



# **VALUING CULTURAL HERITAGE**

## **Economic and Cultural Value of the Colosseum**

Olga Lvova

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TAMPEREEN AMMATTIKORKEAKOULU  
Tampere University of Applied Sciences

## **ABSTRACT**

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The purpose of this thesis was to examine the existing awareness and significance of cultural heritage sites and, in particular, of the Colosseum. The objective of this study was to analyze the economic and cultural value of the Colosseum as well as to outline its extent. The extent of these values was identified as the degree to which the target group is willing to support the Colosseum's preservation.

The theoretical part explores concepts of total economic value and cultural value of cultural heritage sites along with various valuation methods. The empirical section consists of quantitative research that was used to collect primary data. This data was gathered by conducting questionnaire survey among undergraduate students from Finland, the Netherlands and Germany.

The majority of respondents stated that they highly value the existence of the Colosseum and the option to visit it. Also, they agreed that the Colosseum should be preserved under any circumstances since they consider it as Italy's most known monument. These results suggest that the site has significant cultural value in addition to considerable economic value.

The findings indicate that undergraduate students from Finland, the Netherlands and Germany are highly aware of the Colosseum's cultural heritage and its need for preservation. They recognize the Colosseum as an important cultural heritage site and are willing to contribute to its conservation to amount of one to five Euros a month. Further research is required to get in-depth information on reasons behind differences in valuation between the respondent university students from the participated countries.

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Key words: cultural heritage site, economic value, cultural value, willingness to pay

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## 1 INTRODUCTION

Value has always been the underlying reason for heritage preservation. Naturally, society does not make effort to conserve something that it does not value. Humankind encourages to protect and preserve cultural heritage, as it embodies important aspects of history. The Roman Amphitheatre has been there for almost 2,000 years as a testimony to the power of the Roman Empire. An old saying declares: “While stands the Colosseum, Rome stands... When Rome falls, so falls the world” (Bomgardner 2000, 2). Clearly, being one of the top tourist attractions of Italy nowadays, the Colosseum has an undeniable significance. This paper intends to clarify the extent of the importance and various values people attach to the Colosseum.

In a time when funding of heritage may come under the question due to decreasing governments’ funds, caused by economic recession, the valuing of cultural heritage becomes a logical subject of studies. The aim of this research was to analyze the existent awareness of cultural heritage sites, and in particular, of the Colosseum, as well as examine willingness to pay for the preservation. Whether people are willing to pay and how much are they willing to pay depends on how they value the site. Therefore, economic and cultural value of the Roman amphitheatre needs to be determined.

Quantitative research method was adopted to carry out the research. Primary data was collected with the help of questionnaire-based survey that was used to provide acceptable measures of the economic and cultural value of the Colosseum. The respondents were chosen through snowball sampling method.

The thesis begins with the background information of the Colosseum, its history and role in the Roman Empire. Next to that, in chapter 3 necessary framework about cultural heritage, its economic and cultural value along with different valuation methods is provided. Chapter 4 deals with the research aims and process, discusses methodology and limitations. After that, the next chapter presents results of the research. Finally, conclusions and recommendations can be found in chapter 6.

## 2 BACKGROUND INFORMATION OF THE COLOSSEUM

According to Stirling (2006, 80), the Colosseum, also known as Flavian amphitheatre, is “the single most famous symbol of Rome”. It is an immense building, which served as arena for gladiator fights and represents the Roman imperial power from the past (picture 1). The Colosseum was able to host events for approximately 50,000 spectators and was the largest amphitheatre in the ancient Roman Empire (Thompson 2007, 136, 166).



PICTURE 1. The Colosseum in Rome, Italy (Photo: Chris Richardson 2012)

The prehistory of the Colosseum can be dated back to 64 AD, when Rome experienced an enormous fire, which burned for nearly nine days and destroyed two-thirds of the city. Nero, the ruling emperor at the time, used the cleared areas for constructing a new palace, the Domus Aurea or the Golden House. (Laurence 2010, 40-41.) Bomgardner (2000, 3) emphasizes that enormous sums of money and resources were used while building this symbol of Nero’s self-glorification. Moreover, according to Laurence (2010, 41), this pleasure palace has been called an example of “despotic luxury” by the writers of antiquity.

After Nero’s death in 68 AD, his successor and new emperor, Vespasian, wanted to give back some of Nero’s residence to the public by starting in 72 AD the construction of an unprecedented amphitheatre right next to the location of the former palace (Laurence 2010, 42-43). The amphitheatre was a monumental symbol of the new Flavian dynasty of Vespasian and his two sons, Titus and Domitian, and was meant to represent a great distance between them and Neronian “luxury”. By building a different type of a pleasure palace that would benefit for people and not for the imperial family, new emperor

introduced new ideology and intent to return the centre of Rome back to use of its citizens. (Bomgardner 2000, 3-4; Laurence 2010, 43; Stirling 2006, 80-81.)

However, Vespasian died before the Colosseum was opened by his son Titus in 80 AD. When finished, the amphitheatre covered 2 ha (5 acres), had 76 entrances and seating capacity was up to 50,000-80,000 spectators. They were arranged according their social status and could see the games as well as their emperor. (Stirling 2006, 81.) Not only the Colosseum was the first permanent venue for gladiator contests, as it is stated by Thompson (2007, 23), it was also a place to “go to see” and “be seen”. Bomgardner (2000, 42) explains that the amphitheatre was a place of “visible social status and rigid social hierarchies”, which can be seen in the clear division of seats (picture 2). Likewise, best seats, seats near the arena, were always reserved for members of the senate, town councils and other important Roman citizens (Bomgardner 2000, 166). Gladiator fights, where men fought each other in single as well as group combats, and beast hunts, when men and women played role of hunters, were hold in the arena (Stirling 2006, 81; Laurence 2010, 43). According to Thompson (2007, 164), the majority of gladiators were specially trained slaves whereas also convicted criminals were forced to compete.



PICTURE 2. The interior of the Colosseum: different levels (Photo: Olga Lvova 2011)

After its opening, the Roman amphitheatre was used continuously until the emperor Theodosius II ended gladiator fights in the fifth century under the pressure raised by Christianity (Bomgardner 2000, 202-204; Wiedemann 1992, 150-156). Thus, gladiator fights were forbidden and the Colosseum lost its original purpose as serving as arena for

these events. Consequently, the government's as well as the public's interest in the preservation of the Colosseum decreased steadily. Moreover, the Colosseum was exposed to several fires and earthquakes, and its plenty resources served as the basis for constructing new churches and governmental buildings that led to the fact that the amphitheatre lost its former appearance (Wiedemann 1992, 153; Bomgardner 2000, 29-30, 219). According to Bomgardner (2000, 30-31), the fundamental preservation of the site was started due to the Pope Benedict XIV who in 1749 declared the Colosseum "a sacred place" and placed a wooden cross in a memory to the "Christian martyrs killed in Rome during the persecutions of the first three centuries AD" (picture 3).



PICTURE 3. Wooden cross in the Colosseum (Photo: Olga Lvova 2011)

Today millions of visitors from around the world come and admire this famous landmark that is almost 2,000 years old. According to ANSA (2012), the Colosseum attracts more than five million tourists a year and can draw as many as 24,000 visitors a day during extended summer hours. Constant restoration works make sure that humankind is going to be able to hear this "distant, yet powerful, echo of the former greatness of Rome" in years to come (Bomgardner 2000, 2).

### 3 THEORETICAL FRAMEWORK AND CONCEPTS

This chapter will provide an overview of the main sources and examines the main areas that are relevant for this research. Starting with a discussion about cultural heritage in general, the second part analyzes the role of the economic and cultural value in heritage valuation. Lastly, methods for valuating will be introduced.

#### 3.1 Cultural heritage

In order to discover the meaning of economic and cultural valuation, cultural heritage in general has to be defined. UNESCO on the World Heritage Convention in 1972 defined the cultural heritage as following:

*monuments*: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

*groups of buildings*: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

*sites*: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view (UNESCO World Heritage Center 1972).

Thus, “cultural heritage is formed by all material and immaterial evidence of the cultural identity of a population” (COST 2011). In other words, cultural heritage includes all assets that are significantly influenced by the past (Timothy & Boyd 2003, 2-3). More precisely, Timothy and Boyd (2003, 3-5) assign cultural resources to the following categories: tangible immovable resources, tangible movable resources and intangible resources. Tangible resources are physical artefacts that are considered necessary to be preserved for the benefit of future generations. Furthermore, monuments, historic places and buildings can be defined as tangible immovable resources whereas objects in museums belong to tangible movable resources. (UNESCO 2013.) In comparison, intangible cultural heritage embraces non-physic heritage like spiritual values, morals,



language, oral literature, arts, music, handicrafts, traditional games, lifestyle and habits of different societies, and so on (UNESCO 2001).

Besides, Timothy and Boyd (2003, 14) added the “shared heritage” to the definition of the cultural heritage (figure 1). This term describes the scale of heritage sites since the meaning of the cultural heritage can be shared worldwide, on national level, locally, or simply personally.

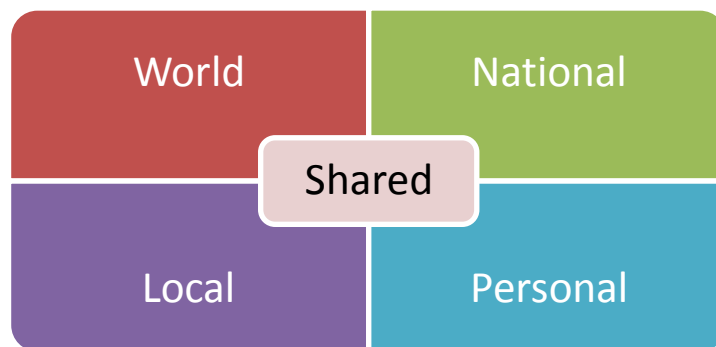


FIGURE 1. Scales of heritage (Timothy & Boyd 2003, modified)

When recapitulating the main points of the above, one can conclude that there are different types of cultural assets, characterized by their tangibility, intangibility and mobility. Independently of their state, they can all be shared on a different scale: worldwide, nationally, locally or personally. This definition has to be taken into consideration when measuring the cultural and economic value of cultural heritage sites.

### 3.2 Economic valuation

According to Klamer and Throsby (2000, 132), economic valuation describes the act in which tourists pay for their cultural experience in the broadest sense. Throsby (2006, 42) emphasizes that “the more highly people value things for cultural reasons the more they will be willing to pay for them”. Besides, the assessment of the market price plays an important role. Regarding the level of the market price, a clear distinction between movable and immovable cultural heritage must be made. Whereas movable cultural assets can be bought and thus, investment is visible, immovable cultural assets have to be appreciated on site and are measured by entrance fees (Throsby 2007).

The value of a cultural element is also influenced by its authenticity, appearance as well as the degree of cultural importance. Furthermore, economic valuation assesses whether people would voluntarily pay money with the purpose of conserving a certain heritage site and thus, the intangible elements they connect with it and if so, how much. Conversely, it also evaluates how much people would dislike the absence of that specific cultural heritage site. (Klamer & Throsby 2000, 134-136.)

Additionally, economic valuation can be measured by the travel costs tourists spend for reaching a certain cultural value (Throsby 2007). If they spend a lot of money to travel to the cultural asset, they certainly appreciate it a lot. Moreover, Timothy and Boyd (2003, 148) state that economic valuation is not limited to the expenditures made by visitors but also includes sponsorship because if a cultural heritage site is recognized as highly valuable, the site is most likely to gain sponsors.

Finally, Mourato and Mazzanti (2002, 68) stress that economic valuation is an important and powerful tool, since “ignoring economic preferences can lead to undervaluing and under pricing of cultural assets”. This, in turn, can cause reduction of the amount of financial resources available to cultural heritage proportionate to other public priorities.

Thus, summarizing the different definitions delineated above, one can conclude that economic valuation can be measured by social recognition, cultural importance, authenticity, appearance, travel costs along with sponsorship. Next to that, economic valuation indicates whether and how much people are willing to pay for the conservation of the cultural heritage site.

### **3.3 Total economic value of a cultural heritage site**

As it is stated in Merlo and Croitoru (2005, 17), total economic value (TEV) is one of the concepts that can be used to identify and quantify the full value of natural or cultural resources. TEV provides help in classifying different types of values in order to measure them typically in monetary unit (World Bank 2005, 9; Sharp & Kerr 2005, 3). According to Throsby (2006), the principle behind this approach is the fact that individuals can experience heritage by direct consumption, by indirect means, or as an external benefit. Basically, TEV is “the sum of all benefits obtained from a resource” (Sharp &

Kerr 2005, 4). In figure 2 the general concept of TEV is shown where use values, namely direct use value, indirect use value and option value, present benefits gained from the actual use of the resource while non-use values, namely existence value and bequest value, are benefits that are not linked directly to the use of the resource (Merlo & Croitoru 2005, 17).

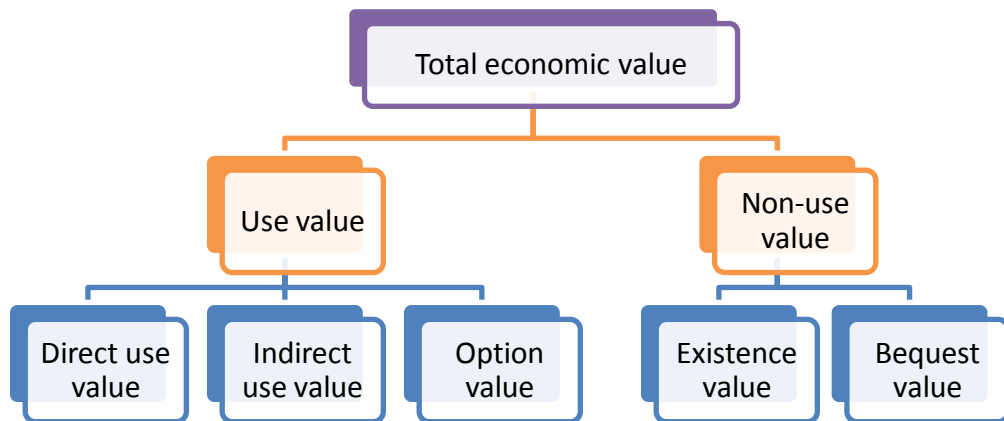


FIGURE 2. The concept of total economic value (World Bank 2005, 9)

However, in order to use TEV concept for a cultural heritage, several adjustments need to be made. According to Throsby (2007), the categories into which the value of heritage can be classified in these terms are still use value and non-use value. Therefore, direct consumption or interaction with heritage is direct use value whereas external benefit gained from heritage is related to one of non-use values, namely existence, bequest and option value (figure 3).

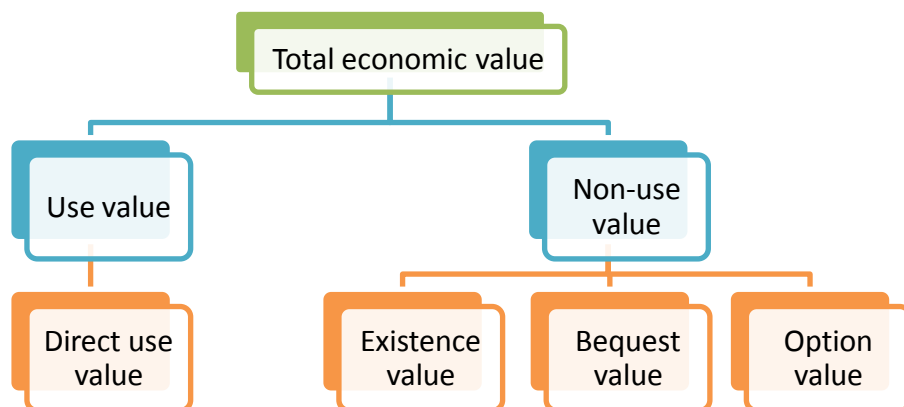


FIGURE 3. The concept of total economic value of cultural heritage site (Throsby 2007, modified)

### 3.3.1 Use values

According to Throsby (2007), use value of a cultural heritage site is the benefit that accrues to individuals, households, or companies through “the direct consumption of heritage services”, for instance, the satisfaction of living or working in a heritage building. Moreover, such values are often reflected in market processes and prices and can be seen in actual rental value of heritage assets (O’Brien 2010, 23). Furthermore, direct use value of a cultural heritage increases to tourists visiting the heritage. In this situation the suitable value can be estimated, for example, in form of entrance fees. (Throsby 2007.)

As a conclusion Throsby (2007) states that direct use values are rather high, because commonly heritage properties are approached by individuals who appreciate their services and are willing to pay the agreed price either in one or other form.

### 3.3.2 Non-use values

Non-use or passive-use values are satisfaction one obtains from “attributes of cultural heritage that are classifiable as non-rival and non-excludable” and, therefore, cannot be reflected in market processes (Throsby 2007). There are three categories of passive-use values that are equally relevant to a cultural heritage site (figure 3):

1. Existence value is an enjoyment people receive from knowing that a particular cultural heritage exists (Dana 2004).
2. Bequest value represents the value attached to preserving an object or site for the use of future generations (O’Garra 2009).
3. Option value is a benefit of having an option to visit cultural heritage in the future (Productivity Commission 2006).

Moreover, an additional category for non-use values of cultural heritage sites can be spotted. Intrinsic value is that form of value that is unique to the cultural sector and is not found anywhere else (O’Brien 2010, 18). This type of value is very hard to define, since it is associated with ideas of aesthetic excellence and individual enjoyment. Intrinsic value is therefore highly subjective. (Rogers & Bardenhagen 2010.)

All of non-use values influence the demand for the conservation of heritage. The extent of this demand can be measured from individual willingness to pay, for instance, in form of donations or taxes. (Throsby 2007.) Moreover, passive-use values have special priority within the cultural sector, since they involve some of the significant benefits generated only by culture. Hence, measurement of non-use values focuses on capturing benefits such as the importance people attach to the existence of heritage, even if it is not a subject of direct interest to them. (O'Brien 2010, 23-24.)

### 3.4 Cultural valuation

According to Throsby (2006, 42), economic value cannot fully capture cultural value as there are specific characteristics of cultural value which cannot be presented in a monetary form. Therefore, it is essential to get an insight on the concept of cultural value.

Cultural valuation can have three functions in regard to non-use value: when people value a certain cultural heritage site, it is satisfactory for them to know that the cultural asset exists (existence value), maybe even for a future visit (option value) or for benefit of future generations (bequest value) (Klamer & Throsby 2000, 134). Furthermore, a cultural heritage site can have an aesthetic, symbolic, spiritual or a historical meaning (Throsby 2007). Nonetheless, it is most important for communities to identify with the cultural asset which means that the larger the identity, the higher the cultural valuation (Timothy & Boyd 2003, 13, 89-90). In this context, the cultural valuation is totally independent of the economic valuation (Throsby 2007).

Additionally, Throsby (2007) claims that cultural heritage can either be valued by an individual or by a whole society which is then called *collective value*. Referring back to the identity issue one can conclude that an individual can identify him-/herself with the cultural asset or a complete society and consequently, they attach certain feeling to that cultural heritage site, becoming "their heritage" (Timothy & Boyd 2003, 13). Hence, it can be concluded that cultural heritage has a certain social significance.

Next to that, a cultural heritage can have a political significance. This is the case when private owners as well as governments have an interest in that heritage site and consequently, aim at collaborating with one another (Timothy & Boyd 2003, 13). Finally, a

cultural asset can be very valuable for science, especially when it reflects history and can be analyzed for future issues. According to Timothy and Boyd (2003, 13), it also has got a scientific significance when it replicates the connection between indigenous people and European settlers or different lifestyles of various areas.

In review of the above, one can see that cultural value is a complex concept grouping qualities of a heritage that are somewhat meaningful to individuals or societies (figure 4). Cultural heritage has undeniable importance on economy, society, politics and science. Moreover, with regard to non-use values, one can benefit from a heritage simply by knowing that this heritage exists and is preserved for future generations as well as it can be visited eventually in upcoming years. Besides, a cultural asset can have an aesthetic, symbolic, spiritual and historical meaning.

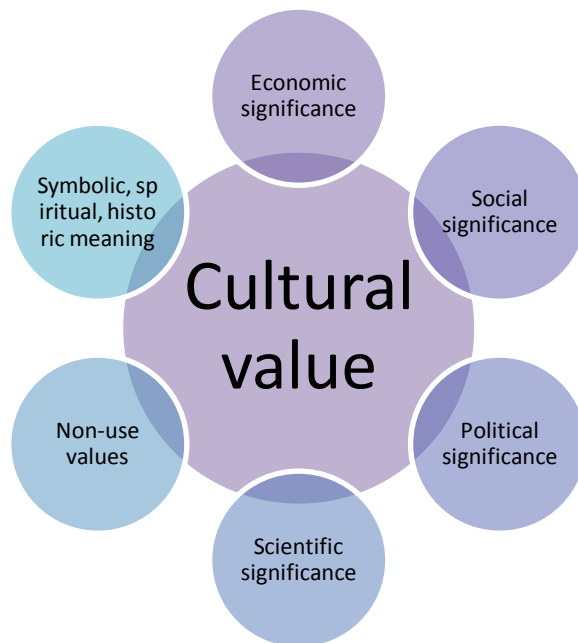


FIGURE 4. The concept of a cultural value (Throsby 2007, Timothy & Boyd 2003, modified)

### 3.5 Valuation methods

After discussing economic and cultural valuation, it is essential to have a look on the different methods for heritage valuation. According to Bateman, Carson, Day, Hanemann, Hanley and Hett (2002, 30), there are two methods for measuring the willing-

ness-to-pay (WTP), namely the Revealed Preference (RP) method and the Stated Preference (SP) method (figure 5). The main difference between these two methods is that RP method draws data from reviews of actual choices made by individuals in the real world, whereas the SP method collects data from people's responses to hypothetical questions instead. Therefore, the RP methods cannot be used when there is non-use values involved. (Bateman et al. 2002, 30-31.)

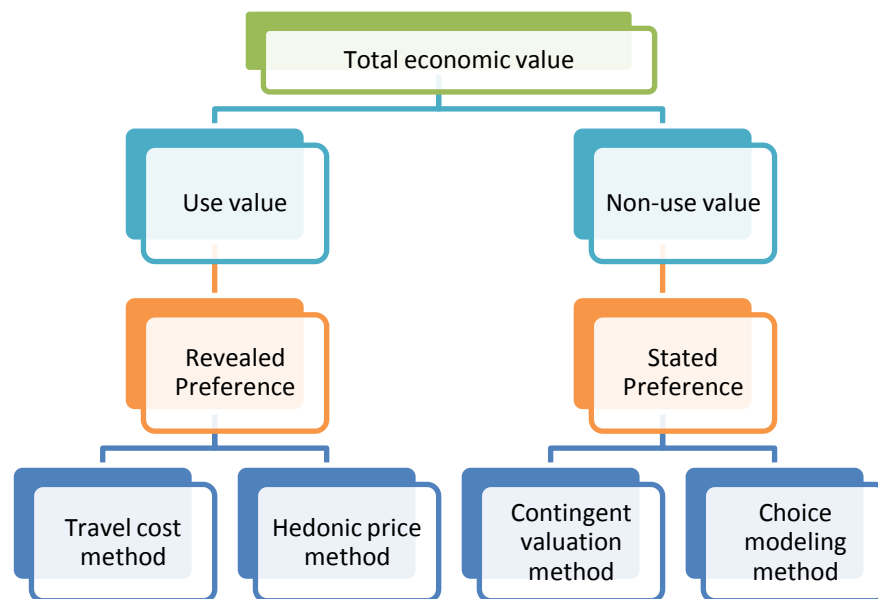


FIGURE 5. Economic valuation techniques (Bateman et al. 2002, modified)

RP techniques involve different valuation methods such as, for example, travel cost and hedonic pricing. The travel cost method includes any entrance fees that are paid to visit the site, other expenses, wear and tear if travelling in one's own car and the economic value of time spent travelling to and from and visiting the site (EFTEC 2005). Next to that, the hedonic pricing method is based on the fact that prices of goods in a market are affected by their characteristics and helps answer the question: What is the relationship between the goods or services and market prices? (Gundimeda 2005; O'Brien 2010, 29). According to O'Brien (2010, 29), this method lies in division of the total value of the goods into composing parts in order to examine to what extent individual features of the goods or services contribute to the overall value.

Further, Stated Preference (SP) techniques are aiming to answer a question about possible ways of capturing users' and non-users' valuations of culture that later can be used in cost-benefit analysis (O'Brien 2010, 22). SP techniques are commonly split into two

categories, namely contingent valuation method and choice modelling method. According to Gundimeda (2005, 2), the method is called contingent valuation (CV), because people are asked to state their willingness to pay, *contingent* (or conditional) on a precise hypothetical scenario and description of the goods or services. Therefore, CVM involves directly asking people in a survey how much they would be willing to pay for specific services or goods (EFTEC 2005). In comparison, choice modelling method asks consumers to choose one outcome from a set of several possible alternatives known as a choice set. Moreover, each description or choice set is distinguished by its attributes and levels. (The Allen Consulting Group 2005, 39.)

Thus, summarizing the review from the above, one can conclude that the contingent valuation method is the most appropriate for the following research, because analysing cultural value of the site naturally involves assessment of its passive-use values. Furthermore, CVM gives an opportunity for directly asking people in a survey about their willingness to pay for specific services or goods.



## 4 RESEARCH AIMS AND PROCESS

### 4.1 Research problem, aims and questions

As it was explained in the chapter 2 of this thesis, the Colosseum is a widely known monumental building, which represents the former power of the Roman Empire. Obviously, the Flavian amphitheatre has great cultural and economic value to humankind (figure 6).

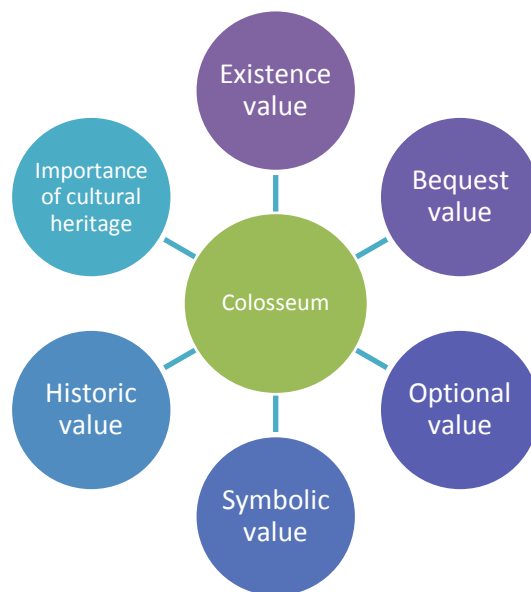


FIGURE 6. The conceptual model of various values of the Colosseum

The purpose of this paper, however, was to determine the actual value of the Colosseum to the target group of undergraduate students from Finland, the Netherlands and Germany. Clearly, the Colosseum has certain significance for the chosen target group. Moreover, the extent of the importance is based on the extent of the economic and cultural values of the amphitheatre. These values can be recognized as the degree to which the target group is willing to contribute to the Colosseum's preservation.

Thus, the aim of the research was to outline the extent, to which undergraduate students from Finnish, Dutch and German universities are currently willing to pay for the preservation of cultural heritage, in particular, for the site of the Roman Colosseum. Therefore, the overall problem statement of this research was: *To what extent are under-*

*graduate students of Dutch, German and Finnish universities aware of cultural heritage in general and, in particular, of the Colosseum, are they willing to contribute to its conservation and to what extent do these three groups differ?*

In order to answer the problem statement, four research questions were formulated. The first question was: *What is the significance of cultural heritage sites for undergraduate students of Dutch, German and Finnish universities?* This research question aimed at displaying how much the target group already knows about cultural heritage sites and how much they actually mean to them by asking, for instance, whether they have been to a cultural heritage site within the last two years along with questions testing their knowledge. This answers the problem statement to the extent that the more significant cultural heritages sites are for the target group, the more they would be willing to pay (Throsby 2007).

The second research question was: *What is the value of the Colosseum from the point of view of undergraduate students of Dutch, German and Finnish universities?* After having discovered the general knowledge and significance of cultural heritage sites for the target group, they were asked specifically about the Colosseum, the major element of this research paper. The high valuation of the Colosseum, as explained in chapter 3, will lead to a willingness to pay.

Next to that, the third question was: *In what form and to what extent are undergraduate students of Dutch, German and Finnish universities willing to contribute to the preservation of the Colosseum?* The answer to this research question refers back to the problem statement to the degree that it was discovered if the aforementioned target group is willing to pay for the conservation of the Colosseum at all or if they prefer other ways of contributing to it.

Finally, the last question was: *Do Dutch, German and Finish undergraduate students value the Colosseum differently and if so, to what extent?* The research was conducted with undergraduate students of three different countries in order to see if there are differences between their interests in cultural conservation issues regarding the Colosseum. This refers back to the problem statement as it answers to what extent their willingness to pay differs.

## 4.2 Methodology

With regard to answering the research questions and, consequently, the problem statement, primary data on the topic of the valuation of cultural heritage was collected. The author chose to design questionnaire-based surveys and to distribute the questionnaires, because it is one of the easiest ways to carry out quantitative research and to gain a quick result of a high number of respondents (Veal 2011, 275-276).

The questionnaires were sent via E-mail and Facebook to a population of approximately 200 students following the snowball sampling. According to Johnston and Sabin (2010, 38-39), this means that an initial population will be asked to suggest people of the same target group with similar characteristics to fill in the questionnaires in order to extend the number of respondents. Therefore, the questionnaire was sent in August 2013 to students from Tampere University of Applied Sciences and to friends as well as acquaintances of the author. Those were then asked to pass the questionnaire on to other students. Besides, it was decided to limit the research to undergraduate students from three different countries in order to narrow the focus of the research and provide more representative results. The aim was to achieve a sample of 102 bachelor level students, 34 from each country.

In total 133 people filled in the questionnaire: 19 high school students, 104 bachelor level students, 5 master level students and 5 persons who were not studying at the moment of the survey. Thus, a sample size for the research was 104 undergraduate students; 35 from Finland, 35 from Germany and 34 from the Netherlands.

Since the questionnaire-based survey was meant to be respondent-completed, it started with clear instructions so that respondents exactly knew what to do. Moreover, it consisted of clear, simple, close-ended questions of different measurement levels, including nominal, ordinal and scale questions. Concerning the nominal questions, there were some issues asking for non-quantitative answers, for instance, for the country of origin in order to put the respondents in one of the three categories (Finnish, German or Dutch). Answers with an unclear interval, for example, the frequency the cultural heritage site has been visited, were given to ordinal questions.

Furthermore, close-ended questions were chosen for the questionnaire survey, because converting open-ended questions for computer analysis can be very time-consuming and sometimes no more beneficial than well-constructed close-ended questions (Veal 2011, 285). Next to that, the questions were based on the theoretical framework portrayed in the chapter 3. For instance, CVM was used while designing the questionnaire. This method allows asking the target group directly about their willingness to pay for the preservation and its extent.

The questionnaire-based survey intends to give an insight into different behaviour patterns and preferences so that general conclusions can be made in the end (Veal 2011, 258). Subsequently, these questionnaires were processed with the help of SPSS, a program used for statistical analyses. Since the target group consisted of respondents from three different countries, it was also assessed whether there is a difference between those nationalities and their connection to the Colosseum.

### **4.3 Questionnaire explanation**

The questionnaire (see appendix 1) entailed questions which were meant to give answers to the four research questions. As it is stressed in Veal (2011, 275), every question should be linked back to research questions, therefore, questions must be included in the questionnaire only if they are related to the subject and problem. With regard to collect relevant data the questionnaire matrix has been created according to information requirements (see appendix 2).

In order to answer the first research question “*What is the significance of cultural heritage sites for undergraduate students of Dutch, German and Finnish universities?*”, it was essential to get the background information about general awareness and knowledge of a cultural heritage. Hence, the questions about the frequency and importance of visitation of a cultural heritage site needed to be asked.

The next research question “*What is the value of the Colosseum from the point of view of undergraduate students of Dutch, German and Finnish universities?*” aimed to gain information about importance and value of the Colosseum for the image of Italy. Therefore, the respondents were asked if they have been to the Colosseum, how important is

the existence of the Colosseum to them and how much they would be willing to pay for the entrance. Also, their opinion on the following statements was demanded: “The Colosseum the most known monument in Italy” and “The Colosseum has to be preserved under any circumstances”.

Regarding the third research question “*In what form and to what extent are undergraduate students of Dutch, German and Finnish universities willing to contribute to the preservation of the Colosseum?*”, forms of supporting the conservation, willingness to spend money on it and the extent of willingness should be examined. Thus, the participants answered in what way they are willing to sustain the protection of the Roman amphitheatre and how much they would be actually ready to pay on a monthly basis in order to preserve the site.

Lastly, the final research question “*Do Dutch, German and Finnish undergraduate students value the Colosseum differently and if so, to what extent?*” required the information about the importance of preservation, willingness to pay and its extent according to different countries of study, namely the Netherlands, Germany and Finland. Therefore, the important questions that had to be responded were “Where are you from?”, “How important is the existence of the Colosseum to you?”, “In what way would you be willing to support the preservation of the Colosseum?” and “How much would you be willing to pay on a monthly basis for the conservation of the Colosseum?”

#### **4.4 Limitations**

Whilst the research was conducted, a few limitations concerning a proper execution and valid results became obvious. First of all, the main issue was the availability of time and resources. Due to relatively short period of time, the larger amount of people could not be reached, and for this reason the results cannot be considered as highly valid conclusions. Therefore, conclusions are simply based on 34 representatives of each country which when compared to the number of existing undergraduate students in each country is a very low rate.

Furthermore, the short period of time did not allow conducting in-depth research in possible reasons, for instance, why undergraduate students of Finnish and German universi-

ties prefer to make donations in order to help with the conservation of the Colosseum whereas students of Dutch universities would rather offer their taxes with the same aim. Therefore, only very superficial conclusions and recommendations could be made.

In addition, the general design of questionnaires in combination with online-questionnaire comprised limitations as well. The questionnaires only entailed closed-ended questions which, as a consequence, limited the answer options and, since people were not interviewed personally, follow-up questions could not be asked.

Next to that, contingent valuation method (CVM), used in the research, has certain limitation as well. According to O'Brien (2010, 27), when asked, individuals will tend to concentrate on the object to be valued, meaning they give more importance to the goods or services than they normally would, because they have been asked about it. Additionally, as it is noted by Gundimeda (2005, 8), if participants believe they will actually be required to pay for the goods, they may understate their willingness to pay (WTP), and if they believe they will not have to pay, they may overstate their WTP. Finally, they may overstate their true valuation of the goods or services in order to be seen to value something they think is socially acceptable to care about (O'Brien 2010, 28).

## 5 RESULTS OF THE RESEARCH

### 5.1 Significance of cultural heritage sites

For answering the problem statement “*To what extent are undergraduate students of Dutch, German and Finnish universities aware of cultural heritage, are they willing to pay for the conservation of the Colosseum and to what extent do they differ?*” it is essential to, first of all, have a look at the significance of cultural heritage for the target group.

To begin with the frequency of visitation of cultural heritage sites, the research showed that 85.6% of respondents have visited a cultural heritage site at least once within the last two years. In particular, 31.7% of the respondents had visited a cultural heritage site 1 or 2 times, 28.8% had visited it 3 to 5 times and 25% had visited a cultural heritage site more than 5 times (figure 7). However, 15 out of 104 questioned people (14.4%) had not visited a cultural heritage site at all within the last two years.

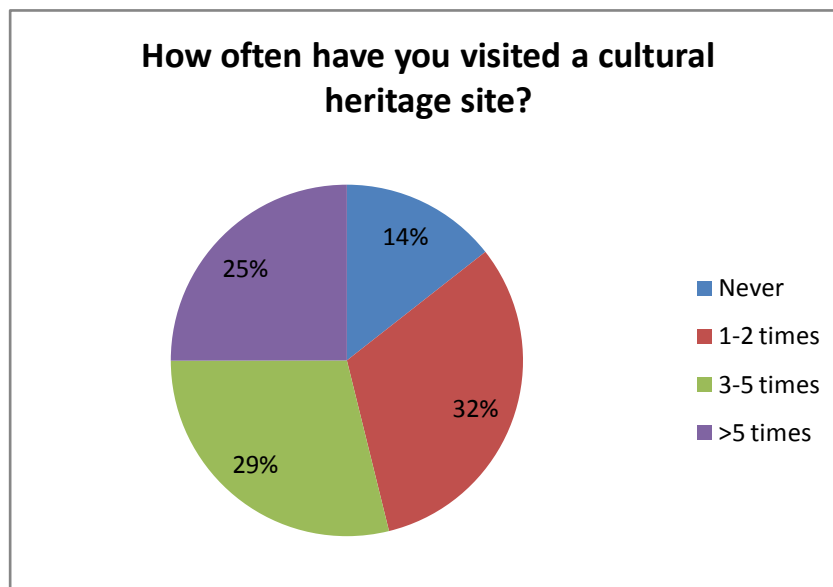


FIGURE 7. The frequency of visits to cultural heritage sites (n=104)

Further regarding the overall knowledge and awareness of a cultural heritage, the research determined that more than a half of the participants (55.8%) have come across the term of “cultural heritage” during their studies. In addition, 69 students out of 104

(66.3%) gave a correct answer on a question that required finding an example of a cultural heritage site in a mixed list of sites of different types. Moreover, the importance of a visitation of a cultural site has been rated on a scale from 1 to 4 with an average of 2.08. Therefore, most respondents, namely 58.7%, evaluated a visitation as somewhat important (figure 8). However, a high score of 0.746 in a standard deviation, a measure expressing the amount by which every variable in a dataset differs from the average mean (University of Leicester 2010), demonstrated that opinions differ drastically from “very important” to “not important at all”. Hence, the importance of a visiting a cultural site is dependent on one’s own individual perceptions and is highly subjective.

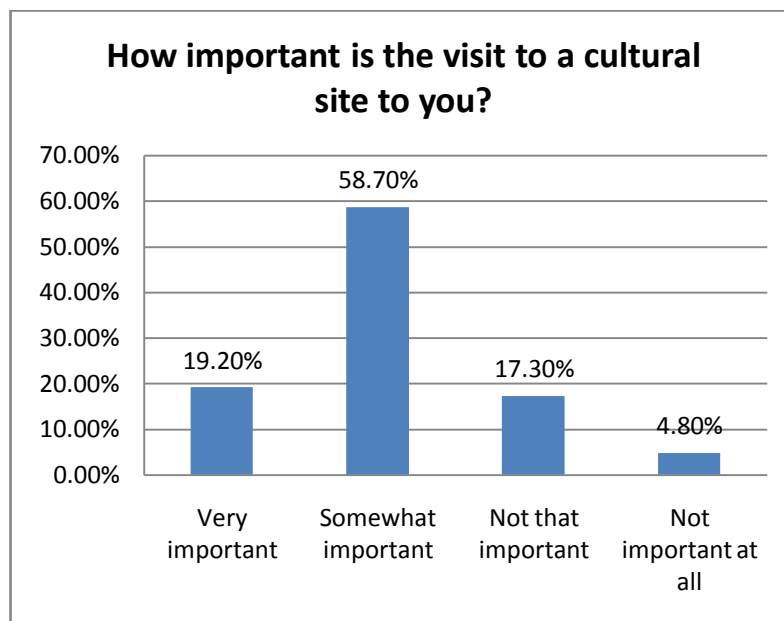


FIGURE 8. The importance of visiting a cultural heritage site (n=104)

Based on the figures and findings presented above, it can be concluded that visitation of a cultural heritage site is of somewhat importance for the target group, but the standard deviation of 0.746 shows that opinions differ greatly. Furthermore, 85.6% of respondents have visited a cultural heritage site and 25% visited it more than 5 times within last 2 years. Therefore, cultural heritage sites have a clear significance for the target group; however, most respondents do not consider it to be of a high importance.



## 5.2 Cultural and economic value of the Colosseum

The next logical step, after having examined the general importance of cultural heritage for the target group, was the identification of the cultural value of the Colosseum. Further, the cultural value of the heritage site, besides other aspects, served as an indicator for the economic value of the Roman amphitheatre. Consequently, the following outlines the cultural value as well as the economic value of the site for the target group.

When analyzing the cultural value of the Colosseum, four different types of values can be recognized as applicable, which are namely existence value, bequest value, option value and symbolic value. To begin with the existence value, the primary research indicated that the importance of the Colosseum's existence was rated on an average of 2.61 on a scale between one and four (where one = low; four = high). Figure 9 demonstrates that from total amount of respondents, 35,6% determine existence of the Colosseum as somewhat important when 10,6% stated that it is very important.

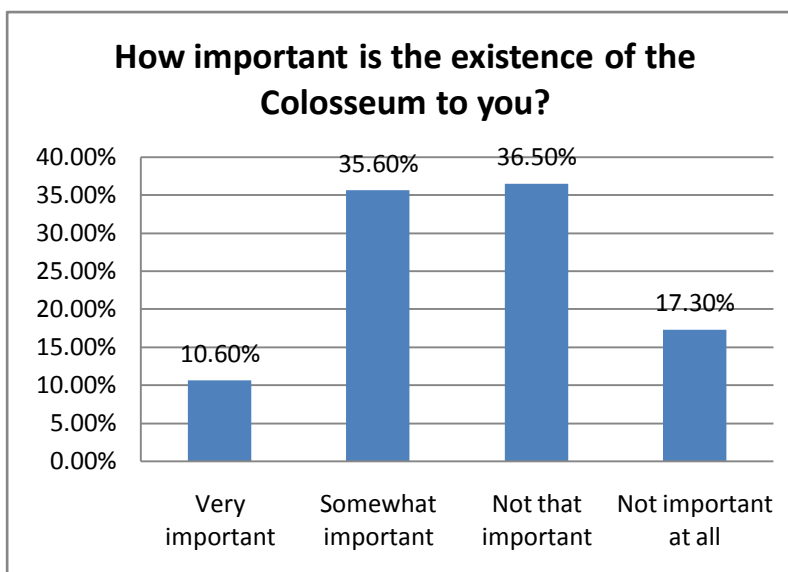


FIGURE 9. The importance of the existence of the Colosseum to the respondents (n=104)

At first glance, the average rating seemed to outline a consistently high importance of the site's presence. However, the relatively eminent standard deviation of 0,897 points out that the Roman amphitheatre is much more important to some of the respondents than to others. Hence, the significance of its presence can be classified as subjective, since the importance depends on each individual's point of view. Nevertheless, the pri-

mary research found out that the Colosseum features a significant existence value for the target group.

Further regarding the bequest value, the research showed that the need for preserving the site is rated on average 1.77 on a score from one to four (when one = very important; four = not important). The high score drew the conclusion that the respondents do recognize the compulsively urgency to preserve the ancient amphitheatre for future generations. Moreover, the respectively low standard deviation of 0,686 underlines the common opinion of the target group regarding the bequest value of the site.

Furthermore, 96.3% of the respondents, who have not been to the Colosseum yet, wished to have the option to visit it. In addition, 83.3% of the interrogated people, who have already been to the Roman amphitheatre, would consider visiting the site again. Further toting up the figures, it can be analyzed that 93.2% of all questioned people would like to have the option to visit the heritage site (figure 10). Thus, it can be concluded that the Colosseum has an extraordinary high option value.

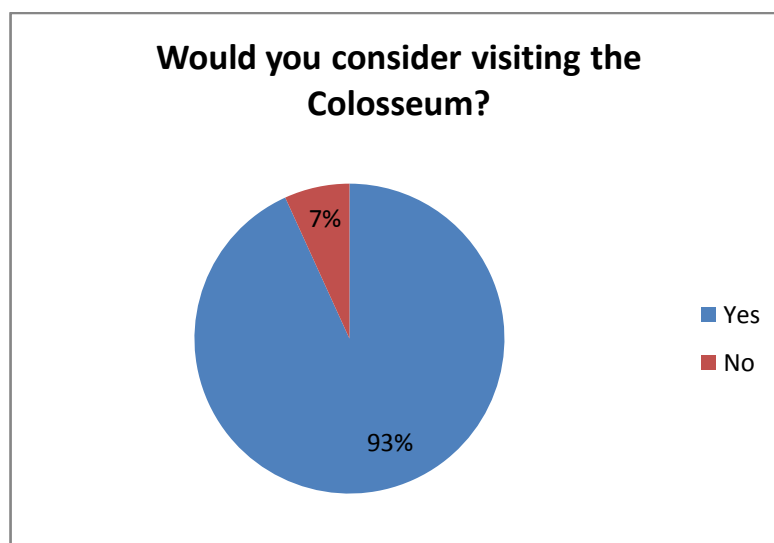


FIGURE 10. Possible option of visiting of the Colosseum

Next to that, considering the symbolic value of the amphitheatre, it has to be noticed that 33.7%, thus 35 of the 104 respondents could not imagine Italy without the Colosseum (figure 11). Consequently, 69 queried people (66.3%) can imagine Italy without the Colosseum, but of these ones 41 persons (39.4% of the respondents) can only imagine hardly the country without its specific heritage.

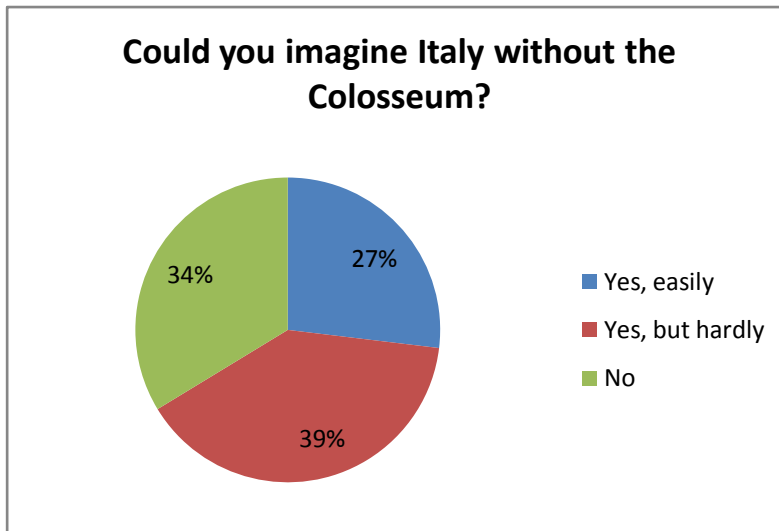


FIGURE 11. Possibility of imagining Italy without the Colosseum (n=104)

These figures show that the Roman Colosseum has only a slightly minted symbolic value. Moreover, the question to what extent this particular cultural monument is the most known monument in Italy, the answers were rated on a scale from one to four (when one = agree strongly; four = disagree strongly) with an average of 1.85. Hence, this rating leads to the assumption that the Colosseum is commonly considered as Italy's most known monument, which stands in contrast to the interpretation of the aforementioned results regarding the site's symbolic value. However, the standard deviation of 0.810 indicates that the symbolic value varies among the respondents and is based on the individual's perspective.

Lastly, as a step to determine the economic value of the Roman amphitheatre, the willingness of respondents to pay for the entrance to the site was analyzed. Figure 12 demonstrates that 76% of participants are ready to pay more than 5 Euros to enter the Colosseum. Moreover, there are 8% of respondents that are willing to pay from 11 to 15 Euros and even 2 persons (2%) that would pay more than 15 Euros in order to see the Colosseum from inside.

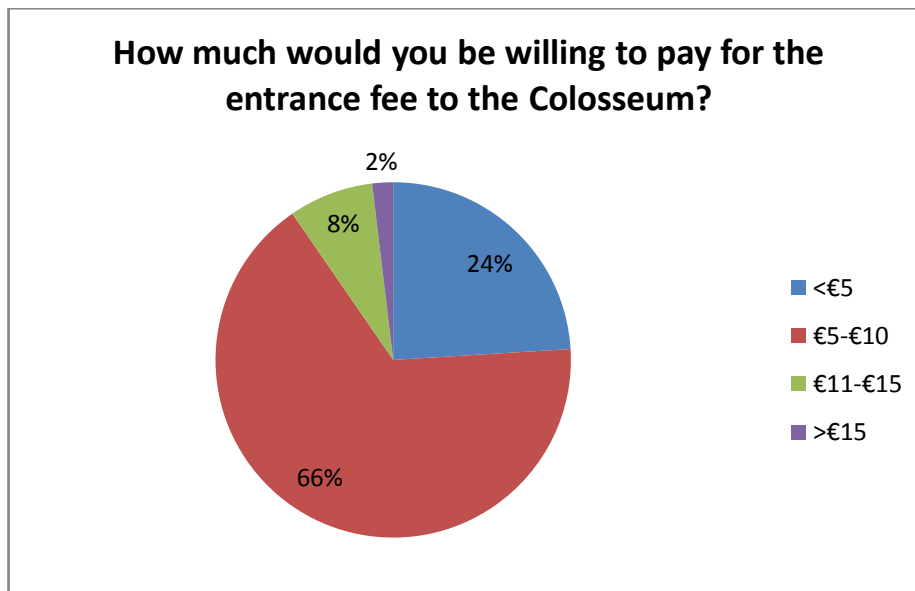


FIGURE 12. The amount that respondents are willing to pay as the entrance fee to the Colosseum

Hence, it can be concluded that majority of respondents are willing to pay for the entrance to the Colosseum, which means that the Roman amphitheatre has a value for the target group. However, this value can be defined only as somewhat significant, since solely 10% of participants are willing to spend more than 10 Euros for the entrance fee.

Finally, recapitulating the results of the primary research with respect to the cultural value of the Colosseum, it has to be mentioned that the target group appreciates the site's existence and the option to visit it. Moreover, the target group thinks that the Colosseum has to be preserved under any circumstances. However, the symbolic value is commonly considered as incisive, but depends on each individual's point of view. Based on the previously mentioned findings, the economic value of the Colosseum can be classified as considerable, but not enormous. This conclusion is based on the fact that although the existence value and option value play a notable role, since the desire to visit the site in the future may be recognized as indicator for potential tourism revenues, other factors predominate among respondents.

### 5.3 Willingness to pay for the preservation of the Colosseum

Obviously, regarding the preservation of the Colosseum, the forms of contribution as well as its extent had to be analyzed in order to answer the problem statement. Therefore, the respondents were asked in what way they are willing to support the conservation of the Colosseum and how much they would be willing to pay for it.

Starting with the willingness to contribute to the conservation of the Colosseum, the research indicated that 79 out of 104 participants (77%) are ready to assist the preservation in one of the possible ways (figure 13). Moreover, 33 people (32%) are willing to finance the preservation in a form of donations, 24 participants (24%) are willing to do voluntary work and 22 people (21%) are willing to provide financial help in a form of taxes. This leads to the following conclusion: the preservation of the ancient amphitheatre seems to be important for the target group people and therefore they are ready to contribute to it in different ways, including financial support.

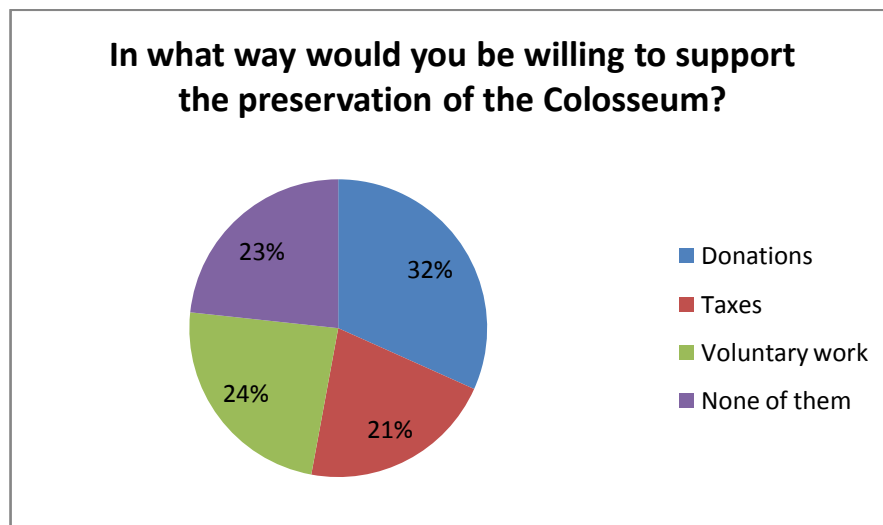


FIGURE 13. Forms of contribution for the preservation of the Colosseum (n=104)

Furthermore, it was necessary to examine to what extent the respondents are willing to pay for the preservation of the Colosseum. Figure 14 illustrates that 53.8% (56) of the respondents are not willing to contribute financially to the protection of the Colosseum. Nevertheless, out of the remaining 48 people, 44 (91.7%) are wilful to pay from 1 to 5 Euros whereas 4 people (6.3%) agree to pay more than 5 Euros on a monthly basis in order to sustain the preservation of the Roman amphitheatre. Hence, it can be concluded

that most of the respondents (77%) are willing to support the conservation, but slightly more than half of respondents (53.8%) are not ready to sustain the protection of the Colosseum financially.

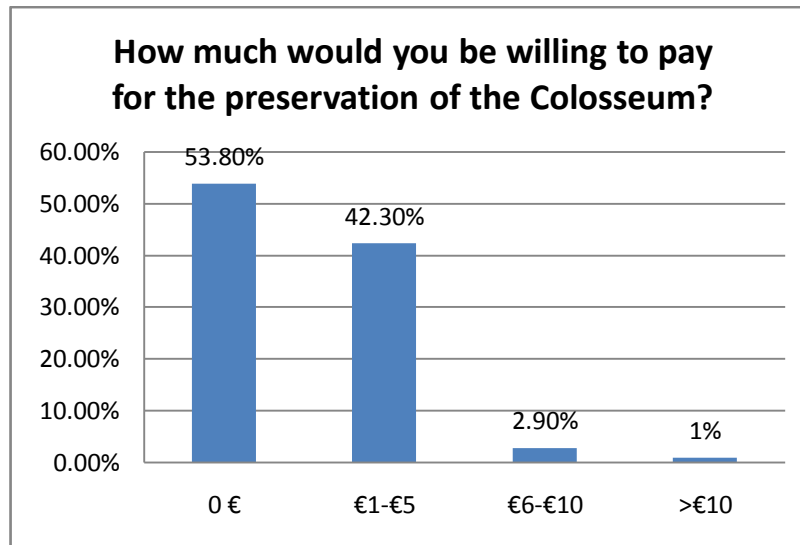


FIGURE 14. The amount that respondents would be willing to pay for the preservation of the Colosseum on a monthly basis (n=104)

When analyzing the economic value of a cultural heritage site, the extent to the aversion of preservation as well as the extent to pay money on a voluntary basis has to be considered. As examined previously, the respondents stated a relatively high interest in the preservation of the Colosseum, which leads to an increase of the site's economic value. Nevertheless, only 33 out of 104 of the questioned people (32%) would be willing to donate money voluntarily. Consequently, this factor impairs the economic value of the cultural heritage site. Concluding, it can be said that the economic value of the site favours by its existence, as well as option value. Moreover, the target group recognized the need for the conservation of the Colosseum, but there is only a limited willingness to contribute to the preservation financially.

#### 5.4 Differences in valuation of the Colosseum

As undergraduate students from three different countries, the Netherlands, Germany and Finland, have been part of this research, it was also interesting to discover whether there are differences between each of their awareness and valuation of cultural heritage and,

in particular, the Colosseum. In the following, this possible differentiation will be outlined.

#### 5.4.1 Importance of cultural heritage sites

First of all, one can say that it is equally important to undergraduate students of Dutch, German and Finnish universities to visit a cultural heritage site when on holidays. As it can be seen in the table 1, students from the Netherlands rated the importance of a visitation of a cultural site on average a 2.24 (when one = very important and four = not important at all) which means that it is somewhat important to them. Comparable to this result is the average of 2.17 of students of German universities. However, the difference between these two countries is the standard deviation. Since respondents from Dutch universities deviated more to the norm (0.867) than those of German universities (0.697), it means that there is quite a large difference between individual's opinions.

Compared to the universities of the Netherlands and Germany, it is rather more important to visit a cultural heritage site to the interrogated undergraduate students of Finnish universities but only by a relatively small percentage, 0.34 more important than to those of German universities but even 0.41 more important than to the average respondent from the Netherlands. The low standard deviation also shows that most Finnish respondents found it important (table 1).

TABLE 1. The importance of visiting a cultural site to respondents

Country	Mean	Number of respondents	Standard Deviation
Netherlands	2,24	34	,867
Germany	2,17	35	,697
Finland	1,83	35	,618
Total	2,08	104	,746

Concluding that, it is a bit more important for respondent students from Finland to visit cultural heritage sites when on holidays than to those studying in Germany or the Netherlands.

### 5.4.2 Economic and cultural value

Likewise, the participated undergraduate students of Dutch, German and Finnish universities had similar interests in the existence value of the Colosseum as they have comparable interests in the option value of cultural heritage sites in general, with the Finnish representatives deviating a bit from the others. Students had to rate between one = very important and four = not important at all how important the existence of the Colosseum is to them.

The existence of the Colosseum is almost as important to participants from German universities (2.69) as it is to Dutch students (2.67), both rather tend to rate its importance as not that important as can be seen in the table 2. However, the standard deviation of the latter group is fairly high which means that the opinion of undergraduate students of Dutch universities is very individual with 14.7% who think that the existence of the Colosseum is very important, 26.5% who believe that it is somewhat important, in the opinion of 35.3% of them it is not that important and for 23.5% it is not important at all. Hence, the largest group of the respondents actually think that it is not that important.

TABLE 2. How important is the existence of the Colosseum (n=104)

Country	Mean	Number of respondents	Standard Deviation
Netherlands	2,67	34	1,021
Germany	2,69	35	,822
Finland	2,46	35	,852
Total	2,61	104	,897

Conversely, respondent people studying in Finland deviated with about 0.2 from the Western European countries with a tendency to the importance of the existence of the Colosseum (figure 15). This means that the Colosseum's existence is not that important to interrogated students from Dutch and German universities compared to Finnish university student respondents, although their opinions do not differ a lot.



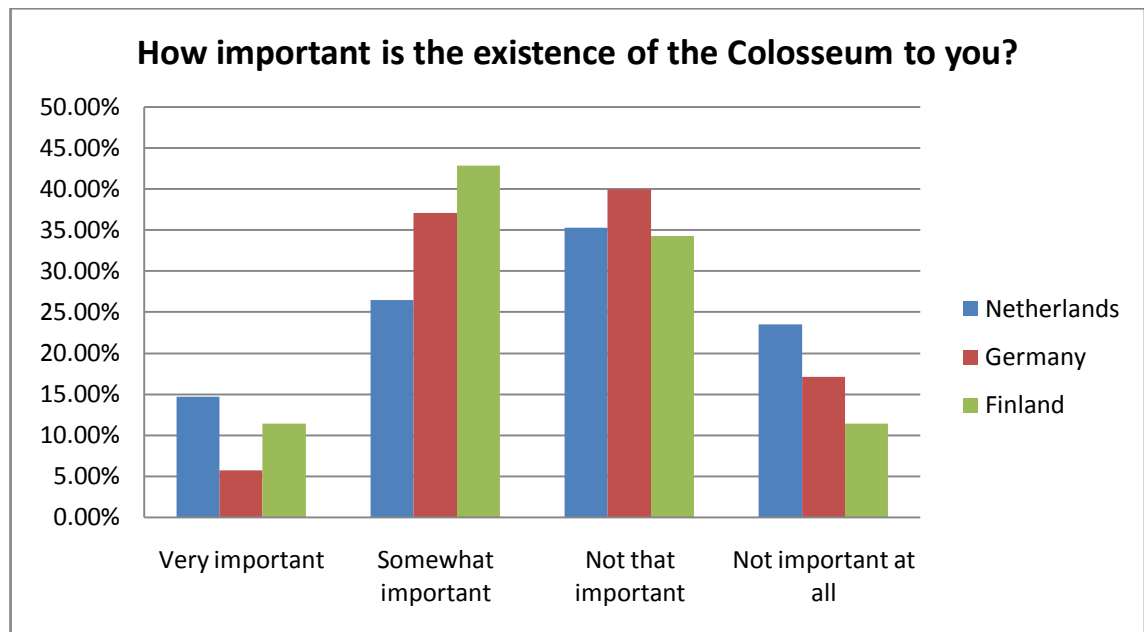


FIGURE 15. The importance of the existence of the Colosseum to respondents (n=104)

The importance of the existence of the Colosseum also refers to the question whether undergraduate students consider the Colosseum as the most known monument of Italy. Therefore, one could assume that the respondent rates are the same because if the Colosseum is the most known monument of Italy for one respondent group, the existence should also be important to them. However, this assumption has proved to be wrong. The difference between participants from Dutch universities is comparably high to those of German universities in this case.

Whereas the average of the sample of Dutch universities thinks that the Colosseum is Italy's most known monument (1.67), student respondents of German universities do not consider that it is that known (2.06), with the Finnish representatives in between (1.8) which can be seen in the table 3.

TABLE 3. The Colosseum is Italy's most known monument

Country	Mean	Number of respondents	Standard Deviation
Netherlands	1,67	34	,736
Germany	2,06	35	,826
Finland	1,80	35	,833
Total	1,85	104	,810

However, the standard deviation shows that the individual opinion of each representative group differed quite a lot from the average and, thus, a graph has been created in order to see which tendencies these outliers have. Figure 16 displays that in the case of participated undergraduate students of Dutch universities the tendency goes towards the belief that the Colosseum is certainly the most known monument of Italy. In the case of respondent students from Finnish universities, a very high number agreed to the statement that the Colosseum is Italy's most known monument (42.9% agreed strongly and 37.1% agreed).

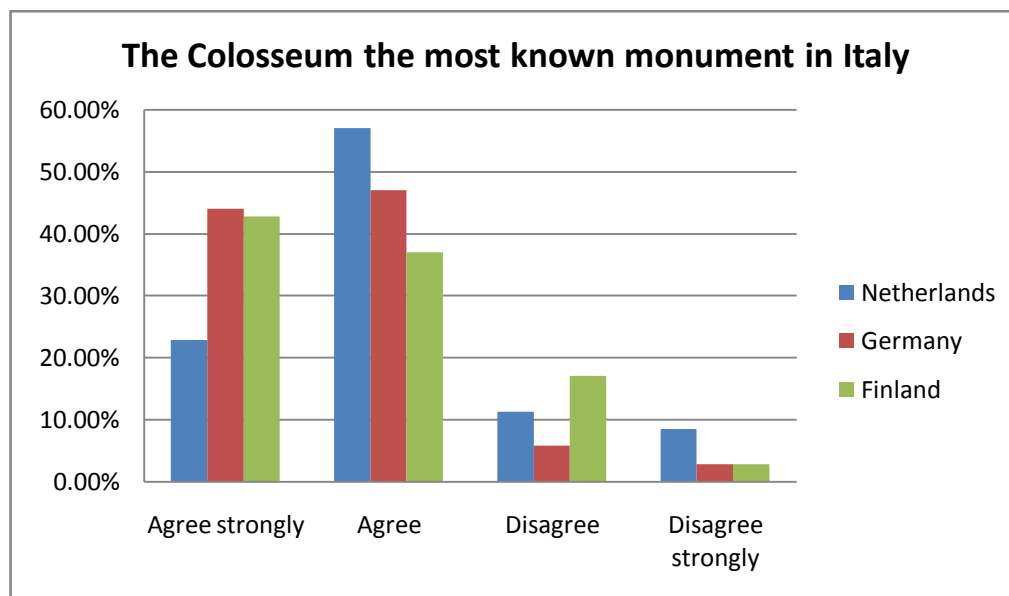


FIGURE 16. The Colosseum the most known monument in Italy

Hence, even though the student respondents from the three nations differ to some extent, they all believe that the Colosseum belongs to the most known monuments of Italy as the lowest rating is 2 which still means that they agree to the statement.

#### 5.4.3 Willingness to pay for the preservation

Additionally, each representative group agreed to the point that the Colosseum has to be preserved under any circumstances, referring back to the existence value. Again, respondent undergraduate students had to assess to what extent they agree to the aforementioned statement, one meaning agreeing strongly and four meaning disagreeing strongly (table 4). The research has shown that the first group, student participants of

Dutch universities, rated on an average 1.76; the second group, student respondents of German universities, 1.92; and the third group, student participants of Finnish universities, 1.63. This indicates that the preservation of the Colosseum is most important to the third group and least important to the second group.

TABLE 4. The Colosseum has to be preserved under any circumstances (n=104)

Country	Mean	Number of respondents	Standard Deviation
Netherlands	1,76	34	,751
Germany	1,92	35	,692
Finland	1,63	35	,598
Total	1,77	104	,686

All in all, all three groups want the Colosseum to be preserved under any circumstances and, thus, the existence value can be evaluated as high.

Furthermore, there is a huge difference between the ways interrogated undergraduate students from the three specific countries are willing to contribute to the preservation of the Colosseum. Whereas 32.4%, the largest group of respondent undergraduate students from Dutch universities, would like to support the conservation of the Roman amphitheatre through their taxes, the majority of the respondents from Finnish universities (42.9%) would rather contribute with donations. Conversely, the greatest part of respondent undergraduate students from Germany (37.2%) does not seem to be willing to support the conservation at all. However, the second largest group of representatives of German universities with an amount of 31.4% can be compared to the preference of the representatives of Finnish universities (figure 17).

This shows that participated undergraduate students of Dutch and Finnish universities are more likely to contribute to the Colosseum's preservation compared to respondent students of German universities. However, the respondents from Dutch universities rather chose taxes as a method of contribution in contrast to donations, the inclination of the representatives of Finnish universities.

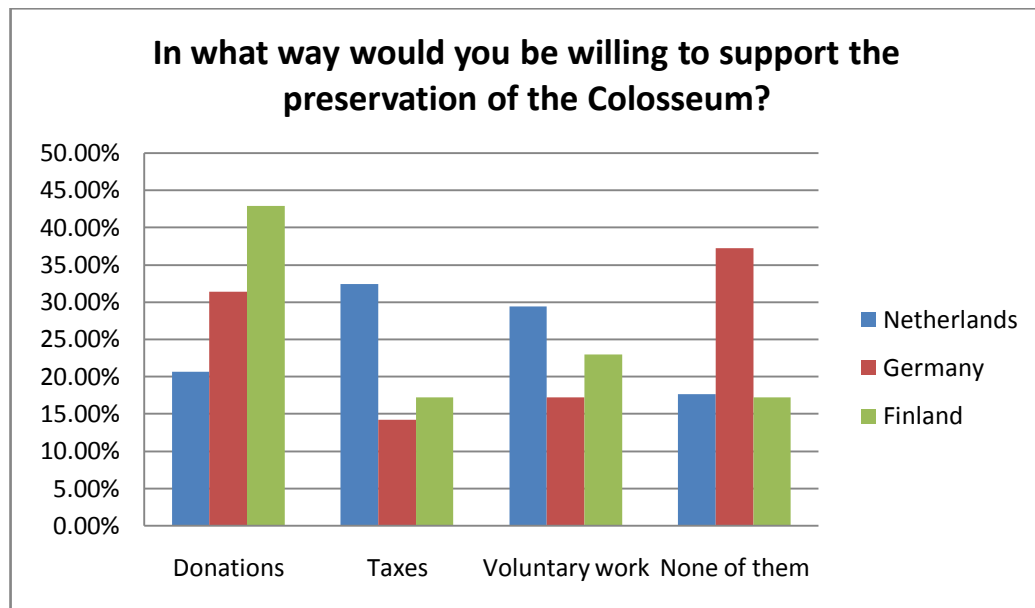


FIGURE 17. Forms of contribution for the preservation of the Colosseum (n=104)

Finally, there is also a difference in how much respondent undergraduate students of the three different countries are willing to pay for the preservation of the Colosseum and, hence, contributing to the economic value of the Colosseum.

German students stand out the most due to their preferences. Whereas the majority of Finnish (57.1%) and Dutch (55.9%) interrogated students do not want to contribute financially to the preservation, the greatest part of German respondent students prefers to support it with €1- €5 on a monthly basis. However, they are not at all willing to pay more than that whilst there are individuals of Finnish and Dutch representatives who are willing to pay €6- €10. Even 2.9% of participated Finnish students would pay more than 10 Euros (figure 18).

In review of the above one can see that respondent undergraduate students of German universities are more willing to contribute to the preservation of the Colosseum financially whilst respondent students of Dutch and Finnish universities are willing to pay more for it if at all.

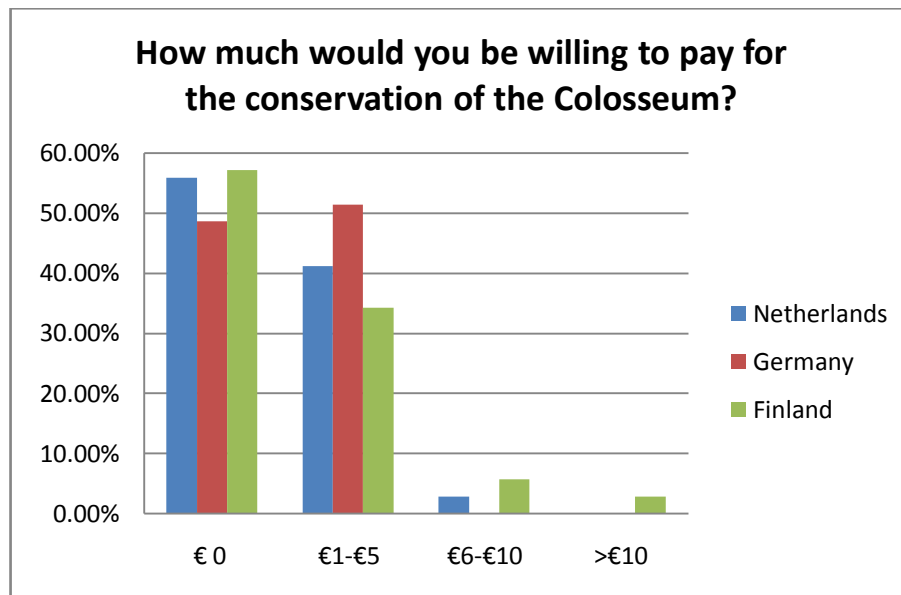


FIGURE 18. The amount that respondents would be willing to pay for the preservation of the Colosseum on a monthly basis according to countries of their studies (n=104)

#### 5.4.4 Conclusion

Concluding the differences between respondent undergraduate students of Dutch, German and Finnish universities, one can generally say that students from Finland value cultural heritage sites more than those respondent students studying in Germany or the Netherlands. However, this difference in valuation is minimal and can be classified into option, existence and economic valuation.

Concerning the existence valuation, the research has shown that the Colosseum's existence is not that important to participated undergraduate students from Dutch and German universities compared to Finnish respondent university students. Furthermore, the preservation of the Colosseum is more an issue among Finnish interrogated university students than among German and Dutch ones. Conversely, Dutch respondent students tend to contribute to the conservation of the Colosseum to the same extent as Finnish students. These two representative groups vary to the group of German respondents to a very small scope. Therefore, one can say that the existence of the Colosseum is valued the highest by the representatives of the Finnish respondent university students. Along with that, one can conclude that it is most important to them to have the option of visiting the Colosseum in the future.

However, the opinion of respondent undergraduate students of Dutch universities regarding the form of contribution to the conservation differs to the other samples because they prefer to support it with their taxes whereas respondent students of German and Finnish universities chose donations. The majority of the respondents from Germany do not want to contribute at all though. The research showed that respondent undergraduate students of German universities are more willing to contribute to the preservation of the Colosseum financially, if at all.

## 6 CONCLUSIONS AND RECOMMENDATIONS

In this chapter the results of the research will be concluded and lastly referred to the overall problem statement of this thesis. In addition, recommendations for the possible future research will be given.

The respondent undergraduate students from Dutch, German and Finnish universities have commonly visited cultural heritage sites during their last holidays; hence, a clear significance of cultural heritage could be recognized. When it comes to the Colosseum, it can be stated that the target group values its existence and the option to visit the site. Moreover, the bequest value can be assessed as relatively high, since the questioned people appreciate the preservation of this cultural monument. Even though a high amount of the respondents stated that they could imagine Italy without the Colosseum, they pointed out that this particular site can be considered as the country's most known monument. Based on these results, the economic value of the Colosseum could be identified as considerable, because the target group values it culturally.

Nevertheless, less than half of the respondents stated that they would contribute to its preservation financially, which reduces the economic value slightly. Regarding the willingness to preserve the monument, it has to be mentioned that the target group would like to donate money. However, the donations would be within the scope of one to five Euros. This relatively low willingness can lead back to the characteristics of the target group. As the consulted people were students, it is likely that they do not have sufficient financial funds to support the conservation to a larger extent. Contribution with voluntary work was mentioned by 24% of the respondents, too.

Moreover, the difference between respondent Dutch, German and Finnish undergraduate students can be concluded as relatively small. However, one can generally say that the existence and option value is more important to participated undergraduate students from Finland than to those studying in Germany or the Netherlands. This difference in valuation is minimal though.

In conclusion, interrogated undergraduate students of Dutch, German and Finnish universities are highly aware of cultural heritage and its need for conservation. They also

consider the Roman amphitheatre as an important cultural heritage site and are, therefore, willing to donate for its preservation. However, due to their financial situation, it appears that they would only contribute to a small amount between 1 and 5 Euros on a monthly basis. Respondent undergraduate students of Finnish universities slightly deviate from the others as they seem to appreciate cultural heritage sites more than the other two representative groups.

Consequently, there are few recommendations for a research project to be conducted with a similar purpose as well as recommendations for the managers of the Colosseum. In order to cover the high costs of the Colosseum's conservation, its managers should approach university students, in particular, German and Finnish university students, asking for donations because they appear to be willing to donate for the Colosseum's preservation. This willingness to pay is based upon, as the research has shown, the importance of the existence of the Colosseum to them; its symbolic meaning as one of the most important cultural sites of Italy, and, finally, the option for a future visit.

Furthermore, it is recommended introducing a student price between 5 and 10 Euros for the entrance fee for the Flavian amphitheatre since the research has shown that most respondent undergraduate students would be willing to pay this amount of money. By announcing this specific price, more students would consequently be attracted to enter the Colosseum.

Regarding the research process, it is suggested interviewing people about this topic rather than designing questionnaire-based surveys because this way, follow-up questions could be asked and more detailed information could be received. Furthermore, a better background knowledge about the target group's characteristics would be necessary to make comparisons in a greater extent, in particular, the reasons why they differ to some degree. Therefore, it is recommended spending more time on secondary research. Finally, a longer time period of time would have been required to conduct in-depth research about such an important topic.



## REFERENCES

- ANSA. 2012. Colosseum looks at limiting tourists. Read 02.10.2013. [http://www.ansa.it/web/notizie/rubriche/english/2012/01/05/visualizza\\_new.html\\_40564268.html](http://www.ansa.it/web/notizie/rubriche/english/2012/01/05/visualizza_new.html_40564268.html)
- Bateman, I. J., Carson, R. T., Day, B., Hanemann, M., Hanley, N. & Hett, T. 2002. Economic Valuation with Stated Preference Techniques: A Manual. Northampton, MA: Edward Elgar.
- Bomgardner, D. 2000. Story of the Roman Amphitheatre. London: Routledge.
- COST. 2011. Safeguard of Cultural Heritage: A Challenge from the Past for the Europe of Tomorrow. Read 03.09.2013. <http://www.cost.eu/events/Cultural-Heritage>
- Dana, D.A. 2004. Existence Value and Federal Preservation Regulation. Harvard Environmental Law Review 28, 344-399. Read 15.09.2013 [http://www.law.harvard.edu/students/orgs/elr/vol28\\_2/dana.pdf](http://www.law.harvard.edu/students/orgs/elr/vol28_2/dana.pdf)
- EFTEC. 2005. Valuation of the Historic Environment. Read 05.09.2013. <http://www.english-heritage.org.uk/publications/valuation-historic-environment/valuation-historic-environment-exec-summary.pdf>
- Gundimeda, H. 2005. Hedonic Price Method – A Concept Note. Read 07.09.2013. <http://coe.mse.ac.in/dp/concept%20note-HP.pdf>
- Johnston, L.G. & Sabin, K. 2010. Sampling hard-to-reach populations with respondent driven sampling. Methodological Innovations Online 5 (2), 38-48. Read 04.09.2013. <http://www.pbs.plym.ac.uk/mi/pdf/05-08-10/5.%20Johnston%20and%20Sabin%20English%20%28formatted%29.pdf>
- Klamer, A. & Throsby, D. 2000. Paying for the Past: the Economics of Cultural Heritage. World Culture Report. New York: UNESCO, 130–145.
- Laurence, R. 2010. Roman Passions: A History of Pleasure in Imperial Rome. London: Continuum International Publishing.
- Merlo, M. & Croitoru, L. 2005. Valuing Mediterranean Forests: Towards Total Economic Value. Wallingford, Oxfordshire: CABI Publishing.
- Mourato, S. & Mazzanti, M. 2002. Economic Valuation of Cultural Heritage. In de la Torre, M. (ed.) Assessing the value of cultural heritage. Los Angeles: The Getty Conservation Institute, 51-77. Read 27.09.2013. [http://www.getty.edu/conservation/publications\\_resources/pdf\\_publications/pdf/assessing.pdf](http://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/assessing.pdf)
- O'Brien, D. 2010. Measuring the Value of Culture. Report to the Department of Culture and Sport. Arts and Humanities Research Council.

O'Garra, T. 2009. Bequest Values for Marine Resources: How Important for Indigenous Communities in Less-developed Economies? *Environment Resource Economy* 44, 179-202. Read 24.09.2013.

[http://esl.fem.ipb.ac.id/uploads/media/Bequest\\_Values\\_for\\_Marine\\_Resources.pdf](http://esl.fem.ipb.ac.id/uploads/media/Bequest_Values_for_Marine_Resources.pdf)

Productivity Commission. 2006. Conservation of Australia's Historic Heritage Places. Read 06.10.2013. [http://www.pc.gov.au/data/assets/pdf\\_file/0011/92369/heritage.pdf](http://www.pc.gov.au/data/assets/pdf_file/0011/92369/heritage.pdf)

Rogers, G.O. & Bardenhagen, E.K. 2010. Natural and Cultural Resource Valuation: A Place Based, Resource-Driven Approach. Read 24.09.2013. [http://faculty.arch.tamu.edu/grogers/Rogers\\_Publications/RogersandBardenhagen2010\\_NaturalandCulturalResourceValuation.pdf](http://faculty.arch.tamu.edu/grogers/Rogers_Publications/RogersandBardenhagen2010_NaturalandCulturalResourceValuation.pdf)

Sharp, B. & Kerr, G. 2005. Option and Existence Values for the Waitaki Catchment. Read 16.09.2013. <http://www.mfe.govt.nz/publications/water/waitaki-option-existence-values-jan05/waitaki-option-existence-values-jan05.pdf>

Stirling, L. 2006. Art, Architecture and Archaeology in the Roman Empire. In Potter, D. (ed.) *A Companion to the Roman Empire*. Oxford: Backwell Publishing Ltd, 75-97.

The Allen Consulting Group. 2005. Valuing the Priceless: The Value of Heritage Protection in Australia. Read 15.09.2013.

<http://www.environment.gov.au/system/files/resources/da10a766-2ef7-4989-b202-edac0f5d6f3e/files/heritage-historic.pdf>

Thompson, N.L. 2007. *Roman Art. A Resource for Educators*. New York: The Metropolitan Museum of Art, NY.

Throsby, D. 2006. The value of cultural heritage: What can economics tell us? In Clark, K. (ed.) *Capturing the Public Value of Heritage: The Proceedings of the London Conference 25-26 January 2006*. London: English Heritage, 40-44.

Throsby, D. 2007. The Value of Heritage. Heritage Economics Workshop. Read 08.10.2013. <http://www.environment.gov.au/resource/economics-heritage>

Timothy, D.J. & Boyd, S.W. 2003. *Heritage Tourism*. Edinburgh: Pearson Education Ltd.

UNESCO World Heritage Center. 1972. Convention Concerning the Protection of the World Cultural and Natural Heritage. Read 02.09.2013. <http://whc.unesco.org/en/conventiontext/>

UNESCO. 2001. International Round Table. "Intangible Cultural Heritage"-Working definitions. Read 02.09.2013. <http://www.unesco.org/culture/ich/doc/src/05299.pdf>

UNESCO. 2013. UNESCO Office in Cairo: Tangible Cultural Heritage. Read 02.10.2013. <http://www.unesco.org/new/en/cairo/culture/tangible-cultural-heritage/>

University of Leicester. 2010. Numeracy Skills. Read 20.10.2013. <http://www2.le.ac.uk/projects/oer/oers/ssds/oers/numeracy-skills/numeracyskillscg.pdf/view>

Veal, A.J. 2011. *Research Methods for Leisure and Tourism – a Practical Guide*. Harlow: Pearson Education Ltd.

Wiedemann, T. 1992. *Emperors and Gladiators*. London: Routledge.

World Bank. 2005. *How Much is an Ecosystem Worth? Assessing the Economic Value of Conservation*. Herndon, VA: World Bank Publications.

**APPENDICES**

## Appendix 1. Questionnaire

1 (3)

**QUESTIONNAIRE**  
**Roman Colosseum, Italy**

*Please note that only one answer option is possible!*

1. What is the level of your current education to be completed?

- High school
- BA/BS
- MA/MS
- PhD
- Not studying at the moment

2. Where are you from?

- Netherlands
- Germany
- Finland
- Somewhere else

3. How often have you visited a cultural heritage site within the last two years?

- Never
- 1-2 times
- 3-5 times
- >5 times

4. Which of the following sites is an example of a cultural heritage?

- Wadden Sea
- Palace of Versailles
- Grand Canyon
- Hawaii volcanoes

(continues)



3 (3)

10. To what extent do you agree with the following statements?

	Agree strongly	Agree	Disagree	Disagree strongly
The Colosseum is the most known monument in Italy	1	2	3	4
The Colosseum has to be preserved under any circumstances	1	2	3	4

11. How much would you be willing to pay for the entrance fee to the Colosseum?

- <€5
- €5-10
- €11-15
- >€15

12. In what way would you be willing to support the preservation of the Colosseum?

- Donations
- Taxes
- Voluntary work
- None of them

13. How much would you be willing to pay on a monthly basis for the conservation of the Colosseum?

- €0
- €1-5
- €6-10
- >€10

**Thank you for your time!**

Appendix 2. Questionnaire matrix table

Research questions	Information requirements	Questionnaire questions
<p>1. What is the significance of cultural heritage sites for undergraduate students of Dutch, German and Finnish universities?</p>	<ul style="list-style-type: none"> <li>• Awareness of cultural heritage</li> <li>• Significance of cultural heritage</li> <li>• Knowledge about cultural heritage</li> <li>• Visitation of cultural heritage sites</li> </ul>	<ul style="list-style-type: none"> <li>• How often have you visited a cultural heritage site within the last two years?</li> <li>• Which of the following sites is an example of cultural heritage?</li> <li>• Have you come across the term “cultural heritage” during your previous studies?</li> <li>• When going on vacation, how important is the visitation of a cultural site to you?</li> </ul>
<p>2. What is the value of the Colosseum from the point of view of undergraduate students of Dutch, German and Finnish universities?</p>	<ul style="list-style-type: none"> <li>• Awareness of the Colosseum</li> <li>• Value of the Colosseum</li> <li>• Importance of the Colosseum for the Italian image</li> </ul>	<ul style="list-style-type: none"> <li>• Have you ever been to the Colosseum in Rome?</li> <li>• If no, would you consider visiting it? If yes, would you consider visiting it once again?</li> <li>• Could you imagine Italy without the Colosseum?</li> <li>• How important is the existence of the Colosseum to you? Please rate the importance from 1 to 4 (1=low; 4=high).</li> <li>• To what extent do you agree with the following statements? “The Colosseum is the most known monument in Italy” and</li> </ul>

		<p>“The Colosseum has to be preserved under any circumstances” (1=agree strongly; 4=disagree strongly).</p> <ul style="list-style-type: none"> <li>•How much would you be willing to pay for the entrance of the Colosseum?</li> </ul>
<p>3. In what form and to what extent are undergraduate students of Dutch, German and Finnish universities willing to contribute to the preservation of the Colosseum?</p>	<ul style="list-style-type: none"> <li>•Form of supporting preservation</li> <li>•Willingness to spend money</li> <li>•Extent of willingness</li> </ul>	<ul style="list-style-type: none"> <li>•In what way would you be willing to support the preservation of the Colosseum?</li> <li>•How much would you be willing to pay on a monthly basis for the conservation of the Colosseum?</li> </ul>
<p>4. Do Dutch, German and Finnish undergraduate students value the Colosseum differently and if so, to what extent?</p>	<ul style="list-style-type: none"> <li>•Value of the Colosseum</li> <li>•Importance of the Colosseum for the Italian image</li> <li>•Importance of preservation</li> <li>•Willingness to spend money</li> <li>•Extent of willingness</li> <li>•Difference in answers</li> </ul>	<ul style="list-style-type: none"> <li>•Where are you from?</li> <li>•How important is the existence of the Colosseum to you? Please rate the importance from one to 4 (1=low; 4=high).</li> <li>•To what extent do you agree with the following statements? “The Colosseum is the most known monument in Italy” and “The Colosseum has to be preserved under any circumstances” (1=agree strongly; 4=disagree strongly).</li> <li>•In what way would you be</li> </ul>



		<p>willing to support the preservation of the Colosseum?</p> <ul style="list-style-type: none"><li>• How much would you be willing to pay on a monthly basis for the conservation of the Colosseum?</li></ul>
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