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Culture as a Prerequisite for Sustainable Development. An Investigation into the Process of Cultural Content Digitisation in Romania

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Received: 15 April 2018; Accepted: 2 June 2018; Published: 4 June 2018



Abstract: In an age of rapid technological changes, new ways of cultural production–consumption and dissemination–access to cultural content are creating great opportunities for promoting cultural heritage at home and abroad as a prerequisite for sustainable development. The aims of this paper are to scrutinize the main opportunities of the process of cultural content digitisation with a focus on Romania and to highlight the main fields in which the country is still lagging behind. The article discusses technical internet-related endowment and use of internet by households in urban and rural areas, the existing digital cultural content, the importance of open access, e-accessibility, digital archives, e-museums, e-libraries, etc., as well as the main national and European strategies and agendas that Romania has based its cultural digitisation and heritage preservation priorities on. The paper is an empirical inquiry into the progress achieved, the positioning among the other European countries and the perspectives of cultural digitisation for Romania. Such matters are important determinants of smart, sustainable and inclusive growth, as long as access to public services and cultural content is a major objective of Europe 2020 Strategy.

Keywords: digitisation and preservation of cultural content; cultural heritage; open access; Europeana; smart sustainable and inclusive growth; sustainable development

1. Introduction

The ongoing technological revolution is phenomenally and rapidly improving all areas of activities, generating major changes and increased efficiency in all aspects of social, economic, and cultural life. Consumption and production patterns change across all fields, including those related to culture, creative activities, and cultural content. As a result of such transfigurations, the cultural experience changes as well. Both cultural consumption and production are enhanced and facilitated by new technologies, and digitisation of culture brings about better and faster access to and dissemination of the creative output.

Cultural and creative industries, as well as cultural heritage-based policies are engines of sustainable development. Also, cultural diversity and access to culture are prerequisites for building bridges among countries and for fostering development and social cohesion. Culture, alongside human health, land availability, peace, social security, continuity, knowledge, and jobs are identified as social safeguard subjects and state indicators for sustainability assessments [1]. Moreover, culture has been recognised as the fourth pillar of sustainable development by the United Cities and Local Governments (UCLG) [2]. As a result, UCLG has recommended the integration of culture into development policies of cities and local and regional governments, the development of a solid cultural policy, the inclusion of culture in public policies, and the inclusion of culture as the fourth pillar of sustainable development

in international policy making [2]. These are the main reasons why culture has to be integrated into sustainable development policies and practices [3].

The creation and development of digital systems to digitise the creative output is a must in view of contributing to the achievement of one of the objectives of Europe 2020 Strategy, that of a smart, sustainable and inclusive growth. More specifically, the Council of the European Union (EU) insists on exploiting the high economic potential of the cultural and creative industries and proposes that the Digital Agenda for Europe should be the means through which cultural and creative content should be placed online. It also insists on the need to reinforce the digitisation and dissemination of European cultural heritage, including through the digital library project Europeana. A digital library is an information system that administers a collection (which can be shared) of (relatively) autonomous digital information resources in order to preserve the latter in the long run and to make such resources available to its users through certain specific mechanisms that facilitate retrieval, navigation and access [4]. Moreover, the Council recognises that the cultural and creative sectors represent an important source of technological and non-technological innovation, and that this potential must be fully unlocked. According to the strategy, the Member States and the Commission are invited to promote the digitisation of and access to cultural heritage and contemporary cultural content, including audio-visual works, in particular through Europeana, thus also promoting and preserving cultural diversity and multilingualism in full respect of copyright and related rights [5].

The article focuses on the digitisation of cultural heritage in Romania, and assesses the progress made by this country in contrast with that of other European countries. Romania's case presents a particular interest in this discussion due to the fact that it still has to catch up with the other EU member states both in terms of digitisation at all levels of economy and society and in terms of cultural heritage digitisation. The official statistics examined in the paper reveal the precarious position occupied by Romania in EU rankings in such matters and raise a red flag indicating that it is high time to design strategies and implement policies to improve the status quo and to line up with the other EU member states. This analysis is placed in the larger context in which culture is both an enabler and a driver of the economic, social and environmental dimensions of sustainable development. According to the Resolution adopted by the General Assembly on 25 September 2015, United Nations underline the need to appreciate cultural diversity and culture's contribution to sustainable development. In addition, promoting local culture and products and safeguarding the world's cultural heritage complement the previously mentioned larger goal [6]. The research presented within the paper relates to the progress made by Romania in terms of cultural content digitisation, in an attempt to try to answer the following questions: How is Romania placed in the European Union in terms of cultural content digitisation? What are its most significant achievements in this endeavour? In what matters is Romania still lagging behind? The analysis is based on the empirical observation of the existing digital cultural content as well as on national and European public policy documents.

2. Literature Review

The importance of digitisation of cultural heritage has been advocated by numerous authors, both from a technical point of view, as well as from a social, cultural, and economic point of view. Some authors insist on the importance of the direction given by public policy in supporting the process of cultural digitisation [7,8]. Such is the case of the Danish cultural policy and the Danish digitisation strategies, which base their main objectives on the operation of a Danish Cultural heritage portal [9]. The Danish experience shows that public policy discourse, innovation integration, and international experiences are primary aspects to consider within the process. Also, the public Danish discourse on cultural digitisation comprises participation and user engagement, administrative and managerial effectiveness, cooperation, increased production, innovation, and competition. It is worth noting that digitisation and use prevail in terms of platform aims, rather than access and use [10].

Digitisation of cultural content is a time-consuming process whose ultimate goal is to build a participatory social memory by connecting past, present, and future in terms of cultural heritage.

The process needs to be advocated by public policy (in order to boost the provision of cultural public services and to facilitate access to culture)—and by the private sector alike, especially because part of the cultural content is the object of commercial operation [11]. At times, public endeavours in terms of cultural content digitisation are supplemented by the contribution of the general public under the form of amateur online museums, archives, and collections [12].

One first endeavour to assess the current state of cultural digitisation was made within NUMERIC, a project of the European Union that covered archives, libraries and museums, and developed a framework for the collection of statistical data on national level [13].

Building digital libraries, collections, and archives is one way of translating the aforementioned objective into results. Needless to say, such structures need to be flexible and constantly updated from a technical point of view [14]. Increasing access to cultural and heritage content from galleries, libraries, archives, and museums is in line with the Open Access Movement [15].

Other authors look at cultural content digitisation as far as it leading to changes in social interaction. The process of digitisation generates positive externalities, as it turns cultural centres into contact zones and into places of cultural and social mediation, in addition to linking the digital media with democracy [16]. On the one hand, access to cultural content through digital media creates an enhancement effect, thus increasing the number of visitors inside physical cultural institutions as well [17]. On the other hand, networking is rendering the world flatter, and libraries and museums are no longer just physical places, but also virtual destinations [18]. Besides the positive effect of digitisation on the visibility of collections of galleries, libraries, archives, and museums, and on tourism, it also attracts businesses and investment to local or regional economies [19].

Cultural heritage digitisation is an expensive endeavour, which is partly supported through public funds and partly supported through other means, such as public-private partnerships or European funds. The Czech Republic, Finland, Greece, Latvia, Lithuania, Poland, Slovakia, and Sweden are examples of countries that have used the European Structural and Investment Fund to co-finance the cultural heritage digitisation. The Lithuanian *e-Paveldas* project was financed in such a way, the database containing three million pages of old books, newspapers, artworks, manuscripts, and church registers. The project was financed with Eur 3.6 million, it lasted two and a half years, and created 32 jobs. Another Lithuanian project, the budget of which is Eur 2.7 million, *Lithuanian Documentary Cinema on the Internet*, aims to archive digitised documentary film production, while providing online access to the database. The source of finance is Priority 3 “Information Society for All”. In Poland, the European Regional Development Fund, through Priority XI Culture and Cultural Heritage, co-finances *Nitrofilm Project*, which is designed to set up an infrastructure for the preservation and reconstruction of the oldest films and to digitise a part of Polish pre-war film collection. The total budget of the project is Eur 4.8 million [19].

The Italian Ministry for Cultural Heritage and Activities and Tourism undertook several digital projects to preserve and utilise the cultural heritage that primarily focused on public historic archives in order to evaluate their impact on the access to cultural products. In 2008, *Cultura Italia* portal was launched, and it was integrated into *Europeana*. As in the case of other countries’ initiatives, its main aim is to promote Italian cultural heritage and to provide online access to cultural content. It included 2.5 million items coming from 32 public and private partners. For public historical archives, Italy created state archives websites, gathered under the web domain *beniculturali.it*. Also, a National Archivist System was created, an open system that is uploaded once indexing and digitisation of cultural resources progress [20].

A study on sustainable digitisation of cultural heritage with a focus on Germany underlines that there are certain requirements of digitisation, and that institutions need to meet such requirements for a successful process. The author argues that the components of cultural heritage digitisation are:

1. content specification—identifying the purpose and the object of digitisation, anticipating the kind of digital use, finding ways to digitise content without destroying or damaging it, analysing

the legal framework pertaining to digitisation, publication and use, and assessing the necessary resources to complete the envisaged tasks

2. digital cataloguing—creating information about the digital content
 3. digitisation—creating digital forms to represent the original object
 4. digital presentation—providing access to digital content
 5. digital backup—securing the online database using specific infrastructure and security mechanisms
 6. digital preservation—maintaining the significant properties of digital objects in the future [21].
- The importance of digital storage and retrieval of cultural content is justified by the psychological function to preserve social or collective memory, which is the very basis of identity, and also to ensure cultural sustainability. Therefore, digitisation is deemed as a promise of retention [22,23].

The EU's South East Europe Transnational Cooperation Programme 2011–2013 funded the project entitled "Achieving SUSTainability through an integrated approach to the management of CULTural heritage", under the coordination of the City of Venice. The project involved 12 institutions from seven countries, including Romania. Within the project, evidence was collected to show how cultural heritage contributes to sustainable development and guidance for public policy and governance was provided. The conclusion of the study is that cultural heritage is economically, socially and environmentally creative [23]. Other examples of EU funded projects on cultural content digitisation are: RICHES (Renewal, Innovation and Change: Heritage and European Society), PREFORMA (PREservation FORMAts for culture information/e-archives), Civic EPISTEMOLOGIES [24].

While the above-mentioned NUMERIC project also discusses the specific case of cultural digitisation in Romania, the present paper includes data updates are needed in order to assess the current status of the process, as well as additional analyses, such as: Internet penetration, Internet use, and factors underlying the digitisation process.

3. Materials and Methods

The study is based on the critical analysis of the public policy documents in matters concerning digitisation of cultural heritage (Europe 2020 Strategy and the European Digital Agenda, the National Strategy for the Digital Agenda for Romania 2020, the National Strategy for Research, Development and Innovation 2014–2020, the Sectoral Strategy in the Field of Culture and National Heritage for the Period 2014–2020, and the Strategy for Culture and National Heritage 2016–2020), as well as on the empirical analysis of the digitised cultural heritage items. National and international cultural and heritage-related strategies, through their objectives and specific measures, are a sine-qua-non condition for achieving a sustainable increase in the quality and quantity of digital cultural content. The very foundation for implementing strategies and applying policies is the existence of the adequate infrastructure. In this respect, the study examines the most recent data on Internet penetration and use in Romania and compares them against similar European data. For the digital cultural content to achieve its end—i.e., expansion of cultural consumption, development of new forms of cultural production and content dissemination, better access to culture, enhancement of cultural diversity, preservation of cultural heritage—the population should be better engaged in digital consumption and connected to on-line facilities, public services need to be digitised, and awareness should be raised insofar as the importance of digital literacy promotion is concerned. Considering all of the above, the research hypothesis is that Romania is not occupying a leading position among European countries in terms of cultural digitisation progress, and the aim of the paper is to reveal what its most significant achievements are and the fields in which Romania is lagging behind. The case of Romania is particularly interesting in European and international context because there is a lag in action and a gap between its performance and that of other EU member states. Such gaps need to be bridged by means of dedicated strategies and policies. Moreover, the article advocates for the digitisation of cultural heritage and encourages the open data agenda in view of achieving sustainable development

and an inclusive and culturally-diverse society. The research is based on the most recent data available, such as the Digital Economy and Society Index (DESI) 2017 (the last edition) and up-to-date Europeana digital library statistics.

Furthermore, the paper inspects the main challenges of cultural content digitisation, which range from technical and infrastructure-related, to legal constraints and financial limitations, which are faced by all countries alike—both by the best performing countries in terms of cultural content digitisation and by the worst performing countries (e.g., Romania). A general presentation of the legal framework is provided in order to explain the time and resource-consuming nature of the process of cultural content digitisation and the main reasons for lagging behind. Based on all the positive determinants and inhibitors identified within this multidisciplinary approach, the paper ends by proposing a SWOT analysis, which can serve as guidance for policy makers, as well as for further research.

4. Results

4.1. The European and Romanian Digital Agendas. Romania's Cultural Strategies

One of the seven pillars of the Europe 2020 Strategy, the Digital Agenda stands out as a major objective due to its impact on innovation, economic growth, and progress by using information and communication technologies [25]. In its turn, the Digital Agenda comprises seven pillars:

1. achieving the digital single market
2. enhancing interoperability and standards
3. strengthening online trust and security
4. promoting fast and ultra-fast Internet access for all
5. investing in research and innovation
6. promoting digital literacy, skills, and inclusion
7. ICT (Information and Communication Technologies)—enhanced benefits for EU society.

The seventh pillar specifically includes digitisation of cultural content through Europeana. However, all pillars impact on the intricate process of cultural digitisation. The achievement of a digital single market would facilitate online cross-border access to cultural content, while complying with copyright legislation. Also, the main goal of the European e-Inclusion policy is that no one is left behind, promoting the use of information and communication technologies to overcome exclusion and improve, inter alia, quality of life, and social participation and cohesion through culture. Providing or improving access to content is not enough as long as digital and media literacy is not enhanced. Member states should promote e-accessibility, while trying to preserve cultural diversity. Last but not least, Europeana—the digital platform for cultural heritage—provides access to the European culture, including pieces of art that are being made available under open licences.

In February 2015, Romania also approved a National Strategy for the Digital Agenda for Romania 2020 [26]. The Romanian strategy is based on four major action areas:

1. eGovernance, Interoperability, Cyber Security, Cloud Computing, Open Data, Big Data, and Social Media
2. ICT in Education, Health, Culture, and eInclusion
3. eCommerce, Research, Development, and Innovation in ICT
4. Broadband and Digital Services Infrastructure.

The strategy proposes that for achieving the goals included in the second pillar for Culture a total investment in the amount of Eur 37.5 million would be required [26]. The cultural objectives included in the strategy are the following:

- developing Romania's digital archives and contributing to the Europeana development (with the precise goal to exhibit 750,000 digital items in Europeana.eu)

- promoting the creation of original digital content that is specific to Romanian communities
- improving the interaction between libraries/public archives that store information on the national cultural heritage and citizens through information and communication technologies.

This set of objectives is to be achieved with the participation of the European Commission, the Foundation Europeana, Romania (through the Ministry of Culture and the Ministry for the Information Society as a supporter), and Romanian cultural institutions.

The first benefit of developing the digital archives is that in so doing Romania will preserve its national cultural creations, thus ensuring access to them by future generations. The inclusion of Romanian items into the Europeana digital library will make the country more visible abroad and will help improve foreign perceptions on the country, which could lead to an increase in the number of foreign visitors of Romania. Making cultural heritage available online contributes to the process of cultural internationalisation and awareness increase, and physical barriers and boundaries no longer count as impediments to cultural consumption and to access to resources. A particular focus on promoting the creation of original digital content by Romanian communities will increase the public awareness regarding the national image and international tourism. Connections have been identified between investment in cultural heritage preservation and promotion of tourism, whereas Romania has done efforts to preserve and enhance the cultural heritage [23]. The long-term goal is to preserve Romanian customs and to educate the younger generations in the spirit of Romanian traditions. Another benefit of promoting place-specific cultural content is the development of rural tourism, while enhancing social inclusion by educating citizens and improving their digital skills.

Improvement of the citizen-digital content interaction could lead to: lower long-term costs for libraries, faster and easier access to information, improved citizen satisfaction, and increased use of library or museum services.

The SWOT analysis for culture conducted in view of setting the objectives of the strategy revealed that the main weaknesses are: a small number of cultural items included in the European digital library Europeana, low level of skills of the personnel working in libraries and public archives, and insufficient ICT endowment of cultural institutions [26].

Both the National Strategy for the Digital Agenda for Romania 2020 and the National Strategy for Research, Development and Innovation 2014–2020 highlight the importance of fully unlocking the human potential in order to achieve sustainable growth of the Romanian economy using ICT as a facilitator [27].

A more specific endeavour in the field of cultural digitisation is proposed by the two versions of the Romanian cultural strategy: The Sectoral Strategy in the Field of Culture and National Heritage for the Period 2014–2020 [28], and the Strategy for Culture and National Heritage 2016–2020 [29].

The first strategy raises issues such as: finding the most adequate ways to avoid the digital divide, digitising cultural resources as a cross-strategic goal, sustaining the cultural offer and public access via a programmatic development of cultural resources digitisation in cooperation and in partnership with central and local authorities, as well as with other owners of such resources, in full compliance with intellectual property rights, enriching the Romanian Digital Library and Europeana with Romanian cultural content, identifying additional sources of finance to support the digitisation process by means of public-private partnership, promoting cultural internationalisation [28]. Also, the strategy clearly argues for the necessity of cultural resources digitisation, which is a key factor that will improve accessibility and uninterrupted flow of information in a knowledge economy [30].

The second strategy, elaborated during the year 2016, underlines that the main reason for which the digitisation process was slow was the lack of sufficient finance. Therefore, the Ministry of Culture has resorted to non-reimbursable European funds in order to finance cultural digitisation, namely to e-Cultura project. E-Cultura project is implemented by the Ministry of Culture with the support of cultural establishments and cultural county directorates through the Competitiveness Operational Programme—Action 2.3.3 “Improving ICT infrastructure and digital content in the field of systemic e-education, e-culture, e-health and e-inclusion”. The main objectives of the project are to develop

an on-line IT platform of shared catalogue and digital library, available to all cultural institutions in Romania and to the public, on the one hand, and to increase digitisation and the on-line presence in Europeana of Romanian cultural items, on the other hand. Besides the increase in the number of digitised items, the strategy insists on the importance of enhancing the rate at which digitised cultural items are actually accessed [29]. Similar databases are: the Digital Public Library of America at <https://dp.laintheUSA>, Deutsche Digitale Bibliothek at www.deutsche-digitale-bibliothek.de in Germany, Cultura Italia at www.culturaitalia.it in Italy, Culture at www.culture.fr in France, Kultur pool at www.kulturpool.at in Austria or Finna at www.finna.fi in Finland.

Despite the existence of the two tailor-made strategies in the field of culture, the latest reports indicate that for the period 2015–2017, Romania solely based its actions on the National Strategy for the Digital Agenda for Romania—and on the national funding programme—i.e., Eur 10 million from Competitiveness Operational Programme e-Cultura—for planning the digitisation of cultural material. However, no national scheme or mechanism is in place for monitoring progress in the cultural content digitisation, nor for creating an overview of the digitised content [31]. The reason why the strategies were not used was because they were not assumed by the Government of Romania. The first strategy was designed by specialists in the field, while the second one was indeed commissioned by the Government of Romania through the Ministry of Culture, but the timing was not fortunate—the results of the elections led to the change of government, and the previous government did not have enough time to enforce the strategy through a government ordinance.

4.2. The Current Status of Digitisation in Romania

The Digital Economy and Society Index is an indicator of the progress of digitisation, which is published by the European Commission on an annual basis. It is a composite index having five components:

- connectivity
- human capital
- use of internet
- integration of digital technology
- digital public services.

According to the Digital Economy and Society Index 2017 published by the European Commission, Romania ranks 28th, benefitting from coverage of fast broadband connections in urban areas, and occupying the second position in the European Union in terms of share of subscriptions. Moreover, mobile broadband is also penetrating at a fast pace. The best performing component for Romania is connectivity, while the worst performing component is digital public services. The same report reveals that the rate of digitisation of the economy as well as the level of digital skills are still low compared to other countries [32].

Romania is still part of the cluster of low performing countries, as can be seen in Figure 1, despite its steady positive evolution shown in Figure 2.

The human capital component reveals that the number of internet users rose from 52% in 2015 to 56% in 2016—a positive evolution that is still below the EU average of 79% in 2016. The Compendium of Cultural Policies and Trends in Europe reveals an increased percentage of internet users in Romania—i.e., 62% of the population—for the year 2017 [33]. In addition, only 28% of the individuals had at least the basic digital skills in Romania in 2016 as compared to an average of 56% in the European Union.

In terms of use of internet, in 2016 Romanian internet users engaged mostly in social networks (74%—above the EU average of 63%) and video call services (45%—above the EU average of 39%). Consumption of music, videos and games on the internet is at 67%, while the EU average is 78%. At the lower end are internet banking (8% for Romania as compared to the 59% for the EU) and shopping (18% for Romania and 66% for the EU). The general trend for use of internet is a positive one, with a

clear increase between 2014 and 2015, a lower growth rate between 2015 and 2016, and no increase between 2016 and 2017, as indicated in Figure 3.

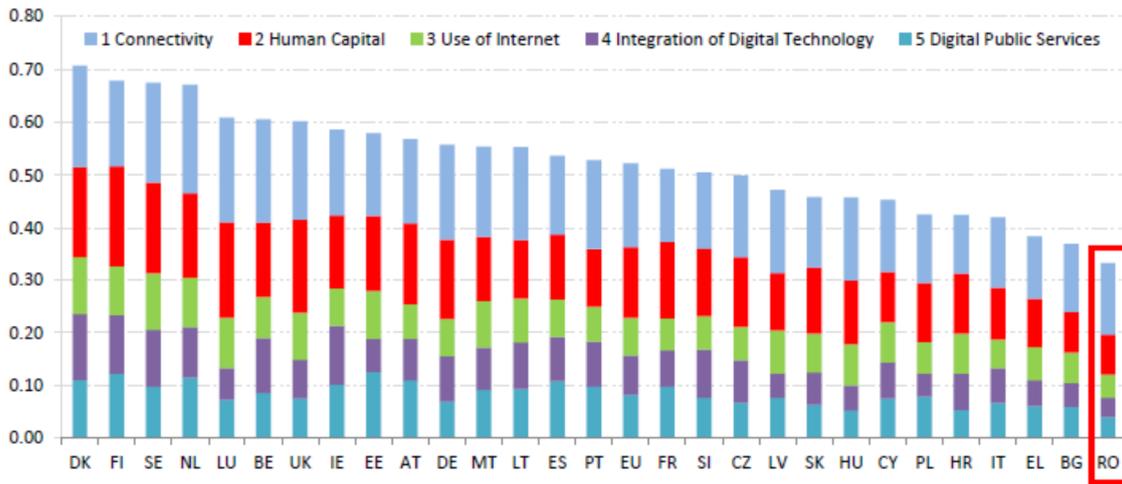


Figure 1. Digital Economy and Society Index (DESI) 2017; Source: [32].

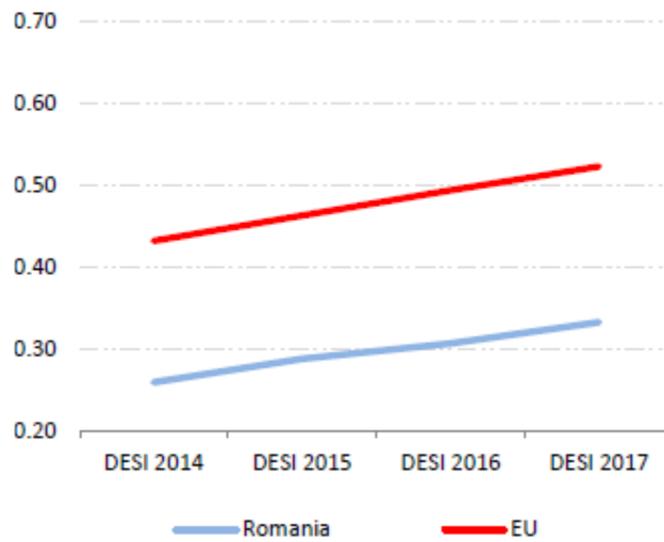


Figure 2. DESI evolution over time for Romania and the EU; Source: [32].

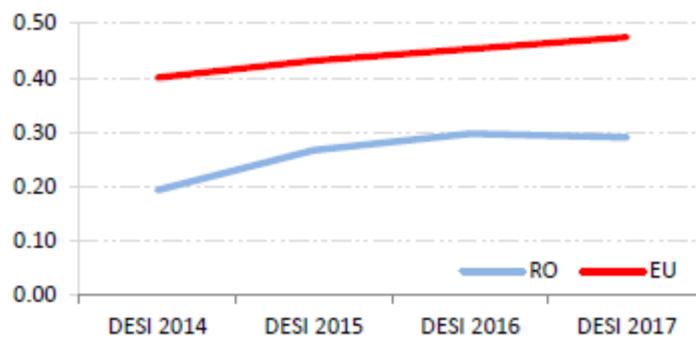


Figure 3. Use of internet evolution over time for Romania and the EU; Source: [32].

The same report indicates that Romania occupies the last position in the EU for the component integration of digital technology—Romanian business digitisation is still lagging behind the EU average, especially when it comes to cloud computing or online trade channels.

Insofar as the last component—digital public services—is concerned, Romania made progress in the availability of Open Data, but the users of eGovernment services are not numerous and the supply of such services is still low, placing Romania on the same last position among the EU member states.

The exploration and analysis of DESI by components is particularly important, especially in the context of cultural digitisation because it reflects Romania's degree of preparedness to use and supply such services. Needless to say, up-to-date evidence reveals that Romania is still not prepared to embrace digital consumption, nor is it currently providing enough access to digital services. However, there has been a positive evolution over the past three years, following a similar trend to that of the European evolution, but at a lower scale.

The disparities between Romania and the EU discussed above are partly due to the digital divide—the gap between individuals, households, businesses, and geographic areas at different socio-economic levels with regard to both to their opportunities to access information and communication technologies and to their use of the internet for a wide variety of activities [34]. The digital divide across Europe is mostly visible between the North and the South, with Romania (alongside Bulgaria, Portugal and Greece) having the lowest broadband take-up in both rural and urban areas [35]. In Northern Europe, almost all citizens are regular internet users, with rates reaching as high as 90%. At the other end stands Romania (alongside Bulgaria, Greece, Italy and Portugal), where approximately one third of the population does not use the internet. According to Eurostat, the digital divide is mostly prominent across different age groups—96% of the population aged 16–24 use the internet frequently, while only 57% of the population aged 55–74 use the internet on a regular basis. The level of education also explains the digital gap—96% of those with a high level of education use the internet on a regular basis, as compared to 60% of those with a lower level of education [36].

For Romania, adopting policies and practices similar to those implemented in other EU countries is imperative in order to diminish the existing gap and to spur the capacity to achieve sustainable development through culture. Moreover, the digital divide implies reduced access to resources for a large share of population, and digitisation is justified in that it is a viable solution to improve access to and consumption of culture by rural communities. To argue this statement, at the end of the year 2015, 2352 public libraries were functioning in Romania. The number had decreased by 17% as compared to the year 2010, when 2836 libraries were functional. Romania has 2861 rural townships, but only 2032 have their own libraries, which means 829 townships do not have a library. In addition, the number of school libraries dropped from 8300 in 2010 to only 7119 in 2015—a 14% decrease. However, such libraries are mostly found in urban areas, and less in rural areas. Roughly 6100 schools do not have a library of their own [37].

4.3. Europeana—A Major Stake and Yardstick for the Romanian Cultural Heritage Digitisation

Europeana platform, which is part of the European Digital Agenda, is aimed at promoting the European culture and universal access to cultural heritage by means of cultural content digitisation and by leading providers of cultural goods across Europe to adjust their practices in order to comply with international standards for data indexing and storage [20]. Contributing countries are European countries, but also the USA and Israel. The European digital library operates under open licences and it only includes items that belong to the public domain. Europeana is not the only online digital library, UNESCO World Digital Library (www.wdl.org), Open Library (openlibrary.org), and Online Computer Library Center (www.worldcat.org) being other examples of such initiatives. In April 2018, the total number of contributing countries is 44, Europe as a contributor being included too. The leading providing country is the Netherlands, with a total of 5,568,279 items included in the digital library, followed by Norway with 5,401,420 items, Germany with 5,092,179 items, France with 4,740,920 items, and Spain with 4,681,565 items. Contrary to its national digital agenda, whose objective was that

of exhibiting 750,000 items by the end of the year 2015, Romania currently has a total number of 154,830 items digitised and included in Europeana. This performance ranks Romania 24th in the total of 44 providing countries in terms of absolute number of items included in Europeana.

However, Romania's performance is much worse when taking into account the number of digitised items in Europeana per thousand inhabitants. In the Appendix A, countries are ordered from the best performing (Norway) to the worst performing (Bosnia and Herzegovina) countries. To exemplify, Norway included 1027 items per thousand inhabitants, while Romania had less than 8 items included per thousand inhabitants. This number places Romania on the very last position among EU countries if the country population is also taken into account, and on the 33rd position in the total number of 41 European countries.

To sum up, both the absolute number of items and the number of items per thousand inhabitants included in Europeana place Romania on the last positions in the European Union and in Europe.

Back in the year 2008, the Romanian Ministry of Culture developed a public policy for digitisation, approved by the Government Decision no. 1676/10.12.2008 [30]. Its main objective was the creation of a National Programme for the digitisation of national cultural resources and the establishment of the Romanian Digital Library. Results of efforts to digitise the cultural heritage can also be found on the Digital Library of Romania (part of the National Library of Romania), the Bucharest Digital Library and the Romanian Medieval Archives. However, the existing collections are far from covering the existing physical stock of books and prints [38].

In Romania, the National Heritage Institute (Institutul Național al Patrimoniului) has the quality of national aggregator since the year 2011, as a result of the taking over of the National Institute of Cultural Memory (CIMEC) [39]. The aggregator is in charge of digitising mobile goods belonging to the national cultural heritage, images of historic monuments, of archaeological sites, and theatre plays posts. The five components of the national portal are: written heritage (libraries), immovable heritage (monuments, archaeology sites), audio-visual heritage (audio-visual archives), mobile heritage (museums, collections) and archives.

According to the European Data Exchange Agreement: (1) data providers grant Europeana the right to publish image previews provided to Europeana. However, such previews may not be re-used by third parties unless such previews are allowed; (2) for all other metadata provided to Europeana, data providers grant Europeana the right to publish all metadata under the terms of the Creative Commons Zero Public Domain Dedication. In such case, all metadata can be used by third parties without any restriction [40]. In other words, one of the main impediments to cultural content digitisation is the issue of intellectual property rights (copyrights, registered and unregistered design rights, trademarks and patents, database rights, performers' rights) [22].

The first step of the process of cultural content digitisation is to secure permission from the rights holder. This investigation concerns each and every piece of work under examination, and various types of information should be found: if the work is copyrighted or protected by other intellectual property rights, when such rights expire, the date when the work was created, the identity and nationality of the creator, the publication status of the work, the applicable legislation in terms of intellectual property rights in the country of origin, and dealing with cases when the author is not known or cannot be found. Only items that belong to the public domain can be included in Europeana (that is, intellectual property rights have expired) [40]. The copyright impediment to including items in Europeana has been called 'the black hole in Europeana' [41]. However, steps have been made in the European Union to allow for the digitisation of orphan works and out-of-commerce works as a result of adopting the Directive 2012/28/EU of the European Parliament and of the Council of 25 October 2012 on certain permitted uses of orphan works OJ L299/5 (Orphan Works Directive) and of the Memorandum of Understanding on Key Principles on the Digitisation and Making Available of Out-of-Commerce Works [42,43]. An orphan work is protected by copyright, but its author is unknown or cannot be found.

Another impediment to cultural data digitisation is the poor quality of the original work, which makes it even more difficult to replicate it into a digital form, the relative compatibility of formats, and the financial resources required for such a long-term process. Such difficulties are faced by all providing countries to the European Digital Library, all the more for Romania, where digitisation has not been a continuous process, nor has it been financed on a regular basis. It is critical to involve both public institutions and private actors into the process, the latter bringing their contribution in terms of technological know-how and financial resources.

Also, there are several legal impediments in terms of photographic reproductions of public domain works—in Romania, the author of such reproductions has the copyright on the reproduction. For instance, digital images of public domain works do not belong to the public domain [31].

As stated in the Digital Agenda, the challenge for Romanian institutions is to provide as many items as possible into Europeana, but the current debate around the topic signals the risk of an excess of quantity over quality and highlights the heterogeneity of such data. Thus, Europeana is also striving for breaking down collections into tiers in order to improve data quality. The current publishing frameworks includes the following tiers: (1) Europeana as a search engine (people can find content); (2) Europeana as a showcase (people can find and view content); (3) Europeana as a distribution platform for non-commercial re-use (people can find, view, and use content, but not for commercial gain); (4) Europeana as a free re-use platform (people can find, view, and use content as they wish). In deciding what items to digitise, the following aspects should be analysed: identifying the type of cultural heritage content that could be useful afterwards, whether the digital content can then serve as input for creative-cultural industries or for educational or cultural tourism, estimating the cost of digitisation and finding alternative sources of finance, and determining the necessary skills and technical resources. The relevant actors that should be involved in the digitisation process are: the public sector (ministries, central and local administrations), cultural institutions (galleries, librarians, archives, museums), creative-cultural industries as re-users of the digitised content, IT companies, and the Internet community. Given that public finance cannot cover all the costs of digitisation, policy makers should search for alternative financing sources, such as private companies, public-private partnerships, crowdfunding, etc. Another important concern regarding Europeana is the monitoring and benchmarking activity, which are ensured by *enumerate.eu* [19]. An explanation provided by the person in charge of Europeana aggregation for Romania, Mr. Dan Matei from the National Heritage Institute, dated 22 May 2018, reveals the fact that no clear criteria have been used by providers in selecting the items to be included in Europeana. The only criteria considered were the ones normally used by all local cultural institutions: resources should be both cultural and relevant. There is no reference whatsoever to value, which, according to the representative of the National Heritage Institute, cannot be defined in this context. In fact, the Romanian providers to Europeana select those items they consider relevant, representative or easy to include from a technical point of view, i.e., to catalogue. The Romanian contributions to Europeana are those items included in the national heritage, with the exception of old books. For the latter, no fully-digitised volumes are available—only covers or title pages. Europeana only requires the digital data to be authentic, trustworthy, and robust.

- The 2017 and most recent report on ENUMERATE survey reveals the following: 82% of the institutions included in the study sample have a digital collection or are engaged in digitisation activities; 42% have a written digital strategy, addressing issues such as: digitisation of analogue collections (90%), selection and acquisition of digital collections (39%), publishing digital collections (79%), and long-term digital preservation (64%); the object types mentioned as part of collections are: text-based (89%), visual 2D (89%), archival records (74%), time-based material (67%), and 3D man-made material (63%).
- 59% of the institutions have born digital items; 58% of the heritage collections have been catalogued in a collection database; 22% of the heritage collections have been digitally reproduced; and 54% need to be reproduced.

- The most important reasons to provide digital access to collections are academic research and educational use, and the least important reason is sales and commercial licensing.
- 42% of the digital objects managed by institutions are not available online, and 51% of the online available items are found on the institutional website.
- 49% of the institutions measure the use of digital collections, and 90% of these institutions use web statistics for the measurement.
- 27% of the institutions have a written digital preservation strategy, while 45% do not have long-term preservation solutions based on international standards for digital preservation; the best-performing type of institution in this respect are national archives and national libraries [44].

The report aggregates the data from all responding institutions, and does not disclose a by-country status. It is quite obvious that digitisation is still far from covering most of heritage collections, and that not all institutions have strategies in place to support the digitisation and/or the preservation process. While no specific data is disclosed for Romania, the report reveals that the number of responding institutions dropped dramatically between survey 1 and 4, from 39 to only one responding institution. The largest drops in relative terms are recorded by Romania and the Slovak Republic—the latter witnessing a fall from 78 to none.

5. Discussion

The paper analyses the main aspects of cultural content digitisation in Romania as seen through the objectives of the European and Romanian Digital Agenda, which are part of the Europe 2020 Strategy, and discusses this topic in the more general context of the digitisation process in the economy and society. The current state of digitisation and the progress in this field are seen as extremely important factors that determine the subsequent evolution of cultural digitisation—both in terms of digital cultural consumption and in terms of cultural content distribution in a digital form. In other words, the digitisation of the economy and society mainly determines the degree of digitisation of cultural content, the former giving a measure of the preparedness degree of the society to embrace new forms of cultural consumption, distribution, and production. Also, the paper is meant to advocate for the cultural content digitisation.

The present research can be extended in the direction of a qualitative analysis of the cultural digitisation process, which is in line with the current concerns of Europeana. It is of high importance to include as many items as possible in the European digital library, but it is equally important to focus on high quality cultural content, which is representative for the national and European heritage.

Cultural content digitisation has far more implications than that of just preserving cultural heritage, on the one hand, and providing access to culture, on the other hand. Culture is central to recent sustainable development strategies due to its ability to generate employment, increase incomes, lead to an increase in cultural tourism, improve quality of life, revitalise urban and rural spaces, harness creativity and innovation, contribute to achieving social cohesion and inclusion, and build bridges between different cultures and countries, thus creating a culture of peace. Thus, the Europe 2020 Strategy specifically included the objective of developing a single digital market with the purpose of ensuring sustainable, smart, and inclusive growth, which can be facilitated by backing digitisation, as part of the objectives to exploit cultural resources [28]. Once digitised, the cultural, scientific, or educational heritage can become a resource for a wide range of informational products or services, in fields such as education or tourism. Therefore, cultural content digitisation has a huge economic potential in the long run, which can lead to increased competitiveness across all Europe, in line with the Lisbon Strategy [30]. Cultural heritage contributes to the European GDP not only through its impact on tourism, but also as a stimulant for growth and employment in a wide array of traditional and new industries alike, as a contributor to social cohesion and engagement. It leads to a higher level of employment, welfare, and improved environments [45].

Based on the analyses made within this research paper, a SWOT analysis can be drafted to serve as guidance for policy making insofar as the process of Romanian cultural content digitisation is concerned. The main strengths identified are: a high share of Internet subscriptions, fast penetration of mobile broadband, financing cultural digitisation through EU funds, i.e., e-Cultura (Eur 10 mil), while the main weaknesses are: low internet penetration and use as compared to other EU countries, low digital literacy of the population, low level of skills of the personnel working in libraries and public archives, insufficient ICT endowment of cultural institutions, little number of items included in the Europeana, and insufficient finance dedicated to the digitisation process. Despite the current situation, Romania is faced with many opportunities, such as the existence of the following strategies and programmes: the National Programme for the digitisation of national cultural resources and the establishment of the Romanian Digital Library, the National Strategy for the Digital Agenda for Romania 2020, the National Strategy for Research, Development and Innovation 2014–2020, the existence of a legal framework and of a national aggregator in charge of digitising cultural heritage, and the EU progress made on legal matters related to orphan works and out-of-commerce works, which facilitates the digitisation process. Last but not least, the main threats that have been identified are: the digital divide, low public awareness about the importance of cultural content digitisation, and thus, a poor rate of access to cultural resources, no public discourse to address the urgency to put in place a digital library, no undertaking to create an overview of the digitised content, the impossibility to track, benchmark and monitor the progress in cultural content digitisation due to the lack of a national scheme or mechanism, frequent political changes that make it impossible to follow through one cultural strategy, not using the two cultural strategies that were elaborated by specialists (The Sectoral Strategy in the Field of Culture and National Heritage for the Period 2014–2020 and the Strategy for Culture and National Heritage 2016–2020), as well as legal impediments to digitisation related to compliance with intellectual property rights.

6. Conclusions

The study is a useful tool for public policy and practice in terms of cultural content digitisation, as it clearly outlines the major stake of the process under investigation; culture is considered to be the fourth pillar of sustainable development, and it has a potentiation effect onto numerous areas within the economy. The existence of digitised cultural items can lead to unlocking the potential of other industries and sectors as well, such as research, education, creative-cultural industries (design, fashion design, visual arts, film and TV, performing arts, music, architecture, advertising, etc.), tourism, etc., but also to the creative re-use of resources, increase in cultural consumption, creation of other means of producing and distributing cultural content, etc. In other words, digital cultural resources have the capacity to open up ways to new forms of consumption, production, distribution of and access to the cultural heritage, and to create new opportunities in the economy, while at the same time ensuring sustainability for the cultural heritage by preserving it in a digital format. Digitisation has a positive impact on the sustainability of heritage, especially in cases where virtual visits can replace physical ones (e.g., sites in extreme decay or deterioration, old paper documents, the inspection of which is very risky) [20]. Additionally, technical constraints may be overcome through research and development as a result of an increasing need to digitise, store and back large amounts of data in the long run. In such a light, digitisation can become an impetus for the further development of the IT industry. Besides such macro scale benefits, digitisation comes with faster and better access to numerous resources, thus reducing the time and effort spent by the individual trying to identify and retrieve information and data. Although time- and money-consuming, digitisation improves societal welfare and quality of life, facilitates better cooperation among all the actors—consumers, producers, public and private institutions. Needless to say, incorporating technology in the cultural heritage field cannot but improve the efficiency of all its related activities, as is the case in all other fields of the economy. Last but not least, digitisation may be often translated into environmentally friendly services, less printing, less travelling to certain objectives, and a more sustainable cultural

consumption. Although digitisation is the long-term solution for preservation and, in the case of certain specific items such as folklore, recordings, etc., for survival, it should definitely not replace the cultural heritage in its original form. Digitisation is a desideratum to ensure cultural heritage sustainability and to facilitate access and dissemination.

Similar studies have been conducted, as shown in the literature review section, and the originality of this paper stands in the fact that no such analysis has been made for Romania, a country still lagging behind in terms of cultural content digitisation and in highest need for action. Identifying the main strengths and weaknesses allows for decision makers to assess the gap between the current and the desired situation, and to better estimate the requirements in terms of financial resources, human and intellectual capital, and IT infrastructure. The paper may also prove to be valuable for future research and policy and action design. Areas that can be further analysed in direct relation to the topic of the paper are: designing appropriate tools to track and monitor the process of digitisation, finding adequate means and the right criteria to improve the quality and quantity of items included into Europeana, identifying ways to increase public awareness about the importance of preserving, storing and accessing the cultural heritage, and planning action using best practice examples in the literature.

Conflicts of Interest: The author declares no conflict of interest.

Appendix A

Table A1. European ranking of Europeana providing countries as of April 2018.

No.	Providing Country	Total Number of Items	Population (in the Inhabitants)	Number of Items per Thousand Inhabitants
1	Norway	5,401,420	5258.32	1027.21
2	Estonia	528,790	1315.64	401.93
3	Sweden	3,333,752	9995.15	333.54
4	The Netherlands	5,568,279	17081.51	325.98
5	Slovenia	573,446	2065.90	277.58
6	Denmark	1,535,717	5748.77	267.14
7	Vatican	199	0.79	251.26
8	Austria	2,107,295	8772.87	240.21
9	Finland	972,728	5503.30	176.75
10	Belgium	1,451,554	11,365.83	127.71
11	Malta	55,165	440.43	125.25
12	Luxembourg	65,622	590.67	111.10
13	Spain	4,681,565	46,528.97	100.62
14	Hungary	829,026	9797.56	84.62
15	Poland	3,051,161	37,972.96	80.35
16	Czech Republic	839,429	10,578.82	79.35
17	Latvia	143,347	1950.12	73.51
18	France	4,740,920	67,024.46	70.73
19	United Kingdom	4,441,166	65,808.57	67.49
20	Lithuania	182,641	2847.90	64.13
21	Greece	677,166	10,757.29	62.95
22	Germany	5,092,179	82,800.00	61.50
23	Italy	3,140,005	60,589.45	51.82
24	Cyprus	42,698	854.80	49.95
25	Iceland	9970	338.35	29.47
26	Croatia	115,869	4154.21	27.89
27	Ireland	122,399	4774.83	25.63
28	Portugal	207,910	10,309.57	20.17
29	Switzerland	166,799	8417.70	19.82
30	Slovakia	89,854	5435.34	16.53
31	Bulgaria	116,438	7101.86	16.40
32	Serbia	68,113	7040.27	9.67
33	Romania	154,830	19,638.31	7.88

Table A1. Cont.

No.	Providing Country	Total Number of Items	Population (in the Inhabitants)	Number of Items per Thousand Inhabitants
34	Republic of Moldova	4300	3553.06	1.21
35	Russian Federation	29,212	143,666.93	0.20
36	Republic of Macedonia	367	2073.70	0.18
37	Montenegro	83	622.39	0.13
38	Albania	312	2886.03	0.11
39	Turkey	3482	79,814.87	0.04
40	Ukraine	1716	42,590.88	0.04
41	Bosnia and Herzegovina	27	3509.73	0.01

Source: Author's own calculations based on the current data available; Source: [46,47].

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