

Article

Financial Sustainability of Digitizing Cultural Heritage: The International Platform Europeana

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Abstract: In recent years, the increasing demand for digital cultural content has intensified the digitization challenges for cultural organizations. Among these difficulties, cultural organizations have been struggling to find the financial resources for digitizing their cultural heritage, as well as for storing data, developing digital skills, and implementing enhancement and management processes for their digitized materials. The financial sustainability of digitization projects has therefore been problematic, especially for small and medium organizations. In this framework, among its attempts to solve these issues, the European Union has launched the project Europeana, a digital platform uniting European digitized heritage and empowering cultural organizations through a variety of services. The aim of our research was to investigate the Europeana project to understand how it eases the financial costs of digitization for cultural organizations, and how the Europeana model could bring insights into how to improve the financial sustainability of digitization of cultural heritage.

Keywords: financial sustainability; digitization of cultural heritage; management model of international digital platforms; financial management of digitization projects; co-creation of value



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1. Introduction

The digitization challenge for cultural heritage organizations has intensified in recent years, during which there has been a growth in demand for digital cultural content (Cosimato et al. 2021; Marras 2020) exacerbated by the pandemic period (Kolokytha and Rozgonyi 2021; Radermecker 2021; Vlassis 2021; Zbucheá et al. 2021). Cultural organizations have been struggling to find the financial resources for creating digital and physical infrastructures, developing digital skills, and designing enhancement and management processes to both digitize their heritage and preserve, store, and enhance digitized materials (De La Porte and Higgs 2019; Pandey and Kumar 2020; Preuss 2016). The European Union has tried to act both by allocating special funds for the digital transition and by creating special initiatives that are based on unified collaborative partnerships and digital platforms for storing, managing, and enhancing digitized cultural heritage.

In this framework, one of the most significant projects is the launch of the Europeana initiative: it aimed to create a digital platform, called Europeana, which could bring together Europe's huge digitized cultural heritage. The objective was to create a unified management system for digitized cultural heritage that can help to preserve, enhance, and make accessible European digital cultural data. The case has been analyzed in depth from the point of view of data digitization protocols and data management (Belhi et al. 2017; Meghini et al. 2019; Siqueira et al. 2021); however, analyses of the business model of the project, and its impact on reducing the digitization costs for cultural organizations, are still limited (Macri and Cristofaro 2021). It is, therefore, of particular interest to try to understand how the project is structured and what the mechanisms for easing the financial burden of the digitization of cultural heritage for cultural organizations are.

Moreover, a new initiative of the European Union (namely the ECCCH—European Collaborative Cloud for Cultural Heritage) is aiming at creating a new platform for empowering cultural heritage organizations in their digitization journey (source: https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3855) (accessed on 12 May 2023), questioning the approach proposed by Europeana (Brunet et al. 2022) and partially replacing it. It seems relevant, therefore, to further reflect on the Europeana project, focusing on an aspect that was rather neglected in the academic literature so far but that could also be relevant in the newly-launched initiative. Meanwhile, it is interesting to evaluate how the reduction in costs is creating value for the different stakeholders involved.

Specifically, this contribution aims at answering the following research questions:

- How is the Europeana project impacting the reduction in the costs of digitizing and managing digitized cultural heritage in European cultural organizations?
- What are the lessons that we are learning from the project that can guide the financially sustainable management of digitized cultural heritage for cultural organizations?

These research questions are investigated using a qualitative case study analysis according to the model proposed by Yin (2014) and the coding of primary data according to the methodology proposed by Gioia et al. (2012).

This contribution is divided into five main sections. After this introduction, the second section presents the theoretical references of the research, which are articulated in an analysis of the evolution of digitization in the cultural heritage sector and the related economic management challenges, also concerning financial management and financial sustainability in international digital platforms and global value chains. The third section briefly presents the research methodology and the use of secondary and primary data, while the fourth section presents the main results of the empirical research, creating a case study report which also includes a critical discussion of the data based on the previous findings in the literature. Finally, some conclusions will be presented that link our analysis to the broader debate on the financial sustainability of the digitization of cultural heritage: it is highlighted that Europeana helped to ease some of the costs related to the enhancement and management of the data but provided other essential benefits to the organizations. In the conclusions, the authors discuss how the case study could provide insight into the academic and practical debate, and what the potential future development of the research might be.

2. Literature Review

A useful theoretical framework for our research should take into consideration the reflection on three main aspects: the debate on the digitization of cultural heritage, presenting its evolution and the issues related to managerial and cost issues; the debate on digital platforms and the issues related to them, given the nature of the Europeana initiative; and the reflection on international and global value chains, given that the project involves international actors operating in an online framework.

To begin with, the historical perspectives serve to better frame the evolutionary process of cultural heritage digitization in its profiles of increasing complexity, up to the issues that led to outsourcing or international partnership strategies, which are at the core of the Europeana case study model which is under investigation. The lens of business analysis provides the key to interpreting the dynamics behind the financial sustainability of digitization processes of cultural heritage, as well as the management and enhancement of digitized cultural data. Furthermore, it intersects with reflections on cost management and financial sustainability with the reflection on the creation of value (also interpreted as economic and financial value) in this type of large collaborative international project.

Starting from a historical perspective, it must be pointed out that in recent decades, the topic of digital transformation has been addressed by the cultural sector both at the level of political discussion (Khan et al. 2018; Valtysson 2017) and at the level of analysis of the digitization process and its economic–managerial (Sotirova et al. 2012), ethical (Manžuch 2017), and legal implications (Borissova 2018; Horvat and Zivkovic 2010).

Digitization has offered cultural institutions interesting opportunities not only to reach different audiences (Camuñas-García et al. 2023), but also to facilitate access to artifacts and collections for research purposes (Evens and Hauttekeete 2011; Moraitou et al. 2023). Optimizing digital accessibility lays the foundation for realizing the economic and social potential of heritage collections (Müller 2021; Cameron 2021).

The digitization of cultural heritage relies on the increasing quality of technical equipment and the rapid improvement of computer processing and storage capacities to acquire, preserve, archive, and distribute technically accurate reproductions of cultural artifacts. It started in the 1970s with the first digital catalogs (Affleck and Kvan 2008; Van Horik 2005) and continued in the 1980s, when several museums converted printed material into digital files (Kiernan 1981; NARA 1991). In the 1990s, computer devices were more readily available to users, who showed a growing interest in digital content (Prescott 1997). This accelerated experimentation by cultural organizations, libraries, archives, and museums led to the adoption of digital technologies for learning, teaching, and research purposes to support preservation and increase accessibility (Kenney and Rieger 2000; Naughton 2000). In the 1990s, several cultural organizations introduced digitization on a wider scale, also as a response to political initiatives pushing for the digitization of cultural heritage, such as the “Internet Library of Early Journals” initiative¹. Furthermore, digitized material started to be placed alongside “born-digital” material to supplement and enrich existing information and data. The organization of cultural heritage started using interactive visualization, resorting to reconstructive 3D modeling techniques and exploiting the potential of WEB 1.0. at the beginning of the 2000s (Doolan et al. 2004). Recently, they started to use mobile applications, 3D interpretative models, and the semantic web, implemented through international programs aimed at encouraging institutions to digitize their cultural heritage (Rossato 2020).

Over the last two decades, digitization has attracted increasing interest not only in museology, digital technologies, and computer science, but also in the literature on business and management (Lazzeretti and Sartori 2016; Minghetti et al. 2001; Vom Lehn and Heath 2005), including a reflection on its financial sustainability and business models. A decade ago, a pioneering survey such as that published in the framework of the Enumerate project (Stroeker and Vogels 2012) exposed some of the most common challenges related to digitization, such as the need for specifically trained staff, technologies, and the long-term financial sustainability of digitization processes. Additional costs leading to difficult financial sustainability have often been perceived as one of the main obstacles to digitization processes (Navarrete 2013; Evens and Hauttekeete 2011), resulting in the need to rethink business models and develop new strategies regarding stakeholders (Bishoff and Allen 2004). In particular, heritage organizations have progressively embraced the idea of outsourcing or creating strategic partnerships to implement activities that are not part of their core competencies, such as digitization and the management and valorization of their digital/digitized cultural heritage (Borin et al. 2020). In digitization projects, such partnerships are developed to generate management efficiency, economies of scale, and sharing of knowledge and innovations. However, these partnerships have often been temporarily limited based on overly specific projects, thus hindering the possibility of evolving into structural cooperation (Bishoff and Allen 2004). Moreover, they pose issues related to governance (Esposito et al. 2023; Evens and Hauttekeete 2011) and designing the best systems of interaction among the involved parties (Capurro 2021).

The European Union has attempted to take action to foster and support these processes, starting with the “Digital Agenda for Europe”, which was developed after the economic crisis of 2008–2009 and served as an initial framework for cultural and creative industries and digitization, as well as for stimulating the European economy and sustainable growth more generally through the digital transition (Cruz-Jesus et al. 2012; Manikowska 2019; Mansell 2014). As part of this first experience, the European Commission’s eContentplus program launched the Europeana digital portal, facilitating the sharing of millions of digitized cultural resources from more than 2000 European cultural organizations (muse-

ums, archives, libraries, and audiovisual collections) in the first phase. The first results of the project highlighted the need for further efforts by individual cultural organizations and a redefinition of the overall project management model, especially considering its international nature. Indeed, it required the development of specific standards, tools, and technologies that would guarantee the use of digital data by the diverse users and partners of Europeana. Furthermore, it was based on protocols for managing collaborations between organizations of different types, which are geographically distant and often have different levels of technological advancement and objectives. Recently, the European Union has launched a new initiative, called ECCCH—European Collaborative Cloud for Cultural Heritage, aiming at bringing forward the Europeana experience (Brunet et al. 2022) and addressing the most recent challenges of cultural heritage digitization (Brunet et al. 2022).

Indeed, the digitization challenge for cultural heritage organizations has further intensified due to the growth in demand for digital cultural content, especially during the pandemic period (Agostino et al. 2020; Cosimato et al. 2021; Kolokytha and Rozgonyi 2021; Marras 2020; Vlassis 2021). Once again, these challenges have often appeared too daunting to be addressed by individual cultural heritage institutions, considering that the majority of these organizations are small- and medium-sized (Eurostat 2019) and often do not have the necessary financial means to invest either in technologies and human resources upskilling or in the storage, management, and enhancement of digital data (Borin et al. 2020).

The problem has been partially solved through the allocation of some European funds dedicated to digitization processes (Manikowska 2019). Another solution has been the establishment of cooperation at local, meso, national, and international levels that could guarantee a joint investment in infrastructure and integrate skills, knowledge, and strategies, thus reducing the costs of digitization, preservation, and enhancement of digitized cultural heritage (Borin 2017). Regarding the first point, the goal of digital and ecological transition has also been confirmed as a priority in the most recent EU programming period, as can be seen in the Multiannual Financial Framework 2021–2027 and in the NextGeneration EU instrument, where the goal of an inclusive and participatory transition towards a “green and digital future” is repeatedly stressed (De la Porte and Jensen 2021). The support and encouragement initiatives (also through substantial financial allocations) are in addition to the various programs and multifaceted specific initiatives promoted by various public and private actors operating in the cultural sector throughout Europe (Sunkoly and Vahtikari 2018; Sotirova et al. 2012). Regarding the second point, there is an ongoing scientific, theoretical, and practical reflection on how best to manage such international partnerships for digitization and digital data management to create benefits for cultural heritage organizations and ensure the long-term economic sustainability of the digitization projects: this discussion has also addressed the economic and financial sustainability of digitization projects, reflecting on partnerships for the digitization of cultural heritage as well as on digital platforms for cultural heritage enhancement (Borin 2017).

For this study, as in the vast body of research mentioned above, it is relevant to address the scientific debate on the economic and financial sustainability of the digitization of cultural heritage, as well as the literature on digital platforms for the management of digitized data. This would indeed help us to place our research questions on the Europeana project into the correct research framework. In particular, interesting insights in the literature for our investigation can be identified in research on value creation mechanisms and power relations in situations where international partnerships are composed of companies of various sizes and with different levels of bargaining power.

A strong body of literature on the digitization of cultural heritage has emphasized its benefits in terms of the preservation, enhancement, and accessibility of cultural heritage as previously described, but it has also highlighted the high costs of digitization for cultural organizations and the potential threats to their financial unsustainability. Digitization costs could be related to equipment and technology, since cultural organizations need to invest in specialized equipment and technology for digitization, such as high-resolution scanners, cameras, digitization software, storage devices, and computer systems capable of handling

large amounts of data (Pandey and Kumar 2020; Adane et al. 2019). These technological investments can be quite significant and not feasible for small- and medium-sized cultural organizations, especially those relying on public funding. Another significant cost could be related to the fact that digitizing cultural heritage requires a skilled workforce with expertise in handling and digitizing delicate artifacts, operating specialized equipment, and managing digital assets. Hiring and training staff or outsourcing these services can incur costs (Cori and Fraticelli 2018). Digitized cultural heritage, moreover, implies metadata creation and cataloging. Indeed, digitized cultural heritage needs to be properly organized, described, and cataloged to ensure easy access and retrieval. This involves creating metadata, which requires trained professionals who are familiar with cataloging standards and practices (Giannoulakis et al. 2018). Moreover, digitized content requires adequate storage infrastructure and data management systems to ensure its long-term preservation and accessibility. The costs may include cloud storage solutions, backup systems, and ongoing maintenance of digital repositories. It also requires good processes of quality control and assurance: cultural organizations need to allocate resources for quality control processes, including image verification, metadata accuracy checks, and regular system audits, to maintain high-quality digitized materials (Nguyen et al. 2022). Ensuring the long-term sustainability of digitized cultural heritage involves ongoing maintenance, system upgrades, periodic data migration, and regular technology updates. Budgeting for these recurring costs is essential to preserve digital assets effectively (Gireesh Kumar and Nair 2022; Thekkum Kara 2021). Finally, making digitized cultural heritage accessible to the public often requires additional investments. This may involve creating user-friendly interfaces, developing interactive exhibits or websites, and implementing outreach programs to promote awareness and engagement (Bontchev 2015).

A further cost category is identified for copyright, licensing, and digital rights management (Borissova 2018). Cultural organizations must consider copyright and licensing issues when digitizing cultural heritage. Acquiring permissions, licenses, or rights to reproduce and display certain materials can involve legal and financial considerations. Cultural organizations may also need to invest in digital rights management systems to protect their digitized content from unauthorized use, reproduction, or distribution. These systems often involve licensing fees or technological solutions that incur costs.

To complement the insights provided by the literature on the financial sustainability of international digitization projects, and concerning our selected case study, it seems interesting to make some considerations based on the studies on digital business and digital platforms. In this literature, an interesting stream of research focuses on the roles that can be identified in the implementation of digital platforms and how they relate to the sustainability of the project and value creation/co-creation (Kapoor 2018; Hein et al. 2020; Tiwana 2018). The key roles of platform sponsors, users, and complementors are highlighted, and it is pointed out that a continuous interaction, from an ecosystem perspective based on the proactivity of the parties in continuous value co-creation processes, is necessary (Dattée et al. 2018). Platform sponsors are often the key figures in determining the sustainability of projects; they also shape the mechanisms by which innovation or open innovation is promoted, even in contexts of high uncertainty such as digital ones. It must be noted that in digital platforms, value creation is also multi-directional, totally different from the linear value creation model of a traditional company, for which shared and participatory governance systems are often more appropriate (Banerjee and Majumdar 2020; Chen et al. 2021; Kenney and Zysman 2019; Mosch and Obermaier 2022; Pagani 2013; Trabucchi et al. 2022; Wulf and Blohm 2020). These insights also resonate with the literature on digital platforms and digital projects in cultural heritage (Kéfi and Pallud 2011; Benardou et al. 2018; Musasa and Modiba 2021; Salvador et al. 2019; Pesce et al. 2019).

The literature on global value chains and value creation adds other interesting insights to our analysis (Lee and Lee 2019). Part of the reflection on the mechanisms of value creation in global value chains focuses on partnerships between small and medium-sized enterprises as dependent suppliers, which operate in ancillary positions in value chains in networks

led by large, often multinational, entities (Buckley and Prashantham 2016; Strange et al. 2022). On the one hand, the literature has emphasized how such small and medium-sized enterprises depend on relationships with large corporations and project leaders to obtain the complementary financial, technological, and human resources that could enable their digitization processes and use of digital data, also from a positive perspective (Buckley 2009; Murphree and Anderson 2018; Soontornthum et al. 2020). Leaders can provide a strong stimulus for technological upgrading to small enterprises through the demand for the adaptation of application profiles and the supply of specific digital materials and data (Magnani et al. 2019; Murphree and Anderson 2018). Studies on the dynamics of value creation within global value chains concerning the advent of the digital age indicate that digitization influences small industries (also in the cultural and creative sector, in particular, the video games sector) in an ameliorative way, stimulating technological upgrading and investment by players interacting in international partnerships, thus changing their role and power at an international level and stimulating the upgrading of skills, competencies, and technological investment.

The research paradigms highlighted above thus show us the framework for a study of how an international central platform for digitized cultural heritage could provide potential benefits regarding the challenges of digitization in the cultural sector. As mentioned above, this research aims to provide initial reflections on these aspects through the results that will be illustrated in the following sections of this article.

3. Research Design and Methodology

This paper aims to achieve its research objectives through a qualitative analysis of the case study of the Europeana project, with a particular focus on the management processes and business model of the project, and on its impact in terms of ensuring the long-term economic and financial sustainability of the project. The case was chosen according to the criteria of relevance and appropriateness to the research area and research questions (Patton 2014). As previously illustrated, Europeana has often been referred to in the literature as the emblematic project of the European Union in terms of digitization policies, representative not only of the European strategy towards digitization, but also of the problems and, in a certain sense, the uncertainties that have led to a partial implementation of the potential of such a large-scale project. Furthermore, the project seemed particularly suitable for this research due to its scale, governance, and management profiles, which makes it possible to relate it to the reflections on how to address the cost challenges involved in the digitization of cultural heritage. The project's period (launched about 15 years ago) makes it a "mature" project, a characteristic that seemed particularly relevant because it was possible to analyze the current configurations as the result of an evolution over time. Lastly, the case was chosen because a research gap was identified in the literature that needed to be filled concerning the cost benefits that the model is bringing to cultural organizations, to complement the various studies on this subject already published relating to other fields of study (e.g., those in the IT or cultural fields).

The case study was investigated following a data collection protocol based on various documentary sources, according to the model proposed by Yin (2014). In particular, two phases of analysis can be identified: in the first phase, a preliminary analysis was carried out from different secondary sources, including annual reports, partnership agreements, project documents, and outputs on the official website, statutes, and press releases, as well as calls for tender procedures for the project. This first phase was considered preparatory for the empirical research phase based on primary sources. Indeed, in the second phase, a series of five semi-structured research interviews was conducted with the representatives of three main categories of actors in the Europeana initiative: the Europeana Foundation (one interview), the aggregators (two interviews), and the cultural organizations involved as digital data providers (two interviews). The majority of interviewees demanded to keep their identities confidential. The interviews lasted approximately 30 to 60 min and aimed at exploring issues related to funding and costs of the projects, but also to the

management and perception of the benefits of the project for the involved parties. The protocol of the research questions was slightly varied during some interviews, following the flexible approach indicated by Dubois, Gadde, and Stake (Dubois and Gadde 2017; Stake 2008). Each interview was recorded, transcribed, and coded manually to ensure the scientific rigor of the analysis. The data were coded using the Gioia methodology (Gioia et al. 2012), thus producing categories and abstractions. This approach was found to be appropriate for the study to meet the required rigor and trustworthiness standards (Gioia et al. 2012). It entails coding the data using a first-order (informant-centric) and second-order (theory-centric) approach, which results in the ultimate aggregation of data into primary aggregated themes. The data are provided through tables and figures in the reporting phase, and are further interpreted and critically discussed by the authors. The results are presented in the next section of this paper, providing not only information on the research topics, but also food for thought on the aspects that could shape similar initiatives and potential future developments of the project from an economic and business perspective.

4. Results of the Empirical Analysis

4.1. Presentation of the Case Study

The prototype of a European digital library called Europeana was launched in 2008; in May 2015, Europeana became one of the European Commission's Digital Service Infrastructures, DSI, providing networked cross-border services for citizens, businesses, and public administrations (Zimina 2011). The initiative relies on the interaction between the Europeana Initiative and the active digitization strategies of the EU Member States; it is financed by European funds complemented by specific funds from the Ministries of Culture of the participating countries, and works in line with EU policies and strategies in areas such as inclusiveness; online accessibility; re-use of public information; and promotion of European research, development, and innovation by directly complementing and supporting the work undertaken by cultural heritage institutions within their national cultural policies (Scott 2013; Valtysson 2017). The initiative is based on the interaction between three main bodies: the Europeana Foundation (ENF), an independent, non-profit organization that manages the Europeana platform and collaborates with other digital initiatives that make use of cultural heritage worldwide; the European Aggregators Forum (EAF), which brings together all 44 of the project's data aggregators, affiliated partners that manage the data flow and enrichment that are then fed into the Europeana portal; and, finally, the Europeana Network Association (ENA), an association open to all citizens and the community, composed of people who are interested in digital cultural collections. Although anyone can apply for membership, ENA members are generally cultural sector professionals or researchers and advanced users interested in accessing portal data for specific interests, such as historical research (Marsenić and Stanojević 2020; Meghini et al. 2019), as well as small private companies and private cultural heritage companies.

The Europeana Foundation is an independent body that manages the platform and related activities through a Europe-wide competitive procedure (tender) renewed every two years within the funding cycles of Digital Service Infrastructure (DSI) projects. This foundation, which is, in fact, the main governance body of the project, is based in Le Hague (The Netherlands); its mission is to support the European cultural heritage sector in the process of digitizing its cultural assets. Its main objectives are to stimulate the development of strategies, tools, and competencies in the various European cultural heritage organizations and to gather digitized assets into a single digital infrastructure. Indeed, the Foundation manages the digital data of all the partner cultural organizations (source: <https://pro.europeana.eu/>) (accessed on 12 May 2023). Their main service is to store and network the digitized cultural assets of the approximately 3700 cultural organizations that have joined the project through an open-access digital platform called Europeana. Moreover, the platform and the Foundation offer a wide range of services, from training courses, edutainment content, and outreach activities that ensure international visibility

and accessibility of data to a strong program for the enhancement of digitized content (source: <https://pro.europeana.eu/>) (accessed on 12 May 2023).

Currently, the Europeana platform offers the possibility to view some 58 million digital objects (e.g., books, music, works of art) via search and consultation tools, which support users in accessing the numerous thematic collections, exhibitions, galleries, and blogs (source: <https://pro.europeana.eu/>) (accessed on 12 May 2023). The foundation, which can rely on a limited staff (about 60 people, two-thirds of whom work in the offices in Le Hague while the rest work remotely), manages the collaboration with different cultural institutions across Europe through a network of affiliated partners (called aggregators), grouped by thematic and geographic areas and based in different European countries. These aggregators are in charge of collecting and checking the quality of the data transmitted by the institutions, enriching them with different types of metadata containing additional information (e.g., with geolocation data and other metadata sets).

At the first level, the European cultural organizations participating in the project (who are the data/content holders and providers) take charge of the digitization of their own heritage according to data acquisition protocols established by the aggregators, which, in turn, interface with those of Europeana. Content providers are both large cultural heritage institutions, which have budgets, IT skills, and developed infrastructures, and smaller cultural heritage institutions which are less prepared for the digitization, storage, and sharing of digital collections (Kenny 2016).

At the second level, the 44 aggregators assist the institutions in collecting and coding these data, checking the quality of the information, and enriching it with multilingual metadata. As previously mentioned, aggregators are divided into thematic and geographical areas. While large institutions often have an internal repository already suited to hosting an application profile that can dialogue with the Europeana application profile, as well as staff dedicated to these activities, small institutions usually struggle to provide directly transferable data. In these cases, aggregators provide assistance by developing applications that enable them to transform information in such a way that valid data can be obtained and captured within the portal (Capurro and Plets 2020).

At the third level, the Europeana Foundation, an independent, not-for-profit organization, receives the data from the aggregators, elaborates upon them, and finally stores and uses them for educational, capacity-building, research, and dissemination projects, as well as organizing specific events that maximize the impact of the project. In addition, the foundation is responsible for technical decisions regarding the application profile and its updates. It develops and manages technology solutions for the presentation, sharing, and use of digitized cultural heritage, as well as the systems and processes used internally in the project to manage and enrich the cultural heritage material. It is, therefore, in charge of important outreach activities, at a European and global level, for different categories of users and according to an open-access model. During the interviews, it was clarified that the Foundation is mainly financed by EU funding through a tender procedure, and by the aggregators by national or local public funding (many of them being publicly owned institutions).

The management of processes between the three parties almost always takes place online, through common repositories and through project management software and application interfaces that facilitate information sharing. However, each cultural organization refers to its own aggregator for its digitization processes, often with informal interactions with other organizations or with aggregators from other geographical or thematic areas. Aggregators also carry out their tasks independently, according to protocols established centrally by the Europeana Foundation. During the interviews, however, it emerged how the European Commission influences the strategic lines and objectives of the project, as well as the measurement and reporting aspects, through the tender procedure which the foundation applies periodically to obtain the necessary funds for its activities.

Although the processes are almost entirely digital and relatively non-participative (Capurro et al. 2023), moments of physical interaction are considered necessary as opportu-

nities for networking and constructive confrontation within the three main subjects (EAF, ENA, and EF). In fact, each actor organizes at least two physical/hybrid meeting moments (e.g., annual fairs, assemblies, and forums) where the various governance bodies make strategic decisions based on the consultation and voting of their members.

4.2. *Europeana: A Focus on Cost Reduction Issues for Digitization of Cultural Heritage*

As previously explained, the research interviews built upon the data collected in the first phase of the research and allowed the authors to better identify the perceived impact of Europeana on the cost reduction related to digitization. In turn, the interviews' analysis led to some conclusions regarding the lessons learned from the Europeana model to optimize the costs of other digitization projects.

The data coding followed the model proposed by Gioia et al. (2012), thus identifying three main aggregate dimensions: the first indicating that the Europeana project is not perceived as a project aiming at reducing the digitization costs; the second indicating that Europeana nevertheless impacts the reductions in costs related to the enhancement and management of the digitized data; and the third indicating that the real added value of the project lies, rather, in the possibility of creating value for the various cultural heritage stakeholders, thus exchanging and bringing forward the discussion on the digitization of cultural heritage, although some critical issues emerge. Decreasing costs related to digitization is, therefore, not the main objective for the diverse entities involved in the project. In fact, it is the potential of creating alliances to offer better services for the users and to foster reflection on the potential of digitized/digital outreach regarding cultural heritage.

In detail, the first aggregate dimension (Figure 1) indicated that Europeana does not mean to provide direct funding for the digitization of cultural heritage, and therefore does not impact the cost reduction for the digitization processes of cultural organizations. Two main second-order themes were identified in the analysis: the first related to the fact that cultural organizations are responsible and bear the costs of digitization of their cultural assets, which confirms the literature findings and the desk analysis, and was pointed out in all interviews. Specifically, the foundation's interviewees and the aggregators indeed pointed out that, since the beginning, their objective has not been to offer a digitization service nor a consulting service: "the purpose of the project is not to help cultural organizations with funding for the digitization process", although "some funds for digitization could come through joint projects developed with other participants in the initiative". "The aggregators however may provide assistance although not doing the job", as declared by one of the interviewed cultural organizations. The second theme was related to the fact that although not providing funding for digitization, Europeana and the aggregators established protocols for digitization and data collection and, in some cases, provided methodological support so as to facilitate the digitization-related work carried out by the cultural organizations. These results thus confirm the findings of the preliminary desk research and align with the literature on the management model of the project. They enrich the literature by underlining that the definition of protocols for data collection and the partial support by the aggregators are perceived as tools that facilitate the entire process, thus indirectly impacting digitization costs.

The second aggregate dimension (Figure 2) indicated that the Europeana initiative positively impacted the reduction in costs related to the quality-checking of data, as well as the management and enhancement of digitized cultural heritage. In the second-order themes, three main points could be identified: the first was that the project offered the valuable services of data management and enhancement of data for education, training, entertainment, and research. As affirmed by the cultural organizations, "digitizing cultural heritage is not enough: digitized material should be made available and accessible". Small cultural organizations often struggle to reach visibility and to develop enhancement strategies with long-term impacts. In the second- and third-order themes, it is pointed out that the services of enrichment of digital data with metadata and quality checking, both offered by aggregators, are considered particularly valuable in all aspects, and are

perceived as another important factor in the overall indirect cost reduction brought about by the participation in Europeana. This result reinforces the concept that Europeana helps cultural organizations by reducing the costs related to digitization, and adds to the previous literature by highlighting that the services of quality checking and metadata enrichment are perceived as significant contributions to the provision of data by cultural organizations.

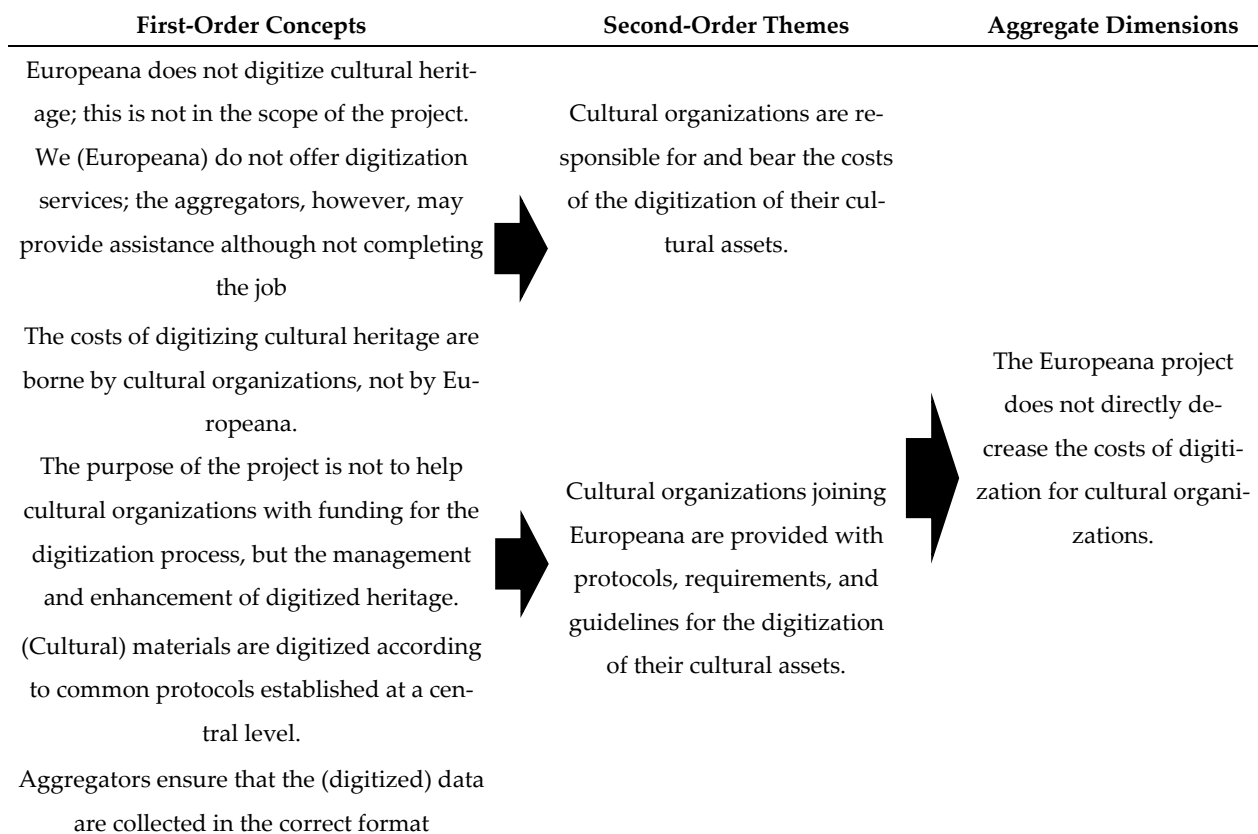


Figure 1. R1—First aggregate dimension: The Europeana project does not directly decrease the costs of digitization for cultural organizations (Source: elaboration by the authors).

The third aggregate dimension (Figure 3) clarifies that cultural organizations are interested in joining the Europeana project mainly in relation to the possibility of creating value for their stakeholders, although some criticalities emerge in some categories of users of the project. It also states that they value the possibility of participating in a Europe-wide project with the possibility of exchange and discussion regarding the digitization of cultural heritage. Decreasing costs related to digitization is not the only objective, although it is understood that Europeana significantly contributes to this aspect.

Three main second-order themes that better explain this point emerged in the coding. The first was related to the fact that the interest of cultural organization is not simply reducing the costs of digitization, but also in enriching their impact in relation to their communities, users, and stakeholders for education, research, and enhancement purposes. Europeana allows them to reach this goal. The cultural organizations argued that through Europeana, the digitized data contribute to the fulfillment of their mission of having an impact on education and research and preserving their heritage at the European level, not only locally. This is considered particularly important for small organizations. The second theme is related to the fact that, by participating in Europeana, there are strong networking opportunities that potentially allow the different actors to create useful connections with potential partners for other projects, as well as EU-funded ones. This is perceived as an indirect possibility to obtain additional funding for implementing their digitization processes, as well as a means to contribute and participate in the broader scientific and

professional discussion on cultural heritage digitization. Respondents emphasized the project's contribution to the creation of an open, aware, and creative European society: Europeana contributes to building a digitally powered cultural heritage sector and a culture-powered Europe which can ensure a resilient and growing economy, increased employment, a greater sense of well-being, and a strengthened European identity.

The services of the Europeana Foundation potentially enable users to develop skills and tools that can better prepare them for the digital transition of society, making it easier to use cultural heritage for education, research, creation, and leisure. However, during the interviews, it emerged that Europeana is not addressing all categories of users or stakeholders: in particular, common citizens are usually not interested in using Europeana's services, and the project is directed mainly at cultural heritage professionals or people with interest in specific aspects of cultural heritage.

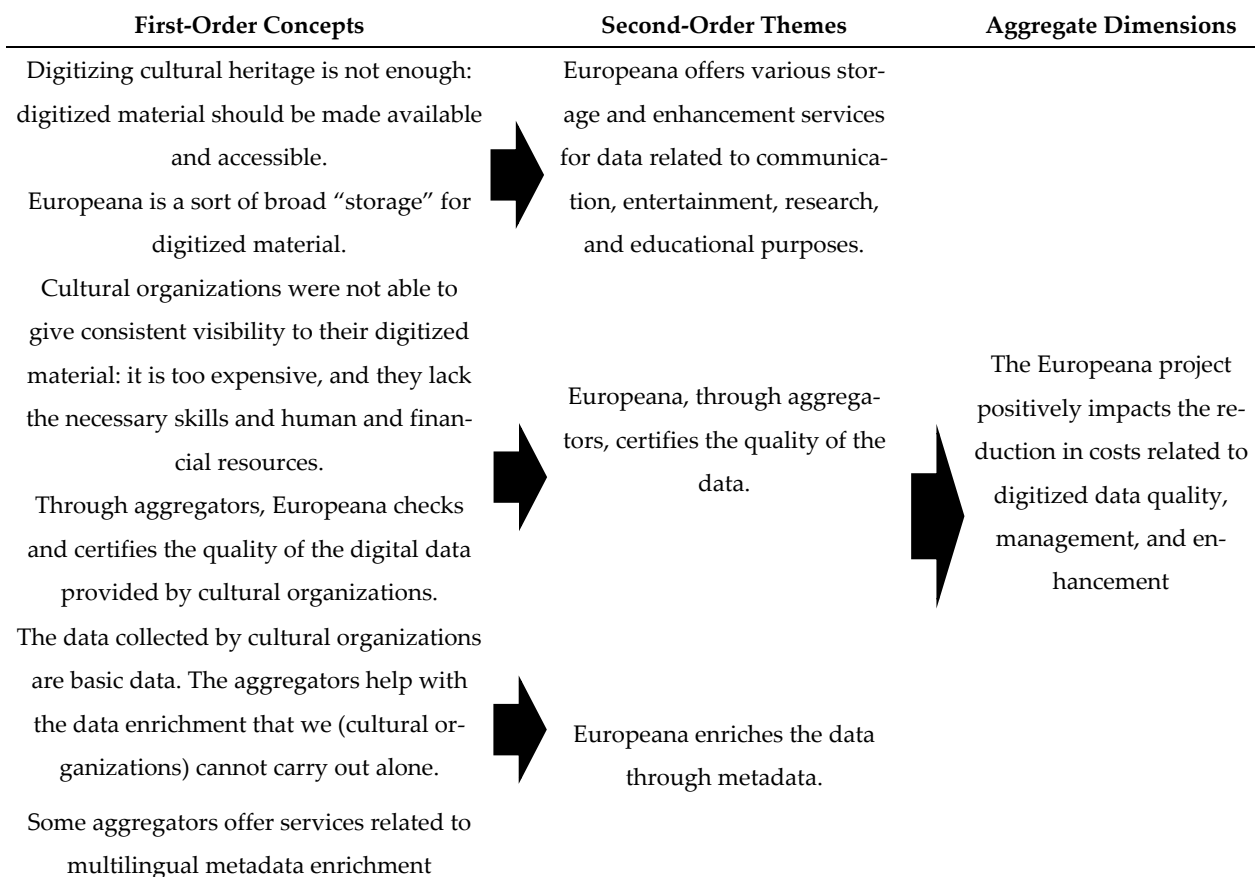


Figure 2. R2—Second aggregate dimension: The Europeana project positively impacts the reduction in costs related to digitized data quality, management, and enhancement (Source: elaboration by the authors).

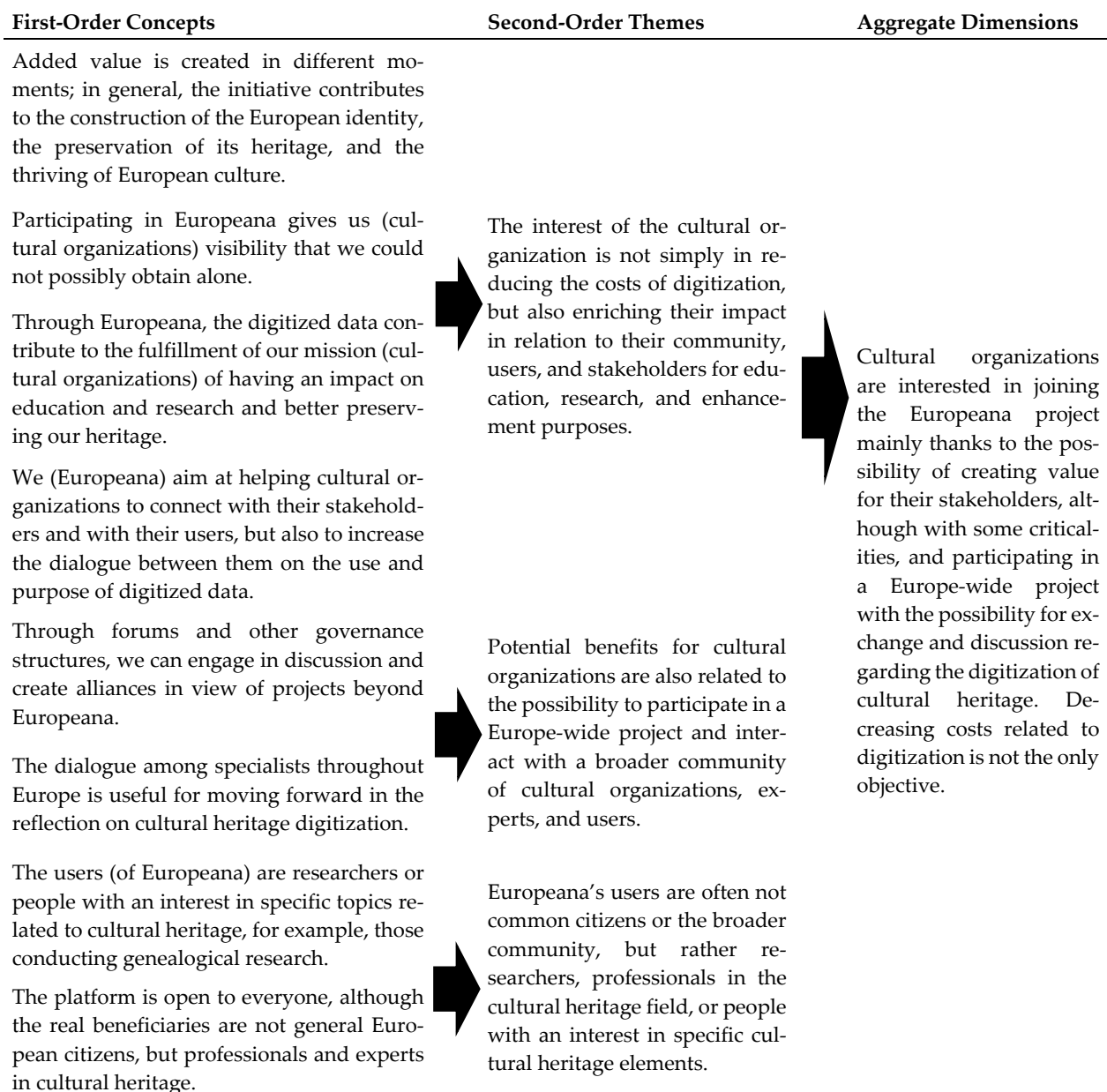


Figure 3. R3—Third aggregate dimension: Cultural organizations are interested in joining the Europeana project mainly thanks to the possibility of creating value for their stakeholders, although with some criticalities, and participating in a Europe-wide project with the possibility for exchange and discussion regarding the digitization of cultural heritage. Decreasing costs related to digitization is not the only objective (Source: elaboration by the authors).

5. Conclusions

The aim of this research was to investigate the Europeana initiative as an exemplary case study to understand how collaborative, Europe-wide partnerships could help cultural heritage organizations to reduce the costs of digitization of cultural heritage, and what lessons we can learn from the Europeana model to optimize costs in other digitization projects.

In the literature review, it emerged that there is an increasing demand for digitized cultural heritage, but that the digitization, storage, and enhancement of digitalized cultural heritage implies additional costs related to specific economic, technological, and human resources. Digitization is, therefore, often perceived as an additional financial burden for cultural organizations, and often makes digitization projects financially unsustainable.

Besides directly helping cultural organizations with specific funding, the European Union also launched specific initiatives to support cultural heritage organizations in their digitization processes, such as the Europeana initiative. The case study analysis of this initiative and the activities it proposes indicate that creating an online digital platform that stores, makes accessible, and enhances European cultural heritage could help to reduce some of the costs related to the management and enhancement of digitized heritage, although leaving the direct costs of the digitization process to the cultural heritage organization.

In particular, the Europeana initiative helped to reduce several categories of costs related to metadata creation and cataloging; quality control and assurance; storage infrastructure and data management systems to ensure preservation and accessibility; and costs related to the enhancement of digitized data. Through the outreach and enhancement services offered by Europeana, digitized cultural heritage was made accessible to the public, thus helping cultural organizations to fulfill their missions.

The Europeana initiative, therefore, provides significant benefits in terms of indirect cost reduction and provides evidence of the usefulness of creating Europe-wide partnerships for jointly storing, managing, and enhancing digitized cultural assets. However, cost reduction is not the only reason for participating in the initiative: other significant benefits can be perceived, such as the possibility of connecting with other participants in the project and contributing to the discussion on cultural heritage digitization.

These results could contribute to the academic debate on the strategies to ensure the financial sustainability of digitization projects for cultural heritage; they also provide relevant insights into the potential benefits of wide partnership arrangements that cultural organizations can set up when implementing their digitization journeys.

The main limitation of this research is the fact that these reflections are related to a single case study that received substantial financial support from the European Union, and that the analysis was based on a limited sample of interviews. The results may be improved and even revised when a larger sample of participants is interviewed; moreover, future developments could attempt to replicate the analysis in similar cases, as well as in platforms that are not supported through public funding, to better understand the viability of these initiatives.

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Notes

- ¹ The ‘Internet Library of Early Journals’ initiative is a joint project of the Universities of Birmingham, Leeds, Manchester and Oxford, which digitised around 200,000 pages of journals from the 18th and 19th centuries: it was partly a response to the UK government’s Joint Information System’s Committee’s plan to encourage the creation of electronic libraries (or ELibs) that made resources, services and infrastructure available to increase the use of digital content in higher education (ILEJ 1999; JISC 2010).

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