Abstract: Selected methodological approaches to the hypothetical application of the valuation of cultural heritage to historical monuments. Cultural heritage has significant meaning for society and represents different values for each person. This is the reason why valuing it causes so many difficulties. There are not many publications on the subject, which is probably because of the many methodological problems. These include a lack of data and the limited nature, in the sense that they concentrate on specific national policies, of existing case studies. However, the similarity between environmental and cultural goods gives researchers an opportunity to transfer some of the valuation methods applied to the environment to cultural heritage. This paper presents selected valuation techniques and the hypothetical problems associated with applying them using the example of Polish heritage in the form of historical monuments. Though further studies are required, the results delivered by the economic approach may be of merit in the valuation of cultural heritage.

Key words: valuation, cultural heritage, environmental, non-market approaches, historical monuments

INTRODUCTION

Cultural heritage is a key element in the identification of society. It is one of the elements which makes visiting a place unique. Visitors spending their free time expect to see an aspect of history in well-maintained scenery with a cultural programme and, if possible, to do so free of charge. The recent financial crisis has changed the economic situation in all EU countries and has forced all sectors to look for alternative ways to achieve sustainable growth [Europe 2020, 2011]. There is a need to see an opportunity in local and traditional investments and to recognise that cultural heritage has been attracting the attention of both visitors and investors for a very long time. Valuing cultural resources can help set priorities and improve the decision-making process in terms of their preservation, restoration and use. Some of the problems related to cultural heritage are also easy to find in the area of environmental amenities. Cultural and environmental goods are both public goods. Holcombe [1997] defined a public good in this way: ‘a public good, as defined by economic theory, is a good that, once produced, can be consumed by an additional consumer at no additional cost. A second characteristic is sometimes added, specifying that consumers cannot be excluded from consuming the public good once it is produced’. This means that environmental sites, such as national parks, have a lot in common with cultural ones, such as the historic monuments visited by tour-
ists. The same set of recreational or educational benefits for visitors is derived from environmental and cultural goods. The visitor receives the value of enjoying a cultural heritage good, which in fact means the largest amount of money that visitor would be willing to pay (WTP) to have that opportunity. The definition of the use value that a person visiting a cultural heritage site receives would be the largest amount of money over and above any existing entry fee that the visitor would be willing to pay to gain access to the site. The sum of all the individual visitors’ WTPs gives us the total use value. The maximum WTP to gain access to the site is the definition of the use value [Navrud and Ready, 2002]. The value can be estimated from direct use (e.g. visiting a site), indirect use (e.g. viewing pictures of a site) and passive use (e.g. knowing that the place is a part of history and will be preserved) [Morey and Rossmann, 2002]. Sometimes these values are described as non-use or passive-use values in opposition to active-use ones, where, for example, tourists enjoy the assets of a site by direct consumption [Throsby and Rizzo, 2006].

The environmental issues can be measured in two ways using market based approaches: when we have available data and with non-market based instruments. However, when we study the preferences of visitors to museums [Mazzanti, 2001], monuments [Morey et al., 2003] and cultural heritage sites [Tuan and Navrud, 2006], where there are no prices available for non-market cultural goods, it is possible to use prices derived from hypothetical markets. The main aim of this paper is to investigate non-market valuation approaches, including hedonic pricing, the travel cost, contingent valuation (CV) and the choice experiment (CE) methods in terms of the challenges raised by Polish cultural heritage.

MATERIAL AND METHODS

For the purposes of this paper, the author simplified and stripped down each of the economic approaches mentioned above so that they could be applied successfully (in the author’s view) to historical monuments. Knowledge gleaned from the literature on valuation, which is mostly associated with the environment, was compared with the present state of the monuments. Though the research was based on site visits, a parallel effort was nevertheless made to collect data, including archives. The first theoretical or empirical obstacle reached was deemed the reason to reject the chosen method. The questions which were asked and the number of respondents were relative to the chosen method and site capacity (see details in Table 1).

Hedonic pricing

It is well known that some environmental attributes influence house prices. This common rule is used unrestrainedly, for example in hotels, where a nice view is included in the price. We can observe the same tendency with rooms with a view of the historic part of a town rather than of other, workaday buildings. This method makes it possible to see how cultural heritage affects the price of real estate. The drawback is that this method can be applied only when we have relatively extensive market data [Thorsby, 2010].
<table>
<thead>
<tr>
<th>Method</th>
<th>Data-collection method (literature/interview)</th>
<th>Respondents (in the pilot research the aim for each monument was to ask 20 random people)</th>
<th>Obstacle/problem</th>
<th>Possibility of the application failing while researching the historical monument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hedonic pricing</td>
<td>Literature/maps</td>
<td>Comparison of data, continuous timeline is essential</td>
<td><strong>Grunwald</strong> No need to ask respondents</td>
<td>Lack of data/interrupted timeline</td>
</tr>
<tr>
<td></td>
<td>Direct interviews</td>
<td>Question to visitors: <em>What is the main purpose of your trip?</em></td>
<td><strong>Grunwald</strong> 18 ppl – visiting Grunwald 2 ppl – Grunwald was on their route</td>
<td>Big and attractive city as a main purpose of the trip; absence of visitors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Raclawice</strong> No respondents on the site</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Westerplatte</strong> 4 ppl – visiting Westerplatte 14 ppl – visiting Gdańsk and, by the way, Westerplatte (in close vicinity) 2 ppl – taking a boat trip (the place was not important)</td>
<td></td>
</tr>
<tr>
<td>CVM</td>
<td>Direct interviews</td>
<td>A hypothetical scenario with the presence or absence of the cultural programme (CP)</td>
<td><strong>Grunwald</strong> 17 ppl – presence of the CP 3 ppl – absence of the CP (main activity was taking a walk)</td>
<td>Absence of visitors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Raclawice</strong> No respondents on the site</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Westerplatte</strong> 14 ppl – presence of the CP 6 ppl – absence of the CP (having historical knowledge of the place)</td>
<td></td>
</tr>
<tr>
<td>CE</td>
<td>Direct or indirect interviews (via e-mail), chosen group of respondents received a questionnaire with visualizations</td>
<td><strong>Grunwald</strong> Under research</td>
<td>Not identified</td>
<td>Not recognized, still under research</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Raclawice</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Westerplatte</strong></td>
<td></td>
</tr>
</tbody>
</table>
The travel cost method (TCM)

The travel cost method was developed to compare the value of market activities with the value of outdoor recreation. A participant who chooses to visit a site must incur the cost of travel. Choice of site is based on the idea that on a particular occasion a forward thinking visitor will consider all aspects of the candidate sites, including the total cost of reaching each of them and the entry fee. The visitor will then choose the one which has the best attributes and price. There now follow examples of the challenges faced in applied studies using TCM. Often we are observing many possible destinations, none of which will be visited by the potential visitors in a given year. A frequent solution to simplify the interviewing is to group visitors geographically according to their home address and to rate visits from a region or zone of origin (the zonal travel cost model). Further challenges arise when we try to measure the proper costs of trips. A round trip should include the direct costs of the journey as well as the cost of the time spent travelling. This is because the visitor could use the time for an income-generating activity. Travel to and from the site is costly both because of the direct costs of the journey and also because the time spent travelling could be used for another utility-generating or income-generating activity [Navrud and Ready, 2002]. On each occasion, the individual potential visitor calculates the utility from each site and chooses the one site that promises the highest utility on that occasion.

The contingent valuation method (CVM)

The CVM uses a survey to determine individuals’ willingness to pay (WTP) for hypothetical changes to a good or service. The respondents are asked to imagine a situation and not the real decisions to be made in relation to it. In the random application the respondent must choose between two unreal situations, one of which will provide them with higher monetary wealth but a lower level of cultural goods. The role of the interviewer is to discover how the respondent would value the good bearing in mind their hypothetical behaviour. It is important to fully describe the cultural good to the respondent before asking them to decide between the two presented actions. There is a balance to be struck here between overloading the interview with details and giving only scant information. The quality of cultural heritage includes its visual aspects. For this reason it is useful to show the respondent photographs simulating the hypothetical situation. Giving respondents a choice of two answers (dichotomous method) is a fruitful approach as it is easier for them to choose between two prices than suggest their own. Unfortunately, the answers provide limited information about the respondent’s WTP for the good in question.

Choice experiment

The typical CE survey provides a hypothetical situation in which people express their preferences by choosing the most suitable of the non-existent variants. The respondents are shown alternative options for one object, place or
good described by a set of selected attributes. The levels taken by two or more of the attributes differ from the versions shown [Longo, 2007]. The design of the questionnaire can be based on quantitative attributes, such as visitors per day or entrance fee, nevertheless most researchers use qualitative attributes such as the availability of incentives, services or cultural features. An example would be the presence or absence of guided tours [Longo, 2007] or a mixture of these features [Apostolakis and Jaffry, 2005]. The levels of the attributes should be reasonable and first of all realistic. Otherwise, the questionnaire would be rejected or the answers provided would not show true choices. When valuing cultural heritage we are dealing with aesthetic values which are best “described” by visualizations, which is the form that is most easily interpreted and understood by respondents.

Results and discussion

An example of cultural heritage is a historical monument, which is defined as an immovable monument of special importance to the culture of our country. The rank of historical monument is established by special regulation of the President of Poland1. In this paper the author has attempted to make a hypothetical choice of techniques applied to the environment to identify the possibilities for their use in evaluating a particular kind of cultural heritage: the historical monument.

Hedonic pricing is used when data is available. A good example is the research done by Moorehouse and Smith [1994], who studied the influence of changes in architectural styles on the prices of a row of houses from the nineteenth century. It is unrealistic to collect data on real estate in Poland due to its historical and political situation over the last twenty years. The problem is especially visible with places and objects which continue to remind people of sensitive issues so that each anniversary reawakens latent regrets or dissatisfaction. This mostly happens where the rancour is still fresh, such as with regard to WW II during the research conducted on Westerplatte. Though a long time has now passed, most of the information is hidden in archives, lost or unpublished.

TCM is realistic for places which attract a lot of visitors. It is easy to question them about why they have chosen one cultural attraction over another, about the distance they have travelled and about the cost of their trip. In these cases people have made a special effort to get to a cultural site and have devoted their free time and money to making the round trip. Researchers should choose historical monuments that are outside the city, such as the site of the battle of Grunwald2 (Fig. 1) or Westerplatte3.

---

1National Heritage Board of Poland website: www.nid.gov.pl.

2Grunwald: battlefield monument of history by the Regulation of the President of the Republic of Poland of 17.09.2010. This is where, on 10 July 1410, a combined army of Poles, Lithuanians, Russians and Tatars defeated the Teutonic Order, thus beginning its decline.

3Westerplatte: the battlefield on the Westerplatte, which is a historical monument by the Regulation of the President of the Republic of Poland of 22.08.2003. It is close to Gdańsk. On 1 September 1939 at 04:47 in the direction of the Military Transit Depot (at Westerplatte) the first volley was fired by the German battleship Schleswig-
M. Soltan (Fig. 2), as it is easier to visit tourist attractions within walking distance or that can be reached easily on public transport. At first glance this method would appear applicable at least to the site of the battle of Grunwald, but a problem arises concerning the question of the purpose of visitors’ trips. Most visitors (nine out of ten of those asked during the author’s site visit) had decided to visit Westerplatte because it was in the vicinity of Gdańsk, which was their main destination.

Taking CVM into consideration we are able to design a scenario in which, for example, we ask visitors to estimate their willingness to pay for new hypothetical amenities. For Westerplatte this method will give hypothetical results. The researcher can choose the additional amenities, such as an interactive museum or a cultural programme, devise a visualisation for the chosen scenario and ask visitors about their preferences dur-
ing site visits. During the author’s out-of-season, January visit to Westerplatte the author found a variety of respondents (families, school trips, weekend visitors), while in summer the historical site attracts more people (based on an interview with a man from the marina, who normally works on the Gdańsk Długie Pobrzeże to Westerplatte boat). Visitors can choose between the scenarios shown. At this stage of the research no obstacle was identified. The author then chose Racławice⁴ (Fig. 3). In this case there was a problem at the site because there was no one there and therefore no opportunity to distribute and complete questionnaires. We are not able to obtain complete information from behaviour on how public goods are consumed as it is always based on the observation of behaviour linked with public asset services and goods [Herriges and Kling, 1999].

The third of the methods presented, choice experiment (CE), may offer a way to measure the value of historical monuments. Society values cultural resources for a variety of aesthetic, cultural and historical reasons. If they look at realistic visualizations with different attributes, it is possible for the chosen respondents to reveal their real preferences without site visits. If we apply this method we can obtain information about the preferred development options for the site and its vicinity. Economic analyses are not sufficient when valuing cultural heritage, which means that the researcher must combine economic values with cultural ones. However, cultural benefits are very difficult to measure. One of the suggestions made by Throsby [2010] is to include elements such as the aesthetic (beauty, harmony), spiritual (understanding, enlightenment, insight), social (connection with others, a sense of identity), historical (connection with the past), symbolic (objects or sites as repositories or conveyors of meaning) and the quality of authenticity (integrity, uniqueness).

⁴Racławice: the battlefield of Raclawice (a historical monument by the Regulation of the President of the Republic of Poland of 14.04.2004). Here, a Polish army under the command of Tadeusz Kościuszko defeated a Russian army under the command of Major General Alexander Tormasow. The battle took place on 4 April 1794 in the village of Raclawice, which is now in the province of Małopolska. The victory of the Polish army, despite the very great importance of the military, raised the morale of the insurgents.
in methods for assessing cultural value. We can see from this cultural approach how extensive the range of analytical perspectives on valuing cultural heritage can be. Nevertheless, economic analyses can still offer insights into cultural heritage even if they do not capture all of its very diverse elements [Throsby and Rizzo, 2006].

CONCLUSIONS

Far fewer cultural heritage valuation studies than those concerning environmental research have so far been conducted. This is largely because cultural services are harder to analyse and describe. Studying historical monuments may also reawaken sensitive issues, which then raises questions about the data’s credibility, including those concerning the quantity of materials and interruptions in the data’s timeline. Nevertheless, a number of studies have been made and they have clearly shown that non-market valuation methods might be successfully applied to cultural heritage attractions of local, national and global significance – even when there are different functions and multiple functions (the Augustowski Canal, for example, has two functions: tourism and sailing). Further studies should also focus on neighbouring areas, as relatively little is yet known about how the value of cultural resources may be affected by changes in the immediate vicinity. Even though it requires further work and refinements to existing methodology, the economic approach to valuing cultural heritage remains a potentially useful and valuable one.

REFERENCES


**Streszczenie:** Waloryzacja dziedzictwa kulturowego: poszukiwanie możliwości zastosowania hipotetycznego w odniesieniu do pomników historii – wybrane podejścia metodologiczne. Dziedzictwo kulturowe ma istotne znaczenie dla społeczeństwa, a także przedstawia różną wartość dla każdego człowieka z osobna. To jeden z powodów, dla których wycena dziedzictwa kulturowego przysparza tak wiele trudności. Publikacje z tego zakresu nie są liczne, prawdopodobnie z powodu trudności metodologicznych: niewielu opracowań, braku danych, ograniczeń case study wynikających ze specyfiki polityki krajowej. Jednak podobieństwo dóbr środowiskowych i kulturowych stwarza możliwość przeniesienia wybranych metod wyceny środowiska naturalnego na grunt dziedzictwa kulturowego. W publikacji przedstawiono wybrane techniki wyceny i związane z ich hipotetycznym zastosowaniem obszary problemowe, na przykładzie pomników historii. Nasuwa się wniosek, że konieczne jest prowadzenie dalszych badań w tym zakresie, nie mniej jednak podejście ekonomiczne może mieć wartość dodaną dla procesu wyceny dziedzictwa kulturowego.