Valuing congestion costs in small museums: the case of the

***Rubenshuis Museum* in Antwerp**

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Summary

Within the methodological framework of Contingent Valuation (CV), the purpose of this research was to find in the Rubenshuis Museum the 'congestion cost' or the amount visitors are willing to pay in order to avoid too many people inside. A number of 200 site interviews with museum visitors, either entering or leaving the museum, were made. The analysis of the results showed a strong tendency of visitors to prefer not congested situations. However, their WTP more for the ticket was low (€1.33 in average). It was also found that if visitors were women, were older, were better educated and had a bad experience at the museum, the WTP went up. In addition, those visitors who were in their way out of the museum showed a higher WTP than those ones who were in their way in. Other options to diminish congestion were also asked to visitors. Extra morning and night opening hours were the most popular ones among the sample, which is an alert to the museum to start thinking in improving its services. The Rubenshuis Museum is a remarkable example of how congestion can be handled in order to have a better experience. That was reflected in the answers visitors gave about congestion. In general, even if the museum had a lot of attendance, people were very pleased with the experience and they were amply capable to enjoy the collection.

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I. Introduction

"Museums are potentially congestible resources because the exhibits they contain are, in any relevant sense of the word, irreproducible" (Maddison & Foster, 2003)

Congestion is a common adjective when one is referring to visit a museum, especially if it is a very famous one like the *Rijksmuseum* in Amsterdam or the *Louvre* in Paris. Even though those are wonderful museums, it can be said that, because of the huge number of visitors they attract every day, the experience may be affected. Congestion or overcrowding may result in uncomfortable incidents such as queuing, noises and at the end in a failure to enjoy the paintings.

In smaller museums those incidents can be even more uncomfortable, especially in those ones which are located in original houses like the *Maurithuis Museum* in The Hague or the *Rubenshuis Museum* in Antwerp. Those museums try to preserve the houses in their original conditions and the exhibition of the collection is shown in small rooms where having just a few people inside can diminish considerable the experience one may have.

Thus, there may be some people who are willing to pay more for the ticket in order to exclude some visitors and, in that way, avoid congestion. From an economic perspective, this extra amount that people may be willing to pay is a cost that visitors impose on each other.

Within the methodological framework of Contingent Valuation (CV), the purpose of this research is to find in a selected small museum the 'congestion cost' or the amount visitors are willing to pay in order to avoid too many people inside. The research also wants to identify what determines if people are willing to pay or not. Is it the age? The gender? A bad experience at the museum? In addition, the paper wants to explore other possibilities that could

lead to diminish congestion such as: 1) visitors just pay for the time they spend inside the museum (like in a parking lot); 2) tickets are booked in advance with specific date and hour (time slots); 3) extra morning opening hours; 4) extra night opening hours.

The CV method is the most commonly used to estimate public goods such as cultural goods and cultural heritage. The CV consists in asking through a survey questionnaire to a sample of population what is their willingness to pay (WTP) for specific non-marketed goods. With this mechanism, individuals can communicate the value they place on a public good and in that way they are revealing their individual demand (Cuccia, 2003). The final aim of the survey is to have an estimation of the benefits (or costs) of a change in the level of provision of some public good (Mitchell & Carson, 1989). It is called 'contingent' valuation, because people are asked to state their WTP, contingent on a hypothetical scenario, which in the case of this specific research is congestion inside a museum.

This thesis is the second attempt in using valuation methods for exploring congestion costs in museums. The first attempt was the valuation of the congestion cost in the British Museum of London made by Maddison and Foster (2003) which is explained in the next section.

The selected small museum for this research was the Rubenshuis in Antwerp which was the original home and studio of the seventeenth century Flemish painter Peter Paul Rubens (1577-1640). In addition to the Rembrandthuis in Amsterdam and the residences of El Greco in Toledo, Michelangelo in Florence and Vasari in Arezzo, no other artists' original homes of this quality still subsist nowadays[1].

The analysis focused its attention on the current users of the museum. A number of 200 site interviews with museum visitors, either going in or out, were made. About the experience inside the museum, surprisingly for a small

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[1] Source: Rubenshuis Museum webpage: http://museum.antwerpen.be/rubenshuis/

popular museum, most of the visitors didn't find it as a noisy, congested or uncomfortable place. In general, people were very pleased with the experience and they were amply capable to enjoy the collection. These answers may result from the efforts the museum has made to solve the problem of congestion and to guarantee a better experience. One of them is the pavilion built outside the museum, which separating the sales from the main entrance, helps to have a more controlled and organized flow of visitors. Other effort is the free audio guide. Practically every body takes it and, in addition to guarantee a quality experience thanks to the information it gives, it helps visitors to be quiet and focused in what they are listening. Thus, people may not feel annoyed by the fact they are surrounded by others.

The analysis of the results showed a strong tendency of visitors to prefer not congested situations. However, their WTP more for the price of the ticket was low. In average, those visitors who cared about congestion will be willing to pay €1.33 extra which included those ones with a WTP=0. Without including the WTP=0 answers, the average amount increased to €4.64. It was also found that the WTP goes up if visitors were women, were older, were better educated and had a bad experience at the museum. In addition, those visitors who were in their way out of the museum showed a higher WTP than those ones who were in their way in. The options related to extra opening hours were the most popular ones among the sample, which is an alert to the museum to start thinking in improving its services.

The content of the research is as follows: The second section has a review of the literature of the economics of museums. It contains different economic studies that mention the discussion on entrance fees and congestion. It also includes some pros and cons of the use of the CV methodology and a few examples of works that have used contingent valuation in museums as a tool of valuating non-tradable goods. The third section introduces the concept of "superstar museums" and defines the valuation problem. The forth section gives a brief description of the museum under study. The fifth section contains the application of the CV method to the museum mentioned and shows the results of the survey. A transcription of a conversation with the Curator of the

Rubenshuis is shown in the sixth section which contains an interesting discussion of the changes that have been implemented so far and the flexibility the museum has to implement future changes. The seventh section compares the results obtained in the survey using econometric modeling techniques in order to find out what determines the WTP in visitors. The conclusions are found in the final section.

II. Literature Review

a. Congestion and charging fees

Peacock and Godfrey (1974) try to explain how museums work due to the debate that had taken place in the United Kingdom in the seventies regarding the decision of charging the entrance fee to museums or not. By then, their economic analysis, which is considered to be a starting point of thinking about museums from an economic perspective, suggested that "charging is both feasible and also compatible with the policy aims". They thought charging the entrance was an effective way of rising money from direct beneficiaries in order to cover the costs of the building program and that didn't have to struggle with the public responsibilities of the museum.

What it can be seen today in most of British museums is that there isn't an entrance fee for their visitors. The United States, at least at a federal level, also follows this pattern. Around the world what can be seen is a variety of pricing options in addition to the entrance fee such as donation boxes, seasonal tickets, free day policy, price discrimination and, higher entrance fees for especial exhibitions (Frey and Meier, 2003).

In a latter work about the economics of heritage attractions, Peacock (1994) mentions again that he is in favor of charging an entrance fee because it is a useful source of income that provides the administration the opportunity to improve visitor facilities. The author also says that in order to attract poor and uneducated people, discriminatory pricing is required.

Frey and Meier (2003) are also in favor of price discrimination because it is advantageous for visitors and for the museum administration. They say, for example, that tourists could be charge more than residents (like in the Rubenshuis Museum), that the price can be differentiated between those who

want to spend little time in the museum and those who want to spend ample time, and that the museums could charge more at weekends and less during summer holidays. Finally, they mention that in periods of high demand, when the museum reaches its full capacity, the museum could offer the possibility of paying a higher fee which will be associated with a shorter queue.

Frey and Meier (2003) also explain an important consideration that should be taken into account when analyzing the economics of museums. They say that in addition to the entrance fee, there are two other major costs involved in visiting a museum: 1) the opportunity cost of time (i.e. how much additional income could have been gained during that period); and, 2) the price of alternative activities (i.e. theatres, cinemas, sports, restaurants). Regarding the first one, Frey and Meier (2003) argue that it may be higher for people with a higher income, and regarding the second one, they say that the higher the price of those other alternatives is, the higher the visits to the museum are.

The core topic that comes up when the discussion about charging or not for the entrance to the museum is if it deters or not people's visit. The public sector faces a trade off between charging or not because on one hand, it helps the museum to be self-sustainable, but on the other hand, it may deters visitors from going to the museum. However, if the finance opportunities are excluded from the panorama, it could be desirable not to have so many people inside in order to better preserve the museum and to supply a more pleasant experience. For some authors it is clear that one of the consequences of not charging an entrance fee leads to congestion, and at the end in a failure to enjoy the museum. But, for some other authors, since the demand for museums is price inelastic, a higher entrance fee won't deter visitors from going into the museum.

For example, Peacock (1994) argues that there is evidence that payment hasn't deterred the growth in visitor numbers. Actually, the author says that the number of visitors has increased at the same rate as visits to museums and galleries that don't charge for the admission. Regarding this point,

according to Frey and Meier (2003) econometric estimates of different museums in different countries such as Darnell (1992) suggest that demand for museums is price inelastic.

On the other hand, the study made by Goudriaan and Gerrit (1985) analyzed the demand for museums in Rotterdam, The Netherlands, before and after museums were free of charge. They found that while in the aggregate the amount of visitors decreased 30%, the amount of low-income families rose significantly instead of falling. Other interesting finding was that smaller number of visits was offset by an increase in average duration. Thus, the new entrance fee didn't filter out low-income visitors but filter out short visits.

Regarding congestion, Peacock (1994) states that heritage artifacts have important public good characteristics such as indivisibility because viewing enjoyment by one person doesn't exclude similar enjoyment by others. However, he is aware that when the congestion point is reached this is not longer true.

Heilbrun and Gray (2001), in their analysis of the economics of art museums, arrive to the conclusion that overcrowded exhibitions lead to a reduction in pleasure: "This reduction in pleasure can be thought of as a cost that visitors who enter a congested exhibition impose on other simultaneous visitors and can be treated as an increase in marginal and average cost, starting at the point when visitors begin to get in each other's way". They suggest that higher fees would decrease too many people inside the museums to an optimal level. In addition, the higher income received would be a contribution to cover the deficit museums have during not overcrowded periods.

In contrast, Robbins (1971) says that while temporary exhibitions do suffer of overcrowding and that is why there has never been a hesitation in charging an entrance fee, the permanent collections don't exhibit the discomfort of too many people inside. That is why this author is against charging the entrance fee to national museums and galleries. He says that museums must be compared with libraries or parks because their use doesn't involve serious

overcrowding. On the contrary, theatres and operas have a certain capacity or a certain number of seats that if there was no price involved in the tickets, far more people will apply for entering to a performance than the number of seats available.

b. __Why CV? Which are its Pros and Cons?__

The interrogate about how to estimate the value of public goods is an important one in the cultural economics field. The estimations of such a value have been approached studying what it's called *revealed preferences*, such as travel costs, which implies the observation of consumers' behavior and inferring their WTP for public goods from that behavior. Some others have said that the valuation of public goods can best be found through *citizen referenda*, which consists in asking to the electorate to either accept or reject a specific proposal. Other researchers prefer to trust on the stated preferences (SP) of a sample of survey respondents (Schuster, 2003).

One of the advantages of using the last approach is that it can be designed to estimate all benefits, use and passive (for instance, the revealed preference approach only captures direct use values). According to Morikawa et al. (1990), due to the controlled data collection nature of the SP method, the following advantages can also be found: "1) they can elicit preferences for non-existing alternatives; 2) the choice set is pre-specified; 3) collinearity among attributes can be avoided; and, 4) range of attribute values can be extended". However, according to Morey et al. (2002) there are also disadvantages like that the responses to choice questions may contain biases with respect to preferences. The authors say that choosing can be difficult if the respondent is almost indifferent between alternatives. In addition, individuals may find themselves frustrated if the answer they would like to give is not an option. Finally, the authors also point out that respondents can be bias towards the 'status quo', so they ignore their constraints and behave strategically.

The *Contingent Valuation Methodology (CV)* is one of the most popular methods among the SP approach, and within the cultural economic field is becoming very popular because it gives researchers the option to explore the non-market values of various cultural resources (Schuster, 2003). Actually, according to Noonan (2002) there are over one hundred CV studies of cultural goods, most of them about heritage and historic sites.

What this methodology basically does is to ask through a questionnaire to a sample of population what is their willingness to pay (WTP) for specific non-marketed public goods. With this methodology, individuals can communicate the value they place on a public good and in that way they are revealing their individual demand. The final aim of the survey is to have an estimation of the benefits (or costs) of a change in the level of provision of some public good. It is called 'contingent' valuation, because people are asked to state their WTP, contingent on a hypothetical circumstance.

According to Noonan (2003) the CV makes transparent the opportunity costs of different allocation decisions. In that way, policymakers can see the benefits of undertaking certain projects and cultural institution managers can carry out more complete cost-benefit analyses.

Thompson et al. (2002) says that in comparison with other methods for estimating the value of public goods such as hedonic housing and wage equations, the advantage of the CV method is that the researcher doesn't have to work with whatever changes are observed in the data. The CV method allows the researcher varying the amount of change in the public good.

On the other hand, Frey (2000) identifies a few challenges regarding the application of CV on cultural goods. He says that marginal changes in their provision are difficult to conceive, that constructing plausible contingent markets may be problematic or even impossible, that abstract cultural goods cannot be even 'hypothetically commoditized' and that the existence of

positive values from some groups and negative values from others complicates the design of the research.

Alternatively, Throsby (2003) is worried about the missing values that CV may have. He emphasizes in the necessity of cultural economists to continue seeking options to measure those values. Some of the problems he mentions are: 1) "Ignorance", because the amount of information provided to respondents has a critical affect in their WTP judgments. "Better-informed" judgments are more useful than "ill-informed" judgments, so, since acquiring a taste for cultural goods takes time, CV isn't able to provide fully-informed WTP estimates for cultural goods. 2) The WTP doesn't provide a complete view of the non-market value of a cultural good because there are some categories that cannot be expressed in monetary terms. 3) The WTP is an expression of one individual with some specific characteristics and doesn't take into account the community involved.

About the latter, Epstein (2003) also says that because CV is a technique that seeks to aggregate preferences, it becomes tricky to decide if the right movement is where the majority goes. Thus, if the main respondents of the Rubenshuis Museum are tourists and if the museum would like to make decisions based on the answers of them, it would be tricky because the museum is for the Belgium community and it should mainly defend their interests.

Sunstein (2002) is concerned about this particular problem as well. He says that "society is not a person", the WTP is a "crude proxy for utility", and "even people reflect on their preferences; they do not simply try to satisfy them". The problem appears when there are many people which may be WTP a lot of money for something doesn't give them much utility, and there are some others which may be WTP little for something that gives them a lot of utility.

Mitchell and Carson (1989) and Blumenschein et al. (1998) wrote about the accuracy of the CV method pointing out that estimates have been supported by some experiments which have compared WTP measured with hypothetical

contingent valuation surveys and with real payments. However, here Thorsby's "ignorance" critique takes place because the authors say this statement is true "at least when respondents are very familiar with the goods involved, and respondents are highly certain about their responses" (Thomson, 2002:90)

Some authors such as Mitchell and Carson (1989) have argued that working with hypothetic scenarios results in having higher WTP responses because people are not actually asked to pay. To solve this problem, Thomson et al. (2002), in his attempt to assess the value that the residents of a state in the U.S. place on arts performances and exhibits, asked in his survey to indicate the certainty of people's donation on a scale of 1 to 10. "This information made it possible to distinguish between respondents who would probably pay from those who would definitely pay" (Thompson et al., 2002: 91) Thus, he just considered those WTP values from people who indicated a certainty of 9 to 10.

About other problems that come up with CV of cultural amenities, Sunstein (2002) states the following: "…my basic submission is simple: it seems clear that the valuation of cultural amenities are likely to be inflated, by standard economic criteria, if the relevant contingent valuation studies do not ask people to consider problems from other categories, involving, for example, human health, safety, and the environment" (Sunstein, 2002: 2). The author says that because people have an "implicit ranking" of categories, people may have a better judgment in their WTP if they are not asked just about an isolated problem. People must be asked to consider more categories which can be of more or less importance to them than the cultural amenities asked. In that way the WTP will be more accurate.

On the other hand, Sunstein also identifies a problem which results from unbounded WTP answers, because, "people do not have a clear sense of how to translate their moral and political judgments into the dollar scale. As a result of the translation problem, an effort to capture the willingness to pay can produce variable and somewhat arbitrary results" (Sunstein, 2002: 4). The

author says that one solution to diminish the effects of this problem is to give the respondents a numerical "anchor" suggesting where to start. In the case of the Rubenshuis Museum WTP experiment it is not necessary to give this anchor, since all the visitors were asked after they bought the ticket, so the anchor was implicitly given. Besides, even if it's visitors' first time to a museum, they are rational, and they know which should be the limit for a museum ticket price. Around Europe (excluding UK) it can be found that most of the museums charge around €10. Besides, since museums are a leisure activity, they can be substituted by other activities of that kind such as cinema, restaurants, theatre, etc., which may also cost around €10. Thus, this research thinks visitors implicitly know their own limits for paying extra for an entrance to a museum. In fact, as we will see it later, the maximum extra amount a visitor will be willing to pay is €10.

As we can see, a great discussion about the use of this methodology can be found. Actually, more negative than positive things are highlighted in the literature. However, as Epstein (2003) points out:

"…contingent valuation will continue to be used in spite of the obvious weaknesses of survey techniques, until someone comes up with an alternative method powerful enough to displace it. After over 50 years of trying, I doubt that any robust alternative will ever be developed. That said, all that is left is to refine the techniques in question" (Epstein, 2003: 260)

c. **Implementation of CV on Cultural Goods: Noonan (2003)**

Noonan makes an important effort to summarize the existing empirical literature that have used CV in cultural resources such as archeology, arts, broadcast and media, historical sites, heritage, libraries, museums, sports and theatre. He finds out that the measurement varies from very local goods, to world heritage sites and to values for the abstract. Noonan is concerned by the fact quality is linked to the validity of the studies' estimates and that is why he puts together 65 studies and 129 different WTP values and makes a meta-analysis. He wants to find across the literature if: 1) the patterns on the findings are consistent with expectations; 2) the variations in findings can be

attributed to methodological differences; and, 3) information bias is a significant problem.

He finds out that the design and administration of surveys can systematically influence responses. In that way, door to door surveys, dichotomous choice surveys and small sample surveys are associated with higher WTP values and payment vehicles like taxes are not significant predictors of WTP. Other important finding is that the kind of goods being measured matters. He finds out that the WTP for goods that involve avoiding a loss exceeds the WTP for other goods. He also finds out that archeological sites and goods defined as public spending levels are associated with higher WTP.

On the other hand, he discovers that information can have a lot of effects in the responses because certain information can bias respondents' answers. For example, information about current tax burdens can bias responses toward that amount. Thus, the WTP is closer to costs per capita when those costs are told to the public.

Finally, he discovers that an especial look has to be made to the distribution of values because many people have low WTP and a few people have very high WTP values, thus, the difference between the media and the median can be huge. Noonan says that in order to observe more clearly the distribution values one must look to the median to mean ratio. He finds out, for example, that admission fee studies, private payment vehicles, heritage goods and large scale goods studies have lower median-mean ratios.

d. Implementation of CV on Museums

The following are two examples across the literature that have used the CV methodology for asking people their WTP for a change in a specific provision in a museum.

On one hand, we have the study of Martin (1994) which consisted in a phone survey to 908 Québec citizens about Québec Government's funding of

museums. Specifically, the author wanted to determine the subsidy that can be justified by the museum's social benefits. The survey used closed-end questions and included the following: 1) If the allocation on museums per adult ($7.50) was too large, just large enough, or not large enough, in comparison with other allocations ($2.50 on the teaching of arts, $15 on law enforcement). 2) Which tax increase towards the funding of museums was acceptable: $1, $2, $3, $4, $5 and more, none. 3) If government spending in other activities should be shifted to museums, without paying more taxes: yes or no. 4) How many dollars per adult should be transferred from other government activities to museums: $1, $2, $3, $4, $5 and more, none. The author found a WTP per capita of $7.95[2] per year to support all Québec museums, which is interesting because was higher than the $7.50 portion of people's taxes that was allocated to museums.

On the other hand, we have the study developed by Maddison and Foster (2003), which is the inspiration of this research. The paper studied the presence of congestion costs in museums in order to examine the relevant argument in favor for charging in museums. The authors made a face-to-face survey to visitors going in and out of the British Museum of London. A random sample of 400 visitors was asked their WTP to reduce congestion inside by showing them pictures with different degrees of congestion. The survey associated the crowded pictures with the free admission (that is how the museum still works at the moment) and the less crowded pictures with a randomly chosen admission charge, and respondents indicated their preferred scenario. Maddison and Foster estimated a congestion cost of £8.05 imposed

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[2] The answers to the survey were obtained as follows: In question 1) 271 respondents considered that the proportion of their taxes used to finance museum was too large; 496, large enough; and, 141 considered that was not large enough. Referring to question 2), for these 141 respondents, 22 would welcome an increase of $1 in their taxes to finance museums; 23, an increase of $2; 22, an increase of $3; 6, an increase of $4; 38, an increase of $5; 30 respondents, did not specify the amount of increase. Because of the small number of these respondents, the paper established three scenarios to account for them: an increase of $3, $2, and only $1. Similarly, this was done for the respondents who answered that their proportion was too large. The three scenarios also combined the 496 firm answers. This comprises all the respondents. The weighted result produced $ 7.35 as the desired amount to be devoted to museums. A similar procedure was applied to questions 3) and 4). It produced a higher value: $ 8.54. Then the author averaged the two values, with the result of $ 7.95.

by the marginal visitor on all other visitors[3]. The main conclusions shown by the article are: 1) visitors consider the British Museum a congested place and would be willing to pay something in order to have less people inside while they are visiting; 2) better educated and older visitors care more about congestion than younger and less educated; 3) the marginal congestion cost inflicted by the last visitor is proportionate to the number of visitors, so charging more during periods of high demand will apply.

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[3] The estimation of the congestion cost imposed by an additional visitor is 0.05 pence. If this figure is then multiplied by the daily average number of visitors (14.978), the aggregate congestion cost imposed by the marginal visitor on all other visitors is obtained (£8.05 per person).

III. Definition of the Valuation Problem

"There are few well-known and world famous museums. They can be called superstar because they have a special status setting them far apart from other museums" (Frey and Meier, 2003: 26).

The selected famous museum for this research was the Rubenshuis in Antwerp which was the original home and studio of the seventeenth century Flemish painter Peter Paul Rubens (1577-1640).

According to Frey and Meier (2003) the Rubenshuis can be called a "Superstar Museum" because it fulfils the five main characteristics required to be called like that: 1) it's a "must" for tourists. There are not many tourists to go to Antwerp and don't visit the Rubenshuis Museum. 2) It has a large number of visitors (around 200.000 every year, which is a considerable amount for being a small museum). 3) It is about one of the most world famous painters and world famous paintings. 4) The building itself is a world famous artistic feature. 5) It is commercialized in two aspects: a part of its income derives from the revenue of the museum bookshop. It has a major impact on the local economy.

As we can see, because the Rubenshuis Museum is a Superstar museum, it attracts a lot of visitors, especially around Easter and during the summer months. This fact may produce the visitors the inability to enjoy the exhibits due to the noise and the crowd standing in front of the paintings. Because of these uncomfortable particularities that this popular museum may have, a tourist, who traveled from another country and is very anxious to see the Rubenshuis, or an Antwerp citizen who is tired of never being able to enjoy in an ample way the museum, could be willing to pay more money in order to avoid congestion and, in that way, have a better experience. Even on days where there are supposed to be relatively few visitors, people may want to pay more in order to avoid the possibility of increased attendance.

Then, the valuation problem or in other words what this study wants to measure is the Rubenshuis Museum visitors' WTP in order to avoid congestion. That will give an estimation of the congestion cost that visitors impose on each other.

The motivation of visitors to pay more for the ticket may take three forms. First, an option value, which means that visitors are willing to pay an extra amount for the assurance of being able to visit an uncongested museum in the future. Second, visitors may like on behalf of the intergenerational equity that future generations can enjoy of a better uncongested experience. Third, visitors obtain satisfaction from the mere existence of a less crowded museum, knowing that other people will enjoy of this benefit. However, charging more for the ticket means the exclusion of other visitors, because it is actually a cost that visitors impose to each other. Thus, even if people would be motivated not to have an overcrowded museum, they may want to sacrifice this on favor of the society.

IV. Museum Rubenshuis in Antwerp

a. <u>Rubens's life and the Museum[4]</u>

> " The work of Peter Paul Rubens is considered the epitome of Flemish Baroque. His artistic talent and diplomatic skills brought him international fame even in his lifetime, opening the doors of palaces and aristocratic houses. Rubens was not just an artist. Like no other, he embodied the ideal of the universal man. A cosmopolitan and art collector, he trod the political stage with a sure footing, ran a flourishing studio and founded a large family". (Bauer, 2004: 4).

Even tough Peter Paul Rubens's family roots lay in Antwerp, he was born in Germany (Siegen, Westphalia) in 1577, nine years after his parents went to Cologne going away from the religious conflicts that plagued The Law Countries during the Reformation. While the family was living in Siegen, they had the necessity to belong to the Lutheran Church, but in 1578 when they went back to Cologne they returned to the Catholic faith (White, 1987).

The history of how Rubens turned into such a famous painter and ended up buying what is nowadays known as the Rubens's house in Antwerp dated back to 1589 when he moved to the city with his mother and his brother two years after his father's death. In Antwerp, Rubens had his academic training in Rombout Versonck's school. There, he learnt Latin and some Greek. However, his stay at school was short. At the age of thirteen Rubens abandoned his training. Shortly, his mother placed him in the service of the Court of Lalaing, but Rubens soon asked her to remove him from there. According to White (1987), he did so because of his growing desire to paint. "The urge to paint was all-powerful and he returned to his mother's house in Antwerp clearly with the intention of becoming an artist" (White, 1987:6).

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[4] Based on Bauer (2004), White (1987), the description about the Rubenshuis provided by the City of Antwerp in their webpage, http://www.antwerpen.be/eCache/BEN/16/455.cmVjPTQ1NDc.html and, the webpage of the museum itself, http://museum.antwerpen.be/rubenshuis/.

At the age of fourteen years old, Rubens began to take lessons with the landscape painter Tobias Verhaecht, then, he changed to Adam van Noort who was a portrait painter and, finally he ended up with his most important teacher, Otto van Veen. In 1598, he entered the Guild of St. Luke as an independent master and he was also permitted pupils. However, according to White (1987), Rubens may have continued to work in association with van Veen. Just few works from this early period of his life as a painter survive. Adam and Eve (before 1600), is one of them and, it is exhibited at the Rubenshuis Museum.

The influence of Italy on Rubens was great and it can be seen not only in the house he designed later in Antwerp but in his career as an artist. In 1600, Rubens set off for Italy. "He was thus following a path well-trodden by northern European painters looking for a source of inspiration for their own artistic development" (Bauer, 2004: 8). The painter's first stop was Venice. There he had the opportunity to experience first-hand paintings by Titian, Veronese, and Tintoretto. After, he settled at the court of duke Vincenzo I of Gonzaga in Mantua as a court painter, and with financial support from the duke, he traveled to Rome in 1601. There, he studied classical Greek and Roman art, and, he also studied the works of great Renaissance artists, such as Raphael and Michelangelo, and the works of contemporaries such as Caravaggio. In 1602 Rubens went back to Mantua. The year 1603 was a key point in his career. He combined his art with diplomacy due to the fact he had to travel to Spain on a diplomatic mission to deliver gifts from the Gonzagas to the court of Philip III. This journey gave Rubens the opportunity to study the artistic situation there. According to White (1987) "He reported that he saw 'so many splendid works of Titian, of Raphael and others, which astonished me, both by their quality and their quantity'". The next year he went back to Italy and remained there for four more years.

In 1608, Rubens planned his departure from Italy to Antwerp because his mother was ill, but she died before he arrived. His initial plan was to go back to Italy, but in his return to Antwerp he had such a cordial reception and he saw a bunch of opportunities due to the fact the city was going trough a period

of prosperity that Rubens decided to stay. "Once again he was overtaken by events, and he rapidly found himself established in Antwerp by his indispensability to the city and to the court" (White, 1987:54). He was appointed by the Spanish Court in Brussels as their painter, and received special permission to base his studio in Antwerp, to also work for other clients and to take pupils. He remained close to the Archduchess until her death in 1633, and was called upon not only as a painter but also as an ambassador and diplomat.

In 1609 Rubens married Isabella Brant, the daughter of a highly regarded family. By then, Rubens was comfortably off thanks to the great demand of his work. Commissions such as "Raising of the Cross" (1610-1611) and "Descent from the Cross" (1611-1614) established himself as a respected artist. In 1610 he bought a splendid property with an extensive garden on the Wapper, a canal formerly part of the moat of the old fortifications of the city. "It was an admirable purchase because it gave the Rubens households extensive accommodation with sufficient space for further building" (White, 1987: 61).

The building was a typical sixteen-century Flemish house: a wide front facing the street with an additional wing at the end of the building bordering the courtyard. Nonetheless, the property was not enough for the painter. Rubens designed himself a new building in an Italian palazzo style and adapted it to the original property for use as a studio. He also closed the courtyard on the garden side with a triumphal arch. The new house was ready to move in not before 1616 and clearly demonstrated Rubens's taste for architecture. (White, 1987). Nowadays this beautiful house is known as the Rubenshuis (Rubens's House). The complex around an inner courtyard and garden contained his workshop, where he and his apprentices made most of the paintings, and his personal art collection and library.

Thanks to his increasing reputation, his studio grew and his workhouse became very desirable among young artists. His most famous pupil was Anthony van Dyck, who soon became the leading Flemish portraitist and collaborated frequently with Rubens. He also frequently collaborated with

many specialists active in the city who were always the best ones in their field, including landscape painter Cornellis Saftleven, still-life painter Osias Beert the Elder, the animal painter Frans Snyders, and the flower-painter Jan Brueghel the Elder.

It is interesting how the studio Rubens ran used to work. There was an obvious division of tasks. They varied from mixing pigments via preparing canvases to making copies of works already finished, for which there was a continuous demand. In addition, engravings of many paintings were commissioned and sold. Other particular characteristic of how the studio used to work is that very frequently the making of paintings, based on compositions by Rubens, were entirely made by his assistants and, he only gave the paintings the "final touches". Those ones were much cheaper than the ones made entirely by Rubens. (Bauer, 2004).

In 1611 the painter and Isabella had their first child, Clara Serena. Later in 1614 and 1618 two other sons arrived, Albert and Nicolaes.

With the Counter-Reformation, a great demand for religious paintings came up. However, Rubens also painted a lot of mythological scenes like "Samson and Delilah" (1609 for the Antwerp city councilor Nicolaas Rockox). It is important to remark here that Nicolaas Rockox was a rich man of influence in the city, and at the same time a good friend of Rubens, and their friendship brought Rubens to important public and private commissions (White, 1987).

Rubens was also recognized to have the "ability to capture people in all their physicality on canvas" (Bauer, 2004: 25), which led him to have more and more private commissions. On the other hand, among princely collectors, hunting scenes became very popular for decorating palaces, which as a business man, made Rubens turned his hand to this genre. In that way, scenes such as fox-hunting, pursuits of wolves or combats between men and exotic animals were made. An example of a typical hunting scene was "Hunting Hippos and Crocodiles" (1616).

In 1615 a new church was built in Antwerp by the Jesuits and Rubens was called in to design a number of altarpiece frames, two pictures for the high altar and sketches for the sculptural furnishings. In 1620, he signed a contract promising to paint 39 compositions for the ceilings of the aisles. However, all this work was destroyed in 1718 by fire and only the sketches survived.

After this huge commission, Rubens didn't have to wait long to be called again for another. In 1621, Marie de'Medici, the dowager queen of France, approached Rubens in order to ask him to furnish paintings for her new palace in Paris. In 1622 Rubens signed the contract and he arranged to do all the paintings himself, leaving only backgrounds and small details to his assistants. However, according to Bauer (2004), the task was far beyond of decorative paintings. Because the position of the dowager at the French court was precarious, her relationship with her son Louis XIII was difficult and the rumors involving her in the death of her husband Henry IV, Rubens new that he had to be careful picking the right scenes. Thus, instead of taking episodes from the real life, Rubens transformed the various scenes into allegories, introduced mythological figures, symbolic allusions or explicit references. The paintings had to be political statement. By the year of 1624 the series were completed.

In parallel to Marie de'Medici commission, Rubens was also working on a commission made by her son Louis XIII which involved cartoons for a series of tapestries featuring scenes from the life of Constantine the Great. Other important works were also commissioned in the first half of the 1620s like an altarpiece for the cathedral in Freising, ordered by Veit Adam von Gepeckh, Prince Bishop of the town. Nonetheless, such a success was offset by the sudden death of his daughter in 1623 and the later death of his wife in 1626.

In 1630 Rubens got married for the second time. His new wife was Helene Fourment, the daughter of a respected silk and tapestry dealer from Antwerp and gave him five more children. Helene's appearance in Rubens's works were not just in pictures, but also in paintings of other subjects. For example,

she was the inspirations of one of the figures depicted in the "Three Graces" (1635).

Rubens's had many contacts because of his political activities with the Archduchess Isabella, and that brought him a lot of commissions. One of them was the "Apotheosis of James I" (1632-1634) for the Banqueting House in Whitehall, London. In 1633 when the Achduchess Isabella died, Rubens abandoned his diplomatic career. However, the political situation of Europe was still of his concern. That can be seen in one of his last paintings the "Horrors of War" (1637-1638) which was painted for Ferdinand de'Medici, the new successor of the Archduchess.

At the end of Rubens's life, an especial interest for landscape came up. Before, landscape always had appeared in the background and, it generally had been painted by his assistants. "Landscape with Rainbow" (1635-1638) is an example of this final tendency. By then, Rubens was spending more and more time in the countryside in a house he bought outside Antwerp. There he set up a small studio.

On May the 30th, 1640, Rubens died in Antwerp at the age of sixty-two. After his death, his house in the Wapper changed owners several times. During the 19th century, a growing awareness that the residence should be converted into a monument started. The city of Antwerp finally expropriated the house in 1937 and began a renovation process that finished in 1946.

The Rubenshuis museum is located in Wapper Street, which is half square and half pedestrian street. Coming from the fashionable Schuttershof Street, the house is located on the left hand side, and in the middle of the square since 1999 there is a glass pavilion designed by the architect Stephane Beel, where the bookshop is located, the tickets of the museum are sold and lockers are available. This modern glass pavilion contrasts sharply with the architecture of the Rubenshuis and acts as a peaceful place were all the crowd of Wapper Street vanishes.

Inside, the museum consists of a beautiful courtyard and garden, and a Flemish-Italian building which includes an open gallery and the painter's studio linked to his residence. The gallery consists in a semicircular room with a domed roof like the Pantheon in Rome where marble busts are on display.

The museum has ten works by Rubens including his self-portrait, Adam and Eve in Paradise, Henry IV in the battle for Paris and a portrait of Sir Anthony Van Dyck as a boy. Many art objects, sculptures and utensils are also part of the collection, which either belonged to Rubens himself or date from his time. Table 1 summarizes the museum practical information for visitors.

Table 1. Rubenshuis Museum Information		
Opening Hours	Daily from 10:00 to 17:00	
	Closed on Mondays	
Entrance Fees Included in the ticket: 1) Audio guide permanent collection available in Dutch, French, English, Spanish and German. 2) Gallery guide available in Dutch and English (from July 2007). 3) Free access to the Museum Mayer van den Bergh.	Adults	6 euro
	-26 years old and groups of minimum 15 participants	4 euro
	-19 years old/+65 years old	free
	Antwerp residents	
	School groups	
	Disabled people and companions	
	ICOM card	
	Last Wednesday of every month	
	For temporary exhibitions	
Bookings	For groups and schools	Maximum 18 people. Reservation in advance.

Source: Rubenshuis webpage
http://museum.antwerpen.be/rubenshuis/index_eng.html

The Rubenshuis receives every year near to 200.000 visitors, which is a great number given the fact it is a small museum (See graphic 1). Since the museum is a 'must' for tourists going to Antwerp, 75% of the visitors are from

abroad Belgium. In addition, within the visitors it can be found that the museum receives every year approximately 1000 international groups and 450 school groups.

Graphic 1. Rubenshuis Museum: Visitors per year
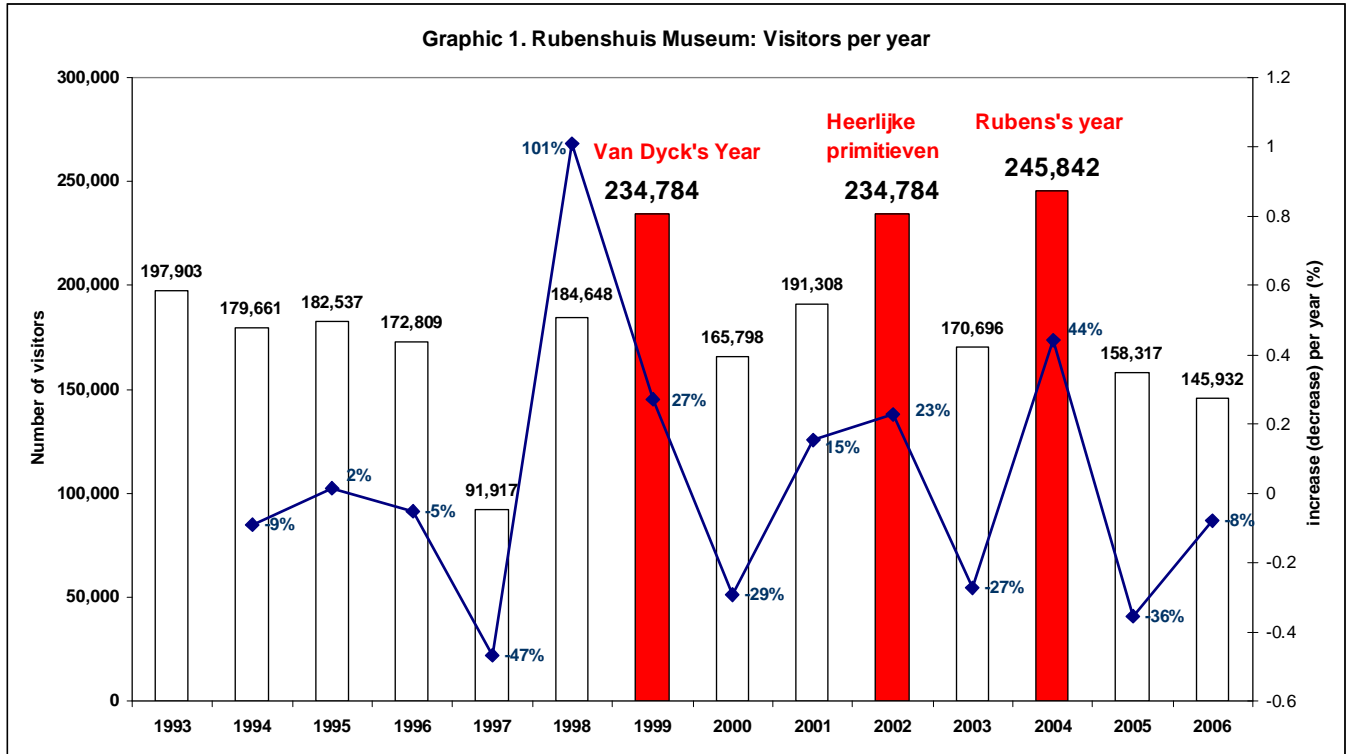
Source: Rubenshuis Museum

The years with the major amount of visitors were the ones who had especial exhibitions. The year 1999 attracted 234.784 thanks to the temporal exhibition the "Van Dyck's year". The same happened with the year 2002 with the exhibition "Heerlijke primitieven" which attracted over 230.000 visitors and, with the year 2004, when more than 245.000 visitors went to visit the especial exhibition called "Rubens's year". As we can see, especial exhibitions result in a considerable increase in the amount of people who visit the museum. The year 1999 increased its attendance in 27%, the year 2002 in 23% and, the year 2004 in 44%. According to the Rubenshuis, Antwerp citizens explain a great part of the increase. Thus, having a non-static museum is crucial in order to keep in touch with local citizens.

The Rubenshuis is currently developing a new and more exciting display of the permanent collection. The project will also include a new gallery guide and audio tour which will be available from July 2007. In Autumn of 2008 a new temporal exhibition is coming: "Rubens as architect".

b. My experience at the museum

I did my visit on the morning of Friday the 11th of May, 2007. I first went to the ticket office which is located in front of the museum in a modern glass pavilion. I was quite impressed by the mixture between this modern box of glass, which is like a meteorite in the middle of the street, and the old style of the buildings surrounding it, especially the Rubenshuis. However, when I first entered the pavilion it was very pleasant. All the noise of the street disappeared and I had the time and the space to prepare myself for the visit. I left my bag in the lockers (which is mandatory) and then, I went to the ticket desk to ask for my ticket. I paid 6 euro for the entrance because I'm older than 19 years old and with that ticket they told me I was allowed to also visit the Museum Mayer van den Bergh.

The personnel asked me if I would like to have for free the audio guide. I said no, which, let me say, was a big mistake. This museum is not like others where having or not the audio guide would depend of the time available for the visit and, the experience don't vary that much because, in general, museums have the explanations bellow of every article. In the Rubenshuis the audio guide is crucial. Without the audio guide, the visit to the museum looses a lot of meaning.

That is how my experience at the museum can be split in two: without audio guide and, with audio guide. My visit without the audio guide can be described as follows:

After buying the ticket I went straight to the entrance of the museum. Just before me a Japanese group of about 15 people came in with their own guide. Japanese are well-known to be very quiet; however, given the fact the

museum has such a small rooms, even the lowest noise may be uncomfortable to some people. I personally found the group annoying. The guide was speaking in a language of course I couldn't understand and for me every word was a terrible noise. I tried to pass them but I faced with two main problems in doing that. First, the group had taken the whole space and it was difficult for me to pass and, second, the Rubenshuis has the particularity that the visit has to follow a certain route. If you pass to another room, you have no chance to go back. Besides, if you take your time in the next room, there can be a high probability to be chase for the same group again or for other one. So I had no choice. I had to follow the group.

Since I didn't have a guide, or an audio guide, I couldn't learn anything about Rubens, his house, his paintings and the other artifacts the museum has. There wasn't any explanation at the beginning, unlike other museums, explaining the painter's life or the history of the house. In addition, in other museums it is quite often to find in every object a label bellow saying something like "Peter Paul Rubens (Flemish, 1577-1640): Self-Portrait, Oil on canvas", plus a small text. There was just, and not in every room, a standing panel with the summary of selected art works and objects. Those panels had small pictures of the piece they were referring too, with just the work's name and the author's name. That lack of information, plus the necessity to pass trough people in order to see the panel made me really regret my choice of not taking the audio guide with me. Nevertheless, I found the house and the collection beautiful.

The final stop of the route was the garden. The day was sunny and people were walking, listening to the audio guide, seated in the benches, taking pictures or reading a book. It was very pleasant to be there.

When I left the museum I had the sensation that I really liked but I had the need to visit it again in order to learn more about what I had just saw. Fortunately I didn't have a rush and I could visit the museum again taking the audio guide with me. I can imagine this decision is very costly in terms of time for a tourist who has just a few hours left in Antwerp. If that tourist didn't take

the audio guide and regretted it, it is probable that he or she cannot do the visit again.

I went back to the ticket desk and asked for the audio guide. It was great, it really worth it.   It first had an introduction of Rubens's as an artist, collector and business man. It also had an explanation of the design of the house and the garden. Inside, selected paintings, sculptures and artifacts were explained. The selected items had a number bellow. The only thing I had to do was to press that number in the audio guide and the explanation came to me. There was a story to tell behind each object, which was very interesting. Nevertheless, I would like to have more items explained.

The feeling I had at the end of my visit was that I will remember very well the museum and its collection because I took my time with the items while the audio guide was on. What generally happens in most of the museums is that I pass by very quickly and I just remember later the most famous ones I saw. The rest is a bit blurry. With the Rubenshuis it was different and I can bet I will remember very good must of the collection.

Regarding the noise and the amount of visitors inside, I was so focused in the audio guide that I wasn't annoyed at all by other people. Besides, since most of the people had the audio guide with them as well, they were also focused in their own audio guides, so they were quiet listening. However, I had to say that this time I didn't have any group walking with me.

After visiting the museum twice, with and without the audio guide, my suggestion will be to tell the visitors about the importance of the audio guide inside. In the ticket desk, the personnel should tell them that the experience may not be the same. On the other hand, groups having their own guide shouldn't be mixed with individual visitors because it can be too noisy for them. The museum should delay a bit the entrance of those who aren't part of the group so when they go in they can move and listen to their audio guide more freely. Then, own guided groups should be asked to pay a bit more per visitor for the inconvenience of delaying other's visit.

My final comment is about the bookshop. It is also in a glass box next to the ticket office. I loved that place. Since it is surrounded by glass, all the activity of the street and square were around me. However, the difference between being outside and inside the bookshop, was that the noise was completely isolated. Thus, I could peacefully take my time to take a look to the books the museum sells about Rubens's life and paintings. So, even if the glass pavilion seems at the first glance as a meteorite in the middle of the street, I think it was a great solution to isolate the incoming and/or out coming visitors. The flow of visitors is not only more controlled, because the visitors are not going into the museum all at once, but the visitors are more comfortable. They are under a roof, so even if it is raining or if there is a lot of sun, they are more willing to stand in a queue than before. Besides, lockers and a place to seat to prepare themselves for the visit is also of great convenience for the visitors.

V. The Survey: Descriptive Statistics

The survey was conducted by means of face-to face interviews with 200 random visitors entering and leaving the Rubenshuis Museum during the week and weekends in May 2007 (See appendix 1 and 2 for the design of the survey). It was made in English and also considered people leaving the museum because it was good to capture the answers based on the experience people had during their visit. Questions regarding noise, the amount of visitors, the amount of children and the capability to enjoy the museum were asked.

The main idea was to invite people to choose between different degrees of congestion and to ask them to give their ranking on different solutions which eventually would solve the problem of congestion. Because it was difficult to make people understand the problem of congestion if at the specific time of the survey the museum was not overcrowded, following Maddison & Foster (2003), pictures showing different degrees of congestion had been shown to visitors.

One of the solutions the visitors had to rank was increasing the price of the ticket. Even if some of the literature argues that the demand for museums is price inelastic (so no matter the price people will still go), it is also true that museums as leisure attractions have other substitutes and, that is why, one may think that if the price is higher, the flow of visitors will decrease. Actually, according to the Rubenshuis Report made by MUSIS (2004) visitors to the museum had gone in the last month to other leisure activities such as other museums (42.8%), expositions (24.9%), cinema (37%) and theatre (12.1%).

Besides, it is interesting to know among those visitors who think that increasing the price is a good solution, how much more they would be willing to pay. In that sense, the WTP gives a monetary measure of the cost of

congestion, or in other words, the cost visitors impose to each other. Here visitors didn't have to choose between alternatives since it was an open-ended WTP question.

The second possibility to decrease congestion was that all visitors will have to arrange an appointment with specific date and hour, so the museum can control the amount of people inside.

The third possibility was to treat visitors as they were in a parking lot, which means that the price of the ticket will be based on minutes or hours spent inside the museum. This solution may lead to have quicker visits of those visitors who may not be very interested in the museum or those who go just to see specific pieces.

Finally, visitors were asked if it was a good idea to have morning opening hours (before 10:00) and night opening hours (after 17:00), and at what time they would be interested to attend to the museum.

The survey also had a socio-demographic characteristics section with the idea to know which kind of population is attending the museum and to try to find some tendencies in the answers depending on age, gender, education, nationality and if people have children or not.

Socio-demographic section: 200 people going in and out the museum
Table 2 shows the results of the socio-demographic characteristics of the sample. It can be seen that most of the visitors the museum attracted were women (74%), showing this a clear preference of that gender for arts and culture. Besides, they were more critical and made more comments than men when they were asked about congestion and solutions.

Most of the visitors were between 20 and 39 years old, 31% had children and 42% had a Master or PhD degree. Finally, it can be seen that people from The Netherlands (20.5%), Spain (14%) and Belgium (12.5%) were more likely to visit the museum. However, it has to be said that some people from

Belgium didn't want to fill in the survey because they didn't feel comfortable with the fact the survey was in English. So that may explain that their share is not higher that 12.5%.

Table 2. Results: Socio-demographic section. Survey to 200 people going in and out the museum

Gender:	Male	**26%**		Women	**74%**			
Age: [15-19] **9%**	[20-29] **28%**		[30-39] **30%**	[40-49] **15%**		[50-59] **9%** >59 **9%**		
Children:	Yes	**31%**		No	**69%**			
Education:	High School	**21%**	Bachelor	**37%**	Master or higher			**42%**

Nationality:

The Netherlands **20.5%**
Spain **14%**
Belgium **12.5%**
England **6.5%**
Japan **6.5%**
France **5%**
Australia **4%**
Germany **4%**
United States **4%**
Poland **3.5%**
Czech Republic **3%**
India **3%**
Rumania **3%**
China **2.5%**
Colombia **2%**
Russia **1.5%**
Mexico **1.5%**
Israel **1%**
Italy **1%**
Denmark **0.5%**
Estonia **0.5%**

Source: Own calculations

Table 2a) has a comparison between the socio-demographic characteristics this research found and the last survey available (MUSIS, 2004) the museum Rubenshuis has about its visitors. It is important to remark that the survey of this thesis wasn't made to all the visitors coming in and out the museum. They were randomly selected and some of them didn't want to answer to the survey even because they were not comfortable with their English or because they just didn't want to. In addition, children (<19 years old) were practically out of

the survey. Since I was myself the one picking people to ask them to fill in the survey, I always preferred adults to answer and give me their opinions. That is how some times the nationality or the age of the sample may not be near the one in the questionnaire made by the museum itself in 2004.

Table 2a. Socio-demographic characteristics of the Museum Rubenshuis visitors

Characteristics		This Research	MUSIS (2004)
Nationality	Belgium	12.5%	24.9%
	The Netherlands, Luxemburg, Germany or France	29.5%	34%
	UK	6.5%	3.6%
	Switzerland	0%	1.6%
	Denmark, Norway, Sweden or Finland	0.5%	1.7%
	Spain, Portugal, Italy or Greece	15%	10.6%
	Other Europe	11.5%	12.2%
	Africa, Latin America or Asia	16.5%	4.5%
	USA, Canada or New Zealand	8%	7.1%
Age	12-19	9%	21.8%
	20-34	48.5%	34.2%
	35-49	23.5%	21%
	50-64	15.5%	13.4%
	65-79	3.5%	7.3%
	>80	0%	2.5%
Education	High School	21%	22.2%
	Bachelor	37%	24.9%
	Master or Higher	42%	43.8%
	Primary School	-	9%
Gender	Female	74%	48.8%
	Male	26%	51.2%

Source: Own calculations and MUSIS (2004)

Survey to a sample of 100 people going into the museum

Table 3 shows the results of the survey made to people who were in their way into the museum. Most of them hadn't been to the museum before (86%) and the majority of the ones who had been there before don't remember the museum as a crowded or comfortable place. For example, just 7% said they remember it as a noisy place and 64% said they were highly capable to enjoy the museum.

Regarding the degree of congestion visitors preferred, the majority of them split their answers between low congestion (42%) and no congestion (36%).

That gives us a clue that people really value not being in overcrowded museums.

Table 3. Results of the Survey: 100 people going into the museum

1. First visit to the museum? Yes **86%** No **14%**

If No: Experience before inside the museum[5]:

Noise:	High **7%**	Not high no low **14%**	Low **50%**	D.R[6]. **29%**
Visitors:	High **21%**	Not high no low **14%**	Low **36%**	D.R **29%**
Children:	High **14%**	Not high no low **21%**	Low **36%**	D.R. **29%**
Capability to enjoy:	High **64%**	Not high no low **0%**	Low **7%**	D.R. **29%**

2. Situations preferred when visiting the museum:

High Congestion **2%**   Low Congestion **42%**   No Congestion **36%**   I don't care **20%**

3. If answered Low Congestion or No Congestion: Solutions to diminish the amount of people inside the museum (78 answers) [7]:

Increase the price of the ticket:	Good	**22%**	Not bad no good	**15%**	Bad	**63%**
Time slots:	Good	**32%**	Not bad no good	**22%**	Bad	**46%**
Ticket price based on time spent:	Good	**24%**	Not bad no good	**17%**	Bad	**59%**
Morning opening hours:	Good	**63%**	Not bad no good	**10%**	Bad	**27%**
Night opening hours:	Good	**73%**	Not bad no good	**5%**	Bad	**22%**

3a. Increasing the price of the ticket: Willingness to Pay:

€ 0 **73%**   € 1-3 **12%**   € 4-5 **9%**   € 7-10 **6%**

3b. If morning opening hours is a good solution: Time before 10:00 in which people will go to the museum (54 answers):

7:00 **6%**   8:00 **43%**   8:30 **11%**   9:00 **40%**

3c. If night opening hours is a good solution: Time after 17:00 in which people will go to the museum(63 answers):

18:00 **5%**   19:00 **11%**   20:00 **13%**   21:00 **41%**
22:00 **22%**   23:00 **3%**   0:00 **5%**

Source: Own calculations

With respect to the solutions to diminish the amount of people inside, most of the visitors who cared about congestion thought that increasing the price of the ticket was not a good solution (63%). Some of them gave that answer because they didn't want to be asked for more money, some of them because

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[5] The visitors had to rank from 1 to 5 the options. In this table "High" corresponds to rankings equal to 1 and 2, "Normal" no rankings equal to 3, and "Low" to rankings equal to 4 and 5.
[6] D.R: I don't remember
[7] The visitors had to rank from 1 to 5 the options. In this table "Good" corresponds to rankings equal to 1 and 2, "No good no bad" no rankings equal to 3, and "Bad" to rankings equal to 4 and 5.

they were really convinced that increasing the price won't mean fewer visitors and, some others because they were aware that the measure will mean excluding other visitors. In addition, some of the people over 65 years old said that since they can visit the museum for free they are not really able to answer that question. Most of them said "why do I bother if people pay more or not?" Those over 65 years old visitors didn't realize the fact that increasing the price of the ticket is a cost they would be imposing on other visitors so they can have more space for themselves when visiting the museum. The rest of the visitors split their answer among 'No good no bad' (15%) solution and 'Good' solution (22%).

Further on, when visitors were asked about how much more they will be willing to pay for the ticket, 73% answered they are not willing to pay anything, which is reflected in the amount of people who didn't like this solution, 12% are willing to pay between €1 and €2, 9% between €4 and €5 and 6% between €7 and €10. The mean WTP was €4.71, just taking into account those WTP>0. Taking into account also those WTP=0 the mean goes down to €1.27.

With respect to other solutions that can help not having a lot of people inside the museum, the sample was mostly interested in morning opening hours (63%) and night opening hours (73%). Most of those who liked to go earlier that 10:00 in the morning would go from 8:00 and, most of those who liked to go after 17:00 would go until 21:00.

Survey to a sample of 100 people going out the museum
Table 4 shows the results of the survey made to people who were in their way out of the museum. In comparison with the previous group of visitors, this group already faced the fact the museum has small rooms easily congestioned, so they were more aware of the problem.

In general, people didn't complain about noise, too many visitors, too many children or a bad experience when trying to enjoy the museum. Most of the visitors said they had a very pleasant stay and some of them made the

comment that they have liked very much the audio guide. However, some of them complained about the noise produced by the alarms to protect the rooms and paintings. They said that it was really annoying some times. Others complained the audio guide didn't have information for all the paintings and articles in the house. In addition, some visitors said that the museum was not very well organized since some numbers didn't correspond to the audio guide and, the written information inside wasn't complete or wasn't correspondent with which they had in front.

Table 4. Results of the Survey: 100 people going out the museum

1. Experience inside the museum:						
Noise:	High	**13%**	Not high no low	**14%**	Low	**73%**
Visitors:	High	**12%**	Not high no low	**42%**	Low	**46%**
Children:	High	**11%**	Not high no low	**19%**	Low	**70%**
Capability to enjoy the museum:	High	**71%**	Not high no low	**21%**	Low	**8%**

2. Situations preferred when visiting the museum:

High Congestion **1%**   Low Congestion **52%**   No Congestion **30%**   I don't care **17%**

3. If answered Low Congestion or No Congestion: Solutions to diminish the amount of people inside the museum (82 answers):

Increase the price of the ticket:	Good	**22%**	Not bad no good	**13%**	Bad	**65%**
Time slots:	Good	**38%**	Not bad no good	**18%**	Bad	**44%**
Ticket price based on time spent:	Good	**24%**	Not bad no good	**15%**	Bad	**61%**
Morning opening hours:	Good	**72%**	Not bad no good	**7%**	Bad	**21%**
Night opening hours:	Good	**82%**	Not bad no good	**5%**	Bad	**13%**

3a. Increasing the price of the ticket: Willingness to Pay:

€ 0   **70%**   € 1-3   **12%**   € 4-5   **11%**   € 7-10   **7%**

3b. If morning opening hours is a good solution: Time before 10:00 in which people will go to the museum (60 answers):

7:00   **3%**   8:00   **45%**   8:30   **5%**   9:00   **47%**

3c. If night opening hours is a good solution: Time after 17:00 in which people will go to the museum (71 answers):

18:00 **11%**   18:30 **6%**   19:00 **16%**   20:00 **25%**
21:00 **25%**   22:00 **14%**   0:00 **3%**

Source: Own calculations

Groups of adults or children were more likely to show up at the museum during the week, which one may say could lead to a lack of enjoyment of the museum giving the fact the rooms are very small. However, when visitors who didn't belong to such groups were interviewed, most of them didn't seem to be

annoyed by the groups. In general they said something like "there was a huge group of children but I didn't care. It is good that children are encouraged to come to this kind of museums".

As we can see, in general, visitors had a very pleasant stay and they were not perturbed by the fact other visitors may be around them. There may be two reasons for this tendency. One is that having an audio guide may helped the visitors to focus on what they were listening and to forget the people around. The other one is that this museum, like no other small museum, has made huge efforts for controlling the flow of visitors and to guarantee a pleasant uncongested stay. Building the glass pavilion was a clever solution to isolate the flow from the direct entrance of the building. That has given space to the museum to make queuing more comfortable and, to control better the amount of visitors going into the museum. At the same time, the bookshop is also outside the museum which helps to isolate visitors from the main entrance as well.

Going back to the survey, when respondents were asked about the ideal degree of congestion, again, they chose low (52%) or no congestion at all (30%).

Regarding the solutions the museum could provide to reach low degrees of congestion, again, visitors didn't like the idea of increasing the ticket. 65% of them answered that rising the ticket would be a very bad solution, 13% were in the middle and, 22% stated it would be a good solution. That is how 70% of the visitors stated they won't be willing to pay more for the ticket. A lot of visitors made comments saying that they won't sacrifice the fact tickets are very cheap and accessible to almost everybody. The majority of those who will be willing to pay more answered that just an amount between €1 and €3 and the rest between €4 and €10. That gives a mean WTP of €4.58. If the 70% that answer a WTP=0 is considered the mean is €1.45.

The most popular solutions were once more extra morning opening hours and extra night opening hours. From 8:00-9:00 in the morning until 20:00-21:00 in

the night. In addition, it has to be pointed out that some visitors said that the closing hour would depend on the season. Some of them were focusing in the fact that during the summer it would be very nice to come late at night when it is not too hot. Some others said the museum needs light to be visited. When it is dark it is not the same, especially for some rooms inside the house and the garden.

The other two options given were less popular. Just 38% of the people liked the idea of reserving the entrance at a specific time and date. Some of the ones who didn't like that solution said that maybe it could be good for groups, but not for individual tourists who will be in the city for a day or two and won't have the opportunity to go back to the museum again for the appointment.
The comments received by the people who didn't like the solution of the ticket price based on time spent inside the museum (61%) were that they wouldn't like to feel they have to run because otherwise it would be more expensive.

The whole sample: Degree of Congestion and Solutions
Table 5 contains the results for the whole sample. Since the going in group and the going out group had similar answers, the tendency is basically the same and can be summarized as follows: 1) most of the people cared about congestion, so they preferred to have a low degree of congestion or no congestion at all. 2) Just a few people will impose a cost on their fellows in order to decrease the flow of visitants, which will be most of the times between €1 and €3 (the mean was €4.64 and €1.33 ifWTP=0 is considered. See graphics 2, 3 and 4). 3) Extra morning opening hours and extra night opening hours were the most popular solutions to diminish the amount of visitors. In general, visitors would like to go at 8:00-9:00 in the morning and to leave at 21:00.

Table 5. Results of the Survey: 200 people in and out the museum

1. Situations preferred when visiting the museum:

High Congestion **1%**   Low Congestion **47%**   No Congestion **33%**   I don't care **19%**

2. If answered Low Congestion or No Congestion: Solutions to diminish the amount of people inside the museum (160 answers):

Increase the price of the ticket:	Good **22%**	No bad no good **14%**	Bad **64%**
Time slots:	Good **35%**	No bad no good **20%**	Bad **45%**
Ticket price based on time spent:	Good **24%**	No bad no good **16%**	Bad **60%**
Morning opening hours:	Good **67%**	No bad no good **9%**	Bad **24%**
Night opening hours:	Good **78%**	No bad no good **5%**	Bad **17%**

2a. Increasing the price of the ticket: Willingness to Pay:

€ 0   **71%**   € 1-3   **12%**   € 4-5   **10%**   € 7-10 **7%**

2b. If morning opening hours is a good solution: Time before 10:00 in which people will go to the museum (114 answers):

7:00   **4%**   8:00   **44%**   8:30   **8%**   9:00   **44%**

2c. If night opening hours is a good solution: Time after 17:00 in which people will go to the museum (134 answers):

18:00 **8%**	18:30 **3%**	19:00 **13%**	20:00 **19%**
21:00 **33%**	22:00 **18%**	23:00 **1%**	0:00 **4%**
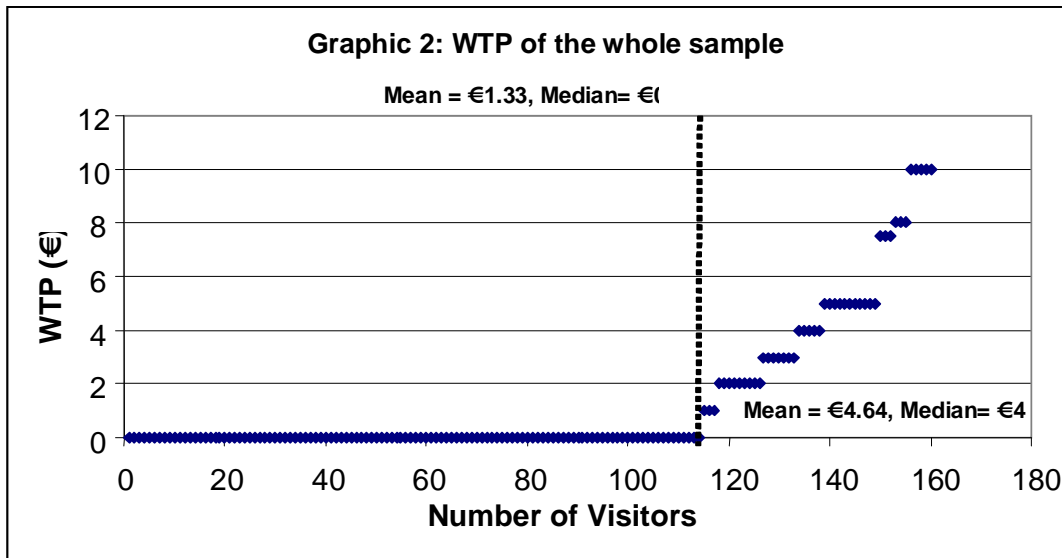
Source: Own calculations

Source: Own calculations

Graphic 3: WTP of the going in group

Mean = €1.27, Median= €0

Mean = €4.71, Median= €5

Source: Own calculations

Graphic 4: WTP of the going out group

Mean = €1.45, Median= €0

Mean = €4.58, Median= €4
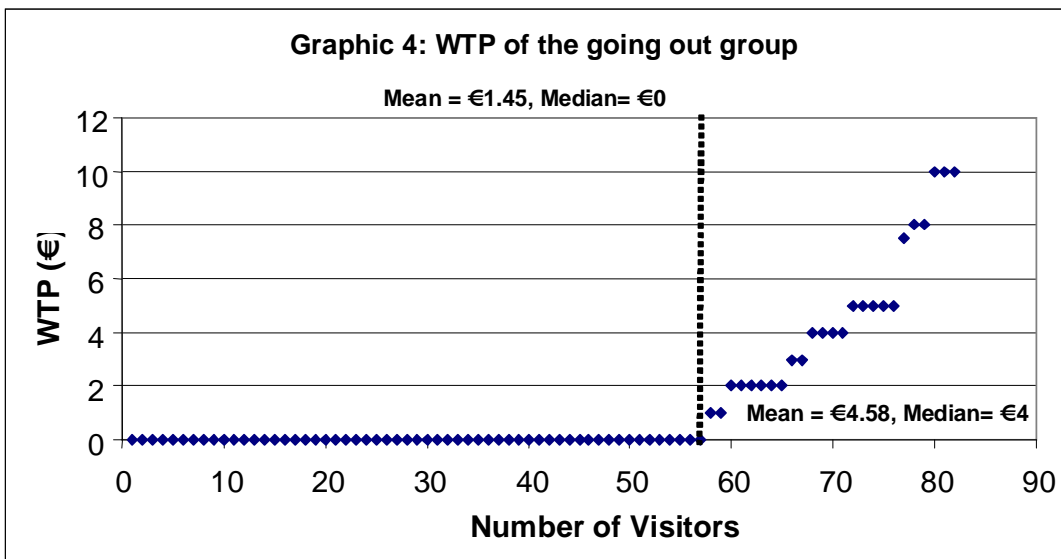
Source: Own calculations

 VI. Conversation with Mr. Ben van Beneden, Curator of the Rubenshuis

When I first told the Curator, Mr. Ben van Beneden, about the purpose of my research he was really interested. By then, when I was just asking for permission to do the survey inside the museum, he told me he was concern by the fact the Rubenshuis attracts too many people. First, because of the security of the paintings and, second, because of people's experience in the museum. Besides, authentic houses like this one have more troubles in managing the crowds than other museums. These sorts of houses are more in physical danger if they are exposed to a lot of people at the same time, and because of the small original rooms, uncomfortable incidents such as noise are more willing to show up.

Mr. van Beneden told me that even though solutions can be implemented; there is a problem that most of the famous public museums in the world have to face. On one hand, the museum itself is worried about the safety of the collection they show and the quality of the visit, and on the other hand, the government, which in this case is the City of Antwerp, is more worried about attracting as much visitors as possible. Thus, the flexibility to intervene is in many cases very low. About this, Frey and Meier (2003) say that "…the museum directorate is not free to simply pursue its own goals, because they face certain constraints on their actions. Differences in these institutionally determined restrictions explain the museum management's behavior….From a politico-economic point of view, the institutional set-up and the nature of funding of the museums has a dramatic influence on the behavior of the directorate" (Frey and Meier, 2003: 16-17).

After finishing the exercise of interviewing 200 visitors at the museum, on June the 7th I went again to Antwerp and told Mr. van Beneden the results. He was quite surprised that the general perception of the Rubenshuis is a non

crowded place. He also was surprised to hear that people liked the audio guide because it is not up-to-date (however, asking about the audio guide was not a question in the survey. In general, people made a comment saying they liked it and just a few complained about it). He told me that from June 15th of this year they are giving the visitors a new version of it with the actualization of an improvement that has been done to the collection (some art works and articles have been removed and new ones have been placed).

In addition, Mr van Beneden told me that a new label system will be implemented from July the 1st. That means that the old static explanatory labels will disappear. The museum decided to highlight 50 items and to put just numbers bellow them. Those 50 items will be explained in the audio guide and will be also explained in a small booklet visitors will get for free at the entrance. Each item will have an explanatory text of approximately 130 words.

The problems they are facing with the present label system is that since it aims to summarize a lot of articles in the same page, there is not enough information about each one of them. In addition, if there are a lot of people in the room, everybody goes to the label and block other visitors to read. The labels also remain dirty because visitors, especially children, use them as a support to write and, replacing them becomes very expensive.

The new system will allow people to move much more freely trough each room and to learn and focus in what they want. Other improvement the museum is working in is the establishment of a free gallery guide.

Groups are a big concern to Mr. van Beneden. He is not in favor of them because of the congestion problem they bring. At the moment, groups of no more than 20 people are allowed. However, if two groups arrive at the same time and each one has, let's say, 23 individuals, the museum will not say no to the remaining 3 visitors, so there will be 46 people inside at the same time, which is too much. Even though the museum manages the reservation mechanism for groups in order to control the overcrowding problem, some

times groups show up and, he said, the museum cannot restrict them the entrance.

Other problem with groups is that it is mandatory to take a guide from the City of Antwerp[8]. Mr. van Beneden exposed his concern about the quality of those guides. He said that even though the City of Antwerp has some good guides, it also has bad quality guides who may not give the visitors an accurate explanation.

About the solutions suggested in this research for decreasing the amount of visitors inside the museum, Mr. Beneden liked the time slots, but he is aware that for a tourist it will be difficult to make an appointment and then come back. However, he does think time slots are necessary for groups, because in that way they can control better the amount of visitors inside the museum.

Mr. Beneden liked very much the idea of extra opening hours, especially in the summer. He thinks having a last visit allowed at 16:15 is too early. He suggested having, during spring, summer and autumn, the museum open until 18:00 and, one evening per week until 21:00. However, implementing the extra opening hours would mean more hours required from the personnel, and that not only would cost a lot of money, but also wouldn't be very popular among the personnel. According to Frey and Meier (2003), "the finances available are the most important constraint on the museum's directorate. Other constraints, such as limited space or legal and administrative burdens imposed by the bureaucracy or labor unions, can also be weigh heavily" (Frey and Meier, 2003: 16-17)

In addition, as I said before, the museum has the hands a bit tight because the City of Antwerp and not the museum itself is the one who has the last word in this kind of decisions. The same happens with other sort of activities the museum could have such as concerts or cocktails in the garden, or renting

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[8] With the exception of Japanese groups and tour operators who are allowed to take their own guides with them. Those groups attract a lot of money to the museum in the form of tickets and expenses in the bookshop.

the museum for having special events for companies. Those kinds of events need the authorization of the government, and also, need specialized personnel for the booking and the general organization, which can be very costly. However, the museum is working on it and would like to have in the near future those kinds of possibilities. Specially, the museum would like to have events where it can get closer to people and ask them to become friends of the Rubenshuis.

 VII. Econometric Analysis: Theoretical Model and Results[9]

The econometric analysis of the survey results gives an opportunity to analyze how WTP is affected by the characteristics of Rubenshuis Museum visitors. Three groups of characteristics are of interest in this research. The first group includes socio-demographic attributes. The second group of characteristics is if the visitors are going in their way in or in their way out of the museum. In case the visitors are in their way in, a separate analysis is done which considers if is their first visit to the museum or not. And, in case visitors are in their way out, a separate analysis is done taking into account the experience inside the museum. The third group of characteristics refers to the ranking respondents give to solutions to decrease the amount of people inside the museum.

WTP to support an increase in the price of the ticket is expected to raise with a bad experience at the museum (i.e. noise), with women, since they were more critical during the survey, and with higher rankings given to that solution. No expectation about the other variables is clear. This leads to the following initial regression framework for WTP:

$$WTP = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4, (1)$$

where X_1 is a vector with all the socio-demographic characteristics of each respondent (gender, age, nationality, children, education). In the case of gender, a dummy variable that takes the value of 1 for male and 0 for female is used. The same happens with children, 1 means the visitor has children and 0 that he or she doesn't. Education takes the form of 1 if the answer is high school, 2 if it is bachelor and, 3 if it is master or higher. In the case of nationality, each country of origin is a dummy variable taking the value of 1 in case the respondent is from that origin.

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[9] Theoretical model based on Thomson et al. (2002)

X_2 is a dummy variable that takes the value of 1 in case the visitor is in his/her way into the museum and 0 if is in his/her way out. When the regression is run just taking into account the 'going into the museum' visitors, X_2 represents a dummy variable that takes the value of 1 if the visit is the first one to the museum. On the other hand, when the regression is run just for the 'going out the museum' visitors, X_2 takes the form of a vector that includes people's experience inside the museum (noise, visitors, children, capability to enjoy). Each of these variables takes the form of 1, 2, 3, 4 or 5 depending on the ranking given by the respondents.

X_3 takes into account the degree of congestion visitors prefer. Since the regression wants to explain the movements in the WTP and the survey was stopped if people didn't care about congestion or if they preferred having high congestion, just those answers referring to low congestion or no congestion at all are considered for the analysis. In that way, a dummy variable was constructed and takes the value of 1 if the respondent states 'low' congestion and the value of 0 if the respondent states 'no' congestion.

X_4 is a set of variables indicating respondents' preferences for the solutions that are supposed to decrease congestion (increase the price of the ticket, time slots, ticket as a parking lot, extra opening hours). Each of these variables takes the form of 1, 2, 3, 4 or 5 depending on the ranking given by visitors.

The coefficients in Equation (1) will give an estimate of the effect of the X variables on the WTP. Since the WTP is set up as a 0-1 dummy variable (0 means WTP=0 and 1 means WTP>0) the predicted value of the dependent variable, WTP, can be interpreted as the probability that the respondent will pay more for the ticket, given the values of the explanatory variables.

Following Thomson (2002), for this calculation, we assume that respondent's WTP follows a logistic distribution. Under a logistic distribution and given that

individuals were asked to state their WTP, the probability of an affirmative answer can be expressed as:

$$Pr(WTP > 0) = 1/(1 + e^{-X}), \quad (2)$$

The *X* refers to the right-hand side of Equation (1) above. As we can see, it is assumed that the minimum WTP among respondents is $0 euro.

For each or the three scenarios (going in, going out and the whole sample), the logistic regression was done. However, only the results for the going out group and the whole sample are shown due to no significant coefficients in the going in group. Besides, since most of the variables were dummies, collinearity problems came out and the program dropped most of the variables, which led to not having interesting conclusions to show. The logistic parameter estimates are reported in Table 6 with standard errors in parentheses (*=99% confidence level, **=95% confidence level, and ***=90% confidence level).

Let's first analyze the going out visitors' model which shows significant coefficients in all the variables analyzed. As expected, the coefficient of the gender dummy had a significant negative impact on the probability of a yes WTP. This means that if the respondent is male, we can say with 99% of confidence that the probability of paying more for the ticket will decrease. On the contrary, other socio-demographic variables showed a positive and significant coefficient on the probability of a yes in the WTP. The older the visitors are and the higher the degree of education is, the greater the positive impact in the probability is. The variable 'children1', which means if visitors have children or not, was dropped because of collinearity problems.

Table 6. Logistic Regression Analysis on WTP [a]

Variables	Going out visitors Coefficient	All visitors Coefficient
Male	-193.67* (7.13)	0.38 (1.08)
Age	12.73* (0.16)	0.09 (1.39)
Children1	- -	-1.27 (1.60)
Education	177.25* (0.82)	-0.55 (0.51)
Netherlands	394.62* (7.63)	13.56* (1.04)
Japan	1107.88* (14.82)	18.56* (3.74)
Belgium	-6.01** (3.07)	14.48* (2.71)
France	131.12* (2.29)	19.59* (3.57)
Spain	- -	15.60* (1.81)
United States	- -	12.69* (1.28)
Germany	- -	11.81* (1.49)
Australia	- -	15.64* (1.71)
Noise	-54.66* (3.55)	- -
Children2	- -	- -
Visitors	-187.69* (2.45)	- -
Capability	-103.36* (1.45)	- -
Low Congestion	61.27* (2.89)	-0.16 (1.24)
Increase ticket	-196.02* (4.29)	-3.36** (1.36)
Time slots	-114.05* (1.34)	0.51 (0.59)
Parking	153.11* (2.87)	1.01 (0.68)
Morning hours	99.14* (2.64)	0.38 (0.45)
Night hours	197.25* (2.68)	-0.16 (0.46)
In/Out	- -	-1.45*** (0.78)
N	63	128
Log-likelihood	-4.862e-07	-20.92453
Pseudo R^2	1.000	0.7479

[a] Standard Errors in parentheses. Not shown are coefficients for variables dropped by the program because of collinearity. * For 99% confidence level, ** For 95% confidence level, *** For 90% confidence level

When analyzing per nationalities we can see that while visitors from The Netherlands, Japan and France increase the probability of a yes WTP, visitors from Belgium decrease the probability of a yes WTP. The rest of nationalities were dropped by the program because of collinearity problems.

Regarding the experience the going out group had at the museum, it can be seen that the higher the noise and the amount of visitors inside, the less probable that visitors will be willing to pay an extra amount for the ticket. In a similar way, the more capable a visitor was to enjoy the museum, the less probable is that he/she will pay more. The variable children2, which refers to have seen children inside the museum, was dropped by the program because of collinearity problems.

With respect to the degree of congestion desired, the choice of 'low congestion' had a strong positive effect on the probability. On the other hand, solutions given to decrease the amount of people inside the museum had both, negative and positive impacts. As expected, the less favorable the ranking visitors gave to increase the price of the ticket, the fewer the probability of a yes on the WTP. The same happened with the time slots. On the contrary, the less favorable the ranking given to "pay per minutes ticket" and, even morning or night extra opening hours, the greater the probability of a yes WTP.

When analyzing the whole sample, the same trends were found when the coefficients were significant. Visitors from The Netherlands, Japan, France, Spain, United States, Germany and Australia increase the probability of a yes WTP. In contrast with the previous model, visitors from Belgium also increase the probability of a yes WTP answer. Similarly with the going out model, the less ranking people gave to the increasing the ticket solution, the fewer the probability of a yes WTP. Finally, according with the last variable this model considered (in or out visitors), going out visitors have a strong positive impact on the probability of a yes WTP.

 VIII. Conclusions

Within the methodological framework of the Contingent Valuation Methodology the purpose of this thesis was to find in a selected museum the 'congestion cost' or the amount visitors are willing to pay in order to avoid too many people inside. The research also wanted to identify what determines if people are willing to pay or not. For analyzing this, aspects such as socio-demographic characteristics, the experience inside the museum and visitors' preferred degree of congestion were taken into account. In addition, other possibilities that could lead to diminish congestion inside the museum were considered.

The selected museum for this research was the Rubenshuis in Antwerp which was the original home and studio of the XVII century Flemish painter Peter Paul Rubens. The Rubenshuis Museum, as a Superstar museum in Belgium and in the world, attracts a lot of visitors every year. Most of them are tourists who see the museum as a 'must' when going to Antwerp in a holiday trip. The Rubenshuis was selected because given the fact it is a small museum and manages very small rooms, having visitors around is more notorious and, incidents such as noise and failure to enjoy the collection are more likely to appear.

The analysis focused its attention on the current users of the museum. A number of 200 site interviews with museum visitors, either entering or leaving, were made. About the experience inside the museum, surprisingly, most of the visitors didn't find it as a noisy, congested or uncomfortable place. In general, people were very pleased with the experience and they were amply capable to enjoy the collection. These answers may result from the efforts the museum has made to solve the problem of congestion and to guarantee a better experience. One of them is the pavilion built outside the museum, which separating the sales from the main entrance, helps to have a more

controlled and organized flow of visitors. Other effort is the free audio guide. Practically every body takes it and, in addition to guarantee a quality experience thanks to the information it gives, it helps visitors to be quiet and focused in what they are listening. Thus, people may not feel annoyed by the fact they are surrounded by others.

In order to capture people's preference for congestion, visitors were invited to choose between different degrees of overcrowding. Each degree was accompanied with a picture which graphically gave them an idea of the problem. In general, visitors preferred not congested situations. This was reflected in the fact they split their answers between low or no congestion at all.

Further on, they were asked to give their opinion on different solutions which eventually would solve the problem of congestion. They had to rank five different solutions: 1) increase the price of the ticket, 2) time slots, 3) ticket based on time spent inside the museum, 4) extra morning opening hours; and, 5) extra night opening hours. The one that this research was mainly interested in was increasing the price of the ticket, because, that one was further on associated with the extra amount visitors will actually pay to exclude other fellows to see the collection. However, that option was the less popular.

In consequence, the WTP more for the price of the ticket was low. In average, those visitors who cared about congestion would be willing to pay €1.33 extra which includes those ones with a WTP=0. Without including the WTP=0 answers, the average amount raises to €4.64.

The options related to extra opening hours, even morning or night, were the most popular ones among the sample, which is an alert to the museum to start thinking in improving its services. However, since the Rubenshuis is a public museum, it doesn't have a lot of flexibility to make decisions based on people's preferences. In addition, improving the services of the museum

needs not only the permission of the City of Antwerp, but also money and qualified personnel.

The econometric analysis of the survey results gave an opportunity to analyze how WTP for increasing the price of the ticket is affected by the characteristics of Rubenshuis Museum visitors. The analysis showed that the probability of a yes answer in the WTP goes up if visitors were women, were older, were better educated and had a bad experience at the museum. In addition, those visitors who were in their way out of the museum showed a higher WTP than those ones who were in their way in.

Regarding the use of the CV methodology this research faced some advantages and some disadvantages. Among its advantages, having the possibility of creating a monetary value of something that doesn't exist in the market gives the opportunity to the museum to make decisions. The particular experiment in this research gives an idea of the cost people imposed to each other in order to be in a less crowded place. Here, even when people showed a strong preference to be in a less crowded place, it can be seen that there is little demand for it if the only possibility is paying. The museum then can work on other solutions that lead to have less congestion inside.

However, since the CV is a technique that seeks to aggregate preferences, it becomes tricky to decide if the right movement is where the majority goes. If the museum would like to make decisions based on the answers of the visitors, it would be tricky because the museum attracted mostly tourists, so the city interests may not being captured.

Other advantage is that I had the possibility to construct my own data. I think I won't ever be the same economist again. I had always worked with data that was already constructed by someone else, mainly, by institutions. Here I worked with my own data and I can trust 100% on my results.

Among the disadvantages I had to face with the problem of information which is crucial in the WTP judgments. When people were asked to state their WTP

three different reactions appeared. The first one was that people were thinking in their own pocket and they wouldn't want to pay more. The second one was that they thought increasing the price wouldn't deter the entrance. The third one was that they were aware that they would be excluding others to visit the museum. This research was more interested in the latter one. I don't know if it could have been better to formulate the question in a way that people were told they would be imposing a cost on other visitors.

About the use of CV I would like to point out that many of the studies that have used this methodology as a tool to valuate non-marketed cultural goods stay in the paper. They don't go beyond and practically no one is applying the results these sorts of studies show. The CV studies are actually creating a market that didn't exist before and that is a very useful and powerful tool to make policies towards cultural goods. The final goal of this research is that the Rubenshuis Museum and other museums of its kind consider what it was revealed from the direct users of museums. When public policy in the cultural field is to be made, there is no one who knows better what is needed than the users of culture.

Regarding congestion in museums, I finally want to say that the Rubenshuis is a great example of how a good experience in a superstar museum is possible. Having an isolated ticket office and bookshop is a great solution to decrease the crowd standing right in front of the entrance of the museum. First, because visitors are more comfortable than being standing up outside and second, because the museum can better control the flow of the crowds. The service of free audio guides is something that all museums should have and encourage to the visitors in order to guarantee a better understanding of the collection and, also to have a more quite and peaceful environment.

Tourism is growing rapidly around the world (6.5% per year on average) due to better economic conditions, especially in Asia. In addition, the competence between airlines is now more aggressive than ever and cheap flights are easily available across Europe bringing this more and more tourists to the cities. Since museum attendance is positively correlated with the amount of

tourists a city attracts, museums should be prepared to face their growing attendances and solutions to guarantee a pleasant stay should be implemented. Museums then must choose between what is more important to them: being a museum that assures a quality visit or being a museum that attracts as much visitors as possible and doesn't pay much attention if visitors are having a good experience or not. That will define in the near future the solutions implemented and that also will define the kind of visitors they will attract or loose.

If guaranteeing a pleasant uncongested stay is one of the objectives of museums, according with what visitors answered in this research, extra morning and/or night opening hours could be a good solution. In addition, efforts made by other museums of how the crowds and a pleasant stay should be handled are already proven and can be a great example to follow.

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XI. Appendices

Appendix 1. Survey to people going into the museum

Gender: **M**   **F**

Age:

Children: **Yes**   **No**

Nationality:

Education: **High School**   **Bachelor**   **Master or higher**

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1. First visit to the museum?   **Yes**   **No**

 If No: Please rank the following situations you experienced before inside the museum from 1
 to 5. 1= High, 5 = Low. If you don't remember please tick 0.

Noise: 0   1   2   3   4   5
Visitors: 0   1   2   3   4   5
Children: 0   1   2   3   4   5
Capability to enjoy the museum: 0   1   2   3   4   5

2. Which of the following situations will you prefer when visiting the museum?

A: High Congestion   B: Low Congestion   C: No Congestion   D: I don't care

3. If you answered B or C: Please rank the following solutions for decreasing the amount of people
inside the museum from 1 to 5, being 1 a very good solution.

a) Increase the price of the ticket   1   2   3   4   5
b) Visit reserved in advance with specific date and hour   1   2   3   4   5
   *(All visitors would have to make an appointment, so the museum can control the amount of
   people inside per time slot)*
c) Ticket price based on minutes/hours spent inside the museum   1   2   3   4   5
   *(This means that visitors who may not be very interested in the exhibition or that come to see
   just specific things would leave the museum quicker)*
d) Morning opening hours (before 10:00)   1   2   3   4   5
e) Night opening hours (after 17:00)   1   2   3   4   5

4. If you liked solution a), How much more will you be willing to pay?   _____Euro

5. If you liked solution d), from what time before 10:00 would you be willing to visit the museum?_____

6. If you liked solution e), until what time after 17:00 would you be willing to visit the museum?_____

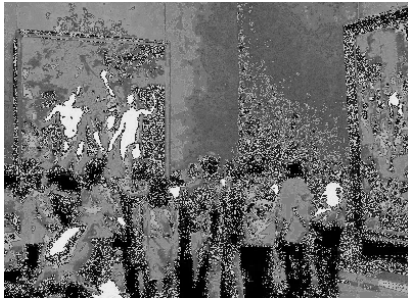| *Appendix 2. Survey to people going out the museums* |
|---|

Gender: **M   F**
Age:
Children: **Yes   No**
Nationality:
Education: **High School   Bachelor   Master or higher**

----

1. Please rank the following situations you experienced inside the museum from 1 to 5. 1= High much, 5 = Low

Noise: 1   2   3   4   5
Visitors: 1   2   3   4   5
Children: 1   2   3   4   5
Capability to enjoy the museum: 1   2   3   4   5

2. Which of the following situations will you prefer when visiting the museum?

A: High Congestion   B: Low Congestion   C: No Congestion   D: I don't care

3. If you answered B or C: Please rank the following solutions for decreasing the amount of people inside the museum from 1 to 5, being 1 a very good solution.

a) Increase the price of the ticket   1   2   3   4   5
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   (All visitors would have to make an appointment, so the museum can control the amount of people inside per time slot)
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   (This means that visitors who may not be very interested in the exhibition or that come to see just specific things would leave the museum quicker)
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4. If you liked solution a), How much more will you be willing to pay?   _____Euro

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6. If you liked solution e), until what time after 17:00 would you be willing to visit the museum?_____