



### EVALUATING FOREIGN TOURISTS' WILLINGNESS TO PAY FOR ANCIENT GOBEKLITEPE-SANLIURFA, TURKEY

**Ali Rıza MANCI**

Assistant Professor, Harran University, Faculty of Tourism

*E-mail: [armanci@harran.edu.tr](mailto:armanci@harran.edu.tr)*

**Abstract:** The goal of this study is to determine entrance fee and factors that are associated with willingness to pay (WTP) for ancient Gobeklitepe-Sanlıurfa-Turkey by using contingent valuation method (CVM). In this context, by using convenience sampling method, 338 foreign tourists were surveyed. Two types of questions were used: closed-ended (or dichotomous choice) and open-ended. The probit model and 2SLS (Two-Stage Least Squares) models were used to answer the research questions of the study. The factors that affect tourists' WTP have been estimated by using maximum likelihood method (MLM) instead of LSE (Least Square Estimation) method. The average WTP for the probit model is estimated at \$25 for Gobeklitepe and the stated WTP was estimated at \$22.04 by 2SLS. Accordingly, aggregate use value from probit model and 2SLS model were estimated 1,042,500 \$/year and 919,068 \$/year respectively. This study is the first of its type in the region. The study determines the primary factors (gender, travel cost, call frequency, marriage, pensioner, travel with family, age, continents and bid prices) influencing tourists' WTP for the optimal management of a cultural site. The results are extremely important for policymakers because valuing non-market cultural heritage has ability to implement suitable policies its preservation. This study contains useful information for Turkey and other countries which have similar archaeological cultural heritage characteristics.

**Key Words:** Willingness to pay, probit model, 2SLS model, culture economy, Sanliurfa, Gobeklitepe

## Introduction

The cultural heritage is defined as the overall collection of possessions, real estate, tangible as well as intangible properties, private belongings, public and semi-public organizations' properties, and material goods belonging to churches and nation which are significantly valuable in terms of history, arts, science and culture for this reason, deserve protection and conservation by the nations and societies (Bedate et al., 2004).

Economy of culture, cultural economics or economics of historical heritage is a subdiscipline of economics which combines the culture and economics to analyze the effects of economic factors on cultural heritage. As Montenegro et al. (2009:97) suggest, the "economics of historical heritage" has been developed as an analytical field by its own owing to the uniqueness of the included properties, which are usually matchless, not duplicatable, and exposed to durability in time.

In addition to these characteristics, it is important to value cultural heritages for their preservation and sustainability. The Contingent Valuation Method (CVM) is used to value these heritages by determining the entrance fee. In order to get informations from tourists who are asked about their Willingness To Pay (WTP) to facilitate the services, hypothetical market should be developed. There are many researchers who conduct this type of studies particularly about cultural heritages (Sanz et al., 2003; Bedate et al., 2004; Salazar and Marques, 2005; Venn and Quggin, 2007; Kinghorn and Willis, 2008; Montenegro et al., 2009; Bostedt and Lundgren, 2010; Choi et al., 2010; Poor and Snowball, 2010; Necissa, 2011; Raheem et al., 2012; Barrio et al., 2012; Gomes et al., 2013; Voltaire et al., 2013). The common of these studies are as follows: they conducted Contingent Valuation Method to assess some places which are cultural heritages that is the economic value of heritage sites. These studies apply to only one site and reached some variables affecting WTP. Their results indicate that cultural heritage is valuable in monetary terms. Thus, archeological sites are able to protected and conserved by means of valuing them.

Based on the agreement in 2015 the World Heritage Committee Convention confirmed 1,031 heritages have particularly universal worth in many countries worldwide. These world heritages include 802 cultural, 197 natural, and 32 mixed properties (UNESCO, 2016a).

Turkey is listed among the countries with deep cultural heritage which are taken over through several civilizations from the beginning of the history. Fifteen natural and cultural heritages of Turkey were confirmed by UNESCO. In addition, the archaeological site of Gobeklitepe is considered as a potential heritage by UNESCO in tentative list since Gobeklitepe will be able to become an important representative tourism resource of Turkey, especially Sanliurfa (UNESCO, 2016b). Many scientists assume that the Gobeklitepe is an original, unique and first temple in the history (Mann, 2011). Despite the fact that some other heritage sites which are less significant in archaeological terms have been visited with large quantities of foreign tourists, Gobeklitepe, which is of outstanding value for the human kind, has gathered less attention from visitors.

The problem about this site is how to preserve the cultural, archaeological properties and how to ensure attraction of tourists. Moreover, they may spend money to get tourism products and services. It means economy of Sanliurfa is affected positively in case of collecting revenue from tourists, employments and other economic variables. This site currently charges no entrance fee. Although the city has a rich cultural heritage, most of Sanliurfa's economy is currently dependent on agriculture. It is observed that in order to raise the competitiveness and attractiveness of this type of cultural heritage, it is crucial to note that there must be a linkage between preservation and services which tourists' prefer.

The primary intention of this study is to determine entrance fee, economic value of Gobekli-tepe and specifically, to identify the WTP determinants. It is possible to employ CVM to approximate use as well as non-use values. In this technique, directly contacting a person through questions in a survey to learn how much they would be WTP for certain environmental, cultural and historical values. This is named as contingent valuation due to the fact that it is requested from a person to express their WTP subject to a certain hypothetical scenario and explication of these values. The feature of CVM, which is depending on the expressions of individuals concerning their future actions rather than what they are actually observed to do, is the most important weakness as well as the most important strength of it (Chiam et al., 2011). For any further theoretical investigations, researchers should review these studies (Schkade and Payna, 1994; Bjornstad and Kahn, 1996; Bateman and Willis, 1999; Vossler and Kerkvliet, 2003; Loomis 2011; Hausman, 2012; Haab et al, 2013).

### Literature review

This main purpose of the study was to estimate entrance fee for Gobekli-tepe which is well-known man-made cultural heritage. As a result of the estimation, the economic value of this monument was predicted. This type of archaeological areas have known as public goods which are not bought and sold in the market. If the authorities want to preserve their continuity, it is essential to value them economically. At the same time, they are historical places which attracts cultural tourists. In other words tourists visit these sites for cultural purposes.

The literature section of this study presents a review of the matters associated with the valuation of cultural heritage by conducting traditional or narrative literature review method. In this method, some relevant articles were selected to criticize, analyse and synthesize.

Within the literature, there is a considerable amount of studies concerning the effects of cultural heritages on local societies, communities as well as on the global economy. The statement that heritages are shared prosperity and create surplus benefits have been under debate among various scholars (Fonseca and Rebelo, 2010). Thus, the benefits of public goods e.g recreational places, cultural heritages (tangible and intangible), man-made historical monuments, works of art (traditions, paintings, sculptures, collections and museums), archeological spots and so on can be identified through the usage of economic valuation techniques such as contingent valuation, hedonic pricing, and travel cost (Ortacesme et al., 2002; Bilgic, et al., 2007; Twerefou and Ababio, 2012). These techniques are widely used to monetize their values. It is consensual that this is an unfinished study area, which should encourage researcher undertake

in a way to generating a multiplicity of spillover effects over other economic activities specially connected with tourism by attracting consumers, catering, local products, and so forth (Fonseca, 2010). For this reasons, cultural heritages are becoming increasingly important on the economics of cultural heritages including demand for archeological sites, which is analyzed in this paper.

When cultural heritages are being valued, several academics have chosen to employ CVM which obtains tendencies for public goods through contacting people directly and asking them their WTP for the services (Mitchell and Carson, 1989). For example, Gurel et al. (2017) asserted in order for tourism policy makers to create an efficient and fair tax system in tourism destinations, it is crucial to understand travelers' perceptions concerning willingness to pay (WTP), tax rates, and their optimal allocation. Similarly, some prior studies (Salazar and Marques, 2005; Tuan and Navrud, 2007; Giannakopoulou et al., 2017) have identified same arguments the economic dimension of cultural heritage should be recognised. Alberini et al. (2004) asserted parallel to Gurel et al. (2007) the payment vehicle in the valuation scenario was additional tax payments, and the payment question was phrased as a referendum, with programme being implemented and funded if a majority voted for it. The Giannakopoulou et al. (2017) elicit visitors' WTP for the preservation of the local architectural heritage of the region of Mani, i.e. to quantify the social value of traditional architecture as in this study.

Moreover a CVM survey builds scenarios which present alternative probable future government actions. Following the establishment of the scenarios, the respondents are forwarded the question to express their inclinations about those actions. Afterwards, the collected responses are put under analysis in a resembling way with the responses of those in actual markets. Under both circumstances, expressed in a hypothetical setting or in a real market, the economic value is obtained from the selections of the subjects (Carson, 2000).

According to Chiam et al. (2011), the indication of CVM execution in different researches need to be essentially understood for the purpose of allowing for the method to be debated. For approximating the use-value of the common goods, the WTP assesses for example Hicksian Consumer Surplus Measures depending on utility-theoretic analysis (Hanemann, 1984) and usually, the net of the price paid in reality is measured (Carson, 2000).

Some studies using CVM are as follows (Tumay and Brouwer, 2007; Jun et al., 2010; Raheem et al., 2012; Barrio et al., 2012; Tehrani et al., 2013; Lavee and Baniad, 2013; Gomes et al., 2013; Voltaire et al., 2013).

## Methodology

### Study site description

Gobeklitepe is a man-made archeological and ancient site about 15 km away from the city of Sanliurfa, Southeastern Anatolia (figure 1). It is a distinctive temple that was built 11,500 years ago for spiritual ceremonies. Among its different characteristics include T-shaped pillars which have foxes, snakes, wild boars, cranes, wild ducks pictures 6 meters heights and 60 tonnes (figure 2). In addition, Gobeklitepe is considered the beginning of the history of architecture, first settlement for mankind and religious temple which is a building devoted to the worship of

a Good or Goods by archeologists. Finally Gobeklitepe is still an enigma for many scientists. For example, David Lewis-Williams (2002) describes Gobeklitepe as “the most important archaeological site in the world” and Gordon White (2016) asserted that “The discovery of Gobeklitepe in Southeastern Turkey in 1994 has forced us to rethink the origins of civilization”

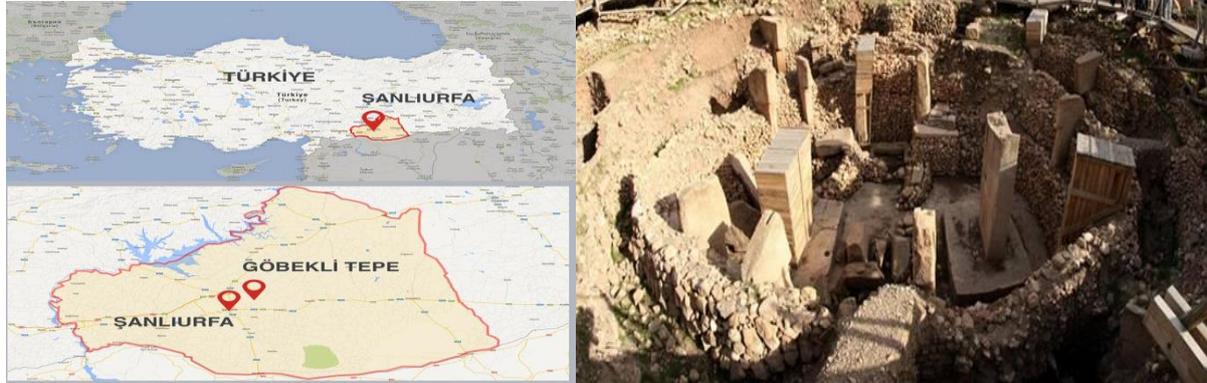


Figure 1. The location of Gobeklitepe, Source: <http://gobeklitepe.info/>, Date of access: 14.12.2017

Figure 2. Gobeklitepe cult center (Source: <http://web.harran.edu.tr/tarih/tr/foto-galeri/goster/105/gobekli-tepe/13> Date of access: 14.12.2017

## Measurement

There are different types of question formats using CVM to get hypothetical WTP in cultural heritage literature. The types of question used in this study were closed-ended or dichotomous choice and open-ended. In closed-ended format, or in double-bound dichotomous choice model, asked respondents' in the case of the presence of facilities or improvements in the study area whether they were WTP a specified bid amount that was each respondents were asked to pay for entrance fee for Gobeklitepe. The bid price was selected randomly from \$5 to \$60, increasing \$2.5, which was determined according to pre-test results in each questionnaire. To decide on bid prices, a pretest was conducted on randomly selected foreign tourists who visit Gobeklitepe. Based on the results of the pretest, bid prices for the first closed-ended question were divided into 23 categories and bid prices were selected randomly in each questionnaire.

After being provided with detailed information about services which reflect improvement for touristic and cultural value of the Gobeklitepe archaeological site, extended question was asked in questionnaires. *Suppose that local authorities have planned to improve facilities at Gobeklitepe such as showrooms, shopping center, traditional handicrafts, bookstore, hotels, traditional food serving restaurants, information center, sanitation place and other facilities including landscaping. However, these new facilities will definitely cost more than the entrance fee to visit the Gobeklitepe. In this case, would you be WTP additional cost to operating authority for this proposed plan? If yes, please indicate your maximum amount that you are WTP for the proposed improvement? If no, then please indicate your least amount including zero that you are WTP for the proposed improvement?* In the second closed-ended question with the improvements, bid prices were divided into 25 categories from \$5 to \$125, increasing with \$5.

The main survey was administered via face-to-face interviews in 2011 spring season . Sample size were selected randomly with the help of given formula below:

$$n = \frac{Nt^2 pq}{d^2(N-1) + t^2 pq} \quad (\text{Yamane, 2009}) \quad (1)$$

Where: n: number of sample size, N: number of population, Numbers of foreign tourists were 41,700, t: Z value within %95 confidence interval as 1,96 because sample size is greater than 30, p: probability of foreign tourists to visit cultural heritage sites 0,50, q:1-p: 0,50, probability of foreign tourists not to visit, d: Margin of error 0,05 thus the sample size was calculated approximately as 338.

## Model specification

### *Probit model*

In this paper, the theoretical specification of the CVM has been based on Hicksian utility-theoretic analysis (Kim et al., 2007). A probit model is defined in statistics as a kind of regression in which the dependent variable can merely get two values. The probit name comes from the words *probability + unit*. The model aims at approximating the probability which an observation having certain features will be classified under one of the particular categories. Furthermore, in case approximated probabilities with values higher than  $\frac{1}{2}$  are considered as classifying an observation into a forecasted class, the probit model is a kind of binary classification model. A probit model is a general arrangement for an ordinal or a binary response model. It handles the same problem groups by itself like logistic regression which makes use of similar methods. The probit model adopts a probit link function and is frequently assessed employing the standard maximum likelihood process. In such a case, this approximation is named as a probit regression (Gujarati and Porter, 2009). On the other hand, logit model is another regression technique. Both methods will yield similar (though not identical) inferences. Logit – also known as logistic regression – is more popular in health sciences like epidemiology partly because coefficients can be interpreted in terms of odds ratios. Probit models can be generalized to account for non-constant error variances in more advanced econometric settings (known as heteroskedastic probit models) and hence are used in some contexts by economists and political scientists. If these more advanced applications are not of relevance, than it does not matter which method you choose to go with (Chen and Tsurumi, 2010).

### *Two-stages least square (2SLS) model*

In disciplines including statistics, econometrics, epidemiology and so on, the instrumental variables technique is employed in order to approximate cause and effect relationships when there is not a chance to make controlled experiments or when an action is not transported to each unit in a randomized experiment. Instrumental variable methods enable consistent estimation when the explanatory variables (covariates) have a correlation with the error terms of a regression relationship. This kind of a correlation can take place when the dependent variable drives minimum one of the covariates (“reverse” causation), when a number of related explanatory variables can be ignored from the model, or when the covariates are exposed to measurement error. Under these circumstances, ordinary linear regression usually creates approximations which are biased and inconsistent (Greene, 2003). On the other hand, consistent

approximations can again be acquired in case of the presence of an instrument. An instrument is a variable which is not a part of the explanatory equation by itself and is related with the endogenous explanatory variables and subject to the other covariates (Greene, 2003). In linear models, two major prerequisites call for the employment of an instrumental variable. Firstly, the instrument needs to be related with the endogenous explanatory variables, conditional on the other covariates. Secondly, the instrumental variable cannot be related to the error term in the explanatory equation; which means that the instrument cannot be disadvantaged by the same problem as the original predicting variable (Jia et al., 2013). The inconsistency of ordinary least square is due to endogeneity of  $x$ , which indicates that changes in  $x$  are related with the changes in  $y$ , while they also change in the error  $u$ . A technique for creating merely exogenous variation in  $x$  is required. An understandable approach is employment of an experiment; however, for most economics purposes experiments are too expensive or even inapplicable. The model is as follow: Name of variables ( $X_i$ ) are shown in table 1.

$$I_i = X_i\beta + \varepsilon_i$$

$$X_i\beta = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \beta_{12}X_{12} + \beta_{13}X_{13} \quad (2)$$

## Findings

Majority of respondents were male (53%). Sixty percent of them were between 18-44 ages. 50% married. The monthly income of them \$1000-3000 (34%) and have no child (59%). Eighty four percent of respondents were university graduated. 22% of respondents were retired and 62% of them come from Europe. Eighty eight percent of them visited for cultural, religious and historical purposes, that means Sanliurfa is rich-city with its cultural heritages. Because 59% of respondents have beliefs about “Sanliurfa is one of the oldest city in the world”.

The probit model and 2SLS were used in this research in order to determine entrance fee and the socioeconomic determinants of WTP of foreign tourists who have been visiting Gobeklipepe by using limited dependent variables programme. According to probit and 2SLS model, entrance fee of the site was estimated at \$25 and at \$22.04 respectively. The economic value of the site was \$1,042,500/year and \$919,068/year on the assumption that 41,700 foreign tourists visited Gobeklipepe. According to results of probit model estimation, the gender, American, travel cost, call frequencies and bid price were statistically significant parameters affected the WTP significantly (Table 1).

**Table 1. The probit model results for WTP**

Variables	Probit model coefficients	t-value
Constant	-1.96	-1.58
Gender	<b>-0.27<sup>a</sup></b>	-1.73
Marital Status	-0.05	-0.27
Education	0.12	1.21
Age	0	-0.67
European	-0.08	-0.34
Australian	-0.12	-0.38
American	<b>0.54<sup>a</sup></b>	1.75
Number of Children	0.08	0.91

Group Travel	0.16	0.79
Travel Cost	<b>0.21<sup>b</sup></b>	2.45
Call Frequency	<b>0.73<sup>c</sup></b>	3.67
Perception of cultural heritages	0.02	1.57
Income	0.58	0.82
Bid prices	<b>-0.05<sup>c</sup></b>	-8.28
Chi-square		119.628

<sup>a,b,c</sup>orderly indicates the degree of statistical significance of 10%, 5% and 1%

It was expected to see a decrease of WTP with the rising bid prices similar to demand model. The result was consistent with the priority perception (intuitive knowledge) when looked at the other CV studies. The coefficient of parameter is statistically significant ( $P \leq 0.01$ ). Male respondents have less WTP than female. There was a positive relationship between travel cost and WTP ( $P \leq 0.05$ ). It means if the travel cost of respondents increase, WTP of them increase, too. This result is not an correspondence to demand model. Increase in frequency visit of respondents caused an increase in the WTP ( $P \leq 0.01$ ). Because frequent visitors have positive perception on historical monuments. That is they are ready to pay higher price for protection of this site with their income. When looking at the overall condition of the model, all exogenous variables simultaneously made contribution in the probability of WTP from Chi-square statistical point of view was observed. Therefore, the variables used in the probit model be able to explain the probability of WTP (Table 2).

**Table 2. The 2SLS model results for WTP**

Variables	2SLS model coefficients	t-value
Constant	<b>29.03<sup>a</sup></b>	<b>1.71</b>
Gender	2.62	0.84
Single	0.86	0.12
Married	<b>13.54<sup>a</sup></b>	<b>1.94</b>
Bachelor Degree	0.39	0.09
MS and PhD	0.49	0.09
European	<b>-11.61<sup>b</sup></b>	<b>-2.24</b>
Australian	<b>-18.19<sup>c</sup></b>	<b>-2.68</b>
American	<b>-11.27<sup>a</sup></b>	-1.82
Pensioner	<b>12.143<sup>b</sup></b>	<b>2.33</b>
Travel Alone	3.33	0.81
Travel with family	<b>-8.21<sup>b</sup></b>	-2.01
Business travel	5.02	0.78
Age	<b>-0.41<sup>b</sup></b>	<b>-1.83</b>
Travel costs	-2.58	1.30
Bid prices	<b>-0.02<sup>c</sup></b>	<b>-8.07</b>
WTP	-8.25	-1.24
Chi-square		<b>120.22<sup>c</sup></b>

<sup>a,b,c</sup>orderly indicates the degree of statistical significance of 10%, 5% and 1%

2SLS model was analyzed for Gobeklitepe. In this analysis, statistically significant variables were focused on. Married visitors have positive WTP when compared with widowed visitors. Married visitors' WTP is about \$14. Under these circumstances, when single visitors have tendency to save from their disposable income, married couples want to make a sacrifice from their disposable income. In this case most probably arose from economic situation between

disposable incomes of visitors. In other words, this situation are caused that married couples have high disposable income than single visitors, at the same time married couples give more attributes to cultural monuments.

Moreover both probability of WTP and stated WTP amount vary from for tourists in terms of their residential. European, American and Australian tourists, have lesser WTP compare with Asian ones. Between these tourists, Australians stated lesser significance in terms of both probability of WTP and WTP amount. Pensioners compared to employee, have positive propensity in terms of both probability and WTP amount. In addition, pensioners compared to employee have 92.5% more WTP and in case of establishment of better social conditions for Gobeklitepe and want to pay \$12 more. Tourists that travel with their family have \$8 less WTP than tourists who travel alone. This negative amount may be caused by high cost of travel with family.

As the age of visitors increases, the probability of WTP decreases. There is an inverse relationship between them. As a result, it is expected for young visitors sacrifice their disposable income quite easily in order to access new vision of historical sites. New generations want more attractiveness and social competence to historical sites. Because they take advantages of these type of activities.

It is estimated that there is a negative relationship between probability of WTP and bid prices expected ( $P < 0.01$ ). In case of increasing bid prices, WTP will decreases in accordance with demand law. Thus, when bid prices are increased it is expected that the number of visitors will decrease. But these will overcompensate with the help of functional reform of historical sites. Collective or group visiting may be possible by engaging in promotional activity for this type of historical sites in national and international arena and increasing the more opportunities and facilities for tourists. It is clearly understood that using other model instead of 2SLS, parameters will not be unbiased and efficient. If explanatory power of the 2SLS model is examined by the help of chi-square test, external variables explained enough both probability of WTP and stated WTP simultaneously.

## Conclusions

This paper examined the use of CV to value cultural heritage for Gobeklitepe in Sanliurfa-Turkey. The economic value of cultural heritage does not necessarily reflect the true value of a good or fair estimation. Cultural heritage valuation is a sine qua non when it comes to decision-making; otherwise, in raw market terms, cultural goods are assigned a zero price (Giannakopoulou et al., 2017). This analysis indicates that CV can be successfully applied to historical sites in developing countries. The econometric analysis undertaken indicates a linkage between various socio-economic variables of interest and the expressed WTP. The theoretical approach has been founded on the premise that a person increases his/her gains to the highest possible level in view of the socioeconomic variables in this study.

The main sample of study is selected by conducting convenience sampling method survey of foreign tourists. The probit model is created by using CVM and the study created in the form

of survey question types according to the characteristics stated WTP of the additional ordinary two-stage least square method (2SLS) is conducted.

The factors that affect tourists' WTP have been estimated by using MLM. As a result, The average WTP for the probit model is estimated the amount of \$25 and the stated amount WTP was estimated by 2SLS \$22,04. In addition, the estimated annual economic values attributed to historical monuments calculated as \$1,042,500. According to the 2SLS model, the average annual benefits have been estimated at \$919,068.

It is rational to impose entrance fee according to results of the study, wherein no entrance fee currently and the visitors have \$22 mean WTP for this site. The financial income from entrance fee can be used to improvements in the site, such as additional resource for archeological excavation, undertake research, touristic services, promotion of the site, increasing awareness of domestic people, tourists attractions, etc. On the other hand, there may be an over-estimated WTP because of biases. Some of the respondents may specify high amounts because they will not pay actually. In the theoretical debates, foreign tourists may have told that prices because they know that will not able to pay more for a hypothetical market now. On the other hands, the results of the study were consistent with other applied research and in practice applications. Such as Stonehenge's entrance fee is £14.90, entrance fee of Statue of Liberty is \$17 and the Pyramids of Giza's entrance fee between 30 LE (Egyptian Lira) and 100 LE and visiting inside the Great Pyramid costs to tourists 100 LE (\$14.36).

There isn't enough of such type of scientific research in valuing cultural heritages despite their importance in tourism sector specifically in cultural tourism in Turkey. The obtained results of this study will encourage other researchers in reliability and applicability of this methodology. The other researchers may achieve certain results by using this method to the other cultural assets of Sanliurfa-Turkey as well.

In this type of research, researchers might face with some bias for example hypothetical bias may arise, i.e. respondents' expressed preferences may differ from their actual behaviour under real economic circumstances (Hausman, 2012). Conducting with only foreign visitors and CVM are some limitations of this study. Because critics have long questioned their reliability and validity; that is whether they give consistent results across different survey designs that might be used to measure the same quantity and whether they measure what they are intended to (Bateman et al., 2002; Freeman, 2003; Rakotonarivo et al., 2016). In future research, Discrete Choice Experiment (DCE) method which become widespread among environmental practitioners (Rakotonarivo et al., 2016) may conduct in this sort of valuation of non-market goods studies. Because one of the main advantages of DCE over CVM is its ability to value the individual attributes characterizing a good or a policy, which may be more useful from a management perspective (Hanley et al., 2001). As a result of this study, authorities may arrange environment of this place to attract tourists. They may apply entrance fee to sustain its preservation. Finally, it is concluded that it is possible to use of the contingent valuation as a policy instrument in the public cultural sector.

## References

- Alberini, A., Rosato, P., Longo, A. and Zanatta, V. (2004). Information and Willingness to Pay in a Contingent Valuation Study: The Value of the S. Erasmo in the Lagoon of Venice, *FEEM Working Paper Series*, 19.
- Barrio, M. J., Devesa, M. and Herrero, L. C. (2012). Evaluating intangible cultural heritage: The case of cultural festivals. *City, Culture and Society*, 3, 235-244.
- Bateman, I. J. and Willis, K. G. (Eds.). (1999). Valuing environmental preferences: the theory and practice of the contingent valuation method in the US, EU and developing countries. Oxford, Oxford University Press, p. 668
- Bedate, A., Herrero, L. C. and Sanz, J. A. (2004). Economic valuation of the cultural heritage: Application to four case studies in Spain. *Journal of Cultural Heritage*, 5, 101-111.
- Bilgic, A., Florkowski, W. J., Yoder, J., and Schreiner, D. F. (2007). Estimating fishing and hunting leisure spending shares in the United States. *Tourism Management*, 29 (4), 771-782. doi:10.1016/j.tourman.2007.09.001
- Bjornstad, J. and Kahn, J. R. (Eds.). (1996). *The contingent valuation of environmental resources: methodological issues and research needs*. Cheltenham, UK., Brookfield, Vt. Edward Elgar,
- Bostedt, G. and Lundgren, T. (2010). Accounting for cultural heritage- A theoretical and empirical exploration with focus on Swedish reindeer husbandry. *Ecological Economics*, 69, 651-657.
- Carson, T. R. (2000). Contingent Valuation: A user's guide. *Journal of Environmental Science and Technology*, 34, 1413-1418.
- Cetin, G., Alrawadieh, Z., Dincer, M. Z., Dincer, F. I. and Ioannides D. (2017). Willingness to Pay for Tourist Tax in Destinations: Empirical Evidence from Istanbul, *Economies*, 5 (21), 1-15.
- Chen, G. and Tsurumi, H. (2010). Probit and logit model selection. *Communications in Statistics - Theory and Methods*, 40, 159-175.
- Chiam, C., Khalid, A. R., Rusli, Y. and Alias, R. (2011). *Contingent Valuation Method: Valuing Cultural Heritage*. In: Singapore Economic Review Conference (SERC), Singapore.
- Choi, A., Ritchie, B., Papandrea, F. and Bennett, J. (2010). Economic valuation of cultural heritage sites: choice modelling approach. *Tourism Management*, 31, 213-220.
- Giannakopoulou, S., Xypolitakou, E., Damigos, D. and Kaliampakos, D. (2017). How visitors value traditional built environment? Evidence from a contingent valuation survey. *Journal of Cultural Heritage*, 24, 157-164. <http://dx.doi.org/10.1016/j.culher.2016.11.00>.
- Fonseca, S. and Rebelo, J. (2010). Economic valuation of cultural heritage: application to a museum located in the Alto Douro Wine Region–World Heritage Site, *Pasos, Revista de Turismo y Patrimonio Cultural*, 8 (2), 339–350.
- Gomes, L. L., Pinto, L. M. C. and Rebelo, J. F. (2013). Visitors' preferences for preserving the attributes of a world heritage site. *Journal of Cultural Heritage*, <http://dx.doi.org/10.1016/j.culher.2013.01.003>
- Greene, W. (2003). *Econometric analysis*. New Jersey, Prentice Hall International.
- Gujarati, D. N. and Porter, D. C. (2009). *Basic econometrics*. Boston, Mass: McGraw-Hill.

- Haab, T., Interis, M. G., Petrolia, D. R. and Whitehead, J. C. (2013). From Hopeless to Curious? Thoughts on Hausman's "Dubious to Hopeless" critique of contingent valuation. *Applied Economic Perspectives and Policy*, Advance access, 1–20. doi:10.1093/aep/ppt029
- Hanemann, M. (1984). Welfare evaluation in contingent valuation experiments with discrete responses. *American Journal of Agricultural Economics*, 66, 332-341.
- Hausman, J. A. (2012). Contingent valuation: from dubious to hopeless. *Journal of Economic Perspectives*, 26, (4), 43–56. <http://dx.doi.org/10.1257/jep.26.4.43>.
- Jia, H., Skaperdas, S. and Vaidya, S. (2013). Contest functions: Theoretical foundations and issues in estimation, *International Journal of Industrial Organization*, 31(3), 211-222.
- Jun, E., Kim, W. J., Jeong, Y. H. and Chang, S. H. (2010). Measuring the social value of nuclear energy using contingent valuation methodology. *Energy Policy*, 38, 1470-1476.
- Kim, S. S., Wong K. F. and Cho, M. (2007). Assessing the economic value of a world heritage site and willingness-to-pay determinants: A case of Changdeok Palace. *Tourism Management*, 28, 317-322.
- Kinghorn, N. and Willis, K. (2008). Valuing the components of an archaeological site: An application of Choice Experiment to Vindolanda, Hadrian's Wall. *Journal of Cultural Heritage*, 9, 117-124.
- Lavee, D. and Baniad, G. (2013). Assessing the value of non-marketable land: The case of Israel. *Land Use Policy*, 34, 276-281.
- Lewis, D. W. (2002). *The Mind in the Cave: Consciousness and the Origins of Art*. USA, Thames and Hudson publication.
- Loomis, J. B. (2011). What's to know about hypothetical bias in stated preference valuation studies. *Journal of Economic Surveys*, 25 (2), 363–370.
- Mann, C. (2011). Gobekli-tepe, Birth of Religion, National Geographic, <http://ngm.nationalgeographic.com/2011/06/gobekli-tepe/mann-text>, access date: 13.12.2017
- Mitchell, R. and Carson, R. (1989). Using surveys to value public goods: the contingent valuation method, *Resources for the Future*, Washington, D. C., p. 223.
- Montenegro, A. B., Huaquin, M. N. and Herrero, L. C. (2009). The valuation of historical sites: a case study of Valdivia, Chile. *Journal of Environmental Planning and Management*, 52, 97-109.
- Necissa, Y. (2011). Cultural heritage as a resource: its role in the sustainability of urban developments. The case of Tlemcen, Algeria. *Journal of Procedia Engineering*, 21, 874-882. doi: 10.1016/j.proeng.1011.11.2089.
- Ortaçesme, V., Özkan, B. and Karagüzel, O. (2002). An estimation of the recreational use value of Kursunlu Waterfall Nature Park by the individual travel cost method. *Turkish Journal of Agriculture and Forestry*, 26, 57-62.
- Poor, J. and Snowball, J. (2010). The valuation of campus built heritage from the student perspective: Comparative analysis of Rhodes University in South Africa and St. Mary's College of Maryland in the United States. *Journal of Cultural Heritage*, 11, 145-154.

- Raheem, N., Colt, S., Fleishman, E., Talberth, J., Boyle, K. J., Rudd, M., Lopez, R. D. (2012). Application of non-market valuation to California's coastal policy decisions. *Marine Policy*, 36, 1166-1171.
- Salazar, S. and Marques J. (2005). Valuing cultural heritage: The social benefits of restoring and old Arab tower. *Journal of Cultural Heritage*, 6, 69-77.
- Sanz, J. A., Herrero, L. C. and Bedate, A. M. (2003). Contingent valuation and semiparametric methods: A case study of the National Museum of Sculpture in Valladolid, Spain. *Journal of Cultural Economics*, 27, 241-257.
- Schkade, D. A. and Payne, J. W. (1994). How people respond to contingent valuation questions: a verbal protocol analysis of willingness to pay for an environmental regulation. *Journal of Environmental Economics and Management*, 26, 88-109.
- Tehrani, M., Verbic, M. and Chung J. Y. (2013). An analysis of adopting dual pricing for museums the case of the national museum of Iran. *Annals of Tourism Research*, 43, 58-80.
- Tümay, A. B. and R. Brouwer (2007). Nonmarket valuation of water quality in a rural transition economy in Turkey applying a posteriori bid design. *Water Resources Research*, 43, doi:10.1029/2006WR004869.
- Tuan, T. H. and Navrud, S. (2007). Valuing cultural heritage in developing countries: Comparing and pooling contingent valuation and choice modelling estimates. *Environmental and Resource Economics*, 38, 51-63. doi: 10.1007/s10640-006-9056-5
- Twerefou, D.K. and Ababio, D.K.A. (2012). An Economic Valuation of the Kakum National Park: An individual travel cost approach. *African Journal of Environmental Science and Technology*, 6 (4), 199-207.
- UNESCO, (2016a). World Heritage List. Dünya kültür mirası listesi (accessed: whc.unesco.org/en/list), access date: 12.03.2016
- UNESCO, (2016b). Dünya kültür mirası geçici listesi (accessed: <http://whc.unesco.org/en/tentativelists/5612/>), access date: 12.03.2016
- Venn, T. and Quiggin, J. (2007). Accommodating indigenous cultural heritage values in resource assessment: Cape York Peninsula and the Murray-Darling Basin, Australia. *Ecological Economics*, 61, 334-344.
- Voltaire, L., Pirrone, C. and Bailly, D. (2013). Dealing with preference uncertainty in contingent willingness to pay for a nature protection program: A new approach. *Ecological Economics*, 88, 76-85.
- Vossler, C.A. and Kerkvliet, J. (2003). A criterion validity test of the contingent valuation method: comparing hypothetical and actual voting behavior for a public referendum. *Journal of Environmental Economics and Management*, 45, 631-649.
- White, G. (2016). *Star.Ships: A Prehistory of the Spirits*. United Kingdom, Scarletimprint.
- Yamane, T. (2009). Temel örnekleme yöntemleri. İstanbul, Literatür Yayıncılık, p528, ISBN: 9789758431342