in Turkey are mostly concentrated in the rural areas. Green tourism mainly known by various names such as nature tourism, alternative tourism, ecotourism, and highland tourism is the most suitable one for the region as it preserves its unique natural structure. In recent years, the studies have pointed out to evaluate the Eastern black sea region as a very rich potential for such a kind of tourism activities [9].

The attributes of destinations have come into prominence in selection of tour package for the travellers. A study carried out on Dalyan, which is one of the top popular destinations in Turkey, shows that the most influential attribute in the town is ecotourism [10]. Another research made in Portugal focusing on the attributes of the destination found out that weather and price are the most important attributes for the travellers and ideal tourism product is mostly affected from the climate and the cost of travel [4]. Eastern black-sea region has also its unique attributes in attracting consumers.

The aim of the article is to investigate existing and potential customer expectations from the Eastern black-sea regional tourism by defining region's some attributes and their levels. The research reveals the priorities of the attributes in consumer selection of a regional tourism. To our knowledge, no research has been carried out on expectations of tourists who have chosen the region as a holiday destination. Realising the gap in the extant literature, more researches are needed for the regional tourism in the Eastern black-sea region. To address these gaps, this study has been conducted in favour of revealing which attributes are the most preferred and contributes to the literature. Research findings also address national and local authorities aiming to develop the region by explaining the insights of the consumer behaviour.

2. Research Method

In this study, conjoint analysis was employed, which is an approach that commonly known in Psychology and Marketing. The analysis determines customer preferences. In Conjoint analysis, a set of attributes and their levels are asked to consumers to rate. The research of Luce and Tukey (1964) are the principal references [11] and, later Wilkie and Pessemier (1973) began to discuss multi-attribute models [12], as an approach to break down and comprehend the preferences of the purchasers. The model clarifies the priorities of the consumers in determining a product or service attributes.

First of all, in order to reveal the preferences of the consumers from Black-sea trip package, the attributes were listed. These attributes were derived from the web pages of the most popular travel agencies. The agencies were chosen from A group agencies list of the Association of Turkish Travel Agencies (TURSAB) [7]. Since there are more than 9000 travel agencies in the group, the most popular ones were chosen according to their popularity on social media such as Facebook and Instagram. The most liked and followed travel agencies in Turkey were found asetstur.com, jollytour.com, anitur.com, tatilsepeti.com, tatil.com, respectively. Secondly, the questionnaire was constructed with three sections. In the first section, information related to characteristics of the consumers was aimed to gather. In the second section, alternative cards were set up to get the preferences of the attributes and their levels for each product, which will be explained later, and the last section included some questions about their habits in relation to their touristic behaviours. And lastly, the survey was applied to the consumers who took a tour package after checking the questionnaire with several test subjects.

The survey data were collected from 107 consumers by using convenience sampling method with web based questionnaire between the dates of July 19 and August 7, 2017 in Turkey. But, only 101 of them were found eligible for the analyses. Table 1 summarizes the characteristics of the respondents. 51.5% of them are female and 48.5% are male. Majority of them with 58.4% are between the ages 25-40, 19.8% of them are between the ages 18-25, 12.9% of them are between the ages 40-50 and 8.9% are over 50 years old. Majority of them with 38.6% have post graduate degree and 30.7% of them have graduate degree while 17.8% of them have high school and 12.9% of them have primary school degree. Monthly incomes of the respondents are as follows in Turkish Lira (TRY). Majority has earnings between 3000-5000 with 40.6% while over 5000

with 31.7%, 1500-3000 with 16.8% and below 1500 with 10.9%. Location city of the respondents was also requested in the questionnaire. Majority comes from other cities with 47.6% while Istanbul has the biggest share with 26.7%, Ankara has the third rank with 16.8% and Izmir is following them with 8.9%. It can be confirmed that these figures almost represent the whole country.

Table 1. Some characteristics of the respondents

Demographics		Frequency	%
Sex	Female	52	51.5
	Male	49	48.5
	Total	101	100.0
Age	18-25	20	19.8
	25-40	59	58.4
	40-50	13	12.9
	50+	9	8.9
	Total	101	100.0
Education	Primary school	13	12.9
	High school	18	17.8
	Graduate	31	30.7
	Post Graduate	39	38.6
	Total	101	100.0
Monthly Income (TRY)	<1500	11	10.9
	1500-3000	17	16.8
	3000-5000	41	40.6
	>5000	32	31.7
	Total	101	100.0
Location city of respondent	Istanbul	27	26.7
	Ankara	17	16.8
	Izmir	9	8.9
	Others	48	47.6
	Total	101	100.0

Literature research and web sites of the sector leaders were searched in defining the attributes to be covered in the research. A number of attributes and their levels were discovered from the research. But, the attributes and their levels were needed to be limited due to the getting more precise results from the research. Five attributes and thirteen levels were defined for the qualifications that would affect the purchase of Eastern black-sea tour. The attributes are namely as length of stay, transportation, destination, price per night, and travel theme.

Short (3-4 nights) and long (6-7 nights) levels were assigned for the length of stay in destination selection. These levels were received and calculated from the advertisements of travel agencies published in their web sites and social media accounts.

Concerning the attribute of transportation, two levels were set up namely as flight+coach and only coach. Eastern black-sea region is almost very far away for the target travellers who are located in the big cities of Turkey such as Istanbul, Izmir and Ankara. Flight option could be a better choice for the people who have a less spare time and financially strong enough for the travel. Meanwhile, only coach option could be a better selection for the travellers who are curious and price sensitive, with having more spare time.

Destination is another attribute for the choice of travelling to Eastern black sea region. Two levels were set up for the attribute namely as domestic+Batumi, and only domestic. Eastern black-sea region has a border gate to the City of Batumi in Georgia. Georgia is an attractive country for the local people due to its especially heritage coming from old Soviet Union. Travellers may pay attention to this historical city not only its old characteristics but also some duty-free shopping.

Price is important factor especially for the low and middle-income consumers who are price sensitive. The average price was calculated from the prices of the tour options on the websites of 5 major travel agencies given above. Each agency offers different price alternatives depending on their length of stay. For each stay, both travel by flight+coach and travel by only coach prices were calculated on daily basis, and then the average price of the tour company was determined. The average price of the sector was also calculated from the average prices of the tour

companies. Two levels in local currency were set up for the consumer choice such as TRY 142 and TRY 260 calculated based on the research. Both of them are acceptable rates for the consumers who wish to take this tour. The tour operators offer different kind of services based on the quality like transportation and accommodation with 2-4 star hotels. As it is known, pricing the services is influenced by the value given by awareness, perception of quality and experience of consumers.

Travel theme is also another important factor for the travellers who wish to live unique experience. Five different levels were defined for the tour. These are namely nature tourism, city tourism, highland tourism, culture and history, and finally nature sports. All these options are offered to the travellers during their trip in the region. All the attributes in the questionnaire and their levels are given in Table 2.

Table 2. Attributes and their levels

Attributes	Levels
Length of stay	3-4 night 6-7 nights
Transportation	Flight+Coach Coach
Destination	Domestic+Batumi Domestic
Price per night (TRY)	260 for Flight+Coach 142 for Coach
Travel theme	Nature tourism City tourism Highland tourism Culture and History Nature Sports

A full factorial design ($2 \times 2 \times 2 \times 2 \times 5 = 80$ cards) in conjoint analysis accounts of all the possible effects. But the information calculated from full factorial design is excessive, an interviewee is not able to make a proper assessment by losing interest and the quality of the replies is affected in a negative direction. Researchers often use fractional factorial designs in order to avoid the

negative situation. Two basic principles of orthogonality and equilibrium are taken into account to obtain valuable and reliable data. In this study, orthogonal design was used created by SPSS 21.0. Orthogonal design presumes that all existing interactions in stimuli may be neglected, but it provides an effective estimate of all significant effects [13]. So, the card combination of eighty was reduced to sixteen by using orthogonal design to reduce a respondent's weariness level to minimum. Table 3 lists the cards used for the questionnaire.

Table 3. The cards employed in assessing the destination preference.

#	Card	Length of Stay	Transportation	Destination	Price per night (TRY)	Travel theme
1	1	6-7 nights	Flight+Coach	Domestic+Batu mi	260	Nature Sports
2	2	3-4 night	Coach	Domestic+Batu mi	260	Highland tourism
3	3	3-4 night	Flight+Coach	Domestic	260	Nature tourism
4	4	3-4 night	Flight+Coach	Domestic+Batu mi	142	Culture and History
5	5	6-7 nights	Flight+Coach	Domestic+Batu mi	142	Highland tourism
6	6	6-7 nights	Coach	Domestic	142	Nature tourism
7	7	6-7 nights	Flight+Coach	Domestic	142	Highland tourism
8	8	3-4 night	Coach	Domestic	142	Nature sports
9	9	3-4 night	Flight+Coach	Domestic+Batu mi	260	Nature tourism
10	10	3-4 night	Flight+Coach	Domestic	142	City tourism

11	11	6-7 nights	Coach	Domestic+Batu mi	260	Citytourism
12	12	3-4 night	Coach	Domestic	260	Highland tourism
13	13	6-7 nights	Coach	Domestic	260	Culture and History
14	14	3-4 night	Coach	Domestic+Batu mi	142	Citytourism
15	15	6-7 nights	Flight+Coac h	Domestic	260	Citytourism
16	16	6-7 nights	Coach	Domestic+Batu mi	142	Nature tourism

Figure 1 represents a stimulus card of sixteen generated and aims to measure the likelihood of purchasing Easternblack-sea travel by the participants. The participants assessed their purchase intention by a seven-point scale, where 1 is “would definitely not purchase” and 7 is “would definitely purchase”. Here in conjoint analysis, dependent variables are represented by participants’ intention to purchase, and independent variables are represented by the attribute levels.

Figure 1. Stimulus card of #2

Card#2						
Length of stay:3-4 nights						
Transportation: Coach						
Destination: Domestic+Batumi						
Price per night (TRY): 260						
Travel theme: Highland tourism						
Your evaluation						
Would definitely not purchase				Would definitely purchase		
1	2	3	4	5	6	7

3. Results and Analysis

Table 4 summarizes the results of the conjoint analysis depicting traveller preferences of Easternblack-sea destination and importance of the attributes in their decision-making process.

The model's fit of the traveller preferences predicted by the conjoint analysis are evaluated according to Pearson's R and Kendall's tau coefficients. The results of the analysis show that 0.981 Pearson's R and 0.912 Kendall's tau results are correlated between the applied model and the observed results. According to the results, the model has a good estimation power. Utility estimate values in the table indicate the preference of various levels of the attributes. A high utility value means that the attribute is the desire or preference for that level.

Table 4. The result of Conjoint analysis

Attribute	Relative importance (%)	Level	Utility Estimate	Standard error
Travel theme	51.444	Nature tourism	.421	.057
		City tourism	-.089	.057
		Highland tourism	.206	.057
		Nature sports	-.014	.074
		Culture and History	-.524	.074
Length of Stay	26.135	3-4 night	.240	.031
		6-7 nights	-.240	.031
Destination	15.543	Domestic	-.143	.031
		Domestic+Batumi	.143	.031
Transportation	3.989	Flight+Coach	-.037	.031
		Coach	.037	.031
Price per night (TRY)	2.889	260	-.053	.061
		142	-.106	.122
(Constant)			3.851	0.097
Significance:			Value	p
Pearson's R			0.981	0.000
Kendall's tau			0.912	0.001

The analysis determines that the travel theme attribute is the major factor in traveller preference. The effect of travel theme on the intention to buy decision is 51.444%. The length of stay is found as the second important attribute. The length of stay factor is found to be effective in the purchasing decision with the ratio of 26.135%. The third important factor in influencing decision process is the destination. The destination factor affects the decision with the rate of 15.543%.

Fourth, the transportation has a minor impact on the purchase decision with the rate of 3.989%. And lastly, the price per night attribute has also minor effect on the decision with the rate of 2.889%.

The utility figure of each factor denominates the effective power of each level in traveller preferences. Nature and highland tourism both are the highest utility scores under the travel theme attribute 0.421 and 0.206, respectively. City tourism, nature sports, and culture and history have minus and lower scores. This clarifies that tourists are expected to see the nature and highland when they purchase Eastern black sea region tour. These levels should be clearly focused on to satisfy the traveller expectations. Nature and highlands are competitive advantage and superiority for the region. Others can be accounted as additive in order to add flavour and diversification to the destination.

Short length of stay (3-4 nights) presents the highest utility score with 0.240 to the travellers. This preference impacts the local stakeholders negatively as the aim of the destinations to serve its visitors a prolonged period. Other level of longer length of stay (6-7 nights) has a lower score with -0.240. Regions unique characteristics should be promoted for the visitors to attract and enjoy their time.

Domestic + Batumi choice has higher utility score with 0.143 than the only domestic alternative for the destination attribute. Turkey and Georgia has a very good relation. This makes easy for the traveller to cross the border with identity cards. But longer queues make officials duty difficult especially in summer times. Turkish travellers wish to experience these historical places because of the common history and its unique architecture. Travelling to Georgia is expected to be easier soon just after the new investments and renovation at Sarp bordergate. Additive Batumi tour would be attractive for the travellers who wish to see Eastern black sea region.

Only coach level instead of flight+coach has higher utility score with 0.037. This is contradiction with the short length of stay option. A coach from Istanbul or Izmir takes approximately 17-18 hours. It could be very exhausting especially for the elderly people. Sightseeing in nature and

highlands is also tiring. Region's own culture, heritage and music may ease this weary journey turn into joy.

Price was found as the least important factor in affecting the purchase decision. The cheaper rate offers higher value for the travellers with -0.106 utility score. This is not a surprise that mostly consumers wish to pay less. The point is here the price factor is the less important factor among the other attributes. This may be result of the region's own special character and its positive image.

The total utility value is the sum of the factor level scores. The combination of the highest total utility is defined as the product quality series that provides optimum benefit to the consumers. According to this, the most suitable preference set that provides the optimum utility to the travellers is equal to Travel theme with Nature Tourism + Short (3-4 Nights) length of stay + Destination with Domestic and Batumi travel + Transportation with Coach + TRY 142 as of Price Per Night + 3.851 as of Constant. Its total value is $[0.421 + 0.240 + 0.143 + 0.037 + (-0.106) + 3.851 = 4.586]$. It can be concluded that the travellers are willing to purchase travel to Eastern black sea region with nature tourism, short stay, not only sightseeing the local places but also a foreign country, transportation with coach at a cheaper rate of prices. Travel theme, length of stay and destination are the major factors that affect travellers' decision by 93%.

4. Conclusions

This research explored traveller preferences for purchasing decision of touristic tour of Eastern black-sea region in Turkey. Regions in a country are in competition with each other. Regions with its own superior character try to attract domestic and foreign tourists to get a share from the tourism pie.

Literature and market research identified destination, travel theme, length of stay, transportation and price as attributes to be used to evaluate Eastern black-sea region as touristic destination. According to the results of Conjoint analysis, the respondents identified travel theme as having the highest relative importance followed by length of stay, destination, transport and price per night. Nature tourism has the highest value for the respondents together with highland tourism.

Other options such as city tourism, nature sports and culture and history have minor effect on deciding Eastern black-sea tour. All the stakeholders should focus on these two options to develop the region as a touristic destination. Mountains, green areas, forests, valleys and streams are inheriting characteristics of the region. These areas should be better planned for the touristic purposes.

Short length of stay is preferred by the respondents. Longer staying should be promoted to get better advantage from the tour. Enriched activities can be a solution for short stay. The region has enough own riches that should be turn into tourism.

Travellers wonder to see Batumi which is neighbour city in Georgia. Turkey and Georgia officials can make easier these touristic tours by eliminating some paperworks at the border. Long queues do not allow traveller to visit other country. Simply, these difficulties do harm both countries' mutual benefit from the activities.

Coach transportation is preferred to flight + coach alternative. Travellers may want to enjoy their time and geography by selecting longer transport option. This is good for the other regions passing through in reaching the destination. Traveller may see other cities during their sightseeing and may be good potential for the neighbouring cities. The cities along with the route may benefit from this far away destination.

Price per night is relatively the least important factor for the travellers. This is advantage for all parties. Travellers are not price sensitive for the destination. It will help for the regional development by attracting more visitors to the destination.

Travellers may prefer to take the tour especially in the summer times. This is not acceptable. Local authorities should examine their potential for the other seasons as well. The region has also its own spectacular beauty in the winter time. The region may benefit from its original landscape by investing for the infrastructure. The Green Road project, which aims to integrate the highlands from Samsun province to Artvin province, can be a good investment for discovering the real potential of the region. Local people should be well informed with the project to get the

support by means of marketing communication and all the investments should take into account to protect the environment.

The research has some limitations. Limited number of consumer took part in the survey. Cluster analysis could be done with higher participation. The research covers only Turkish consumers excluding foreign tourists. Attributes and levels were kept limited due to the restriction of the analysis.

References

- [1] *UNWTO Annual Report 2015 | World Tourism Organization UNWTO.* (2017).“*Www2.unwto.org*”, Retrieved 26 October 2017, from <http://www2.unwto.org/publication/unwto-annual-report-2015>
- [2] *OECD Tourism Trends and Policies 2016 - en - OECD.* (2017).“*Oecd.org.*” Retrieved 26 September 2017, from <http://www.oecd.org/cfe/tourism/oecd-tourism-trends-and-policies-20767773.html>
- [3] Jackson, J., & Murphy, P. (2006). “Clusters in regional tourism: An Australian case”, *Annals of Tourism Research*, 33, 1018-1035.
- [4] Sérgio Dominique Ferreira Lopes. (2012). “Post hoc segmentation combining conjoint analysis and a two-stage cluster analysis”, *African Journal of Business Management*, 6, 1-4.
- [5] *Turizm giderleri: 2003-... | TÜRSAB Türkiye Seyahat Acentaları Birliği.* (2017). “*Tursab.org.tr*”, Retrieved 16 May 2017, from http://www.tursab.org.tr/tr/turizm-verileri/istatistikler/yurtici-seyahat-pazari/turizm-giderleri-2003-_74.html
- [6] *International tourism, number of arrivals | Data.* (2017). “*Data.worldbank.org*”, Retrieved 26 October 2017, from http://data.worldbank.org/indicator/ST.INT.ARVL?name_desc=true
- [7] *Seyahat Acentaları | TÜRSAB Türkiye Seyahat Acentaları Birliği.* (2017). “*Tursab.org.tr*”, Retrieved 16 May 2017, from http://www.tursab.org.tr/tr/turizm-verileri/istatistikler/turistik-tesis-ve-isletmeler/seyahat-acentalari_915.html
- [8] *Bölgesel İstatistikler.* (2017). “*Biruni.tuik.gov.tr*”, Retrieved 26 May 2017, from <https://biruni.tuik.gov.tr/bolgeselistatistik/tabloyilSutunGetir.do?durum=acKapa&menuNo=273&altMenuGoster=1>

- [9] Zaman, M. (2017). "The Role of Traditional Plateau Festivals in the Development of the Plateau Tourism of Eastern Black Sea Region", *DoğucografyaDergisi*, 7, 2-3.
- [10] Ozer, O. (2012). "DestinasyonTercihindePazarlamaKarmasibilesenlerininRolu-DalyanOrnegi", *Journal of Business Research-Turk*, 1, 1.
- [11] Luce, R. & Tukey, J. (1964). "Simultaneous conjoint measurement: A new type of fundamental measurement", *Journal of Mathematical Psychology*, 1, 1-27.
- [12] Wilkie, W.&Pessemier, E. (1973). "Issues in Marketing's Use of Multi-Attribute Attitude Models", *Journal of Marketing Research*, 10, 428.
- [13] Green, P., Krieger, A. & Wind, Y. (2001). Thirty years of conjoint analysis: reflections and prospects,*Interfaces*, 31 (3), 56-73.