Museums' accessibility for senior citizens: Some evidence from Italy

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Abstract

This paper uses the information on elderly visitors, drawn from a survey carried out by the Italian National Institute of Statistics (ISTAT) in 2018, to identify the factors that facilitate or hinder senior tourists' visits to museums. The resulting evidence captures how the accessibility of museums impacts the share of elderly visitors who have access problems and higher need of assistance and, therefore, provides useful information to improve cultural supply. The econometric analysis shows some significant relationships between the dependent variable, namely, the share of senior visitors on the total visitors, and the dummy variables employed as regressors indicating the existence of free admission for a certain category of visitors who have a problem of access, free admission for accompanying person, the presence of communication/promotional campaigns aimed at seniors visitors, the presence of an on-line catalogue, and support for visitors with access difficulties. Monetary reasons are not a major hindrance to enjoy cultural sites. The study further outlines certain aspects that should be taken into account to increase senior citizens' participation in museum activities.

Keywords: accessibility; museums; elderly visitors; Tobit model; Sicily.

Citation: Giammanco, M.D., Gitto, L. and Ofria, F. (2022). Museums' accessibility for senior citizens: Some evidence from Italy. *European Journal of Tourism Research* 31, 3116.

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Introduction

The relevance of the ageing societies and disability themes is growing among tourism scholars, as both the demand and supply of this industry are widely impacted by them. In this perspective, accessible tourism is a topic of ever-increasing importance (Darcy, 2010). Based on the premise that cultural activities should be open to everybody, accessible tourism endeavours to completely integrate and include citizens with certain specific needs such as people with disabilities and aged people (Alén *et al.*, 2012). Naturally, the older the population the higher the number of people needing assistance (Brenna and Gitto, 2016; Verropoulou and Tsimbos, 2017; WHO, 2021). Additionally, for a disabled person, one's personal experience of visiting cultural sites (WHO, 2001a, 2001b) has to balance a less than optimal health status and the obstacles posed by the environment. Since elderly people are at risk of exclusion from travelling and visiting touristic sites (Burnet and Baker, 2001), the issue of accessibility becomes fundamental for them as reduced accessibility determines marginalization (Alén *et al.*, 2012).

Barriers may also be imposed by the social environment that does not recognize among social issues ageing and disability (Darcy, 2010). An investigation concerning the environmental barriers and enablers of senior tourism may, therefore, throw some light on possible ways to reduce the burden on the aged population. An example of potential barriers reduction is suggested by Cavapozzi and Zantomio (2021) in a study carried out on a large Italian population dataset. The authors argue that impediments for senior tourists depend on a low socioeconomic status and disabilities that could regard ageing people. In the latter case, however, the obstacles can be overcome by travelling with a partner, who may act as a caregiver. The awareness that barriers are not absolute poses an interesting question: is it possible to detect some characteristics of a cultural site that can help to generate a barrier-free environment for the senior visitors? The present contribution aims at suggesting an answer using a case study related to Sicilian cultural institutions.

In Sicily, there are 261 cultural attractions (183 of which are museums), distributed, although unequally, across the nine Sicilian provinces (ISTAT, 2018). Overall, in 2018, 7.6 million people visited Sicilian cultural institutions, the most being located in the provinces of Palermo, Catania and Messina (ISTAT, 2018). A preliminary investigation carried out for Sicily (Giammanco *et al.*, 2022) suggests, in accordance with the relevant literature (see among others, Eichhorn and Buhalis, 2011), that one of the main barriers for elderly/people with disabilities to visit cultural sites is physical accessibility, due to the difficulties in reaching a cultural site; further, an old/disabled person might need to be accompanied by someone.

Moreover, the lack of accurate and specifically tailored information to access and use tourism facilities may be a hindrance to accessible tourism as well (Williams *et al.*, 2006; WHO, 2016). This may be a problem in Sicily: while the region relies on tourism as an economic resource, given the richness and scope of its cultural heritage, it lacks a Regional Plan devoted to disability and people in need of assistance, and no detailed information is provided about the accessibility. Hence, a senior citizen who is willing to visit a cultural institution, often does not, because of some factors that create an uncomfortable environment. Here, the analysis has focused, in particular, on museums, based on the reflection that an older person might prefer to visit such cultural institutions because of the higher comfort offered to a visitor needing assistance in comparison with other cultural institutions as, for example, an archaeological park.

This note is organized as follows: the next section describes the case study, the methodology of analysis and the data source; section 3 presents and discusses the results of the empirical analysis; some final considerations and insights for further analysis will conclude the contribution.

Data and methods

The present analysis uses information available on elderly visitors to museums in Sicily, retrieved by the “Survey on Museums and similar institutions” carried out by the National Institute of Statistics (*Istituto Nazionale di Statistica* – ISTAT) in 2018. ISTAT survey has a census nature: it has been realized through online questionnaires answered by 5,688 directors of museums and other cultural institutions, both public and private, open to visitors in 2018. The questionnaire elicits information about the modalities of access and visits, the structures that can support the visit (braille signs, ramps, elevators, equipped bathrooms, etc.), the activities organized for the public. Although the ISTAT survey included data on different institutions, the empirical analysis has focused on museums, which attracted about one third (31.44%) of elderly visitors (i.e. people needing assistance).

To investigate the use of such cultural institutions by elderly people, a Tobit model (Tobin, 1958), whose dependent variable is the share of senior visitors over the total number of visitors, was developed. The Tobit model has been employed in other tourism studies. For example, Deng *et al.* (2020) studied the impact of the high-speed railway on tourism, while Pekovic *et al.* (2019) applied a Tobit model to analyse the role of different animator competencies (such as patience, personal skills, qualification, etc.) on determining tourists’ satisfaction.

In the Tobit model, the dependent variable Y is a censored version of a variable Y^* not directly observable: in the observed sample, the share of senior visitors over the total number of visitors has a lower limit of 5 and an upper limit of 80, so that data is censored. The specification of the model is:

$$Y_i = \begin{cases} y_i^* & \text{if } y_i^* > 0 \\ 0 & \text{if } y_i^* \leq 0 \end{cases} \quad (1)$$

The underlying idea is that Y , the dependent variable, is influenced by some characteristics, intrinsic to each museum: free entrance for elderly and accompanying people; the existence of an internet website containing information related to the institution itself; implementation of communication campaigns aimed at promoting the site among the elderly; availability of support to allow people with physical handicaps to enjoy the visit despite their limitations. The selection of regressors has taken into account these peculiarities, focusing on the possible hindrances faced by elderly tourists. Hence, the regressors included in the estimation, related to museums, are:

- free admission for certain categories of visitors (a dummy variable assuming value = 1 if the free entrance is available for disabled tourists and = 0 otherwise);
- a dummy variable related to free admission for accompanying persons;
- a dummy variable related to the implementation of promotional and communication campaigns aimed at elderly visitors (Veall *et al.*, 2017; Corona, 2021);
- a dummy variable related to the availability of an online catalogue of the works on display;
- a dummy variable related to the support offered for visitors with access difficulties is offered (braille indications, audioguides, mobile phone applications, etc.).

Results and discussion

Table 1 presents the descriptive statistics of the the relevant variables employed in the analysis.

Table 1. *Descriptive statistics*

Variables	Mean	Standard deviation	Min	Max
Museum free entrance	0.637	0.483	0	1
Museum free accompanying people	0.597	0.492	0	1
Museum communication aimed at elderly	0.516	0.504	0	1
Museum on-line catalogue	0.144	0.352	0	1
Museum structures for people needing assistance	0.595	0.492	0	1

Source: own elaborations.

The great majority of museums (63.7%) guarantees a free or reduced entrance to elderly visitors, and almost 60% of them extend this to their accompanying people; more than 51% have implemented communication campaigns directed at elderly visitors but only 14.4% have a catalogue accessible online, although this factor may constitute an attractive aspect. Table 2 reports the Tobit model estimation results.

Table 2. *Estimation results*

Dependent variable: share of elderly visitors over total visitors	Coefficient	Standard error
Museum free entrance	8.306	6.137
Museum free accompanying people	-12.234**	5.524
Museum communication aimed at elderly	12.965***	4.684
Museum on-line catalogue	9.883**	5.497
Museum structures for people needing assistance	5.643	6.946
Constant	26.700***	6.037
Sigma	16.747	1.608

Number of obs. = 55

F (5, 50) = 2.35

Prob > F = 0.0543

Log pseudolikelihood = -230.34401

Pseudo R² = 0.0197

*** significant at at p<0.001

** significant at p<0.05

Results show a positive, although not significant, correlation between the free entrance and the share of elderly people visiting the institution. This could confirm what is suggested by the relevant literature: while money matters (Cavapozzi and Zantomio, 2021), monetary reasons may not be the main hindrance to senior tourists. The negative and significant correlation with the possibility to enjoy free entrance for accompanying people calls for further investigation; it may suggest that the elderly people visiting museums are in quite good health. Nevertheless, other reasons may play a role, such as an entry ticket that might not be expensive or the high importance of the museum that could justify paying for the access of the accompanying person.

Communication strategies targeted at senior tourists are positively correlated with the dependent variable and have a high regression coefficient. This supports the notion that information is valued and necessary for the elderly (Eichhorn and Buhalis, 2011) and fundamental in programming a visit to a cultural site. The senior tourist knows what she/he needs and the provision of information concerning the characteristics of the institution may lower uncertainty, increase efficiency and augment

intergenerational equality. It is interesting to note the positive impact on the online catalogue, suggesting that the search for information is not just limited to information on accessibility.

Conclusions

This note looked at possible correlates of the share of senior visitors in the total number of museum visitors in Sicily, to investigate the existence of hindrances and facilitators to senior tourism. The results suggest some ways to increase senior citizens' participation in the museum industry, evidencing the positive role of accessible information, be it targeted or general, in favouring their empowerment. As information is a dimension of accessibility (Darcy, 2010), and accessibility (Alén, 2012) is an element of quality, this should be considered when organizing cultural supply, as: "*We will be placed sooner rather than later in a scenario where terms such as accessible, barrier-free, universal, for all, etc., will stop being used, and talk only of quality tourism, that is offering a comprehensive service appropriate to each type of client, regardless of their particular conditions*" Alén et al., 2012, pp. 144-145).

The results also advocate that monetary reasons may not be the main obstacle to the enjoyment of cultural sites by aged people: in this sense, the evidence of a negative and significant correlation between the free entrance for accompanying people and the share of elderly visitors, together with the lack of significance of the variables related to disability, might signify that accompanying people are not necessary to visit a cultural site, so that elderly people are not encouraged by the circumstance that their caregivers do not pay the entrance ticket. This is in line with the "activity theory", which suggests that senior travellers are those who have access not only to a large amount of spare time but also to substantial financial resources (Nimrod, 2007; Cavapozzi and Zantomio, 2021). By shedding some light on the type of accessibility barriers to senior tourism arising from the supply-side, the present study can help policymakers to prioritize the spread of touristic information tailored to the senior citizens.

A limitation of the present study is the local nature of the data used: the relevance of its findings would be higher if the same analysis was carried out at the national level. This is the next immediate research direction: gathering data allowing comparison among different regions and countries. Another limitation stems from the nature of the data used to build the dependent variable. The data employed record an event (the visit to cultural sites) that has already occurred, therefore, they merely capture senior citizens' revealed preferences. From this follows that the econometric analysis performed may only suggest a causal link between elderly people's decisions to visit or not to visit a cultural site (their revealed preferences) and some characteristics of the museum services provided. To tackle with stated preferences a further development of the analysis should use disaggregated data, obtained through in-depth interviews investigating tourists' choices to allow them to disclose the diverse factors underlying their stated preferences.

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Received: 03/06/2021

Accepted: 15/09/2021

Coordinating editor: Stanislav Ivanov