



Estudios de Economía Aplicada

ISSN: 1133-3197

secretaria.tecnica@revista-eea.net

Asociación Internacional de Economía  
Aplicada  
España

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Padua and Seville  
Estudios de Economía Aplicada, vol. 27, núm. 1, abril, 2009, pp. 175-196  
Asociación Internacional de Economía Aplicada  
Valladolid, España

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## **A Comparative Econometric Analysis of Museum Attendance by Locals and Foreigners: The Cases of Padua and Seville\***

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### **ABSTRACT**

Through a comparative survey based on a unique dataset, we highlight existing similarities and differences in the museum demand of two similar institutions located in two different European cities, Padua and Seville. While considering some of the peculiarities of the two museums, we examine the heterogeneity of their visitors' profiles and their factual, motivational, and evaluative stated behaviours. In particular, these characteristics are econometrically regressed to explain the assiduousness of the two museums' audiences.

*Keywords:* Museums and Cultural Heritage; Audience Research, Visit Patterns, International Comparative Case Study.

### **Un análisis econométrico comparado de las asistencias a los museos por parte del público local y extranjero: el caso de Padua y Sevilla**

### **RESUMEN**

A partir de una encuesta comparativa, integrada en una única base de datos, se analizan y ponen de manifiesto las similitudes y diferencias en la demanda de museos de dos instituciones similares, localizadas en dos ciudades europeas, Padua y Sevilla. Se estudian las peculiaridades de los dos museos y examinamos la heterogeneidad de los visitantes: sus perfiles y comportamiento. Nos hemos centrado en un análisis econométrico a fin de explicar la relación de las características de los visitantes con la asiduidad de las visitas.

*Palabras clave:* Museos; patrimonio cultural; estudios de audiencia; patrones de visita; estudios de caso comparativos.

Clasificación JEL: D12, L83, C25, Z11.

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Artículo recibido en noviembre de 2008 y aceptado en marzo de 2009.

Artículo disponible en versión electrónica en la página [www.revista-eea.net](http://www.revista-eea.net), ref. 27115.

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\* We thank the Directors of, respectively, the Musei Civici agli Eremitani, Padua, and the Museo de Bellas Artes, Seville, for their help. We also wish to thank two anonymous referees.

## 1. INTRODUCTION<sup>1</sup>

In the museum environment it is possible and important, even if not enough practiced, to empirically study the link between the quality of various services offered, the overall level of satisfaction of visitors and their future intention to revisit the same museum or recommend its visit to other people (Harrison and Shaw, 2004). An increasing body of literature, initially developed in the areas of tourism research and services marketing, has now spread to cultural economics and museum marketing, examining and measuring the nexuses between service quality and consumers' satisfaction, loyalty and future behaviour and intentions (Boulding et al., 1993; Jones and Sasser, 1995; Heskett et al., 1997; Baker and Crompton, 2000; Homburg and Giering, 2001; Harrison and Shaw, 2001 and 2004; Novacki, 2005).<sup>2</sup>

The vast majority of studies on museum attendance and the datasets they build on are either a) part of general surveys on cultural participation and cultural activities carried out at national level, involving wide statistically representative samples and undertaken with some degree of regularity; or b) ad-hoc visitors studies performed more occasionally, usually by individual museums or cultural institutions.

In his review of the first kind of endeavours, Provonost (2002) explains how, despite some methodological limitations, participation surveys represent an invaluable basis of information due to their continuity, and are very useful when they describe the evolution of cultural practices and of the characteristics of the attending public within the same country. However, international comparisons are difficult to make through these surveys, because statistical categories and the formulation of questions are still diverse. On the very same vein, in his fundamental work on the proliferation of participation studies and their utility for international comparisons, Schuster (2006: 1) speaks of a multifaceted "research terrain in which (cross-national) comparability is traded off against (local) usability".

The second kind of studies on museum audiences (Loomis, 1987; Dickenson, 1992; Kelly, 1998; Kawashima, 1998) has also seen a real spread in the last decades. The "International Bibliography of Visitors Surveys" by Waidacher et al. (1999) includes over 1,000 references on museum and heritage market research, surveys, evaluation and performance measurement. About two thirds of these references directly or indirectly deal with visitor studies. Even if accurate and simple to administer, such small-scale surveys of visitors present fundamental weaknesses in terms of comparative analysis, since they are extremely heterogeneous in terms of methodology, breadth, specific contents and objectives.

While belonging to the latter group of contributions, our study, while positioning itself in the latter group of contributions, aims first of all to fill part of this "comparability gap". In fact, we jointly conceived and carried out the same survey

<sup>1</sup> We thank the Directors of, respectively, the Musei Civici agli Eremitani, Padua, and the Museo de Bellas Artes, Seville, for their help. We also wish to thank two anonymous referees.

<sup>2</sup> In particular, in Darnell and Johnson (2001), the issue of the inter-temporal profiles of such repeated visits to tourist attractions is addressed through a simulation model.

on the visitors of two similar museums in Italy and Spain, and jointly analysed the obtained results. More precisely, our combined case study empirically analyses and compares, from various points of view, the attendance of these two museums by means of a common investigation tool. Specifically building a unique original dataset, we test a series of hypotheses on the respective composition, motivations, behaviour and perceptions of their publics. After closely looking at and comparing socio-demographic characteristics, provenance and visiting patterns of samples of the two museums' visitors, we apply a discrete choice model explaining their behaviour and in particular their assiduousness.<sup>3</sup> To our knowledge, this work represents the first attempt in terms of joint international analysis of museum audience with this scope.

The two identical surveys were done at the "Musei Civici degli Eremitani"<sup>4</sup> of Padua and the "Museo de Bellas Artes" of Seville. These two institutions share many characteristics, in terms of size of their collections, artistic and historical importance, institutional settings and, in particular, tourist attractiveness at local, national and international level. On the other hand, they differ for other aspects, namely the fee structure. Because of these reasons, they represent almost ideal objects for a joint case study of their publics.<sup>5</sup>

The next Section will present the similarities and differences of the supply of the two museums, introducing the rationales of the joint survey on their publics, based on the evidence of collected data (Section 3). Section 4 will compare and discuss the wide bunch of visitors' socio-demographic and behavioural observed characteristics of the two museums' visitors. Section 5 will focus on the econometric analysis and results on visitors' assiduousness, and assiduousness and its relationship with those characteristics. The last Section will conclude the paper.

## 2. CIVIC MUSEUM SUPPLY IN PADUA AND SEVILLA

The civic museums of Padua and Seville were both founded in the first half of the Nineteenth century. Their collections, which originated from works of art formerly belonging to monasteries and convents, have successively been enriched by important private donations and a certain number of acquisitions. They both have their seat in historical buildings of great value (respectively, the "Convento degli Eremitani" and the "Convento de la Merced Calzada"), and have their main strength in their collections of artworks by famous local and regional artists, respectively of

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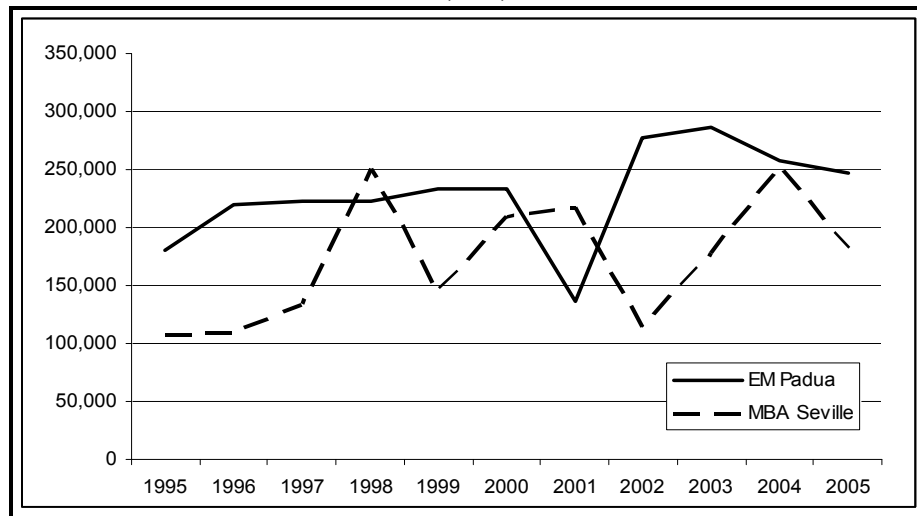
<sup>3</sup> See, for instance, O'Hare and McNee (2003).

<sup>4</sup> Notice that in this study we consider only the main site from which derives the name of the Eremitani Museums, a complex which comprehends various sites in town, including the famous and most visited Giotto's Scrovegni Chapel.

<sup>5</sup> So far, neither the Padua museum or the Seville museum have even separately engaged in any systematic qualitative and comprehensive monitoring of their own visitors. Only some basic quantitative data have been collected impromptu on attendance, mostly on the basis of ticket office records of the two respective cities.

the Seville Baroque of Pacheco, Murillo, Zurbarán, Juan de Valdés Leal and others, and of the Venetian Renaissance of Giovanni Bellini, Giorgione, Titian, Tintoretto and Veronese.<sup>6</sup>

**FIGURE 1**  
Visitors to the Eremitani Museum (EM) in Padua and to the Museo de Bellas Artes (MBA) in Seville, 1995-2005.



Source: Official statistics on attendance, courtesy of the museums' management.

However valuable their collections, the two museums partake the characteristic of not being the major artistic and tourist attraction of their respective cities. Still, from this point of view, the Eremitani Museum benefits from a special situation, since it is in close proximity to what is doubtless a masterpiece in the history of painting in Italy and Europe, the Scrovegni Chapel, with its series of frescoes, executed by Giotto in his mature age, depicting the stories of the Virgin Mary and Christ. This closeness is physical but also institutional, since both assets depend on the Municipality and are part of the Civic Museums network, possibly generating a pull effect among the public.

The relevance of this pull effect can be clearly seen in the yearly data on the number of visitors of the Eremitani Museum (EM) displayed in Figure 1 together with those of Seville (MBA). In fact, the sharp decline in admissions to the EM in 2001, down to 136,000 from an average of about 226,000 in the previous five

<sup>6</sup> The two museums also possess large collections of prints and drawings, which have been progressively studied and catalogued, and have been publicly displayed in significant temporary exhibitions. While the Spanish museum is exclusively devoted to the fine arts, the Italian one has also an important archaeological section.

years, can be easily explained by the fact that the Scrovegni Chapel remained closed from the end of April 2001 through January 2002, due to major restoration works.

Obviously, the pull effect exerted by the Scrovegni Chapel on the Eremitani Museum has been taken into consideration in the last revision of its tariff scheme, dated 2003: the ticket to the Chapel, which sells at 12 euros, is a joint ticket which gives the visitor the option to visit also the Eremitani Museum.

This aspect leads us to what appears as a really major difference between the two cases under scrutiny, that is their fee structure. In fact, while the admission to the Museo de Bellas Artes is practically free, the Eremitani Museum is charged. More precisely, Museo de Bellas Artes is completely free of charge for all citizens from the European Union and all students with an ISIC card, since only non-European visitors have to pay 1.50 euros. On the contrary, besides the joint ticket, the Eremitani can be singularly visited with a ticket of 10 euros (reduced to 8 euros for groups, and 5 euros for students); only children under 6 and local residents over 65 can enter for free. The Eremitani's quite elaborate tariff scheme is completed by a 48 hour card, selling at 12 euros and giving access to a dozen of museums and other tourist attractions in town.

From the pricing point of view, the only thing that the two museums have in common is that their respective management cannot decide on admission prices. In the Italian case they are set by the City Council, and in the Spanish case by the Regional authorities (Comunidad Autónoma de Andalucía).<sup>7</sup>

### 3. THE JOINT SURVEY ON VISITORS

A first objective of our research is to verify whether the disparity of the two museums in their pricing schemes and (fix, for the observed period) fee levels possibly affect their respective visitors' profiles and attendance patterns. In this regard, we deem as especially important the discouraging effect exerted by the relatively steep average admission tariffs in Padua on that segment of potential visitors characterised by a lower reservation price. In particular, the constraint of higher admission fees should give rise to stronger effects for local residents than for tourists (both foreign and national ones), other things being equal. In fact, for the latter, the opportunity costs for visiting museums and other attractions is relatively low with respect to their travel-related budget (mainly represented by transport, accommo-

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<sup>7</sup> An arrangement which, apart from being mainly inherited from traditional approaches to the matter, does seem to have quite appealing properties also from a theoretical point of view. According to Fernández Blanco and Prieto Rodríguez (2006: 180), in a principal-agent framework the "transferring of ticket pricing policies to the manager is not a correct way to introduce adequate incentives under any circumstances".

dation, meals, and shopping expenses), thus lowering the associated own-price elasticity of demand.<sup>8</sup>

Since both cities constitute important destinations for international touristic flows, we further examine the likely existence of stronger similarities among the groups of foreign visitors (to both museums) than among the groups of national visitors for a wide range of characteristics, attitudes, and behaviours.

Another scope of our research relates to the broad issue of audience development, which is becoming increasingly important for large numbers of fine arts institutions and museums. Following the particular attention given to the frequently stated necessity of raising the level of consumer's loyalty in terms of repeated or even habitual visits, we investigate the determinants of repeated visits behaviour in the two museums.

Our throughout survey, besides inquiring on the overall satisfaction with the visit, collected the visitors' opinions on possible improvements of some aspects of the offered services. Therefore, aspects including the arrangement of the collection, the course of the visit, the areas for pausing/resting, the informative material, the explicative panels, the guided tours, the opening hours, the (book)shop and the availability of multilingual panels were included. Most listed aspects, which do not imply a qualitative judgement on the artistic, historical, cultural, or emotional value of the exhibits, either have the character of "tangible features" or are related to dimensions of service quality involving reliability or communication (Novacki, 2005). Furthermore, they bear the operational advantage of being more or less easily corrected or adjusted by the museum management. In the econometric analysis (as we will see in Section 5), such features will be synthesised in a variable—"Required improvements"—measuring the overall quality. It corresponds to the simple count of the features which, according to respondents, should require any improvement.

For the purpose of our comparative research, we have built two unique and matching datasets. Accurate information was collected through two parallel visitors' surveys realised in the two museums between 2005 and 2006. The systematic random sample of the interviewees represents about 5 percent of all visitors at least 15 years old. The difference in the number of questionnaires collected—about 1,000 in Padua and 400 in Seville—is mainly due to the different length of the periods covered (three months in Padua, one month in Seville).<sup>9</sup>

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<sup>8</sup> According to Been at al. (2002: 3), on average the entrance fees represent about 17 percent of total expenses, the rest been represented by travel, food and accommodation. The proportion of these costs increases with the distance from the museum. Because of this, smaller local museums with a more regional based public tend to experience higher price elasticity of their demand.

<sup>9</sup> In order to minimise the risk of seasonal differences in levels and structure of attendance, and being impossible for organisational and financial reasons to realise the surveys concurrently and for periods of the same length, the Italian survey was carried out in April, May and June 2005, and the Seville one in May 2006.

The common structured questionnaire included 24 multiple-choice questions grouped into five sections. The questionnaires, handed out at the beginning of the visit and collected at its end, were self-administered, but research staff was available in case the interviewees needed some assistance. The questionnaires only differ in the obvious peculiarities of the sections listing other museums and/or cultural attractions existing in the two cities, likely to be visited by the respondents. Given the presence of many foreign visitors in both museums, the questionnaires available to the interviewees were translated into different languages (English, German and French, besides Italian and Spanish).

#### **4. SOCIO-DEMOGRAPHIC AND BEHAVIOURAL PATTERNS OF PADUA AND SEVILLE AUDIENCES**

Data relating to a variety of socio-demographic and economic characteristics of visitors, such as age, level of education, occupational status, residence, etc., were collected. In addition, we gathered information on a whole series of behavioural aspects ahead and after the visit experience, such as: the knowledge and perception of the visited museum and the relative offered activities and services, and the reasons and motivations of attending (ahead); the perceived level of satisfaction, the social dimension of the visit, and the possible existence of phenomena of loyalty or assiduousness, in the form of repeated visits (after).

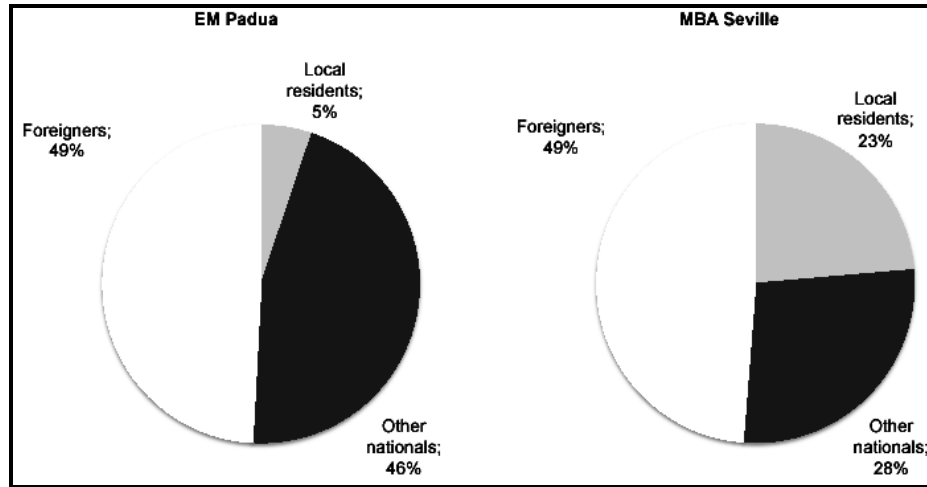
As shown in Figure 2, in both museums foreigners represent a share of almost 50 percent of total visitors. But the Spanish museum appears to exert a higher attractiveness to local visitors than its Italian counterpart, since Seville residents constitute almost one quarter of total visitors, as opposed to Padua local visitors, scoring only 5 percent.

Explanations for such a clear-cut disparity in the geographic provenance of audiences could possibly relate to particularly stronger bonds with the local and regional history and cultural heritage in Seville as compared to Padua, besides differences in the homogeneity of the social composition of the two populations. It could also be the case that such a stronger presence of local visitors in Seville is the result of different management's policies, aiming at strengthening the ties with the local community.<sup>10</sup> Another possible explanation could be the already recalled difference in the tariff schemes.

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<sup>10</sup> However, our qualitative recollection of their respective policies, based on both written documents and records and on personal interviews with the two museum directors, did not show peculiar differences in their objectives, programmatic choices, and instruments related to some sort of community-based effort.

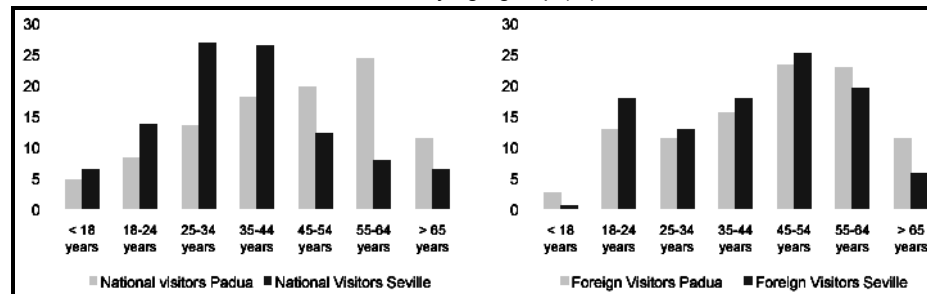
**FIGURE 2**  
Visitors to the Eremitani Museum (EM) and the  
Museo de Bellas Artes (MBA) by geographic origin (%).



Source: Our data.

As we will illustrate, the obtained data and statistical indicators highlight many common characteristics, attitudes and behaviours among the foreign visitors of the two museums. This is far from the truth in the case of the two sets of national visitors. For instance, the right-hand part of Figure 3, reporting the Padua and Seville shares of foreign visitors by groups of age, clearly shows a peculiarly coincident pattern, with a bimodal distribution, where the higher values are picked up by the 18-24 and the 45-54 age groups. Quite differently, Seville national visitors show a symmetrical distribution (left panel of Figure 3), with the highest percentages corresponding to the central age brackets of 25-34 (the modal value) and 35-44. On the other hand, in Padua there is a left-skewed distribution with the mode coinciding to the 55-64 age group. Such a dissimilarity in the age structure of local visitors, with a gap of thirty years between the most represented age groups in the two museums, could also be attributed to the different admission conditions —free entrance in Seville, 12 euros in Padua. In other words, it is reasonable to assume that, other things being equal, the willingness to pay for cultural leisure opportunities by young adults with family responsibilities and children is rather low, and therefore a relatively high ticket prices can act in their case as a crucial barrier to attendance. In such a situation, even in the presence of a latent demand, an interest in participation by such marginal consumers has a higher probability of being converted into actual participation only in the case of free admittance (Steiner, 1997).

**FIGURE 3**  
Visitors by age group (%).



Source: Our data.

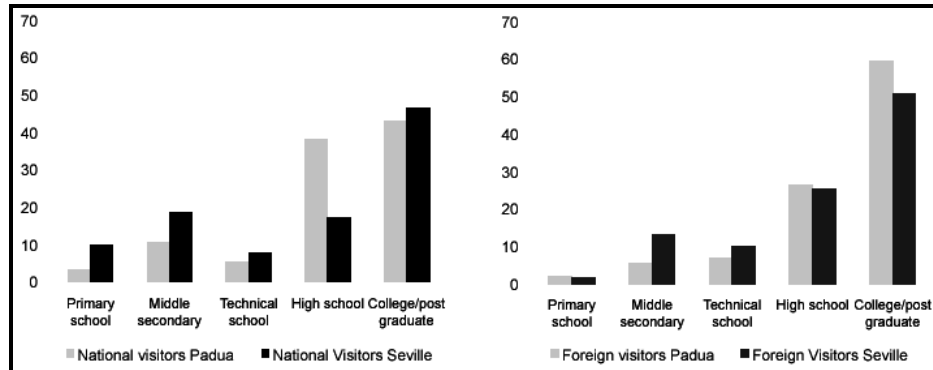
Such an assumption is in accordance with the view that increased entrance fees can not only deter the demand, but moreover change its social composition (Kirchberg, 1998: 10). Been et al. (2002: 9) report the results of the experiment started by the Louvre management in 1996, with free access on Sunday once a month. In this regard, it is relevant the higher attendance scored by French residents (+130 percent) in free days and the higher percentage of young visitors (between 15 and 25 years old) and families with small children.

As far as the level of education is concerned, in Figure 4 we can easily recognise the similarity in the two strongly left-skewed distributions of foreign visitors in both cities, with an overwhelming presence (50-60 percent) of people holding a tertiary education degree (college or post-graduate). Again, national visitors (left panel) show some divergent traits with respect to this structure and, above all, a few idiosyncrasies, such as the relatively high share of people with lower education attainment (primary school or middle-secondary) in Seville and the strong presence of high-school diploma holders in Padua.

Given the importance that both the theoretical and the empirical literature assign to the precocious and repeated exposure to art and cultural goods for the processes of taste acquisition and taste reinforcement,<sup>11</sup> some interesting considerations can be derived from Figures 5 and 6, concerning, respectively, the number of museums or exhibitions visited by the interviewees in the previous 12 months, and their age at their first visit of a museum.

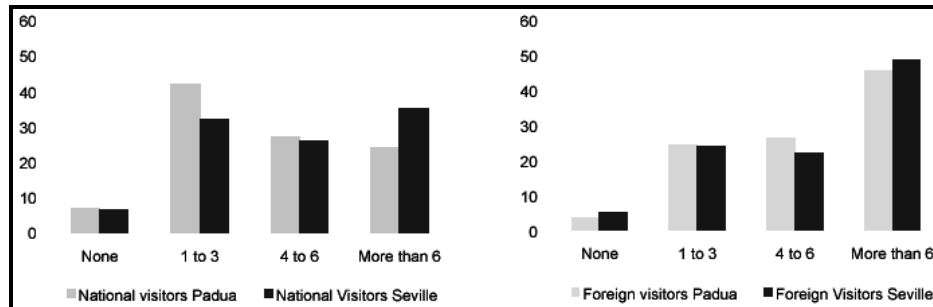
<sup>11</sup> Classical references for the taste development and the human capital approaches are, respectively, McCain (1977, 1995) and Stigler and Becker (1977). For empirical applications to the field of museum attendance, see, among others, Gray (1998), and to the performing arts, Morrison and West (1986) and Borgonovi (2004).

**FIGURE 4**  
Visitors by level of education (%).



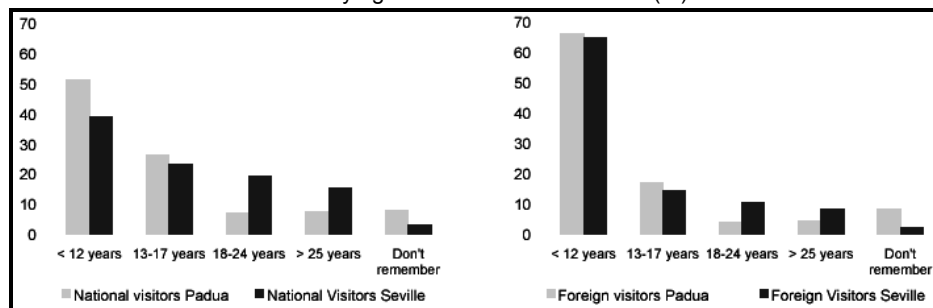
Source: Our data.

**FIGURE 5**  
Visitors by number of museums/exhibitions visited in the last 12 months (%).



Source: Our data.

**FIGURE 6**  
Visitors by age at first visit of a museum (%).

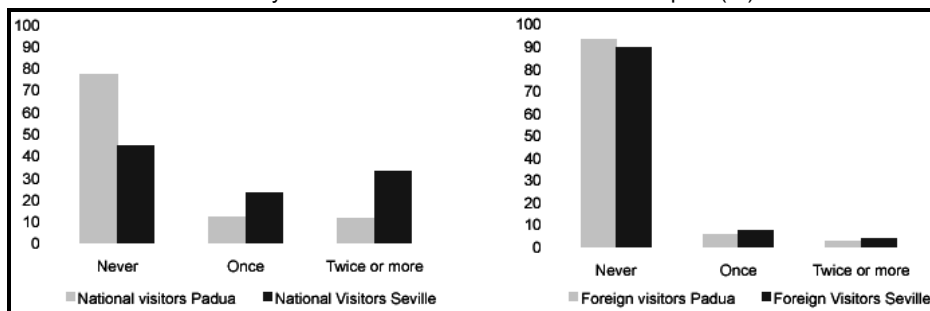


Source: Our data.

The right panels of Figures 5 and 6 show that the two museums' foreign visitors are strongly museum-oriented in their cultural consumption behaviour (48.7 percent of them in Seville and 45.7 percent in Padua have visited more than six museums or exhibitions in the previous year) and "early birds": two thirds of them (66.2 percent in Padua and 64,6 percent in Seville, respectively) recall having first visited a museum when they were less than 12 years old.

When it comes to national visitors, their assiduousness in museum visiting is clearly lower, especially in Padua (with a modal value of 42.1 percent in correspondence with the answer 1-3 museums), while their distribution as to the age of first exposure does not show the extreme right-skewedness of the foreign segments of visitors. This is particularly evident in the Seville case, where late joiners represent almost 35 percent of the sample (19.4 percent being in the 18-24 age bracket and 15.4 percent in the over 25 group).

**FIGURE 7**  
Visitors by number of visits to the museum in the past (%).



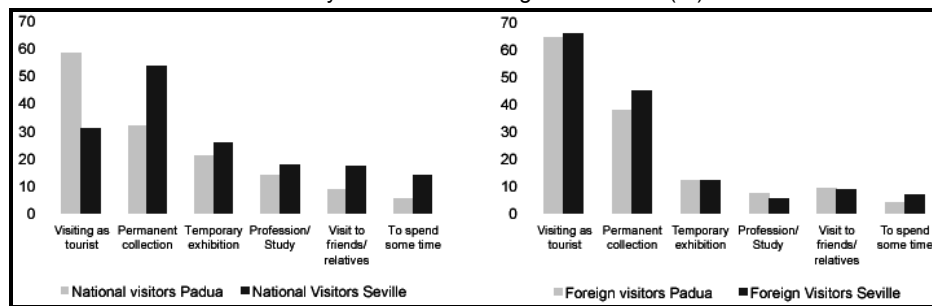
Source: Our data.

In terms of visitors' behaviours, reasons and evaluations, the two museums confirm a pattern of similarities among foreign visitors, and dissimilarities among national ones. As expected, the right panel of Figure 7 shows the almost negligible level of repeated visits, which is typical of foreign visitors to both museums. Their overwhelming majority (89.2 percent in Seville, 92.9 percent in Padua) has never visited the museum before. However, remark that while a quite similar behaviour emerges also for the domestic visitors to the Padua museum (76.9 percent of which are at their first visit), an opposite pattern stands out in the Seville museum, where almost 56 percent of national visitors have already visited the Museo de Bella Artes at least once, and almost one third (32.8 percent) have done it twice or even more times.

Such findings are in line with the information presented in Figure 8, where the share of interviewees who adduced a generic tourist visit to the city as their reason for visiting the museum represents almost two thirds for foreign visitors (63.8 percent in Padua, 65.3 percent in Seville). It is only slightly lower for national visitors

to the Padua museum (58.1 percent), while it drops by one half to only 30.9 percent for the domestic visitors to the Seville museum. This difference has an obvious counterpart—and find its explanation—in the already recalled circumstance that local residents represent a little more than 5 percent in Padua, while being almost one quarter of total visitors in Seville (see Figure 2).

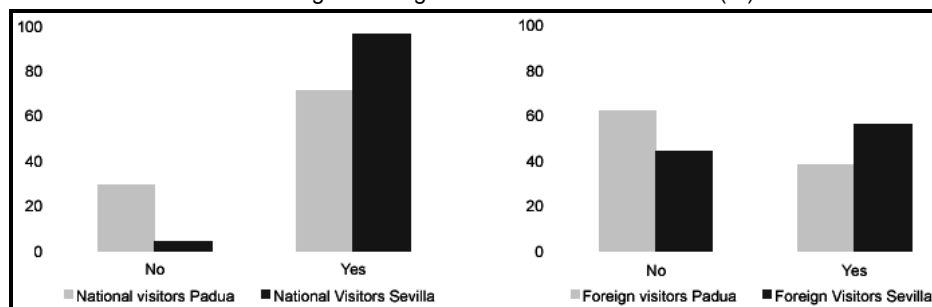
**FIGURE 8**  
Visitors by reasons for visiting the museum (%).



Source: Our data.

Finally, Figure 9 illustrates the percentages of interviewees stating their intention to visit the same museum again in the future. Notice that the declared loyalty generating potential demand for the Museo de Bellas Artes is significantly higher than for the Padua one for both foreign and national visitors. Indeed, our data show the existence of quite a large gap—about twenty percentage points—for both the first group (61.9 percent of foreigners declare that they do not intend to return to the Padua museum, while only 43.9 percent express such a negative attitude in the Seville case) and for the second group (28.9 percent of Italian visitors do not intend to visit again the Padua museum, while a mere 3.9 percent of Spanish visitors have the same negative intention with regard to the Museo de Bellas Artes).

**FIGURE 9**  
Visitors willing to visit again the museum in the future (%).



Source: Our data.

## 5. ECONOMETRIC ANALYSIS OF ASSIDUOSNESS, VISIT SATISFACTION AND MUSEUM EXPOSURE

In order to identify the determinants of intended repeated visits (or declared loyal or assiduous behaviour) by visitors in the two museums, we applied a probit model, where the dependent (binary) variable is the declared “Intention to visit the same museum again in the future”.

The explanatory variables are grouped into four main categories: socio-demographic, general/previous exposure, motivational, and visit experience evaluation. The socio-demographic factors relate to a set of objectively observable individual characteristics. The exposure factors are connected with the individual's general involvement with museums, and with her past and recent attendance patterns. The motivational factors refer to the different reasons provided by the individual for visiting the museum. Finally, the experience evaluation factors include the overall degree of satisfaction with the visit, as stated by the respondent, and the expressed judgment about the various services offered at the museum, as experienced by the visitor.

More specifically, the probability  $Pr$  that one individual  $i$  states the intention to repeat her visit  $v$  is defined as:

$$Pr_i\{v\} = f_i(S_i, V_i, M_i, E_i)$$

where:

$S_i$  is a vector of socio-demographic individual dummies (age, level of education, gender, place residence). Given the existing empirical evidence between *attendance* rates and higher age and educational levels and being a female,<sup>12</sup> we could expect similar patterns for *loyalty*, especially if we assume an addictive behaviour (Becker, 1996). We also expect a negative correlation between the intention to repeat the visit and the higher direct travel cost and opportunity cost of time, which characterise longer distance travellers (Ashworth and Johnson 1996: 72). With a view to capture such an effect, we included among the explanatory variables a series of dummies controlling for local, provincial, regional, other national and foreign residence. We consider such dummies as proxies for the distance to be travelled to reach the museum, and the associated direct and opportunity costs.<sup>13</sup>

<sup>12</sup> As a general reference for the many almost unanimous contributions in this sense, see Gray (1998 and 2003) and Heilbrun and Gray (2001) and, in particular for Spain, Fernández Blanco and Prieto Rodríguez (2004).

<sup>13</sup> Following also the results reported by Ashworth and Johnson (1996: 75-77), where the estimation of separate functions for “trippers” and “tourists” turn out not to be significantly different from estimating a single function for all respondents, in our final analysis we have chosen not to present different estimates for national residents and foreigners. Moreover, in the case of Padua, some pre-

- $V_i$  is a vector of exposure dummies (age at first visit, number of visits to museums/exhibitions in the last 12 months, number of previous visits to the specific museum). Similarly to the previous vector of dummies, exposure and accumulated knowledge, appreciation and taste development should be positively correlated with the willingness to return.
- $M_i$  is a vector of motivational single dummies specifying one or more reasons for visiting this museum (Tourism; Interest in the permanent collection; Interest in temporary exhibition(s); Professional/Study interest; Visiting friends/relatives; Leisure). In this regard, we expect “looser” motivations—such as leisure, tourism or social occasions—to have a weaker or even negative impact on the expressed intentions of repeating the visit, compared to more solid reasons, such as research or study.
- $E_i$  is a vector of variables of experience evaluation, including a group of dummies of overall satisfaction (no satisfied/somewhat satisfied; quite satisfied; very satisfied) and a variable indicating the number of services<sup>14</sup> which, according to the individual  $i$ , should require improvements.<sup>15</sup> This count variable ranges from zero (= no improvements needed, i.e. the level of service is completely satisfactory) to 9 (all listed aspects should be improved). Following Jones and Sasser (1995) and Harrison and Shaw (2004), extreme levels of satisfaction or dissatisfaction are particularly supposed to influence, in a favourable or unfavourable way, loyalty. Similarly, the dissatisfaction with a higher number of services, signalling a lower experienced utility, should have a negative impact on the dependent variable.

The results of the estimates, carried out separately with the same model for the two cases, are presented in Table 1. The coefficients indicate whether the presence of a certain characteristic (or behaviour, valuation, etc.) increases the probability of declaring one's willingness to visit again the same museum in the future. By dis-

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liminary estimates showed almost identical results in terms of significance of the variables for the two groups.

<sup>14</sup> The arrangement of the collection; the exhibition path; areas for pausing/resting; information material and brochures; explicative panels; availability of multilingual panels; guided tours; opening hours; book/shops.

<sup>15</sup> The reason for this distinction is that the level of satisfaction with a museum visit may be influenced—other than by those aspects or elements of the service which are somehow in the provider's control—by other factors, such as social-psychological states (mood, disposition, needs), extraneous events such as climate or social group interactions during the visit (Baker and Crompton 2000: 787), and, obviously, by the intrinsic quality and value of the exhibits or the admission price. From a different perspective and with a different methodology, the appreciation of a museum's services is also indirectly analysed by Sanz, Herrero and Bedate (2003): by applying a contingent valuation methodology, the authors estimate the monetary value attached to a Spanish museum by both visitors and residents, taking into account the effects of a series of socio-economic variables on their expressed willingness to pay for that institution's preservation and maintenance.

tinctively applying the model to the two museum datasets, we implicitly controlled also for the pricing effects of two different admission schemes.

Notice that the majority of socio-demographic variables we control for —age, level of education, gender— do not show any significant impact (with only two positive exceptions in the case of young and highly educated visitors of the Padua museum). The only variable which jointly shows a negative and highly significant impact is residence. That is, a foreign visitor of Padua or Seville will barely declare her intention to visit again with respect to local residents. Even if to a lesser extent, this is also the case of Padua visitors coming from other Italian regions.

Surprisingly, the precociousness or lateness in the exposure to museum attendance do not seem to have any impact on the probability to repeat a visit to any of the museums (with the negative exception of Seville visitors 13 to 17 years old, with respect to the youngest visitors). Nevertheless, the fact of being average, strong or very strong consumers of museums or exhibitions in general, does influence the willingness to return to the same museum, even if it only applies to Seville. Rather noteworthy are also the results concerning the impact of previous visits to the same museum. The loyalty behaviour is highly significantly correlated to having visited the same museum once (in both Padua and Seville) or more than once (in Padua only). In other words, the assiduousness in attendance seems to result, other things being equal, in a process of progressive acquaintance with the individual museum collections and environment, which is typical of addictive consumption behaviour.

Among the possible reasons for visiting the Padua museum, the presence of a peculiar interest in the permanent collection and for professional or study reasons plays a crucial role. This result seems to be mirrored by the Seville museum audience, where the occasion of a generic/tourist visit to the city exerts a negative impact on their willingness to visit again.

The overall level of satisfaction emerges as an important determinant of the willingness to visit again or not. In the Padua case, the negative coefficient for negative or low levels of satisfaction and the positive coefficient for a very satisfactory visit have a similar absolute value and are both highly significant. Such a result is in line with the hypothesis put forward by Jones and Sasser (1995) and taken up by Harrison and Shaw (2004), that is extreme levels of satisfaction (high or low) are rather associated (in a favourable or unfavourable way) to the intention to visit again. In the Seville case, we obtain a similar, even if less clear-cut result, given that very satisfied visitors are not significantly willing to visit again, while dissatisfied visitors behave like the Padua ones. Presumably, the overall dissatisfaction of the Seville museum captures also the effect of the variable “required improvements”, since only in the Padua case we also detect a significantly negative, even if not so high, impact by this variable. Still, (at least Padua) visitors can distinguish some inadequacy in the single aspects of the museum service components, which affects their willingness to visit again. This supports the appropriateness of separately taking into account the “over-

all satisfaction” and the “service elements” evaluation, when trying to assess the determinants of consumers’ loyalty.

## 6. CONCLUSIONS

This empirical study constitutes a first attempt in terms of international comparison of the socio-demographic, exposure, motivational, behavioural and valutational patterns of the publics of two similar fine arts museum—respectively Padua and Seville—by means of a common investigation tool and methodology analysis.

A quite strong heterogeneous portrait emerge, opposing local to non local visitors for both the Spanish and Italian museums, confirming our hypothesis of the existence of stronger similarities—across a wide range of characteristics, attitudes, and behaviours—among the groups of foreign visitors (to both museums) than among the national groups of visitors.

The econometric analysis has highlighted the determinants of visit assiduousness in the two museums. The results show that the overall level of visit satisfaction constitutes an important determinant of the willingness to visit again. Moreover, in the Padua case, we could detect a significantly negative influence of unsatisfactory museum services, possibly calling for improvements.

Even if they do not represent the majority of visitors, the results confirm that residents tend to repeat their visits more than the others, in particular in the case of Padua. Here, specific reasons for visiting, such as the interest in the permanent collection and professional and study grounds, are also positively associated with loyalty. Ultimately, the fee deterrent exerted by the charging museum seems to select stronger motivational effects on local and/or professional visitors than on tourists, both foreign and national.

**TABLE 1 (to be continued)**  
Regression results (probit coefficients) for loyalty determinants.

Dependent variable: Intention to visit the same museum again in the future Independent variables:	Musei Civici degli Eremitani PADUA	Museo de Bellas Artes SEVILLE
Age: <i>reference group: 45-54 years</i>		
< 18 years	0.776** (2.29)	0.408 (0.58)
18-24 years	0.262 (1.48)	-0.399 (1.35)
25-34 years	-0.076 (0.46)	0.230 (0.80)
35-44 years	-0.015 (0.10)	0.024 (0.09)
55-64 years	0.018 (0.13)	-0.268 (0.96)
65+ years	0.058 (0.35)	-0.138 (0.35)
Education: <i>reference group: Middle-secondary school</i>		
No education/primary school	-0.088 (0.28)	-0.739 (1.42)
Technical/professional school	0.389 (1.46)	-0.043 (0.12)
High school	0.203 (0.96)	-0.390 (1.31)
College/Post graduate	0.396* (1.88)	-0.163 (0.58)
Female	-0.095 (1.02)	-0.125 (0.72)
Gender: Female: ( <i>reference group: Male</i> )	-0.095 (1.02)	-0.125 (0.72)
Residence: <i>reference group: Municipal area</i>		
Province	0.304 (0.77)	0.336 (0.64)
Region	0.338 (1.06)	0.463 (1.03)
Other regions of the country	0.510* (1.83)	0.154 (0.36)
Abroad	1.274*** (4.49)	1.061*** (3.06)
Age at first visit to a museum: <i>reference group: &lt;12 years</i>		
13-17 years	0.016 (0.13)	0.397* (1.70)
18-24 years	0.180 (0.87)	0.470 (1.55)
25+ years	0.094 (0.45)	0.161 (0.54)
do not now/remember	0.245 (1.37)	0.658 (0.85)

Note: Absolute values of z-statistics are in parentheses. \*\*\* denotes coefficients significant at 1% level, \*\* at 5%; \* at 10%.

**TABLE 1 (continued)**  
Regression results (probit coefficients) for loyalty determinants.

Dependent variable: Intention to visit the same museum again in the future Independent variables:	Musei Civici degli Eremitani PADUA	Museo de Bellas Artes SEVILLE
No. of museums/exhibitions visited in last 12 months: <i>ref. group: None</i>		
1-3	0.245 (1.15)	0.805** (2.30)
4-6	0.251 (1.14)	0.793** (2.25)
7+	0.342 (1.55)	0.761** (2.16)
No. of previous visits to the specific museum: <i>reference group: None</i>		
1	0.499*** (2.87)	0.968*** (2.61)
2+	0.748*** (2.84)	0.120 (0.35)
Reasons for visit:		
Interest in permanent collection	0.403** (3.70)	0.121 (0.59)
Interest in temporary exhibition	0.047 (0.34)	0.343 (1.25)
On occasion to a visit to friends/relatives	0.163 (0.91)	-0.115 (0.36)
Tourism	0.016 (0.15)	-0.414* (1.88)
Leisure	-0.013 (0.06)	0.035 (0.11)
Professional/study interest	0.574*** (3.25)	-0.241 (0.73)
Overall visit satisfaction: <i>reference group: Quite satisfied</i>		
No satisfied /somewhat satisfied	-0.824*** (3.68)	-0.821** (2.53)
Very satisfied	0.924*** (8.97)	0.266 (1.39)
Required improvements	-0.073* (1.76)	-0.100 (1.26)
No. of observations	1,027	384
LR $\chi^2$ (33 d.f.)	381.43	128.82
Prob > $\chi^2$	0.000	0.000
Pseudo $R^2$	0.270	0.294

Note: Absolute values of z-statistics are in parentheses. \*\*\* denotes coefficients significant at 1% level, \*\* at 5%; \* at 10%.

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## APPENDIX

**TABLE A.1**  
Descriptive statistics for the dataset regarding the Padua Museum.

Variable	Mean	Std. Dev.	Min	Max
Age < 18 years	0.035957	0.186274	0	1
Age 18-24 years	0.104956	0.306646	0	1
Age 25-34 years	0.125364	0.331293	0	1
Age 35-44 years	0.169096	0.375019	0	1
Age 45-54 years	0.214772	0.410864	0	1
Age 55-64 years	0.236152	0.424923	0	1
Age 65 or more years	0.113703	0.317604	0	1
No education/primary school/	0.026290	0.160075	0	1
Middle-secondary school	0.080818	0.272688	0	1
Technical/professional school	0.059396	0.236480	0	1
High school	0.323272	0.467953	0	1
College/Post graduate	0.510224	0.500139	0	1
Female	0.535471	0.498983	0	1
Residents in the municipal area	0.051506	0.221136	0	1
Residents in the province	0.027211	0.162777	0	1
Residents in the region	0.069971	0.255222	0	1
Residents in other regions of the country	0.359572	0.480108	0	1
Foreigners	0.491740	0.500175	0	1
First visit to a museum: < 12 years	0.586978	0.492616	0	1
First visit to a museum: 13-17 years	0.216715	0.412207	0	1
First visit to a museum: 18-24 years	0.055394	0.228858	0	1
First visit to a museum: 25 or more years	0.059281	0.236264	0	1
First visit to a museum: do not know/remember	0.081633	0.273937	0	1
Museums/exhibitions visited in last 12 months: none	0.052478	0.223098	0	1
Museums/exhibitions visited in last 12 months: 1-3	0.333333	0.471634	0	1
Museums/exhibitions visited in last 12 months: 4-6	0.267250	0.442739	0	1
Museums/exhibitions visited in last 12 months: > 6	0.346939	0.476228	0	1
Never visited this museum	0.847425	0.359753	0	1
Visited once	0.085520	0.279790	0	1
Visited 2 or more times	0.067055	0.250240	0	1
Motive for visit: interest in permanent collection	0.342080	0.474637	0	1
Motive for visit: interest in temporary exhibition	0.164237	0.370671	0	1
Motive for visit: in connection to a visit to friends/relatives	0.086492	0.281226	0	1
Motive for visit: visiting the city as a tourist	0.609329	0.488138	0	1
Motive for visit: just wanted to spend some time	0.043732	0.204597	0	1
Motive for visit: profess./study interest in the museum	0.104956	0.306646	0	1
No satisfied /somewhat satisfied	0.068999	0.253576	0	1
Quite satisfied	0.544218	0.498283	0	1
Very satisfied	0.386783	0.487250	0	1
Required improvements	1.396501	1.182816	0	6

**TABLE A.2**  
Descriptive statistics for the dataset regarding the Seville Museum.

Variable	Mean	Std. Dev.	Min	Max
Age < 18 years	0.035088	0.184233	0	1
Age 18-24 years	0.157895	0.365100	0	1
Age 25-34 years	0.200501	0.400878	0	1
Age 35-44 years	0.225564	0.418478	0	1
Age 45-54 years	0.185464	0.389161	0	1
Age 55-64 years	0.135338	0.342514	0	1
Age 65 or more years	0.060150	0.238064	0	1
No education/primary school/	0.057789	0.233638	0	1
Middle-secondary school	0.158292	0.365474	0	1
Technical/professional school	0.087940	0.283564	0	1
High school	0.211055	0.408571	0	1
College/Post graduate	0.484925	0.500402	0	1
Female	0.511278	0.500500	0	1
Residents in the municipal area	0.236181	0.425269	0	1
Residents in the province	0.052764	0.223843	0	1
Residents in the region	0.082915	0.276100	0	1
Residents in other regions of the country	0.140704	0.348153	0	1
Foreigners	0.487437	0.500471	0	1
First visit to a museum: < 12 years	0.515228	0.500404	0	1
First visit to a museum: 13-17 years	0.190355	0.393081	0	1
First visit to a museum: 18-24 years	0.149746	0.357276	0	1
First visit to a museum: 25 or more years	0.119289	0.324541	0	1
First visit to a museum: do not know/remember	0.025381	0.157479	0	1
Museums/exhibitions visited in last 12 months: none	0.058824	0.235596	0	1
Museums/exhibitions visited in last 12 months: 1-3	0.281330	0.450224	0	1
Museums/exhibitions visited in last 12 months: 4-6	0.240409	0.427880	0	1
Museums/exhibitions visited in last 12 months: > 6	0.419437	0.494099	0	1
Never visited this museum	0.660000	0.474302	0	1
Visited once	0.155000	0.362358	0	1
Visited 2 or more times	0.185000	0.388784	0	1
Motive for visit: interest in permanent collection	0.493734	0.500588	0	1
Motive for visit: interest in temporary exhibition	0.190476	0.393170	0	1
Motive for visit: in connection to a visit to friends/relatives	0.127820	0.334308	0	1
Motive for visit: visiting the city as a tourist	0.476191	0.500060	0	1
Motive for visit: just wanted to spend some time	0.102757	0.304022	0	1
Motive for visit: profess./study interest in the museum	0.117795	0.322769	0	1
No satisfied /somewhat satisfied	0.067839	0.251786	0	1
Quite satisfied	0.552764	0.497834	0	1
Very satisfied	0.379397	0.485848	0	1
Required improvements	1.270000	1.187698	0	6