

# Cultural participation in Italy

What are the factors influencing museums' attendance?



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### Abstract

The aim of this study is to analyze the reasons behind cultural participation related to museums in Italy. Cultural participation is indeed an important subject, widely investigated and especially related to the implementation of cultural policies. Studying cultural participation and most specifically museums' attendance in Italy can help to understand how to ameliorate Italian's access to museums and what are the main factors to focus on. Data are part of an extensive survey named "*Aspetti della vita quotidiana*" (daily life's aspects) by the Italian National Institute of Statistica (*Istituto Nazionale di Statistica - Istat*) in the year 2018. This data set is a valuable source to see if, how, and in which ways variables related to age, sex, education, geographical location and income influence the participation and non-participation of Italian museums. A negative binomial model is used to study this matter. Results show that education, sex, age and income influence the attendance of Italian museum in different ways. Moreover, this thesis invites future researches to focus on each of these specific matters at a national level in order to implement Italian cultural policies that take cultural access into account.

KEYWORDS: cultural participation, Italian museums' attendance, cultural policies, education, negative binomial model.

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# 1. INTRODUCTION

What is freedom for? Culture represents a form of individual expression that is a sort of bulwark for any democratic society. Culture is a representation of human engagement. Culture provides the opportunity to experience that we are independent human being. A song or a painting, a movie, a performance are ways of expression and ways to acknowledge ourselves, to inform us.

Cultural participation is not something just related to art, but it is especially something related to identity, social and economic matter. Cultural participation can be a key player in creating a democratic life and community, being a strong quality of life's indicator. Even if this subject is proved to be an important player for the development and wealth being of each country, different barriers make difficult for several people to have access to cultural consumption. Barriers related to financial matters, social integration issues, different level of education, minorities access, freedom of expression and cultural rights are some examples. Studying the factors that influence cultural participation is then crucial to find solutions and work for a future wider conception of it, reducing the barriers and implementing positive outcomes. Moreover, domestic policies and several projects operating at the European Union level work closely to guarantee cultural access to everyone.

Past researches already worked on the concept of cultural participation and attendance, focusing on different cultural thematic or at different scales. There are already quite a substantial number of cultural participation studies related to different cultural sectors and on the reasons behind the participation and non-participation of individuals. Speaking about the scale of past studies, several researchers worked on a cross-sectional comparison between countries or at a European level in order to study possible similarities and differences, with the aim to find common solutions and implement cultural participation's policies. Other studies focused on specific countries at a time and worked closely on specific limiting factors such as education, income, age and sex. In Italy, cultural participation levels are particularly depressed, especially among citizens with low income, low education and in the most disadvantaged areas of the country. Moreover, several sources showed that in 2018 there was a great discrepancy between cultural participation in the Northern and Southern part of Italy (Istat, 2019). Even if there has been a slightly higher level of cultural participation compared to the previous years (27,9 % - 0,8 % more than in 2017), 2 persons out of 3 in Italy did not visit a museum in the last 12 months (Istat,2019). This becomes even higher while referring to the main islands (Sicily and Sardinia) where 3 out of 4 persons never visited a museum in the past 12 months (Istat, 2019). This could be generally explained by the fact that the exercise of cultural activities by citizens presupposes physical and cognitive accessibility to public and private places and services, such as libraries, archives, theaters, museums, cinemas, concert halls, art galleries, places whose territorial distribution is uneven. But what does this mean specifically?

The research question for this thesis is:

**What are the main factors influencing cultural participation, and more specifically museums' attendance in Italy?**

Following this, the main aim of this thesis is to focus on a specific country, Italy and, while focusing on museums, a quantitative research on different factors influencing museums' attendance is presented.

Considering the magnitude of Italian cultural heritage, it is therefore surprising to find that this topic has been scarcely investigated by the literature. Some studies have analyzed museums' attendance for specific Italian museums, but there is no empirical investigation of the determinants of Italian museums' attendance that comprises the entire national territory. This study aims at contributing to fill this lacuna, by using a dataset taken from Istat (*Istituto Nazionale di Statistica*, National Institute of Statistics). In other European countries the detailed survey of citizens' practice and cultural participation is a direct task of the Ministry of Culture (Cicerchia, 2019). In Italy, this is partly managed by Istat, a public research organization providing official statistics for the country. Specifically, the organization provides some indications for culture, conducting a yearly and non-sectorial sample survey "Aspects of daily life" from where we can use some specific variables for our study.

Specifically, we used variables related to the age, sex, educational level, income, working conditions and geographical location to see their influence on museums' attendance consisting in the entry "Frequency of museums' attendance in the last 12 months" existing in the original dataset from Istat. The research is then made using a Negative Binomial model and using the software SPSS.

The thesis is structured as follow. First, chapter 2 includes past literatures related to cultural participation. Specifically, concepts such as cultural capital and most specifically the impact of education on cultural participation are analyzed. Moreover, chapter 2 continues analyzing past literatures related to factors such as income, age, sex and geographical matters related to cultural participation. Since the thesis is focusing on museums' attendance in Italy, chapter 2 analyses also past researches on Italy and on museums' attendance and it concludes considering as well the impact of digitalization on the matter. Second, chapter 3 describes the methodology used in this thesis. This includes information related to the data and to the National Institute of Statistics, from where the data have been taken. Moreover, chapter 3 shows the different expected results and relates them to the literature. To conclude, chapter 3 explains also how the data have been used, while running a negative binomial model.

Third, chapter 4 presents the final result of the regression and indicates and explains what specific variables influence museums' attendance. Finally, chapter 5 concludes the thesis not only showing how some specific age ranges, income variables and education levels are proved to be factors influencing museums' attendance, but it also presents the different limitation encountered, that could be a good starting point for future researches.

## 2. LITERATURE REVIEW

### 2.1 WHAT IS CULTURAL PARTICIPATION?

What is cultural participation? Attending a cultural event, consuming a cultural good through the media and the activities practiced by the artists are all part of a wide definition of it (Ateca-Amestoy, 2008). Consuming and producing art are then both part of the definition of cultural participation.

In this study, we will mainly focus on the cultural attendance aspect and on the main factors influencing it, museums' attendance in particular.

Why is this important? Cultural participation is clearly a synonym of cultural demand and consumer behaviors. Being able to depict the main factors leading to a certain type of participation and attendance in the Arts could increase the comprehension of the general social conditions of each country. This means that the participation and related attendance of cultural activities is not only part of each country's human capital, but it generates and nourishes as well feelings related to social inclusion. An inclusive society relates to the capacity of sharing values and norms in groups, gathering many different entities. Cultural participation can then strengthen tolerance and engage different individuals, making them work on the respect and acceptance of diversity, what the Council of Europe calls "creating a democratic culture" (Council of Europe, 2016).

Studies related to this topic could then ameliorate and implement cultural and educational policies, identifying underrepresented groups, implementing and designing initiatives or programs aiming at increasing their cultural attendance (Working group of Eu member states' experts, 2012). Moreover, topic-related policies help also in tackling access and participation matters and ensuring equal opportunities. The last issue (ensuring equal opportunities) could be directly related to the equality of the individual right to access cultural life. This right is given thanks to the absence of legal and institutionalized barriers to entry (O'Hagan, 2013). Nonetheless, equality of right does not guarantee an equal attendance to participate. O'Hagan (2013) referred to an equality of opportunity as the possibility to enable and encourage certain groups to attend/participate. This is exactly what

policies aim at, while speaking about giving access to cultural participation and it represents a very challenging work.

There are several factors that influence cultural participation as well as non-participation and the characteristics of access to Arts. It is quite difficult to find always common determinants for every country, nonetheless there are few past researches that focused on a cross-national perspective. If we consider Europe, Falk & Katz-Gerro (2016) aimed at identifying common determinants for cultural participation, especially focusing on the influence of demographic and socioeconomic characteristics. They were able to study the effects that factors such as education, income, gender and age, have on cultural participation in different European countries. Considering this European case, attained status characteristics (income, education ...) have a stronger impact on cultural participation rather than ascribed characteristics such as age and gender. Following their research, we can associate a high level of significance of income and education as first variables influencing cultural participation for this study. This means also that a highbrow cultured person consumes and participates more in cultural activities in general than a person coming from a different background.

A deeper analysis on past researches focusing on education, income and their effects on cultural participation would be useful to see how these variables affect different countries' cultural participation. Since our final aim is to focus on specifically the Italian case, the analyzed past researches mainly study one country or area at a time. The analysis of the literature enables to see how cultural participation is shaped by different variables in each country. For example, if in the research made by Falk & Katz-Gerro (2016), age and gender do not look like two main influencing factors of cultural participation. Other studies, however did not find the same. Magaudda & Santoro (2015) and Christin (2012) both showed a higher cultural participation for female compared to male. Moreover, in a country such as Italy there are great discrepancies in between age-range and cultural participation (Eurostat, 2017). This first brief example reveals the struggle while doing international comparison due to cultural, institutional and social differences between countries.

### *2.1.1. THE ROLE OF CULTURAL CAPITAL*

As already mentioned, everyone can potentially actively participate in culture, yet not everyone has the possibility to access it. The concept of cultural capital, firstly presented by Bourdieu et al., refers to the familiarity and capability to acquire specific skills belonging to a particular social class (Bourdieu et al., 1991). This leads to a sense of collective identity but also to a feeling of social inequality, since not everyone has access to these skills. The educational system, in particular, requires a certain level of cultural capital and thus it is sometimes of difficult access for lower- class people (Sullivan, 2001).

Bourdieu et al. (1991) suggested that museums' attendance is closely related to the educational level of visitors. Indeed, the consumption of culture is influenced by the knowledge and experience a person possesses, its cultural capital. The level of artistic competence a visitor has, it is then directly related to his/her capacity to interpret the social codes (schema) behind it. It is not strictly necessary to have a specific knowledge in history of art for example, but it is fundamental to know how to look for codes in the cultural domain. This structure works not only for museums but can be linked to other cultural domains such as music, theater or cinema. Only cultivated people could then enjoy visiting a museum, thus it is only thanks to past familiarization with the Arts that the experience is possible. As a consequence of that, school is one of the most important way to give the instruments to decode the message and gain cultural capital.

If education is at the core of cultural capital, other aspects of it have been discussed in past literatures. Willekens and Lievens (2016) show that also different family backgrounds together with a certain educational level give legitimacy to a higher level of cultural participation. Their studies concentrated on the Flanders region of Belgium, analyzing how cultural capital, economics factors, social factors and time pressure affected attendance on arts and heritage activities. Willekens and Lievens (2016) referred to cultural participation as a part of that cultural capital that "generates currency for the upper class" (Willekens & Lievens, 2016, p.52), especially acquired during socialization in the family and in the educational system, following the idea of Bourdieu that culture is accessible when a person is already cultivated. As a consequence of that, they estimated that people possessing less social and cultural capital will be less inclined to attend cultural activities. Katz-Gerro (2002) also analyzed the association between class and cultural consumption, investigating different countries, such as Italy, Israel, West Germany, Sweden and the US. The author underlined a very interesting fact related to a possible definition of highbrow culture. The definition of highbrow culture may change depending on the country. This is due to the fact that countries face different economic and social situations: something that we can relate to an upper-class element in a country can be seen as part of a medium-lower class to another (Katz-Gerro, 2002). This also explains the existence of different theories of association in between cultural practices and social class. Each country has different interests related to cultural activities and this can be further noticed looking at the difference of funds' allocations in each country. For example, speaking of Italy, Italian cultural policies historically invested in traditional high culture, especially because of its history and geography. In this specific case, most of the public funds spent for cultural issues are related to the preservation of cultural heritage and state interventions for the promotion of contemporary art are practically nil (Katz-Gerro, 2002).

In another very interesting paper by Katz-Gerro (2004), the concept of cultural capital is taken into account again as an important element for cultural consumption. Here, the author reflected on the fact that cultural taste highlights different types of social class but it is also a mean for the social groups to reproduce themselves in



future generations. While already different authors related cultural consumption to low or high-brow culture, Katz-Gerro (2004) showed how many different indicators and different types of cultural consumption play an important role in this discourse. Due to the variety of cultural goods, it is impossible to relate all of them to a certain high or low brow culture and thus to identify a precise categorization.

To conclude, we can then argue that cultural capital strongly influences cultural participation. This is specifically related to the educational level of a person, its family background and family habits that influence also future generations. Past studies focused especially on how cultural capital is linked to high-cultivated social classes. However, in recent years, studies and policies' works aimed at working on finding solutions to reach a broader audience and work for social inclusion. The main aim of these is in general to make cultural capital more accessible to everyone and work with education is one important point.

### *2.1.2. CULTURAL CAPITAL AND THE PRICE TO ATTEND*

If cultural capital is one main important factor influencing cultural participation, the price to attend a cultural event is also something that has been discussed in the past. Willekens and Lievenes (2016) investigated the impact of price and time on cultural participation. To this regard, price and time matters are important for visitors to attend a cultural activity, yet less important than the concept of cultural capital (Willekens and Lievenes, 2016). Indeed, these two factors show to have an important role only for individuals who already passed some threshold of cultural capital needed to attend cultural activities (Katz-Gerro, 2004). First, speaking about the financial matter, price tickets do not influence significantly the cultural consumption. Second, time constraints are strictly related to factors such as family and working obligations. These both factors will not influence visitors' participation since usually people plan in advance their cultural activities.

Some other studies investigated the impact of education on cultural attendance considering as well the price visitors have to pay in order to attend. O'Hagan (1996) analyzed the barriers limiting access to the arts and the issue of more equal access for passive consumers<sup>1</sup>. Interesting for us in this paper is the main difference between price and income that the author highlighted. The costs of admission to a museum or the price that a consumer is willing to pay for a substitute good or service are not only related to the ticket price. If we consider only the latter, everyone is faced with the same price all the time, thus this factor does not influence cultural participation.

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<sup>1</sup> O'Hagan (1996) refers to passive consumers as someone that attend to a play or concert. This is opposed to an active consumer: someone who paints, plays the piano or participates in an amateur production.

Nevertheless, this reasoning changes when we take into consideration the income of potential consumers. The real financial barrier for participation in the arts is not the price a person has to pay in order to enter; the barrier rather resides in the lower incomes of people that already present a lower educational attainment (O'Hagan, 1996).

What about free museums' entrance tickets? Chen et al. (2016) and Cellini & Cuccia (2018) both supported the same point of view on free entrance and museums attendance. Both researches based their arguments on the framing theory for which consumers firstly allocates their income to a specific expenditure goods' category and, secondly, they decide which good consume within the chosen expenditure category (Cellini & Cuccia, 2018). Following this, with a free-admission policy, a consumer that decides to use its income on the cultural goods' category will spend its saved money on another cultural good or experience. This means that free entrance policies potentially higher museums demand, potentially enabling people to spend the saved money on other cultural goods (Cellini & Cuccia, 2018). This however strengthen cultural demand, but doesn't higher the number of cultural consumers.

In this scenario, the first factor that always directly influences cultural participation is the educational level of possible consumers. Indeed, there are significant different level of participation by educational level and for mostly all cultural activities, the proportion of participation increase with the level of education (O'Hagan, 2013). If education is indeed the first important barrier, monetary ones play also an important role. These however will come later, meaning that a lower-income factor will play a role mostly when also a low level of education exists. It is interesting to underline the importance of the relation between the two, meaning that the possibility of a higher cultural participation not only depends on education and income alone. While working already on one of the two factors, for example the income level, the other will be also influenced, in this case by the level of education. As in Willekens and Lievens (2016), a certain level of education is needed as a basic threshold and, only after that, factors such as income can be considered as a cause to a certain level of cultural participation.

An interesting point of view on the relation between education and culture raised by O'Hagan (1996) refers to the capacity of certain individuals to stay longer in a specific educational system and, subsequently, earn a higher income and prefer a specific type of art. It is interesting to note that a wider gap in the education background of two persons, rather than having being exposed to completely different arts for the past years, has a stronger impact on art attendance and preferences (O'Hagan, 1996). Frey and Meier (2006) analyzed as well private demand for museums finding that, demand is (in)elastic with respect to price but that the higher the income, the higher a person will be willing to attend a cultural activity. The latter relation is, not surprisingly, related to better-

educated people. This is because they have a higher human capital and they are supposed to enjoy more the museums experience rather than lower-educated people.

It is true that culture is related to specific societal class and that education is an important element to take always in consideration, however there are factors such as age, gender, income that influence this relation as well. Moreover, we have to consider that while talking about cultural consumption, we talk about a huge variety of topics and products, thus culture can be shared in different social groups.

### *2.1.3. OTHER FACTORS INFLUENCING CULTURAL PARTICIPATION*

Having focused especially on education and income and on how they interact and influence cultural participation, other factors play a role. O'Hagan (1996) analyzed other important factors, especially for the Italian situation. The physical surroundings, the localization and centralization towards and within cities influence as well as the attendance. Brida et al. (2016) studied consumers and their distance from museums and noted that visitors living far from museums or central areas were likely to visit more often museums. This can be related to the same point of view of Falk and Katz-Gerro (2015) considering that people when they attend a cultural activity they usually plan it in advance so location and time are less important while measuring cultural attendance and participation. Moreover, cultural participation tends to be higher for people living in cities rather than in rural areas. This means that the higher degree of urbanization<sup>2</sup>, the higher level of cultural participation

Another factor interesting for our research, also related to the location, is time. Frey and Meier (2006) reflected on a certain "opportunity cost of time". This will be not only higher for people with a higher income and that are self-employed, but it will also relate to the time that a visitor takes and the time required to get to a museum (Frey and Meier, 2006). Moreover, the time matter will change also depending on who will be visiting a museum: visitors and inhabitants will have different opportunity cost of time. To this regard, the study by Brida et al. (2016) analyzed the motivation behind cultural participation for the "Vittoriale", Gabriele D'Annunzio estate in Italy. Their results showed a different cultural consumptions between tourists, excursionist<sup>3</sup> and inhabitants, mainly

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<sup>2</sup> The degree of urbanization classifies local administrative units (LAUs) as cities, towns and suburbs or rural areas based on a combination of geographical contiguity and population density, measured by minimum population thresholds applied to 1 km<sup>2</sup> population grid cells; each LAU belongs exclusively to one of these three classes- cities, suburbs, rural areas (Eurostat, 2017).

<sup>3</sup> Tourists refer to overnight visitors; excursionists to same-day visitors

due to different motivations behind the visit. They argued that people on holidays usually feel more relaxed, thus more open to visit, willing to discover something new and to move to reach the destination. In this situation, visitors are not especially looking for a specific symbolic content but they are looking for experiences to share with family and friends. We can reason that, in similar situations, the educational aspect is relatively less influential than usual for visitors. What could be the explanation then behind some holidaymakers that don't visit museums? Is it more about social status or more about education and knowledge? O'Hagan (2017) argued that cultural participation is more a matter of social status and related interest rather than a matter of price or of the educational level related to cultural experiences. Thus three main points are strongly correlated: education, income and time/location. The research strengthened the role of art especially for higher-educated people, who most of the time spend money and participate in culture more for their social status, rather than because of the educational value that going to an exhibition could have. Moreover, the study showed that their main reasons not to attend is the lack of interest and lack of time, proving again that the price issue may still be relevant, yet is not a main reason for non-attendance, at least for this category of cultural consumers. O'Hagan (2017) then suggested that people with lower-educational level have a lower interest to attend high-arts, yet they participate in other kind of arts such as music and other type of cultural activities. This does not mean that they are not participating in the art. There are already some cultural activities that most of the time are still not recognized as proper cultural activities so studying their impact and the current related participation is still difficult.

Related to the social status and social inclusion factors, Martorana et al. (2017), investigated more the cultural participation and its relation with social inclusions in disadvantaged neighbors. First, this can help not only to understand that even in larger cities different neighbors work in different ways and thus cultural participation is not of equal access and interest to everyone. Moreover, even if cultural activities or places are proposed in certain lower-cultured area, they mostly attract "outside visitors" and are "only" able to give work to the locals. The authors reflected on this process of "colonization" as a way of enhancing the cultural scene of a city, although its effect on cultural participation and social inclusion of the residents appears debatable (Martorana et al., 2017).

The second interesting aspect is that the authors underlined again the educational impact on cultural participation, explaining that the cultural barrier does not only reside on a lack of knowledge but that art education could give the possibility to young adults to transmit culture to the elders of the family, thus lowering prejudices against cultural participation.

## 2.2 ITALIAN CULTURAL PARTICIPATION

### 2.2.1 CULTURAL PARTICIPATION IN ITALY

Regarding cultural participation in Italy, Cicerchia (2017) gave a general overview on the situation of cultural participation and on the management of culture at the Italian level. Interestingly, Cicerchia (2017) pointed at the scarce investment on cultural education and some school's reforms as one of the main determinants of the weak Italian cultural participation. However, this is not the only explanation the author gave to this matter, since also the geographical aspect has to be taken into account. Cicerchia (2017) referred to data from Istat in 2016 where percentages of the absolute non-participants group in Italy show a quite strong discrepancy between South (29 %) and North (12.5 %). Moreover, 24 % of Italian are living in centers with less than 2000 inhabitants. These numbers show a quite strong impact of the Italian geographical structure on cultural participation as also Martorana et al. (2017) emphasized while analyzing different neighbors and the related social status.

Other interesting insights on Italian cultural participation are given by Borowiecki & Castiglione (2014). The authors concentrated on studying the demand for leisure activities. Italian tourists tend to go to the theater or visit an exhibition rather than going to a concerts or to a museum, cultural activities more preferred by foreign tourists. The higher presence of domestic visitors on theater attendance can be explained by the language barrier (usually the performances are in Italian) and by the choice of actors, most of the time famous at a country level. Moreover, the lower attendance to museums by domestic visitors compared to other cultural experiences can be explained by the exhibitions that Italian museums tend to expose. Indeed, since Italian museums have very similar exhibitions, domestic tourists will tend not to come back or visit several museums at a time, differently than foreign visitors (Borowiecki & Castiglione, 2014).

Moreover, also the geographical aspect is of crucial importance while speaking about Italian cultural participation. If we take a look at the report "Sintesi dati Rapporto Annuale Federculture 2018" we can see a great discrepancy in cultural expenditures per family in between North and South, understanding as well that the cultural expenditure per family in Italy is lower than the European mean (Tibaldi, 2018). Taking in consideration the years of 2015 and 2016, the expenditure that Italian municipalities invested on culture lowered of 4 %, with an even sharper drop in the Central and Southern regions. We then can presume that Italian cultural participation will be then shaped across regions, being stronger in Northern regions than in the Southern part (Tibaldi, 2018). Magaudda and Santoro (2015) published also a study giving a general overview of the cultural consumption and practices in the Italian regions. They made two interesting points on the influence of gender and the Italian geography on cultural consumption and participation. First, taking in consideration the gender

aspect, the rise of female cultural participation appears to have two main reasons: a change in the family structure where women started being able to work and a less traditional conception of family. Additionally, this is related to a stronger female attendance to public events and being able to manage more freely their leisure time. Yet, also a change in the female educational level has to be taken into consideration. Starting from the sixties, the possibility to have a higher level of education became possible and more important for Italian women. To this regard, Christin (2012) specifically noted that women are more willing to attend art-related classes during their education, leading to a higher interest in the Arts in their adulthood. A last aspect that also partly explains a higher female cultural participation is related to a higher likeliness for a woman to work in the cultural and educational sector and this could lead to a higher interest in the Arts. It would be interesting to see if a shift in the cultural and educational occupation sector from female to male will lead to a shift in the cultural participation gender percentage (Christin, 2012).

Second, Magaudda and Santoro (2015) took into consideration the importance of geolocation and urbanization on Italian cultural participation. Indeed, they cared to underline the fact that cultural consumption depends on regional and geographical differences related to tradition, history, specific policies related to local territories. Moreover, there is also a difference between cities and provinces. Not surprisingly, the cultural life of the Italian capital is one of the highest and most important in Italy. This data follows also the Eurostat explanation on the relation in between urbanization and culture participation: the bigger the city or the urban area, the stronger the participation (Eurostat, 2017). How do other Italian cities cope with cultural participation? Taking in consideration Istat data from 2016, we can see that more than the half of people living in the Southern part of Italy do not participate in cultural activities (Istat, 2016), as also analyzed by Cicerchia (2017).

### *2.2.2 A FOCUS ON THE ITALIAN MUSEUMS' SCENE*

Researches on museums and archeological sites specifically focus on three main points:

- 1) Museums' demand and how their public/private organization influence it
- 2) Cultural participation in Italian museums and archeological sites
- 3) Impact of urbanization and geographical location on museums' attendance

Museums' demand is still generally shaped by the same factors others cultural products are affected by. Frey and Maier (2006) referred to two different types of demand related to museums: private and social demand. First, private demand is related to visitors that are interested to museums as one of their leisure activities or

related to their professional path (Frey and Meier, 2006). This type of demand is usually determined by some main factors that can shape the museum's demand curve: admission fees, opportunity cost of time, price of alternative activities and individual experiences (Frey and Meier, 2006). In addition to this, three general factors influence the situation: income, education and the related human capital required in order to consume some museums' activities (Frey and Meier, 2006).

Second, while speaking about social demand, we refer to the museums' societal influence. Museums are able to create social values. Nonetheless, those are not compensated in a monetary way, so museums managers will usually try not to focus on these specific types of value as first, but rather on earning-related ones. While speaking about social values, we can refer to option value (thinking of enjoying a specific object in a museum in the future), existence value (knowing that a museum exists, without planning to visit), bequest value (a part of your community will enjoy a museums and you derive satisfaction from it), prestige value (knowing that a museum is highly valued by other persons) and education value (people know that museums contribute to their own sense of culture and give a value to it) (Frey and Meier, 2006). Moreover, it is also important to say that museums can differ in the content of their supply, as well as size, age of the building and especially for their Institutional entities. Taking in consideration the last variable it is true that even if commonly we can make a distinction in between private and public structure, most of the time museums resides in between the two, being able for example to receive some forms of subsidies from the government even if they are private (Frey and Meier, 2006). Indeed, the entity of a museum could influence its heritage management, exhibitions, diffusion objectives and the topic of attention of it as well (such as price setting, management of the collection, commercial activities...). For instance, it is assumed that, since public museums have benefits from financial public support, managers will be less oriented in the organization of activities to attract visitors. This would lead then to a lower participation and interest of the public (Banca d'Italia, 2019). This assumption is also sustained by Frey and Meier (2006).

Katz-Gerro (2004) highlighted how the museums' structure practically could influence their functioning. Taking in consideration museums and archeological sites in Italy, the author referred to museums as a part of the high-valued cultural goods and underlined the importance of public or private management of them, how the structure will influence their success and utilization (Katz-Gerro, 2004). Moreover, some related policies and funds will influence the consumption and interest for museums in specific countries. Speaking of Italy, the State has always invested in this type of high-cultured activities such as cultural heritage and conservation, while instead focusing a bit less in modern art (Katz-Gerro, 2004). Related to this, a reform made by the Italian Ministry of Culture and Tourism focusing on the organization and structure of Italian museums took place in Italy in 2014 with the aim to give more organizational and managerial autonomy to museums. This goal followed the fact that

museums in the last decades are not only space for heritage but they have increasingly become of social and economic interest for the country (Banca d'Italia, 2019). Museums needed to be able to achieve their objectives in a more efficient way thinking especially to their organizations as social spaces, important for the country and citizen. Following the reform of 2014, museums that became more independent became also more active on the Italian territory, the visitors interest increased as also the number of visitors (Banca d'Italia, 2019). Moreover, while speaking the different museums' organizational forms, most of private and public museums presented themselves as non-profit organizational form. This is due to the fact that usually the demand curve of museums is above the average cost curve and the usage of a non-profit type of organizational structure will allow visitors, who wish to voluntarily pay for it, to become donors (Frey and Meier, 2006).

To give a general overview on Italian museums and their organizational structure in 2017 (year just before our selected data), two third of museums were of public property. Moreover, even if museums owned by the State represented only the 10 % of the whole, they hosted the 44 % of visitors (Banca d'Italia, 2019). According to Istat (2016), there is one museum every 12.000 Italian citizens, but 46,3 % of the heritage present in those museums, including archeological area, is located in Northern Italy. It is also highlighted that the museums' supply in Italy is quite well widespread also in between centralized and decentralized areas. Indeed, 40 % of them are located decentralized areas. The "Sintesi dati Rapporto Annuale Federculture 2018" focused also only on museums and archeological sites. The numbers regarding the non-cultural participation in 2016 are quite astonishing. 69,2 % of the Italian adult population didn't attend any type of museums and 74 % didn't visit any archeological site or monuments in 2016. The 82 % of them are coming from the Central or Southern part of the country (Tibaldi, 2018).

## 2.3 DIGITAL MUSEUMS AND ONLINE VISITS

The current pandemic situation and the fast and evolving cultural digitization are also important in this discourse. In Italy, as stated by the compendium of cultural policies and trends, all cultural venues have been closed during the pandemic, concerts and events have been cancelled leading to a big loss of income (Bodo, 2020). This situation is surely also affecting Italian museums and cultural sites. Specifically, for these organizations, the Legislative Decree of March 17<sup>th</sup> 2020 "Cura Italia" exempted until end of April 2020 all the related social charges and substituted all the museums' pre-sold tickets with vouchers of the same value to be used later on during the year (Bodo, 2020). In the meantime, museums are already offering free online visits. How could we measure the impact of those? The current situation shows in a practical way how the digitization is at the core of museums'



evolution. Nonetheless, digitization can act as a tool to encourage people to visit museums rather than replace the need or desire for it.

Even without taking in consideration the already existing platforms and digital museums, the role of the internet has a huge impact on the consumption of museums experiences and influence of other consumers. Indeed, visitors were used to go to museums to have access to information; now they can access to the same information outside of the cultural organization, meaning that they not need especially the museum entity to have access to them (Navarrete & Mackenzie Owen, 2016). Nonetheless, the museums as an entity is still needed and of great importance even in the digital cultural world. As Navarrete & Mackenzie Owen (2016) showed, the museums entity are important nodes to connect objects, information, people and places in the digital world, representing also the authenticity and trust of the online collection.

Focusing on the visitors' side, on one side, this situation can be seen as the possibility to enlarge the community and to give the possibility to everyone to enter in the cultural system, giving access to cultural content across the globe (Borowiecki & Navarrete, 2017). On the other hand, the internet lowered the barriers of access to various contents in the cultural sector, including museums. This can lead to a fear of losing live audiences and experiencing a real museum visit (Tomka, 2013). Moreover, cultural digitization can lead to an extreme globalization of the thing (Navarrete, 2020), sometimes reducing the impact of local activities and local interest.

But how museums can keep up with technology and innovation? Borowiecki & Navarrete (2017) studied the digitization of cultural heritage on a macro, meso and micro perspective, focusing on how heritage organizations are able to innovate and adopt to digital technology, giving more access to their cultural content. They found that the organizational attention should focus on a creative reuse of cultural collections, engaging a specialized staff and following digital strategically polices. Building a common infrastructure from where different types of organizations would be able to innovate, thus keep it up with technological evolution, would be an important suggestion for cultural heritage organizations and their relations with the digital world (Borowiecki & Navarrete,2017).

The museums sector in general is still testing the online world and trying to enter the growing network information society that already counts 4.3 billion users worldwide, 56 % of the worldwide population (Straughan, 2019). Very little is still known on online visiting consumption also due to the missing official definition of a digital museum. So far consumers visiting online museums have a very similar profile as those proper museums, but as also stated before, technology can facilitate the access of a broader audience, that goes also outside of a museums environment. Moreover, it is known that demand for digital cultural consumption is directly related to the level of digital literacy of the consumer. As a consequence of that the more the people will

be digitally involved in their life (using internet, social media, mobile devices etc....) the more digital cultural demand will grow (Navarrete, 2013).

Taking in consideration the specific pandemic situation it could be reasonable to interpret digital consumption in a different way as during the lockdown period online museums visits represented the only possibility to consume culture. The Network of European Museum Organization wrote a report regarding the European situation. Specifically, 70 % of museums in Europe increased their digital content, especially focusing on the use of social media and virtual tours and online exhibitions and 40% of the museums noticed an increase in their online visits (NEMO, 2020).

Evidence is still lacking on the taste formation effect on digital consumption; however, one sure thing is that we can assume that consumers will benefit from available online visits to inform their future choices. This is more relevant, for example, for people who are unable to travel due to lack of resources and/or previous museums' experiences, or who are concerned about environmental footprints (Navarrete, 2020). Digital resource raise awareness, they don't replace museums visits, you are never going to be able to experience the art in the same way, but especially in periods like this one, they help keeping culture alive. Virtual engagement has proved a stimulus to actual participation, not a replacement of that. Google opened culture to a new kind of consumer, it developed a new way of interacting with the audience and created new tools to collect consumer's preferences, without having to be asked (Holden, 2007).

## 2.4 SUMMARY OF THE LITERATURE

The aim of this literature review has been to have a general overview of the variables influencing cultural participation in Italy, focusing especially on museums and archeological sites.

In order to understand this, it is important to have a general overview and then analyze data on the specific situation. It is hard to study independently variables such as income, education, time and location since each of them affect the other.

Education is certainly a variable to take into consideration. Some authors refer to it as the main core of the cultural capital, while others related them more to a social status and as a symbol not only of knowledge but also of social class. Generally, it is known that a higher level of education is related to a higher level of cultural

participation. Moreover, income is positively related also to cultural participation. However, the educational aspect has to be taken always into consideration as a basic threshold for it.

Studies on time and distance are also of great importance since we have to consider how time is handled by not only tourists but also locals. Indeed, these two different types of consumers treat times in two different ways. As a consequence of that it is hard to argue if the time required to visit a museum and the time required to get there are important. Usually tourists plan these activities in advance so the time has not a huge impact on their decisions. Related to it a slightly more important subject is the location of museums. Location and the relation between cultural participation and the geography of Italian museums are a very interesting subject, since there are areas where cultural participation is stronger than other and this is not only related to the quantity of cultural activities proposed in a specific area but also on the wealth level of the place and of the population living there.

Variables that influence as well cultural participation are gender and the organizational structure of museums. Some studies argued that the female gender is more exposed and willing to attend to cultural activities, especially in the last decades when the role of the women within the family has become more independent. The organizational structure of museums and archeological sites are likely to influence the aim of the organizations and the focus on visitors and creation of content. This will then lead to a certain type of cultural participation.

The digitalization of museums is the last important aspect to consider in this framework. Even if online visits will never replace the real experience of visiting a museum, they are part of a current cultural shift that might affect future participation and consumption.

### 3 METHODOLOGY

In order to study the impact that education, income, different geographical areas and demographic factors such as age and gender have on Italian museums' attendance, a quantitative approach has been chosen. This choice has been made for two main reasons. First, in order to focus on such a big sample, it is easier and more precise to use quantitative data. Second, due the current situation (Covid-19) and due to a matter of time, collecting information directly from Italian museums has been rather difficult. This is why secondary data have been used. This choice led to a cost (the data are freely accessible on the internet) and time (always available) advantage and it gave also access to, most of the time, high-quality datasets based on large representative samples, usually more reliable and valid (Brymans, 2015). Moreover, the utilization of official statistics is part of the unobtrusive method and thus an advantage of it is a lack of reactivity (Brymans, 2015). On the other hand, it is true that some

limitations can arise from the utilization of these types of data. Lack of familiarity and their complexity could be an example, together with the absence of key variables. To this regard, the analysis for this study focused on data taken from Istat in 2018. If on one side it would have been interesting to analyze the evolution through the years of Italian museums attendance and the impact of the different selected variables on it, an analysis over the 12 months of 2018 has been preferred. This choice is especially preferred since all the literature review related to cultural participation and specifically on museums attendance worked always with cross-sectional data. Indeed, it would be interesting to compare our results with past related discoveries. The most important study for our analysis and related to museum attendance is Brida et al (2016). The authors created a survey for visitors of the “Vittoriale” in Italy, and extrapolated different variables from it, focusing on a specific moment in time, taking in consideration only the year of 2012. Their main aim has been to study the level of motivation related to museum attendance, together with other demographic and socio-economic one. More generally, other literature related to cultural participation have also used cross-sectional data from National Survey. To cite some examples, we can refer to Christin (2012), that used the survey of public participation in the arts 2008 to explain the gender gap situation in highbrow cultural participation. Moreover, Willekens and Lievens (2016) also focused on a cross-sectional dataset in order to deeply analyze multiple variables studying the attendance and non-attendance in arts and heritage activities in the Flanders region in 2009. Lastly, another relevant example is given by Ateca-Amestoy and Prieto-Rodriguez (2013) investigating two types of cultural activities with different degrees of popularity in the U.S in 2002, using cross-sectional data. In all these cases the main aim has not been to examine changes in variables during time, yet to compare and analyze the differences among them and study how they all behave in relation to a certain matter in a specific moment.

Speaking about the different variables to analyze, it has not been possible to integrate an analysis including the effects that the private or public structure of a museum could have on the visitors’ participation. This is due to the unavailability of micro data regarding private and public museums. Moreover, also a study on the relationship between museums’ participation and the impact of digitalization is unfortunately not yet possible, since data on this specific topic are not yet available for Italy. Nonetheless, it would be very interesting and important if future studies could analyze this specific situation, collecting data from Italian museums and add it to the researches.

### 3.1 ABOUT ISTAT

Istat (istituto nazionale di Statistica) is an Italian public research organization offering official statistics in the service of citizens and policy-makers. It is one of the largest public research organization for Italian statistics and one of the few with such as many data regarding cultural organizations, consumptions and participation. Istat represents indeed the main reference for data on the Italian national territory and it collects and analyze data also on a regional and city-level. The organization offers a wide variety of data aiming at giving complete information on citizen within the Italian territory. Most of the created data are presented as metadata on the websites and are fully available to the public, however some micro data are also available on the websites. To give some examples these microdata presents yearly information related to specific subjects such as the daily life's aspects of the citizens, holidays and travels, families' expenses, information on museums and similar institutions, roads accidents and labor force. Sometimes the data are updated every year, but this is not always the case.

For our specific research, the year that has been used for this study is 2018, since this is the most updated year for our specific research. The main aim is to develop a research using cross-sectional data. The data come directly from the survey "*Aspetti della vita quotidiana*" (daily life's aspects), part of a larger integrated system of social investigations (Multi-purpose Surveys on Families), running every year since 1993. The main aim of this dataset is to understand how individuals live in Italy and if they are happy with the functioning of those utilities which must contribute to improve the quality of life. School, work, family life and relationship, home and areas where they live, leisure, political and social participation, health, lifestyles and relationship with services are investigated. More specifically, 20.000 families and 50.000 individuals took part of the survey. The main aim is to define social information (Istat, 2018). Having access to all these data gave the possibility to directly analyze all the variables influencing museums' attendance.

Even if the dataset presents a big variety of variables, only few of them have been used in this thesis for the purpose of our investigation. Specifically, the following variables have been taken into consideration: Age (ETAMI), Sex (SESSO), educational level (ISTRIMI), professional condition (CONDIMi), professional position (POSIZMi), source of income (REDPRMi), economic resources of the year (RISEC), regions (REGMF), museums' attendance in the past 12 months (MUSEO). In the following subsections each of them is going to be explained and analyzed.

### 3.2 DATA AND DESCRIPTIVE STATISTICS

The descriptive statistics of this study are summarized in Tables 3.1 and further explained in Appendix A. We can first take in consideration some basic demographic variables in the sample such as age and sex, that are also the two variables with no missing N (Table 3.1), together with the variable region. Our sample consists of 44672 responses. We can see that 51.7 % of the analyzed observant were female (Appendix A), a percentage slightly higher than the one related to male (48,3%) (Appendix A). Moreover, age varied in between 0 and more than 75 years, with a higher frequency from 25 years onwards (Appendix A). We can also see that only 13,4 % of the respondents obtained an undergraduate/postgraduate diploma (Appendix A).

Taking in consideration the dependent variable, already from the descriptive statistics analysis it is possible to see that 63,8% of the respondents never attended a museum in 2018 (Appendix A). On the other hand, taking in consideration the other possible answers, we can see that 22,3% of the respondents went to a museum in between 1 and 3 times in 2018, 5% in between 4-6 times, only 1-5 % went in between 7 and 12 times and less than 1 % (0.7 %) went more than 12 times (Appendix A).

**Table 3.1:** Descriptive statistics

	Valid N	Missing N	Mean	Std. Deviation
Age	44672	0	10.24	3.744
Sex	44672	0	1.52	.500
Educational level	42501	42501	9.38	13.510
Professional condition	39131	5541	2.15	1.291
Professional position	31176	13496	5.68	16.861
Primary source of income	38146	6526	3.05	1.959
Family economic resources in the last 12 months	44455	217	2.41	.607
Region	44672	0	104.56	70.598
Museums' frequency in past 12 months	41834	2838	1.43	.736

### 3.3 VARIABLES AND HYPOTHESES

The aim of this study is to conduct a negative binomial model having as dependent variables (x) factors such as education, age, sex, and income. The independent variable (y) will be museums' attendance. The latter is described through the variable "Frequency of museums' attendance in the last 12 months" in the dataset from Istat, *Aspetti della vita quotidiana 2018*. The collected answers are then divided in groups of people that never visited a museum, went to a museum in between 1-3 times, in between 4-6 times, 7-12 times, more than 12 times. Following the reasoning of Ateca-Amestoy (2008) we assume that cultural participation, thus museums' attendance, "is determined by the availability of certain resources used to satisfy cultural needs, as well as by personal and household characteristics" (p.132). In this specific case these needs are age, sex, socio-economic capital, cultural capital and geographical location.

Museums' attendance (Y) will be then depending on the following variables:

$$Y = f(x) = f(D, Se, S, E) \quad (1)$$

With the variable Di and Se we refer to demographic factors such as age and sex and to more socio-economic related factors, especially focusing on the income's aspect. Cultural capital (S) aims then at identifying the educational level of the respondent. Lastly E specifically aims at describing environmental-related issues, in this case the geography of Italy and the different Italian regions. The independent variable "Museums' attendance" (y) is expressed by the frequency of museums' participation in the last 12 months. Table 3.2 presents a general overview of the different variables and it summarizes the general assumptions related to each variable and its impact on museums' attendance. We will then explain each hypothesis and relate them to the literature.

**Table 3.2:** variables in the regression

Variables	Definition	Hypotheses
Y	Frequency of museums 'participation in the last 12 months	
D	Vector of demographic variables	
	<i>age</i> Age	+
	<i>sex</i> Sex	+(F)
Se	Vector of socio-economic variables	
	<i>proffcon</i> Professional condition	+
	<i>proffsit</i> Professional situation	+
	<i>inc</i> Source of income	+
	<i>ecres</i> Family economic resources level in the past 12 months	+
S	Vector of cultural capital variables	
	<i>edu</i> Own formal education level	+
E	Vector of variables from the environment	
	<i>geo</i> Italian regions	+/-

### 3.3.1 DEMOGRAPHIC FACTORS: AGE AND SEX

As mentioned in the literature review, age and sex can influence cultural participation. To analyze the first variable, a variable age (*age*) has been created. Individuals have been divided into 15 subcategories by their age, as divided in the original datasets (0-2, 3-5, 6-10, 11-13, 14-15, 16-17, 18-19, 20-24, 25-34, 35-44, 45-54, 55-59, 60-64, 65-74).

We could expect that the older a person is, the higher its consumption of culture, so its museums' attendance. This hypothesis can be based to the assumption of Gray (2003) for which taste formation is a process that takes time, so the interest in culture. Considering the second demographic variable, a binary variable has been created for the sex (*sex*) where the observed individual answered male or female. Following past researches and as already stated in the literature review, there is a tendency to participate in culture if the person is female rather than men (Christin, 2012; Magaouda and Santoro, 2015). We thus expect a higher participation for females rather than males in Italian museums in 2018.



### 3.3.2 CULTURAL CAPITAL FACTOR: EDUCATION

Education (*edu*) is regarded as a threshold for cultural participation, meaning that it is the first variable to take into consideration for a high or low museum attendance. In the survey, relatively to the level of education declared the answers have been divided into five different groups: primary education/nothing, secondary education degree, high school degree, undergraduate or postgraduate degree, no information provided.

Taking in consideration museums' attendance in Italy in the past years we can assume that museums' attendance is higher among people having a high school diploma or higher. This assumption follows Bourdieu definition of cultural capital and the past study of Stigler and Becker (1977), referring to education as a factor able to influence cultural consumption: the more educated a person is, the more he/she will be willing to consume a certain cultural good (Stigler and Becker, 1977). Additionally, also O' Hagan 2013 suggested that the proportion of cultural participation increases with the personal educational level. We can then expect that the higher the level of education in the survey, the higher the attendance to museums.

### 3.3.3 ENVIRONMENTAL FACTOR: ITALIAN REGIONS

Another interesting variable influencing cultural participation is related to the different geographical areas presented in Italy. To this regard, data regarding museums' visit divided by geographical areas are also available by Istat. Indeed, the different areas are divided following the different Italian regions five geographical parts (North East, North West, Center, South, Islands) and the different specific Italian regions. As we can see, taking in consideration Istat (2016), museums' attendance is different in each Italian regions. Indeed, the report on museums, archeological sites and Italian monuments showed that the highest number of visitors visits a museum in regions such as Tuscany, Lazio or Campania. This is mainly due to cities such as Florence, Pisa, Siena, Rome, Naples that offer different types of museums and are also the places where museums are mostly concentrated (Istat, 2019) and attract the vast majority of visitors during the year. Moreover, as indicated in the literature review, museums' attendance depends also on the different tradition and specific policies related to local territories (Magaudda and Santoro,2012).Taking in consideration report by Istat regarding a higher participation number in the North rather than in the South we can thus expect that cultural participation could be different depending the region or the geographical localization of the individual responding to the survey, with a tendency to have higher participation on Northern regions and in regions where the biggest cultural Italian capital are located.

### 3.3.4 SOCIO-ECONOMIC FACTORS: INCOME AND PROFESSIONAL CONDITION

In order to depict a relation in between personal income and cultural participation for museums, according to the literature, information on the personal occupation is relevant. This information concerns the occupation and the related specific level of income, and also the primary source of income. To this regard, in the analyzed dataset, variables that take into consideration different professional conditions (*proffcon*: currently working; looking for a job; not active; other condition; not available), professional position (*proffsit*: executive chief, self-employed as entrepreneur or freelancer; executive, manager, employee; chief worker, subordinate and related worker, apprentice, working at home on behalf of the company; self-employed, cooperative member of the production of goods and / or services, adjuvant, coordinated and continuous collaboration, occasional work; not available) and the source of income (*inc*: employee income, income from self-employment ; pension; various allowances and benefits; family bequest income; family economic support ) can underline this aspect. Moreover, the variable *ecres can* help us to identify the family economic resources level in the past 12 months.

The main expectation here is that the higher the income of a person, the higher the attendance to a museum. This assumption can also be based on past researches made by Ateca-Amestoy and Prieto-Rodriguez (2013) referring to income as a monotonic and significant variable, increasing the likelihood of participation, together with education and to the past study of Willekens and Livens (2016).

## 3.4 THE NEGATIVE BINOMIAL MODEL

The aim of this study is to analyze the reasons behind museums' attendance in Italy. Factors such as education, age, sex, geographical areas and income are studied as the main factor influencing museums' attendance.

Several models could have been used to study the matter: the Poisson model, the negative binomial model, the zero-inflated (Poisson and zero-inflated) and the ordinal logit or probit. Specifically, a Poisson regression requires equidispersion of data; if data are overdispersed or underdispersed, a negative binomial or a zero inflated binomial model would be a better choice. Since the dependent variable assumes discrete values (as for museum visits) but it is not a categorical variable (like different category of museum visits) it is preferable to use a Poisson or a negative binomial regression, rather than an ordered response models, like ordered Logit.

The dependent variable in this model is explained using an index, counting the number of times individuals went to a museum in 2018. Then, a Poisson regression could have been a good choice. However as also Christin (2012) mentioned, the dependent variable presents a large number of null values and it is characterized by over

dispersion (Table 3.3). Indeed, while analyzing some descriptive statistics the means and the variance are not similar, we can see that the conditional variance exceeds the conditional mean. As already stated before, in case of high variance, a more adequate model is the Negative binomial regression, very similar to the Poisson one and of the same family. Moreover, the negative binomial model is able to describe the probabilities of the occurrence of whole numbers greater than or equal to 0. Differently than the Poisson distribution when the variance and the means are not equivalent, the negative binomial model is preferred (Ford, 2016).

**Table 3.3:** Descriptive statistics for museums' attendance

Descriptive statistics for museums' attendance			
	N	Mean	Variance
Frequency of museums' participation in the last 12 months	41834	1.43	.542
Valid N (list wise)	41834		

Because of the presence of many null values, previous studies facing this problem and focusing on factors influencing cultural participation and non-participation at a country-level used a zero inflated binomial model. This enabled them to study the reasons behind the attendance and non-attendance and the frequency of participation. One of the main reference for the utilization of this model while speaking about cultural participation is the study by Ateca-Amestoy (2008). The interesting thing about the paper by Ateca-Amestoy (2008) is that this type of empirical method allowed the author to jointly determine the participation of two distinct groups of people; in this case people not going to the theatre because they were not willing to go and people who were willing but due to time and money constraint couldn't attend and the ones that were willing to go but couldn't attend. Thanks to this model the author has been able to see that economic variables work as deterrents to participation but cultural capital variables explain both the access and the intensity of participation (Ateca-Amestoy, 2008). In another past literature by Ateca-Amestoy and Pietro-Rodriguez (2013), the ZINB model is used to forecast performance of count data on arts attendance. The negative binomial method is however a good alternative to ZINB, as suggested by Ateca-Amestoy and Pietro-Rodriguez (2013), and it is more user-friendly under SPSS. This thesis follows Christin (2012) that analyzed the relationship between gender and highbrow culture in the USA. As in our case, the author worked with overdispersed data and thus opted for a negative binomial regression. Variables such as early socialization with the Arts, socioeconomics status,

differential involvement by gender in the labor force and the influence of marriage on women's and men's cultural participation are taken into consideration while running the regression.

Having analyzed some past studies and, taking in consideration the high dispersion of our data, we can then say that the negative binomial model represents a good combination of specificity and easiness to run.

## 4 RESULTS

This chapter describes the results of the analysis presented in the methodology, using a negative binomial regression. If at the beginning a Poisson regression has been the first selected model, after realizing that our data were overdispersed, a negative binomial model has been chosen, while using SPSS. Specifically, for this regressions, we customized the negative binomial model regression available on SPSS. Indeed, we have to consider that usually the software set a parameter of 1 to consider overdispersion (0 would mean that there is no overdispersion). We wanted to have a more accurate dispersion value for our data, that is why we decided to make the software estimate the correct level of dispersion for this model. If we would have remained to the preset value, we would have overcorrected the standard error of each variable regression coefficient and the model would have resulted too conservative. Thanks to this, we have been able to have a better calibrated dispersion parameter estimates.

We have also checked for multicollinearity. The model presented a Hessian matrix singularity caused by collinearity in the data. Indeed, in our model the variable region resulted highly collinear with other variables in the model. This can be seen from the high levels of VIF (Appendix C) that show how this variable is strongly correlated to the others. As a consequence of this, we decided to remove this variable from the model and thus we have not been able to study the impact that different Italian regions or macro areas have on museums' attendance.

Our model than became as follow:

$$Y = f(x) = f(D, Se, S) \quad (2)$$

Going through our results, we can see that our data fit the specific model, since in the Godness of fit test our value/df is higher than 0,05 (0,298) (Table 4.1). Moreover, since our  $p$  value is less than 0,05 (0,000) the model is significant (Table 4.2).

**Table 4.1: Goodness of Fit**

Goodness of Fit <sup>a</sup>			
	Value	df	Value/df
Deviance	8.362.871	30121	.278
Scaled Deviance	8.362.871	30121	
Pearson Chi-Square	8.962.341	30121	.298
Scaled Pearson Chi-Square	8.962.341	30121	
Log Likelihood <sup>b</sup>	84.278.086		
Akaike's Information Criterion (AIC)	-168.492.172		
Finite Sample Corrected AIC (AICC)	-168.492.102		
Bayesian Information Criterion (BIC)	-168.226.122		
Consistent AIC (CAIC)	-168.194.122		

Dependent Variable: Frequency of museums' participation in the last 12 months

- a. Information criteria are in smaller-is-better form.
- b. The full log likelihood function is displayed and used in computing information criteria.

**Table 4.2: Omnibus Test**

Omnibus Test <sup>a</sup>			
Likelihood Ratio Chi-Square	df	Sig.	
249.530.360	31	.000	

a. Compares the fitted model against the null model.

Table 4.3 (Test of model effects) shows which terms in the model have an effect. Focusing then on the variables, we can see that age, sex, educational level, the professional condition and position and family economic resources level in the past 12 months are statistically significant in the model (Table 4.3).

**Table 4.3:** Tests of Model Effects

Tests of Model Effects			
Source	Wald Chi-Square	df	Sig.
Age	99.255	10	.000
Sex	7.746	1	.005
Educational level	562.770	4	.000
Professional condition	15.263	3	.002
Professional position	125.929	4	.000
Family economic resources level in the past 12 months	49.617	3	.000
Primary source of income	4.092	5	.536

Appendix B describes more in detail in which way each variable influences museums' attendance. Taking in consideration the parameters estimates table (Appendix B) we can analyze more deeply the effects of each predictors and relate them to our expectations. Indeed, the parameter of estimates table aims at specifying the estimation methods. In this table each coefficient (beta) can be compared to the specific reference category and we can thus see how the category, if significant, is related to Museums' attendance. In a negative binomial model regression, the estimated coefficients take the form of expected log counts and describes the expected difference in log count with the specific reference category. Taking into consideration the demographic factors, the expectations that the higher the age, the higher the participation is not exactly followed. Indeed, it is interesting to see that in specifically range of ages, the age coefficients are highly significant and have a higher museums' visits rate rather than other age coefficients. Specifically, in between 16 and 25 years old the coefficients are significant and positively related to museums' participation (estimated coefficients 0.303, 0.353 and 0.172 respectively). This means that for example the expected log count for people in between 16 and 17 years old to visit a museum is 0.303 higher than the expected log count for the reference category (more than 75). Another significant and positively related result is also related to the age range in between 45 and 75 years old, where the estimated coefficients of 0.101, 0.096, 0.130 and 0.107 prove a higher rate on museums' visit than the reference category "more than 75" ( $p < 0,01$ ) (Appendix B).

Italians aging in between 16 and 25 and then in between 45 and 75 years old are more willing to attend a museums visit than the reference category (Appendix B). This can be explained by different factors such as freer

time and the willingness to travel and discover. Moreover, most of all the Italian museums have reductions for people younger than 25. Additionally, we can also relate the high interest of young adults in museums to their personal education. Indeed, the cultural capital acquired in their previous years in school can directly impact their willingness to continue to nurture their interests related to culture, even outside their family or school environment. The significant higher attendance to museums when the observer is in between 45 and 75 years old, could again be explained by different sort of reductions (for elder people). A second explanation could also resides on the willingness to share cultural capital with the family, thus a museum visit would transmit some cultural capital to the children, for example.

Taking in consideration the sex, we can see that the difference in the logs of expected counts for museums' attendance is expected to be 0.028 less for male rather than female (reference category). This gender coefficient is also highly significant ( $p < 0,01$ ).

Speaking about education we can easily see that the results are consistent with our expectation. Indeed, it is probably true that people owning a bachelor or postgraduate diploma have a higher chance to visit a museum in Italy (coefficient for people owning an under or post graduate diploma is 0.327 and highly significant), compared to the one having a lower educational level. The parameter estimates clearly show that the higher the educational level the higher is the estimated coefficient, taking always in consideration the reference category (no answer). This is also related to a probable higher cultural capital, thus higher interest in attending a museum. This result can also be also associated with the article by Willekens and Lievens (2016) where the higher the educational level of a person the higher its cultural capital. Our results specifically prove this.

Lastly, the socio-economic variable aimed at analyzing the impact of income in the matter. Let's first concentrate on the professional condition. People that are currently working have a positive estimated coefficient (0.168) related to museums' attendance that is also statistically significant ( $p < 0,001$ ), compared to the other professional conditions' categories and to the reference category (no answer). The second socio-economic factor that is related to museums' attendance is the professional position of the observant. Indeed, here people that are chief worker, subordinate and related worker, apprentice, working at home on behalf of the company, have a lower probability (coefficient of  $-0.119$ ) to visit a museum compared to the reference category (no answer) and also to the other categories. This result is significant at 0.001 level. Another Interesting fact related to income is that the family economic resource level is highly significant in our analysis, meaning that people that having an optimal or adequate economic resources in the past 12 months went more to the museums (0.206 coefficient for people with an optimal economic resource) compared to people that have absolutely insufficient resources (reference category).

The variable primary source of income is not significant in this model, as also showed in Table 4.3. We could say that people living from a family bequest income have a higher possibility to visit a museum compared to people living with a family income (reference category) or other categories. This however is not statistically significant.

## 5 CONCLUSION

The aim of this thesis, as explained from the very beginning, is to study the main factors influencing Italian museums' attendance. Past studies already analyzed different factors influencing cultural participation, at a country level or comparing different countries. Others already focused on Italian museums' attendance while analyzing specific museums' cases (such as the study by Brida et al., 2016). Yet, no one tried to depict the main factors influencing Italian museums' attendance at a country level. What we aimed at showing is how and if factors such as sex, age, education, income, and different Italian regions play an important role in influencing the attendance of Italian visitors to museums. This has been possible thanks to the dataset "*Aspetti della vita quotidiana*" (daily life's aspects) by Istat, the Italian National Institute of Statistics, from where our variables are being taken. Following past literature, cultural capital and especially education are regarded as the main important factors to access culture in general. This idea has been supported by authors such as Stigler and Becker (1977), and O' Hagan 2013. We then hypothesized that the higher the level of education, the higher the Italian museums' attendance. Our results show that indeed there is a higher attendance for Italians having a bachelor or postgraduate degree rather than people with a lower educational level. Moreover, age and sex have been also analyzed. Past researches focused on the fact that female have a higher tendency to attend cultural events rather than male (Christin, 2012; Magaudda & Santoro, 2015) and that taste formation is a process that takes time (Gray, 2013), so the interest in culture. Our study, proved again that there is slighter higher tendency for women to visit a museum and that people in between 18 and 25 years are strongly attending more museums. This can be said also for people having more than 45 years. These two results could be linked to discounts or specific projects for museums' visit created for these specific ages' ranges. Moreover, several factors related to income can also influence museums' attendance. Specifically, we discovered that people with an optimal or adequate source of income in 2018 surely visits more Italian museums, showing that income could still be of great importance in this discourse. Other income related factors also showed that people currently working and in certain working positions are more willing to visit a museum than others.

Being able to depict what is the main public that visits museum is of crucial importance for the implementation of cultural policies, so are the factors that describe this public. Education is a strong key in the process of making



museums more accessible to everyone, governments and cultural organization should focus on this, together with some working related to the inclusion different types of people considering different ages, income situation and sex. In order to widen the museums' attendance cultural policies should also be able to focus on other age categories.

## 5.1 LIMITATIONS

In order to contribute also to further researches in this topic, it is important to speak about the limitations that this work faced. Speaking firstly about the chosen data, it is true that a longitudinal study, with panel data, could have been of great importance. The absence of past literature using this approach led to the decision of sticking to a specific year, with the decision then to not track each individual over a period of time. This would have led to additional interesting and relevant results. However, since this is a first explanatory study, the main focus has been on the comparison with past researches, that used predominantly cross-sectional data. Moreover, several specific data on cultural participation especially considering museums in Italy have not been considered. Main examples are museums' organizational structure and the digital cultural consumption. The reason for overlooking the first issue (missing data on museums organizational structure) is mainly due to the fact that data on this subject are not updated (last data available by Istat are from 2015). As for data on cultural digitalization are not (yet) available to the public, while speaking about data from Istat and concerning the Italian territory. As a consequence of that, museums entity and the digital cultural participation information are still missing in this research and having access to them could give more additional insights on the matter. These omitted variables play an important role in the museums' attendance discourse. Lastly, speaking always about the data, there could have been additional and more precise variables to define especially income and educational matters, this can partly explain also some insignificant results related to income matter. The level, for example, of education of the observant' families has a great impact on each individuals and it has not been possible to analyze. Lastly, it is correct also to take into consideration possible latent subpopulation that in the used dataset could have been omitted and thus not observed. Lastly, as already mentioned before, the choice of using a Zero Inflated binomial regression could have led to more precise results.

Related to the limitations, further studies could focus on a specific factor influencing museums' attendance in Italy. Particularly, the income and educational aspects could be strongly amplified. Other interesting studies could relate to the digital impact on museums' visit and on the related policies at the national level. Lastly, there are already several policies and project that work on cultural participation in Italy, especially working on youth cultural participation. One very interesting topic to elaborate would be on how the project Bonus Cultura

impacted youth cultural participation. The project, proposed by the Ministry of Culture in 2016, aims at promoting the cultural growth in Italy together with its cultural heritage to focusing on young generation.

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# APPENDIX A

## Descriptive statistics

	Frequency	Percent	Valid Percent	Cumulative Percent
Sex				
male	21578	48.3	48.3	48.3
female	23094	51.7	51.7	100.0
Total	44672	100.0	100.0	
Age				
0-2 years	1090	2.4	2.4	2.4
2-5 years	1133	2.5	2.5	5.0
6-10 years	2066	4.6	4.6	9.6
11-13 years	1327	3.0	3.0	12.6
14-15 years	796	1.8	1.8	14.4
16-17 years	869	1.9	1.9	16.3
18-19 years	811	1.8	1.8	18.1
20-24 years	2056	4.6	4.6	22.7
25-34 years	4505	10.1	10.1	32.8
35-44 years	6007	13.4	13.4	46.2
45-54 years	7087	15.9	15.9	62.1
55-59 years	3328	7.4	7.4	69.6
60-64 years	2971	6.7	6.7	76.2
65-74 years	5295	11.9	11.9	88.1
more than 75	5331	11.9	11.9	100.0
Total	44672	100.0	100.0	

	Frequency	Percent	Valid Percent	Cumulative Percent
Educational level				
Undergraduate/postgraduate	5710	12.8	13.4	13.4
High school diploma	14483	32.4	34.1	47.5
Secondary high school diploma	11870	26.6	27.9	75.4
Primary high school diploma/nothing	9533	21.3	22.4	97.9
Not available	905	2.0	2.1	100.0
Total	42501	95.1	100.0	
Missing System	2171	4.9		
Total	44672	100.0		

Region				
Piemonte	3164	7.1	7.1	7.1
Valle d'Aosta	909	2.0	2.0	9.1
Lombardia	3750	8.4	8.4	17.5
Trentino-Alto Adige	2639	5.9	5.9	23.4
Veneto	2658	6.0	6.0	29.4
Friuli-Venezia Giulia	1626	3.6	3.6	33.0
Liguria	1714	3.8	3.8	36.8
Emilia-Romagna	2341	5.2	5.2	42.1
Toscana	2494	5.6	5.6	47.7
Umbria	1268	2.8	2.8	50.5
Marche	1932	4.3	4.3	54.8
Lazio	2679	6.0	6.0	60.8
Abruzzo	1918	4.3	4.3	65.1
Molise	1278	2.9	2.9	68.0
Campania	3414	7.6	7.6	75.6
Puglia	2769	6.2	6.2	81.8



	Frequency	Percent	Valid Percent	Cumulative Percent
Basilicata	1300	2.9	2.9	84.7
Calabria	2237	5.0	5.0	89.7
Sicilia	2695	6.0	6.0	95.8
Sardegna	1735	3.9	3.9	99.7
North- West	14	.0	.0	99.7
North-East	21	.0	.0	99.7
Center	37	.1	.1	99.8
South	39	.1	.1	99.9
Not available	41	.1	.1	100.0
Total	44672	100.0	100.0	

Primary source of income

Employee income	12860	28.8	33.7	33.7
Income from self-employment	3657	8.2	9.6	43.3
Pension	10408	23.3	27.3	70.6
Various allowances and benefits	1015	2.3	2.7	73.2
Family bequest income	281	.6	.7	74.0
Family economic support	9925	22.2	26.0	100.0
Total	38146	85.4	100.0	
Missing System	6526	14.6		
Total	44672	100.0		

	Frequency	Percent	Valid Percent	Cumulative Percent
Family economic resources level in the past 12 months				
Optimal	613	1.4	1.4	1.4
Adequate	27106	60.7	61.0	62.4
Scarce	14549	32.6	32.7	95.1
Absolutely not sufficient	2187	4.9	4.9	100.0
Total	44455	99.5	100.0	
Missing System	217	.5		
Total	44672	100.0		
Professional position				
Executive chief, self-employed as entrepreneur ...	2905	6.5	9.3	9.3
Executive, manager, employee	10354	23.2	33.2	42.5
Chief worker, subordinate and related worker...	11653	26.1	37.4	79.9
Self-employed, cooperative member of the production of goods and ...	5281	11.8	16.9	96.8
Not available	983	2.2	3.2	100.0
Total	31176	69.8	100.0	
Missing System	13496	30.2		
Total	44672	100.0		

	Frequency	Percent	Valid Percent	Cumulative Percent
Professional condition				
Currently working	16632	37.2	42.5	42.5
Looking for a job	3695	8.3	9.4	51.9
Not active; other condition	18164	40.7	46.4	98.4
Not available	640	1.4	1.6	100.0
Total	39131	87.6	100.0	
Missing System	5541	12.4		
Total	44672	100.0		
Frequency of museums' participation in the last 12 months				
Never	28489	63.8	68.1	68.1
1-3 times	10124	22.7	24.2	92.3
4-6 times	2215	5.0	5.3	97.6
7-12 times	681	1.5	1.6	99.2
more than 12	325	.7	.8	100.0
Total	41834	93.6	100.0	
Missing System	2838	6.4		
Total	44672	100.0		

## APPENDIX B

### Negative binomial regression- parameter estimates model

	Parameter	B	Std. Error
Intercept		.005	.0692
Age	14-15 years	.268	.1726
	16-17 years	.303**	.1002
	18-19 years	.353***	.0626
	20-24 years	.172***	.0369
	25-34 years	.067*	.0306
	35-44 years	.028	.0295
	45-54 years	.101***	.0286
	55-59 years	.096***	.0297
	60-64 years	.130***	.0267
	65-74 years	.107***	.0202
	more than 75	0 <sup>a</sup>	.
Sex	male	-.028**	.0101
	female	0 <sup>a</sup>	.
Educational level	Undergraduate/postgraduate	.327***	.0436
	High school diploma	.099*	.0426
	Secondary high school diploma	-.042	.0430
	Primary high school diploma/nothing	-.120**	.0459
	Not available	0 <sup>a</sup>	.
Professional condition	Currently working	.168***	.0524
	Looking for a job	.091	.0544

	Not active; other condition	.141**	.0526
	Not available	0 <sup>a</sup>	.
<hr/>			
Professional position	Executive chief, self-employed as entrepreneur ...	.047	.0366
	Executive, manager, employee	.023	.0337
	Chief worker, subordinate and related worker...	.119***	.0335
	Self-employed, cooperative member of the production of goods and ...	-.053	.0346
	Not available	0 <sup>a</sup>	.
<hr/>			
Family economic resources level in the past 12 months	Optimal	.206***	.0449
	adequate	.121***	.0264
	scarce	.063*	.0270
	Absolutely insufficient	0 <sup>a</sup>	.
<hr/>			
Primary source of income	Employee income	-.022	.0463
	Income from self-employment	-.047	.0480
	Pension	.006	.0254
	Various allowances and benefits	-.011	.0352
	Family heritage	.073	.0571
	Family economic support	0 <sup>a</sup>	.
<hr/>			
	(Scale)	1 <sup>b</sup>	
	(Negative binomial)	4.884E-8	
<hr/>			

a. Set to zero because this parameter is redundant. b. Fixed at the displayed value.

Significance: \* p < 0.05. \*\* p < 0.01. \*\*\* p < 0.001.

# APPENDIX C

## Collinearity

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Coefficients <sup>a,b</sup>		
	Tolerance	VIF
Sex	.116	8.629
Educational level	.611	1.638
Professional condition	.171	5.850
Professional position	.788	1.269
Family economic resources level in the past 12 months	.079	12.696
Age	.056	18.006
Primary source of income	.219	4.559

---

a. Dependent Variable: Region

b. Linear Regression through the Origin