

Leveraging digitalization and people-centeredness: an investigation of the attractiveness of Italian museums and cultural institutions

The organizational attractiveness of museums

Received 2 June 2023
Revised 6 September 2023
Accepted 14 October 2023

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Abstract

Purpose – The evolving visitors' expectations and the unfolding digital transformation compel rethinking on the service offering of museums and cultural institutions. Although digitalization and people-centeredness are widely exploited to enhance the visiting experience, there is limited evidence of their implications on organizational attractiveness. The article investigates this issue, examining the service attributes that entice visitors.

Design/methodology/approach – The study collected secondary data from the latest census study by the Italian Institute of Statistics on museums and cultural institutions. Two hierarchical regression models have been run on a sample of large publicly owned organizations ($n = 312$) to identify the service factors that were most effective in attracting Italian and foreign visitors.

Findings – Museums and cultural institutions undergoing a digital transformation were more effective in attracting visitors. The delivery of virtual tours and online events captivated the Italian audience. Foreigners appreciated the opportunity to use applications augmenting the on-site visit.

Practical implications – Digitalization and people-centeredness improve the attractiveness of museums and cultural institutions. Using digital channels to engage visitors fosters their desire to interact with cultural heritage. Furthermore, digitalization enriches the on-site visit, expanding conventional services with virtuality. However, the adverse effects on cultural heritage should be carefully handled.

Originality/value – This study highlights the service attributes that add to the attractiveness of museums and cultural institutions, enabling them to engage visitors and improve the visiting experience.

Keywords Attractiveness, Cultural institutions, Museums, Organizational change, Quality

Paper type Research paper

1. Introduction

Two challenges affect the functioning of museums and cultural institutions (Kotler and Kotler, 2000). The pledge to protect and preserve the integrity of cultural heritage (Gilmore and Rentschler, 2002) is compounded by the need to enhance organizational attractiveness (Silberberg, 1995). Redefining the space and contents of the service offering is crucial to advance the museums and cultural institutions to entice the audience (Di Pietro *et al.*, 2015). This is especially true after the COVID-19 pandemic (Agostino *et al.*, 2020), which altered visitors' attitudes and behaviors (Tranta *et al.*, 2021). Enriching the service offering empowers museums and cultural institutions to address the evolving expectations of the audience (Goulding, 2000), which is increasingly interested in personal identification and cultural entertainment (Sheng and Chen, 2012). Furthermore, it allows museums and cultural



institutions to improve their impact on social inclusion (Pencarelli *et al.*, 2017), stimulating visitors' engagement with the cultural heritage (Sandell, 1998).

Scholars and practitioners agree on the need to reframe the service offering of museums and cultural institutions, acknowledging that service quality drives attractiveness (Brida *et al.*, 2016). However, little is known about the factors underpinning the organizational ability to entice the audience (Magliacani and Sorrentino, 2022). Co-creation (Fu *et al.*, 2015), digitalization (Trunfio and Campana, 2020) and authenticity (Gronemann *et al.*, 2015) are usually discussed as fundamental ingredients of the recipe for organizational attractiveness. Previous research highlighted that these ingredients nurture the visitors' desire to access and enjoy cultural services (Grefe *et al.*, 2017). Co-creation practices enacted by digitalization improve the visitors' experience, paving the way for increased perceptions of authenticity and attractiveness (Antón *et al.*, 2018). Digital transformation augments the service exchange (Errichiello *et al.*, 2019), adding to the audience's ability to feel the authenticity of cultural heritage and co-produce value before, during and after the visit (Kuflik *et al.*, 2015).

The attempts to shed light on the service attributes that encourage or deter people from visiting museums and cultural institutions have led to inconsistent findings (e.g. Del Chiappa *et al.*, 2014; Su and Teng, 2018). Value co-creation involves embracing a people-centered perspective and enacting an immersive visiting experience (Scarso, 2021). Live events, shows, conferences, seminars and laboratories targeted at particular audience groups enhance the visit and nourish the visitors' interest (Mencarelli *et al.*, 2010). However, they can be perceived as a drift towards consumerism, thus threatening the authenticity of the visiting experience (Chhabra, 2008). Digitalization can be exploited to improve the service experience and facilitate contact with cultural heritage (Trunfio *et al.*, 2022), boosting visitors' satisfaction (Hede *et al.*, 2014). Beyond advancing the appreciation of cultural heritage (Fenu and Pittarello, 2018), digitalization might undermine its authenticity, adversely affecting organizational attractiveness (Massari *et al.*, 2022). The pervasiveness of digital tools enables museums and cultural institutions to create digital twins and attract virtual visitors, overcoming physical barriers and constraints (Sundar *et al.*, 2015). Nevertheless, translating the visiting experience in the digital environment involves a disconnect between the visitor and the cultural heritage (Wolf *et al.*, 2018), impairing authenticity (Evrard and Krebs, 2018).

Ambiguity about how people-centeredness, digitalization and authenticity interact and affect the attractiveness of museums and cultural institutions generates a knowledge gap, preventing us from identifying the approaches and practices that attract visitors. This article aims to fill such a gap, providing evidence on the service improvement initiatives that most effectively enhance the attractiveness of museums and cultural institutions. The following research question (RQ) inspired this study.

RQ. Do people-centeredness and digitalization increase the ability of museums and cultural institutions to attract visitors?

The article proceeds as follows. The next section outlines the conceptual framework, formalizing the research hypotheses tested in our empirical analysis. The methodological note then reported, presenting the sample involved in this research. The findings are described in the fourth section. They are critically discussed in the fifth section, which paves the way for conceptual and practical implications, as argued in the concluding paragraph.

2. Conceptual framework

Institutional, social and technological transformations reshape demands and expectations toward museums and cultural institutions (Sheng and Chen, 2012). Their evolution from entities devoted to heritage protection to public spaces where the audience needs come first fosters a shift toward people-centeredness (Van Aalst and Boogaarts, 2002), reconfiguring their societal role (Brida *et al.*, 2016). At the same time, technological

developments facilitate the integration of visitors' desire to connect with cultural heritage and search for entertainment (Grinter *et al.*, 2002). Within this scenario, museums and cultural institutions are compelled to redesign their service offerings to attract visitors and fully address their value expectations (Palumbo, 2022).

Previous research attempted to reveal the service factors that determine the ability of museums and cultural institutions to entice the audience (Collins *et al.*, 2009) and engage visitors (Manna and Palumbo, 2018). Embracing a socio-technical perspective (Batt, 2017) and acknowledging that digital transformation prompts a transformation of museums and cultural institutions according to a people-centered view (Chen, 2007), three main transitions reframe the visiting experience (Cheng *et al.*, 2023). The unfolding digitization prompts greater responsiveness to the evolving needs of the audience, enriching the contents of the on-site visits with digital tools and technologies (Raimo *et al.*, 2022). Moreover, museums and cultural institutions are more prone to act as experience generators to cope with their dual role of protecting cultural heritage and serving the public (Hein, 2016). Lastly, virtualizing the service offering creates new touchpoints with the audience: digitalizing the physical encounter (Marin-Morales *et al.*, 2019), it advances the organizational attractiveness toward virtual visitors (Beer, 2015).

Digital tools and applications can be exploited to enrich the on-site visit, adding to the service experience of physical visitors (Sakkopoulos *et al.*, 2015). Previous research stressed that using applications and mobile devices aggrandizes the service experience, facilitating the personalization of the interaction with the cultural heritage (Carvajal-Trujillo *et al.*, 2021). Although digitalizing the service encounter could have side effects on the visit, provoking visitors' isolation and intrusiveness of digital tools in the appreciation of cultural heritage (Rhee and Choi, 2015), it creates new spaces and ways to extract value from museums and cultural institutions (Weilenmann *et al.*, 2013). Accompanying the visitor during the service experience and enriching the touchpoints with the organization (Koukoulis and Koukopoulos, 2016), digital technologies enact an engaging space (Bailey-Ross *et al.*, 2016), which attracts the audience to the service offering (Palumbo *et al.*, 2022). In line with these considerations, it is hypothesized that:

H1. Supplementing the on-site visiting experience with digital tools and applications increases the attractiveness of museums and cultural institutions.

Alongside reshaping the content of the on-site visit with digital tools and applications, museums and cultural institutions could embrace a people-centered perspective to establish new value bonds with the audience (Siu *et al.*, 2013). Seminars, meetings and conferences are valuable in creating a meaningful dialogue with the public (Dean, 2013), enhancing the museums and cultural institutions' ability to entice the audience (Manna and Palumbo, 2018). Similarly, shows, live events and cultural promotion initiatives comply with the visitors' evolving expectations (O'Connor and Collins, 2021). Adopting a pedagogical approach to address the learning needs of particular audience groups, such as children and young people, further increases the attractiveness of museums and cultural institutions (Allen, 2004). Such services encapsulate an edutainment perspective in the design of the service offering (Tran, 2007) which fits the institutional aim to protect and promote cultural heritage (Blake, 2018). Embracing a people-centered view, cultural institutions and museums stick to a service-dominant logic (Vargo and Lusch, 2012). It dramatically increases their ability to establish a dialogue with visitors and engage them in a co-creating experience, improving the appreciation of the cultural heritage's authenticity (Thyne and Hede, 2016). From this point of view, it is assumed that:

H2. Introducing people-centered services increases the museums and cultural institutions' ability to attract visitors.

Digitalization facilitates reframing the service offering according to a smart perspective (Yang and Zhang, 2022). It expands organizational boundaries and contextualizes the service offering in the virtual domain, enlarging the spaces of interaction with the visitors (Perry *et al.*, 2017). People can remotely access cultural heritage through individual and guided virtual tours (Loaiza Carvajal *et al.*, 2020). Such tours can be targeted to the general public or to specific audience groups, such as disadvantaged people who face constraints that prevent them from physically accessing the cultural institution (Beauchet *et al.*, 2022). Furthermore, the virtual environment can host online laboratories, conferences and seminars focusing on cultural heritage-related issues (Aiello *et al.*, 2019; Tserklevych *et al.*, 2021). Beyond enacting a new service environment, the virtual domain empowers museums and cultural institutions to contact and engage a larger audience (Esposito and Ricci, 2021; Nisiotis *et al.*, 2019). This could positively affect organizational attractiveness, stimulating the willingness of virtual visitors to experience the cultural heritage on-site (Kamariotou *et al.*, 2021). Coherently with these considerations, it is assumed that:

H3. The design of virtual services that expand the boundaries of museums and cultural institutions advances their attractiveness to the audience.

We designed an empirical study to test the research hypotheses reported above and shed light on the factors determining the ability of museums and cultural institutions to attract visitors. Details on the study design and methods are reported below.

3. Study design and methods

Secondary data were collected from the latest census study of the Italian Institute of Statistics (ISTAT) on museums and cultural institutions operating in Italy (ISTAT, 2023). Data are made available by ISTAT under a Creative Common license (CC BY 3.0 IT). The authors have conducted all statistical elaborations without the involvement of the ISTAT, to which the evidence reported in this article should not be attributed.

To collect consistent and reliable evidence on the factors determining the organizational ability to attract visitors and avoid size-generated biases, we exclusively included museums and cultural institutions employing at least ten people in our sample. Moreover, only publicly owned entities were contemplated to escape the ambiguity produced by considering different forms of ownership. This allowed us to minimize distortion in interpreting the study findings, which could be extended to similar organizations operating in other geographic settings. Lastly, we removed from our sample all the cultural institutions open to the public for less than 100 days a year. This exclusion criterion permitted us to pay attention to museums and cultural institutions that were not predominantly focused on conservation and promoted access to their cultural heritage. In sum, our sample consisted of 312 publicly owned cultural institutions, whose attributes are reported in Table 1.

Museums represented most of the entities involved in this study (65.1%), followed by monuments (17.9%) and archaeological parks (17%). About half of the sample consisted of institutions owned by the central state (48.1%). Most organizations were managed directly by the owner (85.9%), and only a limited group was steered by an external contractor (14.1%). The different geographic areas of Italy were evenly represented, with Northern Italy accounting for a third of the sample (34%) and the remaining part being fairly distributed in Central Italy (21.5%), Southern Italy (17.9%) and main Italian islands (19.6%). On average, the units of analysis employed 28 people ($\sigma = 26$) and were open for 235 days ($\sigma = 48$). Only 1 in 10 entities stack to a free access scheme (10.3%), while most had an entry ticket (89.7%). On average, 42,841 Italians ($\sigma = 102,754$) and 22,708 foreigners ($\sigma = 80,730$) visited the units of analysis throughout 2021.

Table 2 illustrates the study variables. The number of people who accessed cultural institutions during 2021 was used as a proxy to gauge organizational attractiveness.

Variable	No.	Total	%	The organizational attractiveness of museums
<i>Type of cultural institution</i>				
Museum	203		65.1	
Archaeological park	53		17	
Monument	56		17.9	
<i>Ownership</i>				
Central state	162		48.1	
Local public entities	140		44.9	
Other	10		7	
<i>Geographic location</i>				
North-western Italy	40		12.8	
North-eastern Italy	66		21.2	
Central Italy	89		28.5	
Southern Italy	56		17.9	
Main Italian Islands	61		19.6	
<i>No. of visitors (2021)</i>				
5.000 or less	62		19.9	
Between 5.001 and 10.000	54		17.3	
Between 10.001 and 50.000	120		38.5	
Between 50.001 and 100.000	24		7.7	
Between 100.001 and 500.000	46		14.7	
More than 500.000	6		1.9	
<i>No. of employees</i>				
Between 10 and 15 employees	52		16.7	
Between 16 and 20 employees	65		20.8	
Between 21 and 30 employees	60		19.2	
Between 31 and 50 employees	63		20.2	
51 employees and more	72		23.1	
<i>Modality of access</i>				
Free access	32		10.3	
Entry ticket	280		89.7	
<i>Form of management</i>				
Direct management	268		85.9	
Indirect management	44		14.1	
Source(s): Authors' own creation				

Table 1.
The attributes of the study sample ($n = 312$)

A logarithmic transformation was applied to normalize the distribution and improve statistical elaborations. Three groups of independent variables were considered according to the conceptual framework articulated above. First, in coherence with *Hp. 1*, we focused on supplementary digital services (SDS) arranged to enrich the content of the on-site visit. We explored whether the units of analysis: (1) developed applications for mobile devices (SDS_1), (2) arranged multimedia stages based on virtual/augmented reality (SDS_2) and (3) loaned tablets and mobile devices (SDS_3) to improve the visitors' appreciation of cultural heritage. Second, in line with *Hp. 2*, we investigated the provision of people-centered services (PCS) to expand the service offering. More specifically, we evaluated the participation of cultural institutions in: (1) designing pedagogical activities and teaching laboratories (PCS_1), (2) hosting seminars, conferences and meetings (PCS_2) and (3) arranging live events and shows to promote cultural heritage (PCS_3). Third, following *Hp. 3*, we examined the delivery of virtual services (VS). Alongside the arrangement of individual virtual tours (VS_1) and

Table 2.
The study measures

Variable (ID)	Items	Scale/code	Descriptive statistics		
			Obs.	μ σ	
<i>Independent variables</i>					
Supplementary digital services (SDS)	Applications for tablets and smartphones advancing the on-site visit (SDS_1)	0 = Absence of the SDS	308	0.32	0.47
	Multimedia stages based on virtual/augmented reality enhancing the exhibition (SDS_2)	1 = Implementation of the SDS	308	0.30	0.46
People-centered services (PCS)	Lending tablets and mobile devices to visitors (SDS_3)	0 = Absence of the PCS	307	0.08	0.27
	Pedagogical activities and teaching laboratories (PCS_1)	0 = Absence of the PCS	311	0.58	0.49
	Seminars, meetings and conferences (PCS_2)	1 = Implementation of the PCS	311	0.67	0.47
	Live events, cultural promotion initiatives and shows (PCS_3)	1 = Implementation of the PCS	311	0.70	0.46
Virtual services (VS)	Individual virtual tours (VS_1)	0 = Absence of the VS	311	0.35	0.48
	Guided virtual tours (VS_2)	1 = Implementation of the VS	311	0.34	0.47
	Web-based teaching laboratories (VS_3)	0 = Absence of the VS	311	0.27	0.44
	Online seminars, meetings and conferences (VS_4)	1 = Implementation of the VS	311	0.42	0.49
<i>Dependent variables</i>					
No. of Italian visitors (Vis_It)	Number of Italian visitors who visited the cultural institution on-site in 2021	Continuous variable	312	42.842	102.754
No. of foreign visitors (Vis_Int)	Number of foreign visitors who visited the cultural institution on-site in 2021	Continuous variable	307	22.708	80.730
Source(s): Authors' own creation					

guided virtual tours (VS_2), we assessed the implementation of virtual teaching laboratories (VS_3) and the organization of online seminars, meetings and conferences (VS_4). These variables were dichotomous, with “1” indicating that they were realized and “0” indicating that they were not realized.

A hierarchical regression model has been designed to test the research hypotheses. In the first step, we included in the regression analysis the type of ownership, the management approach, the geographic location and the access modality. In the second step, we added the variables related to SDS and PCS, which focused on initiatives intended to enrich the on-site visit. In the third and last step, we introduced the items pertaining to VS to account for the virtualization of the service offering. We ran two models focused on Italian (Model 1) and foreign visitors (Model 2). This allowed us to check the consistency of the findings and obtain dependable evidence of the drivers of organizational attractiveness.

4. Findings

The institutions involved in our analysis were concerned with enhancing the content of their on-site service offering with digital tools and technologies. A third of the sample developed applications for mobile devices (31.8%). Moreover, about 3 in 10 arranged multimedia stages exploiting virtual and/or augmented reality (29.8%). A limited number of cultural institutions loaned tablets and mobile devices to improve the visitors' experience (7.8%). The units of analysis were interested in designing and providing people-centered services to enrich their exchange with the audience. More than half of them introduced pedagogical activities and teaching laboratories into their service offering (57.9%). In addition, most institutions organized seminars, meetings and conferences (66.9%) and held live shows and events to promote cultural heritage (70.4%). Virtualization was moderately exploited to create new channels to interact with the visitors. A third of the sample delivered virtual tours (35%) and organized guided visits online (33.8%). Web channels were used to broadcast online seminars, meetings and conferences (41.8%). Pedagogical activities were less commonly arranged in the digital environment (27%).

Table 3 reports the results of Model 1, which focused on Italian visitors. In the first step, geographic location ($\beta = -0.31$; significant at the 0.001 level) and the modality of access ($\beta = -0.23$; significant at the 0.05 level) were negatively related to organizational attractiveness. Institutions in southern Italy and those with a free access scheme reported fewer Italian visitors. Introducing SDS and PCS in the second step yielded a statistically significant improvement in the model. The availability of applications for mobile devices ($\beta = 0.21$; significant at the 0.01 level) and on-site seminars, meetings and conferences ($\beta = 0.23$; significant at the 0.01 level) added to the organizational ability to attract visitors. In the last step, the inclusion of VS in the regression analysis generated a further model improvement. Virtual tours ($\beta = 0.31$; significant at the 0.05 level) and online seminars, meetings and conferences ($\beta = 0.19$; significant at the 0.001 level) were positively and significantly associated with organizational attractiveness. Geographic location preserved its negative and statistically significant relationship with the number of Italian visitors ($\beta = -0.26$; significant at the 0.01 level). The access modality and the items related to SDS and PCS lost statistical significance. Therefore, Hp. 1 and Hp. 2 were rejected. However, we obtained partial support for Hp. 3. Virtualization of the service offering enhanced the ability of museums and cultural institutions to meet the evolving expectations of Italian visitors.

Table 4 shows the results of Model 2, which concerned the international audience. In the first step of the model, only geographic location was significantly related to the number of foreign visitors who accessed the cultural institutions ($\beta = -0.27$; significant at the 0.01 level). Institutions established in southern Italy were less attractive than their counterparts. Adding SDS and PCS in the second step of the regression analysis improved the model. Applications for mobile devices ($\beta = 0.36$; significant at the 0.001 level) and on-site seminars, meetings and

Table 3.
The study results –
model 1

Outcome: Vis_It										
Model summary										
Model	R	R ²	Adj. R ²	Estimate's SE	R ² change	F change	df1	df2	Sig. F change	Durbin-Watson
1	0.27	0.07	0.06	0.63	0.07	6.04	4	296	0.000	
2	0.38	0.14	0.12	0.61	0.07	3.96	6	290	0.001	
3	0.46	0.21	0.17	0.59	0.07	6.05	4	286	0.000	1.59
ANOVA										
Model	Sum of squares			df	Mean square		F	Sig.		
1	Regression	9.64	4	2.41	6.04		6.04	0.000		
	Residual	118.21	296	0.40						
	Total	127.85	300							
2	Regression	18.59	10	1.86	4.93		4.93	0.000		
	Residual	109.26	290	0.38						
	Total	127.85	300							
3	Regression	27.12	14	1.94	5.50		5.50	0.000		
	Residual	100.73	286	0.35						
	Total	127.85	300							
Coefficients										
Model	Unstandardized coef.		Standardized coef.		t		Sig.		Collinearity statistics	
	β	SE	β	SE					Tolerance	VIF
1	Const	4.23	0.070	0.070	60.083	0.000				
	Ownership (1 = State owned)	0.06	0.078	0.047	0.793	0.428			0.878	1.139
	Management approach (1 = Indirect)	-0.06	0.111	-0.031	-0.517	0.606			0.875	1.143
	Geographic location (1 = Southern Italy)***	-0.31	0.076	-0.229	-4.034	0.000			0.970	1.031
	Modality of access (1 = Free entry)*	-0.23	0.120	-0.111	-1.968	0.050			0.978	1.023

(continued)

Model	Coefficients	Unstandardized coef. β	SE	Standardized coef. β	t	Sig.	Tolerance	Collinearity statistics VIF
2	Const	3.94	0.10		39.13	0.000		
	Ownership (1 = State owned)	0.06	0.08	0.05	0.81	0.416	0.85	1.18
	Type of management (1 = Indirect)	-0.03	0.11	-0.02	-0.30	0.767	0.85	1.17
	Geographic location (1 = Southern Italy)***	-0.33	0.08	-0.24	-4.29	0.000	0.91	1.09
	Modality of access (1 = Free entry)	-0.18	0.12	-0.09	-1.58	0.116	0.96	1.05
	SDS_1**	0.21	0.08	0.15	2.65	0.009	0.90	1.11
	SDS_2	-0.01	0.08	-0.01	-0.10	0.920	0.91	1.09
	SDS_3	-0.02	0.14	-0.01	-0.11	0.911	0.93	1.07
	PCS_1	-0.03	0.08	-0.02	-0.31	0.757	0.82	1.22
	PCS_2**	0.23	0.08	0.17	2.74	0.006	0.81	1.24
	PCS_3	0.12	0.08	0.08	1.43	0.154	0.87	1.15
	Const	3.89	0.10		39.65	0.000		
	Ownership (1 = State owned)	0.05	0.07	0.04	0.69	0.489	0.825	1.213
	Type of management (1 = Indirect)	-0.05	0.11	-0.03	-0.50	0.619	0.849	1.178
Geographic location (1 = Southern Italy)**	-0.26	0.08	-0.19	-3.33	0.001	0.835	1.198	
Modality of access (1 = Free entry)	-0.16	0.11	-0.08	-1.44	0.151	0.953	1.049	
SDS_1 [†]	0.16	0.08	0.11	1.93	0.054	0.815	1.227	
SDS_2	-0.07	0.08	-0.05	-0.89	0.371	0.868	1.152	
SDS_3	-0.01	0.13	-0.01	-0.03	0.980	0.923	1.084	
PCS_1	-0.08	0.08	-0.06	-1.02	0.307	0.786	1.272	
PCS_2 [†]	0.14	0.08	0.10	1.66	0.098	0.751	1.332	
PCS_3	0.07	0.08	0.05	0.86	0.393	0.851	1.175	
VS_1*	0.19	0.09	0.14	2.20	0.029	0.658	1.521	
VS_2	-0.01	0.09	-0.01	-0.06	0.956	0.634	1.576	
VS_3	-0.02	0.09	-0.02	-0.24	0.812	0.662	1.511	
VS_4****	0.31	0.08	0.24	3.87	0.000	0.738	1.356	

Note(s): ^{*}Significant at the 0.05 level; ^{**}Significant at the 0.01 level; ^{***}Significant at the 0.001 level; [†]Significant at the 0.10 level

Source(s): Authors' own creation

Table 3.

Table 4.
The study results –
model 2

Outcome: Vis_Int Model summary										
Model	R	R ²	Adj. R ²	Estimate's SE	R ² change	F change	df1	df2	Sig. F change	Durbin-Watson
1	0.22	0.05	0.03	0.78	0.05	3.63	4	296	0.007	
2	0.34	0.11	0.09	0.76	0.07	3.64	6	290	0.002	
3	0.41	0.17	0.13	0.74	0.05	4.54	4	286	0.001	1.48
ANOVA										
Model	Sum of squares			df	Mean square		F	Sig.		
1	Regression	8.91	4	2.23	3.63		0.007			
	Residual	181.73	296	0.61						
	Total	190.63	300							
2	Regression	21.63	10	2.16	3.71		0.000			
	Residual	169.01	290	0.58						
	Total	190.63	300							
3	Regression	31.73	14	2.27	4.080		0.000			
	Residual	158.91	286	0.56						
	Total	190.63	300							
Coefficients										
Model	Unstandardized coef.		Standardized coef.		Collinearity statistics					
	β	SE	β	t	Tolerance	VIF				
1	Const	3.67	0.09	42.06	0.000					
	Ownership (1 = State owned)	0.07	0.10	0.77	0.440	1.14				
	Type of management (1 = Indirect)	-0.12	0.14	-0.91	0.365	1.14				
	Geographic location (1 = Southern Italy)**	-0.27	0.09	-2.82	0.005	1.03				
	Modality of access (1 = Free entry) [†]	-0.26	0.15	-1.76	0.079	1.02				

(continued)

Model	Coefficients	Unstandardized coef. β	SE	Standardized coef. β	t	Sig	Tolerance	VIF
2	Const	3.44	0.13		27.51	0.000		
	Ownership (1 = State owned)	0.07	0.10	0.05	0.77	0.441	0.850	1.176
	Type of management (1 = Indirect)	-0.06	0.14	-0.03	-0.46	0.642	0.851	1.175
	Geographic location (1 = Southern Italy)**	-0.29	0.09	-0.17	-3.03	0.003	0.914	1.094
	Modality of access (1 = Free entry)	-0.22	0.15	-0.08	-1.48	0.139	0.957	1.045
	SDS_1***	0.36	0.10	0.21	3.61	0.000	0.899	1.112
	SDS_2	-0.02	0.10	-0.01	-0.14	0.885	0.914	1.094
	SDS_3	-0.15	0.17	-0.05	-0.92	0.360	0.934	1.071
	PCS_1	-0.12	0.10	-0.07	-1.21	0.229	0.820	1.220
	PCS_2*	0.23	0.11	0.13	2.18	0.030	0.807	1.239
	PCS_3	0.06	0.10	0.03	0.56	0.577	0.873	1.146
	Const	3.40	0.12		27.58	0.000		
	Ownership (1 = State owned)	0.06	0.09	0.04	0.63	0.529	0.825	1.213
	Type of management (1 = Indirect)	-0.08	0.13	-0.04	-0.63	0.526	0.849	1.178
	Geographic location (1 = Southern Italy)**	-0.21	0.10	-0.13	-2.21	0.028	0.835	1.198
Modality of access (1 = Free entry)	-0.21	0.14	-0.08	-1.48	0.139	0.953	1.049	
SDS_1**	0.31	0.10	0.18	3.04	0.003	0.815	1.227	
SDS_2	-0.08	0.10	-0.05	-0.84	0.404	0.868	1.152	
SDS_3	-0.16	0.16	-0.05	-0.97	0.331	0.923	1.084	
PCS_1	-0.15	0.10	-0.09	-1.55	0.121	0.786	1.272	
PCS_2	0.13	0.11	0.07	1.19	0.235	0.751	1.332	
PCS_3	0.02	0.10	0.01	0.18	0.855	0.851	1.175	
VS_1	0.13	0.11	0.08	1.22	0.223	0.658	1.521	
VS_2	0.12	0.12	0.07	1.02	0.309	0.634	1.576	
VS_3†	-0.22	0.12	-0.13	-1.90	0.058	0.662	1.511	
VS_4***	0.31	0.08	0.24	3.87	0.000	0.738	1.356	

Note(s): *Significant at the 0.05 level; **Significant at the 0.01 level; ***Significant at the 0.001 level; †Significant at the 0.10 level

Source(s): Authors' own creation

Table 4.

conferences ($\beta = 0.23$; significant at the 0.05 level) contributed to enhancing the attractiveness toward the international audience. Also, the inclusion of VS implied an improvement in the model. Geographic location continued to be negatively and significantly associated with organizational attractiveness ($\beta = -0.21$; significant at the 0.05 level). The development of mobile device applications to advance the visiting experience was positively and significantly associated with the number of visitors ($\beta = 0.31$; significant at the 0.01 level). Furthermore, online seminars, meetings and conferences increased the international attractiveness of cultural institutions ($\beta = 0.31$; significant at the 0.001 level). Hence, [Hp. 1](#) and [Hp. 3](#) were partially supported, while [Hp. 2](#) was rejected. Augmenting the visiting experience with digital applications and arranging online seminars, meetings and conferences boosted the cultural institutions' ability to entice international visitors.

5. Discussion

The study findings provide intriguing insights to advance our understanding of how museums and cultural institutions can redesign their service offerings to thrive in an increasingly complex and challenging environment ([Palumbo, 2022](#)). Reconfiguring the visiting experience through digitalization and value co-creation is vital to accompany the institutional shift from a focus on custodial activities to a concern for attracting and enticing the audience ([Blasco López et al., 2019](#); [Gilmore and Rentschler, 2002](#)). This involves embracing a people orientation to anticipate the visitors' evolving needs ([Camarero Izquierdo and José Garrido Samaniego, 2007](#)) and establish a co-creating relationship with the audience ([Thyne and Hede, 2016](#)).

Previous research emphasized the role of digitalization in enhancing the value delivered by museums and cultural institutions ([Raimo et al., 2022](#)). However, we found limited evidence of the impact of digitalization on organizational attractiveness ([Geismar, 2021](#)). Italian visitors did not seem to be captivated by the reconfiguration of the visiting experience with digital technologies. International visitors were enticed by the availability of mobile devices that enhanced their appreciation of cultural heritage. However, they seemed to be not interested in multimedia stages based on virtual reality or augmented reality. These findings stress that the digitalization of the service experience should be implemented by preserving the authenticity of the cultural heritage ([Baratta et al., 2022](#)), avoiding that the pervasiveness of digital technologies undermines the contact with cultural heritage ([Evrard and Krebs, 2018](#)). This calls for handling authenticity amidst the digital transformation of museums and cultural institutions, preserving cultural heritage in an increasingly immaterial world ([Shehade and Stylianou-Lambert, 2020](#)).

It is worth noting that the delivery of people-centered services was not found to be associated with organizational attractiveness. Although complementing the conventional value proposition of museums and cultural institutions ([Wu and Li, 2015](#)), people-centered services are only indirectly related to their core offering ([Hooper-Greenhill, 2000](#)). Therefore, embracing a people-centered view may not be enough to advance the visiting experience by leveraging emotions and feelings of authenticity ([Forgas-Coll et al., 2017](#)). This is especially true when these services result from a loose strategy to attract new visitors, overlooking the fit between the service offering and the cultural heritage ([Palumbo et al., 2022](#)). Alternatively, virtualizing the service offering increased the attractiveness of museums and cultural institutions to national and international audiences. Recontextualizing the visiting experience in the cyber-physical landscape is consistent with adopting an open perspective in the configuration of the service exchange with the audience ([Tanasi et al., 2021](#)). Virtualization modernizes the relationship with the visitors ([Camps-Ortueta et al., 2021](#)), activating new ways of interacting with the audience and pushing forward organizational attractiveness ([Massari et al., 2022](#)).

The study findings should be read in light of the limitations that affect this research. Our analysis was exclusively focused on Italian museums and cultural institutions. Therefore, it is impossible to claim the international generalizability of the results. However, we investigated a representative sample of large, publicly-owned cultural institutions operating in Italy, which provided reliable evidence of the service factors generating organizational attractiveness. The dataset's cross-sectional nature compromises the robustness of our study, preventing us from maintaining a longitudinal relationship between the study variables. Lastly, but importantly, the secondary data used in this research were collected in 2021. Hence, there is the risk that the aftermath of the Covid-19 pandemic influenced the study findings.

Despite these limitations, the implications are twofold. Museums and cultural institutions should handle the digital shift as a two-edged sword. Although digitalization is crucial to modernize the service offering and captivate an international audience, it could undermine the cultural institutions' attractiveness if no precautions are taken to protect cultural heritage. The digital transition might impoverish visitors' emotions and feelings, reducing the quality of the visiting experience. Tailored change management initiatives should be implemented to increase the capacity of museums and cultural institutions to attract and retain visitors through digitalization. On the one hand, joint optimization should be sought between the physical and the virtual contents of the visiting experience, aligning digital tools and technologies with the components of the conventional service offering. On the other hand, museums and cultural institutions should leverage digital technologies to create value co-creation opportunities. Far from virtualizing cultural heritage, digital tools should empower visitors, enabling them to fully appreciate its authenticity.

More research is required to advance our understanding of the factors that influence the attractiveness of museums and cultural institutions. Extending this study to other countries is needed to verify the dependability and gauge their generalizability. Besides, longitudinal studies are necessitated to obtain reliable and robust evidence of the drivers of organizational attractiveness. Finally, in-depth qualitative analyses should be performed to examine visitors' reactions to embedding digital technologies in the service offering of museums and cultural institutions.

6. Conclusions

Museums and cultural institutions face significant challenges in addressing the evolving expectations of the audience. Reconfiguring the service offering is needed to advance the organizational ability to thrive in an increasingly turbulent environment. Digitalization is key to modernizing the content of the visiting experience and engaging the audience. For this to happen, the digital transition should be managed by adopting an empowerment perspective, enabling visitors to perceive the authenticity of cultural heritage. Digital technologies that intermediate the contact between visitors and the cultural heritage are likely to undermine the quality of the service experience and disengage visitors. Therefore, attention should be paid to the alignment between the service offering's digitalization and the cultural heritage, relying on visitors' emotions and feelings to attract and entice them.

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