

The Valuation of Heritage Interpretation for Conservation and Sustainable Tourism: A Case Study of the Historic City of Ayutthaya*

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Abstract

This paper is a contingent valuation study for eliciting the value of the heritage interpretation of cultural heritage sites by using the Historic City of Ayutthaya, which is the listed as a World Cultural Heritage Site by UNESCO as the study site. To conserve the cultural heritage site sustainably, heritage interpretation is the one of the essential factors that has to be taken into account because heritage interpretations, for example, signs, information boards, brochures, booklets, pamphlets, tourist guides, and demonstrations, are instruments that can convey the authentic values that lay inside the heritage site for the visitors. Single-bounded dichotomous choice questions were employed in this contingent valuation study with two hypothetical programs; the first program was the restoration and improvement program for three major historic sites, and the second program was scaled up for fifteen historic sites. The payment vehicle used was one – day package entrance fee because of its incentive compatibility. Furthermore, intriguing methodological issues,

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which were distance decay, anchoring bias, and scope effect, were also investigated in this study. According to the empirical results, the willingness to pay values of heritage interpretation restoration and improvement program for three major historic sites and fifteen historic sites were shown at 137.44 Baht per visitor and 422.44 Baht per visitor respectively. Amazingly, distance decay was previously believed to be found but was not. Furthermore, it was found that this study passes the scope test and no anchoring bias was statistically found.

Keywords: *Heritage Interpretation, Contingent Valuation, Sustainable Tourism, Cultural heritage*

การประเมินมูลค่าการสื่อสารมรดกทางวัฒนธรรม เพื่อพัฒนาการ อนุรักษ์ และการท่องเที่ยวอย่างยั่งยืน: กรณีศึกษาอุทยานประวัติศาสตร์ พระนครศรีอยุธยา*

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บทคัดย่อ

บทความวิจัยนี้เป็นงานวิจัยที่ใช้วิธีการประเมินมูลค่าโดยการสมมติเหตุการณ์ในการประเมินมูลค่าของการสื่อสารมรดกทางวัฒนธรรมในโบราณสถาน ที่เป็นมรดกทางวัฒนธรรม และประวัติศาสตร์ โดยผู้วิจัยได้เลือกเอาอุทยานประวัติศาสตร์ พระนครศรีอยุธยา ซึ่งได้รับการขึ้นทะเบียนจากองค์การการศึกษา วิทยาศาสตร์และวัฒนธรรมแห่งสหประชาชาติ เป็นมรดกโลก เป็นกรณีศึกษา การสื่อสารมรดกทางวัฒนธรรมที่อยู่ในรูปแบบต่าง ๆ ไม่ว่าจะเป็นป้ายอธิบายข้อมูลต่าง ๆ สื่อสิ่งพิมพ์ แผ่นพับ การบริการมัคคุเทศก์ และการสาธิตต่าง ๆ นั้นมีความสำคัญอย่างยิ่งในการสื่อสารให้แก่นักท่องเที่ยวได้รับรู้ และเข้าใจถึงคุณค่าที่แท้จริงของมรดกทางประวัติศาสตร์ และวัฒนธรรมของโบราณสถานนั้น ๆ งานวิจัยนี้ได้ใช้คำถามปลายปิดแบบเสนอราคาครั้งเดียว โดยมีเหตุการณ์สมมติในการปรับปรุงบูรณะการสื่อสารมรดกทางวัฒนธรรมภายในอุทยานประวัติศาสตร์ พระนครศรีอยุธยา 2 เหตุการณ์ โดยทั้ง 2 เหตุการณ์นี้มีขอบเขตในการปรับปรุง และบูรณะที่แตกต่างกัน กล่าวคือ โครงการสมมติที่หนึ่ง เป็นการปรับปรุงบูรณะการสื่อสารมรดกทางวัฒนธรรมภายในโบราณสถานในอุทยานประวัติศาสตร์ พระนครศรีอยุธยา ทั้งสิ้น 3 แห่ง สำหรับโครงการสมมติที่สองนั้นได้มีการเพิ่มเติมโบราณสถานเข้าไปอีก 12 แห่ง รวมเป็น 15 แห่ง โดยใช้อัตราค่าธรรมเนียมในการเข้าชม 1 วัน เป็นวิธีที่ให้ผู้ตอบแบบสอบถามแจ้งความเต็มใจจะจ่าย โดยการศึกษาวิจัยในครั้งนี้ ผู้วิจัย

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ยังได้ศึกษา เกี่ยวกับผลกระทบของระยะทางระหว่างจังหวัดที่ผู้ตอบแบบสอบถามพักอาศัย และจังหวัดพระนครศรีอยุธยาต่อมูลค่าความเต็มใจจะจ่าย การทดสอบผลกระทบของขอบเขตของโครงการต่อมูลค่าความเต็มใจจะจ่าย และการทดสอบอคติอันเกิดมาจากการยึดติดจากการศึกษา พบว่า ความเต็มใจจะจ่ายของนักท่องเที่ยวชาวไทยในการปรับปรุงบูรณะการสื่อสารมรดกทางวัฒนธรรมสำหรับโบราณสถาน 3 แห่ง และ 15 แห่ง นั้นมีค่าเท่ากับ 137.44 บาทต่อคน และ 422.44 บาทต่อคน ตามลำดับ ซึ่งสะท้อนถึงส่วนเกินของผู้บริโภคที่ยังมีอยู่มาก และเป็นโอกาสในการพิจารณาปรับเพิ่มค่าเข้าชมโบราณสถานต่าง ๆ ภายในอุทยานประวัติศาสตร์ พระนครศรีอยุธยา เพื่อจะได้จัดสรรรายได้ในการปรับปรุงบูรณะการสื่อสารมรดกทางวัฒนธรรม เพื่อพัฒนาการท่องเที่ยว เพื่อให้การท่องเที่ยวสามารถดำเนินการควบคู่ไปกับการอนุรักษ์ได้อย่างยั่งยืน นอกจากนี้ ผลการศึกษายังพบอีกว่า มูลค่าความเต็มใจจะจ่ายนั้นไม่มีแนวโน้มลดลงต่อระยะทาง แต่มีมูลค่าเพิ่มขึ้นตามขนาดขอบเขตของโครงการ ในขณะที่อคติจากการยึดติดไม่พบว่ามีอิทธิพลที่มีนัยสำคัญทางสถิติ

คำสำคัญ: การสื่อสารมรดกทางวัฒนธรรม การประเมินมูลค่าโดยกำหนดเหตุการณ์สมมติ การท่องเที่ยวอย่างยั่งยืน มรดกทางวัฒนธรรม

Introduction

In December 13, 1991, the Historic City of Ayutthaya was listed as a World Cultural Heritage Site of UNESCO. The criterion indicates that Ayutthaya bears excellent witness to the period of development of a true national Thai art. Nowadays, the protection and conservation of the Historic City of Ayutthaya are implemented under the Act on Ancient Monuments, Antiques, Objects of Art and National Museums of 1961 and reinforced by zoning regulations under the City Planning Act of 1975.

However, only regulations are not sufficient to implement the conservation program of the cultural heritage site. One of the goals of the World Heritage listing is to encourage the understanding and sharing of experiences among people, and both of education and regulation should be unavoidably employed (Drost, 1996: 483, Choi & Sirakaya, 2006: 1284, Bramwell & Lane, 1993: 2, Bramwell & Lane, 1999: 3). Especially regarding the educational process, heritage interpretation is the key process to deliver not only information and knowledge regarding cultural heritage for visitors, but it can also encourage the visitors to perceive something of the beauty and wonder, the inspiration and spiritual meaning, that lie behind the ruins and remains (Tilden 2007: 3). Heritage interpretation is usually implemented for foreign visitors instead of domestic visitors, but it should be indeed arranged for local visitors and domestic tourists as the main purpose because the values perceived by foreign visitors are only direct-use values from their visitations, for instance, aesthetic and recreational values. However, the domestic visitors are able to perceive not only the direct-use values but they are also aware of the indirect-use values or even non-use values, for example, existence value, bequest value, historical value, cultural value, ethnic value, etc. Therefore, heritage interpretation should be considered for domestic visitors rather than foreign visitors (Peleggi, 1996: 445).

With regard to the types of interpretation, Ward and Wilkinson (2006: 5) divided interpretation into two types that are personal and non-personal interpretations. Personal interpretation is the interpretive services that use people to interpret contents regarding the tourism sites to visitors for example, tourist guide

services, events and demonstrations. Non-personal interpretation is the interpretive services that visitors gain the tourism experience through provided media for example, information boards, exhibits, brochures, interactive multimedia, audio guide system.

As compared with personal-interpretation, Non-personal interpretation can provide the guide services to more visitors and more economical. However, low quality of non-personal interpretation can cause the notorious image of the sites. Therefore, good quality and well-prepared condition of the non-personal interpretive instruments should be continuously maintained.

As already mentioned, Personal interpretation is direct person-to-person activities between interpreters and visitors. As a result, personal interpretation can be arranged to matches with the visitors and the interpreters can respond the visitors' doubts and interests immediately. The well-trained interpreters and adequate number of interpreters are able to convey more authentic experience to the visitors as compared to non-personal interpretive media. Likewise, poorly-trained interpreters, and poor preparation and presentation can leave negative impressions on visitors.

Currently, according to Figure 1, the information boards, labels, and exhibits inside the historic sites in Ayutthaya Historical Park are deteriorated and not functional. As is the case when a Thai visitor would like to access any historic sites, the visitor has to pay just 10 Baht per person per site for the entrance fee (there is no package entrance fee that allows the visitor to pay one time for a package to visit several sites). For foreign visitors, they have to pay 40 Baht per site for the entrance fee). After the visitors pay the 10 Baht entrance fee, they will receive only the ticket and are allowed to wander inside the historic site by themselves without a tourist guide service or even any booklets, pamphlets, or brochures.

It is believed that good-quality heritage interpretations are the key to ensure the quality of tourism. Further, good-quality heritage interpretation can cultivate good-quality and well-behaved visitors and then those good-quality visitors can collaborate with the authorities and other relevant parties to generate sustainable tourism and conservation in the cultural heritage sites (Moscardo, 1996; Henderson, 2002; Poria et al., 2003; McManus, 1997). Unfortunately, due to low quality and poorly-maintained heritage interpretations inside Ayutthaya Historical Park at present,

sustainable tourism and conservation cannot be anticipated to be seen in the Historic City of Ayutthaya at all. Under the extremely cheap current entrance fees to the historic sites in Ayutthaya Historical Park and with the visitors usually visiting only a few famous historic sites, the revenue from the entrance fees are not adequate for the restoration or improvement of the heritage interpretations inside the historic sites, and it is a crucial constraint to do so. Therefore, it is plausible enough to preliminarily assume that the consumer surplus should be greater than the current entrance fees, and a package entrance fee should be considered as to whether it works or not.



Figure 1: Current Situation of Heritage Interpretation in the Historic City of Ayutthaya

In addition to the malfunction and deterioration of the current heritage interpretations of the Historic City of Ayutthaya, the Historic City is supposed to be concerned that it is risky to be placed on the list of World Heritage Sites in Danger and will probably be delisted in the future. Although so far the Historic City of Ayutthaya has not been placed on the list of World Heritage Sites in Danger yet, the situation still causes anxiety because the problems regarding urban development, public awareness, community collaboration, conflicts among stakeholders, ambiguous roles and responsibilities of each administrative party, and aleatory tourism promotion still keep occurring without obvious solutions.

To figure out or relieve the aforementioned problems, heritage interpretation should be no more or less regarded as an effective tool because if the visitors, especially Thai visitors and local visitors, know, realize and experience the authentic values of the Historic City of Ayutthaya, their collaboration, public awareness, sense of belonging, and other desirable participations will be improved gradually and continuously (Uriely et al., 2002: 861). Therefore, heritage interpretation cannot be ignored in the process of figuring out the administrative problems in the Historic City of Ayutthaya.

This study attempts to elicit Thai visitors' willingness to pay for the restoration and improvement of heritage interpretation in Ayutthaya Historical Park and to examine the factors influencing it by using the contingent valuation method, which is a type of stated preference technique of economic valuation. Additionally, this study will deal with some intriguing contingent valuation methodological issues: distance decay, anchoring bias, and the scope test. The results are expected to suggest policy that can create an optimal entrance fee so that the Historic City of Ayutthaya can obtain enough revenue to maintain and improve the heritage interpretation programs and relevant conservation projects with a self-funded mechanism. Hopefully, tourism can proceed alongside conservation, which is the ultimate goal of sustainable tourism (Nuryanti, 1996: 258).

Conceptual Framework

Cultural heritage sites can to some degree be considered public goods. First, public goods have to be non-excludable. Although the authority can charge the visitors an entrance fee before allowing them to access the inside of the historic area, sightseeing from outside cannot be charged. Furthermore, the entrance fee may not represent all of the values generated by the cultural heritage sites. Indeed, if such historic sites are considered important, there probably are some people that live far away and they gain only some enjoyment from knowing that the historic site still exists in good condition. Second, public goods have to be non-rival. That means that several visitors can enjoy sightseeing at the historic site at the same time. Nevertheless, some famous cultural heritage sites exhibit some degree of rivalness if they contain too many visitors until each visitor's enjoyment is

diminished (Ready & Navrud, 2002: 5). However, cultural heritage sites can be seen as a kind of public good.

As usual, cultural heritage sites cannot be effectively allocated through a market mechanism and market failure can often be found. Therefore, there are a lot of cultural heritage sites or historic areas that do not have a sufficient budget to maintain their good conditions (Mason, 1999: 9).

With reference to cultural heritage sites regarded as public goods, the total value that individuals can gain from them can be classified into two types. The first one is use value, which can be defined as the maximum willingness to pay to access the site. The second one is non-use value. Non-use value includes the benefits that individuals can gain because they know that the cultural heritage sites are being conserved in good condition. These benefits can be obtained by: 1) people that would like the cultural heritage site to be available for others (altruistic value); or 2) people that would like to conserve the site for future generations (bequest value); or 3) people that think that they may be visitors sometime in the future (option value); or 4) people that would just like to have the sites maintained, even though nobody ever actually visits them (existence value). Hence, the total economic value of cultural heritage site is illustrated in Figure 2 below (Serageldin, 1999: 25; Klammer & Zuidhof, 1999: 31; Mason, 2002: 13).

Since the market cannot be trusted to provide an adequate supply of cultural heritage sites and their prices cannot be observed through a market mechanism, non-market valuation especially, the stated preference technique such as the contingent valuation method (CVM) should be instead applied to elicit the value of the heritage sites.

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the contribution of heritage interpretation, and information regarding the value of heritage interpretation is necessary to be used for budget allocation and fund-raising programs in order to restore, improve, and develop interpretive services for tourists and other people that visit the historic sites (Carver et al., 2003: 90).

The random utility model (RUM) is a fundamental model for analyzing dichotomous choice responses. Moreover, several economic valuations that use the stated preference technique, especially the contingent valuation method, are still based on random utility maximization (Bockstael, 2005: 557).

According to the random utility model (Habb & McConnell 2002: 24; Holmes & Adamowicz 2003: 188), there are 2 alternatives, so that the indirect utility for respondent j can be written

$$u_{ij} = u_i(y_j, z_j, \varepsilon_{ij}) \quad - - - - (1)$$

where $i = 1$ is the stage that the hypothetical program is implemented to improve the current situation of the typical cultural heritage's condition, while $i = 0$ is for the status quo. The determinants of utility are y_j , the j^{th} respondent's income, z_j , an m -dimensional vector of the respondent's socioeconomic variables, the attitudinal variables and attributes of the proposed hypothetical program, and ε_{ij} , a random error term with a zero mean.

The j^{th} respondent will be willing to pay t_j if his utility in state $i = 1$ is greater than his utility in status quo (state $i = 0$), which is exhibited in equation (2).

$$u_1(y_j - t_j, z_j, \varepsilon_{1j}) > u_0(y_j, z_j, \varepsilon_{0j}) \quad - - - - (2)$$

If the linear utility function is assumed, the deterministic part of the preference function, which is linear in income and covariates, can be written in equation (3), shown below,

$$v_{ij}(y_j) = \alpha_i z_j + \beta_i(y_j) \quad - - - - (3)$$

where y_j is individual j 's income, z_j is the m -dimensional vector of the variables related to individual j , and α_i is the m -dimensional vector of the parameters, so that $\alpha_i z_j = \sum_{k=1}^m \alpha_{ik} z_{jk}$. A contingent valuation question induces the respondent to choose between the proposed conditions at the required payment t and the current state. The deterministic utility for the proposed hypothetical scenario is

$$v_{1j}(y_j - t_j) = \alpha_1 z_j + \beta_1 (y_j - t_j) \quad \text{----- (4)}$$

where t_j is the price offered to the j^{th} respondent. The status quo utility is

$$v_{0j}(y_j) = \alpha_0 z_j + \beta_0 (y_j) \quad \text{----- (5)}$$

The change in deterministic utility is

$$v_{1j} - v_{0j} = (\alpha_1 - \alpha_0) z_j + \beta_1 (y_j - t_j) - \beta_0 y_j \quad \text{----- (6)}$$

In this case, it is reasonable to assume that the marginal utility of income is constant between the two states. Therefore, $\beta_1 = \beta_0 = \beta$ and the utility difference becomes

$$v_{1j} - v_{0j} = \alpha z_j - \beta t_j \quad \text{----- (7)}$$

where $\alpha = \alpha_1 - \alpha_0$ and $\alpha z_j = \sum_{k=1}^m \alpha_k z_{jk}$.

This study employed single-bounded dichotomous choice questions to elicit the willingness to pay for the heritage restoration and improvement program in the Historic City of Ayutthaya. Each respondent was proposed a particular bid amount to implement a typical hypothetical program, and after that the respondent will use his or her discretion in replying “Yes” or “No” for the bid amount. Therefore, binary logistic regression was employed in this study and its equation is shown below.

Probability of “Yes” answer for proposed bid amount

= $f(\text{Bid amount, Socio – economic variables, Attitudinal variables,}$

Methodological variables)

where the socio-economic variables are age, gender, religion, family members, educational level, marital status, income, etc.; the attitudinal variables are the respondent’s attitude toward the heritage interpretation of the Historic City of Ayutthaya; the methodological variables are the variable included in the model to test the content validity of this study, which are distance decay, anchoring bias, and scope test.

Method and Data

Single-bounded dichotomous choice questions or close-ended questions were employed in this study, while the utility was assumed to be linear, and the random term ε_j was assumed to be independently and identically distributed (IID) with a mean of zero and logistically distributed. According to equation (7), the probability of yes for respondent j can be estimated as

$$\begin{aligned} \Pr(\alpha \mathbf{z}_j - \beta t_j + \varepsilon_j > 0) &= \Pr(-(\alpha \mathbf{z}_j - \beta t_j) < \varepsilon_j) \\ &= 1 - \Pr(-(\alpha \mathbf{z}_j - \beta t_j) > \varepsilon_j) \\ &= \Pr(\varepsilon_j < \alpha \mathbf{z}_j - \beta t_j) \end{aligned} \quad \text{----- (8)}$$

When ε is logistically distributed, it has a mean of zero and variance $\frac{\pi^2 \sigma_L^2}{3}$. Normalizing by σ_L creates a logistic variable with a mean of zero and variance $\frac{\pi^2}{3}$. If the $\varepsilon \sim \text{logistic}(\mathbf{0}, \frac{\pi^2 \sigma_L^2}{3})$ then $\frac{\varepsilon}{\sigma_L} = \theta \sim \text{logistic}(\mathbf{0}, \frac{\pi^2}{3})$. The probability that a variate distributed as a standard logit is less than or equal to x equals $\frac{1}{(1 + e^{-x})}$. Then the probability that respondent j answers yes is

$$\Pr(\text{yes}_j) = \frac{1}{1 + e^{-\left(\frac{\alpha \mathbf{z}_j - \beta t_j}{\sigma_L}\right)}} \quad \text{----- (9)}$$

Practically, the estimation of parameters comes from the maximization of the likelihood function. Suppose the sample size is T and let $I_j = 1$ if the respondent j answers yes. Hence, the log likelihood function becomes

$$\ln L(\alpha, \beta | \mathbf{y}, \mathbf{z}, \mathbf{t}) = \sum_{j=1}^T I_j \ln \left[\frac{1}{1 + e^{-\left(\frac{\alpha \mathbf{z}_j - \beta t_j}{\sigma}\right)}} \right] + (1 - I_j) \ln \left[1 - \frac{1}{1 + e^{-\left(\frac{\alpha \mathbf{z}_j - \beta t_j}{\sigma}\right)}} \right] \quad \text{----- (10)}$$

Normally, the ultimate goal of contingent valuation study is to calculate the willingness to pay. In general, willingness to pay is the amount of money that makes the respondent indifferent between the status quo and the proposed hypothetical scenario. For the linear random utility model defined in equations (6) and (7), WTP can be defined as

$$\alpha_1 \mathbf{z}_j + \beta(y_j - WTP_j) + \varepsilon_{j1} = \alpha_0 \mathbf{z}_j + \beta y_j + \varepsilon_{j0} \quad \text{----- (11)}$$

Solving equation (11) for WTP yields

$$WTP_j = \frac{\alpha z_j}{\beta} + \frac{\varepsilon_j}{\beta} \quad \text{--- (12)}$$

Therefore, the expectation of willingness to pay with respect to preference uncertainty can be exhibited as follows

$$E_\varepsilon(WTP_j | \alpha, \beta, z_j) = \frac{\alpha z_j}{\beta} \quad \text{--- (13)}$$

This study used two hypothetical programs. The first hypothetical program was the heritage interpretation restoration and improvement project for 3 major historic sites, which are Wat Si Sanphet, Wat Mahathat, and Wat Chaiwatthanaram. These historic sites are the most reputable in the Historic City of Ayutthaya and they are usually seen in most tourist guidebooks. Wat Si Sanphet is a monastery located in the Grand Palace. Initially, it was built as a residential palace during the reign of King Ramathibodi I and it became a temple area during the reign of King Borom Trai Lokanat. Wat Mahathat is the sacred temple, where the Buddha's relics are enshrined and it was believed to be built during the 14th century A.D. (the early Ayutthaya period). In the aspect of tourism, Wat Mahathat possesses the head of the Buddha embedded into a tree trunk. This is its uniquely notable identity. Wat Chaiwatthanaram is another famous monastery established during the reign of King Prasat Thong. Its architecture was influenced by Khmer.

The second hypothetical program will add 12 more historic sites, the ancient monasteries that are recommended by Tourism Authority of Thailand as famous cultural and historic tourism sites in Ayutthaya province, into the program, so there will be a total of 15 historic sites in the second program composed of Wat Si Sanphet, Wat Mahathat, Wat Chaiwatthanaram, Wat Mongkol Bophit, Wat Thammikarat, Wat Phra Ram, Wat Buddhaisawan, Wat Phanan Choeng, Wat Maheyong, Wat Yai Chaimongkol, Wat Rajburana, Wat Suwandararam, Wat Na Phra Men, Wat Kudidao, and Wat Barom Buddharam. This means that each respondent will be asked to elicit his willingness to pay for two hypothesized heritage interpretation restoration and improvement programs.

Two focus groups were organized in order to design the questionnaire. The first focus group was conducted with eight attendees (the optimal number of

attendees is 8-12 (Boyle, 2003: 138), who used visited Ayutthaya Historic City on January 16, 2012 and February 24, 2012. The aim of the focus group sessions was to gather information and attitudinal viewpoints to define good, valuation scenarios, the question format for the questionnaire, and the appropriate payment vehicle. According to the two focus groups, the survey materials, including a script to be read by the person administering the survey, the survey visual materials, and the survey questionnaires, were confirmed with content validity, indicating that there were not any ambiguous words or phrases in the survey visual materials or questionnaire. The one-day package entrance fee was decided to be used as the payment vehicle for this study because of its incentive compatibility and its ability to prevent a free rider (Seenprachawong, 2012: 126). The field pretest was planned to be organized later.

Theoretically, a field pretest should be conducted with at least 50-100 observations (Boyle, 2003: 138). Therefore, the field pretest of this study was conducted with 110 observations between April 6 and 20, 2012. According to the pretest, there were 7 bid prices for the 3-site program (80, 100, 120, 140, 160, 180, and 200). Likewise, for the 15-site program, 7 bid prices (180, 200, 220, 240, 260, 280 and 300) were arranged. After the field pretest had been prudentially considered, the bid prices were adapted and some phrases in the questionnaire were a little bit modified to make it clearer and finalized for the main survey. Theoretically, the optimal number of bid prices should be between 5-8 bid amounts (Alberini, 1995a: 306; 1995b: 95; Kanninen, 1993a: S11; 1993b: 146; 1995: 125), so the 7 bid prices of this study were considered to be appropriate for conducting the main survey.

The main survey was conducted from June 17-July 20, 2012. The survey method for gathering the primary data on the contingent valuation in this study was the face-to-face interview. Because the Historic City of Ayutthaya, especially Ayutthaya Historical Park, is the property of all Thai people, all Thai people have the right to visit the Historic City of Ayutthaya. In addition, according to the policy of the Fine Arts Department, the entrance fee of 10 Baht per site will be collected from Thai visitors that are older than or equal to 20 years of age only. Therefore, the population was Thai people that were older than or equal to 20 years old. According to the National Statistical Office, there were 46,729,157 Thai people older than or equal

to 20 years of age in 2011. Hence, the population size in this study was considered to be 46,729,157 people.

According to Yamane's sample size computation (Yamane, 1973: 727), the sample size in this study should be 400 observations for a 5% sampling error. In this case, the sample size was 717 observations, greater than the recommended 400 observations. Three hundred and seventy respondents were asked to elicit their willingness to pay for the 3-site heritage interpretation restoration and improvement program before the 15-site program, and 347 respondents were asked to elicit their willingness to pay for the 15-site program before the 3-site program. The sample size was separated into two groups because each respondent had to reply concerning their willingness to pay for 2 hypothetical programs. Therefore, the anchoring bias was reasonable to be concerned and it is interesting to examine whether saying "Yes" or "No" of the first hypothetical program influence the answer of the second hypothetical program or not. The separation of respondents into two groups enabled the researcher to examine the statistical evidence of the anchoring bias by incorporating a particular dummy variable into the model. This dummy variable was 1 if the 3-site heritage interpretation restoration and improvement program was proposed to the respondent before the 15-site program, and vice versa, this dummy variable became 0 if the 15-site program was proposed to the respondent before the 3-site program.

With regard to the survey procedure, ideally, the study should have obtained information on the willingness to pay for information from a randomly-drawn sample of Thai visitors at each heritage site in Ayutthaya province. Realistically, most visitors that visit the Ayutthaya Historical Park usually visit 3 major sites in the Historic City of Ayutthaya: Wat Si Sanphet, Wat Mahathat, and Wat Chaiwatthanaram. For the aforementioned reason, it was decided to conduct the survey in front of the exit of these 3 famous historic sites. The visitors that visit these three most well-known sites could be rationally assumed to have knowledge and attitudes that would be representative of the visitors that visit the Historic City of Ayutthaya. The respondents were selected using the systematic random sampling procedure. The interviewer chose every the 5th visitor exiting the three major sites and asked after he or she had had experience in heritage interpretation in such a site so that the respondents

were able to realize the current situation and were ready to willingly provide truthful viewpoints.

Another methodological issue that was extremely interesting to investigate concerned the scope test. In general, individuals are believed to be sensitive to the number of historic sites in the heritage interpretation restoration and improvement program, and they are supposed to pay more if the number of historic sites in the program is scaled up. Nevertheless, in case that the individuals are not sensitive to the scope of the project or there is no statistical evidence that the individuals will be willing to pay more for the larger project, this reflects that the individuals just pay to perform their good citizenship or altruism only, which is called the warm glow giving phenomenon in economic terms (Andreoni, 1990: 477). In order to conduct the scope test, since each respondent was independently asked about the two hypothetical programs, which were on different scales, each typical respondent could be treated as two respondents. It is as though the answers for the first and second hypothetical program derived from different respondents. Therefore, the sample size was allowed to be doubled to 1,434 observations and the single-bounded dichotomous choice technique with logistic regression was accordingly applied to carry out the scope test. A specific dummy variable was included in the model to examine the scope effect. This dummy variable was 1 if hypothetical program proposed to the respondent was the 15-site heritage interpretation restoration and improvement program and became 0 if the proposed hypothetical program was the 3-site program.

The variables used in this study constituted the bid amount of the 3-site program, the bid amount of the 15-site program, 8 socio-economic variables, 3 attitudinal variables, the variable to examine the anchoring bias, and the variable to investigate the scope effect. The definition of each variable is provided in Table 1 below.

Table 1: Definition of Variables Used in this Study

Variable	Definition
TBID	Bid amount for the 3 major site program
FBID	Bid amount for the 15-site program
SEX	SEX = 1 if the respondent was male SEX = 0 if the respondent was female
AGE	The respondent's age (years)
BUDD	BUDD = 1 if the respondent was Buddhist BUDD = 0 if the respondent was not Buddhist
SING	SING = 1 if the respondent was single SING = 0 if the respondent was married, divorced, or widowed
PROV	The distance between the respondent's living province and Ayutthaya province (kilometers)
EDU	The respondent's schooling years (years)
FAM	The number of household members of the respondent, including the respondent
INC	The respondent's monthly income (Baht per month)
BASE	How much knowledge background of Ayutthaya do you currently have? (Likert scale 0-6)
SERV	How well-prepared are you concerning the existing heritage interpretation of the Historic City of Ayutthaya, for example, brochures, displays, tour guides, signs, labels, etc.? (Likert scale 0-6)
NGEN	The Historic City of Ayutthaya is a valuable heritage site that should be conserved for the next generation. (Likert scale 0-6)
ANCH	ANCH = 1 if the 3-site program is proposed to the respondent before 15-site program ANCH = 0 if the 15-site program is proposed to the respondent before 3-site program
SCOP	SCOP = 1 if the 15-site program is proposed to the respondent SCOP = 0 if the 3-site program is proposed to the respondent

Regarding the issue of distance decay, it is believed that the individuals who are local residents who live in the cultural heritage site nearby or who live in the neighboring provinces should tend to provide higher willingness to pay as compared to other individuals who live in other distant provinces. To examine the statistical evidence of distance decay, the distance between the respondent's living province and Ayutthaya province was specified as a socio-economic variable in the model.

Results

Among the 717 Thai visitors, the number of female respondents (355, 49.51%) was comparable to the number of male respondents (362, 50.49%). The majority of respondents had graduated with a bachelor degree (342, 47.70%) and were Buddhist (690, 96.23%), single (394, 54.95%), and employed in a private firm (400, 55.79%). There were 385 respondents (53.70%) that lived in Bangkok and vicinity. One hundred and seventeen respondents (16.32%) were local people that lived in Ayutthaya province and the rest lived in other provinces, accounting for 29.99%. The average respondent's age was 37.23 years. The average respondent's household members were 4.06 persons. The mean respondent's monthly income was approximately 32,622.51 Baht per month.

Initially, it was very useful to know what the respondents thought about the restoration and improvement of heritage interpretation in the Historic City of Ayutthaya. It was found that there were 410 respondents, and the largest proportion—57.18%—strongly agreed with the heritage restoration and improvement program, while 305 respondents, accounting for 42.54%, agreed and only 2 respondents disagreed with the restoration and improvement of the existing heritage interpretation. What the visitors most wanted to know about during the trip was the history of Ayutthaya, which represented 53.70%, while the percent of people that wanted to know about the art and architecture of Ayutthaya and the tradition and way of life during the Ayutthaya period was approximately the same at 23.01% and 23.29% respectively. From the perspective of interpretive tools, a well-prepared information board was the most required by the visitors. A tourist guide service,

and traditional demonstration, pamphlet, and audio-guide system were ranked second, third, fourth, and fifth respectively.

Table 2 and Table 3 report the logit model of the WTP bids for the heritage interpretation restoration and improvement program for the 3 major sites and the 15 historic sites respectively.

Table 2: Parameter Estimates of the Logit Model of the 3-Site Heritage Interpretation Restoration and Improvement Program (Single Bounded DC)

Variable	Coefficient	Standard Error	t – ratio	P – Value
Constant	-3.3871	2.8166	-1.203	.2291
TBID	-.2056E-01**	.2278E-02	-9.024	.0000
SEX	.3239E-01	.1742	.186	.8525
AGE	.5960E-02	.1112E-01	.536	.5921
BUDD	1.0172**	.5011	2.030	.0424
SING	-.1931	.2108	-.916	.3596
PROV	.2661E-03	.5627E-03	.473	.6363
EDU	.8519E-01**	.3654E-01	2.331	.0197
FAM	-.4853E-01	.4236E-01	-1.146	.2519
INC	.1844E-04**	.3836E-05	4.807	.0000
BASE	.2250**	.9741E-01	2.309	.0209
SERV	-.1301*	.6811E-01	-1.910	.0561
NGEN	.5102	.4449	1.147	.2514
ANCH	.4115E-01	.1714	.240	.8103

Notes: * = significant at 10% ** = significant at 5% Variables in bold are statistically significant.

Table 3: Parameter Estimates of the Logit Model of the 15-Site Heritage Interpretation Restoration and Improvement Program (Single Bounded DC)

Variable	Coefficient	Standard Error	t – ratio	P – Value
Constant	-1.5539	2.8420	-.547	.5845
FBID	-.5792E-02**	.1446E-02	-4.007	.0001
SEX	-.1027	.1798	-.571	.5679
AGE	.7958E-02	.1192E-01	.668	.5043
BUDD	1.4103**	.4635	3.043	.0023
SING	.1703	.2204	.772	.4398
PROV	-.5337E-03	.5663E-03	-.942	.3460
EDU	.9616E-01**	.3694E-01	2.603	.0092
FAM	.2177E-01	.4476E-01	.486	.6268
INC	.1976E-04**	.5157E-05	3.831	.0001
BASE	.1600	.9976E-01	1.604	.1087
SERV	-.1018	.7038E-01	-1.446	.1482
NGEN	-.8850E-02	.4435	-.020	.9841
ANCH	.2759	.1820	1.516	.1295

Notes: * = significant at 10% ** = significant at 5% Variables in bold are statistically significant.

According to Table 2 and Table 3, the coefficients for the bid variable and income were commensurate with the economic foundation. The sign of the bid variable's coefficient was negative and statistically significant at a 95% confidence level, indicating that the higher bids were more likely to be declined by the respondents, while income was also found to be a significantly positive determinant of willingness to pay.

Educational level or schooling years was found to be a significantly positive determinant of willingness to pay. This implies that higher-educated people are inclined to pay more for a heritage interpretation restoration and improvement program. According to positive sign for the BUDD variable coefficient, it means that the Buddhist visitors were likely to pay for a well-maintained and functional heritage interpretation, but this finding causes the anxiety because the Historic City of Ayutthaya is listed as world cultural heritage site containing priceless authentic

value besides its religious importance and should belong to all Thai people regardless their religion. Too many Buddhism-oriented tourism promotional activities in Ayutthaya province possibly unintentionally rule other Thai visitors that are not Buddhist out of the ownership of the Historic City of Ayutthaya.

For the variables regarding gender, marital status, and family size, none of these socio-economic variables was statistically significant at the 95% level of confidence.

With regard to the attitudinal variables, in the case of the 3 major site heritage interpretation restoration and improvement program, the significantly positive sign of the BASE's coefficient at the 95% confidence level provided evidence that those that had more background knowledge about Ayutthaya tended to pay more for the good condition of heritage interpretation. Furthermore, it was also found that the respondents were aware of the quality of the heritage interpretation because the significantly negative coefficient at the 90% confidence level of the SERV variable reflected that Thai visitors could not bear to accept the low quality of the heritage interpretation and that they were willing to pay for the quality improvement of heritage interpretation. Nevertheless, regarding the matter of heritage interpretation restoration and improvement, Thai visitors did not take the next generation into account yet because of the statistical insignificance of the NGEN variable.

Regarding the 15-site heritage interpretation restoration and improvement program, none of the attitudinal variables was statistically significant. Since the payment vehicle of this study was a one – day package entrance fee and it is possible that the visitors that with this kind of ticket were not able to visit all fifteen historic sites in the package within a day, this is supposed to be the reason behind the statistical insignificance of all of the attitudinal variables in the case of the 15-site program. Notwithstanding, this implies that Thai visitors still perceive that the heritage interpretation is a tourism instrument providing a direct-use value for visitors rather than its bequest value for the next generation or its non-use value as a cultural heritage conservation tool.

Regarding the concept of distance decay, the willingness to pay values of the respondents inversely vary according to the distance between their residences

and historic site. Therefore, the respondents who live near the historic site tend to pay more. (Tuan et al., 2009: 10; Pollicino & Maddison, 2001: 141). However, in this study, the coefficient of the PROV variable, that is, the distance between the respondent's living province and Ayutthaya province, was not statistically significant at a 95% level of confidence. However, this reflects that the local visitors that live in or near Ayutthaya province did not perceive the importance of the heritage interpretation restoration and improvement of the Historic City of Ayutthaya.

From the perspective of anchoring bias, according to the econometric results in Table 2 and Table 3, despite the positive sign of the ANCH variable coefficient, it cannot be concluded that those were asked about the 3-site program before the 15-site program will tend to pay more than those were asked about the 15-site program before 3-site program because the ANCH variable was not statistically significant. This implies that the anchoring bias cannot be seriously taken into account. Furthermore, this means that the answers of yes or no from typical respondents regarding the 3 major site heritage interpretation restoration and improvement program and the 15-site program were independent of each other, and it was plausible to treat the respondents that replied yes or no regarding the two hypothetical programs as two independent observations in order to examine the scope effect.

Based on single-bounded dichotomous choice technique with logistic regression, the results of the scope test are exhibited in Table 4 as follows.

Table 4: The Results of the Scope Test

Variable	Coefficient	Standard Error	t – ratio	P – Value
Constant	-3.2480	1.8902	-1.718	.0857
BID	-.1009E-01**	.1233E-02	-8.189	.0000
SEX	-.3185E-01	.1228	-.259	.7954
AGE	.7397E-02	.7999E-02	.925	.3551
BUDD	1.1881**	.3445	3.448	.0006
SING	-.1493E-01	.1498	-.100	.9206
PROV	-.1457E-03	.4006E-03	-.364	.7161
EDU	.8709E-01**	.2572E-01	3.386	.0007
FAM	-.1289E-01	.2989E-01	-.431	.6662
INC	.1864E-04**	.3035E-05	6.141	.0000
BASE	.1847**	.6840E-01	2.700	.0069
SERV	-.1145**	.4791E-01	-2.390	.0168
NGEN	.1939	.2963	.654	.5128
SCOP	2.2370**	.1917	11.670	.0000

Notes: * = significant at 10% ** = significant at 5% Variables in bold are statistically significant.

Statistically, it was found that the SCOP variable possessed a significantly-positive coefficient at the 95% confidence level. This means that the willingness to pay will increase if the number of historic sites of the heritage interpretation restoration and improvement program is scaled up. As a result, Thai visitors that decided to pay did not just pay in order to perform their good citizenship or altruistic mind for the society, and no statistical evidence for the warm glow giving phenomenon could be found. In addition, the scope test is ordinarily used to verify the content validity of the contingent validity. If the study passes the scope test, it implies that the survey instruments used in this study were sufficiently appropriate and the respondents realized the questions used to value the heritage interpretation of the Historic City of Ayutthaya. Moreover, this can also prove that the payment vehicle used in this study was reasonable enough. Passing the scope test enabled this study to be more academically reliable.

Table 5 reports the mean willingness to pay based on the simple linear utility function and its aggregate willingness to pay for the restoration and improvement of the heritage interpretation of the Historic City of Ayutthaya.

Table 5: Mean and Aggregate Willingness to Pay

	3 major sites	15 sites
Number of Thai visitors who pay for the entrance fee <u>Note:</u> the data were obtained from an interview with Director of the Phranakhon Si Ayutthaya Historical Park, Mr. Chaiyanan Bussayarat	$\approx 350,000$ visitors per year	
E(WTP) (Linear utility function with logistic regression)	137.4451 Baht	422.4361 Baht
Log likelihood function	- 450.9604	- 421.9610

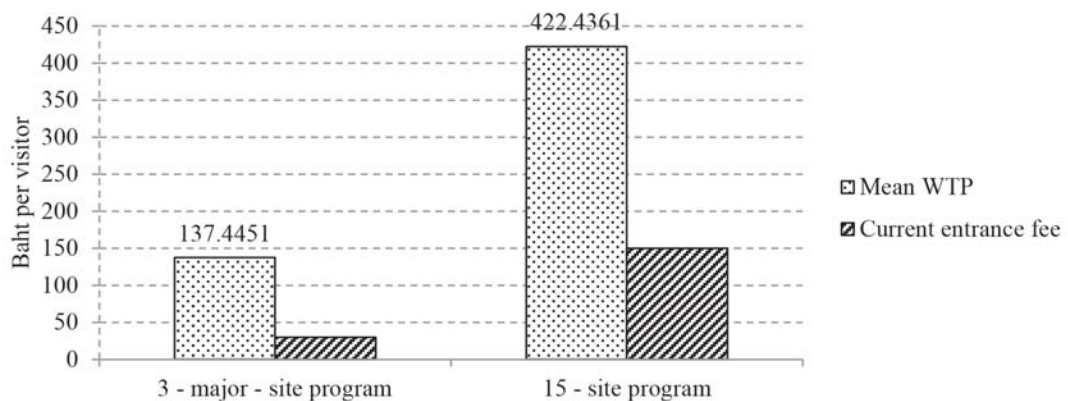


Figure 3: Mean and Aggregate Willingness to Pay

According to Table 5 and Figure 3, the mean amount that visitors were willing to pay for the heritage interpretation program for the 3 major sites and the 15 historic sites in the Historic City of Ayutthaya was 137.4451 Baht per visitor and 422.4366 Baht per visitor, while the current entrance fee for Thai visitors is now 10 Baht per visitor per site. This means that the entrance fee for the 3 major sites and the 15 sites will be only 30 Baht and 150 Baht per visitor respectively. As a result, the values of the mean willingness to pay in the case of the 3-site program and the 15-site program were greater than the current entrance fee by 3.58 times

and 1.82 times respectively. As mentioned before, this study did pass the scope test, so the willingness to pay in the case of the 15-site program was greater than the 3-site program, but the willingness to pay in the case of the 15-site program was not proportionally greater than the 3-site program. Noticeably, the willingness to pay per site in the case of the 3-site program (45.8150 Baht) was greater than the willingness to pay in the case of the 15-site program (28.1624 Baht). This implies that when the heritage interpretation restoration and improvement program's scope is expanded, the willingness to pay for such a program will increase at a diminishing rate commensurate to economic theory. Additionally, another is that the payment vehicle of this study was a one – day package entrance fee, so the visitors are inevitably obligated with time constraints to visit all historic sites within a day. However, according to the law of diminishing marginal utility, the visitors will definitely gain less marginal utility for another historic site they visit. Therefore, the willingness-to-pay amounts obtained from this study can be considered theoretically reliable results and qualify the content validity.

Since the obtained willingness-to-pay amounts were significantly more than the current entrance fee for both the 3-site program and the 15-site program, this means that Thai visitors rationally perceive the value of heritage interpretation and are willing to dedicate themselves to and collaborate on the heritage interpretation restoration and improvement program through their readiness to pay more for an entrance fee in order to help achieve a better-quality heritage interpretation.

According to the data on the approximate number of Thai visitors a year of 350,000 people obtained from the interview with the Director of the Phranakhon Si Ayutthaya Historical Park, Mr. Chaiyanan Bussayarat, the aggregate WTP for the 3 major site and 15-site heritage interpretation restoration and improvement programs approximately yielded 48 million Baht per year and 148 million Baht per year respectively. The enormous aggregate willingness to pay for such heritage interpretation restoration and improvement programs reflect the abundant consumer surplus in heritage interpretation consumption, and it is reasonably possible to increase the current entrance fee to gain the revenue to enhance the quality of the heritage interpretation in the Historic City of Ayutthaya with a self-funding mechanism.

Conclusions

According to the ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites ratified by the 16th General Assembly of ICOMOS, Qubec (Canada), on 4 October 2008, heritage interpretation is an instrument that enable the cultural tourism to go along with the conservation of cultural heritage sites. To generate sustainable tourism, the seven principles on heritage interpretation were determined and exhibited below.

1. Heritage interpretation should be used to generate the public awareness and engagement in the conservation programs of cultural heritage sites.
2. Heritage interpretation should be used to communicate the meaning and understanding of cultural heritage sites to their visitors and stakeholders.
3. Heritage interpretive programs and interpretive instruments should be implemented in compliance with the cultural settings and social contexts of cultural heritage sites.
4. Heritage interpretation should be used to preserve the authenticity of cultural heritage sites by communicating the precise and accurate contents.
5. Long-term maintenance and well upkeep of the interpretive instruments have to be ensured and the interpretive contents should be regularly reviewed to ensure the appropriate communication.
6. The stakeholders of cultural heritage sites and associated communities should be engaged in development and implementation of interpretive programs.
7. New technologies and continuous staff's training should be used to maintain the quality of interpretive programs.

According to the seven principles of ICOMOS, to establish the sustainable tourism, well-prepared heritage interpretation has to be inevitably materialized. Fortunately, due to the tremendous consumer surplus found in this study, there is an opportunity to restore and improve the quality of heritage interpretation inside the Historic City of Ayutthaya and to gain more income by increasing the current entrance fee and provision of tour packages. To accomplish this strategy, a specific committee composed of the stakeholders in cultural tourism and historic site conservation, for example, Tourism Authority of Thailand, the Fine Arts Department,

and local communities should be established. The important roles of this particular committee are suggested as follows.

1) To review and determine the optimal entrance fee and Ayutthaya tour package in order to acquire revenue from the visitors that access Ayutthaya Historical Park. According to this study, there was a potential to increase the entrance fee. In addition to the increase of the entrance fee, a tour package should also be considered to be implemented because a tour package can attract visitors to other unnotable historic sites located in Ayutthaya Historical Park. With the tour package scheme, Ayutthaya Historical Park can gain adequate revenue to allocate the budget to provide the well-prepared heritage interpretive programs of all historic sites located in Ayutthaya province whether they are well-known or not.

2) To arrange the budget to restore, maintain, improve, and invest in heritage interpretation instruments and programs in the Historic City of Ayutthaya with a self-funded mechanism.

3) To make decisions on relevant issues of cultural tourism, conservation in the Historic City of Ayutthaya, and ensure that the conservation and cultural tourism in the Historic City of Ayutthaya will be taken care of at the same time with the ultimate goal of sustainable tourism and conservation.

Since no distance decay was found in this study, this means that the local people and the people that live nearby still do not apprehend the importance of heritage interpretation as the essential tool to sustainably conserve the Historic City of Ayutthaya. They possibly just regard the heritage interpretation as a tourism facility, and this is a definite misunderstanding. As a result, to successfully accomplish the heritage interpretation restoration and improvement program, the local people should not be neglected and should be attracted to participate in the program, for example, with a tourist guide service using local people. Nevertheless, the investment in heritage interpretation should be implemented for both visitors and local people. Currently, because of rapid urban development, a large number of factories in the industrial estates and the immigration of people from other provinces, there are a lot of non-Ayutthaya born residents living in Ayutthaya province. It is necessary to have them realize the importance and perceive the authentic value of the Historic City of Ayutthaya, which is located in their own

province. This is extremely worth doing because this study revealed that the people that have background knowledge about Ayutthaya will be willing to pay for good-quality heritage interpretation.

A good-quality heritage interpretation is believed to be an effective tool in cultivating well-behaved visitors and in creating the sense of belonging of the local people. Hopefully, these well-behaved visitors and local communities that perceive the authentic value of the Historic City of Ayutthaya will be willing to pay for or even voluntarily collaborate with other conservation programs. Therefore, heritage interpretation is considered an effective tool to generate both cultural tourism and conservation. However, the Buddhist context used to promote the tourism in Ayutthaya province should be discretionarily implemented. If the content of Buddhism is incorporated to too great an extent, the Buddhist ceremonies will probably dominate the authentic value of the Historic City of Ayutthaya. Portentously, the Historic City of Ayutthaya belongs to all Thai people, no matter what their religion, what their gender, or where they live. As long as they are Thai people, they are the owners of the Historic City of Ayutthaya.

Eventually, other cultural heritage sites in Thailand are also believed to hold an excessive consumer surplus of heritage interpretation consumption similar to the Historic City of Ayutthaya. Therefore, this study should be used as a reference for other cultural heritage sites to review themselves and determine an optimal entrance fee policy in order to gain sufficient revenue so that the upkeep of heritage interpretation, cultural tourism promotion, and relevant conservation programs can be sustainably administrated.

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