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**Spoke 8 – D2.2 Reports on cultural participation, economic inclusion, social sustainability and the resilience of Italian regions and provinces**

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## Executive summary

This document consists of 9 sections corresponding to 7 Reports and 2 Focus on cultural and social participation, investigated from economic and social perspectives, and their relations with economic resilience in Italy, with specific attention to the distribution across regions and territorial areas. Attention is paid to definitional issues and to the trends of indicators for Italian territories.

The concepts of "cultural participation", "social participation", "social cohesion" and "social sustainability" are all quite elusive and have been measured in different ways in the literature, generally using composite indicators. Therefore, the document recalls some methodological points on the definition and measurement of indicators. It provides an overview of the trends over time (focusing on the last decade) and the spatial distribution in Italy of these indicators. Attention is paid to the role of digitalization in shaping different forms of cultural and social participation. The relationships between the indicators are analysed.

The Deliverable is characterized by the interdisciplinarity of approaches, both among the various sections that comprise it and within each individual Report. In the initial Reports, where defining and methodological aspects are significant, sociological approaches play an essential role, whereas in the Reports of the second part, an economic analysis approach predominates.

The content of this Deliverable draws on specific articles and working papers published or in the process of being published by researchers from various institutions contributing to the work package. What is written in this Deliverable is intentionally presented in a layman's tone; the strictly scientific details and the sound methodological foundations are contained in the scientific articles and working papers on which this Report is based. Few points mentioned are currently being developed and will be presented in working papers or articles, which are expected to be finalized by the end of the project.

Some of the main findings contained in this Report can be summarized as follows.

There is a marked dualism in cultural participation in Italy, reflecting the economic dualism. Exceptions (at the level of individual provinces or territorial areas) do exist, but they do not alter the fundamental picture of a dualistic division.

There is a clear complementarity in the spatial distribution between in-person cultural participation and online activities: where one is higher, the other is also higher. However, there is a noticeable tendency to substitute in-person participation with online cultural activities, especially in some forms of cultural participation (namely, cinema attendance) and especially following the 2020 lockdown shock.

Since access to online tools shows fewer territorial inequalities compared to other variables, such as income, it might be expected that this substitution process would lead to reduced inequalities. However, this is not at all clear, at least based on much of the data collected and presented.

Significant inequalities, particularly concerning education, human capital, and social capital make it problematic to conclude that increasing access to communication and participation tools via digital platforms reduces cultural participation inequalities between different areas of the country.

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# Introduction

The concepts of "cultural participation," "social participation," "social cohesion," and "social sustainability" are inherently complex and have been measured in diverse ways throughout the literature, often using composite indicators. This document addresses some key methodological aspects related to defining and measuring these indicators. It also examines their temporal trends (with a focus on the past decade) and spatial distribution across Italy, highlighting the impact of digitalization in shaping various forms of cultural and social participation. Furthermore, the relationships among these indicators are explored.

The content of this Deliverable is grounded in articles and working papers, either already published or in progress, authored by researchers from different institutions involved in the work package. The information presented here is intentionally written in accessible language; the scientific rigor and methodological details are documented in the supporting academic publications. Certain points discussed are still under development and will be presented in future papers, expected to be finalized by the project's conclusion.

The Deliverable adopts an interdisciplinary approach, reflected both across its sections and within each individual report. In the initial reports, which emphasize definitions and methodology, sociological perspectives play a central role. Conversely, the later reports rely more heavily on economic analysis.

The key findings of this Deliverable can be summarized as follows.

**Persistent Dualism in Cultural Participation:** A significant divide in cultural participation exists in Italy, mirroring the country's economic dualism. While exceptions can be observed at the provincial or territorial level, these do not fundamentally alter the overarching picture of a dualistic structure.

**Complementarity and Substitution in Participation Modes:** There is a clear spatial complementarity between in-person cultural participation and online activities: regions with higher levels of one also tend to exhibit higher levels of the other. However, there is also a marked trend of substituting in-person participation with online activities, particularly in certain areas of cultural participation, such as cinema attendance, a trend exacerbated by the 2020 lockdown.

**Uneven Impact of Digital Tools on Inequalities:** While online tools show fewer territorial disparities compared to variables like income, it was initially expected that the shift to online participation would reduce inequalities. However, the evidence is less conclusive. Data collected thus far does not clearly indicate a reduction in disparities.

**Persistent Inequalities in Education and Social Capital:** Significant disparities in education, human capital, and social capital complicate the assumption that broader access to digital tools for communication and participation will mitigate cultural participation inequalities across different regions of the country.

Specifically, the Deliverable is structured in 9 Chapters (7 Reports and 2 Focus).

Report 1 addresses the concept of "cultural participation," focusing on the different forms it can take, particularly in-person participation. It also touches upon the changes cultural participation has undergone due to the spread of information technologies, leading to the emergence of online cultural participation.

Report 2 explores the meaning of social participation and its connection with the concepts of social sustainability and social cohesion. Here too, the report outlines the aspects generated by forms of social participation facilitated by digital tools.

Focus A and Focus B provide a brief overview of studies from the economic literature on the concepts of cultural participation and social participation.

Report 3 is primarily a descriptive report on the database assembled for analyzing phenomena related to cultural participation. Variables were collected at the regional level in Italy, with annual observations spanning the period from 2011 to 2022. This database represents the main dataset used for the analyses presented in the subsequent two reports. Report 3 also describes some variables collected at the provincial level. However, the collection of provincial data is still ongoing, and the variables presented in this report represent a subset of the full dataset under development.

Report 4 focuses on the resilience of forms of cultural participation in the face of the shock caused by the lockdown. It examines which forms were most affected during the initial impact phase and identifies the regions where the impact was most severe. The report also analyzes recovery capacity (both across different forms of participation and across regions) and proposes various resilience indicators.

Report 5 centers on the substitution between in-person and online cultural participation. It documents a spatial complementarity between the two forms (regions with higher levels of in-person participation also tend to show higher levels of online participation). Nonetheless, in all cases, there is also a tendency for in-person participation to be replaced by online participation.

Report 6 provides an in-depth analysis of depopulation phenomena and the resulting impoverishment of cultural and social participation in Italy's inland areas.

Report 7 addresses a relatively tangential topic compared to the main body of this deliverable. It presents an analysis using sentiment analysis tools to examine perceptions of migration. This report is included in the deliverable to highlight a research line actively pursued within Spoke 8 of the GRINS project, which also contributes to other work packages, particularly WP4.

# 1. REPORT 1

## What Cultural Participation Is

### OUTLINE

1. INTRODUCTION: CULTURAL PARTICIPATION IN CONTEMPORARY SOCIETY
2. CULTURAL PARTICIPATION: ATTENDANCE TO LIVE PERFORMANCES
3. MUSEUM VISITS
4. BOOK READING
5. JOURNAL AND MAGAZINE READING
6. ACTIVE CULTURAL PARTICIPATION
7. CULTURAL PARTICIPATION AS CREATION OF ON-LINE CULTURAL CONTENT
8. CONCLUDING REMARKS

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The content of this Report was developed with contributions from the research units of UniBO and UniCT.

## 1. INTRODUCTION: CULTURAL PARTICIPATION IN CONTEMPORARY SOCIETY

Cultural participation embodies the active engagement of individuals within the cultural sphere. It encompasses a broad spectrum of activities, spanning from traditional arts and performances to contemporary digital expressions. Cultural participation is widely recognized as crucial for individual and community well-being (Delaney and Keaney 2006; Jeannotte 2003). Scholars argue that cultural participation is not just about personal enjoyment, but also plays a critical role in fostering social connections and collective identity (Delaney and Keaney 2006; Jeannotte 2003; Leroux and Bernadska 2014; National Endowment for the Arts (NEA) 2009; Polzella and Forbis 2016; Stern and Seifert 2009). At its core, cultural participation signifies the involvement of individuals in activities that contribute to and derive from the shared cultural heritage, expressions, and narratives within a society.

According to Jeannotte (2003), cultural engagement contributes to the development of social capital, which is essential for building socially cohesive communities. People who participate in cultural activities are more likely to feel a sense of belonging and trust within their communities, which helps create interpersonal networks. These networks are crucial for creating "bridging" social capital—connections that span different social groups—and "bonding" social capital, which strengthens ties within a specific community. In this way, cultural participation promotes collective social integration by bringing together people of different backgrounds around shared experiences.

Further research (Polzella & Forbis 2016) suggests that engagement in cultural experiences can foster dialogue across diverse groups, promoting mutual understanding and reducing social tensions. Community-based art projects and cultural events often bring together individuals from different socio-economic, ethnic, and age groups, providing a space for interaction that might not otherwise occur. This helps build empathy, reduce stereotypes, and encourage solidarity, which are critical elements in the formation of a cohesive society.

The National Endowment for the Arts (NEA) (2009) report also emphasizes that cultural participation fosters a sense of community identity and pride. In areas where cultural events are prominent, individuals report stronger connections to their neighborhoods and a greater willingness to engage in collective civic actions, such as volunteering or participating in local governance. Therefore, the evidence suggests that cultural participation has a decisive role in promoting social cohesion by enhancing both individual well-being and community connectedness.

Cultural and civic participation, while distinct, are often interrelated and can mutually reinforce each other to promote social cohesion. Cultural activities frequently provide a platform for civic engagement, and vice versa, with both forms of participation fostering a sense of community and shared values.

Just to mention a relevant reference, Delaney and Keaney (2006) provide statistical evidence from the UK showing a strong correlation between cultural participation and civic renewal. They argue that people who engage in cultural activities—such as attending festivals, museums, or community

arts programs—are more likely to be involved in civic activities, including voting and community volunteering. This suggests that cultural participation may help cultivate the skills, knowledge, and networks necessary for effective civic engagement. For instance, attending a local cultural event might expose individuals to civic issues in their community, sparking interest in volunteering or advocacy work.

The intersection of cultural and civic participation plays a crucial role in promoting social cohesion. Cultural activities not only provide a space for artistic expression but also serve as platforms for civic engagement, helping individuals connect with their communities and fostering the social capital necessary for strong, cohesive societies.

Defining the concept of cultural participation is a multifaceted task, as it evolves with societal changes and technological advancements. It encompasses involvement in activities such as attending museums, galleries, theaters, cinemas, and libraries or engaging in community-based arts programs. However, with the advent of digitalization, the landscape of cultural participation has undergone a significant transformation. The integration of technology has revolutionized cultural engagement, expanding the horizons of participation. Virtual platforms, social media, and digital archives have become integral in shaping cultural experiences. These tools facilitate access to diverse cultural content, enabling individuals to engage with art, history, and heritage irrespective of geographical boundaries.

The relationship between cultural participation and technological advancements is symbiotic. On one hand, technology acts as an enabler, democratizing cultural access and diversifying participation. On the other hand, cultural participation drives technological innovation, fostering the creation of digital platforms and immersive experiences that cater to the evolving preferences of a globalized audience.

In the digital era, the intersection of cultural participation and technology has facilitated interactive experiences, augmented reality exhibitions, and online forums that encourage dialogue and engagement. Virtual museums, live-streamed performances, and digital storytelling platforms have not only preserved cultural heritage but have also revitalized it, making it accessible and relevant to a wider audience. So, new technological tools may foster inclusivity, allowing individuals from varied backgrounds to partake in cultural activities, thereby promoting social cohesion and understanding. Moreover, telematic cultural consumption and experiences can serve as a catalyst for creativity and innovation, inspiring collaborations and the exchange of ideas across diverse cultural landscapes.

However, despite the benefits, challenges persist.

Moreover, it is far from being clear whether on-line cultural participation is a complement or a substitute for in-person cultural participation. One cannot rule out that digital cultural consumption have displaced in-person cultural activities.

The digital divide poses a barrier to equitable cultural participation, with disparities in access to technology limiting engagement among certain demographics. Moreover, the authenticity of cultural experiences in the digital realm often sparks debates regarding the preservation of traditional forms of art and the impact of technology on cultural authenticity.

In the following Sections, we will review various forms of cultural participation, starting from the more traditional ones, and we will aim to highlight how digital consumption is transforming them, as well as the benefits and risks it may entail.

## 2. CULTURAL PARTICIPATION: ATTENDANCE TO LIVE PERFORMANCES

This Section addresses traditional forms of cultural participation, often equated with the “passive” consumption of cultural content. However, in the case of cultural goods, consumption frequently serves as a precondition for the expression of supply, as long as individuals often act as both consumers and producers. We will deal with consumption behaviors concerning cinematic, theatrical, and musical products, focusing particularly on how these consumption patterns have evolved following digitalization.

### 2.1. Cinema

#### *The Importance of Cinema-Going and the Impact of Internet Movie Downloads*

Cinema-going has long been an integral part of cultural and entertainment experiences for people worldwide. The allure of the big screen, the communal atmosphere, and the immersive audio-visual experience offered by theaters have historically drawn audiences. However, with the advent of the internet and the subsequent ability to download movies, the landscape of movie consumption has undergone a significant transformation, influencing the frequency of cinema attendance.

Attending cinema experiences offers a charm that extends beyond merely watching a film. The cinematic environment, characterized by communal viewing, creates an immersive and impactful experience. Going to the cinema transcends mere movie-watching; it becomes an event, fostering social interactions, shared emotions, and a sense of belonging within a community of fellow movie enthusiasts.

Nevertheless, the accessibility and convenience offered by internet downloads have presented a formidable alternative to traditional cinema-going. The ability to access movies online, often at the comfort of one's home and at a time of personal convenience, has altered consumer behavior. This shift in movie consumption patterns has impacted the frequency of visits to cinemas and theaters, with some individuals opting for the convenience of downloading movies rather than experiencing them in a theatrical setting.

Statistical evidence (at least for Italy, at the regional level) shows that a positive cross-section correlation exists between cinema attendance and access to the internet and the frequency of movie downloading (See also Report ### in the present Deliverable). That is, the regions where the internet access is easier and wider are the same regions with largest cinema attendance. However, over time the correlation is negative: A substitution of on-line movie consumption instead of cinema

attendance has occurred over the last decade. We can also add that attendance at cinema has recovered only partially after the easing of the lockdown restrictions following the Covid-19 shock: attendance at theater, music concert and sport show have recovered in a much larger way as compared to cinema. Also this piece of evidence could suggest that the substitution with internet fruition is easier for cinema as compared to other forms of cultural consumption.

In other words, the convenience of downloading films from the internet has undoubtedly affected cinema attendance. The ease of access, cost-effectiveness, and the ability to watch movies at one's preferred time and place have led to a decline in the frequency of cinema visits for certain demographics.

This trend has prompted cinemas to adapt by enhancing the overall movie-going experience, offering premium amenities, and embracing technological advancements such as immersive audio formats and larger screens to entice audiences back to theaters.

However, despite the allure of internet downloads, the intrinsic value of the cinematic experience remains unparalleled. Cinemas offer a sense of spectacle and immersion that cannot be replicated at home. The communal aspect of sharing emotions, reactions, and laughter with a live audience adds a dimension to the movie-watching experience that is unique to cinema halls. Moreover, certain cinematic productions, particularly those crafted for the big screen, thrive on the immersive nature of theaters, offering visuals and soundscapes that are best appreciated in a theatrical setting.

In conclusion, while the availability of internet movie downloads has impacted the frequency of cinema attendance, the essence of the cinematic experience remains unmatched. As the entertainment landscape continues to evolve, cinemas adapt by offering an experience that transcends the convenience of internet downloads, emphasizing the unique allure and social value of the traditional cinematic outing.

## 2.2. Theater

### *Theatre Attendance: The Essence of Live Performances*

The experience of attending live theatre, particularly productions encompassing prose or tragedy, holds a distinct place in cultural consumption, set apart from the cinematic experience. The immersive nature of live performances and the unique engagement between actors and the audience create an atmosphere that distinguishes theatre from the cinema. However, in the age of online consumption, the question of whether online alternatives could replace the cultural significance of attending theatre remains pertinent.

Live theatre, especially in its portrayal of prose and tragedy, embodies an intimate connection between performers and the audience that transcends the boundaries of traditional entertainment. The immediacy of live acting, the raw emotions conveyed, and the unfiltered interaction between actors and spectators define the essence of theatre. Unlike cinema, where the audience passively observes a recorded performance, theatre-goers become active participants in the unfolding narrative, sharing the same physical space and emotions as the actors.

The experience of attending a theatre production, whether it's a classic tragedy or a contemporary play, offers a level of intimacy and authenticity that cannot be replicated through online consumption. The nuances of live performances, the spontaneity, and the palpable energy exchanged between performers and the audience contribute to an immersive experience that transcends the boundaries of a screen.

However, the rise of online platforms offering recorded theatre performances has led to discussions regarding the potential substitution of live theatre attendance with digital consumption. Online accessibility provides convenience, allowing audiences to access theatrical productions from the comfort of their homes. While these platforms offer a way to experience theatre remotely, they cannot fully replicate the visceral impact of being present in a theatre hall.

Theatre attendance and online consumption differ fundamentally in their essence. The communal experience of sharing a physical space with performers and fellow audience members, the palpable emotions, and the immediate reactions to live performances create a unique atmosphere. On the other hand, online consumption, while convenient, lacks the immersive and interactive aspects that define the live theatre experience.

Also in the case of theater attendance, statistical evidence (at least for the Italian regions) shows that a positive cross-section correlation exists between theatrical performance attendance and access to the internet and the frequency of movie downloading. That is, the regions where internet access is easier and wider are the same regions with the largest theater attendance (even if the link is a little bit weaker as compared to the case of cinema). Data show (see also Report ### in this Deliverable) that substitution over time, between in-person attendance to theatre shows and internet activity is limited. Recovery of theater attendance, after the 2020-21 lockdown has been nearly complete in 2022, indicating that substitution between on-line and in-person consumption of theatrical product is limited.

Once again, and in conclusion, the essence of attending theatre productions, especially those portraying prose and tragedy, lies in the intimate connection between performers and the audience, an element that distinguishes it from cinematic experiences and online consumption. While digital platforms offer accessibility, they cannot fully replicate the visceral impact and immersive nature of live theatre, underscoring the irreplaceable cultural significance of attending performances in person.

### 2.3. Music

Attending live concerts holds a profound significance in both the realms of pop music and classical music, yet each genre offers a distinct and unique experience for audiences.

#### *Pop Music Concerts*

Pop music concerts have evolved into grand spectacles that transcend mere musical performances. They serve as immersive experiences that cater not only to auditory senses but also to visual and

emotional engagement. The energy, showmanship, and connection between pop artists and their audience create an electric atmosphere that is unparalleled in its intensity.

Live pop music concerts are a celebration of communal joy and unity. They offer an opportunity for fans to connect with their favorite artists in a live setting, fostering a sense of belonging and shared enthusiasm. The significance of attending pop music concerts lies in the creation of lasting memories and emotional connections. These concerts serve as a platform for fans to immerse themselves in the artistry of their favorite performers, creating moments that transcend the boundaries of everyday life.

### *Classical Music Concerts*

Classical music concerts, on the other hand, offer a different dimension of musical appreciation. The serene ambiance of a concert hall, the orchestral arrangements, and the intricate compositions transport audiences into a realm of artistic purity and sophistication.

Attending a classical music concert is an immersive journey into the world of musical mastery. The precision of the performers, the complexity of the compositions, and the depth of emotions conveyed through classical pieces create a transformative experience for listeners. The focus on musical intricacies and the sheer talent of instrumentalists and conductors make each classical concert a unique and enriching experience.

The significance of attending classical music concerts lies in the appreciation of musical heritage and cultural legacy. These concerts serve as a testament to the timeless beauty and emotional depth of classical compositions, offering audiences a chance to engage with the rich history and sophistication of the genre.

Thus, both pop music and classical music concerts hold immense importance in the realm of live music experiences. While pop concerts offer a vibrant and interactive celebration of contemporary culture and artistry, classical concerts provide a platform for the appreciation of musical excellence and historical significance. Attending live concerts, regardless of genre, serves as a means of cultural engagement, emotional connection, and appreciation of the art form, offering audiences an opportunity to immerse themselves in the transformative power of music.

### *Concert Attendance in the Digital Era: Navigating Music Consumption*

The landscape of music consumption has witnessed a transformative shift in the digital age, marked by the coexistence of live concert attendance and the prevalence of digital platforms for music consumption. The emergence of online streaming services, digital downloads, and social media has revolutionized how audiences engage with music, raising pertinent questions about the impact of digital consumption on concert attendance.

The accessibility and convenience offered by digital platforms have redefined the way people discover and consume music. Online streaming services grant instant access to an extensive catalog of songs, albums, and playlists, allowing listeners to enjoy their favorite tunes at any time and place.

Furthermore, social media and online communities facilitate the discovery of new artists and genres, enabling music enthusiasts to explore diverse musical landscapes effortlessly.

The prevalence of digital consumption has undoubtedly influenced music listening habits. The ease of accessing music through smartphones, laptops, and other devices has led to a surge in on-the-go consumption, allowing individuals to curate their musical experiences according to personal preferences. Moreover, the democratization of music distribution through digital platforms has provided independent artists with a global reach, fostering a more diverse and inclusive music industry.

### *The Symbiosis of Digital Consumption and Concert Attendance*

One can repeat, for the case of music concert attendance, what said for cinema and theater: Despite the convenience offered by digital music consumption, the allure and significance of live concert attendance do persist. Attending a live concert offer an immersive experience that transcends the boundaries of digital consumption; the palpable energy, the communal spirit, and the direct connection between artists and their audience create an unparalleled atmosphere that elevates the appreciation of music.

Live concerts serve as transformative experiences, fostering a sense of community and shared emotions among attendees. The thrill of witnessing artists perform live, the spontaneity of live renditions, and the interactive engagement with the crowd contribute to the authenticity and emotional impact of live music experiences.

The relationship between digital music consumption and concert attendance is symbiotic rather than antagonistic. Digital platforms often serve as catalysts for concert attendance, acting as promotional tools for artists and events. Social media platforms, online ticket sales, and live stream announcements contribute to the visibility and accessibility of concerts, encouraging fans to attend live events.

Moreover, live concert experiences offer something irreplaceable - a tangible connection between artists and their audience, creating moments that transcend the digital realm. The authenticity, emotional resonance, and the communal bond fostered during live performances remain integral to the concert experience.

### *The Future Evolution of Music Consumption: Streaming Platforms and Artificial Intelligence*

The evolution of music consumption through streaming platforms, coupled with the integration of artificial intelligence, is poised to revolutionize the way we engage with and experience music. These advancements hold the potential to redefine the landscape of music listening in profound ways, offering personalized experiences and shaping the future of the industry.

Streaming platforms have transformed how we access and consume music. These platforms provide an extensive library of songs, albums, and playlists, allowing users to stream music anytime, anywhere. The convenience and accessibility offered by streaming services have democratized music consumption, empowering listeners to explore a vast array of genres and artists effortlessly.

Moreover, streaming platforms leverage algorithms and user data to curate personalized recommendations, tailoring music suggestions based on individual preferences and listening habits. This personalized approach enhances the user experience, introducing listeners to new music that aligns with their tastes while also providing a platform for emerging artists to reach wider audiences.

Artificial intelligence (AI) plays a pivotal role in the evolution of music consumption. AI-powered algorithms analyze vast amounts of data, including user behavior, music preferences, and contextual information, to refine recommendations and enhance the user interface of streaming platforms. Machine learning algorithms continually adapt and learn from user interactions, refining their suggestions and personalization over time.

Furthermore, AI extends beyond recommendation algorithms, and it is increasingly integrated into music creation, composition, and production. AI-generated music, leveraging neural networks and deep learning models, showcases the potential for technology to compose original pieces, mimic various music styles, and even collaborate with human musicians, pushing the boundaries of creativity and innovation in music composition.

The integration of streaming platforms and AI promises to revolutionize the listening experience. Personalized playlists, tailored recommendations, and curated music discovery algorithms cater to individual tastes, fostering a more immersive and engaging music listening journey.

Additionally, AI's role in music creation and composition introduces new avenues for artistic exploration and experimentation. It enables musicians and producers to access innovative tools that assist in composition, sound design, and production, potentially shaping new genres and pushing artistic boundaries.

The synergy between streaming platforms and AI is poised to reshape the music industry. As technology continues to advance, these platforms will likely offer increasingly sophisticated personalized experiences. Moreover, the collaborative potential between AI and human creativity presents opportunities for groundbreaking innovations in music creation, composition, and performance, potentially leading to a new era of artistic expression and musical exploration.

## 2.4. Opera

### *The Uniqueness of Opera: Attendance, Digitalization, and Evolving Trends*

Opera stands as a distinctive art form that weaves together music, drama, and spectacle, creating an immersive and multifaceted experience for its audience. Its historical significance, artistic richness, and the intertwining of music and storytelling have established opera as a timeless cultural treasure. However, in the wake of digitalization, the landscape of opera attendance and presentation has undergone notable changes.

Opera's essence lies in its ability to amalgamate various art forms into a singular, emotionally charged performance. The combination of powerful vocals, orchestral grandeur, theatrical staging, and storytelling creates a multisensory experience that transcends mere entertainment. Opera performances transport audiences to different eras, cultures, and emotional landscapes, eliciting a

profound connection between performers and spectators. The grandeur of opera houses, the acoustics, and the synergy between performers and the audience contribute to the magic of the opera. The live interaction between singers, the orchestra, and the audience creates an atmosphere of shared emotions and collective appreciation for the artistry unfolding on stage.

### *Impact of Digitalization on Opera*

The digital age has ushered in both challenges and opportunities for opera. Online platforms and streaming services offer accessibility to opera performances, allowing audiences to access a diverse range of productions from anywhere in the world. Live streaming of opera performances has expanded the reach of this art form, making it accessible to a global audience and introducing opera to new enthusiasts.

However, the digitalization of opera has raised discussions about its impact on traditional opera attendance. While digital platforms increase accessibility, they cannot fully replicate the immersive and communal experience of attending a live opera performance. The intimacy of witnessing the drama unfold on stage, the nuanced expressions of singers, and the live orchestral accompaniment create an emotional depth that is challenging to capture through digital means.

Opera houses and performers have adapted to the digital landscape by embracing technology to complement live performances. Digital marketing, live streaming of selected performances, and educational initiatives through online platforms have broadened opera's reach while maintaining the allure of live attendance.

Moreover, technology has been integrated into stage productions, offering innovative set designs, audio-visual enhancements, and creative storytelling elements that enrich the visual and sensory experience of opera.

In short, opera remains an unparalleled artistic form that thrives on live attendance, fostering a profound connection between performers and audiences. While digitalization has expanded accessibility and introduced new ways of experiencing opera, the essence of the art form lies in the immersive and communal nature of live performances. Opera's adaptation to digital trends reflects a balance between embracing technological advancements and preserving the emotive power and authenticity of the live opera experience.

### 3. MUSEUM VISITS

#### 3.1. Museum Visits: A Pillar of Cultural Engagement

Museum visits stand as a key indicator of cultural participation within a society, reflecting the level of engagement with art, history, science, and cultural heritage. The act of visiting museums goes beyond mere leisure; it signifies a desire to explore, learn, and engage with diverse facets of human creativity, knowledge, and heritage.

Museums serve as repositories of human achievement, housing collections that span centuries, civilizations, and disciplines. These institutions offer immersive experiences, providing visitors with opportunities to explore art masterpieces, historical artifacts, scientific discoveries, and cultural narratives.

Visiting museums fosters intellectual curiosity, promoting lifelong learning, and contributing to educational enrichment. The interactive exhibits, guided tours, workshops, and educational programs offered by museums cater to diverse age groups and interests, creating an environment conducive to exploration and discovery.

Museum visits represent an active engagement with cultural heritage and societal discourse. Individuals who frequent museums contribute to the preservation and appreciation of cultural artifacts, supporting the cultural and educational initiatives undertaken by these institutions.

Furthermore, museums often serve as community hubs, hosting events, lectures, and exhibitions that foster dialogue, encourage critical thinking, and promote cultural exchange. Visitors actively participate in these cultural activities, engaging in discussions, attending events, and supporting initiatives that contribute to the vibrancy of their communities.

Recently, museums are increasingly involved in promotion of social cohesion initiatives, including actions for disadvantage people and for migrants' integration.

#### 3.2. Museums and Cultural Participation

Surveys and studies frequently incorporate museum visitation rates as a key metric in assessing cultural participation within a community or region. These metrics gauge the frequency of museum visits, the diversity of museums patronized, and the demographic profile of visitors, offering insights into the cultural engagement of different segments of the population.

Museum visits have a profound impact beyond individual enrichment. They contribute to the economic vitality of regions by attracting tourism, promoting cultural tourism, and stimulating local

economies. Additionally, they play a pivotal role in fostering a sense of identity, pride, and connection to cultural heritage among visitors.

Of course, there are different types of museums (artistic, historical, natural history, scientific), and museum visitors include visitors to archaeological parks, natural parks, exhibitions (permanent or temporary in museum spaces or other public areas), and, in Italian statistics, visitors to monuments.

It is also worth mentioning that an increasing number of opportunities for free entrance to museums has been offered, in Italy, over the past year. Some studies deal with the effect of free-entrance on charged attendance, suggesting a positive impact: causal links can be detected running from the number of free visit to subsequent charged attendance, at the level of both individual museum, and aggregate data.

### 3.3. Museum in the age of digitalization

Museums, custodians of culture and heritage, have undergone a remarkable evolution propelled by the forces of digitalization. The integration of digital technology has revolutionized museum experiences, transforming the way audiences engage with art, history, and scientific knowledge.

Digitalization has expanded the reach of museums beyond physical boundaries. Online platforms, virtual tours, and digitized collections have democratized access, allowing global audiences to explore museum exhibits and collections remotely. This increased accessibility has fostered engagement among diverse demographics, reaching individuals who may not have had the opportunity to visit museums in person.

Digital technology has enriched museum experiences by offering immersive and interactive elements. Augmented reality (AR), virtual reality (VR), and interactive installations bring exhibits to life, allowing visitors to delve deeper into historical eras, art movements, or scientific phenomena. These technologies create dynamic and engaging experiences, offering a multi-sensory exploration of museum content.

The digitization of museum collections has been a transformative aspect of digitalization. High-resolution images, 3D models, and digital archives preserve and showcase artifacts and artworks in unprecedented detail. Digital databases allow researchers, scholars, and enthusiasts to access and study collections remotely, promoting academic research and cultural exchange.

Educational initiatives are increasingly offered by museums. Digital tools and applications have become integral educational assets within museums. Interactive apps, educational games, and multimedia guides cater to diverse learning styles, enhancing visitor engagement and facilitating deeper understanding. These tools transform passive observation into active participation, encouraging curiosity and fostering lifelong learning.

Despite the numerous advantages, the digital transformation of museums also presents challenges. Issues regarding digital preservation, data security, and equitable access to technology need to be addressed. Moreover, balancing the integration of technology with the preservation of the authentic museum experience remains a consideration for curators and museum professionals.

### 3.4. Museums, Community Engagement and Social Media

Museums leverage social media platforms to engage with audiences, promote exhibits, and share content. Online communities and social media campaigns facilitate dialogue, encourage user-generated content, and amplify the museum's impact by fostering a sense of community among followers and visitors.

Museums, in embracing social media platforms, have unlocked a powerful avenue for community engagement, interaction, and cultural dialogue. The integration of social media has redefined the relationship between museums and their audiences, fostering connections, expanding outreach, and promoting a deeper understanding of cultural heritage.

Through social media, museums are connecting with diverse audiences worldwide. Museums utilize platforms like Facebook, Twitter, Instagram, and YouTube to share behind-the-scenes glimpses, highlight collections, and provide insights into exhibitions. By curating engaging content, museums captivate the interest of a broad spectrum of individuals, transcending geographical boundaries and demographic limitations.

Social media enables museums to initiate meaningful conversations and encourage visitor participation. Interactive features such as polls, Q&A sessions, and interactive challenges prompt audiences to share their thoughts, ask questions, and contribute to discussions about art, history, science, and culture. This participatory approach fosters a sense of belonging and encourages audiences to become active contributors to the museum's narrative.

Through social media, museums amplify their impact by disseminating information, promoting events, and showcasing collections to a vast and diverse audience. Platforms like Instagram, known for visual storytelling, provide museums with a space to present captivating visuals, while platforms like Twitter facilitate real-time engagement during events and exhibitions. This heightened visibility and accessibility democratize cultural engagement, attracting visitors from various backgrounds and interests.

Social media serves as a catalyst for cultural advocacy and community building. Museums leverage these platforms to advocate for social causes, cultural heritage preservation, and inclusivity. By actively engaging with communities, museums foster a sense of ownership and pride, encouraging locals to connect with their cultural roots and actively participate in museum initiatives and events.

### 3.5. Future Directions, challenges and opportunities

For sure, the integration of social media platforms has empowered museums to transcend physical boundaries, connect with diverse audiences, and foster meaningful community engagement. By leveraging these digital tools effectively, museums can continue to bridge the gap between culture, heritage, and global communities, creating inclusive spaces for dialogue, education, and appreciation of our shared human history.

While social media presents numerous opportunities for community engagement, museums face challenges in navigating the digital landscape. Balancing authenticity with the need for captivating content, managing diverse audience expectations, and addressing misinformation are among the challenges museums encounter. However, these challenges also present opportunities for museums to foster transparency, build trust, and establish themselves as reliable sources of information and cultural enrichment.

Looking ahead, the future of museums' engagement through social media holds promise for continued innovation. Emerging technologies, such as virtual reality experiences, live streaming events, and interactive storytelling, will further enhance the immersive and participatory nature of museum engagement on social platforms.

## 4. BOOK READING

### 4.1. The Significance of Reading Books

In assessing cultural participation within a community or region, one crucial metric often considered is the inclination towards reading books. Also with reference to reading, one can state that the act of reading transcends mere consumption; it embodies a deeper engagement with cultural narratives, ideas, and knowledge, making it a cornerstone of cultural participation and societal enrichment.

Reading books serves as a gateway to diverse worlds, offering individuals an opportunity to explore realms beyond their immediate surroundings. It fosters intellectual curiosity, stimulates imagination, and broadens perspectives.

Moreover, books serve as repositories of knowledge, offering insights into art, science, philosophy, and myriad other subjects. They stimulate critical thinking, encourage dialogue, and facilitate the exchange of ideas, fostering a culture of intellectual discourse and innovation within societies. Through literature, readers receive information about historical epochs, immerse themselves in

different cultures, and empathize with varied human experiences, nurturing a deeper understanding of the world.

## 4.2. Cultural Participation and Reading

The act of reading books transcends personal enrichment and exerts positive externalities into the whole society. Individuals who engage in reading often contribute to a vibrant cultural landscape by supporting libraries, book clubs, and literary events. They actively participate in discussions, literary festivals, and community-based initiatives centered around books and authors, fostering a sense of communal engagement and shared intellectual pursuits.

Societies that encourage a culture of reading tend to exhibit higher levels of literacy, critical thinking, and creativity. Such communities often celebrate literary heritage, support local authors, and prioritize educational initiatives that promote reading among diverse demographics, thus enriching the cultural fabric of the region.

### *Accessing Books: Buying, Borrowing, and the Rise of E-Books*

The consumption of books, integral to fostering a culture of reading, primarily involves acquiring them through purchase or borrowing from libraries. Surveys gauging reading habits often inquire about the frequency and extent of book consumption, encompassing both books bought and those borrowed. Additionally, data on the availability and utilization of libraries provide insightful metrics into reading patterns within communities.

The act of acquiring books, whether through purchase or borrowing, is a pivotal aspect of fostering a reading culture. Bookstores and online retailers offer avenues for purchasing books, allowing individuals to curate personal collections and access literary works according to their interests and preferences. Conversely, libraries provide a communal space where individuals can borrow books, fostering access to diverse literature without financial constraints.

Surveys on reading habits often probe into the sources from which individuals acquire books, delineating patterns between those who predominantly purchase books for ownership and those who rely on libraries for access. This data underscores the role of both purchasing power and communal resources in facilitating reading habits.

### *The Impact of E-Books on Reading Habits*

The advent of e-books has revolutionized the reading landscape, reshaping how readers access and consume literature. E-books offer convenience, portability, and accessibility, allowing readers to access a vast library of titles with a few taps on digital devices. This shift to digital reading mediums has altered reading habits, providing an alternative to physical books and introducing a new dimension to the reading experience.

E-books have facilitated instantaneous access to literature, enabling readers to carry an entire library in their pockets. This accessibility has transcended geographical barriers, allowing readers to explore and access a diverse range of literary works without limitations imposed by physical book availability.

However, the rise of e-books has sparked discussions regarding their impact on traditional reading behaviors. While e-books offer convenience, some argue that the tactile experience and emotional connection associated with physical books may be lost in digital formats. Additionally, concerns about screen time and digital distractions have prompted discussions about the balance between traditional and digital reading practices.

In conclusion, the means of accessing books—through purchase or borrowing from libraries—play integral roles in shaping reading habits and fostering a culture of literacy. The advent of e-books has introduced new dynamics, offering unprecedented access and convenience, yet sparking discussions about the impact on traditional reading practices. Understanding these changing patterns provides insights into evolving reading behaviors and the intersection between traditional and digital mediums in shaping contemporary reading habits. Moreover, in the digital era, the mode of reading has diversified with the advent of e-books, audiobooks, and online platforms. While these mediums offer convenience and accessibility, they also contribute to the democratization of reading, allowing individuals to access a vast array of literary works irrespective of geographical barriers.

Furthermore, online communities, book-sharing platforms, and virtual book clubs foster a global dialogue around literature, connecting readers from different corners of the world and enhancing cultural exchange.

The inclination towards reading books serves as a significant indicator of cultural participation within a community. Beyond being a source of personal enrichment, reading fosters intellectual growth, stimulates dialogue, and contributes to the cultural vibrancy of a society. Whether through traditional books or modern digital mediums, the act of reading remains an indispensable catalyst for fostering cultural engagement, promoting learning, and nurturing a more informed and connected society.

## 5. JOURNAL AND MAGAZINE READING

### 5.1. Newspapers and Magazines as Cultural Barometers

The act of engaging with newspapers and magazines serves as a significant indicator of cultural participation within a society. This form of media consumption not only provides information but also fosters a deeper understanding of current affairs, diverse perspectives, and societal trends, contributing to an informed and engaged citizenry.

Reading newspapers and magazines offers individuals a multifaceted view of the world, allowing them to stay informed about local and global events, politics, economics, culture, and societal developments. Surveys measuring cultural participation often include inquiries about newspaper and magazine readership, acknowledging their role as informative sources that shape opinions, discussions, and societal awareness.

Access to information through newspapers and magazines empowers individuals to participate meaningfully in societal dialogues, debates, and decision-making processes. Readers become aware of pressing issues, social challenges, and cultural developments, enabling them to form informed opinions and engage in conversations that contribute to the cultural fabric of their communities.

Furthermore, the availability of diverse publications catering to varied interests and perspectives facilitates the exchange of ideas, fosters intellectual curiosity, and nurtures a culture of continuous learning and exploration. The act of regularly reading newspapers and magazines fosters critical thinking skills by evaluating various viewpoints presented in journalistic content.

### *The Impact of Digitalization on Reading News and Magazines*

In the digital era, the consumption of news and magazines has undergone a significant transformation. Online platforms, digital editions, and mobile applications offer convenient access to a wide array of journalistic content, allowing readers to access news in real-time and explore diverse publications at their convenience.

More in general, in today's digital age, the proliferation of information sources has transformed how we access and consume information. The advent of smartphones and digital platforms has facilitated an abundance of diverse sources, providing an unprecedented level of access to information through push notifications and a myriad of channels.

The digital landscape offers an array of sources through which individuals can access information. From traditional news outlets to social media platforms, blogs, podcasts, and specialized apps, the options are vast and diverse. This multitude of sources caters to varied interests, preferences, and ideologies, offering a plethora of perspectives and viewpoints on a wide range of topics.

It is worth underlining the importance of push Notifications: Push notifications represent a significant shift in how information is delivered to individuals. With the rise of smartphones and apps, push notifications have become a common means of delivering real-time updates, news alerts, and personalized content directly to users' devices. These notifications, ranging from breaking news to tailored recommendations based on user preferences, offer instantaneous access to information, keeping individuals informed and engaged.

The availability of diverse information sources, coupled with push notifications, has transformed information consumption patterns. Users can customize their information intake by subscribing to specific channels or enabling notifications from preferred sources, allowing them to stay updated on topics of interest in real-time.

However, the abundance of information sources and push notifications raises concerns about information overload and filter bubbles. The constant stream of updates and notifications can

overwhelm individuals, making it challenging to discern credible sources and differentiate between important information and noise. Moreover, personalized algorithms may inadvertently create echo chambers, reinforcing existing beliefs and limiting exposure to diverse viewpoints.

In this digital milieu, the ability to critically evaluate sources and exercise discernment becomes crucial. Users must cultivate digital literacy skills to navigate the plethora of information available, identify reliable sources, verify information before sharing, and consciously diversify their information intake to avoid echo chambers.

Moreover, technology companies and content creators play a role in designing responsible notification systems that balance the delivery of timely information with user well-being, considering factors like frequency, relevance, and user preferences.

In conclusion, reading newspapers and magazines serves as a vital indicator of cultural participation, enabling individuals to stay informed, engage in societal discussions, and contribute to a well-informed and participatory citizenry. Whether through traditional print or digital formats, the act of consuming journalistic content remains pivotal in fostering an informed and culturally engaged society.

The digital era offers an unparalleled abundance of information sources and push notifications, providing instantaneous access to diverse perspectives and real-time updates. However, this abundance requires individuals to cultivate critical thinking skills, exercise discernment, and actively manage their information intake to navigate the digital information landscape responsibly and make informed decisions.

Needless to say, the digitalization of news consumption has raised discussions about the credibility of sources, the proliferation of misinformation, and the potential impact on traditional journalism. Despite these challenges, digital platforms have democratized access to news, facilitating engagement and allowing readers to access a myriad of perspectives and analyses.

## 6. ACTIVE CULTURAL PARTICIPATION

### 6.1 Introduction: A general definition

Up to now we have dealt with “passive” cultural participation. We can move to “active” cultural participation.

Active cultural participation encompasses the engagement of both individuals and entities, such as businesses and institutions, in cultural activities. While our primary focus is on the active involvement of individuals –as we are interested primarily in the relation with social sustainability– it is essential to acknowledge the significant role that businesses and institutions play in shaping and contributing to cultural landscapes.

A few words concerning individual active cultural participation, before focusing on the issue: Individuals are vital contributors to the cultural vibrancy of a society. Active cultural participation by individuals involves their direct involvement in artistic, creative, and intellectual pursuits. This can range from participating in community projects, to actively supporting and promoting local artists and traditions. Such involvement not only enriches the personal lives of individuals but also fosters a sense of community and shared identity. Furthermore, active cultural participation by individuals has the potential to enhance skills such as creativity, critical thinking, and problem-solving, which are increasingly valued in today's knowledge-based economy.

Beyond individual engagement, businesses and institutions play a pivotal role in fostering cultural participation. Cultural institutions, such as museums, galleries, and theaters, contribute to the preservation and dissemination of cultural heritage. Similarly, businesses can actively support cultural initiatives through sponsorships, partnerships, and corporate social responsibility programs.

Within active cultural participation of institution, we can refer to “creative sectors”: The concept of "industries cultural" refers to the intersection of culture and commerce, encompassing sectors such as film, music, publishing, and the arts. These industries not only contribute to the preservation and promotion of cultural expression but also serve as economic drivers. Investments in cultural industries can lead to job creation, tourism promotion, and the development of a unique local identity that attracts both residents and visitors.

Active cultural participation, whether by individuals or institutions, has the potential to contribute significantly to the economic growth of regions. Cultural activities can stimulate tourism, generate employment opportunities, and attract investments. Additionally, a vibrant cultural scene enhances the overall quality of life, making a region more appealing for residents and businesses alike.

## 6.2. Active cultural participation of individuals

Active cultural participation of individuals takes on various facets, but one of the most rooted and significant forms is represented by the traditional production of cultural content. This concept manifests through being an integral part of artistic groups and movements, contributing to the creation and enrichment of the cultural fabric of society.

We can provide a definition of Active Cultural Participation: Active cultural participation is not merely the passive consumption of artworks or performances but rather direct and tangible involvement in their creation. In this context, traditional content production implies being part of an orchestra, a music band, a theater company, or any other artistic group dedicated to creating works that permeate society with meaningful and distinctive elements.

As far as Music concerns, being part of a music band is not just playing an instrument; it is contributing to collective harmony, transforming isolated notes into an engaging musical experience. Collaboration among musicians in a band not only strengthens social bonds but also creates a sonic heritage reflecting the cultural identity of the group.

Being a member of a theater company, or a ballet company, means bringing stories, emotions, and messages to life through live performance. The actor becomes the conduit between the work and the audience, creating a shared experience that goes beyond mere observation. Theater production is a collective act that extends beyond acting, involving set design, direction, and other elements converging to create a multisensory experience.

In the realm of visual arts, active cultural participation manifests through the creation of visual works that communicate, provoke reflections, and convey a message. Being part of a visual artistic collective implies not only technical mastery but also the ability to express personal ideas and visions through visual art.

In summary, traditional content production represents a tangible and lasting contribution to culture. Through active participation in artistic groups, individuals not only enrich the cultural landscape but also build robust and enduring social bonds. Traditional cultural production becomes, therefore, a living testament to the importance of active participation in creating a shared cultural heritage. Hence, the active cultural participation clearly contributes to social capital accumulation.

Scientific evidence is already available as far as the relation between propensity to active cultural participation, on the one side, and economic growth –and specifically economic resilience– on the other side, with reference to the case of Italian regions, e.g. in Cellini and Cuccia (2019).

### 6.3 Active cultural participation, economic resilience and growth

Cellini and Cuccia (2019), along with other contributions for Italy and other countries, namely Bellandi and Santini (2017), Bristow and Healy (2015), ESS-net Culture (2012), KEA (2006) Pratt (2017, 2019) inter alia, have scrutinized the connection between regional economic resilience and a range of variables associated with cultural behaviors. The findings reveal a positive cross-sectional association between the resilience of regions and certain cultural behaviors affecting both the demand and supply sides. Focusing in this Section on the supply side, the presence of book editors and the availability of theatre performances and cinema shows demonstrate a favorable correlation with the employment resilience of Italian regions. Admittedly, statistical significance is lower for the correlation between these cultural variables and the resilience indicator related to income. An explanation for these observations may be given resorting to the distinctive characteristics of the cultural sector. Talented individuals may find it easier to enter this sector, particularly as self-employed, especially during economic downturns when the opportunity costs of alternative work activities tend to decrease.

Despite facing substantial cuts in public funds during the crisis years under consideration, the unique structure of the cultural industries, characterized by self-employed individuals, small and micro enterprises, and a high turnover rate of cultural enterprises, justifies the resilience capacity of this sector. This, in turn, contributes to the enhanced employment resilience of regions where the investigated cultural behaviors are more prevalent.

The limited impact on income resilience associated with the examined cultural behaviors suggests that the organizational and institutional aspects specific to the sector may play a positive role in

mitigating the impact and facilitating recovery, particularly concerning employment. However, they may not contribute significantly to long-term growth trajectories of aggregate income.

Hence, the increased flexibility within the cultural industries and their job markets should not be seen as a rationale for allowing flexibility to become the norm across the entire economy. This holds true for both the impact and recovery phases of macroeconomic shocks and for fostering long-term growth. Recognizing the need for new forms of public intervention to enhance economic resilience, especially in the cultural sector, measures should shift away from heavy reliance on financial subsidies towards greater emphasis on institutional support and coordination of cultural enterprises.

Cultivating and supporting citizens' cultural participation and education is crucial. These efforts serve as instruments to transmit the culture and identity of local communities while fostering resilience as an evolutionary capacity to respond to external shocks through innovative pathways.

## 7. CULTURAL PARTICIPATION AS CREATION OF ON-LINE CULTURAL CONTENT

Active cultural participation involves the creation of cultural content, which can be initiated by businesses or individuals. In this report, as we are interested in cultural participation as a component of social sustainability, we will focus on the role individuals play as providers of cultural content. Beyond established cultural professions, we are keen on evaluating how digitalization has expanded the opportunity for individuals to offer cultural content.

### 7.1. Defining cultural content on social media

Cultural content on social media spans a diverse spectrum of disciplines, encompassing art, history, literature, science, and more. On social media platforms, these varied forms of cultural expression can be adapted and shared, providing opportunities for engagement and interaction across a wide audience.

A (non-exhaustive) list is as follows.

**Arts:** Artistic content on social media includes visual arts, paintings, sculptures, and digital artwork. Platforms like Instagram and Pinterest thrive as ideal spaces to showcase art, allowing artists to share their creations, behind-the-scenes glimpses, and artistic processes. Creative collaborations, art challenges, and virtual exhibitions enable a dynamic exchange of artistic expression.

**History:** Historical content finds resonance on social media through storytelling, archival photographs, historical facts, and interactive timelines. Platforms such as Twitter and Facebook facilitate the dissemination of historical anecdotes, museum collections, and heritage preservation initiatives. Engaging narratives and interactive polls encourage users to explore and appreciate history in bite-sized formats.

**Literature:** Literary content on social media encompasses book recommendations, poetry, author interviews, and literary discussions. Platforms like Goodreads and Twitter serve as hubs for bibliophiles, allowing users to share reading lists, favorite quotes, and engage in book-related discussions. Literary events, virtual book clubs, and live readings foster a vibrant literary community online.

**Science:** Scientific content on social media covers a broad spectrum, including informative videos, infographics, scientific breakthroughs, and educational resources. Platforms like YouTube and TikTok enable scientists, educators, and enthusiasts to share accessible scientific content, conduct experiments, and debunk myths. Q&A sessions, live demonstrations, and educational series encourage interactive learning.

Adapting cultural content for social media involves optimizing it for engagement and sharing. Visual appeal is crucial; high-quality images, videos, or infographics enhance content visibility. Bite-sized information, concise yet informative captions, and compelling storytelling cater to users' scrolling habits. Hashtags, tagging relevant accounts, and fostering community engagement through comments and discussions help amplify content reach.

In essence, adapting cultural content for social media involves leveraging the platform's features to create immersive, shareable, and engaging experiences that resonate with diverse audiences, fostering appreciation, dialogue, and interaction within cultural spheres.

## 7.2. The role of social media in fostering cultural participation

Social media platforms have emerged as influential catalysts, redefining how individuals engage with cultural content and promoting active participation in cultural spheres. Through their pervasive reach and interactive capabilities, these platforms have transformed the dynamics of cultural engagement, enabling individuals to become active contributors and participants in diverse cultural discourses.

Social media serves as a gateway to an extensive array of cultural content, breaking down traditional barriers of access. Users can explore art, history, literature, and scientific discoveries from anywhere globally. Platforms like Instagram, YouTube, and Twitter democratize cultural access, offering diverse perspectives and content previously confined to select audiences.

These platforms foster vibrant cultural dialogues, encouraging individuals to share, discuss, and engage with cultural content. Users participate in discussions, debates, and collaborations, initiating conversations about art movements, historical events, literary works, and scientific breakthroughs. Hashtags, trending topics, and community groups facilitate the exchange of ideas, fostering a dynamic cultural exchange.

Social media empowers individuals to create and share their cultural narratives. Users become content creators, sharing personal stories, artistic creations, historical insights, and scientific

discoveries. Platforms facilitate the amplification of individual voices, allowing diverse perspectives to flourish and enrich the cultural landscape.

Platforms like Facebook Events, Meetup, and Eventbrite enable the dissemination of information about cultural events, exhibitions, and performances. These platforms serve as virtual hubs where users discover and engage with local and global cultural happenings, encouraging physical participation and attendance.

Social media transcends geographical limitations, connecting individuals with varying backgrounds, interests, and cultural contexts. It fosters inclusivity by providing a platform for marginalized voices, promoting cultural diversity, and celebrating a myriad of cultural expressions.

The viral nature of social media amplifies cultural phenomena, propelling cultural content into the spotlight. Viral challenges, art trends, literary discussions, and scientific discoveries gain widespread attention, influencing broader cultural conversations and trends.

In sum, social media plays a pivotal role in promoting cultural participation by democratizing access, facilitating dialogue, empowering content creation, promoting events, engaging diverse audiences, and catalyzing cultural trends. Its ability to foster an inclusive, interactive, and globally connected cultural ecosystem empowers individuals to actively engage, contribute, and shape the ever-evolving cultural landscape.

### 7.3. Major social media platforms and their content

It's essential to note that the following analysis provides a partial selection of the most prominent social media platforms and their respective content. Each platform serves as a unique digital space, fostering diverse forms of cultural expression, interaction, and content sharing.

**Facebook:** As one of the oldest and most extensive social networks, Facebook accommodates a wide range of content types. Users share personal updates, engage in discussions through posts and comments, join interest-based groups, and follow pages dedicated to various cultural niches. Content spans from news articles and opinion pieces to cultural event promotions and artistic endeavors, creating a multifaceted cultural environment.

**Instagram:** Instagram, primarily a visual platform, revolves around photo and video content. It is a hub for artistic expression, showcasing visual arts, photography, fashion, and lifestyle content. Cultural narratives are conveyed through aesthetically curated feeds, stories, reels, and IGTV, fostering a vibrant visual culture that celebrates creativity and aesthetics.

**Twitter (X):** Twitter (currently renamed as X) is known for its real-time information dissemination and concise messaging. The platform is a hotspot for breaking news, live event coverage, and trending cultural discussions. Users engage in rapid-fire conversations, share opinions, and contribute to ongoing cultural debates through tweets, threads, and hashtags, amplifying cultural conversations.

**YouTube:** YouTube is a video-centric platform that hosts a wide spectrum of cultural content. It serves as a repository for educational videos, historical documentaries, art tutorials, music performances, and scientific explorations. The platform fosters in-depth cultural exploration through long-form content, documentaries, and user-generated videos.

**TikTok:** TikTok, known for short-form video content, has quickly become a cultural phenomenon. This platform allows users to create and share entertaining content, leveraging music, trends, and creative challenges. Users engage in viral dances, showcase artistic talents, share educational content, and participate in challenges, shaping cultural trends in real-time. TikTok has surged in popularity among younger demographics, boasting over 1 billion monthly active users globally.

These platforms represent just a fraction of the digital landscape, each offering a unique environment for cultural expression, interaction, and engagement. The content shared across these platforms reflects the multifaceted nature of cultural discourse, spanning visual arts, discussions, trends, and multimedia experiences. Their collective influence shapes and amplifies cultural narratives, fostering a dynamic and interconnected digital cultural sphere.

Let us mention new platforms, gaining increasing attention.

**Reddit:** Reddit operates through thematic communities called subreddits, covering a wide array of topics. It serves as a hub for in-depth discussions, niche interests, and diverse cultural exchanges. Users engage in text-based discussions, share articles, artwork, and multimedia content, fostering specialized cultural communities.

**Clubhouse:** Clubhouse, an audio-based social networking app, gained popularity for its real-time, voice-driven interactions. As of the last update, it boasted over 10 million weekly active users, attracting individuals seeking live discussions, networking opportunities, and engaging conversations in various interest-based rooms.

**Discord:** Initially designed for gamers, Discord has expanded beyond gaming communities. With over 150 million monthly active users, it's now a versatile platform for communities to communicate via text, voice, and video channels on various topics beyond gaming.

**Triller:** Triller, known for its video creation and editing features, has gained traction in the short-form video space. While its user base is smaller compared to TikTok, it still boasts tens of millions of active users globally.

**Byte:** Byte, a video-sharing app created by the co-founder of Vine, caters to short looping videos. Although its user base is relatively smaller, it's gaining traction among creators and audiences who enjoy its Vine-like format.

These emerging platforms showcase the evolving landscape of social media, appealing to niche audiences and offering unique features tailored to diverse interests, content creation, and interactive experiences.

## 7.4. Author Profiles and the Role of Influencers in Social Media

Social media platforms act as conduits for cultural participation facilitated by author profiles and influencers. Users engage with diverse cultural content, participate in discussions, and contribute to cultural movements fostered by these influential figures. Hashtags, collaborations, challenges, and interactive content curated by authors and influencers drive engagement and encourage audiences to actively participate in cultural dialogues.

The success of author profiles and influencers in promoting cultural participation hinges on authenticity and trust. Audiences gravitate towards genuine, relatable content that aligns with their interests and values. Authentic engagement, transparent interactions, and credible content creation establish trust between creators and their audience, fostering long-term cultural engagement.

Author profiles and influencers on social media platforms expand cultural horizons by introducing audiences to diverse perspectives, trends, and cultural phenomena. Their content facilitates exploration, discovery, and appreciation of various cultural facets, transcending geographical barriers and fostering a globally connected cultural community.

Author profiles and influencers wield substantial influence in driving cultural participation on social media platforms. Their ability to curate, create, and disseminate cultural content not only engages audiences but also shapes cultural narratives, trends, and discussions, transforming social media into vibrant hubs for cultural exchange and participation.

### *Defining "Artists" or "Culture Providers" in the Realm of Internet Influencers and Content Creators*

The question of whether internet influencers and individuals posting artistic or cultural content online can be deemed "artists" is a nuanced and evolving conversation. The term "artist" traditionally invokes images of painters, sculptors, musicians, and creators in the realm of fine arts. However, the digital landscape has redefined artistic expression and the role of creators, prompting a reconsideration of what constitutes an artist.

Internet influencers and content creators who curate, produce, or share artistic and cultural content contribute to the evolving definition of artistry. Their creative endeavors span various mediums, including visual arts, music, literature, digital media, and performance. Through their platforms, these individuals showcase creativity, skill, and originality, blurring the lines between traditional and digital forms of artistic expression.

Artistry often revolves around the intent to create and evoke emotions, thoughts, or reactions. Internet influencers and content creators exhibiting creativity, imagination, and originality in their content align with these foundational aspects of artistic expression. Whether through visual aesthetics, storytelling, innovative techniques, or thought-provoking content, these individuals contribute to cultural dialogues and evoke emotional responses from their audiences.

The influence wielded by internet influencers and content creators in shaping cultural trends, fostering discussions, and influencing audience perspectives echoes the impact of traditional artists. Their ability to initiate conversations, introduce new ideas, challenge norms, and inspire societal change parallels the cultural impact of established artists in various fields.

However, defining these individuals as "artists" might encounter challenges. The subjective nature of art appreciation and the diverse array of content shared on the internet pose challenges in categorizing all content creators as artists. Additionally, the commercial aspects, varying motivations, and diversity in skill levels across content creators complicate the delineation of who can be considered an artist in the digital sphere. For sure, they are cultural product providers.

The evolving digital landscape prompts a reevaluation of the traditional notions of artistry. Internet influencers and individuals sharing artistic or cultural content online possess traits associated with artists, such as creativity, originality, and cultural impact. While categorizing all online creators as artists remains debatable, their contributions to cultural dialogues, creativity, and impact in the digital realm merit recognition and acknowledgment within the evolving framework of modern artistic expression.

## 7.5. Platform for the exchange of NFT with artistic content

The emergence of Non-Fungible Tokens (NFTs), notably exemplified by collections like just to give one single example) The Bored Ape Club, has ignited discussions regarding their classification as artistic creations. This debate has to deal with the essence of artistry, ownership, and the evolving landscape of digital expression.

### *Artistry, Ownership and authenticity in NFTs with aesthetic content*

Advocates argue that NFT collections like The Bored Ape Club epitomize artistic ingenuity. Each digital artwork within these collections is unique, exhibiting diverse visual styles, intricate details, and individual characteristics that resonate with traditional art forms. The meticulous curation, creativity, and conceptual depth infused into these digital pieces align with conventional definitions of artistry.

The fundamental concept of NFTs lies in establishing ownership and authenticity in the digital realm. The blockchain technology underlying NFTs certifies ownership, offering a level of scarcity and provenance akin to physical artworks. Each NFT represents a distinct, verifiable digital asset, granting buyers a sense of ownership and exclusivity, akin to possessing a traditional piece of art.

However, critics contest the classification of NFTs as genuine artistic creations. They argue that while these digital assets hold value and uniqueness, the criteria for defining artistry extend beyond rarity and ownership. Some perceive the artistic merit of NFTs as subjective, questioning whether digital creations meet the criteria of historical, cultural, or aesthetic significance that define traditional art forms.

NFTs are a symbol of the evolving landscape of digital expression and ownership. The integration of blockchain technology into the art world challenges established norms, democratizing access for creators and redefining notions of value and ownership. The Bored Ape Club and similar NFT collections serve as pioneering examples of how digital artistry intertwines with technology and ownership in the contemporary era.

In conclusion, the debate regarding whether NFT collections constitute artistic creations remains subjective and open to interpretation. While these digital assets embody creativity, uniqueness, and ownership, the traditional criteria for defining artistry are evolving in the context of the digital age, prompting ongoing discussions about the intersection of technology, ownership, and artistic expression.

## 8. CONCLUDING REMARKS

The diverse array of topics explored in this Report paints a comprehensive picture of cultural participation in our modern era. The exploration of cultural participation today encapsulates not only the enduring significance of traditional cultural experiences, but also the burgeoning impact of digital platforms. While social media and digital innovations have redefined engagement, the essence of cultural participation remains deeply rooted in conventional avenues such as cinema, theater, concerts, and literary events. These timeless forms of participation continue to hold sway, offering visceral, in-person experiences that resonate with audiences on emotional and intellectual levels.

However, in the contemporary landscape, the integration of technology into these traditional domains has extended their reach and accessibility, complementing physical experiences with digital curation, live streams, and virtual tours. As we navigate the fusion of traditional and digital realms, the evolving roles of influencers, the rise of NFTs as artistic expressions, and the democratization of content creation have all contributed to a richer, more diverse cultural tapestry.

This synthesis of past and present demonstrates the resilience and adaptability of cultural participation, underscoring its ability to evolve, captivate, and connect individuals across generations and technological frontiers.

Most important, cultural participation stands as a cornerstone in fostering social engagement and fostering societal cohesion. It transcends mere entertainment, serving as a bridge that connects individuals, communities, and generations. Through shared cultural experiences, whether in traditional venues or digital spheres, we find common ground, understanding, and a sense of belonging. It's within these cultural exchanges that empathy, appreciation for diversity, and a collective identity are cultivated, nurturing the fabric of a more unified and harmonious society. As we actively engage in cultural pursuits, we not only enrich our own lives but also contribute to the tapestry of a more connected, empathetic, and vibrant community.

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## 2. REPORT 2

# What Social Participation Is

### OUTLINE

1. INTRODUCTION
  2. ON THE CONCEPT OF SOCIAL SUSTAINABILITY
  3. ON THE CONCEPT OF SOCIAL COHESION
  4. ON THE CONCEPT OF SOCIAL CAPITAL
  5. ON THE CONCEPT OF SOCIAL PARTICIPATION
  6. ON THE CONCEPT OF POLITICAL PARTICIPATION
  7. CULTURAL CONSUMPTION AND SOCIAL PARTICIPATION
  8. CONCLUDING REMARKS
- REFERENCES

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## 1. INTRODUCTION

This Report addresses issues related to the definition and conceptualization of Social Sustainability and related concepts such as Social Cohesion, Social Capital, Political Participation, and Social Participation. Emphasizing the importance of the social dimension of sustainability, particularly during crises, the report argues that a clear theoretical framework can greatly impact policy design and implementation, enhancing public intervention effectiveness. In times of crisis, these aspects are crucial for the resilience of communities. To ensure clarity, the report treats Social Sustainability, Social Cohesion, Social Capital, Political Participation, and Social Participation in separate sections, each outlining key elements and current debates. Each section ends with a list of references, and the supplementary material includes a research database of scientific papers on Social Sustainability, categorized by their main contributions.

This Report is clearly connected with the contents of Deliverable D1.2, focused on social participation, delivered by WP1. Among the tasks of WP2 is to investigate how social participation affects the growth and resilience capacities of territories. We will therefore briefly recapitulate the arguments made in D1.2 to connect it –in a subsequent step– to the analysis of the growth and resilience capacities of territories.

## 2. ON THE CONCEPT OF SOCIAL SUSTAINABILITY

Sustainability is a multifaceted concept encompassing environmental, economic, and social dimensions. Environmental sustainability focuses on preserving natural resources, while economic sustainability targets long-term growth. Social sustainability (SS) aims to promote social well-being and inclusion, understanding social systems and improving them for seamless integration.

SS involves building strong social connections and promoting social capital by fostering loyalty, trust, and socio-emotional bonds. This is achieved through community building, social networking, and shared values. Addressing social challenges such as poverty, inequality, discrimination, and exclusion is essential for creating resilient and sustainable social systems.

SS can be framed in five main approaches:

As a distinct objective: SS is seen as an independent goal with unique indicators for comparison across contexts.

As a constraint on economic and environmental imperatives: SS is balanced with economic and environmental priorities, often managed through corporate social responsibility (CSR) initiatives.

As a pre-condition for economic and environmental sustainability: SS is foundational for healthy economic and environmental systems, exemplified by communities investing in communication and conflict resolution.

As a causal mechanism of economic and environmental change: Improving social well-being drives economic and environmental progress, with social change as a catalyst.

As place-centred, process-oriented sustainability: SS integrates social, economic, and environmental goals at the local level, advocating innovative governance to address inequalities and engage communities.

Key elements of SS include education and training, social justice, local democracy, health and well-being, social inclusion, social capital, community safety, equitable income distribution, and active community organizations. Addressing these elements promotes SS and creates a just, equitable, and sustainable society.

Social capital is crucial for SS, promoting a cohesive society focused on collective well-being and equity. It supports social security, participation, civic engagement, and resilience in facing challenges. Connected communities and universal well-being are pivotal in achieving sustainable social outcomes.

### 3. ON THE CONCEPT OF SOCIAL COHESION

The most influential contributions to social cohesion come from Emile Durkheim's framework on solidarity. Durkheim identified two forms of solidarity: mechanical, found in traditional societies with cohesion from shared similarities, and organic, present in modern societies, arising from interdependence due to labour division.

Despite extensive literature, there's no consensus on social cohesion's theoretical conceptualization. It is both desirable and seen as deteriorating due to globalization, migration, new communication technologies, and perceptions within the EU. Bernard (1999) called it a "quasi-concept," lacking a unique formal definition.

Georg Simmel noted that preindustrial interactions were within small, close-knit circles, whereas modern technologies enable interactions across diverse groups, creating unique identities but also potential conflicts. Since the 1990s, research on social cohesion has surged, drawing insights from various disciplines, complicating but enriching understanding. Fundamental components include shared values, civic engagement, trust, social order, diversity, well-being, egalitarianism, and social mobility. Social cohesion manifests at micro, meso, and macro levels.

Social cohesion has two key elements: psychological attachment (ideational) and observable interactions (relational). Research focuses on emotions like belonging and interconnections among group members.

Three main perspectives define social cohesion:

**Sense of belonging:** Emphasizes shared values, common challenges, and equal opportunities to foster hope, trust, and reciprocity. Reducing wealth disparities is fundamental.

**Instrumental:** Practical necessity for effective collaboration, especially during crises, and economic performance. Disparities are seen as sources of societal divisions.

**Economic and social divisions:** Addresses inequalities based on income, ethnicity, politics, and other demographic factors contributing to societal divides.

Social cohesion involves reducing social conflict by addressing inequalities and cultivating strong social ties through trust, civil society, and effective institutions. It relies on indicators of social capital and structural conditions like equal opportunities, resource distribution, and public services.

Equity is key to social cohesion, involving equality of opportunity, treatment, and condition. Institutional performance, including public services and governance, enhances equity. Social cohesion flourishes with equal access to labour, education, and public services. Bernard (1999) identifies three dimensions—economic, political, and social—operating at substantive and formal levels. Key factors include equity, inclusion, participation, legitimacy, community, and diversity.

Standardizing measurements of social cohesion is crucial. The European Commission and Council of Europe view it as a tool against economic instability. Politically, it can support both cultural homogeneity and diversity.

In relation to Social Sustainability, social cohesion's continuity over time contributes to sustainability. Factors promoting social cohesion also enhance social sustainability, with imposed institutions like welfare states being significant determinants.

#### 4. ON THE CONCEPT OF SOCIAL CAPITAL

Many sociologists and political scientists consider social capital as the foundation of social cohesion, political stability, social participation, government efficiency, and democracy (Fukuyama 1995; La Porta et al. 1999; Newton 1999; Putnam 1993, 2000; Uslaner 1999, 2002). Comparative studies have shown that trust and social capital are crucial for economic growth (Algan and Cahuc 2010; Guiso et al. 2006; Knack and Keefer 1997; Tabellini 2010; Whiteley 2000), health outcomes (Kawachi et al. 2008), and happiness (Bartolini and Sarracino 2014; Helliwell and Putnam 1995; Helliwell and Wang 2011).

The concept of capital helps us understand the various connections individuals can make, which significantly impact social sustainability. There are two main conceptual paradigms of social capital: as a collective resource and as a personal asset.

**Collective Resource:** According to Putnam, social capital includes "features of social organization,

such as trust, norms, and networks, that can enhance society's efficiency by facilitating coordinated actions" (1993, 167). This form of social capital fosters cooperation and collective action, emphasizing moral obligations within a community.

**Personal Asset:** Bourdieu views social capital as the network of connections an individual can mobilize to achieve personal goals. Like economic and cultural capital, it helps attain personal and material objectives.

Social capital can be divided into two types:

**Bridging Social Capital:** Often seen as "civiness," it involves a sense of moral obligation towards others based on shared values. It includes trust (in others and institutions), social participation, and political participation. These elements are central to social sustainability and social cohesion, making social capital a link between the two.

In what follows, we will further explore the definitions of political and social participation.

## 5. ON THE CONCEPT OF SOCIAL PARTICIPATION

The concept of social participation has deep roots in the social sciences, central to discussions about social organization and citizenship. Classical thinkers like Durkheim emphasized collective rituals and shared values for maintaining social order and cohesion. Tocqueville, a classical liberal, highlighted the virtues of associationism in *De la démocratie en Amérique*, noting the positive effects of social participation in non-political groups and organizations. He argued that such associations foster social trust, promote cooperation, and reduce transaction costs in a democratic regime. This concept of social participation intersects social and political theory and forms a cornerstone of theories of social capital, such as those developed by Fukuyama (1995) and Putnam (1993).

Social Participation is seen as a source of Social Capital through trust, networks, and cooperation. Engaging in collective activities, such as volunteering or community events, fosters interpersonal trust by creating a sense of shared identity and mutual obligation. Trust, in turn, facilitates cooperation, contributing to social cohesion and resilience. Conversely, low levels of social participation can erode trust, foster feelings of isolation, and undermine collective solidarity. While these mechanisms are evident in small communities, they are harder to observe in larger organizations or societies where the temptation of free-riding is stronger.

James Coleman (1988, 1990) argued that repeated cooperative behaviors can transform in-group trust into trust towards the 'generalized other,' extending reciprocity beyond immediate relationships. In this sense, social participation as a stable pattern of cooperative behaviors encourages individuals to cooperate with strangers, trusting that their goodwill will be reciprocated. Coleman's argument envisions social participation as the engine of a system of expectations where social actors universalize reciprocity for their own benefit, making interpersonal trust a matter of

social intelligence rather than social norms (Gambetta, 1988; Yamigishi, 2001). This system incentivizes the development of a shared identity to promote cooperation and keep transaction costs low (Pizzorno, 1999).

However, defining the system boundaries is challenging. Coleman did not explain why social participation and interpersonal trust vary across different communities within the same institutional context. Putnam (1993) addressed this issue in the case of modern Italy, where regional civic traditions significantly impact local communities' ability to cooperate for social and economic development. A sense of shared identity is both a rational incentive and a premise of social capital. Depending on histories and traditions, social capital can be more 'introverted' (bonding social capital) or 'extroverted' (bridging social capital).

### *Measuring Social Participation: Opportunities and Limitations*

Putnam's work relied on territorial data, such as the diffusion of clubs and associations, as proxies for social capital in Italian regions. Subsequent researchers distinguished between universalistic and particularistic associations to refine the understanding of social participation dynamics. Universalistic associations (e.g., cultural, environmental, and volunteer organizations) serve universal purposes, while particularistic associations (e.g., professional syndicates, political parties, trade unions) serve partisan interests. The literature shows that these categories differ in their capacity to generate bridging versus bonding social capital (Larsen et al., 2004; Leonard, 2004; Patulny and Svendsen, 2007; Stolle, 1998; Stolle and Rochon, 1998).

Other methodologies for studying social participation include surveys and questionnaires, social network analysis, in-depth interviews, and participant observation. Surveys and questionnaires are used to gather individual data on social participation, revealing stratification based on socioeconomic and status variables. Social network analysis provides insights into the structure and dynamics of social participation, highlighting asymmetries and hierarchies invisible in territorial data. Qualitative methods like interviews and participant observation are indispensable for closely observing how forms of social participation work from the actor's perspective and discovering informal forms of social participation understood only in their social context.

In conclusion, social participation is a crucial element in theories of social capital and collective action. It fosters trust, networks, and cooperation, which are essential for social cohesion and resilience. While measuring social participation poses challenges, employing a variety of methodologies can provide a comprehensive understanding of its dynamics and implications. Recognizing the importance of social participation in fostering social capital highlights its role in achieving social sustainability and cohesion.

## 6. ON THE CONCEPT OF POLITICAL PARTICIPATION

Political participation is a multifaceted phenomenon encompassing a range of acts and attitudes aimed at influencing political decisions and the selection of political leaders. It includes both direct and indirect, legal and sometimes illegal activities. A broad definition identifies political participation as any activity intended to affect the outcome of political processes or decisions, whether through formal channels like voting or informal methods like protests.

The literature differentiates between visible and invisible (or latent) political participation. Visible participation includes activities that are overt and often measurable, such as voting, campaigning, or attending political rallies. Invisible participation refers to the presence of a politically interested and informed public opinion that might not always be actively engaged due to satisfaction with the political system or other factors. As Barbagli and Maccelli (1985) state, even passive engagement with political events, such as staying informed and interested, constitutes a form of participation.

Participation is essential for democracy, both in ancient times and modern contexts. In ancient Greek city-states, democracy involved direct participation of citizens in political decision-making. In contrast, modern liberal democracies function as representative systems where elected officials make decisions on behalf of the people. Nevertheless, citizen participation remains crucial to legitimize these representatives and uphold the principle of popular sovereignty. Modern democracies often incorporate direct participation mechanisms like referendums, petitions, and recall votes to complement representative democracy. There is ongoing scholarly debate about new forms of direct democracy that could supplement or even replace representative democracy.

Political participation is continually evolving. Recent decades have seen a decline in traditional forms of participation, such as voting and party membership, alongside a rise in unconventional forms focused on sustainability, inclusion, and rights. This shift reflects changing societal values and the emergence of new issues that mobilize people differently than in the past.

### Classifications of Political Participation

Milbrath (1965) provides an empirical classification of political participation, ranking behaviors by the effort required: namely, Voting, Initiating political discussions, Persuading others to vote in a certain way, Wearing political insignia, Having connections with political officials/leaders, Donating to parties or candidates, Attending political rallies, Contributing to political campaigns, Being an active party member, Participating in decision-making meetings, Fundraising for political causes, Running for office, Holding political or party positions.

Verba, Nie, and Kim (1978) propose a simpler list: Participating in election campaigns, Collaborative activities in groups, Voting, Contacting political leaders/parties.

Barbagli and Maccelli's (1985) Classification specific for Italy includes: Devoting time to a party, Attending political debates, Participating in demonstrations, Joining a party, Donating to a party, Attending rallies, Contacting politicians for personal issues, Sending letters/complaints to public

authorities, Persuading others to vote for a candidate or party, Signing initiative laws/referendums.

Electoral participation is a specific form of political participation and often the most studied due to the availability of precise data. It varies significantly across democratic regimes, with some countries traditionally exhibiting high voter turnout (e.g., Italy, Belgium) and others much lower (e.g., Switzerland, USA). However, recent decades have seen a general decline in voter turnout even in countries with historically high participation rates.

Almond and Verba (1963) noted that citizens in democratic systems often do not fit the ideal model of informed, actively engaged participants. They identified three political culture models: participant, parochial, and subject. This laid the groundwork for studies on the role of participation in democratic quality, suggesting that high levels of participation and competition enhance democracy's quality (Morlino, 2013). Inclusivity and equal participation opportunities are also crucial for democratic quality (Diamond and Morlino, 2005).

Milbrath (1965) categorized American citizens into three groups: Gladiators (Highly active in politics, less than 10%), Spectators (Minimally engaged, about 60%), Apathics (Completely disinterested (about 30%). Verba and Nie (1972) expanded this to five categories: Inactives (22% in the USA), Voting specialists (21%), Communalists (20%), Parochial participants (4%), Campaigners (15%), Complete activists (18%).

Kaase and Marsh (1979) based a different classification on conventional participation and protest potential, distinguishing: Inactives, Conformists, Reformists, Activists, Protesters. Mannheim and Sani (1987) categorized Italian citizens as: Militants, Cives, Disengaged, Marginals. Diamanti identified different profiles of citizens based on participation: Indifferent (Distrustful of parties and institutions, dissatisfied with public services), Communitarians (Integrated into social networks, detached from state institutions, center-right leaning), Disenchanted (Moderately satisfied with public services, focused on security issues), Locally engaged (Active in volunteering, trusting of institutions, non-partisan), Restless (Distrustful and politically disinterested), Public-oriented (Left-leaning, trust in public institutions and authorities).

### *Factors influencing political participation*

Milbrath and Goel (1977) identified variables promoting or hindering participation, noting higher levels among educated, middle-class, male, married, city-dwelling individuals in intermediate age cohorts. Socioeconomic status plays a significant role, as higher status increases confidence in political efficacy. Successful participation experiences can further encourage engagement, while repression can deter it, although it might also foster solidarity and new participation.

Participation also depends on the opportunities provided by the political system. Political parties play a crucial role, though their relevance has changed over time. Strong party mobilization efforts can increase participation even among peripheral individuals, though party bureaucratization can reproduce societal inequalities.

Verba, Scholzman, and Brady (1995) emphasize the role of civic norms in political participation. They argue that transforming resources (money, time, knowledge) into participation requires a commitment propensity stemming from civic sense and recruitment structures for effective

outcomes. This model explains differences within central groups, bridging studies on political participation and social capital.

IN conclusion, political participation is vital for democracy, encompassing various forms and influenced by numerous factors. Understanding its complexities and evolving nature helps in assessing its role in democratic quality and inclusivity. Empirical classifications and sociological insights provide valuable frameworks for analyzing participation patterns and their implications for democratic systems.

## 7. CULTURAL CONSUMPTION AND SOCIAL COHESION

What kind of link does exist between cultural consumption and social cohesion? In 1996 the World Commission on Culture and Development observed that culture plays “an irreplaceable role in defining individual and group identity and provide a shared ‘language’ through which the members of a society can communicate on existential issues which are beyond the reach of everyday speech.” The idea that cultural consumption is positively correlated with the degree of social cohesion of communities is robust and widely shared in literature. However, something happened recently that started to question this result. It is a cultural consumption made usable by the most recent digital technologies. For this reason, it is appropriate to distinguish at least two subsets of cultural digital consumption.

The first, which we will call “Digital consumptions of traditional contents”, consists of habitual cultural products (a movie, for example), which are however made available in new ways. This is the case, for example, of Netflix. In this case, the real cultural content is not too dissimilar from the traditional one. Obviously, although the contents are identical, the ways of use can change the social value of consumption. So, seeing a movie alone is something different from seeing it in company of others. For the second type of cultural digital consumption, on the other hand, McLuhan’s saying is valid: the medium is the message, in the sense that the related tools radically affect the content. These are social networks and all kinds of related content. Actually, one might doubt whether such contents are really “cultural”; nevertheless, we choose to consider them cultural, so as to be able to evaluate their consequences on social cohesion through the same criteria that we adopt to evaluate traditional cultural consumption. We will call them “Digital consumptions of digital contents”. The first remark in this regard is that, unlike platforms such as Netflix, social networks offer content that is only available on those same platforms and, in this sense, it is a totally new good. The second remark is that the most important qualitative difference with any other cultural content is the duration of consumption of single unit of good, which is usually reduced to a few seconds (a normal Instagram reel, for example, lasts no more than 90 seconds). It implies a collapse of sustained attention: the habit of having an immediate reward at the end of a very short duration of consumption makes it difficult to maintain prolonged attention over time and to postpone the reward at the end of a period of prolonged attention. This mechanism of fast and self-reinforced reward leads to a well-known form of addiction and social isolation. Both the collapse of sustained attention (essential for traditional cultural consumption) and the addiction to social media are

factors that reduce the likelihood for an individual to choose traditional cultural consumption. Therefore, if we recognize that traditional cultural consumption improves social cohesion, we must also admit that a reduction in such consumption implies giving up on improving social cohesion, unless digital cultural consumption in turn increases social cohesion to the same extent. At this point, we could distinguish two hypotheses to be verified: the first is that digital consumption of digital contents, as an alternative to traditional cultural consumption, ends up reducing social cohesion and the related advantages; the second is that digital consumption of digital contents can replace the classic one without reducing the levels of social cohesion. At first sight, the former hypothesis appears to be the most likely. First of all, indeed, it is necessary to consider the social impoverishment deriving from dependence and the reduction of attention skills in the individuals. Secondly, although it is undeniable that social networks allow for the construction of social ties, these are strongly conditioned by the phenomenon of the so-called “internet bubble” (individuals with very similar opinions and tastes are gathered and close themselves off from the rest of internet users) and by the lack of corporeality of the encounter (which alters perceptions and relationships due to the filter constituted by the device screen).

## 8. CONCLUDING REMARKS

Social sustainability is at the heart of fostering resilient and inclusive societies. It revolves around the ability of social systems to cultivate robust social connections and promote social capital. These connections are essential for building trust, loyalty, and socio-emotional bonds among individuals and groups within a community.

Social capital plays a pivotal role in social sustainability, as it reflects the strength of social relationships and networks within a society. By fostering social capital, communities can enhance their ability to address challenges collectively and adapt to changing circumstances. Strong social capital promotes cooperation, solidarity, and mutual support, which are vital for resilience and well-being.

Various processes contribute to strengthening social bonds and enhancing social sustainability. Community building initiatives bring people together, fostering a sense of belonging and shared identity. Social networking platforms facilitate connections and communication, bridging geographical and social divides. Additionally, shared values and beliefs serve as a common ground for cooperation and collaboration, promoting cohesion and unity.

The response of social systems to challenges such as poverty, inequality, discrimination, and exclusion is critical for social sustainability. By actively addressing these issues, societies can enhance their resilience and inclusivity. Policies and interventions aimed at reducing poverty, promoting equality, combating discrimination, and fostering social inclusion contribute to building stronger and more sustainable communities.

Social sustainability is foundational for creating resilient, inclusive, and thriving societies. By prioritizing the cultivation of strong social connections and promoting social capital, communities

can enhance their capacity to address challenges collectively and adapt to changing circumstances. Addressing social challenges and promoting equity and inclusion are integral to fostering social sustainability and building a brighter future for all.

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### 3. FOCUS A

## Focus on Social Cohesion from an Economics Perspective

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The content of this Focus was developed by UniCT; main contributor: Dr. S. Spagano.

## A FOCUS ON SOCIAL COHESION FROM AN ECONOMICS PERSPECTIVE:

### *A BRIEF AND SELECTED REVIEW OF THE ECONOMICS LITERATURE ON SOCIAL COHESION*

The locution *social cohesion* first appears in Durkheim (1893). In the first instance, it could be defined as a set of behaviours and bonds that sociologists, political scientists, and psychologists mainly investigated. On the other hand, the concept belongs to the ordinary political discourse. In this sense, social cohesion appears as a “catchword” (Chan et al., 2006, p. 277) for different kinds of political challenges and interests.

Although a large literature faced the concept from many years, there is a lack of consensus regarding its theoretical conceptualization. For example, the social cohesion is both perceived as desirable and as deteriorating (see Council of Europe, 2005, Touraine, 2000 and Jenson, 2010). Why deteriorating? According to Schiefer and van der Noll (2017), there are four reasons: 1) the globalization appears to jeopardize the social cohesion (also see Chan et al., cit.; Hulse and Stone, 2007; Jenson, 2010); 2) the related migrations and ethnic diversity are considered as a threat (in the same direction Beauvais and Jenson, 2002, Hulse and Stone, cit., Ariely, 2014); 3) as also noted by Ferlander and Timms (1999), the new communication technologies changed the quality of social relationships and caused people distress, because the traditional forms of social cohesion appear them as endangered; 4) in EU, citizens often perceived the entrance of new members as a weakening in the national levels of social cohesion (see Hunt, 2005). Several definitions and frameworks have been proposed and then criticized for social cohesion. According to Bernard (1999 p.2),<sup>9</sup> it ultimately would seem to be a “quasi-concept, that is, one of those hybrid mental constructions that politics proposes to us more and more often in order to simultaneously detect possible consensuses on a reading of reality, and to forge them”. So, despite the inflationary use of the concept, the only real consensus on the concept of social cohesion, would seem being about the lack of an its unique formal definition.

The need to reach a consensus, or at least a sufficiently shared standard of definition, is however strictly related to the possibility to standardize measurements.

Among the efforts of single countries and other supranational entities, to our aims, the studies of the European Commission (2007; 2009; 2010) and of both the Council of Europe (2005, cit.; 2010) and the European Committee for Social Cohesion (2004) stand out. European authorities usually conceive social cohesion as an instrument against economic instabilities. More in general, into the non- academic discourse, different political parts use the concept in the way that is of service for their current aims. In this sense, social cohesion could be indifferently invoked to support both cultural homogeneity and cultural diversity.

The main historical root of the concept of social cohesion follows the desirability of maintaining a stable social order also during great revolution periods. Green and Janmaat (2011), analyze such desirability in relation to the globalization and to its overwhelming effects on social stability.

In a sense, the question about what social cohesion is, can be simplified by referring to the two polar (and classic) concepts of social orders (and to the continuum between them), spanning from the Hobbesian need of a monopoly of force to the Hayekian spontaneous coordination of single freedoms. In the first case, social cohesion depends on the intervention of an authority, which is able to maintain the social order also by the force, if necessary, whereas in the second case, social cohesion would be the automatic consequence of a situation (and of a government) that leaves people free to reach their own objectives. In the first wave, we may remind Émile Durkheim (1972), and his different forms of solidarism for the foundation of different kinds of societies.<sup>14</sup> In the second wave, the British liberalism movement, which Durkheim reacted to.

Despite several decades passed, these early differences in the way a society can be considered as cohesive, continue mostly to characterize the contemporary approaches to the issue. Nevertheless, in recent times the interest about social cohesion has been enhanced by the new challenges represented by the globalization and its consequences. In relation to this new phenomenon, the term “social integration” often goes along the social cohesion. Social integration (among individuals) is different from “system integration” (among parts of the society). According to Lockwood (1999), social cohesion would belong to the former and would be characterized by the strength of inter-individual bonds, in turn dependent on common beliefs.

Still recently, the Canadian Policy Research Networks (v. Jenson, 1998, cit.) proposes five alternatives characterizing the social cohesion: 1) belonging/isolation; 2) economic inclusion/exclusion; 3) involvement/extraneousness in public activities; 4) recognition/denial of diversity; 5) legitimacy/illegitimacy of socio- political institutions.

Schiefer and van der Noll (2017), still more recently, presented a largely shared theorization of social cohesion. By considering all the previous approaches, they distill six dimensions of the phenomenon according to the simple criterion of the characteristics that more frequently appeared in the related literature: 1) social relations; 2) identification; 3) orientation towards the common good; 4) shared values; 5) equality; 6) quality of life. At the best of my knowledge, these six dimensions are the most comprehensive scheme to define and further investigate the concept of social cohesion. For this reason, and to our aims, this approach could be maintained also for an economic evaluation of economic desirability, policies, causes and consequences of social cohesion.

An in-depth sight to all these six dimensions seems suitable.

Social relations can be defined (Friedkin, 2004) as the component of social cohesion definable as that force attracting single individuals into a group. Social networks (in the analogical sense of the locution, of course) among individuals build the society; the strength degree of that society can be expressed in terms of number, frequency, and strength of bonds of those networks. So defined, the social relations idea reminds the Bourdieu (1986) definition of social capital. Klein (2013) studies the links between the concepts of social relations and

social capital. Chan et al. (2006, cit.), Dickes et al. (2010), Uslaner (2012) focus on the role of trust within the social relations.

Even if we considered only sociological literature so far, it is already possible to observe an overlap with the more strictly economic concept of transaction costs: the mutual trust, indeed, reduces or even eliminates those transaction costs, which relate to the uncertainty about others' behaviours.

The direct consequence of a growth in the mutual trust is an increase in the number of exchanges, and therefore an increase in the level of social wealth (North, 1990). Alesina and (2002) find a reversal relationship between diversity and trust, whereas Osberg (2003), by investigating the general economic effects of social cohesion, shows a strict relationship between trust and innovation.

Another aspect of social relations, illustrated by Dickes and Valentova (2012), concerns the relations existing among internally homogeneous groups. Here, whereas the sociological literature pays attention to the concept of mutual tolerance among groups, in an economic perspective we can again refer to the number of exchanges as a proxy of the social wealth. And it is pretty obvious that the less frequent the links between (for example) two groups, the lower the probability of exchanges between members of one and the other; thus, the lower the probability of exchanges, the lower the expected potential wealth of the society as a whole.

The last component of social relations is the “engagement” in the sense of participation in the public life. This is, beyond the sociological perspective (about which, see Acket et al., 2011), the necessary premise for any kind of collective decision about the level and the kinds of public goods to be produced.

After the social relations, the concept of identification is the second element contributing, in the scheme we are following, to define social cohesion. First, the identification we are talking about, is identification with the human group of the considered society, but Sani et al. (2000) focus on the historical dimension of this feeling. Then, Chan et al (2006) connect the concept to a well-defined geographical space. Just in this connection with a given place (maybe delimited by legal boundaries, as in the case of a Nation), it is maybe possible to find one

of the elements of identification that the globalization is jeopardizing: Castells (1997) first identified globalization as able to undermine social cohesion insofar as cross-border activities weakened local authorities and rules. Tourain (2000) explains in this way the increasing appeal to other identification systems as the religion.

Orientation towards the common good is the third element. The need for this feature in the construction of the social cohesion is even formally declared by the Council of Europe (European Committee for Social Cohesion, 2004, cit.) in the terms of *ethic of social responsibility*. Perhaps, orientation towards the common good is another name for *solidarity*, but with a more impersonal semantic mark. A concrete proof of both solidarity in action, and its economic outcomes in the European history, is the whole of rules, policies, and institutions, which the welfare system consists of.

Under a different point of view, orientation towards the common good necessarily implies the acceptance of the socio-economic institutions in force; institutions intended at least in the restricted sense offered by Dequech (2013, p. 81), that is as “socially shared rules of behaviour or of thought”. Such a definition disregards institutions as authorities but, in this framework, appears to be enough to act as corollary of the considered element. The system of sanctions enforcement, then, which ensures the reaction against the violation of the rules, is a decisive trait for a real orientation towards the common good to occur.

The shared values are the fourth constituent of the social cohesion. In a cohesive society, according to Kearns and Forrest (2000, p. 997), *the members shared common values*. Here, again, the above-mentioned definition of socio-economic institutions recurs: behavioural regularities need shared value oriented to common goals and structures (Botterman et al. 2012).

Although Schiefer and van der Noll (2017, cit.) mention shared values as constitutive elements of social cohesion, they however notice two reasons for ambiguity in the concept. The first reason can be summarized in the question: how is it possible to balance homogeneity (that should be assumed in shared values) with diversity (that is supposed to be acknowledged and accepted in a cohesive society)? The second point deals with both the nature and the content of such values. Abstractly speaking, indeed, any kind of value can be shared and make a society cohesive: both tolerance and conformity; both individual autonomy and submission.

Even the degree of equality and inequality is regarded to be a constitutive element (the fifth) for a cohesive society. It is assumed that inequality jeopardizes social cohesion (see Stiglitz 2000 and 2004). More in detail, two aspects can be isolated. The first aspect of the equality-inequality dimension has an inherently economic nature, so much so that the World Bank (see Easterly and al., 2006) even claimed that it would be unrealistic to demand social cohesion when people were strongly differentiated in wealth. On the other hand, Jenson (1998), Bernard (1999, cit.) and Dicks et al. (2010, cit.) adopt the inclusion/exclusion pair to evaluate the parity of the individual starting points as something of desirable and salient in terms of equality. Such an aspect, therefore, deals with the concept of equality in terms of accessibility of resources (in this sense see Council of Europe (2005, cit.); Novy, A., Swiatek, D. C., and Moulart, F. (2012.); Rajulton, F., Ravanera, Z. R., and Beaujot, R. (2007).

A second aspect of the dimension deals with equality in terms of cultural and social homogeneity. Alesina et al. (2003) define this subdimension as *fractionalization*.

The last dimension in social cohesion, which Schiefer and van der Noll (2017) examine, is the quality of life, both objective and perceived. It is the dimension with the greatest degree of uncertainty from a measurement point of view, also because it embraces psychological, health, social and economic aspects that, in turn, need to be defined and measured. Sometimes the well-being (in both the objective and subjective dimensions), despite the definition difficulties, is considered (Berger-Schmitt and Noll, 2000) to be a component of the quality of life, but other times it is regarded as a synonymous with quality of life. What is sure is that this sixth dimension of social cohesion remains the most elusive. So, from a measurement perspective, it is likely that a choice will have to be made: favoring subjective well-being (understood as perceived) to the detriment of objective well-being, by measuring the former through surveys. It is perhaps the most practical choice and, maybe, also the most beneficial one, in terms of construction of an index for social cohesion.

From the foregoing it follows that social cohesion can be briefly defined, for our purposes, as any process capable of building shared values within a community. Usually, and it is its most politically appreciated result, such a process ends up reducing inequality. From the individual point of view, it consists of both attachment and responsibility deriving from belonging to the community. Dayton-

Johnson (2003) defines it as the characteristic of a society, which depends on the accumulated social capital (intended as the flow of individual investments).

According to Schiefen and van der Holl's definition, furthermore, social participation is an aspect of social cohesion. It is the force that attracts individuals to gravitate towards groups. Any kind of force. For example, language, customs, religion, social duties, etc.

Social sustainability, in turn, is the survival of social cohesion over time. Any factor that facilitates the continuity of social cohesion contributes to social sustainability. While spontaneous institutions are rather the effect of this continuity, imposed institutions, especially legal and sanctioned ones, can be considered as real determinants of social sustainability (a good example can be the set of rules that found a national welfare state, see Ostrom, 2000).

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## 4. FOCUS B

# Focus on Social and Cultural Participation in the Digital Era from an Economics Perspective

### OUTLINE

1. INTRODUCTION
  2. CULTURAL PARTICIPATION AND THE NEW TECHNOLOGIES
  3. THE PERILS OF PARTICIPATION: INDECISIVENESS AND DEFERRAL
- REFERENCES

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## 1. INTRODUCTION

In the last ten years, the relation between the emergence of new technologies and digital services and social participation has been extensively investigated from an economic perspective. As stated in [Poder \(2011\)](#), social participation has been identified in the economic literature with *social capital*, whose analysis inspects various aspects of social interactions, and their effects on the political, social, and economic phenomena. The recent technological advances, and their consequences on human relations stimulated a strand of research that aims to measure the impact of technologies on social capital.

Ellison, Steinfield, and Lampe (2007) investigate the correlation between the usage of Facebook, and the establishment and perpetuation of social capital. The authors rely on three measures of Facebook use, respectively named as *Facebook intensity*, a combination of the number of Facebook friends and the amount of time spent on Facebook on an ordinary day, *Facebook usage*, which includes salient aspects that users added in their profile, and *Facebook use to meet new people and connect with existing contact*. Furthermore, they explore three measures of social capital evaluation, namely *bridging social capital*, *bonding social capital*, and *maintained social capital*, which estimate the individual's ability to maintain connections with members of a previously inhabited community.

Their findings derived from regression analyses applied to data gathered from a survey of undergraduate students suggest a connection between Facebook usage and the three categories of social capital, with the most pronounced correlation evident in the context of bridging social capital. Additionally, the study reveals an interaction between Facebook usage and indicators of psychological well-being, implying the potential for heightened benefits among users characterized by low self-esteem and diminished life satisfaction.

Steinfeld, Ellison and Lampe (2008) perform a longitudinal examination of panel data involving Facebook users. The authors explore the correlation in the economic academia between the degree of Facebook utilization, indicators of psychological well-being, and bridging social capital. Such research is based on two surveys separated by a one-year interval at a prominent U.S. academic institution, accompanied by in-depth interviews conducted with 18 Facebook users.

The findings reveal that the intensity of Facebook usage during the initial year exhibits a robust predictive association with outcomes related to bridging social capital in the subsequent year, even after adjusting for variables related to self-esteem and life satisfaction. These aforementioned psychological factors also exhibit significant correlations with the outcomes pertaining to social capital. Notably, self-esteem is identified as a moderating factor in the relationship between the intensity of Facebook usage and bridging social capital, with individuals possessing lower self-esteem experiencing a more pronounced enhancement in bridging social capital through their use of Facebook compared to their counterparts with higher self-esteem. The same measures adopted by [Ellison, Steinfield, and Lampe \(2007\)](#) are applied in this work. The authors posit that the affordances offered by Facebook serve to mitigate the barriers encountered by individuals with lower self-esteem when it comes to establishing the extensive and heterogeneous networks that are instrumental in the accumulation of bridging social capital.

Burke, Marlow, and Lento (2009) use server log data from approximately 140,000 new-comers on Facebook to analyze sustained content sharing, drawing upon experiences encountered during the first two weeks of their membership. The study assesses four distinct mechanisms, namely social learning, singling out, feedback, and distribution, that explains motives that drive users engagement on Facebook, particularly among newcomers who may not fully comprehend the value of their contributions. Their findings notably enhance the role of social learning: newcomers who observe their friends engaging in content contribution subsequently exhibit a higher propensity to share content themselves. Moreover, for newcomers willing to contribute, feedbacks and the exposure to a broad audience also emerge as significant factors predicting increased sharing. The authors also delineate design implications that can guide the stimulation of newcomer content sharing in online communities.

Sabatini (2009) introduces a new framework for measuring social capital, and analyzes its determinants. The author first argues that social capital is a multidimensional notion that touches many distinct aspects of human life, and it affects especially economic development and personal well-being. Furthermore, he proposes a novel method for measuring social capital, which includes five different dimensions of the concept, which are strong family ties, weak ties, voluntary organizations, civic awareness, and active political participation. An empirical analysis on the Italian regions examines the relationships between social capital, human development, and labor precariousness. The results highlight that social capital is positively associated with human development and negatively associated with labor precariousness, and that its effects are mediated by the type of social capital (bonding, bridging, or linking). The author claims also that policymakers should invest in social capital, which is a key driver of sustainable economic development.

Antoci, Sabatini, and Sodini (2012) explore the role of computer-mediated interaction in the evolution of social capital. The authors claim that online networking mitigate the decline in social participation that has been observed in recent decades. They provide a theoretical framework for analyzing the relationship between online networking, other forms of web-mediated communication, the evolution of human interaction, and the accumulation of social capital. The authors review the related literature and discuss the interdependence between the phenomena they are considering. They suggest that online networking can foster the development of social capital by providing new opportunities for social interaction and enabling individuals to keep and strengthen existing social ties. However, they also acknowledge that there may be potential negative consequences to relying on online networking for social interaction. The work contributes to the ongoing debate about the impact of technology on social participation and the development of social capital.

## 2. CULTURAL PARTICIPATION AND THE NEW TECHNOLOGIES

Nested into the analysis of social capital, a recent stream of literature measures the effects of new technologies on cultural participation. Montoro-Pons and Cuadrado-García (2011) analyze the demand for live and prerecorded popular music. They provide a detailed profile of the average and frequent consumer in the live and prerecorded music market. Using a joint bivariate probit specification, they study the connections and complementarities between the two markets. Specifically,

the authors observe the causality of demand for prerecorded music variable on that for live music, and an indirect relation, based on the correlation of the unobserved heterogeneity. The empirical evidence is compatible also with a different correlation pattern between unobserved components for different consumer profiles. Moreover, data reveal a negative effect of the use of the internet and file-sharing networks on the prerecorded music market. [Chen \(2015\)](#) investigates US national survey data to study the variation of mobile cultural participation caused by the usage of mobile Internet devices, the intensity, diversity, and the specific types of app use, sociodemographic features, and in-person differences on cultural participation. The augmented accessibility of mobile Internet devices and apps, particularly those geared towards recreational and work-related purposes, fosters an escalation in mobile cultural engagement. The prominence of Hispanic representation, the reversal of the educational gap, and the dissipation of the urban-rural separation in mobile cultural participation suggest that such participation provides members of disadvantaged groups with a more accessible platform for cultural engagement. The robust associations observed between mobile Internet devices, in-person participation, and mobile cultural engagement among the less educated segment of the population lend support to this thesis.

[Crosby \(2019\)](#) explores the effects of digital disruption in the book market, performing a stated preference discrete choice experiment over a sequence of book formats and characteristics. The authors, using a latent class model, identify three classes of book readers. First, the class of 'technological adopters', who exhibit the same propensity to read both traditional printed books and digital ones. This class is the largest one. Second, there is a class of 'popular readers.', a segment of price-sensitive users who read printed books only. Finally, the third class consists of 'avid readers' who display the highest willingness to pay for books and show a desire to read books of all genres. The identification of discrete segments of readers, along with their associated price elasticities and willingness to pay figures, can assist book industry stakeholders (such as book publishers and sellers) with the development of effective strategies to guide them through the various stages of digital book formats technology adoption life cycle. Such results can also be used to help steer cultural policy makers during a period of rapid technological change and uncertainty.

[Mihelj, S., Leguina, A., Downey, J \(2019\)](#) investigate the effects of digital media on participation and diversity in arts and culture, relying on two dimensions: research on cultural participation and research on the digital divide. The authors inspect the Taking Part Survey on digital media and cultural participation in the United Kingdom between 2005/2006 and 2015/2016, analyzing data on museums and galleries. They first show the positive effect of digital media on cultural engagement and new audiences. However, the pace of internet access expansion surpasses that of both museum and gallery attendance and website usage. When contextualized within the digital divide literature, it can be contended that individuals who access the internet may lack the proficiencies required to navigate museum and gallery websites effectively, thus missing out on the advantages of acquiring insights into history, culture, art, and deriving enjoyment from digital exhibits. This gap is wider in case of online cultural engagement. Thus, online access appears to increase the inequality between users and non-users.

[Peukert \(2019\)](#) studies the impact of digitalization on individual cultural participation. First, the author states that the emergence of social networks, and, more in general, of internet-enabled platforms, increases the circulation of accessible cultural contents, raising the level of cultural participation. This evidence triggers the need for research into such new forms of digital participation. Moreover, the

effects of advertising revenues on this dynamic and the economics of copyright are investigated. Finally, the author discusses the economic impact of artificial intelligence (A.I.) on cultural participation, copyright and the industrial organization.

Hadida et al. (2021) report the consequences of digitalization on firms decision-making process in the movie industry. Online streaming services pose a significant challenge to the established decision-making processes within the traditional motion picture industry, presenting major Hollywood studios with a critical juncture. Adopting the institutional logics perspective, this study investigates the strategic decision-making of both traditional studios and online streaming services regarding film production and distribution. A scenario analysis is employed to examine the likely trajectory of their interaction. The study argues that studio executives' production and distribution decisions are predominantly influenced by a commitment institutional logic, characterized by decision-making heuristics that prioritize theatrical release and box-office revenues. In contrast, online streaming services adhere to a convenience institutional logic, driven by advanced data analytics aimed at increasing subscriptions. Under the convenience institutional logic, the imperative to attract online traffic by offering an extensive movie catalog shapes film production and distribution decisions. While the commitment logic strives for mass-market success in cinemas, the convenience logic aims to cater to a diverse range of subscribers at home through tailored, micro-segmented offerings. By comparing these two logics, the study develops four scenarios depicting how their interaction may shape the film industry and concludes with recommendations.

Lawton, Fujiwara, and Hotopp (2021) study the impact of digitalization on cultural heritage, offering an economic evaluation of online film archives. Over time, the degradation of celluloid film to the loss of valuable film history, thereby resulting in the erosion of cultural heritage that contributes to a shared sense of community, identity, and sense of place at local and national levels. Despite the availability of digitized services for accessing cultural resources, there has been a notable absence of economic valuation conducted on online accessible digital local history resources. Although online portals for digital cultural services have emerged in response to the Covid-19 pandemic, including virtual tours of art galleries and digitization of cultural archives, there remains a significant gap in the literature regarding the value of digital culture. The failure to account for the value of digital archives risks the suboptimal allocation of resources for accessing and preserving these aspects of local cultural history. To address this gap, a contingent valuation study was conducted to estimate the willingness to pay for a free online film archive portal containing historical film footage from localities across the United Kingdom. The findings reveal that users are willing to pay an average hypothetical subscription of £38.52 per year for digital archive film services. Non-users in the general population were also surveyed regarding their willingness to make an annual hypothetical donation to maintain free public access, with an average amount of £4.68 per year. These results indicate the positive social value derived from online access to digital archive films and the importance of ensuring that cultural heritage remains digitally accessible to the public, both presently and in the future.

The study also discusses how these findings align with a theoretical framework encompassing the use and non-use value of digital goods and services, extending beyond current portal users to include those introduced to it and the general public who have yet to directly experience the online archive service. Furthermore, the study introduces the application of Subjective Wellbeing analysis to engagement with a digital cultural service, representing a novel approach. By applying economic methods to value cultural activities in monetary terms, emerging modes of digital cultural goods and services can be

compared to other costs and benefits, facilitating cultural policy and investment decisions and placing them on an equal footing with physical cultural assets.

Snowball, Tarentaal, and Sapsed (2021) discuss the innovation dynamics within the cultural and creative industries (CCIs) in the Cape Town cluster of South Africa. While the CCIs are increasingly recognized as wealth-creating sectors that require appropriate investment, the national innovation policy in South Africa remains focused primarily on STEM (science, technology, engineering and mathematics) skillsets and related product markets. The researchers identified a cluster of "fused" innovative CCI firms in Cape Town, characterized by their integration of digital technology and creative design in their production processes. These firms exhibit higher levels of innovation across their business processes, goods, and services. Moreover, the study reveals that fused firms in Cape Town are more likely to employ a demographically diverse workforce. This aspect adds valuable insights from the South African context to UK studies on disciplinary diversity within the CCIs. However, despite the presence of fused creative-digital firms employing greater diversity, a qualitative analysis of South African gaming and animation firms highlights the challenges faced in improving diversity within a developing country context.

The "Rebuilding Europe" report of Lhermitte et al. (2021) is a comprehensive study on the state of the cultural and creative industries (CCIs) in Europe before and after the COVID-19 crisis. The authors provide insights on the impact of the pandemic on the CCIs and the main priorities for the sector to recover and enhance its value in the European economy. The study adopts a "bottom-up" approach to data collection, relying primarily on reliable industry sources at national, European, and global levels. The main databases used include Eurostat Structural Business Statistics, the Eurostat Labor Force Survey, IFPI Global Music Report 2020, and national statistical bureaus. The analysis shows that the European cultural and creative economy lost almost a third of its activity in 2020 due to the pandemic. The author identifies the main priorities for the sector to recover, including the need for targeted financial support, the development of digital skills and infrastructure, and the promotion of cross-sectoral collaboration. They also insist on the importance of recognizing the value of the CCIs beyond their economic contribution, as they play a crucial role in shaping cultural identities and promoting social cohesion. The report offers a comprehensive overview of the challenges and opportunities facing the CCIs in Europe and provides recommendations for policymakers, industry stakeholders, and other actors to support the sector's recovery and growth.

The OECD (2022) report provides information on cultural employment by educational attainment in various countries. The data is based on ISCED (International Standard Classification of Education (2011) standards, and it includes information from Eurostat, the American Community Survey, and the Canadian Labour Force Survey. The report shows the percentage of cultural employment compared to total employment for different levels of education, including less than primary education, upper secondary and post-secondary non-tertiary education, and tertiary education. The government spending on cultural services in OECD countries is described, with an average of 1.2% of total government spending allocated to cultural services. However, the proportion varies widely across countries, with some countries spending almost 3% of their national government expenditure on cultural services while others spend less than half a percent. The report also includes information on the creative economy, skills needs assessment for the creative and cultural sector, and job vacancies in the cultural sector.

The works previously mentioned analyze the consequences of new technologies and digitalization on firms or services belonging to the cultural industry. However, they do not discuss how new technologies and digital resources may *measure* cultural participation. Di Bona et al. (2023) use data from different types of social networks to describe the individual exploration of novelties. Specifically, they analyze the Heaps' law, which characterizes how novelties are distributed in time, and has triggered new mathematical models of exploration processes based on urn extractions or random walks. However, an often overlooked aspect is that novelties can arise as new combinations of existing elements. Thus, they study novelties as  $n > 1$  consecutive elements that appear for the first time in a sequence, and we introduce the  $n^{\text{th}}$ -order Heaps' exponents to measure the rate of discovery of novelties of any order. Through extensive analyses of real-world sequences, such as hastags from a social network, playlists from a digital music and podcast video service, and words from online texts, they find that processes displaying the same rate of discovery of single items can instead differ at higher orders. Thus, they propose to model an explorer as an edge-reinforced random walker with triggering, able to account for the observed properties of higher-order novelties. By capturing the observed properties of higher-order novelties, they reveal how the space of possibilities (potential novelties) expands over time along with the exploration process.

### 3. THE PERILS OF PARTICIPATION: INDECISIVENESS AND DEFERRAL

Social participation may exhibit also drawbacks, which can be measured by the welfare losses generated by social distances, preferences for reputation and social esteem. The cost of social pressure and tensions has been discussed, among the others, by Akerlof (1997), Akerlof and Kranton (2000), Bursztyjn and Jensen (2016), and Uschev and Zenou (2020), who argue that, if social concerns affect payoffs of agents, some non Pareto-efficient equilibria configurations occur. However, these approaches do not question individual indecisiveness, and they investigate the gap of aggregated welfare between social configurations that arise in strategic interactions among decisive agents who maximize their comprehensive utility function.

In Giarlotta, Petralia, Khan, and Reito (2023) we offer a model of individual choice that goes beyond the one in mainstream neoclassical economic theory and takes both individual desires and social restrictions into account. Our approach appeals to classical behavioral criteria that involve both the maximization of personal utility and the minimization of some measure of divergence between individual and social choice. This is to say, that the model takes an 'average' social restriction explicitly into account in a formulation of a two-stage decision problem. In the first stage, we consider an agent, who is not able to determine a trade-off between these two competing criteria, and is thereby indecisive. We formulate this indecisiveness through a binary relation, which we call *one-many ordering*: 'one' because individual preferences are relevant; 'many' because the pressure exerted by the surrounding environment plays a role; 'ordering' because of the relevance of a binary relation that is reflexive and transitive, though not necessarily complete. In the first stage a non-decisive agent discards all the alternatives that are dominated according to individual utility and social cost of once-in-a-lifetime choice, reducing to his *consideration set*. In the second stage, the agent makes his choice from the

previously determined consideration set that takes into account personal utility, present social distance, and the expected future social distance. In our setting, we reproduce the effects of indecisiveness on individual choices affected by social concerns. We prove the existence of an optimal choice performed by an indecisive agent suffering from social pressure. Moreover, we formalize the consequences of choice deferral in strategic interactions, by introducing a novel notion of equilibrium, which is compatible with indecisiveness of agents. Finally, we show that indecisiveness and choice deferral may produce social losses, because the agent discards alternatives that turn out to be desirable when he takes the definitive decision.

Our approach analyzes the effects of social distances on individual decisions. As described in the seminal work of Duesenberry (1949) on “other-regarding preferences”, decisions may be affected by *reference dependence*. In these cases, the agent’s decision is influenced by the choice adopted by a select group of people. Reference dependence has been widely discussed in economic theory. Akerlof (1997) analyzes equilibria of different models of social distance in individual decisions, claiming that social benchmarks may cause inefficient allocations. Sobel (2005) describes agents’ preferences and concerns for status and reciprocity. Benabou and Tirole (2006) study the behavior of agents who have preferences for both reputation and social esteem, showing that pro-social behavior can be ruled out. A recent review on the topic is provided by Bursztyjn and Jensen (2016), who discuss how social distances and social image can be formalized within microeconomic models. Ijima and Kamada (2017) propose a network structure of agents, whose payoffs are affected by social distances. The influence of the ‘other’ is more explicit in applied and experimental economics. Croson and Shang (2008) report the effect of “downward” social information in decisions to finance public goods. Grinblatt, Kelohariu, and Ikaheimo (2009) document a “neighborhood effect” in consumer purchases of automobiles. Easley and Wang (2017) experimentally verify the impact of social influence on career choice. In these works the influence of social standards on individual choices is encoded by embedding the social reference point in the utility function of economic agents, and assuming that, under social tensions, they are able to decide without any hesitation. Instead, we assume that social reference point affects the agent’s consideration set, whose formation does not directly emanate from the standard maximization of agent’s payoffs, but it is the collection of choices which are not dominated according with a binary relation which enhance the conflict between personal aspiration and social conformity.

Thus, our work aims to contribute also in the analysis of indecisiveness and choice deferral in economic theory. Indeed indecisiveness caused by social participation and social tension has already been discussed in psychology. A strand of the literature—see Alison and Shortland (2019)—shows that people in high-pressure contexts want to ‘kill two birds with one stone’, trying to obtain the maximum level of personal utility, while being aligned with a social choice level. In these cases, the agent may not be able to counterbalance individual preferences and social values, he become indecisive, and he defers the choice. This behavioral phenomenon has been already reported by Tversky and Shafir (1992), who claim that choices under conflicts may yield deferred decisions, contradicting the value maximization principle. Later on, indecisiveness and choice procrastination under social pressure and tensions has been tested and measured by Rassin et al. (2007), who analyze psychometrics properties of *Indecisiveness Scale*.<sup>1</sup> Indecisiveness of agents has been recently discussed also in experimental and theoretical economics. In a series of experiments Krijnen, Zeelenberg, and Breugelmans (2015) show that important decisions, which may have a considerable impact on the life of subjects, are often deferred. Pejsachowicz and Toussaert 2017, Gerasimou 2018, and Ok and Tserenjigmid 2022 have

formalized the role of individual indecisiveness in preferences and choices. This recent findings in economic theory has influenced the approach towards capturing an agent's hesitancy when he or she makes choices under social pressure, in a number of ongoing analyses within GRINS project.

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## 5. Report 3

# A picture of cultural participation in Italian regions and provinces: Description of basic datasets

### OUTLINE

1. INTRODUCTION
  2. TWELVE YEARS OF CULTURAL PARTICIPATION IN ITALIAN REGIONS
  3. ATTENDANCE IN PRESENCE TO CULTURAL EVENTS
  4. AGGREGATE MEASURE OF CULTURAL PARTICIPATION OUTSIDE THE HOME
  5. DATA ON ENTRIES (ABSOLUTE NUMBERS OF TICKETS)
  6. READING
  7. A CONCLUSION ON THE REGIONAL CULTURAL CONSUMPTION
  8. CULTURAL PARTICIPATION ACROSS ITALIAN PROVINCES
  9. CONCLUDING REMARKS ON CULTURAL PARTICIPATION AT THE PROVINCIAL LEVEL
- REFERENCES

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The content of this Report was developed with contributions from researchers of UniCT. The main contributors in writing this Report are A. Petralia and D. Pagano.

## 1. INTRODUCTION

The purpose of this chapter is to provide a simple presentation of some of the data collected (partly already included in Deliverable D2.1) related to cultural participation in Italy, particularly across Italian regions and provinces.

This data has been subsequently used for the development of resilience indicators, which will be presented in later chapters of this Deliverable.

The objective of this report is to provide readers, policymakers, and decision-makers with a general overview of the context related to cultural participation in Italy, focusing on regional and local contexts. We underline that this chapter is limited to a purely descriptive analysis of the data, leaving further elaborations and analyses to subsequent chapters of this deliverable or to publications that are currently being developed or are already under review in scientific journals.

The first part of this Report (Section 2 to 7) offers a detailed description of various variables observed in Italian regions during the period 2011–2022, thus covering the years of the lockdown. The second part (Sections 8-9) presents several variables observed at the provincial level, also providing a detailed description.

## 2. TWELVE YEARS OF CULTURAL PARTICIPATION IN ITALIAN REGIONS

In this report we propose an analysis of the Italian regional cultural participation in the period 2011-2022, as depicted in the databank delivered in D2.1 of the GRINS project. We single out main trends and motives of some forms of cultural participation.

The dataset contains, for each of the 20 Italian regions, data about different characteristics of the population and its cultural participation in distinct years.

The variables analyzed in the dataset have been grouped in 10 categories: Demographic (Dem), Economic (Ecn), Civicness (Civ), Social Well-Being (Swb), Health (Hls), Crime and justice (Crj), Environment (Env), Education and training (Edu), Internet, Digitalization and Technology (Idt), and Culture (Cul).

We focus here on cultural variables, first providing their main descriptive statistics.

The numbered regions are: 1 Piemonte, 2 Valdaosta, 3 Lombardia, 4 Trentino-Alto Adige, 5 Veneto, 6 Friuli-Venezia Giulia, 7 Liguria, 8 Emilia-Romagna, 9 Toscana, 10 Umbria, 11 Marche, 12 Lazio, 13 Abruzzo, 14 Molise, 15 Campania, 16 Puglia, 17 Basilicata, 18 Calabria, 19 Sicilia, and 20 Sardegna. The data have been collected from 2011 to 2022. Usually, the twenty Italian regions are divided into

three or five macro-areas. It is well known that cultural participation is unevenly distributed among these areas, reflecting territorial differences in income levels. The following table provides an indication that cultural activities and their demand are undersized in the southern regions and islands, while they are oversized, relative to the population, in the other areas.

Table – Percentage of population and cultural activities across Italian macro-areas.

	Average population on total	Average performances on total	Average paid entries on total
<b>North-West (Regio 1,2,3,7)</b>	26,66	28,34	30,90
<b>North-East (Regio 4,5,6,8)</b>	19,33	20,99	25,48
<b>Centre (Regio 9 to 12)</b>	19,76	26,10	23,68
<b>South (Regio 13 to 18)</b>	23,22	16,67	13,47
<b>Islands (Regio 19,20)</b>	11,03	7,90	6,47

Elaboration on ISTAT and SIAE data. Annual data, 2011-22.

In what follows, we present and analyse more specific variables; in particular, we process data using five indicators: number of performances, paid entries, attendances (paid and free entrance), box office expenditure, and public expenditure (including complementary services). The main source of information is represented by the datasets contained within the Statistical Yearbooks of Entertainment compiled by SIAE (Italian Society of Authors and Publishers). The second source of data is ISTAT and specifically the survey on all-day life style and the BES project.

Through the analysis of these indicators, it is possible to determine the development and variation, over the reference period, of the degree of cultural participation at the national, macro-area, regional, and local levels. For each variable, we analyze the aggregate trend over the considered twelve years, and we highlight the consequences of the pandemic on cultural activities. Moreover, we exploit differences in cultural participation among the Italian regions, and we find relevant gaps between the North and South Italy, which are persistent across many variables. Finally, we compare lowbrow activities, those less sophisticated or more accessible to the general public, such as sport events, with highbrow activities, more intellectual and elitist, such as the attendance at theaters, opera, and classical music concerts. Certainly, the variables described in this Report are not all the variables that can contribute to defining "cultural participation," as argued in various Reports within this Deliverable and in several scientific papers developed by Spoke 8. Here, we are focusing on variables related to "passive" cultural participation (i.e., on the demand side for cultural goods and products). It is nevertheless true that, in the arts and culture sector, supply is closely driven by demand, and supply-related variables are strongly correlated with the demand variables on which we are focusing here.

**Cultural Variables** - The cultural variables of interest in the present Report are:

Attendance in person to cultural events:

- Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno cinema (*People aged 6+ who attended at least one show over the last 12 months, cinema*),
- Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno teatro (*People aged 6+ who attended at least one show over the last 12 months, theater*),
- Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno musei, mostre (*People aged 6+ who attended at least once museum over the last 12 months*),
- Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno concerti di musica classica, opera (*People aged 6+ who attended at least one show over the last 12 months, classic music or opera*),
- Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno altri concerti di musica (*People aged 6+ who attended at least one show over the last 12 months, music other*)
- Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno spettacoli sportivi (*People aged 6+ who attended at least one show over the last 12 months, sport shows*),
- Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno siti archeologici e monumenti (*People aged 6+ who attended at least once archeological sites or monuments over the last 12 months*),

#### Aggregate measures of cultural participation

- Partecipazione culturale fuori casa M (*Cultural participation outside the home, male*)
- Partecipazione culturale fuori casa F (*Cultural participation outside the home, female*),
- Partecipazione culturale fuori casa (*Cultural participation outside the home, total*)

#### Number of entries to live show

- Cinema: numero di ingressi (*Cinema entries*),
- Teatro: numero di ingressi (*Theater drama, entries*),
- Lirica: numero di ingressi (*Opera, entries*),
- Concerti musica classica: numero di ingressi (*Classica music, entries*),
- Concerti musica leggera: numero di ingressi (*Pop music, entries*),
- Attività sportiva: numero di ingressi (*Sport shows, entries*).

#### Reading

- Lettura di libri e quotidiani M (*Reading of books and newspapers, male*),

- Lettura di libri e quotidiani F (*Reading of books and newspapers, female*),
- Lettura di libri e quotidiani (*Reading of books and newspapers, total*),

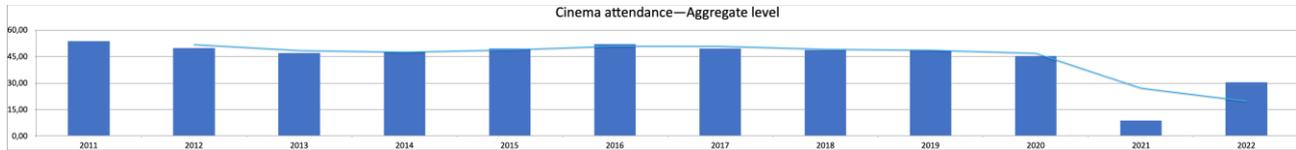
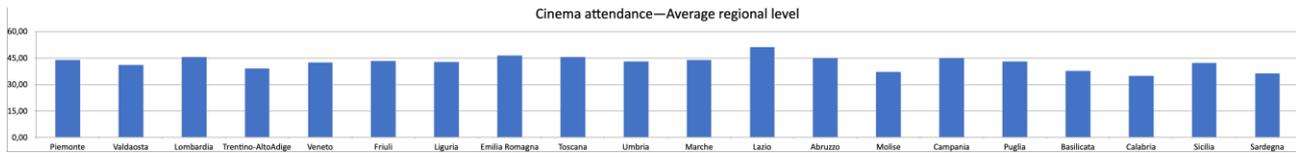
All the variables are expressed as percentage of the population, whereas the last six variables, that report the number of entries to cinemas, theaters, opera, classical music concerts, light music concerts, and sports activities are simply the sum of the entries. We now proceed to analyse the variables of interest.

### 3. ATTENDANCE IN-PRESENCE TO CULTURAL EVENTS

#### 3.1 The cinema attendance

The variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno cinema” collects, for each year, and for each region, the percentage of population that is at least six years old, and has attended at least one performance at the cinema in the past year. The maximum value of the variable is 61.80, which was reached in Lazio in 2011. The minimum value is 4.40, that was reached in Calabria in 2021. The region with the highest average value, 51.32, is Lazio, whereas Calabria is the region that registers the lowest average value, equal to 35.01. In each region a common trend can be inferred: the value of this variable is constant, with some oscillations, but it always exhibits a significative collapse in 2020 and especially 2021, the years of pandemic. In the year 2022, the variable displays a strong increase (a recovery from the COVID shock) in every region. However, as it will be clear later, the recovery is only partial, especially as compared with other forms of cultural participation.

	Value	Region	Year
Max	61.80	Lazio	2011
Min	4.40	Calabria	2021
	Value	Region	
Av.ge Max	51.32	Lazio	
Av.ge Min	35.01	Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	53.80	2011	
Agg. Min	9.10	2021	

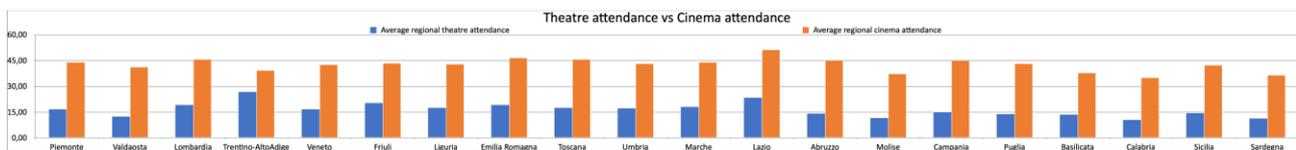
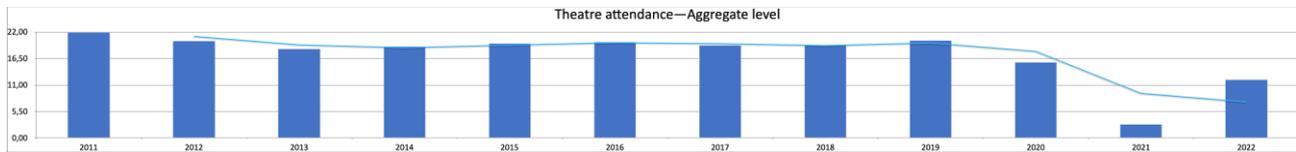
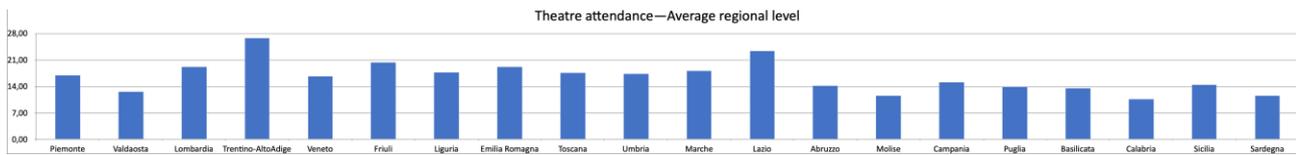


### 3.2 The theatre attendance

The variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno teatro” collects for each year, and for each region, the percentage of population that is at least six years old, and has attended at least one theater performance in the past year. The maximum value of the variable is 33.70, and it was reached in Trentino-Alto Adige in 2011. The minimum value is 1.10, that was reached in Valdaosta in 2021. The region with the highest average value, 26.84, is Trentino-Alto Adige, whereas Calabria is the region that registers the lowest average value, equal to 10.68. In each region a common trend can be inferred: the value of this variable either is constant, with some oscillations, or it slowly decreases, but it always exhibit a significant collapse in 2021, the year of pandemic. In the year 2022, the variable always displays a strong increase.

In each region, and for each year, the value of this variable is lower than the corresponding value of the variable pertaining to cinema. However, the recovery of 2022 (w.r.t. 2021) for theater attendance is larger than for cinema.

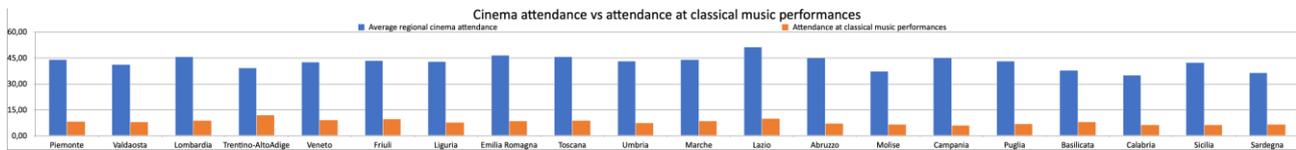
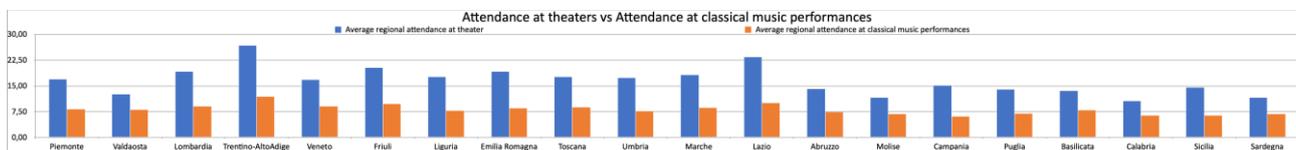
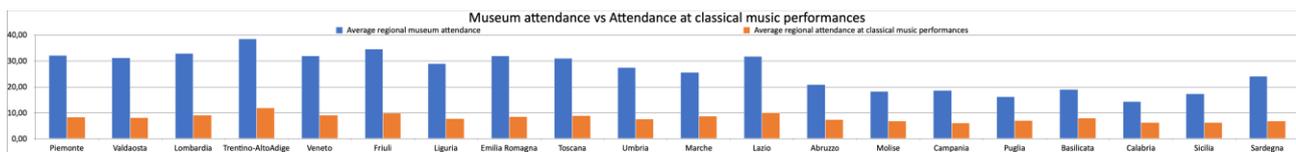
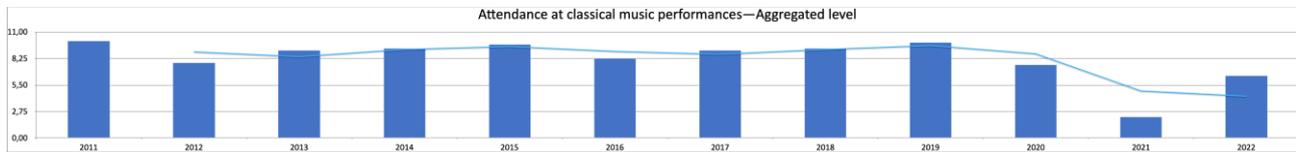
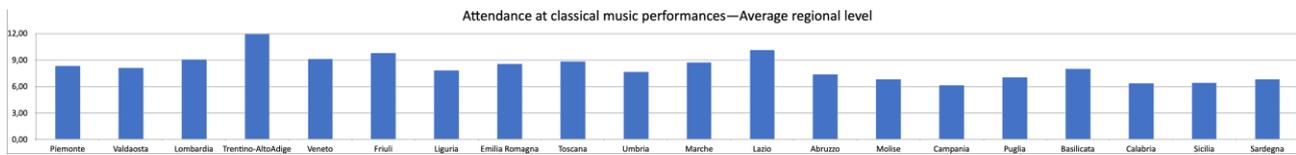
	Value	Region	Year
Max	33.70	Trentino- Alto Adige	2011
Min	1.10	Valdaosta	2021
	Value	Region	
Av.ge Max	26.84	Trentino-Alto Adige	
Av.ge Min	10.68	Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	22.00	2011	
Agg. Min	2.90	2021	



### 3.3 The Attendance at classical music performances

The variable "Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno concerti di musica classica, opera" collects, for each year, and for each region, the percentage of population that is at least six years old, and has attended classical music concerts or opera at least once in the past year. The maximum value of the variable is 16.00, which was reached in Lazio in 2011. The minimum value is 1.40, that was reached in Molise in 2021, the year of the pandemic. The region with the highest average value, 11, 98, is Trentino Alto Adige, whereas Campania registers the lowest average value, equal to 6.16. In each region a common trend can be inferred: the value of this variable is constant, with some oscillations, but it exhibits a significant collapse in every region in 2021, the year of the pandemic. In 2022, the variable displays an increase everywhere. In each region, and in each year, the value of this variable is lower than the corresponding values of other variables (e.g., "Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno musei, mostre", "Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell'ultimo anno cinema"). At the aggregate national level, the maximum, 9.70, was reached in 2019, whereas the minimum, 2.10, was reported in 2021.

7	Value	Region	Year
Max	16.00	Lazio	2011
Min	1.40	Molise	2021
	Value	Region	
Av.ge Max	11.98	Trentino Alto Adige	
Av.ge Min	6.16	Campania	
NATIONAL DATA	Value	Year	
Agg. Max	9.70	2019	
Agg. Min	2.10	2021	

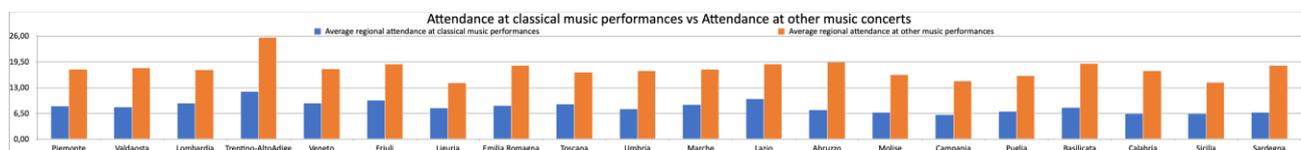
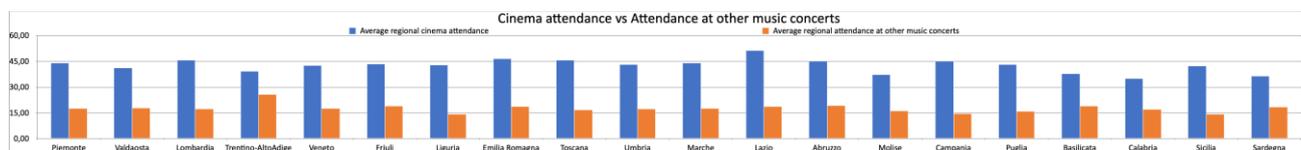
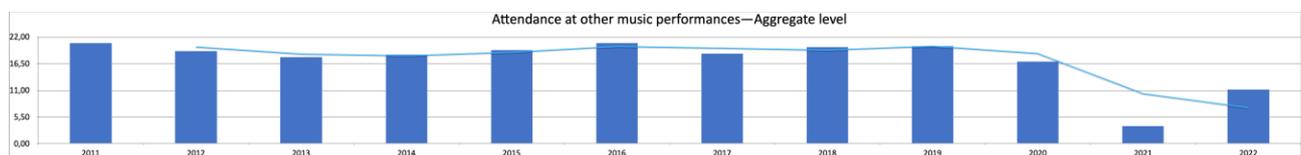
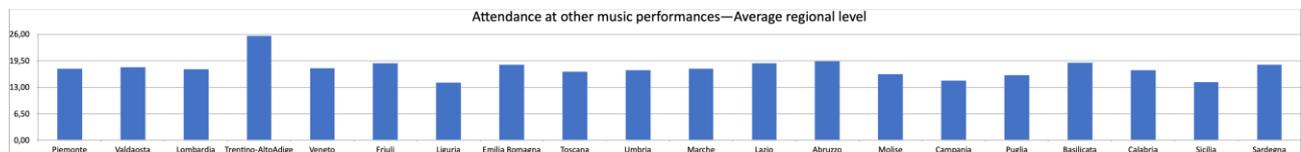


### 3.4 The Attendance at other music concerts

The variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno altri concerti di musica” collects, for each year, and for each region, the percentage of population that is at least six years old, and has attended music concerts. The maximum value of the variable is 30.20, which was reached in Sardegna in 2011. The minimum value is 2.50, that was reached in Molise in 2021, the year of the pandemic. The region with the highest average value, 25.69, is Trentino Alto-Adige, whereas Liguria registers the lowest average value, equal to 14.16. In each region a common trend can be inferred: the value of this variable is constant, with some oscillations, but it exhibits a significant collapse in every region in 2021, the year of the pandemic. In 2022, the variable displays a strong increase everywhere. In each region, and in each year, the value of this variable is higher than the corresponding value of the variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno concerti di musica classica,

opera". At the aggregate national level, the maximum, 20.80, was reached in 2011 and 2016, whereas the minimum, 3.70, was reported in 2021.

	Value	Region	Year
Max	30.20	Sardegna	2011
Min	2.50	Molise	2021
	Value	Region	
Av.ge Max	25.69	Trentino Alto Adige	
Av.ge Min	14.16	Liguria	
NATIONAL DATA	Value	Year	
Agg. Max	20.80	2011, 2016	
Agg. Min	3.70	2021	

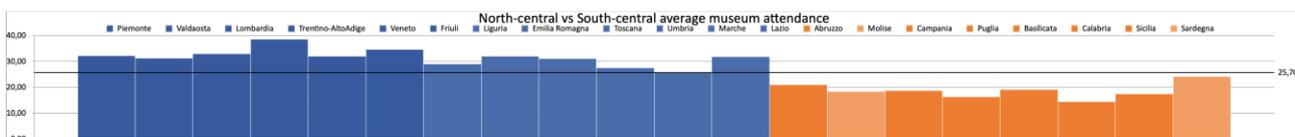
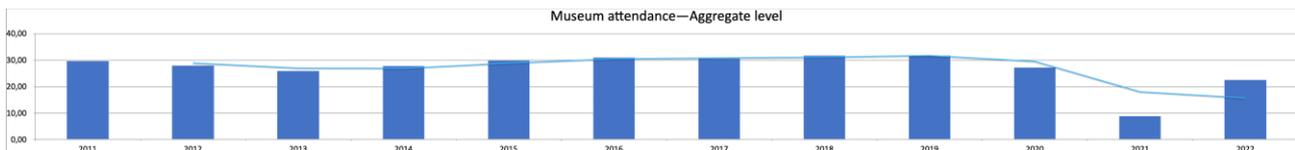
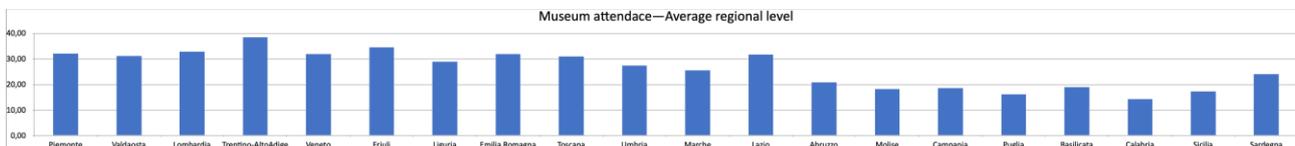


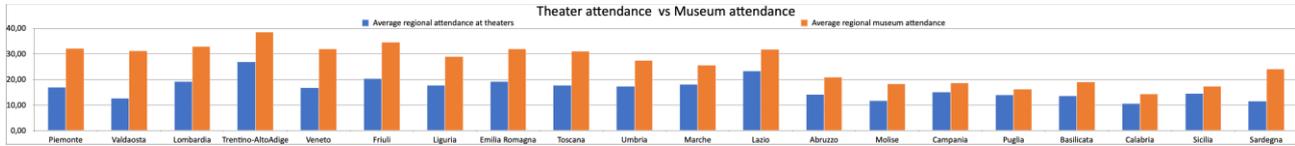
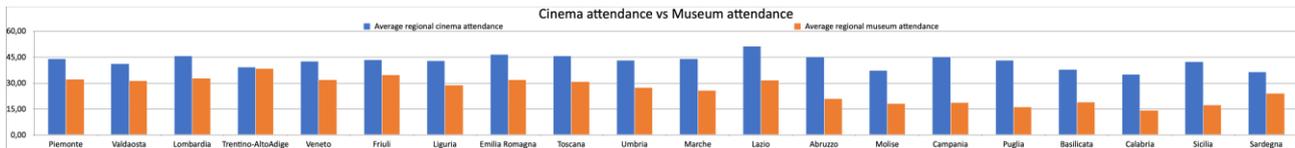
### 3.5 The museum attendance

The variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno musei, mostre” collects, for each year, and for each region, the percentage of population that is at least six years old, and has attended an exhibition or has gone to a museum at least once in the past year. The maximum value of the variable is 45.20, which was reached in Trentino Alto Adige in

2016. The minimum value is 2.70, that was reached in Calabria in 2021, the year of the pandemic. The region with the highest average value, 38.49, is Trentino Alto Adige, whereas Calabria registers the lowest average value, equal to 14.33. In each region a common trend can be inferred: the value of this variable is constant, with some oscillations, but it exhibits a significant collapse in every region in 2021, the year of the pandemic. In the year 2022, the variable displays a strong increase everywhere. The Regions 1 – 12, in the North-center of Italy, bring an average value higher than the regions 13 – 20, in the Center-south of Italy. Interestingly, in each region, the average the value of this variable is higher than the corresponding average value of the variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno teatro”. This dominance shows that the average minimum consumption of museums exhibitions is greater than the average minimum consumption of theatre performances. Again, in each region, the average the value of this variable is lower than the average value of the variable “Lettura di libri e quotidiani”. This evidence shows that the average minimum consumption of museums exhibitions is lower than the average minimum consumption of books and newspapers. At the aggregate national level, the maximum, 29.30, was reached in 2011 and 2019, whereas the minimum, 6.00, was reported in 2021.

	Value	Region	Year
Max	45.20	Trentino-Alto Adige	2016
Min	2.70	Calabria	2021
	Value	Region	
Av.ge Max	38.49	Trentino Alto-Adige	
Av.ge Min	14.33	Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	29.30	2011, 2019	
Agg. Min	6.00	2021	

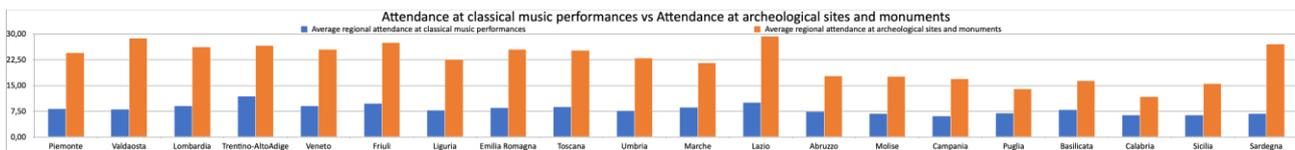
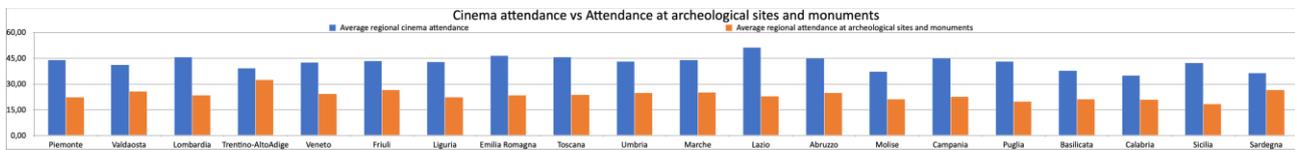
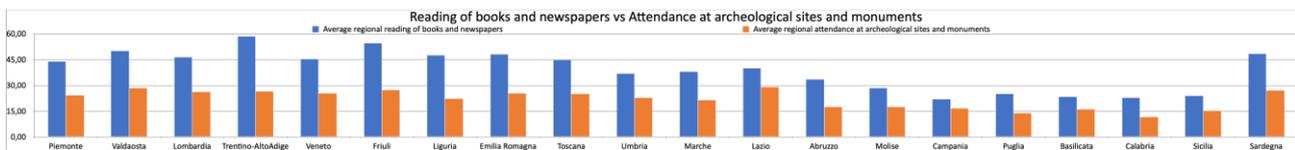
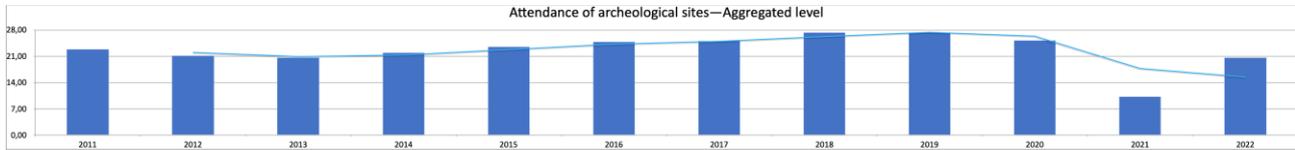
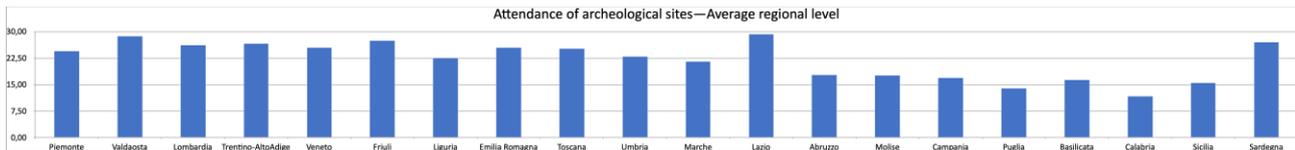




### 3.6 The attendance to archeological sites

The variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno siti archeologici e monumenti” collects, for each year, and for each region, the percentage of population that is at least six years old and has visited archaeological sites and monuments. The maximum value of the variable is 34.70, which was reached in Lazio in 2017. The minimum value is 4.70, that was reached in Basilicata in 2021, the year of the pandemic. The region with the highest average value, 29.29, is Lazio, whereas Calabria registers the lowest average value, equal to 11.74. In each region a common trend can be inferred: the value of this variable increases, with some oscillations, up to 2020, but it exhibits a significant collapse in every region in 2021, the year of the pandemic. In 2022, the variable displays a strong increase everywhere. In each region, and in each year, the value of this variable is higher than the corresponding value of the variables “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno concerti musica classica, opera”. Again, in each region, and in each year, the value of this variable is lower than the corresponding value of the variable “Lettura libri e quotidiani”. This evidence shows also that the minimum attendance at archaeological sites and monuments is lower than the minimum consumption of books and newspapers. At the aggregate national level, the maximum, 27.40, was reached in 2019, whereas the minimum, 10.30, was reported in 2021.

	Value	Region	Year
Max	34.70	Lazio	2017
Min	4.70	Basilicata	2021
	Value	Region	
Av.ge Max	29.40	Lazio	
Av.ge Min	11.74	Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	27.40	2019	
Agg. Min	10.30	2021	

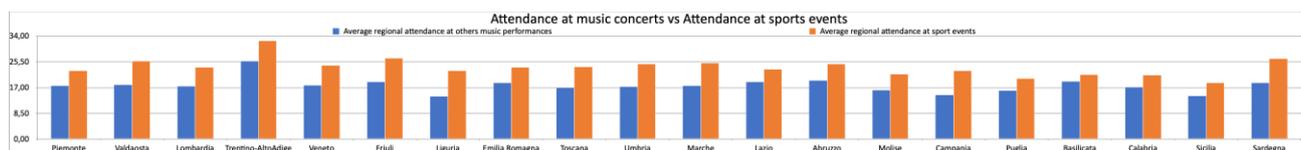
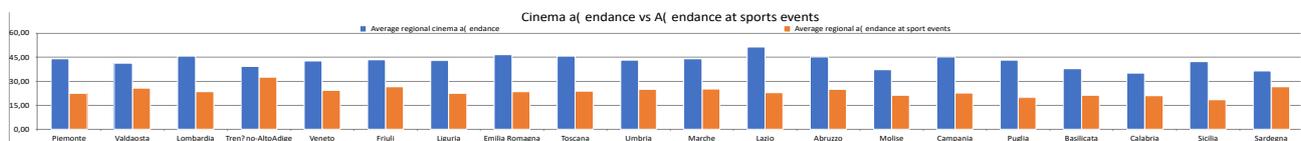
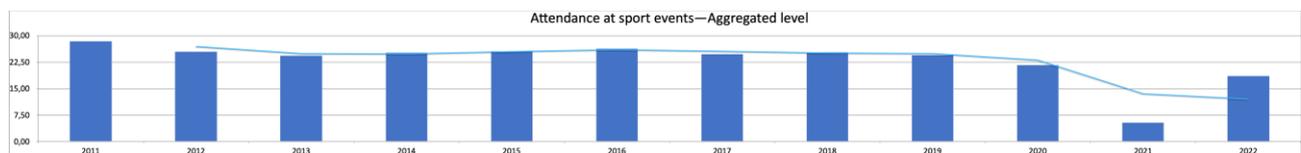
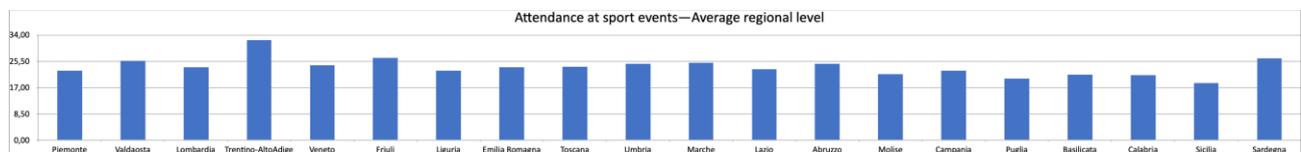


### 3.7 The Attendance at sport events

The variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno spettacoli sportivi” collects, for each year, and for each region, the percentage of population that is at least six years old, and has attended sport events. The maximum value of the variable is 39.20, which was reached in Trentino Alto Adige in 2016. The minimum value is 3.50, that was reached in Liguria in 2021, the year of the pandemic. The region with the highest average value, 32.40, is Trentino Alto Adige, whereas Sicily registers the lowest average value, equal to 18.52. In each region a common trend can be inferred: the value of this variable is pretty constant over time, with some oscillations, but it exhibits a significative collapse in every region in 2021, the year of the pandemic. In 2022, the variable displays a strong increase everywhere. In each region, the average value of this variable is higher than the corresponding value of the variable "Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno concerti di musica”. Again, in each region, the average value of this variable is lower than the corresponding average value of the variable “Persone di 6 anni e più per spettacoli a cui hanno assistito almeno una volta nell’ultimo anno cinema”. This evidence implies that the average minimum attendance at sport events is lower than the average minimum consumption of movie shows. Finally, in each region, and in each year,

the value of this variable is lower than the corresponding value of the variable "Lettura libri e quotidiani". At the aggregate national level, the maximum, 28.40, was reached in 2011, whereas the minimum, 5.50, was reported in 2021.

	Value	Region	Year
Max	39.20	Trentino Alto Adige	2016
Min	3.50	Liguria	2021
	Value	Region	
Av.ge Max	32.40	Trentino Alto Adige	
Av.ge Min	18.52	Sicilia	
NATIONAL DATA	Value	Year	
Agg. Max	28.40	2011	
Agg. Min	5.50	2021	



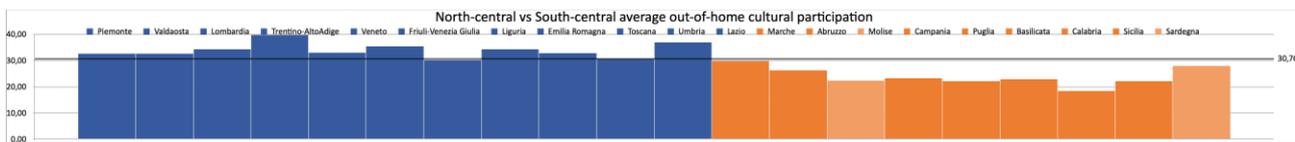
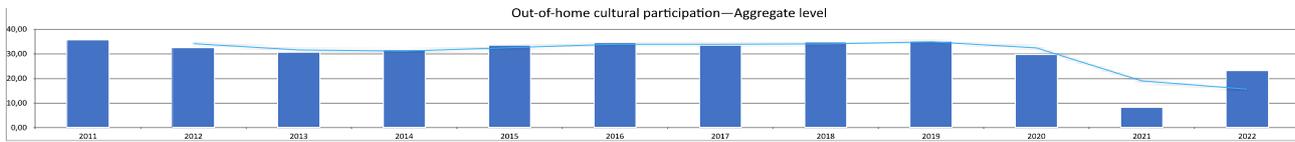
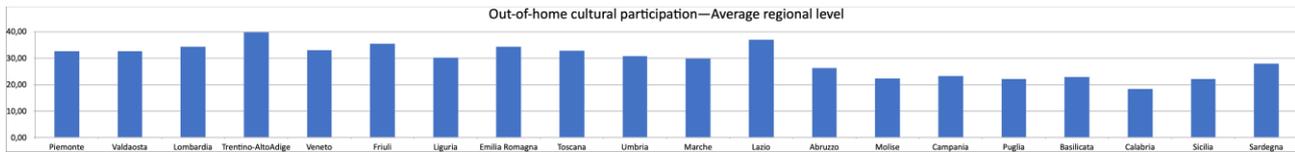
## 4. AGGREGATE MEASURE OF CULTURAL PARTICIPATION OUTSIDE THE HOME

In terms of cultural participation, a composite indicator is proposed and used by ISTAT, to determine whether an individual can be considered as "active" in out-of-home cultural activities. This indicator ("Partecipazione culturale fuori casa") assesses whether, and how often, each person engages in certain activities. Specifically, it measures the percentage of the population (aged 6 and older) who report having participated in at least two of the following activities over the past year: (1) going to the cinema four or more times; (2) attending at least one theater performance; (3) visiting a museum at least once; (4) visiting monuments at least once; (5) attending at least one opera or classical music concert; (6) attending at least one concert of other music genres. This synthetic indicator is not without potential limitations and could be refined or critiqued in various ways (as recognised by ISTAT itself). Nevertheless, it provides an initial, useful overview of trends in out-of-home cultural engagement.

### 4.1 Out-of-home cultural participation

The variable "Partecipazione culturale fuori casa" collects, for each region, and for each year, the percentage of population that has been involved in out-of-home cultural participation. The maximum value of this variable is 46.60, which was reached in Trentino-Alto Adige in 2016. The minimum value is 3.60, that was reached in Calabria in 2021, during the pandemic. The region with the highest average value, 39.85, is Trentino-Alto Adige, whereas Calabria is the region that registers the lowest average value, equal to 18.58. In each region a common trend can be detected: the highest value is observed in the first year of the period considered, then it oscillates up to a serious decrease in 2021, the year of pandemic. At the aggregate national level, the highest value, 35.80 was reached in 2011, whereas the lowest value, 8.30, was reported in 2021. It is worth noting that the average out-of-home cultural participation of any of the regions 1 – 10, in the North-Central of Italy, and the region 12, Lazio, is greater than the average out-of-home cultural participation of each of the regions 13 – 19, in the South-center of Italy, and the region 11, Marche.

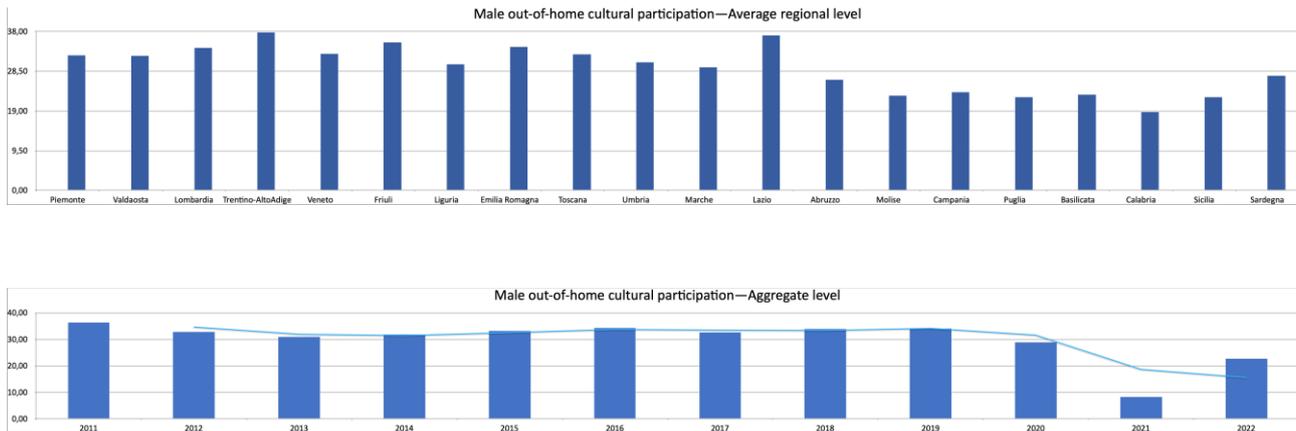
	Value	Region	Year
Max	46.60	Trentino- Alto Adige	2016
Min	3.60	Calabria	2021
	Value	Region	
Av.ge Max	39.85	Trentino-Alto Adige	
Av.ge Min	18.58	Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	35.80	2011	
Agg. Min	8.30	2021	



## 4.2 Male out-of-home cultural participation

It can be interesting to go deeper, in the case of the synthetic variable related to participation, and to deal with participation according to gender. “Partecipazione culturale fuori casa M” collects, for each region, and for each year, the percentage of male population that was involved in out-of-home cultural participation. The maximum value of this variable is 46.50, which was reached in Lazio in 2011. The minimum value is 4.00, that was reached in Calabria in 2021, during the pandemic. The region with the highest average value, 37.88, is Trentino-Alto Adige, whereas Calabria is the region that brings the lowest average value, equal to 18.84. In each region a common trend can be detected: the highest value of this variable is observed in the first year of the period considered, then it oscillates up to a serious decrease in 2021, the year of pandemic. At the aggregate national level, the highest value, 36.40 has been reached in 2011, whereas the lowest value, 8.50, has been reported in 2021.

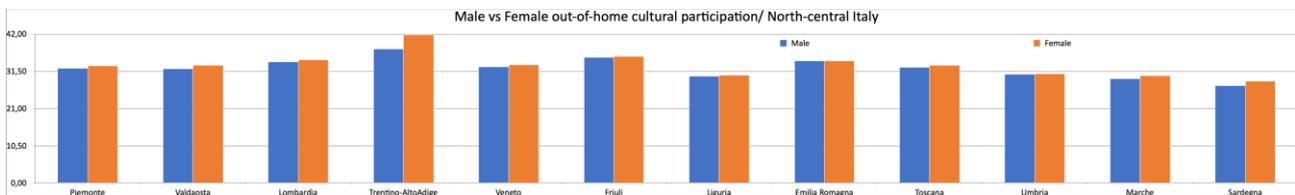
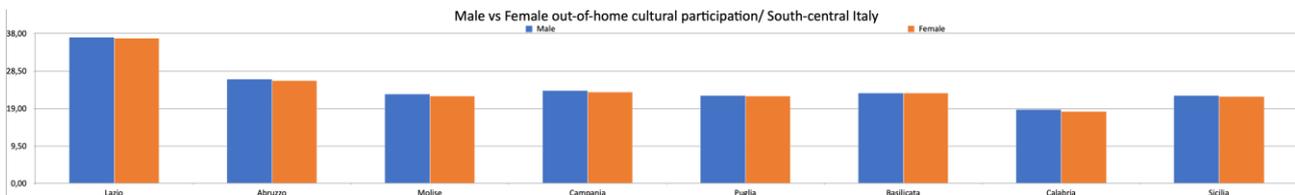
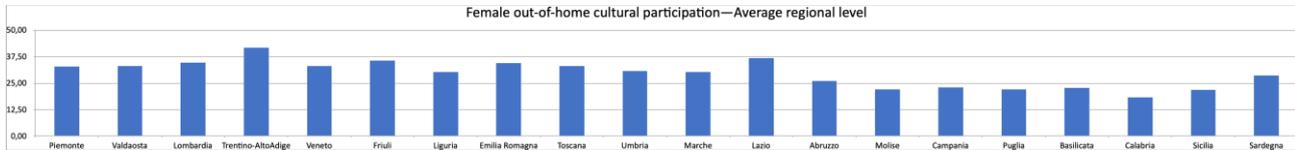
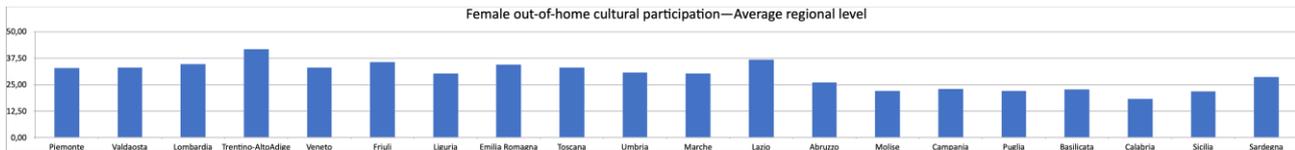
	Value	Region	Year
Max	46.50	Lazio	2011
Min	4.00	Calabria	2021
	Value	Region	
Av.ge Max	37.88	Trentino-Alto Adige	
Av.ge Min	18.84	Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	36.40	2011	
Agg. Min	8.50	2021	



### 4.3 Female out-of-home cultural participation

“Partecipazione culturale fuori casa F” collects, for each region, and for each year, the percentage of female population that has been involved in out-of-home cultural participation. The maximum value of this variable is 48.30, which was reached in Trentino Alto Adige in 2015. The minimum value is 2.60, that was reached in Basilicata in 2021, during the pandemic. The region with the highest average value, 41.73, is Trentino-Alto Adige, whereas Calabria is the region that brings the lowest average value, equal to 18.36. In each region a common trend can be detected: the highest value of this variable is observed in the first year of the period considered, then it oscillates up to a serious decrease in 2021, the year of pandemic. Moreover, for the regions 1 – 11 (the North-center Italian regions), and region 20 (Sardinia) the average female outdoor cultural participation is higher than the average male outdoor cultural participation, whereas the converse holds for regions 12 – 19, the South-center Italian regions. At the aggregate national level, the highest value, 35.80 has been reached in 2019, whereas the lowest value, 8.10, has been reported in 2021.

	Value	Region	Year
Max	48.30	Trentino-Alto Adige	2015
Min	2.60	Basilicata	2021
	Value	Region	
Av.ge Max	41.73	Trentino-Alto Adige	
Av.ge Min	18.36	Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	35.80	2019	
Agg. Min	8.10	2021	

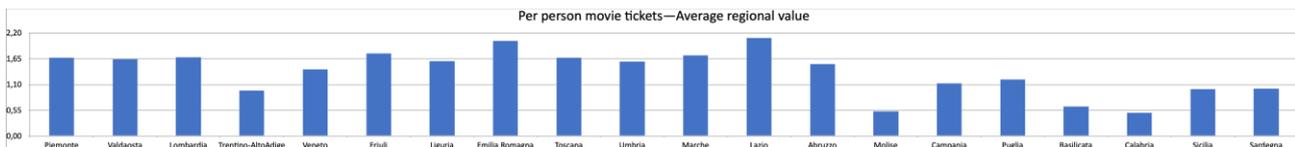
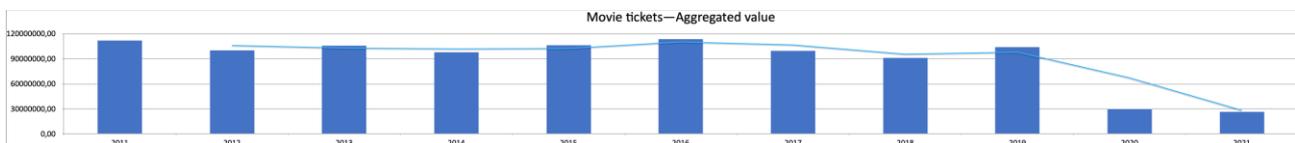


## 5. DATA ON ENTRIES (ABSOLUTE NUMBERS OF TICKETS RELATIVE TO POPULATION)

### 5.1 Movie tickets

“Cinema numero di ingressi” collects, for each year, and for each region, the number of movie tickets that have been sold. We also normalized the variable by considering the population of each region in each year. The maximum value of the variable measuring the absolute number of tickets is 20,662,936, which was reached in Lombardia in 2016. The maximum normalized value is 2.51, which was reached in Emilia Romagna in 2016. The minimum value is 48,626, that was reached in Molise in 2021, the year of the pandemic. The minimum normalized value is 0.17, that was reached in Calabria and Molise in 2021. The region with the highest average value, 16,682,858, is Lombardia, whereas Molise registers the lowest average value. The region with the highest average normalized value, 2.10, is Lazio, whereas Calabria registers the lowest average normalized value, equal to 0.51. In each region a common trend can be inferred: the value of this variable is constant, with some oscillations, up to 2020, but it exhibits a significant collapse in every region in 2021, the year of the pandemic. At the aggregate national level, the maximum, 112119910, was reached in 2011, whereas the minimum, 26.732.626, was reported in 2021.

	Normalized Value	Region	Year
Max	2.51	Emilia Romagna	2016
Min	0.17	Calabria, Molise	2021
	Value	Region	
Av.ge Max	16682858	Lombardia	
Av.ge Min	164673	Molise	
	Normalized Value	Region	
Av.ge Max	2.10	Lazio	
Av.ge Min	0.51	Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	112119910	2011	
Agg. Min	26732626	2021	

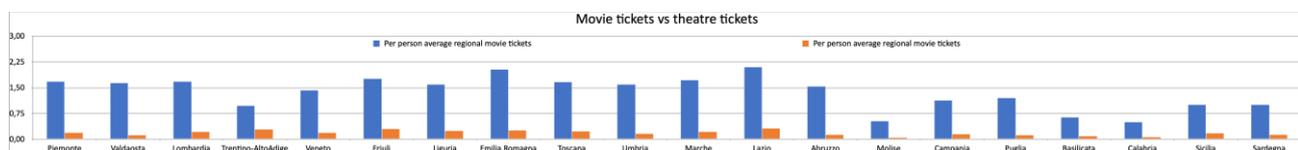
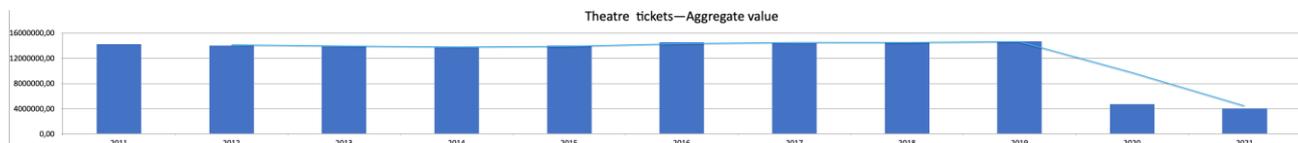
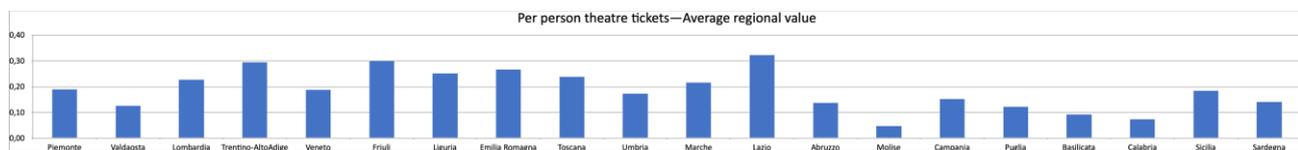


## 5.2 Theatre tickets

The variable “Teatro: numero di ingressi” collects, for each year and for each region, the number of theater admission tickets that have been sold. We normalized the variable, by considering the population of each region in each year. The maximum value of the variable is 2,729,337, which was reached in Lombardia in 2016. The maximum normalized value is 0.42, which was reached in Lazio in 2011. The minimum value is 4.615, that was reached in Molise in 2021, the year of the pandemic. The minimum normalized value is 0.01, that was reached in in 2020 in Molise and Basilicata. The region with the highest average value, 2,253,188, is Lombardia, whereas Molise registers the lowest average value, equal to 15,294. The region with the highest average normalized value, 0.32, is Lazio, whereas Molise registers the lowest average normalized value, equal to 0.05. In each region a common trend can be inferred: the value of this variable slowly increases, with some oscillations, up to 2019, but it exhibits a significative collapse in every region in 2020 and 2021, the years of the pandemic. In each year, and in each region, the value of the variable is clearly (and not surprisingly) lower than the corresponding value of the variable “Cinema: numero di ingressi”: this evidence shows that consumption of movie shows is higher than the consumption of theater performances.

At the aggregate national level, the maximum, 14.717.309, was reached in 2019, whereas the minimum, 4.138.552, was reported in 2021.

	Value	Region	Year
Max	2729337	Lombardia	2016
Min	4615	Molise	2021
	Normalized Value	Region	Year
Max	0.42	Lazio	2011
Min	0.01	Basilicata, Molise	2020
	Normalized Value	Region	
Av.ge Max	0.32	Lazio	
Av.ge Min	0.05	Molise	
NATIONAL DATA	Value	Year	
Agg. Max	14717309	2019	
Agg. Min	4138552	2021	

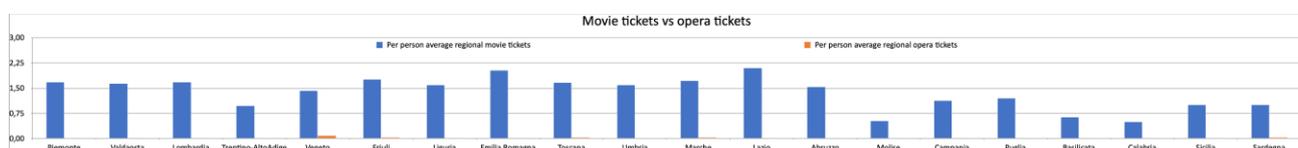
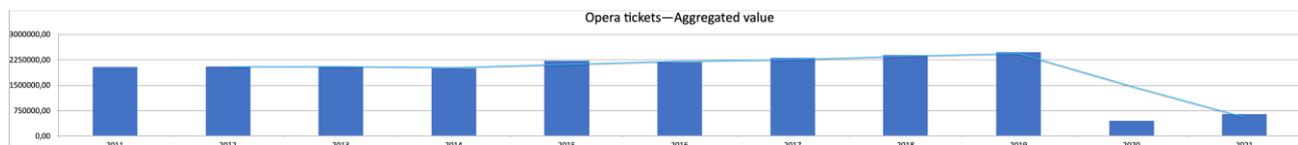
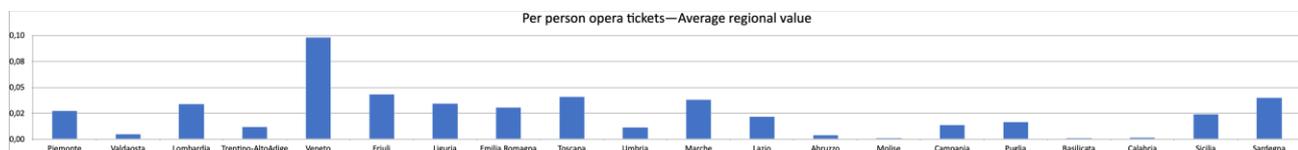


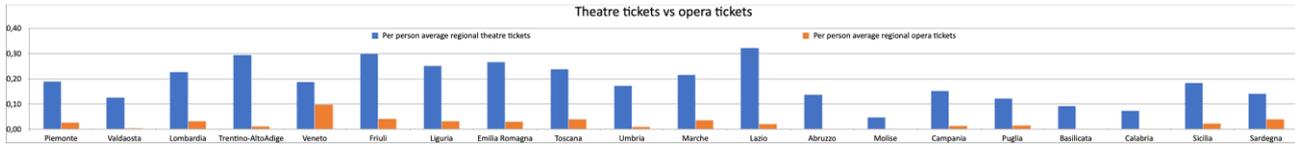
### 5.3 Opera tickets

The variable “Lirica: numero di ingressi” collects for each year, and for each region, the number of tickets for opera concert that have been sold. We also normalized the variable by considering the population of each region in each year. The maximum value of the variable is 616.507, which was reached in Veneto in 2011. The maximum normalized value of the variable is 0.13, which was reached in Veneto in 2011 and 2013. The minimum value and minimum normalized value is 0 (zero, no entries), that has been reached in Molise from 2011 to 2014, and in the years 2020-2021, during

the pandemic. The region with the highest average value, 480,774, is Veneto, whereas Molise registers the lowest average value, equal to about 377. The region with the highest average normalized value, 0.10, is Veneto, whereas Molise brings the lowest average normalized value, equal to 0.001. In each region a common trend can be inferred: the value of this variable increases, with some oscillations, up to 2019, and it exhibits the usual and significant collapse in every region in 2020 the year of the pandemic. In 2021 the variable often exhibits a rise. In each year, and in each region, the value of the variable is lower than the corresponding value of the variables “Cinema: numero di ingressi”, and “Teatro: numero di ingressi”. At the aggregate national level, the maximum, 14,602,790, was reached in 2016, whereas the minimum, 4,138,552, was reported in 2021.

	Value	Region	Year
Max	616507	Veneto	2011
Min	0	Molise	2011-2014, 2020-2021
	Normalized Value	Region	Year
Max	0.13	Veneto	2011, 2013
Min	0	Molise	2011-2014, 2020-2021
	Value	Region	
Av.ge Max	480774.36	Veneto	
Av.ge Min	376.82	Molise	
	Normalized Value	Region	
Av.ge Max	0.10	Veneto	
Av.ge Min	0.001	Molise	
NATIONAL DATA	Value	Year	
Agg. Max	14602790	2016	
Agg. Min	4138552	2021	

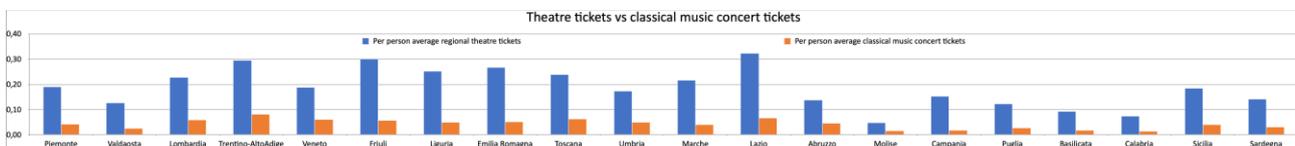
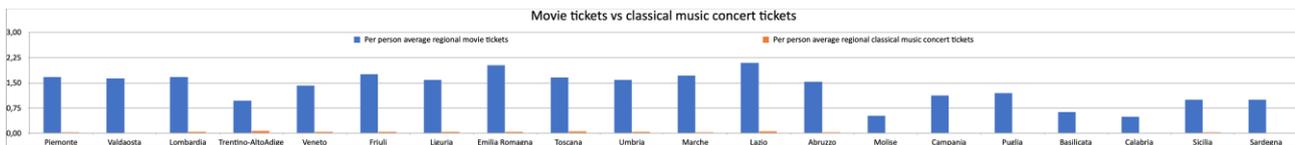
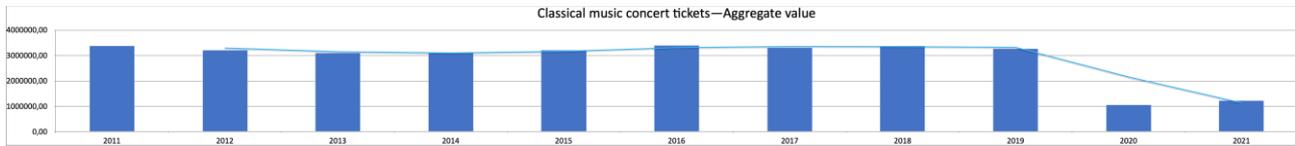
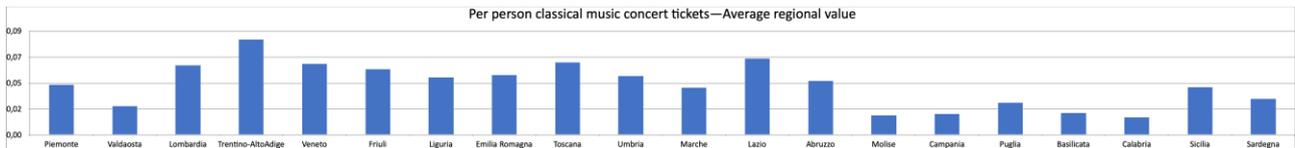




## 5.4 The classical music concert tickets

The variable “Concerti musica classica: numero di ingressi” collects for each year and for each region, the number of classical music concert tickets that have been sold. We also normalized the variable by considering the population of each region in each year. The maximum value of the variable was reached in Lombardia in 2011. The maximum normalized value is 0.30, which was reached in Lombardia in 2019. The minimum value is 454, that was reached in Valdaosta in 2021, during the pandemic (it also corresponds to minimum normalized value, 0.003, Valdaosta in 2021, during the pandemic). The region with the highest average value, 601,329.9, is Lombardia, whereas in Valdaosta the lowest average value, equal to 3201.3, is reported. The region with the highest average normalized value, 0.08, is Trentino Alto Adige, whereas the lowest average normalized value, equal to 0.02, was reported in Molise, Campania, Basilicata, and Calabria. In each region a common trend can be inferred: the value of this variable increases, with some oscillations, up to 2019, but it exhibits a significative collapse in every region in 2020, the year of the pandemic. In 2021 the variable often exhibits a rise. In each region, the average value of the variable is lower than the respective average value of the variable “Teatro: numero di ingressi”. At the aggregate national level, the maximum, 3403190, was reached in 2016, whereas the minimum, 1058646, was reported in 2020.

	Value	Region	Year
Max	774072	Lombardia	2011
Min	454	Valdaosta	2021
	Normalized Value	Region	Year
Max	0.30	Lombardia	2019
Min	0.03	Valdaosta	2021
	Value	Region	
Av.ge Max	601329.91	Lombardia	
Av.ge Min	3201.27	Valdaosta	
	Normalized Value	Region	
Av.ge Max	0.08	Trentino Alto Adige	
Av.ge Min	0.02	Molise, Campania, Basilicata, Calabria	
NATIONAL DATA	Value	Year	
Agg. Max	3403190	2016	
Agg. Min	1058646	2020	

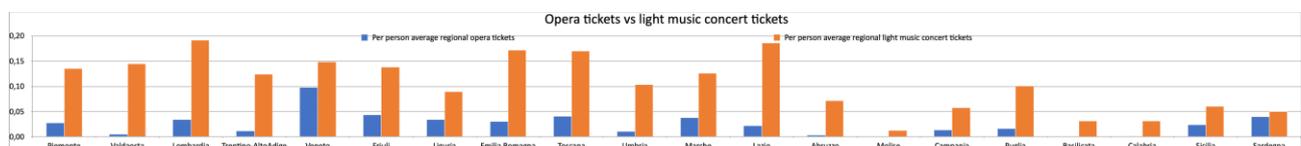
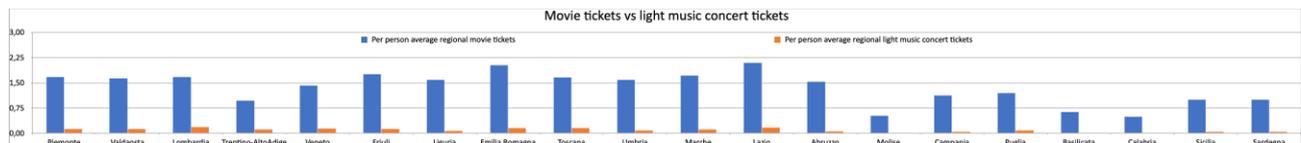
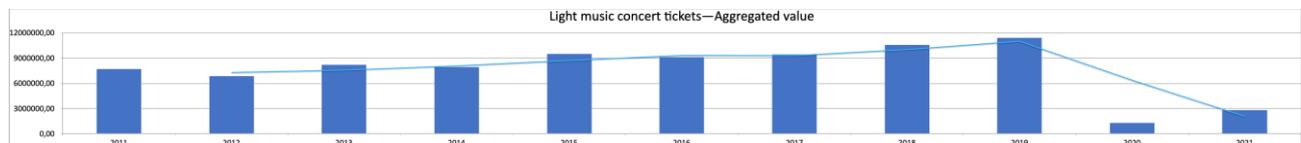
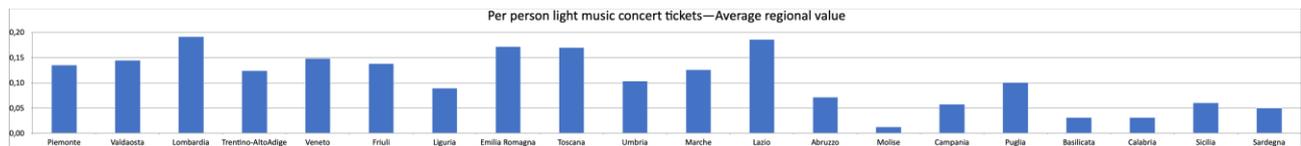


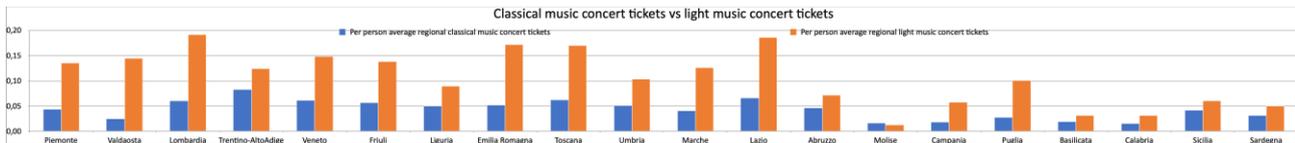
## 5.5 The pop music concert tickets

The variable “Concerti musica leggera: numero di ingressi” collects for each year, and for each region, the number of pop music concert tickets that have been sold. We also normalized the variable by considering the population of each region in each year. The maximum value of the variable is 6.615.207, which was reached in Lombardia in 2019. The maximum normalized value is 0.30, which was reached in Lombardia in 2019. The minimum value is 714, that was reached in Molise in 2020, during the pandemic. The minimum normalized value is 0.002, that was reached in Molise in 2020, during the pandemic. The region with the highest average value, 1,907,700, is Lombardia, whereas in Molise the lowest average value, equal to 3994.82, is reported. The regions with the highest average normalized value, 0.19, are Lombardia and Lazio, whereas in Molise the lowest average normalized value, equal to 0.01, is reported. In each region a common trend can be inferred: the value of this variable increases, with some oscillations, up to 2019, but it exhibits a significant collapse in every region in 2020, the years of the pandemic. In 2021 the variable often exhibits a rise. In each region, the average value of the variable is higher than the corresponding average value of the variables “Concerti di musica classica: numero di ingressi”, and Lirica: numero di ingressi”. This evidence shows that the average consumption of pop music concerts is higher than the average attendance at classical music and opera concerts. In each year, and in each region, the value of the variable is lower than the corresponding value of the variable “Cinema: numero di ingressi”: this shows that the consumption of movie shows is higher than that of light music

concerts. At the aggregate national level, the maximum, 11,440,256, was reached in 2019, whereas the minimum, 1,358,696, was reported in 2020.

	Value	Region	Year
Max	6615207	Lombardia	2019
Min	714	Molise	2020
	Normalized Value	Region	Year
Max	0.30	Lombardia	2019
Min	0.002	Molise	2020
	Value	Region	
Av.ge Max	1907700.09	Lombardia	
Av.ge Min	3994.82	Molise	
	Normalized Value	Region	
Av.ge Max	0.19	Lombardia, Lazio	
Av.ge Min	0.01	Molise	
	Value	Year	
Agg. Max	11440256	2019	
Agg. Min	1358696	2020	

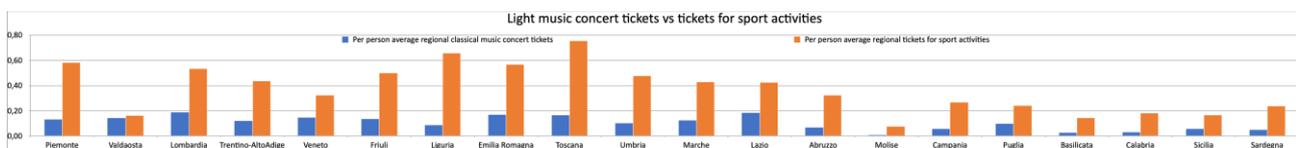
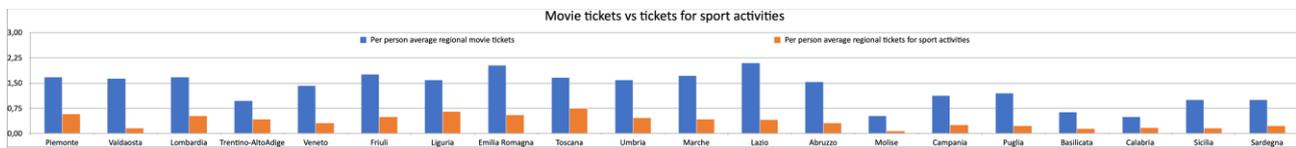
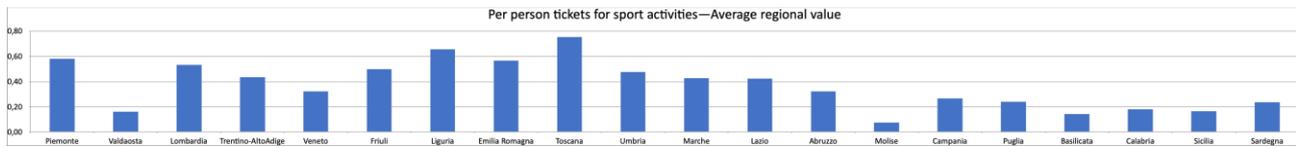




## 5.6 The tickets for sport events

The variable “Attività sportive: numero di ingressi” collects for each year, and for each region, the number of tickets for sport events that have been sold. We also normalized the variable by considering the population of each region in each year. The maximum value of the variable in absolute terms is 6,615,207, which was reached in Lombardia in 2019. The maximum normalized value is 0.95, which was reached in Toscana in 2015. The minimum value is 3965, that was reached in Valdaosta in 2020, during the pandemic. The minimum normalized value is 0.03, that was reached in Valdaosta and Sicilia respectively in 2020 and 2021. The region with the highest average value, 5.289.648,73, is Lombardia, whereas in Valdaosta the lowest average value, equal to 21.083,27, is reported. The region with the highest average normalized value, 0.76, is Toscana, whereas in Molise the lowest average normalized value, equal to 0.08, is reported. In each region a common trend can be inferred: the value of this variable increases, with some oscillations, up to 2019, but it exhibits a significant collapse in every region in 2020, the year of the pandemic. In 2021 the variable often exhibits a rise. In each year, and in each region, the value of the variable is higher than the corresponding value of the variables “Concerti musica leggera: numero di ingressi”: this evidence shows that the attendance at sport events is higher than the attendance at pop music concerts (and, clearly, classical and opera music concerts). However, in each region, the average value of the variable is lower than the corresponding average value of the variable “Cinema: numero di ingressi”. This evidence shows that the average consumption of movie shows is higher than that of sport events. At the aggregate national level, the maximum, 30.800.678, was reached in 2019, whereas the minimum, 7.061.203, was reported in 2020.

	Value	Region	Year
Max	6615207.00	Lombardia	2019
Min	3965	Valdaosta	2020
	Value	Region	
Av.ge Max	5289648.73	Lombardia	
Av.ge Min	21083.27	Valdaosta	
	Normalized Value	Region	
Av.ge Max	0.76	Toscana	
Av.ge Min	0.08	Molise	
	Value	Year	
Agg. Max	30800678	2019	
Agg. Min	7061203	2020	

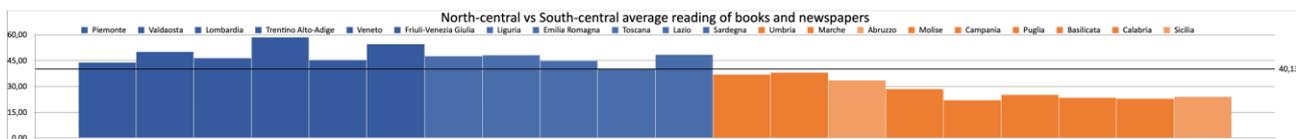
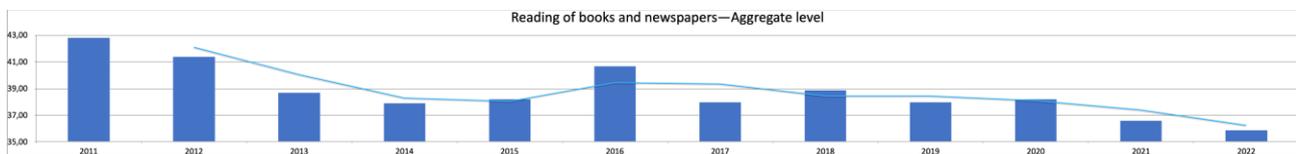
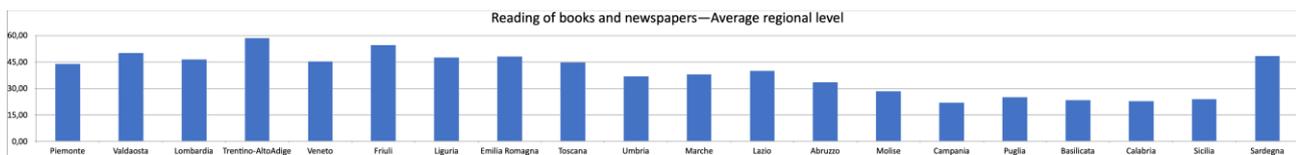


## 6. READING

### 6.1 The Reading of books and newspapers

The variable “Lettura di libri e quotidiani” collects, for each year, and for each region, the percentage of the population that reads books and newspapers. The maximum value of the variable is 63.20, which was reached in Trentino-Alto Adige in 2011. The minimum value is 20.10, that was reached in Calabria in 2020. The region with the highest average value, 58.59, is Trentino-Alto Adige, whereas Campania is the region that registers the lowest average value, equal to 22.08. In each region a common trend can be inferred: the highest value of this variable is often registered in the first year of the period considered, then it slowly decreases up to 2022. However, there is also no evidence of an effect of the pandemic on the analyzed variable. Moreover, in the Northern Italian regions, and in the region 20, Sardinia, the average percentage of population that consumes books and newspapers is higher than that measured for other regions (notice the low level for the Umbria region, in Central Italy). At the aggregate national level, the maximum, 42.80 was reached in 2011, whereas the minimum, 37.10, was reported in 2022.

	Value	Region	Year
Max	63.20	Trentino-Alto Adige	2011
Min	20.10	Calabria	2020
	Value	Region	
Av.ge Max	58.59	Trentino-Alto Adige	
Av.ge Min	22.08	Campania	
	Value	Year	
Agg. Max	42.80	2011	
Agg. Min	37.10	2022	

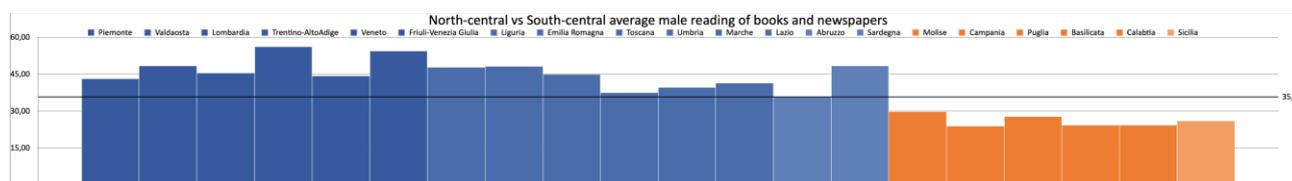
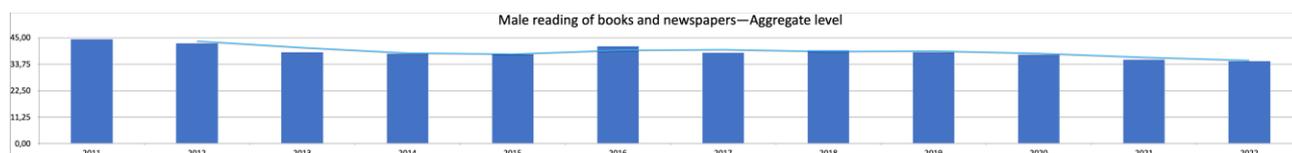
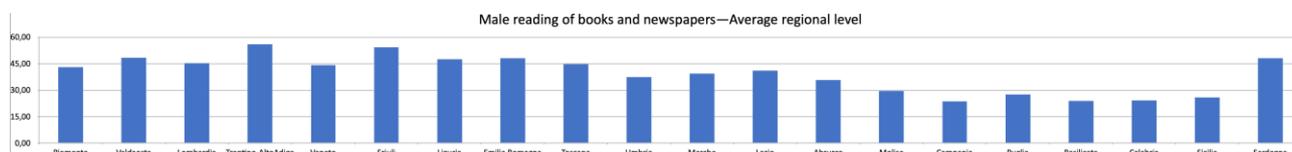


## 5.2 The reading of books and newspapers in the male population

Also in the case of reading, we provide the data for gender. The variable “Lettura di Libri e quotidiani M” collects, for each year, and for each region, the percentage of the male population that reads books and newspapers. The maximum value of this variable is 60.70, which was reached in Trentino-Alto Adige in 2011. The minimum value is 21.30, that was reached in Sicilia in 2022. The region with the highest average value, 56.20, is Trentino-Alto Adige, whereas Campania is the region that registers the lowest average value, equal to 23.89. In each region a common trend can be detected: the highest value of the variable is observed in the first year of the period considered, then it slowly decreases up to 2022. It is worth noting that the pandemic, as expected, did not negatively affect the male percentage of population that reads books and newspaper. However, there is also no evidence of a positive effect of the pandemic on the analyzed variable. Moreover, in the regions 1

– 13, i.e. the North-center Italian regions, and in the region 20, Sardinia, the average percentage of male population that consumes books and newspapers is higher than that registered in the regions 14–19, in the South-center Italian regions. At the aggregate national level, the highest value, 44.40 has been reached in 2011, whereas the lowest value, 35.20, has been reported in 2022.

	Value	Region	Year
Max	60.70	Trentino-Alto Adige	2011
Min	21.30	Sicilia	2022
	Value	Region	
Av.ge Max	56.20	Trentino-Alto Adige	
Av.ge Min	23.89	Campania	
	Value	Year	
Agg. Max	44.40	2011	
Agg. Min	35.20	2022	

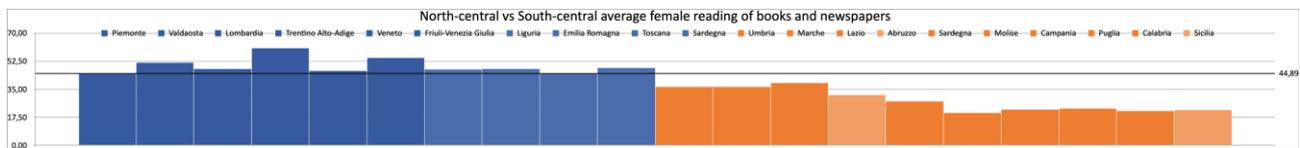
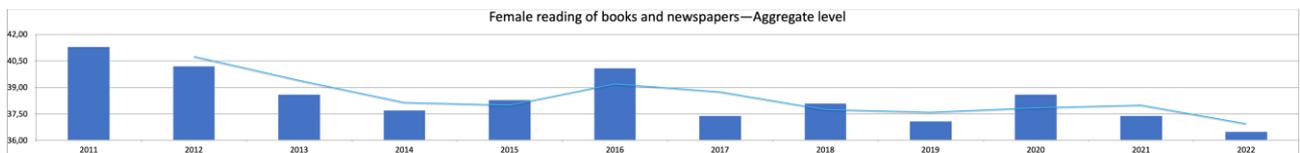
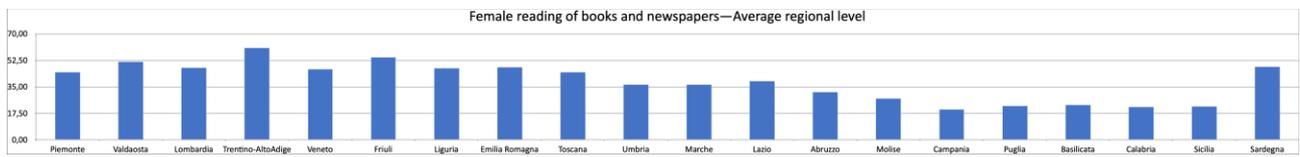


## 6.2 The reading of books and newspaper: the female population

The variable “Lettura di libri e quotidian F” collects, for each year, and for each region, the percentage of the female population that reads books and newspapers. The maximum value of the variable is 65.60, which was reached in Trentino-Alto Adige in 2011. The minimum value is 18.20, that was reached in Campania in 2013. The region with the highest average value, 65.60, is Trentino-Alto Adige, whereas Campania is the region that registers the lowest average value, equal to 20.35. In each region a common trend can be detected: the value of this variable is often at his maximum in the first year of the period considered, then it slowly decreases up to 2022. It is worth noting that the pandemic, as expected, did not negatively affect the female percentage of population that reads

books and newspaper. However, there is also no evidence of a positive effect of the pandemic on the analyzed variable. Moreover, in the regions 1 – 9, the North- center Italian regions, and the region 20, Sardinia, the average percentage of female population that consumes books and newspapers is higher than that registered in the regions 10 – 19, the South-center Italian regions and Umbria (as already noticed for the total datum, without gender distinction). At the national level, the maximum value, 41.30 was reached in 2011, whereas the minimum value , 37.10, was reported in 2019.

	Value	Region	Year
Max	65.60	Trentino-Alto Adige	2011
Min	18.20	Campania	2013
	Value	Region	
Av.ge Max	65.60	Trentino-Alto Adige	
Av.ge Min	20.35	Campania	
	Value	Year	
Agg. Max	41.30	2011	
Agg. Min	37.10	2019	



## 7. A CONCLUSION ON THE REGIONAL CULTURAL CONSUMPTION

The analysis of cultural participation across Italian regions from 2011 to 2022 reveals significant disparities and evolving trends that reflect broader societal changes. The data indicates that regions in the North-center of Italy, particularly Trentino-Alto Adige, consistently demonstrate higher levels of engagement in various cultural activities, including reading, visiting museums, and attending concerts. On the opposite, southern regions like Calabria and Campania show lower participation rates, highlighting a cultural divide that may be influenced by economic factors, accessibility, and educational opportunities. The findings also underscore the impact of exogenous shocks, such as the COVID-19 pandemic, which disrupted cultural activities and altered consumption patterns. The decline in attendance at live events, including classical music concerts and theater performances, suggests a need for adaptive strategies to revitalize cultural engagement in the post-pandemic landscape. Furthermore, the data convey that while traditional forms of cultural consumption, such as reading and visiting museums, remain vital, there is a growing need to innovate and diversify cultural supply to attract broader audiences. Moreover, the report emphasizes the importance of understanding demographic factors, such as age and education level, in shaping cultural preferences and participation.

For sure, fostering cultural participation in Italy requires a multifaceted approach that addresses regional disparities, embraces innovation, and considers the diverse preferences of the population. Policymakers, cultural organizations, and community leaders must collaborate to create inclusive and accessible cultural experiences that resonate with all citizens. By doing so, they can enhance the cultural landscape of Italy, ensuring that it remains vibrant and relevant for future generations. The insights gained from this analysis may serve as a foundation for ongoing discussions and initiatives aimed at promoting cultural engagement across the nation.

## 8. CULTURAL PARTICIPATION AT THE PROVINCIAL LEVEL

The final perspective of analysis proposed in this report concerns the Italian provinces. The national territory is divided into 107 large-area entities. Based on reforms adopted by the national legislator, as well as by the legislators of the special statute regions, some large-area entities have assumed different names, including free municipal consortia (*liberi consorzi comunali*) and metropolitan cities.



A notable case is represented by the Autonomous Region of Sardinia, which has redesigned its institutional structure several times over the years. In this report, the administrative division adopted is based on ISTAT and SIAE data, which divides Sardinia into five provinces: the Metropolitan City of Cagliari, the Province of Sassari, the Province of Oristano, the Province of Nuoro, and the Province of South Sardinia. An additional reform of the Sardinian provinces, expected to be completed in 2024, should lead to a division into eight provinces.

For convenience, all large-area entities will generally be referred to as provinces.

The analysis of provincial data within this report cannot, for reasons of space, cover all Italian provinces; therefore, data from a sample of provinces that is as representative as possible of the national territory will be examined. Specifically, using the average number of performances offered per 100 inhabitants and the average number of paid entries per 100 inhabitants as the main indicators during the reference period, the aim is to analyse which four Italian provinces have the highest number of performances offered and paid entries in relation to the resident population, as well as the four provinces characterized by the lowest values for these indicators.

As shown in the following Table, with reference to the average number of performances offered per 100 inhabitants, the four Italian provinces with the highest values are, in order: Rimini, Trieste, Ascoli Piceno, Gorizia, and Pescara; the four Italian provinces with the lowest values for the average number of performances offered per 100 inhabitants are: Crotone, Vibo Valentia, Isernia, and Reggio Calabria. (In Appendix, the table ranks the provinces in descending order based on the number of annual performances per 100 inhabitants.)

Table - Number of performances x 100 inhabitants.

	Average population 2011-2021	Average performances 2011-2021	Performances/population x 100 inhabitants
<b>Rimini</b>	332.600	39.663	11,93
<b>Trieste</b>	232.471	26.633	11,46
<b>Ascoli Piceno</b>	209.384	23.901	11,41
<b>Gorizia</b>	139.332	15.901	11,41
<b>Pescara</b>	319.462	36.000	11,27
<b>Fermo</b>	174.167	18.656	10,71
<b>Forlì-Cesena</b>	394.128	39.293	9,97
<b>Roma</b>	4.199.266	412.970	9,83
[...]	[...]	[...]	[...]
<b>Sassari</b>	486.284	11.482	2,36
<b>Cosenza</b>	704.350	16.340	2,32
<b>Lecco</b>	335.959	7.672	2,28
<b>Enna</b>	167.469	3.677	2,20
<b>Reggio Calabria</b>	543.884	11.228	2,06
<b>Isernia</b>	85.468	1.266	1,48
<b>Vibo Valentia</b>	159.325	1.646	1,03
<b>Crotone</b>	170.836	1.079	0,63

Personal elaboration on ISTAT and SIAE datasets.

The data reported above shows that the four provinces with the highest values related to the supply of cultural activities offer, on average, over eleven performances per one hundred inhabitants, with the Province of Rimini reaching a value of 11.93.

From a geographical perspective, it emerges that, of the four provinces under consideration, two belong to the same region (Trieste and Gorizia, Friuli-Venezia Giulia region) and three belong to the same macro-area (Rimini, Trieste, and Gorizia, North-East macro-area), while the province of Ascoli Piceno belongs to the Centre macro-area. Thus, there is a total absence of southern provinces from the South and Islands macro-areas.

Regarding the four provinces with the lowest values in terms of the number of performances offered per one hundred inhabitants, the situation is quite different. The values range from 0.63 for the province of Crotone to 2.06 for the province of Reggio Calabria. Geographically, of the four provinces under consideration, three belong to the same region (Crotone, Vibo Valentia, and Reggio Calabria, Calabria region), while all the analysed provinces belong to the same South macro-area. For informational purposes, it is also noted that of the last twenty Italian provinces by the average number of performances offered in relation to the population, eighteen belong to the two macro-areas, South and Islands, which make up Southern Italy.

Moving on to the analysis of demand data, which, as previously highlighted, is represented by the indicator of the average number of paid entries per one hundred inhabitants, the data in Table 4 shows that the four Italian provinces with the highest demand for cultural activities are, in order: Rimini, Ravenna, Verona, and Milan, with values ranging from 1112.24 to 668.72 paid entries per

one hundred inhabitants. Conversely, the four Italian provinces with the lowest values in terms of demand for cultural activities are: Vibo Valentia, Isernia, Enna, and Reggio Calabria, with values ranging from 32.04 to 80.95 paid entries per one hundred inhabitants.

Table – Number of paid entries x 100 inhabitants.

	Average population 2011-2021	Average paid entries 2011-2021	Paid entries/population x 100 inhabitants
<b>Rimini</b>	332.600	3.699.321	1.112,24
<b>Ravenna</b>	389.258	4.293.734	1.103,06
<b>Verona</b>	917.788	7.471.083	814,03
<b>Milano</b>	3.185.329	21.937.929	688,72
<b>Firenze</b>	999.584	6.135.145	613,77
<b>Bologna</b>	1.003.851	5.758.050	573,60
<b>Roma</b>	4.199.266	22.545.732	536,90
<b>Forlì-Cesena</b>	394.128	2.065.298	524,02
[...]	[...]	[...]	[...]
<b>Cosenza</b>	704.350	753.896	107,03
<b>Campobasso</b>	222.716	218.646	98,17
<b>Nuoro</b>	210.969	198.840	94,25
<b>Crotone</b>	170.836	141.384	82,76
<b>Reggio di Calabria</b>	543.884	440.298	80,95
<b>Enna</b>	167.469	105.298	62,88
<b>Isernia</b>	85.468	40.805	47,74
<b>Vibo Valentia</b>	159.325	51.051	32,04

In this case as well, regarding the demand for cultural activities, certain territorial peculiarities can be observed. Specifically, concerning the four provinces with the highest demand values, two belong to the same region (Rimini and Ravenna - Emilia-Romagna Region), three to the same macro-area (Rimini, Ravenna, and Verona, North-East), while all belong to the northern macro-areas (North-West and North-East). Conversely, regarding the four provinces with the lowest demand values, two belong to the same region (Vibo Valentia and Reggio Calabria - Calabria Region), three belong to the same macro-area (Vibo Valentia, Isernia, and Reggio Calabria, South), while all belong to Southern Italy (South and Islands).

Again, considering the last twenty provinces with the lowest demand indicator values, it is evident that the majority belong to the South and Islands macro-areas. Specifically, 7 belong to the Islands macro-area, 10 belong to the South macro-area, 1 belongs to the Centre macro-area, and 2 belong to the North-West macro-area.

## 9. CONCLUDING REMARKS ON PROVINCIAL DATA

Several important considerations emerge from the study of the proposed data. Firstly, significant territorial disparities in cultural participation are evident between the northern and southern macro-areas, regions, and provinces. The data show significantly higher values in terms of both demand and supply for the former. The specificities of certain provinces do not alter the overall picture, characterized by a marked dualism. The causes of these disparities can certainly be traced to sociocultural and territorial factors. However, this report does not delve into these issues, which have been and continue to be the focus of scholarly attention. A similar consideration can be made regarding the different degrees of resilience observed in various territorial areas, with demand and supply reacting very differently following the end of the SARS-COV2 pandemic emergency. However, it should be noted that, as of December 2024, data for the year 2022 at the provincial level is still unavailable. Consequently, a comprehensive analysis of resilience to the COVID-19 shock during the recovery phase cannot be conducted at this level (although we were able to draw some conclusions for regions, as data at that level is already available).

The attention of decision-makers, policymakers, and institutions should aim to eliminate the territorial disparities that characterize the different macro-areas, regions, and provinces of Italy. Disparities between northern and southern areas, as well as those often found between urban and rural areas, should be reduced.

Removing the socioeconomic and territorial barriers that hinder homogeneous cultural participation is essential to ensure equity and social cohesion. The disparities that characterize the north and south of the country, as well as between urban and rural areas, limit access to and enhancement of cultural resources and activities, creating a gap that can perpetuate inequality. Promoting equitable access to culture can potentially enrich individuals' lives and foster the development of a more inclusive and prosperous society, where every citizen has the opportunity to contribute fully to national progress.

## APPENDIX

Italian provinces ranked by average number of performances per 100 inhabitants (Reference period: 2011-2021)

	Average population 2011-2021	Average number of performances 2011-2021	Average performances X 100 inhabitants
Rimini	332.600	39.663	11,93
Trieste	232.471	26.633	11,46
Ascoli Piceno	209.384	23.901	11,41
Gorizia	139.332	15.901	11,41
Pescara	319.462	36.000	11,27
Fermo	174.167	18.656	10,71
Forlì-Cesena	394.128	39.293	9,97
Roma	4.199.266	412.970	9,83
Cagliari	425.150	41.225	9,70
Firenze	999.584	96.179	9,62
Terni	227.305	21.841	9,61
Grosseto	222.939	21.299	9,55
Siena	268.303	25.550	9,52
Udine	533.241	48.084	9,02
Prato	254.415	22.808	8,96
Milano	3.185.329	276.647	8,69
Ferrara	350.200	29.903	8,54
Ravenna	389.258	33.211	8,53
Aosta	126.666	10.695	8,44
Ancona	472.975	39.699	8,39
La Spezia	219.516	18.250	8,31
Pisa	418.895	34.245	8,17
Macerata	317.240	25.883	8,16
Perugia	654.869	52.112	7,96
Imperia	213.625	16.910	7,92
Piacenza	286.567	22.078	7,70
Pesaro e Urbino	360.335	27.404	7,61
Savona	278.333	21.105	7,58
Livorno	336.652	25.332	7,52
Venezia	851.462	63.883	7,50
Alessandria	426.379	31.435	7,37
Arezzo	343.511	24.664	7,18
Torino	2.260.866	161.883	7,16
Bari	1.246.921	88.354	7,09
Bologna	1.003.851	70.494	7,02
Genova	847.318	59.462	7,02
Parma	445.058	30.748	6,91
Teramo	307.496	21.058	6,85
Reggio nell'Emilia	528.151	35.485	6,72
Latina	560.201	37.404	6,68
L'Aquila	301.227	19.320	6,41
Cuneo	589.216	37.766	6,41

Vercelli	173.832	10.854	6,24
Chieti	386.730	24.136	6,24
Novara	367.593	22.870	6,22
Monza e della Brianza	859.782	53.440	6,22
Mantova	409.518	25.161	6,14
Cremona	357.808	21.879	6,11
Brescia	1.252.386	75.573	6,03
Lucca	388.933	23.437	6,03
Catania	1.086.750	64.576	5,94
Sondrio	181.209	10.584	5,84
Treviso	882.458	51.492	5,84
Viterbo	314.335	18.327	5,83
Verona	917.788	53.343	5,81
Pavia	542.001	31.161	5,75
Benevento	279.466	16.036	5,74
Como	595.766	34.115	5,73
Pordenone	311.224	17.584	5,65
Bolzano/Bozen	520.522	29.276	5,62
Oristano	159.537	8.906	5,58
Padova	931.516	51.691	5,55
Bergamo	1.102.911	60.933	5,52
Asti	216.536	11.733	5,42
Vicenza	860.978	46.191	5,36
Massa-Carrara	196.891	10.554	5,36
Messina	633.729	33.425	5,27
Pistoia	291.085	15.217	5,23
Modena	700.065	35.960	5,14
Barletta-Andria-Trani	390.494	19.589	5,02
Rovigo	238.446	11.734	4,92
Avellino	422.885	20.330	4,81
Belluno	205.103	9.785	4,77
Caserta	915.036	43.064	4,71
Ragusa	316.378	14.245	4,50
Varese	882.788	39.098	4,43
Palermo	1.243.174	54.018	4,35
Matera	198.232	8.365	4,22
Frosinone	487.327	20.491	4,20
Trento	537.871	22.545	4,19
Lodi	226.817	9.498	4,19
VCO	159.174	6.664	4,19
Foggia	623.785	26.110	4,19
South Sardinia	354.510	14.828	4,18
Napoli	3.060.189	127.287	4,16
Lecce	799.170	33.216	4,16
Salerno	1.094.698	42.959	3,92
Biella	178.871	6.872	3,84
Brindisi	395.429	14.973	3,79
Rieti	155.759	5.805	3,73
Catanzaro	356.345	12.937	3,63
Nuoro	210.969	7.559	3,58

Agrigento	438.628	15.465	3,53
Campobasso	222.716	7.777	3,49
Taranto	577.594	17.901	3,10
Caltanissetta	266.753	8.202	3,07
Siracusa	398.148	12.117	3,04
Potenza	369.312	11.082	3,00
Trapani	429.608	12.165	2,83
Sassari	486.284	11.482	2,36
Cosenza	704.350	16.340	2,32
Lecco	335.959	7.672	2,28
Enna	167.469	3.677	2,20
Reggio di Calabria	543.884	11.228	2,06
Isernia	85.468	1.266	1,48
Vibo Valentia	159.325	1.646	1,03
Crotone	170.836	1.079	0,63

## 6. Report 4

# The Resilience of Cultural Participation across Italian Regions

### OUTLINE

1. INTRODUCTION
  2. DATA
  3. RESILIENCE MEASURES
  4. NATIONAL DATA: TICKET-BASED VARIABLES VS. SELF-REPORTED ATTENDANCE VARIABLES
  5. DIFFERENCES ACROSS REGIONS
  6. DISCUSSING THE REASONS FOR DIFFERENT PARTICIPATION AND RESILIENCE
  7. CONCLUDING REMARKS
- REFERENCES

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The content of this Report was developed with contributions from researchers of UniCT. More specifically, the responsibility of the content is on R. Cellini, T. Cuccia, and A. De Cristoforo. Methods and results are proposed in an article currently under evaluation of a scientific review for possible publication.

## 1. INTRODUCTION

The aim of this Report is to provide measures of the resilience of cultural activity; in particular, we investigate how various cultural activities involving in-person attendance have responded to the Covid-19 lockdown restrictions and how they have recovered after these restrictions were eased. To this end, we resort to the concept of resilience and to the measures developed in the literature on economic resilience. Italy is taken as the case study.

The concept of resilience, initially introduced by Holling (1973) in the context of ecological systems, fundamentally concerns how complex systems handle adversities, accounting for both the initial impact and the subsequent recovery phases. Extending the notion of resilience to fields such as physics, biology, engineering, and social sciences is relatively straightforward. In economic terms, resilience refers to the ability of an economic system to endure and recover from disruptive shocks (see seminal works by Fingleton et al., 2012; Martin, 2012; Martin and Sunley, 2015).

Economic resilience has been explored through comparisons between countries as well as among regions or territorial areas within a country, focusing on income and/or employment dynamics. Researchers have utilized two main empirical methods to assess the economic resilience of countries and regions. The first method involves descriptive analysis, using case studies and basic statistical indicators (see, for instance, Martin, 2012; Evans and Karecha, 2014; and Lagravinese's 2014 study of Italy). The second method employs time-series analysis and panel data econometric models, possibly incorporating spatial interactions between neighboring regions, to identify and explain resilience (see, for example, Groot et al., 2011; Fingleton et al., 2014; Fingleton and Palombi, 2013; Di Caro, 2014b; and Doran and Fingleton, 2014; also see reviews by Martin and Sunley, 2015, or Cellini et al., 2017).

Notably, various researchers have proposed multifaceted methodologies and distinct approaches to assess economic resilience during both the impact and recovery phases. Key aspects of this empirical analysis include accurately identifying shocks, measuring location-specific responses to these shocks, comparing resilience across different territories, and explaining variations in regional resilience. Several studies highlight the interconnectedness of resilience, change, development, and long-term sustainability (see Brown, 2016).

Since the early foundational works, the concept of economic resilience has been used to evaluate which sectors are more or less resilient to common macroeconomic shocks. Subsequent research has focused on specific sectors, such as Huang and Farboudi-Jahromi (2021) on the service sector and Cellini and Cuccia (2015) on the tourism industry. Other studies have examined how particular sectors contribute to the macroeconomic resilience of territorial areas. For example, Cellini and Cuccia (2019) investigated the role of cultural activities – including cultural industries and cultural participation – in shaping the overall macroeconomic resilience of Italian regions. The role of sector diversity in influencing territorial resilience has been explored by Brown and Greenbaum (2017). Additionally, some research has examined different responses to various shocks, and more recently, whether resilience strategies to the Covid shock have differed from those for other shocks (see, e.g., Sendroui, 2024; also see Jackson, 2021).

In this Report, we analyze the resilience of various entertainment genres involving in-person attendance in Italy and its regions, in light of the common adverse impact of the Covid-19 lockdown restrictions. The negative impact of this shock is evident for 2020 and 2021. Given the current availability of data, we focus on the recovery phase as it is depicted in 2022. It is clear that a longer analysis period would be needed for long-term conclusions. Therefore, in this study, when discussing the recovery following the Covid-19 lockdown shock, we are referring to an immediate sense of recovery.

The analysis will cover three dimensions. First, we will assess attendance at cinemas, theatres (specifically drama), classical music, and popular music (i.e., pop, rock, hip-hop, light music) to determine differences in resilience among these four activities, as measured by in-person attendance. Second, we will use variables reflecting recorded attendance, as well as surveys collecting individuals' statements about their attendance. This will help evaluate whether and how official recorded data aligns with individuals' declarations (which may sometimes be based on perceptions). Third, we will examine how the resilience performance of these cultural activities varies across the twenty regions in Italy, in both the impact and recovery phases. Finally, we aim to investigate whether there is a correlation between the resilience of cultural activities across regions and certain structural socio-economic characteristics of those regions.

We provide various sets of resilience indicators (for both impact and recovery), varying across cultural genres and regions, derived from both simple statistical measures and multiple-regression analysis. We also offer some economic interpretations to explain the differing resilience capacities of genres across regions. Structural variables related to education, social participation, income levels and distribution, and access to and use of IT tools are shown to influence the resilience of cultural participation across regions.

We believe that studying and understanding the dynamics of cultural participation indicators is important from both microeconomic and macroeconomic perspectives: cultural participation is known to be a significant determinant of personal happiness (see, e.g., Ateca-Amestoy et al., 2014; Murin and Zabonetti, 2024) and also a tool for strengthening social capital within a community (Lizardo, 2013; Cebula, 2024).

## 2. DATA

We analyze data at both national and regional levels for Italy, covering the years 2011 through 2022. The national data consists of time series spanning from 2011 to 2022, while the regional dataset forms a balanced panel with 12 annual observations for each of the 20 Italian regions, totaling 240 observations. The data are sourced from various providers.

First, we obtain data on event attendance from SIAE (the Italian Society of Authors and Publishers). To ensure consistency in year-over-year comparisons within each region, we include ticket sales for cinema, classical music concerts, and opera performances individually. For theatre plays and popular music concerts, we account for both paid and free ticket attendance. Although this data is

accessible on SIAE's website ([www.siae.it](http://www.siae.it)), the dataset used in this study has been meticulously compiled by the authors. Where necessary, each data point (both regional and national) is adjusted for population size at that time to create a per capita attendance indicator. These variables, based on ticket sales, are referred to as 'ticket-based' variables.

The second source of data comes from ISTAT's (Italian National Institute of Statistics) survey on daily life in Italy, which measures the percentage of respondents who report attending at least one performance in specific genres—cinema, theatre drama, classical and opera music, and popular (pop/rock/light) music—over the past 12 months. These are termed 'self-reported attendance based' variables. Additionally, ISTAT provides a composite index of cultural participation, which reports the percentage of individuals engaging in at least two of the following activities in the past year: (1) attending cinema four or more times; (2) attending theatre performances at least once; (3) visiting a museum at least once; (4) visiting monuments at least once; (5) attending opera or classical music concerts at least once; (6) attending other music concerts at least once. Although this composite measure, known as CP\_OH (Cultural Participation Outside the Home), is subject to critique and refinement as discussed in studies like Bologna and Savioli (2020) or Cellini and Cuccia (2024), it provides a preliminary overview of cultural engagement outside the home.

Table 1 presents the variables considered and their acronyms.

Table 1 - Variables

Acronym	Variable	Source
CIN_POP	Cinema paid entries / population	SIAE
THEA_POP	Theater entries / population	SIAE
OPERA_POP	Opera paid entries / population	SIAE
MCLAS_POP	Classical music concert paid entries / population	SIAE
MPOPU_POP	Pop music concert entries / population	SIAE
CP_CIN	% of people reporting at least one entry to cinema	ISTAT
CP_THEA	% of people reporting at least one entry to cinema	ISTAT
CP_MCLAS	% of people reporting at least one entry to classical music and opera	ISTAT
CP_MPOPUR	% of people reporting at least one entry to pop/rock music concert	ISTAT
CP_OH	% of people attending at least two types of in-person cultural consumption outside the home out of six under consideration	ISTAT

Note: entries encompass paid and free entries where not otherwise specified.

It is important to note that the ticket-based data from SIAE are derived from official records and encompass the total amount of observed events, offering a comprehensive view. In contrast, the self-reported attendance data from ISTAT come from population surveys and are sample-based. SIAE data measure attendance intensity (e.g., if an individual attends a performance five times, it results in five ticket sales), whereas ISTAT data only record whether an individual has attended at least one event. Consequently, self-reported attendance variables reflect the broad scope of cultural participation (i.e., how many people attended), while ticket-based variables capture both the extent and intensity (i.e., how many people attended and how many times).

Additionally, it is noteworthy that the theatre ticket sales variable exclusively refers to drama performances and does not include opera, which is recorded separately. Conversely, while self-reported attendance for classical music includes both classical music and opera, these genres are separated in the SIAE ticket-based data.

Figures F1 (in the Appendix) show national trends for cinema, theatre, classical music concerts, and popular music concerts, measured by either ticket sales (panel a) or the percentage of the population reporting attendance (panel b). Figures F2 present similar data for the 20 Italian regions.

A clear and significant discrepancy emerges between the data from the two sources. The ticket-based dataset reveals a negative shock in 2020, a further decline in 2021, and a partial recovery in 2022. In contrast, the self-reported attendance data show the impact of the shock in 2021 (since the 2020 survey included responses about the previous 12 months) and a rebound in 2022.

For most series, the 2022 recovery remains incomplete compared to the 2011-2019 period for both ticket-based and self-reported attendance data, with the sole exception being the ticket-sales data for popular music concerts. Interestingly, recovery appears to be more pronounced in the self-reported attendance data compared to the ticket-based data, with the exception of popular music concerts. This observation will be discussed further.

### 3. RESILIENCE MEASURES

We consider measures of resilience, concerning both the impact and the recovery phase, initially basing on simple descriptive statistics and subsequently resorting to regression equations.

Let us start by considering descriptive-statistics-based indicators. Concerning the impact effect, for each variable at both the national level and for each region in Italy, we will assess the ratio between the 2021 data and the average data from 2011-2019 for self-reported attendance variables. For the variables based on self-reported attendance (the CP\_\* variables), the impact effect is captured by the 2021 data, because –as already mentioned– the 2020 data only partially reflects the imposed limitations constituting the shock. As for the variables measuring actual attendance at events (namely, CIN\_POP, THEA\_POP, OPERA\_POP, MCLAS\_POP, MPOPUR\_POP), the impact indicator will be determined by the ratio between the average data from 2020-2021 and the average data from 2011-2019. We will denote this indicator as *RIMP* (resilience to impact). In symbol, for each genre  $i$ :

$$RIMP_i = \frac{y_i(2021)}{\bar{y}_i(2011_{19})} \text{ for self-reported attendance-based series}$$

$$RIMP_i = \frac{y_i(2020_{21})}{\bar{y}_i(2011_{19})} \text{ for ticket-sales based series.}$$

Naturally, the lower the indicator, the heavier the impact effect of the shock, thus indicating less resilience for that specific activity in the region.

Regarding resilience during the recovery phase, we will consider the ratio between the 2022 data and the 2021 data (or the average of the 2020-2021 data for ticket-based variables). This ratio will indicate how much the variable has changed in 2022 compared to the years affected by the shock-induced decline. Additionally, we will examine the ratio between the 2022 data and the 2011-2019 average data to determine the extent to which the "historical" data (referring to the established behavior in the previous decade) has been recovered. These two indicators will be labelled as *RRI* and *RRH*, respectively, representing acronyms for recovery-resilience-immediate and recovery-resilience-historical. In symbol, for each genre *i* (*i*=cinema, theatre, etc)

$$RRI_i = \frac{y_i(2022)}{\bar{y}_i(2020\_21)},$$

$$RRH_i = \frac{y_i(2022)}{\bar{y}_i(2011\_19)}.$$

Following Martin (2012), we can measure resilience, in an alternative way, by considering the specific effect of the shock in the year of impact and in the year(s) of the recovery phase *on the variation rate* of the variable of interest. In symbols, let us consider the percentage rate of change of the variable  $y_t$  over a temporal interval ( $t=[1, T]$ ; in our case  $t=[2011, 2022]$ ) and let us consider the regression equation

$$\dot{y}_t = a + bS_t + cR_t + e_t$$

where *S* is a dummy variable associated to the year when the shock has impacted (in our case, 2020 or 2021), and *R* is a dummy variable associated with the year(s) of recovery (in our case, 2022). The estimates of coefficient *b* (expected to be negative) and *c* (expected to be positive) measure the impact effect and the recovery ability, respectively, conditional on the average growth rate of the variable (related to parameter *a*); they can be considered as resilience indicators. The error term is denoted by  $e_t$ . The regression design, in the present case, is very simple and, as a matter of fact, the estimates of *b* and *c* coefficients simply measure the *distance* of the variation rate of the variable in the year of the shock impact and in the year of recovery from the average variation rate. We will denote such indicators as *RIMP\_B* and *RREC\_C*, respectively, and we will refer to them as regression-based resilience indicators. Note also that *RIMP\_B* and *RREC\_C* are coefficients deriving from a regression, so they have a stochastic nature, and their meaningful interpretation should be contingent upon simultaneous consideration with their estimated variance and statistical significance (that is, with their *p*-value or *t*-stat). Nevertheless, following an established literature, we interpret them as deterministic indicators, provided that they are statically significant. Also in this case, the larger the algebraic value of *RIMP\_B* and *RREC\_C*, the stronger the resilience ability, in both the case of impact-resilience and recovery-resilience.

## 4. NATIONAL DATA: TICKET-BASED VARIABLES VS. SELF-REPORTED ATTENDANCE VARIABLES

Basic data referred to Italy are provided in part A of Table 2. Naturally, the scale of attendance for various genres of cultural entertainment differs significantly, especially concerning observations related to audience numbers in ticket-based variables. In the case of cinema, the ratio between tickets sold and the population –referring to the average of the years 2011-2019– is close to 1.8, corresponding to around 100 million tickets, whereas for lyric opera, it is below 0.04, equivalent to just over 2 million tickets. This represents a magnitude difference of about 50 times. However, this difference is only partially reflected in the percentages of individuals declaring they've attended these different shows at least once over the last 12 months: the percentage for cinema, based on the 2011-2019 average, is just below 50%, while for opera, it is slightly below 10%. This reflects a difference of 5 rather than 50 times. Part of this difference is naturally attributable to the fact that the ticket sale based variables consider consumption intensity (how frequently each spectator attended the show), whereas the self-reported declaration variables merely register whether individuals have attended the show at least once (without considering the frequency).

Table 2. Cultural consumption in Italy (national data) before, during and after the Great Lock-down

Variable		A (Data)			B (Stastic-based indicators)			C (Regression-based indicators)	
		Historic value (2011-19)	Lockdown value	Recovery value	RIMP	RRI	RRH	RIMP_B	RREC_C
(a)	CIN_POP	1,739	0,484	0,815	0,278	1,683	0,469	-0.692***	0.806***
(b)	THEA_POP	0,245	0,077	0,189	0,316	2,440	0,772	-0.664***	1.613***
(c)	LIR_POP	0,037	0,010	0,030	0,259	3,120	0,807	-0.880***	1.593***
(d)	MCLAS_POP	0,055	0,019	0,046	0,354	2,377	0,841	-0.689***	1.194***
(e)	MPOPUR_POP	0,175	0,039	0,357	0,221	9,219	2,037	-1.045***	5.599**
(f)	CP_CIN	49,73	9,10	30,60	0,183	3,363	0,615	-0.781***	2.380***
(g)	CP_THEA	19,78	2,90	12,10	0,147	4,172	0,612	-0.782***	3.205***
(h)	CP_MCLAS	9,18	2,20	6,50	0,240	2,955	0,708	-0.689***	1.976***
(j)	CP_MPOPUR	19,46	3,70	11,20	0,190	3,027	0,576	-0.764***	2.046***
(k)	CP_OH	33,52	8,30	23,10	0,248	2,783	0,689	-0.703***	1.801***

Note: Historic value reports the average value over the period 2011-19; Lockdown value report the datum of 2020-21 (average) for variables (a)-(e) and the datum of 2021 for variable (g)-(k); Recovery value reports the datum of 2022. RIMP, RRI, RRH, RIMP\_B, RREC\_C are the resilience indicators, as defined in text (impact effect, immediate recovery; recovery with respect to the historical value, respectively)

Resilience indicators are provided in parts B and C of Table 2, reporting, respectively, the indicators based on simple descriptive statistics and the indicators deriving from regression equations. As far as the regression-based indicators of resilience in part C of Table 2 are concerned, even if we do not

report the respective  $p$ -values or  $t$ -stat, we have to report that all of them are statistically significant at the 1% level (except one, significant at the 5% level).

It is immediately apparent that *the resilience indicator to the shock's impact yields more stringent measures (i.e., more negative effects) in indicators based on self-reported declaration compared to those based on ticket sales. In other words, the impact effect appears to be emphasized (and felt) as more severe in the respondents' answers, as compared to the ticket-based data. This holds for all forms of entertainment taken into account by the present analysis (when referring to simple statistic indicators) and nearly all forms of entertainment when referring to indicators deriving from regression analysis.*

One possible explanation for why the resilience indicator appears worse with self-reported data compared to ticket sales data could be related to perceptual distortions, where individuals may have perceived the situation as more severe than it actually was (perceptual bias). Another complementary explanation might be that occasional attendees, who have lower participation intensity (e.g., 1 or 2 events per year), experienced less of a disruption from cultural activities due to their lower engagement levels. In contrast, frequent participants, who are more invested, might have made greater efforts to continue their participation and maintained some level of engagement. This could result in a more significant drop in self-reported attendance compared to the reduction observed in ticket-based data.

Turning to the resilience indicators related to recovery, let's examine the 2022 performance relative to 2020-21 for ticket-based indicators or to 2021 for self-reported attendance indicators. It is evident that for cinema, theatre, and, to some extent, classical music, the reported recovery in attendance shows a larger multiplicative factor compared to the observed recovery in ticket sales. This pattern is also reflected in the regression analysis indicators (RREC\_C). Individuals seem to be more optimistic in reporting their experiences than the data suggests, or they may have perceived the impact of the lockdown as more severe than the actual data reflects, aligning with earlier observations of the shock's impact.

When evaluating how much of the historical annual attendance (from 2011-19) was recovered in 2022, we find that self-reported attendance indicators show less variability across different genres compared to ticket-based data. Notably, there was a significant increase in the number of entries for popular music concerts in 2022, nearly doubling compared to the historical average from 2011-19. In contrast, cinema ticket sales in 2022 were less than half of the annual sales during the previous decade.

The pieces of evidence concerning recovery can be summarized as follows: *The recovery from the adverse shock for cultural activities, based on ticket data under current consideration, reveals an overall rate of approximately 80% when comparing the annual 2022 data with the average annual figures from the period 2011-19; however, cinema stands as a notable exception, with a recovery rate of only about 47%, while live concerts of popular music display an "overshooting" phenomenon, with ticket sales in 2022 roughly doubling the average annual figures recorded from 2011-19. On the other hand, the variability observed in self-reported declarations from interviewed individuals*

*regarding their attendance at live shows (at least once over the last year) does not mirror this range. Instead, it indicates a recovery rate ranging between 58% and 71% for all genres of cultural activities currently under scrutiny.*

We can also observe, from a comparative evaluation perspective, that *Popular music experienced the worst impact reaction to the Covid-19 lockdown shock, but the best recovery with respect to the historical data, in terms of tickets. Theatrical performances and classical music had a milder impact reaction, but also a milder recovery with respect to the historical attendance.*

It is worth spending a few words on popular music (encompassing pop, rock and light music concerts): in 2022, Italy experienced an explosion in live popular music events and event attendance. This significant resurgence can be partly explained by rescheduling concerts initially planned between 2020 and 2021, but also by an increasingly extensive and widespread offering, especially during the summer, including major events and festivals. The SIAE data certifies a total of 31-thousand performance concerts of pop, rock, and light music in Italy in 2022, attracting nearly 20.9 million attendees (about 8 million more attendees than the pre-pandemic yearly data). While it is not surprising that the audience grew by 574% compared to 2021 when event recovery was still sluggish, the +66% compared to the last pre-Covid year makes a louder statement. Resilience indicators are consistent with this data.

Furthermore, it is interesting to note that, according to data derived from self-reported attendance, popular music, in particular, exhibits the lowest recovery indicator among various cultural event genres. This might suggest that the remarkable ticket recovery is attributed to a higher intensity of consumption by spectators rather than a recovery in the number of individuals who have decided to resume attending pop music concerts.

We have already mentioned that cinema shows a more difficult recovery as compared to other cultural genres. Let us focus on theatre, in comparison to cinema. Unlike the theatre, cinema already exhibits a slightly declining trend, both in the statements of the interviewees and in the official data of tickets sold, in the years 2011-19. Therefore, the 2022 data contains, within it, the historical trend of a slight decrease ongoing for at least a decade. A working hypothesis may suggest that in-person cultural attendance is progressively being supplanted by online consumption (see, e.g., Bakhshi and Throsby, 2014; Bakhshi et al, 2023; Cellini and Cuccia, 2024, among many others; see also the sociological analysis of Putnam, 2020). This shift can be attributed to the widespread use of information technology tools and the online consumption of cultural products, which seem to more readily substitute the experience of watching films (at home instead of at cinema) rather than theatrical performances. During the lockdown, the consumption of both cinema and theatrical attendance was forbidden or limited. Perhaps, returning to live attendance was perceived as more urgent (and easier?) for theatregoers compared to cinemagoers.

In conclusion, we can confidently state that popular music experienced the greatest impact in terms of ticket sales but has also demonstrated the strongest recovery. In terms of perceptions (self-reported data), theatre seems to have endured a more severe impact. However, the recovery across different cultural entertainment forms appears to be relatively similar, as indicated by both statistical and regression-based metrics. Concerning the post-Covid-19 recovery, cinema faces the most significant difficulties, a trend that was already evident before the pandemic began. Overall,

the trends observed from descriptive statistics align closely with those derived from regression analyses when reviewing national data.

## 5. DIFFERENCES ACROSS REGIONS

### 5.1. Data and simple statistical indicators

The focus in what follows is on the comparison between regions. In this Section, we focus on data and the statistic-based resilience indicators. The regression-based indicators will be presented in Section 5.3. We will proceed to sequentially examine the different genres of cultural entertainment, highlighting the differences across regions within each genre.

It is worth noting that there are significant differences among regions in baseline levels (measured by the annual average of consumers between 2011-19), as well as notable variations in resilience indicators (in both impact and recovery).

Detailed data about cinema attendance at the regional level are provided by Table A1-A in Appendix. Southern regions show a lower inclination to attend cinemas compared to Northern ones. The impact of the Covid-19 lockdown shock, measured by the proportional reduction in moviegoers during the lockdown years, appears less severe in the Southern regions compared to the previous historical data. This holds true for both the perceptions declared by the interviewees and the tickets sold. On the contrary, resilience indicators referred to recovery abilities paint somewhat different stories depending on whether we look at data derived from self-reported statements or ticket sales. In general, if we look at resilience indicators during the recovery phase, the emerging picture is rather confusing. When evaluating recovery in relation to the impact (*RRI* indicator), it emerges that where the impact was more severe, the immediate recovery has been more robust (the cross-sectional correlation between *RIMP* and *RRI* is -0.688, statistically significant at 1%); when assessing recovery in relation to historical attendance data, no robust associations are observed: in all regions, cinema attendance recovery is very partial, but the best data are recorded both in regions characterized by low historical attendance and in regions with high historical attendance.

Some pieces of the story are substantially similar for theatre attendance (statistics are in Table A1-B in Appendix): Southern regions show a lower inclination to attend theatre (specifically, drama performances) compared to northern ones, and the impact of the Covid-19 lockdown shock, appears less severe where the attendance was lower, regarding both the perceptions and the tickets. Stories are partly different when looking at the recovery: the emerging picture is mixed, without clear patterns of better or worse performance related to the deepness of the impact effect. However, the recovery in the case of theatre appears markedly better as compared to cinema. In other words, the theatre has less difficulty, compared to the cinema, in recovering the spectators lost during the Covid-19 lockdown period. We will discuss this piece of evidence in the subsequent Section.

For classical music (Table A1-C), where –once again– the Southern regions appear lagging behind in attendance compared to the Northern regions, the shock had a less severe impact in the Southern regions, which also appear to recover better than the Northern ones. However, this does not mean that the differences have narrowed. It simply means that the Southern regions experienced a less pronounced contraction as an impact and recovered more quickly, although returning to attendance values that are structurally lower than those in the North. The same holds for opera attendance (not reported for the sake of brevity, and also because the attendance is the smallest, across the genres).

For popular music (Table A1-D), the impact of the shock was clearly less burdensome in the South than in the North, particularly in terms of tickets sold. This could also be linked to more favourable climatic conditions that allowed open-air light music shows to take place more easily in the South than in the North during the months of partial lockdown. The recovery also appears to be easier in the Southern regions compared to the Northern ones. However, considering the significant structural differences in the initial conditions, it needs to be verified whether the impact of the Covid-19 lockdown and the diverse resilience responses exhibited by the regions have resulted in a significant reduction in disparities between regions. This issue is addressed as a digression in Section 5.2.

## 5.2 The pattern over time of the differences across regions

In order to ascertain whether the differences in cultural participation across the regions were following a trend of reduction or amplification, and to understand the impact of the Covid-19 shock on this trend, we draw upon the concept of sigma-convergence, borrowed from the economic literature on country and region convergence (Barro and Sala-i-Martin, 1995). Specifically, we examine how the coefficients of variation have changed over time, both before and after the Covid-19 lockdown shock, in reference to attendance to cinema, theatre, classical music and popular music. In particular, we consider the values of the coefficient of variation across regions in 2011, 2019 and 2022. A reduction over time of this coefficient corresponds to the occurrence of sigma-convergence among regions. The results of this analysis are presented in Table 3.

Table 3. Sigma Convergence across regions

	2011	2019	2022		2011	2019	2022
CIN_POP	0.361	0.303	0.325	CP_CIN	0.082	0.102	0.132
THEA_POP	0.429	0.420	0.347	CP_THEA	0.243	0.220	0.280
MCLAS_POP	0.513	0.403	0.354	CP_MCLAS	0.228	0.130	0.203
MPOPUR_POP	0.716	0.463	0.382	CP_MPOPUR	0.173	0.146	0.229
				CP_OH	0.191	0.165	0.224

Note: the Table reports the coefficient of variation across the 20 observations (pertaining the 20 Italian regions), in year 2011, 2019 and 2022.

In the realm of cinema, the Covid-19 shock has led to a slight increase in inequalities among regions. In the case of ticket sales data, this rise in inequalities disrupted a convergence trend that was underway in previous years, although it should be noted that this trend was concurrent with a consistent decline in the number of tickets sold. For theater, the shock appears to have reduced differences, particularly in ticket data, while it seems to have slightly increased them based on respondents' statements. The same pattern emerges for both classical and popular music: the various reactions to the Covid-19 shock have indeed reduced differences between regions in terms of tickets sold, but have slightly widened them in relation to respondents' statements. Not surprisingly, also according to the ISTAT aggregate index of cultural participation outside the home, CP\_OH, the inequality among regions, declining over the period 2011-19 has increased in response to the Covid-19 lockdown shock.

Our digression on the sigma convergence of cultural participation across the Italian region can be concluded by stating that *The Italian regions are characterized by significant differences in cultural participation, as measured by attendance at various genres of performances; These differences are consistently observed in both ticket sales data and people's self-reported attendance in survey interviews. According to ticket sales data, the lockdown shock widened the differences among regions in the case of cinema attendance but led to a reduction of differences for theater, classical music, and popular music. Audience as measured by the percentage of people who reported attending shows, indicates a widening of differences among regions following the Covid-19 shock, in all cases.*

Fundamentally, the ticket data reveal more variability among regions than the data stemming from participation declarations. Considering that, on the contrary, the variation over time around the occurrence of the Covid-19 shock, is more pronounced for self-reported declaration data as compared to ticket sales (apart from the case of popular music concerts), it seems reasonable to assert that the effects of the shock (and subsequent recovery) are “amplified” by the data derived from perception declarations, as opposed to the evidence from official data.

### 5.3 On the resilience indicators from regression analysis

So far, we have developed our comments on resilience indicators based on simple statistical measures (*RIMP*, *RRI*, *RRH*). However, we can also consider the estimated coefficients deriving from regression equation involving growth rates (*RIMP\_B*, *RREC\_C*). In Table A2 in Appendix, such resilience indicators are presented, for the series based on ticket sales data, and it is interesting to compare them with their respective indicators based on simple descriptive statistics. For the sake of completeness, and for possible comparisons, the *RIMP\_B* and *RREC\_C* coefficients are also computed for the series based on self-reported attendance-based data, and printed in Table A3 in Appendix.

Although the series composed of the twenty regional resilience indicators *RIMP* and *RIMP\_B* show a positive and significant (at least at the 5% level) correlation and rank correlation among them, for

all cultural genres (except for classical music, where the *RIMP* and *RIMP\_B* series do not exhibit a positive correlation), so that one could guess that they can be used interchangeably, the specific scenario regarding which region is more or less resilient than others in each genre may vary slightly, depending on the chosen indicator.

In particular, while in the case of theater and popular music, the rankings among regions are essentially similar, regardless of whether we consider resilience indicators *RIMP* or *RIMP\_B* (and *RR1*, *RRH*, or *RREC\_C*), in the cases of cinema (and, to some extent, classical music), the rankings are noticeably different. The reason for this lies in the fact that resilience indicators derived from regression analyses take into account percentage variations recorded in previous years, which is not considered by other indicators. In some cases, this difference is significant, while in others, it is less pronounced. Obviously, one cannot say that one indicator is correct and the other is not; they simply represent two different ways of narrating resilience capacities, whether conditioned or not by historical patterns of the variation rates.

The comments on these indicators are straightforward: the most significant impact, across all examined genres, consistently occurs in the southern regions, indicating their lower resilience capacity to the impact when considering their previous growth rates. Essentially, while impact resilience indicators based on simple statistical measures suggested that regions with lower cultural participation seemed to have suffered less from the Covid-19 impact, indicators accounting for past growth rates signal greater difficulty precisely in regions with historically lower cultural participation. Shifting to recovery resilience indicators, the capacities for better or worse recovery do not reveal a clear geographical pattern: in most cases, southern regions exhibit worse recovery, but there are significant exceptions and even some recovery champions located in the South.

## 6. DISCUSSING THE REASONS FOR DIFFERENT PARTICIPATION AND RESILIENCE

Exploiting the variability that each resilience indicator exhibits across regions, we investigate the correlation between each resilience indicator and a set of socio-economic characteristics of the regions. This investigation aims to determine whether and which socio-economic characteristics are associated with greater or lesser resilience for each type of cultural performance under consideration.

In the following, we present the results based on the ticket sales data and the regression-based resilience indicators. Of course, the analysis can be conducted considering resilience indicators based on simple statistics and/or cultural participation measured by self-reported attendance declarations.

Table 4 provides the simple cross-section correlations between the indicators of “historical” cultural participation (as measured in the 2011-19 period) and some socio-economic variables, observed over the same time period. In particular, we consider: the adjusted gross disposable income of households per capita in PPS (denoted by *INCOME*), the concentration index (the Gini index) of net income (*GINIIND*), the graduated people aged 25-65 to capture the human capital and education

condition (GRADUAT) and two indicators that we will refer to as economic distress indicators: the unemployment rate (UNEMPL), and the share of NEET –Not in Education, Employment, or Training– people in the population aged 15 to 29 (NEET). All this data is sourced from ISTAT, specifically from the BES project database.

The positive correlation between cultural participation indicators, on the one side, and income and education levels, on the other side, is evident and perhaps not particularly surprising. We know well that income and education are two highly significant determinants of the demand for cultural participation (Seaman, 2006). It is interesting to note that, among the in-presence attendance to various genres of cultural events, popular music shows the lowest correlation (although still statistically significant) with education, while popular music shows the highest correlation with income. The Gini index also indicates a significant correlation, with a negative sign: higher concentration in income distribution is associated with lower cultural participation across regions. Similarly, the clear and significant negative correlation between cultural participation indicators (across all genres considered) and socio-economic distress indicators is noteworthy: where the unemployment rate is higher, cultural participation is lower. Even in cases where the youth NEET rate is higher, cultural participation is lower. Lastly, it is observed that the negative correlation is slightly less pronounced in the cases of cinema and popular music, as compared to classical music and theatre. Roughly speaking, the former can be considered as lowbrow cultural activities, while the latter can be associated with highbrow cultural activities. If so, socio-economic distress factors have a larger influence on highbrow cultural consumption compared to lowbrow cultural consumption.

The analysis can be proposed also for further socio-economic variables. In particular, we report here the results concerning: Civic and political participation as defined and measured by ISTAT (CIVPOLPART); Percentage of population engaged in volunteer activities (VOLUNTEER); Perception of safety (SAFEperc); Burglaries in residences (number per 1,000 households) (THEFT); Satisfaction with one own's overall life (SATISFLIFE); Satisfaction with leisure time (SATISFLEISURE); Household with access to the internet (INTNT\_ACHOME); Users of the internet (INTNT\_USERS); Percentage of people using the internet to buy music or movies (INTNT\_BUYMM); all variables are from ISTAT. CIVPOPPART is defined as the percentage of individuals aged 14 and older who engage in at least one civic and political participation activity among the following ones: discussing politics at least once a week; staying informed about Italian political events at least once a week; participating online in consultations or votes on social (civic) or political issues (e.g., urban planning, signing a petition) at least once in the three months prior to the interview; reading and posting opinions on social or political issues on the web at least once in the three months prior to the interview. VOLUNTEER is the percentage of individuals who, in the 4 weeks prior to the interview, voluntarily dedicated time to activities benefiting other people, the community, or the environment, either through groups or organizations or individually, as a proportion of the total population. SAFEperc is the percentage of individuals aged 14 and older who feel very or quite safe walking alone in the dark. SATISFLIFE and STISFLEISURE indicate the percentage of people who report high satisfaction (giving a score equal at least to 8 on a scale from 0 to 10) with their life and leisure time, respectively. INTNET\_ACHOME, USER, BUYMM the percentage of people declaring having access to the net from home, having used the internet over the last three months, and having used the internet to buy music or movies, respectively. All definitions are provided by ISTAT. Clearly, the variables aim to

capture the socio-political involvement of people, the safety condition as perceived by interviewed individuals and as recorded by registered crime, personal satisfaction, access to the internet tool.

The first observation is that there is a systematic correlation between the historical values of cultural participation and the socio-economic variables considered, except for the variables related to crime and safety perception (analogous results emerge for homicide or robbery data). Noteworthy, and not surprisingly, there is a positive (and significant in most cases) association between cultural event attendance and the declared satisfaction for leisure.

Second, the positive and strongly significant cross-section correlation between accessibility and internet usage (and specific usage for cultural purchases) on the one side, and participation in cultural events on the other side, confirms what has already been observed in other studies (e.g., Cellini and Cuccia, 2024): Cultural participation and internet usage go hand-in-hand, that is, they appear to have a complementary nature, from a cross-sectional perspective. Where internet accessibility (and consumption of cultural products via the internet) is higher, there is also a greater in-person attendance at cultural performances.

Even if the analysis of correlation is not reported for the sake of brevity, we mention that, in general, cultural participation measured in terms of ticket sales exhibits stronger correlations with socio-economic variables, compared to cultural participation variables based on self-reported attendance.

Table 4. Correlation between historical values of cultural participation and socio-economic conditions across the regions

	CIN_POP_BASE	THEA_POP_BASE	MCLAS_POP_BASE	MPOPUR_POP_BASE
INCOME	0,715***	0,757***	0,779***	0,841***
GRADUAT	0,7047***	0,6379***	0,6034***	0,5696***
GINIIND	-0,409 *	-0,297	-0,401 *	-0,504 **
UNEMPL	-0,599 ***	-0,591 ***	-0,698 ***	-0,716 ***
NEET	-0,634 ***	-0,596 ***	-0,700 ***	-0,731 ***
CIVPOLPART	0,7370***	0,6782***	0,7441***	0,7273***
VOLUNTEER	0,240	0,5175**	0,6688***	0,5502**
SAFEperc	-0,3836*	-0,2437	-0,2036	-0,1332
THEFT	0,7275***	0,4970**	0,5872***	0,6340***
SATISFLIFE	0,1761	0,3822*	0,5693***	0,4817 **
SATISFLEISURE	0,2779	0,4537**	0,5893***	0,4864**
INTN_AHOME	0,7523***	0,7668***	0,8018***	0,7822***
INTN_USERS	0,7202***	0,7853***	0,8247***	0,8381***
INTN_BUYMM	0,7429***	0,7207***	0,7159***	0,9208***

Note: Critical values, for 20 observations, are: 0. 378, 0.444, 0.561, in the cases of two-tail 10%, 5%, 1% significance level, respectively (\*, \*\*, \*\*\*).

In this study we are mainly interested in investigating the relations between socio-economic variables and the resilience skills of different cultural genres. Table 5 reports the (cross-section) correlations between the economic indicators and the resilience performance indicators of the regions, as derived from the regression analysis approach (*RIMP\_B*, *RREC\_C*).

Table 5. Correlation between resilience indicators of cultural participation and socio-economic conditions across the regions

	RIMP_B				RREC_C			
	CIN_POP	THEA_POP	MCLAS_POP	MPOPUR_P OP	CIN_POP	THEA_POP	MCLAS_POP	MPOPUR_P OP
INCOME	-0,421*	0,488**	0,379*	0,465**	0,575***	0,037	0,202	-0,296
GRADUA	-0,154	0,151	0,428*	0,354	0,046	0,066	0,178	0,018
GINIIND	-0,095	-0,296	-0,36	-0,485**	-0,207	-0,111	0,043	0,013
UNEMPL	0,176	-0,289	-0,377	-0,351	-0,413*	-0,076	-0,175	0,097
NEET	0,201	-0,335	-0,401*	-0,398*	-0,434*	-0,016	-0,174	0,142
CIVPOLPART	-0,327	0,429*	0,497*	0,343	0,508**	-0,139	0,267	-0,263
VOLUNTEER	-0,358	0,315	0,171	0,257	0,604***	0,044	0,069	-0,212
SAFEperc	0,388*	-0,22	-0,241	-0,353	0,429*	0,222	0,296	0,24
THEFT	-0,263	0,417	0,434	0,503**	0,097	-0,155	-0,14	-0,347
SATISFLIFE	-0,126	0,282	0,176	0,169	0,694***	0,021	0,261	-0,169
SATISFLEISURE	-0,114	0,124	0,25	0,234	0,451**	0,279	0,147	0,079
INTN_ACHOME	-0,440*	0,438*	0,510**	0,397*	0,442*	-0,17	0,212	-0,251
INTN_USERS	-0,483**	0,461**	0,437*	0,376	0,564***	-0,063	0,287	-0,284
INTN_BUYMM	-0,490**	0,569***	0,246	0,486**	0,537**	-0,108	0,213	-0,441**

Note: Critical values, for 20 observations, are: 0. 378, 0.444, 0.561, in the cases of two-tail 10%, 5%, 1% significance level, respectively (\*, \*\*, \*\*\*).

The analysis of correlation leads to observe that a higher per capita income associates with better resilience to impact in the case of theater, classical music, and popular music, while it associates with poorer resilience to impact in the case of cinema. In other words, in all cultural activities other than cinema, high per capita income has mitigated the negative effect of the shock, whereas this has not been true in the case of cinema, where the worst impact has indeed been in regions with higher income.

A higher level of education is associated with a limited negative impact of the shock in the case of classical music but not in other cases.

Although not statistically significant, worse income distribution tends to be associated with a worse impact resilience effect in in-person attendance to all cultural activities under consideration. The same association is predominantly recorded for the unemployment rate and the incidence of young NEETs (with the occasional exception of cinema).

Greater political participation and involvement in volunteer activities are associated with better resilience to impact (again, except for cinema).

The robustness of associations with internet access indicators is noteworthy. For cinema, a larger accessibility to the internet and IT tools is associated with poorer resilience of regions to the impact

of the shock, while in all other cultural activities, larger internet accessibility is linked to higher resilience to the impact of the shock. This evidence could be seen as another clue to support, once again, the thesis that the telematic consumption of cinematographic products replaces the consumption of cinematographic services more easily than it does for theater and music.

Now let us examine resilience as the capacity for rebound after a shock, keeping in mind that the data allows us to measure recovery only in terms of immediacy, with substantial information available, at present, only for the year 2022. The picture that emerges from the analysis of the correlation between resilience indicators during the recovery phase and socio-economic structural variables is one of a substantial lack of clear relationships. However, for popular music, a negative correlation with internet accessibility becomes apparent, especially concerning the percentage of users using the internet to purchase cultural products. Thus, in areas where these behaviors are more prevalent, it is evident that the recovery in live performance attendance has been worse.

To draw a robust conclusion that online consumption of artistic performances displaces in-person attendance, we would have needed to observe a negative correlation in the case of cinema as well (as was the case for the shock resilience indicator), which is not the case. In fact, for cinema, the correlation is positive. Cinema stands out as the category with the most significant correlations with structural indicators: in this case, regions with higher income (and consistently higher indicators of political and social participation) report better recovery capacity. However, it is essential to note that cinema, overall, is the genre with the worst recovery capacity. Therefore, it seems more accurate to conclude that in the recovery phase, regions with higher incomes performed better, albeit with an overall partiality in the demonstrated recovery capacity of cinema.

It is worth underlining that our findings, derived from a macroeconomic analysis, are fully consistent with the "microeconomic" analysis by Menardo et al. (2023), conducted on a sample of over 1,000 Italian respondents surveyed about their cultural and social behaviors during the Covid-19 months. Essentially, this analysis indicates that the lockdown shock widened the differences in cultural consumption: those who already had a high propensity for cultural consumption and social activities reinforced these behaviors during the lockdown and the following months, while those with a low propensity did not sufficiently replace in-person activities with online activities during the lockdown months, resulting in lower cultural and social participation following the shock.

## 7. CONCLUDING REMARKS

Economic resilience evaluates the ability of systems to absorb shocks and rebound. In this study we have evaluated the economic resilience of various forms of in-person cultural entertainment – namely, cinema, theatre (drama), classical music and popular music– amidst the Great lockdown following the Covid-19 outbreak, taking Italy as a case study.

We have outlined some stylized facts and proposed explanations regarding the varying resilience capacity of different types of cultural genres involving in-person attendance. In essence, the main findings that emerge from our study can be summarized as follows. Italian regions exhibit significant

differences in cultural participation, measured by attendance at various genres of cultural activities. These differences are consistently observed in both ticket sales data and respondents' self-reported attendance collected in national survey interviews.

However, statements made by interviewees reveal a more pronounced impact of the Covid-19 shock than indicated by ticket sales data. Consequently, the resilience indicator to the shock's impact yields more stringent measures (i.e., more negative effects) in indicators based on self-reported declarations compared to those based on ticket sales. In simpler terms, the impact effect appears to be emphasized (and felt) as more severe in respondents' answers, as opposed to the ticket-based data. This holds true for all forms of entertainment considered in this analysis (when referring to simple statistical indicators) and nearly all forms of entertainment when referring to indicators derived from regression analysis.

The recovery from the adverse shock for cultural activities under consideration (based on ticket data) is around 80%, comparing the annual 2022 data with the average annual data from the period 2011-19. Cinema stands as a negative exception (with a recovery below 50%), while live concerts of popular music exhibit an overshooting phenomenon, with ticket sales in 2022 approximately double the average annual data recorded from 2011-19. The variability seen in self-reported declarations from interviewed individuals regarding their attendance at live shows (at least once over the last year) does not reflect this range; instead, it shows a recovery rate between 58% and 73% for all genres of cultural activities under present scrutiny.

Popular music experienced the most significant negative impact reaction to the Covid-19 lockdown shock but showed the best recovery concerning historical data, in terms of tickets. Theatrical performances and classical music had a milder impact reaction but also a milder recovery with respect to historical attendance.

Audience measurements based on ticket sales data indicate that the lockdown shock widened the differences among regions in the case of cinema attendance but led to a slight reduction of differences across regions for theatre, classical music, and popular music. Audience measurements based on the percentage of people who reported attending shows indicate widening differences among regions following the Covid-19 lockdown shock in all cases.

Fundamentally, ticket data reveal more variability among regions than data derived from participation declarations. Regarding the impact of the shock, it seems reasonable to assert that the effects of the shock (and subsequent recovery) are "amplified" by the data derived from perception declarations, as opposed to evidence from official data.

We have emphasized that different indicators of resilience provide slightly different stories concerning the ability of cultural activity to respond to the shock, both during impact and recovery phases. While a picture emerges in terms of impact reactions where regions with higher participation seem to have reacted better, indications on recovery are not clear. This ambiguity is likely due to the partiality of the recovery analysis, which, at the moment, has only been able to examine recovery in the immediacy of the lifting of restrictions. Of course, we are aware that a more extended timeframe would be necessary for a comprehensive evaluation of the recovery capacities following the shock induced by Covid-19 and the long-term outlook for the evolution of in-person attendance across various genres of cultural events.

Nevertheless, this study represents a preliminary attempt –as far as we know– to measure and compare the resilience capacities of different cultural sectors, even across the regions within a country. Some evidence may be useful for shaping strategies for private operators and public policies to promote cultural consumption in the form of in-person attendance at cultural events.

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## APPENDIX

### DATA TABLES

Table A1-A. Cinema attendance resilience indicators

	CIN_POP				CP_CIN			
	Baseline	RIMP	RRI	RRH	Baseline	RIMP	RRI	RRH
Piemonte	1,944	0,246	1,763	0,434	49,556	0,172	3,447	0,591
Valdaosta	1,903	0,245	1,934	0,473	46,000	0,170	3,718	0,630
Lombardia	1,934	0,284	1,785	0,508	51,133	0,174	3,449	0,600
Trentino A.A.	1,122	0,301	2,048	0,617	43,344	0,228	2,939	0,671
Veneto	1,646	0,278	1,760	0,490	47,778	0,172	3,439	0,590
Friuli	2,036	0,267	1,812	0,484	49,078	0,181	3,191	0,579
Liguria	1,851	0,255	1,773	0,453	48,511	0,146	3,746	0,548
Emilia R.	2,339	0,282	1,662	0,468	51,956	0,219	2,772	0,608
Toscana	1,927	0,274	1,627	0,445	51,678	0,203	2,771	0,563
Umbria	1,826	0,301	1,551	0,466	48,422	0,256	2,427	0,622
Marche	1,995	0,250	1,664	0,416	49,556	0,180	3,427	0,615
Lazio	2,425	0,256	1,720	0,440	57,778	0,177	3,529	0,623
Abruzzo	1,768	0,308	1,469	0,453	50,344	0,161	4,086	0,657
Molise	0,604	0,325	1,349	0,438	41,833	0,124	5,115	0,636
Campania	1,311	0,257	1,539	0,396	50,033	0,164	4,695	0,769
Puglia	1,374	0,343	1,442	0,494	48,189	0,189	3,297	0,623
Basilicata	0,715	0,416	1,299	0,541	42,844	0,159	3,588	0,570
Calabria	0,574	0,362	1,420	0,513	40,178	0,110	4,909	0,538
Sicilia	1,156	0,289	1,646	0,476	47,422	0,226	2,570	0,580
Sardegna	1,164	0,296	1,724	0,510	40,844	0,191	3,115	0,595

Note: For each indicator, the highest and the lowest values are highlighted in green and grey, respectively.

Table A1-B Theatre attendance resilience indicators

	THEA_POP				CP_THEA			
	Baseline	RIMP	RRI	RRH	Baseline	RIMP	RRI	RRH
Piemonte	0,224	0,322	2,508	0,807	19,344	0,160	3,613	0,579
Valdaosta	0,156	0,299	2,742	0,821	14,511	0,076	7,636	0,579
Lombardia	0,266	0,285	2,657	0,758	22,044	0,132	4,586	0,603
Trentino A.A.	0,347	0,284	2,423	0,688	30,933	0,129	4,250	0,550
Veneto	0,220	0,310	2,433	0,754	19,333	0,129	4,120	0,533
Friuli	0,365	0,326	2,020	0,658	23,256	0,142	3,848	0,546
Liguria	0,293	0,307	2,589	0,794	20,011	0,135	4,407	0,595
Emilia R.	0,314	0,333	2,439	0,812	21,889	0,178	3,026	0,539
Toscana	0,278	0,333	2,315	0,772	20,011	0,185	3,324	0,615
Umbria	0,210	0,325	2,352	0,765	20,000	0,180	2,917	0,525
Marche	0,261	0,391	2,075	0,811	20,433	0,152	4,677	0,710
Lazio	0,378	0,265	2,500	0,662	26,589	0,139	4,757	0,662
Abruzzo	0,158	0,462	1,679	0,776	16,189	0,167	3,963	0,661
Molise	0,060	0,232	5,439	1,260	13,467	0,149	3,700	0,550
Campania	0,183	0,323	2,621	0,847	16,778	0,143	5,833	0,834
Puglia	0,141	0,412	2,186	0,900	15,867	0,158	3,320	0,523
Basilicata	0,112	0,167	4,080	0,680	15,933	0,151	3,083	0,464
Calabria	0,085	0,310	2,669	0,828	12,100	0,165	4,000	0,661
Sicilia	0,214	0,338	2,391	0,808	16,567	0,139	4,043	0,561
Sardegna	0,160	0,397	2,162	0,857	13,500	0,163	2,909	0,474

Table A1-C Classical music attendance resilience indicators

	MCLAS_POP				CP_MCLAS			
	Baseline	RIMP	RRI	RRH	Baseline	RIMP	RRI	RRH
Piemonte	0,050	0,325	2,178	0,709	9,333	0,214	3,250	0,696
Valdaosta	0,029	0,255	1,984	0,506	9,167	0,262	1,875	0,491
Lombardia	0,070	0,290	2,514	0,729	10,256	0,195	3,250	0,634
Trentino A.A.	0,093	0,385	2,087	0,804	13,656	0,198	3,074	0,608
Veneto	0,070	0,329	2,704	0,890	10,456	0,210	2,818	0,593
Friuli	0,064	0,413	2,263	0,935	11,222	0,241	2,111	0,508
Liguria	0,057	0,323	2,167	0,700	8,778	0,194	3,000	0,581
Emilia R.	0,058	0,425	2,195	0,933	9,444	0,212	3,500	0,741
Toscana	0,071	0,380	2,338	0,889	10,056	0,229	2,913	0,666
Umbria	0,058	0,347	1,930	0,670	8,656	0,393	1,353	0,531
Marche	0,045	0,551	1,804	0,993	9,744	0,185	4,444	0,821
Lazio	0,077	0,230	2,514	0,577	11,189	0,286	2,719	0,778
Abruzzo	0,052	0,429	2,589	1,110	7,911	0,228	4,222	0,961
Molise	0,019	0,359	3,680	1,320	7,656	0,183	3,571	0,653
Campania	0,020	0,468	1,901	0,890	6,656	0,270	3,444	0,932
Puglia	0,031	0,554	2,598	1,438	7,733	0,310	2,042	0,634
Basilicata	0,020	1,000	2,553	2,554	9,022	0,211	2,947	0,621
Calabria	0,017	0,679	2,581	1,752	7,178	0,195	4,357	0,850
Sicilia	0,047	0,398	2,274	0,904	7,022	0,328	2,435	0,797
Sardegna	0,036	0,280	3,235	0,904	7,711	0,272	2,238	0,610

Table A1-D Popular music attendance resilience indicators

	MPOPUR_POP				CP_MPOPUR			
	Baseline	RIMP	RRI	RRH	Baseline	RIMP	RRI	RRH
Piemonte	0,191	0,188	7,951	1,497	19,900	0,166	3,576	0,593
Valdaosta	0,271	0,047	21,487	1,002	20,467	0,220	2,133	0,469
Lombardia	0,258	0,196	9,460	1,852	19,722	0,152	3,433	0,522
Trentino A.A.	0,182	0,210	10,508	2,209	29,044	0,196	2,719	0,534
Veneto	0,188	0,218	8,313	1,810	20,144	0,223	2,289	0,511
Friuli	0,200	0,278	7,511	2,092	21,533	0,214	2,283	0,488
Liguria	0,116	0,246	6,954	1,708	15,944	0,182	2,552	0,464
Emilia R.	0,234	0,253	8,986	2,277	21,000	0,152	3,750	0,571
Toscana	0,218	0,212	8,711	1,851	19,056	0,236	2,289	0,541
Umbria	0,143	0,233	5,278	1,229	19,778	0,248	1,796	0,445
Marche	0,189	0,261	10,620	2,772	19,922	0,191	3,263	0,622
Lazio	0,264	0,159	11,251	1,790	21,322	0,197	3,405	0,671
Abruzzo	0,093	0,493	8,702	4,287	21,167	0,198	4,286	0,850
Molise	0,021	0,327	55,558	18,157	18,578	0,135	3,880	0,522
Campania	0,075	0,251	12,120	3,040	16,267	0,209	3,676	0,768
Puglia	0,134	0,273	7,987	2,180	17,889	0,235	2,619	0,615
Basilicata	0,039	0,352	18,378	6,464	22,122	0,131	2,966	0,389
Calabria	0,037	0,389	7,863	3,057	20,144	0,139	3,286	0,457
Sicilia	0,074	0,315	7,095	2,233	16,367	0,202	2,636	0,532
Sardegna	0,079	0,233	11,848	2,766	21,100	0,190	3,027	0,576

Table A1-E Resilience indicators for the aggregate cultural participation outside the home

	CP_OH			
	<i>Baseline</i>	<i>RIMP</i>	<i>RRI</i>	<i>RRH</i>
Piemonte	36,344	0,264	2,448	0,647
Valdaosta	35,989	<b>0,286</b>	2,243	0,642
Lombardia	38,033	0,245	2,860	0,699
Trentino A.A.	<b>44,389</b>	0,241	2,738	0,660
Veneto	36,700	0,245	2,844	0,698
Friuli	<b>39,400</b>	<b>0,277</b>	2,284	0,632
Liguria	33,789	0,222	2,667	0,592
Emilia R.	38,378	0,255	2,520	0,644
Toscana	36,378	0,272	2,576	0,701
Umbria	34,544	0,234	2,716	0,637
Marche	33,378	0,216	3,306	0,713
Lazio	<b>40,578</b>	<b>0,303</b>	2,447	0,742
Abruzzo	28,967	0,193	<b>4,107</b>	<b>0,794</b>
Molise	24,944	0,164	<b>4,707</b>	<b>0,774</b>
Campania	25,522	0,227	3,776	<b>0,858</b>
Puglia	25,000	0,200	2,740	0,548
Basilicata	25,989	0,165	<b>3,442</b>	0,569
Calabria	21,400	0,168	3,333	0,561
Sicilia	24,889	0,221	2,818	0,623
Sardegna	31,411	0,223	3,114	0,694

Table A2. Regional resilience as measured by *RIMP\_B* and *RREC\_C* (Ticket sales data)

	<i>CIN_POP</i>		<i>TEA_POP</i>		<i>MCLAS_POP</i>		<i>MPOPUR_POP</i>	
	<i>RIMP_B</i>	<i>RREC_C</i>	<i>RIMP_B</i>	<i>RREC_C</i>	<i>RIMP_B</i>	<i>RREC_C</i>	<i>RIMP_B</i>	<i>RREC_C</i>
Piemonte	-0,427	0,903	-0,678	1,642	-0,726	1,068	-1,126	4,450
Valdaosta	-0,447	1,258	-0,509	2,076	-0,778	3,005	-1,014	1,520
Lombardia	-0,363	0,801	-0,701	1,850	-0,701	1,399	-1,095	5,726
Trentino A.A.	-0,400	1,114	-0,653	1,876	-0,665	1,020	-0,976	7,364
Veneto	-0,399	0,836	-0,640	1,785	-0,665	1,020	-1,139	4,326
Friuli	-0,412	0,898	-0,628	1,260	-0,663	1,101	-0,944	4,748
Liguria	-0,423	0,931	-0,646	1,886	-0,702	0,942	-0,963	4,254
Emilia R.	-0,390	0,774	-0,614	1,773	-0,713	0,895	-1,008	5,670
Toscana	-0,443	0,828	-0,689	1,374	-0,698	1,099	-1,112	5,233
Umbria	-0,420	0,711	-0,657	1,614	-0,636	0,657	-0,816	3,542
Marche	-0,433	0,870	-0,648	1,012	-0,590	0,743	-0,967	7,233
Lazio	-0,355	0,780	-0,653	1,801	-0,607	2,282	-1,030	7,062
Abruzzo	-0,416	0,610	-0,670	0,361	-0,670	1,534	-1,064	4,800
Molise	-0,450	0,606	-0,936	3,673	-0,534	2,129	-1,479	35,290
Campania	-0,369	0,545	-0,662	1,764	-0,828	0,288	-0,997	8,041
Puglia	-0,449	0,672	-0,576	1,399	-0,651	1,127	-0,879	5,508
Basilicata	-0,474	0,471	-0,909	1,933	-1,113	0,289	-1,389	12,187
Calabria	-0,512	0,649	-0,759	1,491	-1,139	0,419	-1,316	3,959
Sicilia	-0,512	0,940	-0,697	1,531	-0,645	1,226	-1,158	3,411
Sardegna	-0,453	0,953	-0,737	0,850	-0,728	2,146	-1,492	6,013

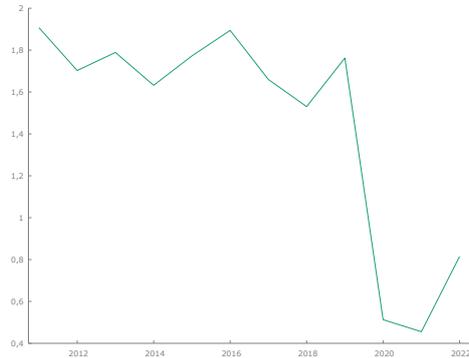
Table A3. Regional resilience as measured by *RIMP\_B* and *RREC\_C* (Self-reported attendance data)

	CP_CIN		CP_TEA		CP_MCLAS		CP_MPOPUR	
	RIMP_B	RREC_C	RIMP_B	RREC_C	RIMP_B	RREC_C	RIMP_B	RREC_C
Piemonte	-0,791	2,468	-0,768	2,639	-0,728	2,255	-0,797	2,590
Valdaosta	-0,808	2,726	-0,914	6,631	-0,714	0,879	-0,751	1,129
Lombardia	-0,803	2,464	-0,786	3,623	-0,733	2,276	-0,843	2,434
Trentino A.A.	-0,745	1,950	-0,786	3,288	-0,684	2,115	-0,763	1,734
Veneto	-0,804	0,452	-0,787	3,162	-0,653	1,863	-0,722	1,308
Friuli	-0,784	2,206	-0,796	2,881	-0,653	1,147	-0,723	1,307
Liguria	-0,814	2,768	-0,829	3,429	-0,780	2,022	-0,814	1,558
Emilia R.	-0,762	1,780	-0,759	2,053	-0,762	2,508	-0,831	2,755
Toscana	-0,742	1,793	-0,739	2,357	-0,652	1,938	-0,734	1,292
Umbria	-0,686	1,443	-0,733	1,939	-0,465	0,348	-0,664	0,816
Marche	-0,778	2,446	-0,780	3,709	-0,747	3,457	-0,749	2,277
Lazio	-0,772	2,552	-0,776	3,800	-0,633	1,738	-0,718	2,431
Abruzzo	-0,808	3,108	-0,709	3,015	-0,796	3,204	-0,778	3,299
Molise	-0,853	4,132	-0,754	2,742	-0,788	2,583	-0,835	2,887
Campania	-0,794	3,715	-0,816	4,849	-0,716	2,429	-0,746	2,687
Puglia	-0,793	2,310	-0,807	2,337	-0,691	1,039	-0,733	1,624
Basilicata	-0,794	2,606	-0,743	2,116	-0,735	1,952	-0,835	1,977
Calabria	-0,835	3,939	-0,766	3,019	-0,706	3,353	-0,723	2,349
Sicilia	-0,731	1,583	-0,824	3,052	-0,617	1,441	-0,715	1,672
Sardegna	-0,761	2,143	-0,739	1,936	-0,128	2,732	-0,741	1,965

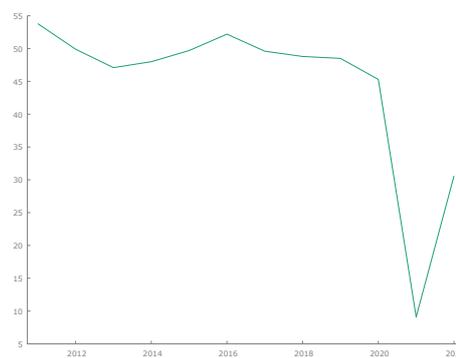
## FIGURES

Figure F1. Attendance to cinema, theatre, classical music and popular music: registered entries and people declarations (data at the national level).

Cinema – Tickets



Cinema – Self-reported attendance



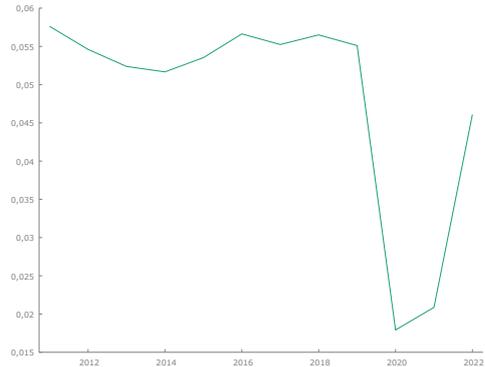
Theatre -Tickets



Theatre – Self reported attendance



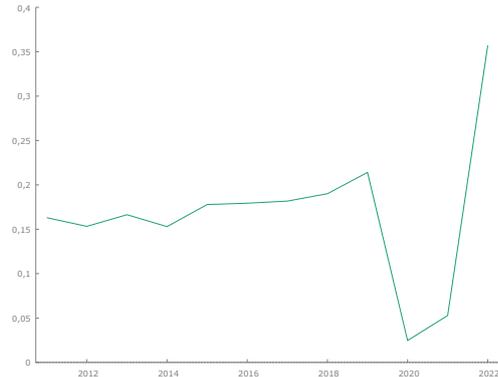
Classical Music – Tickets



Classical and opera music – Self-reported attendance



Popular Music- Tickets



Popular music – Self-reported attendance

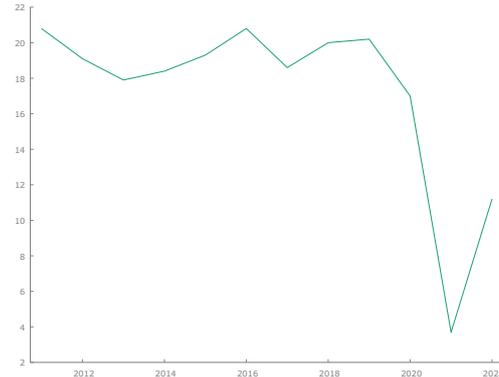
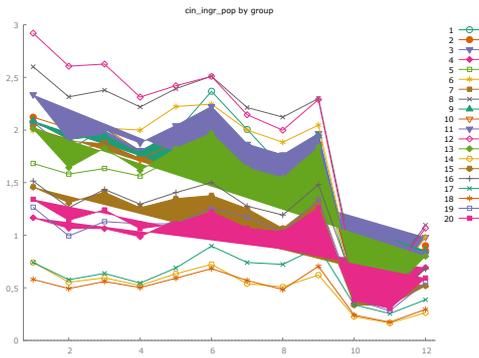
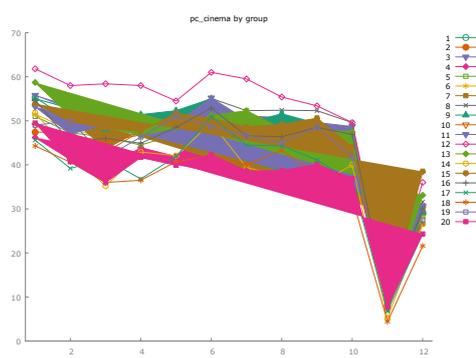


Figure F2 - Attendance to cinema, theatre, classical music and popular music: registered entries and people declarations (regional data)

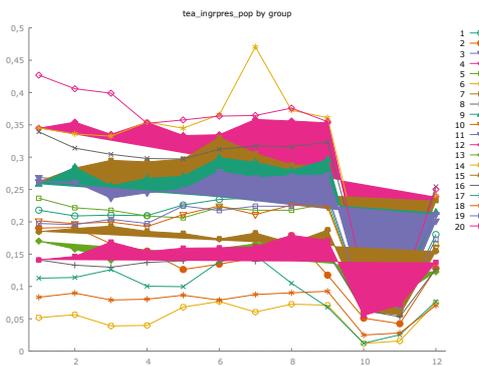
Cinema – Tickets



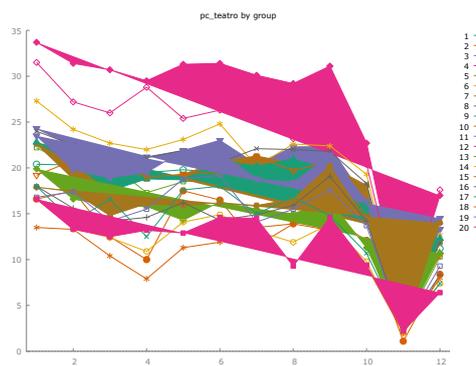
Cinema – Self-reported attendance



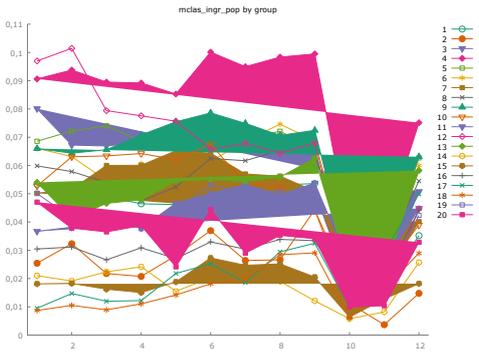
Theatre -Tickets



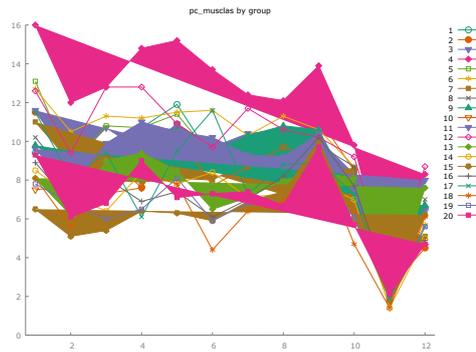
Theatre – Self reported attendance



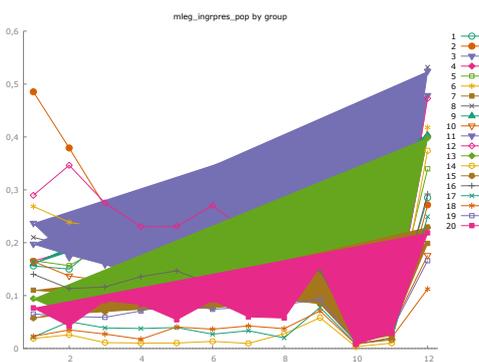
Classical Music – Tickets



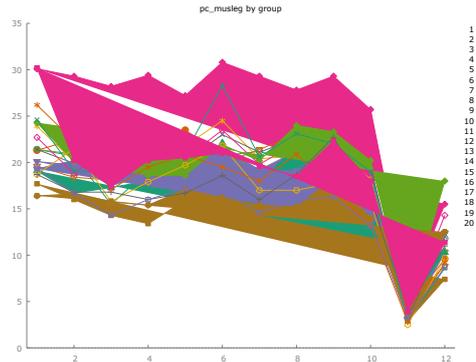
Classical and opera music – Self-reported attendance



Popular Music- Tickets



Popular music – Self-reported attendance



# 7. Report 5

## Digitalization and Cultural Participation across Italian Regions

### OUTLINE

1. INTRODUCTION
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The preparation of this Report involved contributions from researchers at UniCT. A more detailed version of the results from the underlying study (specifically, by R. Cellini and T. Cuccia), including scientific and methodological insights, will be published by the authors in a collective book edited by Springer.

## 1. INTRODUCTION

The lockdown measures implemented in 2020 and 2021 to curb the spread of Covid-19, often referred to as the 'Great Lockdown,' while temporary, had a profound effect on consumer behavior. Social distancing requirements forced people to increasingly depend on Information Technology (IT) tools, likely accelerating the digital transformation of global economies. This raises the question of whether the interplay between innovation and digital transformation, on the one hand, and the shock of the lockdown, on the other, has influenced consumption patterns, particularly in the realm of cultural consumption.

Cultural consumption is a subject of interest. The convergence of IT advancements and lockdown effects has introduced new ways of participating in cultural activities. Notably, online consumption of content such as music, movies, art collections, digital books, and newspapers has increased, largely replacing in-person cultural experiences during the lockdown. In Italy, during 2020, among the 69% of regular internet users, 65.5% used the internet to stream TV shows, videos, and music; 58.1% read newspapers, news, and magazines online; and 16.7% read or downloaded digital books or e-books (ISTAT, 2022a).

As a result, two interconnected research questions emerge: how IT accessibility influences cultural consumption and how the Great Lockdown has impacted online versus in-person cultural participation. The key question is whether the digital consumption of cultural content — which became essential during the lockdown — will permanently replace or merely complement in-person cultural experiences once the pandemic has subsided.

The available, though still preliminary, scientific studies present varying conclusions. According to some researchers (e.g., Feder et al., 2022), the Great Lockdown did not lead to significant structural shifts, and the characteristics of cultural content consumers remained largely consistent before, during, and after the lockdown. On the other hand, other scholars (e.g., Bakhshi et al., 2023) argue that the lockdown has caused notable changes in how different social groups participate in cultural activities, with important consequences for cultural engagement.

This Report seeks to examine some of the available evidence on changes in cultural consumption and contribute to the ongoing debate about whether the Great Lockdown caused lasting structural changes in cultural consumption habits. We first review the results of international studies, followed by an analysis of Italy's specific case. The unique contribution of this Chapter lies in the evidence drawn from a panel dataset covering Italy's 20 regions over the period 2011-22, offering substantial variability across both space and time, which allows for insightful observations.

## 2. CONSUMERS' CULTURAL HABITS, THE LOCKDOWN AND THE INTERNET

A significant body of sociological research has thoroughly explored the Internet's influence on various aspects of social life, including social inclusion, relationships, civic participation, and cultural engagement (Di Maggio et al., 2001; Putnam, 2000). Within this discourse, two contrasting perspectives have emerged: one optimistic, the other skeptical. On the one hand, the Internet lowers information costs for users, expands audiences, and fosters curiosity about new cultural expressions. Digitalization contributes to reducing educational inequalities while also enhancing social relationships, civic involvement, and cultural consumption. On the other hand, more educated users tend to be more efficient at navigating the online environment, using their critical thinking skills to sift through the vast amounts of available information. As a result, the Internet may actually deepen inequalities, aligning with Castells' (1996) prediction of two distinct user groups: those who actively engage and harness the medium's potential and those who passively access only a limited range of applications.

In terms of cultural consumption as a reflection of social relationships, a recent branch of economic literature examines whether the opportunities offered by Internet tools to disseminate cultural information and digital cultural products draw new audiences to traditional forms of cultural participation or, alternatively, reduce traditional audiences by substituting in-person experiences with digital consumption. The first scenario represents the optimistic view, while the second aligns with the skeptical view, which could undermine the social networks crucial to building social capital.

We begin by highlighting two contributions in economic literature that explore the causal link between access to advanced digital technology (such as broadband Internet) and cultural participation, arriving at differing conclusions that reflect the two opposing viewpoints mentioned above. Specifically, we refer to Bauernschuster et al. (2014) regarding the German case, and Geraci et al. (2018, 2022) for the UK case. These studies match data on the type and speed of digital connections in specific areas with individual-level survey data on cultural and social behavior to assess how internet access and speed influence various social activities and specific forms of cultural consumption. Their findings differ.

Bauernschuster et al. (2014) conclude that having broadband internet access at home enhances individuals' social interactions and correlates with higher attendance at theaters and exhibitions. This result can be interpreted in two ways: either new audiences are driving greater demand for performing arts in theaters and exhibitions, or traditional audiences, aided by fast online access to information about cultural performances and digital cultural consumption, are further amplifying the demand for in-person cultural experiences.

In contrast, Geraci et al. (2018, 2022) state in their final version that broadband internet has a minimal effect on cinema and theater attendance. However, preliminary evidence in their working paper suggests that digital accessibility may have a crowding-out effect on cinema attendance. Thus, while Bauernschuster et al.'s findings suggest a positive effect of internet access on in-person cultural participation, Geraci et al.'s results indicate either no impact or negative effects.

The Great Lockdown clearly represented a significant shock that drastically altered the use of IT. In economic research on changes in consumer behavior due to the lockdown, we report two opposing studies on cultural consumption: Feder et al. (2021) and Bakhshi et al. (2023), both focusing on the UK. While Feder et al. (2021) found no significant changes in cultural consumption, Bakhshi et al. (2023) reached different conclusions.

Feder et al. (2021) combine data from two surveys. The first, "DCMS Taking Part Web Panel COVID-19," was conducted in three waves between May and July 2020, with around 1,000 respondents in each wave, asking about 42 cultural activities, ranging from highbrow to lowbrow. Respondents were asked to compare their pre- and post-lockdown habits using the options "less time," "about the same," "more time," or "I never do this." The second survey, "Audience Agency COVID-19 Cultural Participation Monitor," was conducted in several waves during the pandemic (Feder et al. focus on the second wave from February 2021). They categorized consumers into four groups ("Enhancers," "Resilient," "Reducers," and "Non-engaged") based on changes in activity levels. Using various statistical methods, Feder et al. conclude that content preferences, rather than new consumption opportunities driven by technology or the pandemic, largely shaped activity changes. For example, they found that women were more likely than men to be "Enhancers" and that age had complex effects on changes in cultural consumption. Overall, their findings suggest that the pandemic did not fundamentally alter the demographics of cultural audiences but rather exacerbated pre-existing inequalities in cultural participation across socio-economic groups.

On the other hand, Bakhshi et al. (2023) draw on a unique weekly longitudinal survey of UK adults conducted during the early weeks of the Great Lockdown to examine cultural consumption, including music, movies, TV, games, books, magazines, and audiobooks. Their findings reveal that consumption patterns varied during the early lockdown weeks, depending on the nature of the cultural goods and consumers' demographics and socio-economic status. The study indicates that cultural consumption diversified during this period, with lower-income groups particularly accessing a broader range of cultural content through digital platforms.

In summary, the available evidence suggests it is difficult to draw definitive conclusions about both the impact of new IT tools on cultural consumption and the potential added effects of the Great Lockdown. These studies contribute to the broader debate on whether online interactions replace or complement face-to-face interactions. Current consensus in the literature suggests that the division between the physical and virtual worlds is artificial. There is no solid evidence that time spent online reduces face-to-face interactions; in fact, there is a positive correlation between engaging socially both online and offline (Boase and Wellman, 2006). Moreover, individuals often maintain the same social circles in both the physical and virtual spheres (Putnam, 2020; Subrahmanyam et al., 2008; Ellison et al., 2011).

### 3. DATA ON (PASSIVE) CULTURAL PARTICIPATION IN ITALY

This section offers a review of the key findings related to cultural consumption in Italy, as observed from various perspectives. We present evidence drawn from multiple sources: (i) official statistics on aggregate data, which in Italy are provided by ISTAT, the Italian National Statistics Institute (Section 3.1); and (ii) specific surveys conducted on stratified samples of respondents during the Great Lockdown (Section 3.2). These facts form the foundation for our current research.

The latest available aggregate data on cultural participation and access to IT tools are found in ISTAT's BES 2022 Report (ISTAT, 2023).

Regarding cultural participation, ISTAT uses a composite indicator to classify individuals as "active" in out-of-home cultural activities. This indicator measures the percentage of the population (aged 6+) that has engaged in at least three of the following activities in the past year: (1) attending one or more theater performances, (2) going to the cinema four or more times, (3) visiting one or more museums, (4) visiting one or more monuments, or (5) attending one or more live concerts (whether classical or other genres). This composite indicator, referred to as OUT\_CULT in this chapter, has its limitations and can be refined in different ways (see, for example, Bologna and Savioli, 2020), but it provides an initial overview of out-of-home cultural engagement (more detailed data on each specific activity are also available).

Based on the BES 2022 Report (ISTAT, 2023, pp. 88-92), we can summarize the main findings as follows:

The OUT\_CULT indicator fell from approximately 34-35% in 2018 and 2019 to 29.8% in 2020, and then sharply dropped to 8.3% in 2021 due to the lockdown measures imposed by the Italian government starting in March 2020. It partially rebounded to 23.1% in 2022. Therefore, the recovery of in-person cultural participation post-lockdown remains incomplete. It is important to note that the relatively smaller decrease in 2020 and the more substantial decline in 2021 are due to the fact that individuals, when surveyed (in November), report their activities over the previous 12 months. Thus, the impact of the lockdown is more prominently reflected in the 2021 data. As we will demonstrate in the specific contribution of this analysis, participation levels vary significantly across different regions.

Moreover, detailed data reveal that cultural participation differs by age group, with younger individuals generally exhibiting higher levels of out-of-home cultural engagement compared to adults and older populations. However, during the pandemic years, younger people experienced the most significant decline in participation. In no case did the increase in cultural participation in 2022 fully recover to 2019 levels. For the youngest age groups, despite some recovery, participation rates in 2022 remained more than 20 percentage points lower than in 2019. Cultural engagement is also markedly higher among individuals with higher educational qualifications. During the pandemic, the gap in cultural participation between individuals with at least a university degree and those with only compulsory education widened, deepening pre-existing inequalities.

Table 1 provides national-level basic statistics on the *OUT\_CULT* indicator and participation in a subset of specific activities considered in the report and other ISTAT statistics. The table presents data for 2011 (the starting point of our dataset), 2019 (just before the Great Lockdown), and 2021 and 2022, illustrating the lockdown's impact on cultural attendance and the extent of the subsequent recovery.

Table 1 – Outside-the-home cultural participation

	Average (yearly, 2011-22)	2011	2019	2021	2022
<i>OUT_CULT</i>	30.24	35.8	35.1	8.3	23.1
<i>P_Theatre</i>	17.39	22.0	20.3	2.9	12.1
<i>P_Cinema</i>	44.38	53.8	48.5	9.1	30.6
<i>P_Music_classic</i>	8.24	10.1	9.9	2.2	6.5
<i>P_Music_other</i>	17.25	28.4	24.5	5.5	18.7
<i>P_Museum</i>	27.13	29.8	31.8	8.9	22.6

Note: *OUT\_CULT* is defined in text. *P\_\** denote the percentage of population (aged 6+) declaring having attended at least once: theatre, cinema, concert of classic or other music, museum. Note that *P\_Cinema* registers the percentage of population having attended cinema at least once, while the attendance to cinema at least 4 times is required to fulfil a requirement for the *OUT\_CULT* variable. Average reports the mean value over the period 2011-22. Source: ISTAT.

All cultural activities followed a similar trend: in-person cultural participation saw a slight decline between 2011 and 2019, with museum attendance being a partial exception. A significant drop occurred during the Great Lockdown, and by 2022, recovery remained incomplete compared to pre-lockdown levels.

At the same time, access to IT resources steadily increased throughout the decade, with the expansion of these tools potentially having either a positive or negative impact on out-of-home cultural activities. Table 2 presents national-level data for Italy, and as in Table 1, individuals were asked to report their activities over the previous year, making the data directly comparable.

Table 2 specifically shows the percentage of households with Internet access (including broadband) and the percentage of the population aged 6 and above reporting Internet use. According to ISTAT (2023, p. 268), around 76% of the population used the Internet in 2022 (compared to 51.5% in 2011 and 70.4% in 2019). The percentage of people using the Internet daily reached 65.1% in 2022, up from 28.3% in 2011. However, there remain significant and persistent disparities across age groups. While Internet use is near saturation among younger people, older age groups lag behind. Over 90% of individuals aged 11-44 regularly use the Internet, but this percentage drops to 54.2% for those aged 65-74 and falls further to 19.2% for those 75 and older. Still, Internet use rose by 8-9 percentage points across all frequency categories between 2019 and 2022.

Table 2 also provides data on two Internet-related activities connected to cultural behavior: the percentage of people who used the Internet to download music or movies, and those who purchased music or movies online. These activities were chosen as indicators to assess whether digital activities complement or substitute live cultural experiences. Notably, the percentage of people purchasing movies or music online grew from 11% in 2019 to 21% in 2022, while those downloading such content dropped from 49.7% to 37.2% over the same period. During the lockdown, it's likely that new consumer segments, more inclined to purchase than download, turned to the Internet for streaming and listening to music.

Table 2 – Access to informatic resources

	Average	2011	2019	2021	2022
<i>FAM_Internet</i>	69.7	54.5	76,1	81.5	83.1
<i>FAM_Internet_Broadband</i>	67.3	45.7	74.7	79.5	81.7
<i>Regular Internet users</i>	63.1	51.5	70.4	73.3	75.6
<i>Everyday Internet users</i>	44.6	28.3	54.7	63.4	65.1
<i>DOWNL_MM</i>	41.5	43.1	49.7	Na	37.2
<i>ONL_CULT</i>	14.04	16.7	11.0	19.1	21.1

Note: *FAM\_Internet\** denotes the percentage of household declaring to have internet access (or access to the broadband) at home; Regular (/Everyday) internet users denotes the percentage of population (aged 6+) declaring using internet (/declaring a daily usage); *DOWNL\_MM* denotes the percentage of people declaring to having used internet to download music or movies; *ONL\_CULT* denotes the percentage of people declaring to buy music or movies through internet.

### 3.2 Evidence from surveys

We now summarize the findings of two surveys on cultural consumption in Italy during the Covid-19 pandemic: one by Intesa San Paolo with Ipsos (IPSOS-San Paolo Intesa, 2021; 2022) and the other by ISTAT (2022a).

The IPSOS-San Paolo survey focused on how digital technologies affected cultural consumption during the lockdown. Conducted in two waves (Autumn 2020 and Spring 2021) with 1,000 respondents aged 18-70, the survey revealed key trends. Notably, the percentage of individuals reporting significant discomfort due to the lack of live cultural events increased from 37% in the first wave to 47% in the second. Meanwhile, those who said they increased their use of online cultural events decreased from 23% to 16%, likely due to the novelty of online engagement wearing off.

Digital cultural activities, such as virtual concerts, museum visits, and online theater, saw their user base more than double during lockdown, with 12-16% of internet users already engaged in these activities and another 17-25% starting during the pandemic. Initially, there was an "immoderate" use of digital platforms driven by curiosity and the free access to events. However, consumption patterns normalized over time. Half of the respondents indicated they would return to live events

post-lockdown, while 25% expressed a desire to continue online cultural consumption, and 9% planned to shift entirely to online consumption. This latter group was predominantly women with higher education and income, likely due to time constraints.

Digital technologies also introduced a new audience, termed "neophytes" (14% of the sample), who had little cultural engagement before the lockdown. Typically older, with lower income and education, neophytes appreciated the convenience of online culture. In contrast, regular cultural consumers saw digital consumption as a temporary, often frustrating substitute for live events.

Similarly, the ISTAT survey, "Diary of Italians in the time of Covid-19," conducted in two waves (April and December 2020) with 3,000 respondents, revealed shifts in cultural habits. Initially, there was an increase in TV consumption, particularly for news and movies, but by the second wave, 88.7% of people had returned to pre-pandemic viewing habits. Some behaviors, like increased use of mass media, hobbies, and smartphone interactions, persisted into the second wave.

In the following sections, we will analyze regional data to explore the relationship between digital tools and both online and in-person cultural consumption, particularly how this relationship may have shifted due to lockdown restrictions.

## 4. REGIONAL DATA

We now turn to regional data in Italy. First, we present descriptive statistics for the variables under analysis, followed by a multiple regression analysis. Despite being aggregated, the regional data offer valuable insights due to the significant spatial and temporal variability across regions. However, we acknowledge that a longer post-lockdown period is needed to determine whether these observed changes are temporary or permanent.

Italy's twenty regions differ considerably in terms of size (area, population, and aggregate income), and exhibit wide disparities in per-capita income and broader socio-economic indicators, with Southern regions lagging behind. A large body of literature has explored the issue of Italy's economic dualism and the persistent lack of convergence between regions (e.g., Graziani, 1978; Fratianni, 2012). This dualism extends to infrastructure, IT accessibility, and cultural participation, as shown in studies such as Bucci et al. (2021), Benecchi et al. (2023), and Cellini and Cuccia (2019). Additionally, sociological and economic research, following Putnam (1993), highlights that Southern regions tend to have lower levels of social capital, or more bonding rather than bridging social capital, compared to the Northern regions.

The inherent heterogeneity across Italian regions provides a rich dataset with significant variability, all within the framework of shared national institutions. Table 3 presents yearly data and statistics for key variables. The data reflect a steady increase in digital resource access over the period, while cultural participation outside the home—which saw minimal growth from 2011 to 2019, followed by a sharp drop during the Great Lockdown—has only partially rebounded as restrictions eased.

TABLE 3— Mean and Coefficient of variation of the indicators for cultural participation and access to the web over time across the Italian regions.

		Whole period (2011 to 2022)	2011	2019	2021	2022
OUT_CULT	Mean	29.47	35.14	34.13	7.78	22.06
	CV	0.32	0.19	0.17	0.33	0.22
P_theater	Mean	16.60	21.27	19.33	2.8	11.15
	CV	0.39	0.24	0.22	0.27	0.28
P_cinema	Mean	42.62	52.05	46.32	8.65	29.23
	CV	0.29	0.09	0.10	0.22	0.13
P_museum	Mean	26.38	29.09	30.65	8.30	21.57
	CV	0.36	0.29	0.23	0.41	0.28
P_music_class	Mean	8.18	10.19	9.86	2.18	6.18
	CV	0.33	0.23	0.13	0.24	0.20
P_music_other	Mean	17.74	21.82	20.58	3.81	11.12
	CV	0.33	0.17	0.15	0.22	0.23
FAM_internet	Mean	68.72	53.30	75.37	80.55	82.23
	CV	0.15	0.10	0.06	0.04	0.04
FAM_internet_broadband	Mean	66.24	44.59	74.00	78.47	80.84
	CV	0.18	0.13	0.06	0.04	0.04
ONL_CULT	Mean	13.28	16.30	10.09	18.04	20.24
	CV	0.34	0.21	0.23	0.14	0.12

Note: Mean reports the simple average value of the data of the 20 regions; CV is the coefficient of variation across the regions. See Note to Table 2 and 3 for variables' definition.

Examining regional inequality in Italy regarding cultural participation and internet access reveals several key trends. Since 2011, disparities in internet access have decreased, particularly following the Great Lockdown, while inequalities in cultural participation outside the home remained relatively stable in 2022 compared to 2011. Specifically, cultural consumption outside the home saw slight decreases from 2011 to 2019, but this trend stalled post-lockdown, leading to divergent patterns.

Utilizing the concept of sigma-convergence—where the coefficient of variation decreases over time, as discussed by Barro and Sala-i-Martin (1995)—we find that convergence has occurred in internet access among regions, but not in cultural participation.

Several factors contribute to these trends: (i) A larger proportion of digital novices in Southern regions, where access to IT tools is limited, results in a greater tendency for individuals to engage in digital cultural content. (ii) Economic disparities affect cultural participation; lower-income individuals may prefer accessible digital content over costly in-person events. (iii) Higher education levels are necessary for engaging with live cultural content, and ongoing educational disparities between the North and South hinder convergence. (iv) Lower social capital in the South may exacerbate the crowding-out effect of digital over live cultural consumption. (v) The South has fewer

cultural institutions (only 24.4% of relevant entities are located there, ISTAT, 2022b), limiting access to live events.

These findings suggest skepticism about the digital transition's positive impact on in-person cultural consumption in Southern regions, likely due to tighter budgets and fewer cultural offerings. Our analysis aligns with previous studies but focuses on regional rather than individual disparities. While digital consumption differences have narrowed, disparities in live cultural engagement have widened, reflecting the ongoing debate on the effects of lockdown measures on socio-economic cultural consumption disparities.

Moving to a regression analysis approach, we consider a basic regression equation of type:

$$y_{i,t} = \alpha_i + \gamma x_{i,t} + e_{i,t}$$

where  $y_{i,t}$  denotes the variable measuring the cultural participation outside the home in region  $i$  at time  $t$ , and  $x_{i,t}$  denotes the variable measuring the access to informatic resources in region  $i$  at time  $t$ . The vector  $\alpha_i$  denotes the regional 'fixed effects'. We will also present the results of the 'pooled' estimator, with a unique constant term, and the results of the 'between' estimator which resorts to the individual average values over time.

The dataset is a balanced panel with 12 annual observations (2011 to 2022) for each of the 20 Italian regions, totaling 240 observations.

We define variable  $y$  as the synthetic indicator of cultural participation outside the home, labeled `OUT_CULT`, as defined by ISTAT. This indicator includes attendance at cinemas, theatres, concerts, museums, and monuments. Variable  $x$  represents the percentage of people reporting online purchases of film or music, labeled `ONL_CULT`. The basic regression will be expanded to explore different time spans and potential lockdown effects.

It's important to note the exploratory nature of this analysis. Even with statistically significant coefficients, these relationships indicate correlation rather than causation.

Table 4 (part A) presents results from the pooled OLS, fixed-effect, and between estimations of the basic regression. The findings indicate that the between estimator's coefficient is positive and significant, while the fixed-effect estimator's coefficient is negative and significant, suggesting that although regions with greater online cultural consumption show higher levels of cultural participation outside the home, the trends over time within individual regions diverge. In essence, in-person and online cultural consumption appear complementary across regions, consistent with literature on various social activities (e.g., Robinson and Kestnbaum, 1999; Nguyen et al., 2014; Sabatini and Sarracino, 2017). However, within regions, these two forms of consumption trend oppositely over time, functioning as substitutes.

Table 4 (part B) analyzes the impact of online activity on in-person cultural participation before and after the lockdown. The explanatory variable  $x$  is divided into two periods (up to 2019 and from 2020 onward) using an interaction with a dummy time variable. The sign of the explanatory variable remains consistent across both periods (positive for spatial variation and negative for temporal variation), but its statistical significance varies. In summary, the positive correlation between in-person and online activities across regions is linked to the pre-lockdown period, while the negative correlation over time is associated with events during and after the lockdown.

Overall, we interpret that cultural participation outside the home and online purchases of cultural products are fundamentally complementary activities. The observed substitutability is statistically significant only during and shortly after the lockdown period.

Table 4 – Cultural participation in presence and on-line cultural activity

	Pooled-OLS	Fixed-Effects	Between
Obs	240 (N=20, T=12)	240 (N=20, T=12)	20
Part (A)			
C	35.75 (19.30)***		-15.77*** (-3.38)
ONL_CULT	-0.47*** (-3.57)	-0.97*** (-9.75)	+3.41*** (9.77)
R2	0.051	0.56	0.84
Test on fixed effects		$F_{19, 219} = 13.14$ $p = .000$ ***	
Part (B)			
C	24.59 (13.88)		-9.96 (-1.54)
ONL_CULT_Until 2019	0.70*** (4.79)	-0.02 (-0.22)	+4.23*** (5.78)
ONL_CULT_Since 2020	-0.25** (-2.36)	-0.72*** (-8.87)	+0.60 (0.79)
R2	0.39	0.73	0.85
Test on fixed effects		$F_{19, 218} = 13.88$ $p = .000$ ***	
Test on x-coeff	$F_{1, 237} = 133.53$ $p = .000$ ***	$F_{1, 218} = 134.00$ $p = .000$ ***	$F_{1, 17} = 1.63$ $p = 0.22$

Note: Dependent variable is OUT\_CULT; t-stat in parenthesis. \*\*, \*\*\* denote statistical significance at the 5, 1%; test on x-coeff evaluates the equality of the slope coefficient of the ONLCULT variable until 2019 and since 2020.

We also conducted regressions using different empirical approaches for the dependent and explanatory variables. First, we analyzed specific in-person cultural activities—such as attendance at cinemas, theatres, museums, and concerts (both classical and pop music)—as the dependent variable. This allows us to determine if online activity affects various forms of outside-the-home cultural participation differently. The explanatory variable was divided into pre- and post-lockdown periods. Results are presented in Table 5.A. Since fixed effects are statistically significant in all instances, we have excluded the biased pooled-OLS estimates.

Positive correlation across regions is confirmed for all types of in-person cultural participation, especially in the years leading up to the lockdown. Notably, this association is weaker (and not statistically significant) for more popular activities like cinema and pop music concerts, while a clear complementarity between online and in-person cultural consumption is evident for highbrow cultural activities.

Once again, significant substitutability between online cultural purchases and in-person participation occurs only during and after the lockdown, as illustrated by the synthetic indicator of cultural participation used in our basic regression in Tables 5..

Table 5. Effect of on-line cultural purchases on different in-person cultural activities

		P_Theater	P_Cinema	P_Museum	P_Music_class	P_Music_other
Between	<i>ONL_CULT_</i> Until 2019	1.65* (1.76)	0.83 (0.76)	5.22*** (5.83)	0.80** (2.64)	0.95 (1.35)
	<i>ONL_CULT_</i> Since 2020	2.27 (0.80)	2.59 (0.77)	0.35 (0.13)	0.37 (0.41)	-0.11 (-0.05)
Within	<i>ONL_CULT_</i> Until 2019	0.10 (1.49)	0.07 (0.40)	-0.18* (-1.76)	0.06* (1.82)	-0.01 (0.13)
	<i>ONL_CULT_</i> Since 2020	-0.44*** (-8.67)	-1.07*** (-8.63)	-0.66*** (-8.79)	-0.17*** (-6.36)	-0.51*** (-9.38)

Next, we examine whether the synthetic indicator of cultural participation (*OUT\_CULT*) is influenced differently by the percentage of households with internet access (*FAM\_internet*) and those with broadband access (*FAM\_internet\_bb*), irrespective of how they use the internet. Given the high correlation between these two access variables, we run separate regressions, treating each as the explanatory variable in turn. Table 6 presents the results, focusing solely on the slope coefficients.

The positive correlation between online access and in-person cultural participation persists, with the strongest association linked to broadband access. Regions with better internet resources tend to have higher levels of in-person cultural participation. Again, the negative correlation between online activity and in-person cultural engagement emerges following the lockdown shock.

Table 6. Access to Internet and in-person cultural participation

	Between	Within
<i>FAM_internet_</i> Until 2019	0.85 (1.66)	0.05 (0.95)
<i>FAM_internet_</i> Since 2020	2.80 (1.55)	-0.13*** (-3-13)
<i>FAM_internet_bb_</i> Until 2019	0.99** (2.28)	0.03 (0.61)
<i>FAM_internet_bb</i> Since 2020	2.19 (1.34)	-0.15*** (-4.69)

Note: The table reports the coefficient of the explanatory variable (*FAM\_internet* or *FAM\_internet\_bb*), with its *t*-statistics in the multiple regression equation with *OUT\_CULT* as the dependent variable.

## 5. CONCLUDING REMARKS

This Report on regional data in Italy highlights significant disparities in IT access and cultural participation, generally revealing a positive correlation between the two. Over time, we observe limited substitution between in-person and online cultural consumption, except during the Great Lockdown. While regional differences in IT access are decreasing, disparities in in-person cultural participation remain. The internet's expansion has not reduced the gap in cultural participation, emphasizing the need to consider other factors such as education, income, and the availability of cultural institutions.

The Great Lockdown initially increased the use of IT tools for cultural consumption among existing enthusiasts, but prolonged restrictions caused frustration, leading some to withdraw due to negative associations with the lockdown. However, there is no conclusive evidence that the internet has diminished live cultural participation or social interactions.

The internet's role in democratizing cultural content, often celebrated in literature, appears limited. This finding is important not only for understanding cultural participation but also for its socio-economic impacts regarding social inclusion and civic engagement (OECD, 2022).

Online interactions fundamentally differ from face-to-face ones, especially in cultural contexts. Live participation offers immersive experiences that engage all senses and foster connections, while digital consumption provides flexibility and lower costs. Digital interactions allow for anonymity and can reduce hierarchies, but they often lead to social clustering based on shared interests and opinions, exacerbated by algorithms that prioritize similar views (Putnam, 2020). Consequently, nuanced discussions and serious exchanges of differing viewpoints are less common online. Sabatini and Sarracino (2017) note that online social networking enhances well-being when it promotes face-to-face interactions, but its effects turn negative when it replaces them, potentially eroding social capital, which is vital for local development.

The trend towards individual cultural consumption predates Covid-19, evolving alongside the rise of the internet and social platforms over the past two decades. This shift has coincided with declining social participation in many advanced economies, independent of digitalization (Bartolini et al., 2013; Costa and Kahn, 2003; Sarracino, 2010). Putnam's "Bowling Alone" (2000; 2nd ed. 2020) documents this decline, linking it to increased mobility, urbanization, time and financial pressures, reduced religious involvement, and declining union membership.

Both live events and digital cultural experiences need adaptation. Digital tools can enhance in-person events by providing additional content before, during, and after the experience. Accessible digital information can help reduce the inherent information asymmetry of cultural products, improving prior knowledge and addressing the challenges of experience-based goods.

To maximize these benefits, it is crucial to tackle various forms of the digital divide. While technical access to IT may no longer be the main issue (the first digital divide), acquiring the skills needed for effective digital interaction remains a significant challenge (the second and third digital divides, Scheerder et al., 2020). UNESCO supports educational initiatives to promote equal access to digital

tools and content through its 'Digital Guidelines' (2017), a position endorsed by the European Commission's Next Generation EU program, approved in 2021.

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## 8. REPORT 6

# Beyond the Italian inner areas: A spatio-temporal Analysis of Depopulation Processes

### OUTLINE

1. INTRODUCTION
  2. THE ITALIAN NATIONAL STRATEGY FOR INNER AREAS
  3. SOCIAL AND POLITICAL ENGAGEMENT IN ITALIAN INNER AREAS
  4. DATA
  5. METHODOLOGY
  6. THE CASE STUDY OF SICILY
  7. DISCUSSION AND CONCLUSION
- REFERENCES

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The content of this Report was developed with contributions from the research unit of UniCT. Specifically, the Report is written by Francesca Bitonti.

## 1. INTRODUCTION

For decades now, phenomena of depopulation have been occurring in various areas of the world, caused by variations in economic cycles that negatively impact regions where the morphology and accessibility of the territories are more challenging, making attempts at reconversion and technological adaptation more difficult (Mazza et al., 2018). Phenomena such as the economic and industrial growth after World War II or the more recent global economic crisis of 2011 have led to polarizations within national territories, manifested by the convergence of economic activities, and consequently, labor forces, towards large urban areas and industrial hubs capable of ensuring higher profitability.

These changes have led to phenomena of dehumanization that have affected areas characterized by morphology and geographical positioning, making accessibility to essential services and digital and transportation infrastructures particularly difficult. Persistent emigration, mainly involving individuals of working age, has completely revolutionized the structure and dynamics of the remaining population, leading to a collapse in birth rates and a progressive aging, which in turn exacerbate depopulation through increased mortality rates (Collantes & Pinilla, 2004). However, depopulation not only represents a self-reinforcing phenomenon but also a factor that further reinforces the contraction of public and private services, the reduction of investments, and the loss of jobs, giving rise to a downward spiral of marginalization of areas less prepared to react to the economic and technological changes occurring on a global and local scale (Franklin, 2021).

Implications for diminishing social and cultural life are straightforwardly obvious (see also ISTAT, 2022).

Despite socioeconomic, cultural, and geographical heterogeneity, and regardless of the territorial classification methods applied to identify the most fragile areas and the names attributed to them, such as “inner peripheries” at the European Union level (ESPON, 2017b), “inner areas” in Italy (Barca et al., 2014), “Kaso chiiki” in Japan (Feldhoff, 2011), or simply rural areas or fragile areas in countries where their identification is mostly based on parameters of population density and urbanization, neglecting socioeconomic and accessibility indicators), there are several examples of territories in various countries around the world affected by similar dynamics of chronic demographic contraction.

This is the case of rural counties in the Midwest and Great Plains of America (Butler et al., 2020; Johnson et al., 2005; Johnson & Lichter, 2019; Leonard & Gutmann, 2005; Lichter & Johnson, 2020; Lichter & Ziliak, 2017; Nickels & Day, 1997). In these areas characterized by a long agricultural tradition, there has long been talk of the so-called “rural flight”, which involves the progressive depopulation of entire villages and rural areas caused by technological advancements in the agricultural sector, resulting in a decreased demand for local labor and consequent emigration to major urban centers (Leistritz & Ekstrom, 1986).

Similarly, rural areas in China also experience constant outflows of younger population segments, leading to dynamics of aging and socioeconomic marginalization for those who remain (Cheng et al., 2019; Feng et al., 2020). Even mountainous areas and numerous islands in Japan, identified with

the name “Kaso chiiki”, meaning “very depopulated area”, witness persistent demographic decline mainly due to the continuous exodus of young and adult individuals since the early 1960s (Fukuda & Okumura, 2020; Inoue et al., 2022; Kim, 2021; Shiode et al., 2014), within a national context of demographic contraction and “super-aging” (Muramatsu & Akiyama, 2011), where one in ten people is over eighty years old.

In Europe, depopulation affects several countries regardless of the economic, political, and social context: among the countless case studies in literature, there are contexts belonging to the Mediterranean basin such as Spain (Matanle et al., 2022; Pinilla & Sáez, 2017) and Italy (Basile & Cavallo, 2020; Reynaud & Miccoli, 2018; Scrofani & Accordino, 2023), as well as countries in Northern and Continental Europe like Germany (Gregory & Patuelli, 2015), the Netherlands (Ubels et al., 2019), Poland (Bański & Mazur, 2016), and the United Kingdom (Bibby & Shepherd, 2004), and Eastern areas such as Lithuania (Daugirdas & Pociute-Sereikiene, 2018) and Montenegro (Mickovic et al., 2020).

In several countries, as pointed out, assessing socioeconomic gaps among regions is subordinated to the population density measurement (and regional classification based on this indicator). The underlying assumption is that regions with lower population densities tend to exhibit lower socioeconomic performance. While this conceptual framework generally holds true, the reality may be more nuanced than a straightforward correlation between population decline and economic indicators. While rural-to-urban migration is a common phenomenon globally, studies have revealed variations in the pace of decline across rural areas. For instance, Rizzo (2016) observed slow population growth in certain rural areas of southern Italy, attributed largely to investments in agritourism, termed “Territori Lenti” (slow territories) by Lanciarini (2005). Similarly, Collantes et al. (2014) highlighted the impact of pre-2008 mass immigration on rural areas in Spain, which helped counter depopulation trends in some regions. Thus, it could be inaccurate to generally equate low population density with social or economic marginalization.

## 2. THE ITALIAN NATIONAL STRATEGY FOR INNER AREAS

Drawing inspiration from the EU’s concept of “inner peripheries” (ESPON, 2017a), the Italian National Strategy for Inner Areas (SNAI), initiated in 2012, devised its own interpretation of inner peripheries, termed “inner areas” (IAs), focusing solely on proximity to specific essential services (Barca et al., 2014). A large part of the Italian territory is characterized by a spatial organization based on “minor centres”, often small in size, which in many cases are not able to guarantee residents the accessibility to the basic services. SNAI categorizes all Italian municipalities on the basis of their distance from the centres providing services, defined as “poles”, the identification of which constitutes the first step of the classification process. Poles are defined as municipalities able to simultaneously offer the presence of:

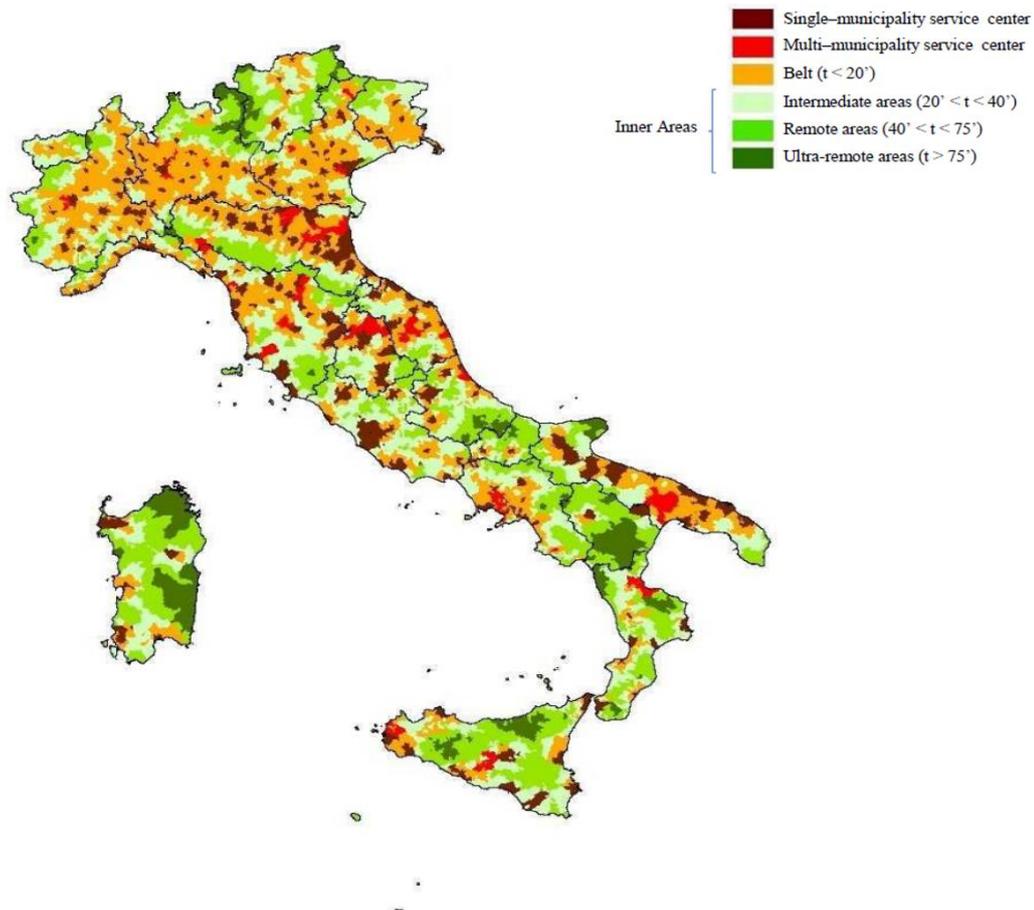
1. at least one hospital with an emergency department;
2. good offer of secondary schools;
3. one railway station (Italian silver level).

The other municipalities are then classified according to the travel time residents must spend to reach the nearest service provider center:

1. Belt areas, travel time under 20 minutes;
2. Intermediate areas, between 20 and 40 minutes;
3. Remote areas, between 40 and 75 minutes;
4. Ultra-remote areas, with a travel time above 75 minutes.

IAs are defined as all the municipalities which travel time is above 20 minutes: i.e. intermediate, remote, and ultra-remote areas (Figure 1). The distances considered are the road distances, measured in terms of time with respect to ideal travel conditions. According to this classification, IAs cover 60% of the national territory, 52% of all municipalities, and 22% of the Italian population (De Matteis, 2013). The municipalities have recently been reclassified. The new classification was published at the beginning of 2022. The method used has not changed. After identifying the poles again based on the same criteria, the distances were recalculated with more advanced GIS methods and more accurate data.

SNAI has, as the ultimate objective, the reversal of the demographic trend, both in terms of number of residents and in terms of composition by age and birth rate. Therefore, the demographic situation is considered as the central issue to be addressed in formulating an economic development plan for IAs. Despite this, no demographic indicator is considered to identify IAs affected by chronic population drain. The model proposed by SNAI has received appreciation in the scientific debate, both for the proposed classification work and for the particular definition of “inner area”. At the same time, despite the extensive premises accompanying the SNAI processing, it appears to be strongly focused on the provision of the three services indicated. The same classification model proposed, based solely on distances from the municipalities considered “poles” determines the categorization of the whole national territory, neglecting the differences in terms of demographic, economic conditions, and infrastructural accessibility. The Italian classification represents a condensed version of the EU’s inner peripheries classification. Within Italy, this restricted consideration of the complex factors contributing to depopulation has sparked scholarly discussions on the distinction between geographical peripherality and the broader notion of marginalization (Oppido et al., 2023; Scrofani & Accordino, 2023; Vendemmia et al., 2021), as well as debates on the methodological inconsistencies between the definition of IAs and the range of services used to identify them (Scrofani et al., 2019; Vendemmia & Kërçuku, 2021).



**Figure 1** SNAI classification of the Italian municipalities. Source: Nota Tecnica NUVAP (2022).

For instance, there remain some inconsistencies such as that, while recognizing that inland areas are affected by the exodus of young people, SNAI still adopts indicators such as health services, which are of little significance in terms of improving the supply of services that create opportunities to prevent this. Consequently, alternative approaches have been proposed, incorporating various socioeconomic indicators, mobility patterns (Ferretti et al., 2022; Galderisi et al., 2022; Vendemmia et al., 2021), and knowledge management considerations (Moretto et al., 2022), aiming to capture the multifaceted nature of the EU's inner peripheries concept.

The present report describes the initial phases of a more general project (for the list of the related publications see Appendix A) aimed to provide a more articulated classification of IAs, arriving at a representation of the municipalities capable of going beyond the availability of the three services of general interest (schools, hospitals, stations), considered by the SNAI as essential to ensure territorial cohesion and the development of disadvantaged areas. In particular, the new classification should be able to consider the temporal evolution of the demographic dynamics affecting the territories, the economic potential of the left-behind population in terms of potential demography, and the multi-scale dimension of the socioeconomic phenomena interacting with the demographic conditions of the territories. The classification proposed is intended to be non-competing, rather alternative to that of SNAI. It should be clarified, however, that our method is completely different from the SNAI one, because it is based on an original workflow and on a

different theoretical premises (with special attention given to the demographic profile of the territories), as well as on a much higher number of indicators.

### 3. SOCIAL AND POLITICAL ENGAGEMENT IN ITALIAN INNER AREAS

The Italian IAs represent territories characterized by low population density and limited accessibility to essential services. Despite their structural challenges, these areas have become the focus of political and social experimentation aimed at strengthening territorial cohesion and sustainable development (Barca, 2012; Lucatelli et al., 2016). The involvement of local communities has emerged as a crucial factor for the success of these interventions, as it promotes active citizen participation and facilitates dialogue between institutions and civil society (Cersosimo & Wolleb, 2018).

Local and regional institutions in IAs play a pivotal role in the implementation of public policies. Since 2014, with the adoption of SNAI, these institutions have been at the forefront of multilevel governance processes, where collaboration between different actors – from the national to the municipal level – is essential for the success of development initiatives (Cavallo Perin & Giacometti, 2017). In particular, the involvement of local actors has led to greater responsiveness to the specific needs of the territory, as demonstrated by case studies from Southern Italy, where inter-municipal cooperation has improved access to health and education services (Casula, 2019; De Matteis et al., 2021).

A distinctive feature of interventions in the IAs is the promotion of social innovation through civic participation. Projects like community cooperatives, born in Tuscany and Calabria, have exemplified how communities can take a proactive role in managing local resources, creating new economic and social opportunities (Borzaga et al., 2020). This type of participation not only fosters social inclusion but also helps develop a collective sense of belonging and shared responsibility for the future of the territory (Ventura et al., 2018).

An emblematic example is the Madonie IA in Sicily, where the local population has developed initiatives related to sustainable agriculture and rural tourism, creating new pathways for economic development (Azzaro et al., 2020). Similarly, in the Valle del Crati IA in Calabria, the direct involvement of the population in territorial planning decisions has led to a significant reduction in youth emigration and the enhancement of local cultural heritage (Coppola & Ferrara, 2021).

Political engagement in IAs has also been seen as a tool to reduce territorial and social inequalities. According to the work of Sotte and Salvatici (2016), the historical marginalization of these territories has exacerbated significant gaps not only in economic terms but also in access to essential services. However, targeted interventions like those in the Central Apennines have shown that strengthening the social fabric and improving service accessibility are key to reducing these inequalities (Camagni et al., 2020; Lucatelli & Truglia, 2020).

Another relevant case is represented by the IAs in Friuli Venezia Giulia, where citizens' participation in development processes has led to economic regeneration based on ecological and sustainable agriculture (Reho et al., 2022). Similarly, in the mountainous areas of Piedmont, participatory

governance initiatives have facilitated the creation of inter-municipal solidarity networks, promoting not only economic growth but also social cohesion (Carrosio, 2013).

Despite the successes, social and political engagement in IAs still faces numerous challenges. Administrative fragmentation, lack of financial resources, and limited continuity of long-term policies pose significant obstacles to the full realization of SNAI objectives (Cecchi, 2021).

#### 4. DATA: ACQUISITION AND PREPARATION

The first steps of the research flow involved the acquisition of a big number of different types of data coming from several official sources. The gathered information spanned geographical, population, real estate, income and living conditions data referred to different geographical levels (i.e., regional, municipal, sub-municipal etc.), different populations (namely, natives, immigrants, residential units etc.) and different aggregation levels (i.e., macro- and individual micro-level data). The data sources exploited included official resources as the Italian General Population Censuses, the population intercensal reconstructions provided by the national institute for official statistics (Istat), the open data portal maintained by the Italian Ministry for Economics and Finance, the Real Estate Market Observatory (OMI) database maintained by the Italian Revenue Agency, the Eurostat EU-SILC database on income and living conditions of immigrant groups and population registers, but also innovative sources such as Google Maps for geocoding activity, and maps and various geographical information download. Given the heterogeneity in the data analyzed, the preparatory phases of the project included also their integration in tailored datasets exploitable for specific tasks. Further data elaborations involved the geocoding of residential addresses through the querying of the Google Maps Application Programming Interface, record linkage to join records from one data source with another that describes the same entity (i.e., data matching) and areal weighted interpolation. The last procedure is one of the most common forms of spatial basis change for socioeconomic and demographic data, which transfers data from one set of reporting zones (also termed “source”) to a second, independent set (termed “target”) (Goodchild et al. 1993). In particular, it allowed to redistribute the different geographic zone-based data (e.g., census tracts and OMI areal units) to a regular spatial grid composed by squared cells. The implementation of the areal weighted interpolation was justified by the arbitrary nature of the various geographical reporting zones, which immediately leads to difficulties known as the modifiable areal unit problem (MAUP) (Openshaw 1984; Openshaw and Taylor 1979), that is, the dependence of spatial analysis results on both the scales and the methods used to create areal units.

## 5. METHODOLOGY

### *Concepts of Potential Demography*

Potential demography is a subfield of demography that focuses on the potential of a population to achieve its full life expectancy. It was first developed in the 1940s by Liebmann Hersch. According to potential demography, the future of a population can be considered as an economic asset, and a population with more future years (because it is young and/or in good health) can be deemed “wealthier”, indicating high economic potential (Blangiardo & Rimoldi, 2012). Evaluating the future of a population is determined by calculating its “potential years of life” (PYL), a measure first introduced by Hersch (1944). PYL can be considered as the sum of life expectancies of all its members or as the number of years that a person could live if they were to experience the age-specific mortality rates of a reference population. During a year, PYL increases through births and net migration, while decreasing due to the “consumption” of remaining years of life (due to the passage of time) and deaths (Blangiardo, 2012). In other words, the differences between two populations’ PYL can be caused by heterogeneities in their age structures, in fertility and survival profiles, or by a differential in the ability to attract other populations (net migrations). Hersch’s fundamental idea was simple: for an individual of a specific age  $x$ , their PYL is represented by life expectancy,  $e_x$  (Panush & Peritz, 1996). If the age distribution of a population is given by  $P_x$ , then:

$$PYL = \frac{1}{2} \sum_{x=0}^{100+} P_x (e_x + e_{x+1}) \quad (1)$$

The PYL can be divided in several meaningful ways. Thus, following the indication of Panush & Peritz (1996), the PYL spent in working age is:

$$PYL_W = \frac{1}{2} \sum_{x=20}^{64} [P_x (e_{x:\overline{65-x}} + e_{x+1:\overline{65-x-1}})] + e_{20:\overline{65-20}} \cdot l_{20} \sum_{x=0}^{19} P_x L_x^{-1} \quad (2)$$

where  $e_{x:\overline{65-x}}$  is the expected number of years lived before 65 years by a person currently aged  $x$ ,  $l_{20}$  are the survivors at 20 years and  $L_x$  are the years lived at age  $x$ . PYLs can be considered as the years of life that the current population has a probability to live in the future.

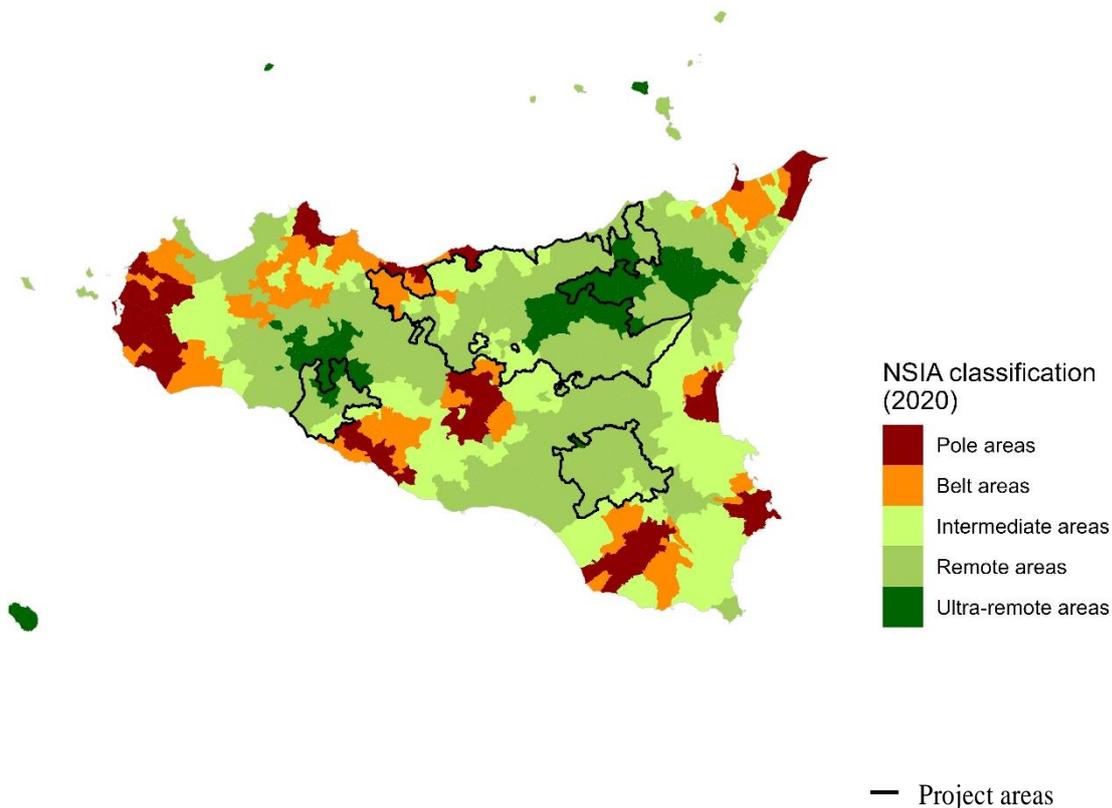
Conventional measures of population ageing, such as the old-age dependency ratios, are often used as proxy indicators of economic dependency. Other measures can provide a more nuanced picture by taking account of increased life expectancy of various age groups, as the  $PYL_W$ . Moreover, the PYL eliminates the possible abrupt changes of conventional dependency ratios (for an exemplificative comparison see the Appendix B).

## 6. THE CASE STUDY OF SICILY

The case study selected for the present report is represented by the southern Italian island of Sicily. According to the 2020 SNAI classification ([Dipartimento per le politiche di coesione - Mappa Aree Interne 2020 \(governo.it\)](https://www.governo.it)), the Sicilian IAs include 310 of the 390 municipalities of the region (areas coloured in shades of green in Figure 2).

*The demographic profile of the Sicilian municipalities in relation to the SNAI classification*

Among them, 34 municipalities have been classified as ultra-remote areas and are mainly located in



**Figure 2** SNAI classification of Sicilian municipalities updated in 2020. Source: authors' elaboration on SNAI data. Note: for ease of representativeness, some of the Sicilian isles have been removed from the current figure.

the north-eastern and western inland areas (without considering the minor isles). Between 2014 and 2022, SNAI selected 6 project areas (PAs) among the Sicilian IAs: Calatino, Madonie, Nebrodi,

Terre Sicanie, Valle del Simeto – Etna and Troina<sup>1</sup>. The PAs are groups of municipalities, intended as pilot areas, where targeted actions to counter territorial marginalization are to be implemented. For each PA, a framework program agreement (ApQ) is established, outlining all the interventions to be carried out, the allocated financial resources, the scheduling of activities, and the expected results associated with each intervention (Tantillo & Lucatelli, 2018).

IAs together account for the 75.64% of the whole area of the region, while hosting almost half (47.84%) of the total residing population in 2020 (Table 1). Similar figures highlight the importance of IAs both in geographical and demographic terms.

**Table 1** Territorial area and population counts in Sicilian SNAI areas. Percentage values in brackets.  
Source: authors' elaboration on SNAI data.

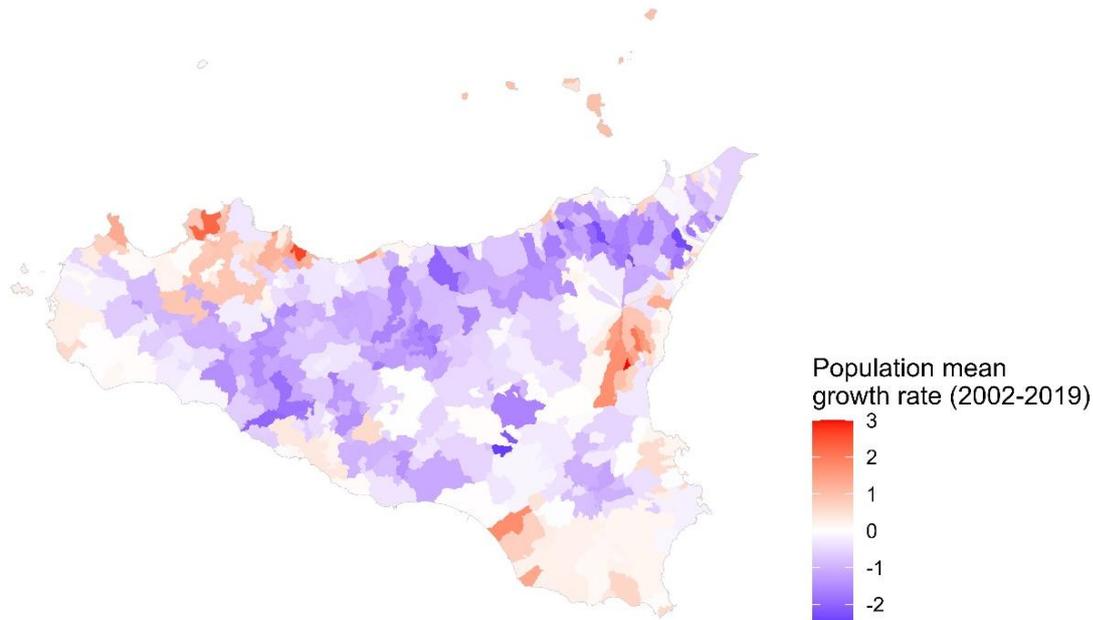
SNAI classification	Geographic area (km <sup>2</sup> – 2019)	Total population (2020)
Pole areas	2882.30 (11.16)	1758272 (36.38)
Belt areas	3409.22 (13.20)	763426 (15.79)
Intermediate areas	6584.51 (25.50)	1151185 (23.82)
Remote areas	10749.76 (41.61)	1059083 (21.91)
Ultra-remote areas	2206.71 (8.53)	101739 (2.11)
Sicily	25832.54 (100.00)	4833705 (100.00)

In Sicily during the last decades, the economic globalization and the expansion of urban areas have aggravated the contrast between the coastal metropolitan cities which offer public and private services (Palermo, Catania, and Messina) and the depopulation of inland areas, historically characterized by the presence of agricultural activities (Scrofani & Novembre, 2015), as illustrated in Figure 3. These areas often are inaccessible and sometimes unknown to foreigners and suffer from economic and cultural marginalities. The census data from the last three decades highlighted that the local population has shown a progressive tendency to concentrate along the Northern and Eastern coasts, especially in the vicinity of the large metropolitan centres (Bitonti et al., 2023). This

<sup>1</sup> The Sicilian PAs include the following municipalities:

- Calatino: Caltagirone, Grammichele, Licodia Eubea, Mineo, Mirabella Imbaccari, San Cono, San Michele di Ganzaria, Vizzini;
- Madonie: Alimena, Aliminusa, Blufi, Bompietro, Caccamo, Caltavuturo, Castelbuono, Castellana Sicula, Collesano, Gangi, Geraci Siculo, Gratteri, Isnello, Montemaggiore Belsito, Petralia Soprana, Petralia Sottana, Polizzi Generosa, Pollina, San Mauro Castelverde, Scillato, Sclafani Bagni;
- Nebrodi: Alcara Li Fusi, Caronia, Castel di Lucio, Castell'Umberto, Frazzanò, Galati Mamertino, Longi, Militello Rosmarino, Mirto, Mistretta, Motta d'Affermo, Naso, Pettineo, Reitano, San Fratello, San Marco d'Alunzio, San Salvatore di Fitalia, Sant'Agata di Militello, Santo Stefano di Camastra, Tortorici, Tusa;
- Terre Sicane: Alessandria della Rocca, Bivona, Burgio, Calamonaci, Cattolica Eraclea, Cianciana, Lucca Sicula, Montallegro, Ribera, San Biagio Platani, Santo Stefano Quisquina, Villafranca Sicula;
- Valle del Simeto - Etna: Adrano, Biancavilla, Centuripe.
- Troina: Agira, Assoro, Calascibetta, Catenanuova, Cerami, Gagliano Castelferrato, Leonforte, Nicosia, Nissoria, Regalbuto, Sperlinga, Troina, Valguarnera Caropepe, Villarosa.

trend has accentuated the differences between urbanized areas, and inland areas, which are even more isolated, scarcely populated and almost completely lacking in basic services.



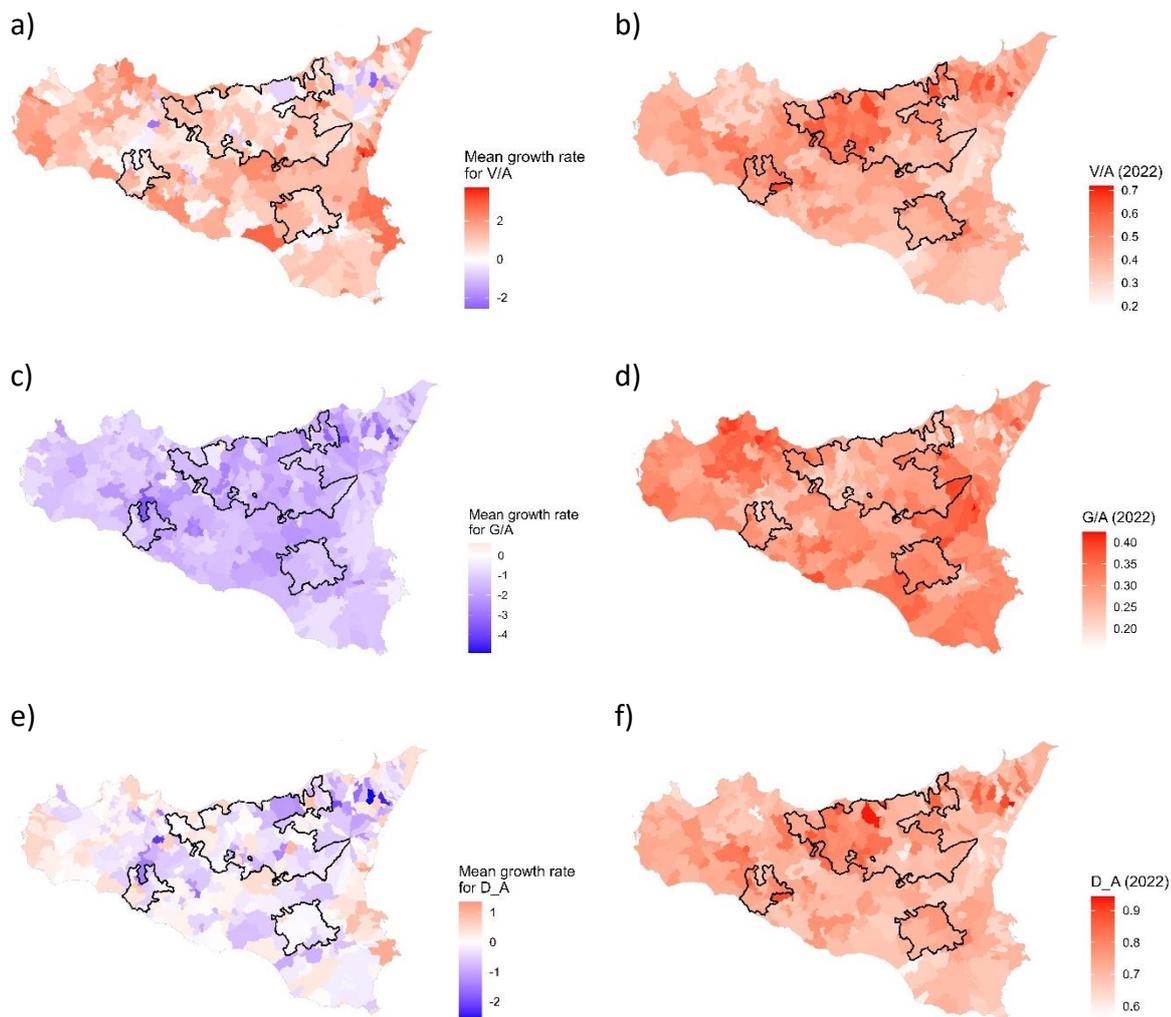
**Figure 3** Population mean growth rate during the period 2002-2022 in Sicily. Source: authors' elaboration on Istat data. Note: for ease of representativeness, some of the Sicilian isles have been removed from the current figure.

According to our elaborations based on Istat data, just the 20.5% of the Sicilian municipalities has registered a positive population mean growth rate in the period 2002-2022 (i.e. 80 municipalities out of 390). Moreover, dividing into age classes the population residing in each municipalities, it is possible to assess that the areas recording an average growth in population between 2002-2022 have, on average, a higher share of young and adult people in 2022 compared to the areas registering population loss (Table 2). This means that the municipalities affected by depopulation have been losing the active (or active in the short run as regard young persons) part of the population. In other terms, less and less working-age individuals are left to support the increasing share of elderly. Areas losing and gaining population over time not always coincide with IAs and a heterogeneous dynamics is recorded also across IAs (Barca et al., 2014). In our opinion, the consideration of a similar "demographic distress" should be considered in the definition of IAs.

**Table 2** Population structure of Sicilian municipalities in 2022 based on the population mean growth rate for 2002-2022. Source: authors' elaborations on Istat data.

Population mean growth rate (2002-2022)	Young people [0-19]	Adult people [20-65]	Old people [65+]
Positive	18.9%	59.8%	21.2%
Negative	16.6%	57.7%	25.6%

Another relevant dimension to consider is, in our thoughts, the comparison between the temporal dynamics and the static situation (e.g. referring to a single year) of the demographic change involving the different municipalities. The areas experiencing systematic demographic drain across time should be considered in different terms with respect to areas affected by contingent loss of active parts of their population. The mean growth rates between 2002 and 2022 of different dependency indices, along with their values recorded in 2022 illustrated in Figure 4 highlight the discrepancies between the temporal variation (subfigs.4.a-c-e) and the static values (subfigs.4.b-d-f) of the same indicator. The values reported in the right-hand side maps refer to 2022 and highlight a higher demographic burden for people in the working-age class in IAs and especially in PAs (contoured by black solid lines).



**Figure 4** Dependency ratio and its components (as mean growth rates between 2002-2022 in subfigs.4.a-c-e and as annual values in 2022 in subfigs.4.b-d-f) in Sicily. Note: G = population aged [0,19]; A = population aged [20,65); V = population aged [65+); Dependency ratio:  $D_A = V/A + G/A$ . PAs contoured by black solid lines. Source: authors' elaboration on Istat and SNAI data.

Roughly speaking, the lower proportions of young people (G) and the higher proportions of old people (V) over the working-age individuals (A) emerging in IAs (and PAs in particular) indicate the efficacy of the current SNAI classification. Yet, looking at the left-hand side maps, the situation becomes more complex. Indeed, the variation over time of the same indicators illustrated for 2022 configures a multifaceted situation where the increasing burden of elderly over working people and the youngsters drain appear heterogeneous. Indeed, the areas characterised by an average increase in the demographic burden do not always correspond to the PAs selected among the IAs identified according to the current methodology. This consideration is also confirmed by comparing the mean growth rates (2002-2022) of selected dependency ratios between IAs and PAs, grouped together respectively (Table 3). The proportion of elderly over the total population, adults and young people

has increased (on average) more in IAs than in PAs. On the other side, the proportion of those aged [0,19] has decreased, in mean terms, more in PAs than in IAs.

**Table 3** Comparison between the mean growth rates (2002-2022) of selected dependency ratios between IAs and PAs. Note: P = total population; G = population aged [0,19]; A = population aged [20,65]; V = population aged [65+]. Source: authors' elaboration on Istat and SNAI data.

Mean growth rates (2002-2022)	Inner areas	Project areas
V/P	0.974	0.841
V/A	0.876	0.752
V/G	2.262	2.163
G/P	-1.375	-1.408
G/A	-1.474	-1.495

Overall, the depopulation processes occurring in Sicilian IAs have been causing two demographic trends: the first is the aggravation of the demographic burden of elderly over working age individuals; the second is the shrinking of the young age classes, those which can contribute the most to the future socioeconomic vitality of IAs. The ongoing demographic dynamics induce future social, economic and cultural changes, which are worthy of attention.

A crucial aspect that should be addressed pertains to the examination of the labour force potential that each area will need to confront the emerging challenges in the forthcoming decades (Blangiardo, 2013). For this reason, some core concepts of the potential demography have been exploited to provide a prospective picture of the Sicilian population in terms of PYL and PYL in the working age. As highlighted in Figure 5, the comparison of the temporal dynamics of the PYL between IAs and non-IAs (left-hand panel) shows that:

1. on the whole, no critical differences have been registered between sexes, implying a similar contribution to the future vitality of the population;
2. the main distance in absolute terms between IAs and non-IAs is recorded in the 20-65 age class, while the contribution of the older ages seems to be similar for both IAs and non-IAs;
3. considering the citizenship, it is possible to notice that whereas the PYL among the Italian younger age classes has decreased over time, the opposite occurs for the foreigners, whose PYL has increased at least for the younger ages; among the Italians, the PYL has slightly increased only for the elderly.

Similarly, the right-hand panel in Figure 5 shows the same time series as the left one but comparing PAs with the rest of IAs which do not receive fundings:

1. again there is no remarkable difference between genders;
2. a great distance in absolute terms between the PYL of IAs and that of PAs emerges, with the latter ones being considerably disadvantaged in the younger age classes;

3. Nonetheless, the PYL trend for youngsters and adults in the PAs seems more stable over time, registering a smaller decrease with respect to the IAs;
4. the contribution of foreigners in the PAs seems very small compared to the other IAs.

Figure 6 describes the temporal variation in the sole  $PYL_W$  and, specifically, the left-hand panel shows that:

1. while the contribution of Italians is lower in the IAs than in non-IAs, that of foreigners is quite the same;
2. even if in absolute terms Italians contribute more than the immigrants, due to the smaller numbers of the latter ones, over time the foreigners'  $PYL_W$  is increasing, in contrast with the Italians'  $PYL_W$  trend

Nonetheless, the right-hand panel in Figure 6 highlights that:

1. in general, the  $PYL_W$  in PAs is much lower than in non-PAs;
2. while the Italians'  $PYL_W$  in non-PAs has registered a high decrease, in PAs the situation seems more stable over time;
3. the contribution of foreigners to the  $PYL_W$  in PAs is close to zero given their scarce presence in these municipalities.

An integrated view of the PYL movements over time between each IA and its neighboring ones can be seen in the Directional Moran's Scatter Plots shown in Figure 7(a-b). This type of data visualization has been developed by Rey et al. (2011), which allow the investigation of the space-time dynamics of spatial distributions, and help to detect a potential reinforcement of clustering and polarization (Gregory & Patuelli, 2015). Here the transition for each municipality is represented as a movement vector with the arrowhead pointed at its location in 2012 (in subfigure a) and in 2022 (in subfigure b). Examination of this visualization reveals a reduction in the intensity of the movements between the two periods considered. Also their directionality appears to become more heterogeneous over time, with the first period characterized by a predominant direction involving downward moves of both a municipality and its neighbor in the PYL distribution nearly everywhere (see the rose diagrams in Figure 7).

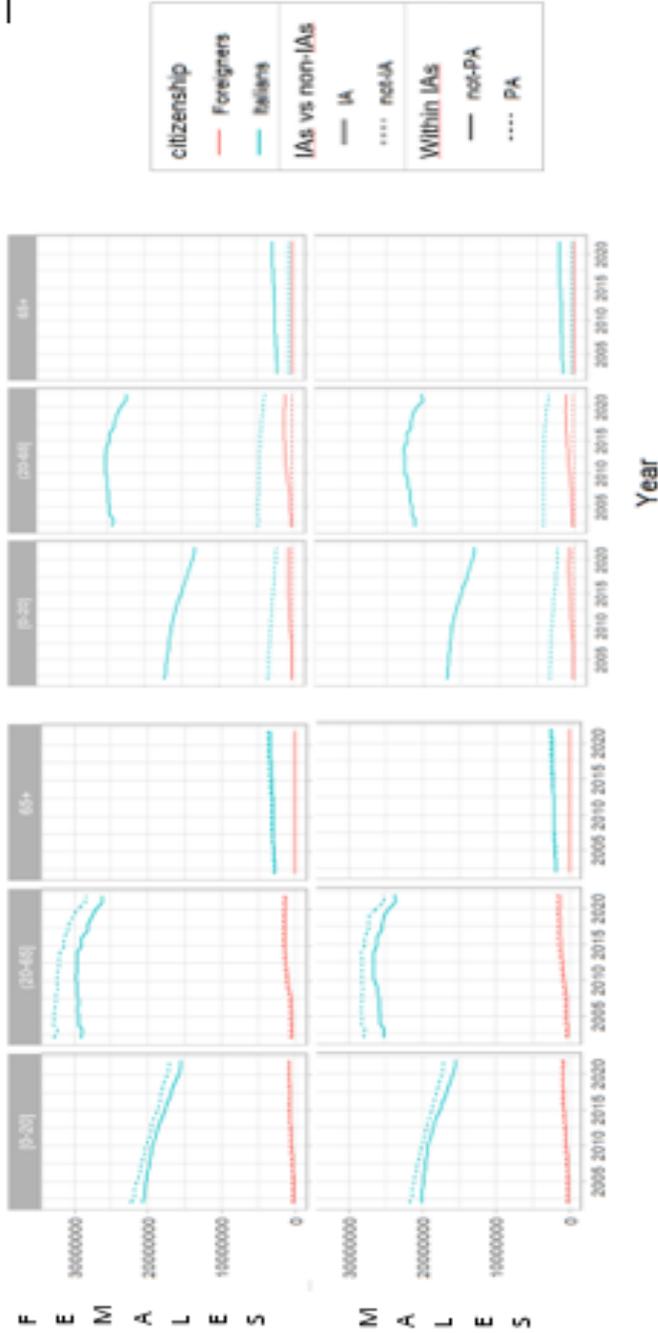


Figure 5 PYL temporal variation (2002-2022) divided by gender (females on the top row and males on the bottom row) between non-IAs vs IAs municipalities (left-hand panel) and PAs vs non-PAs inner areas (right-hand panel) in Sicily. Source: author's own elaboration.

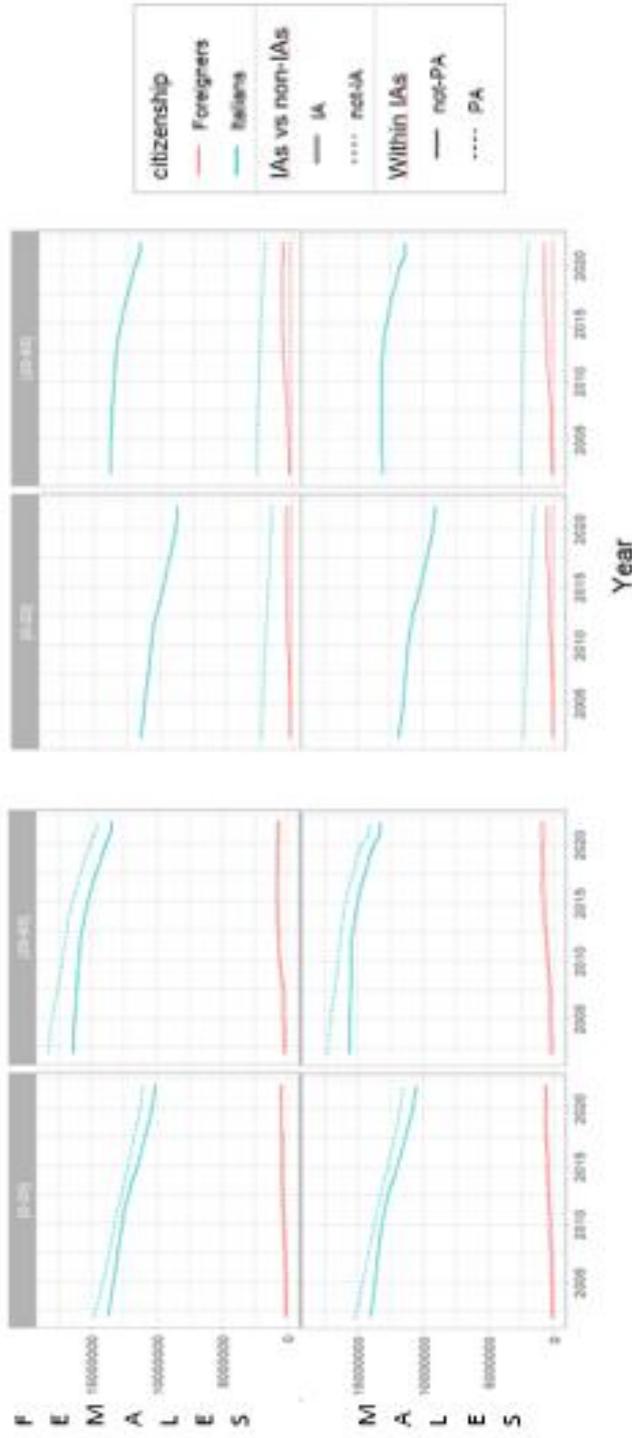


Figure 6  $PYL_W$  temporal variation (2002-2022) divided by gender (females on the top row and males on the bottom row) between non-IAs vs IAs municipalities (left-hand panel) and PAs vs non-PAs inner areas (right-hand panel) in Sicily. Source: author's own elaboration.

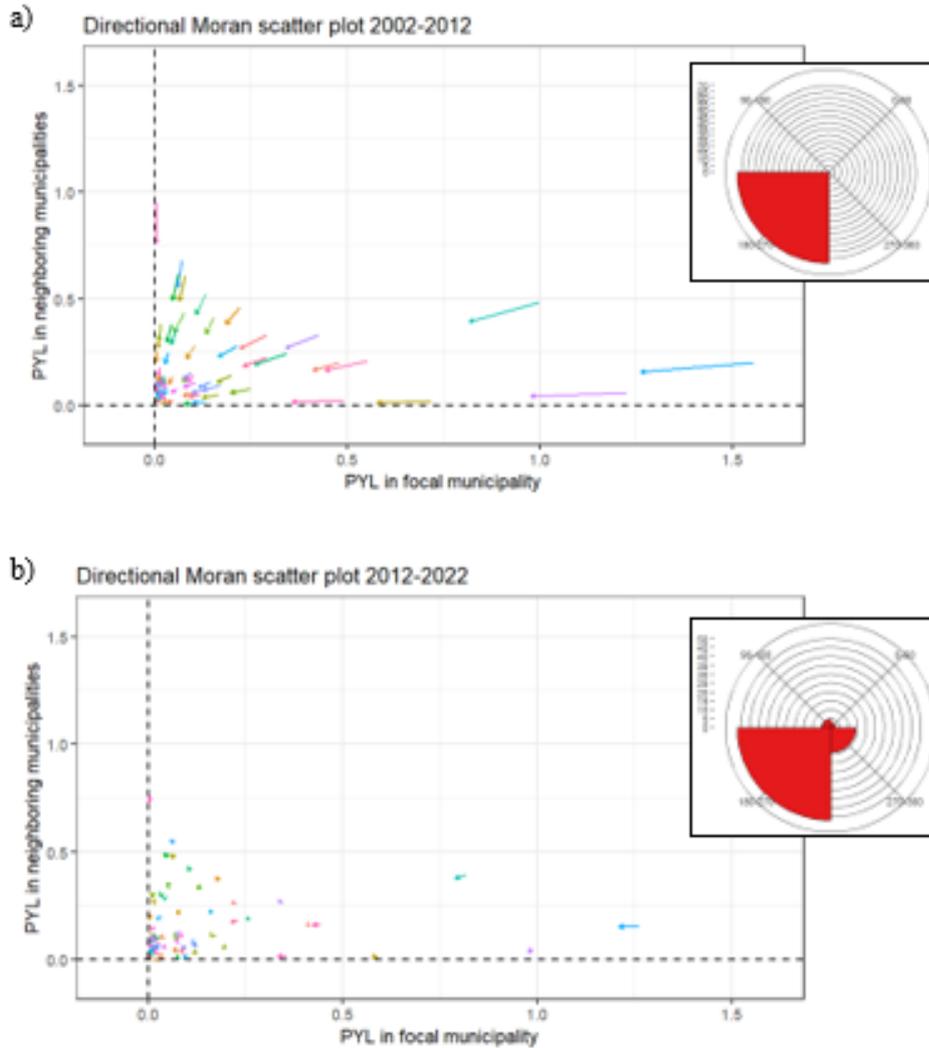
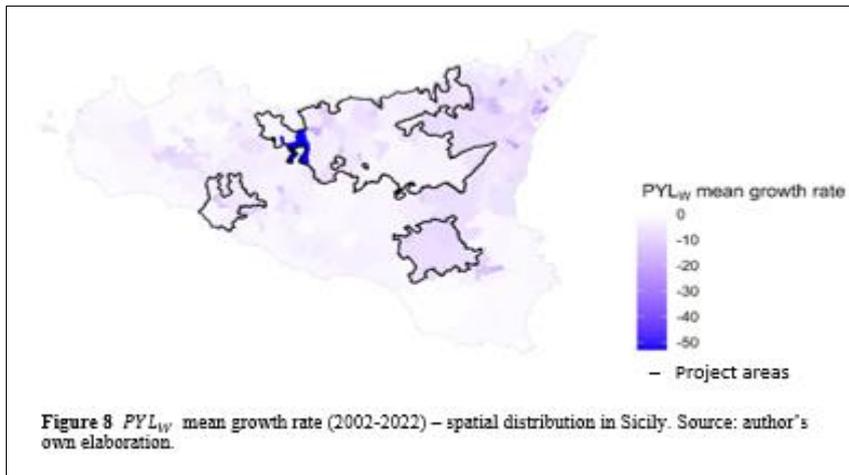
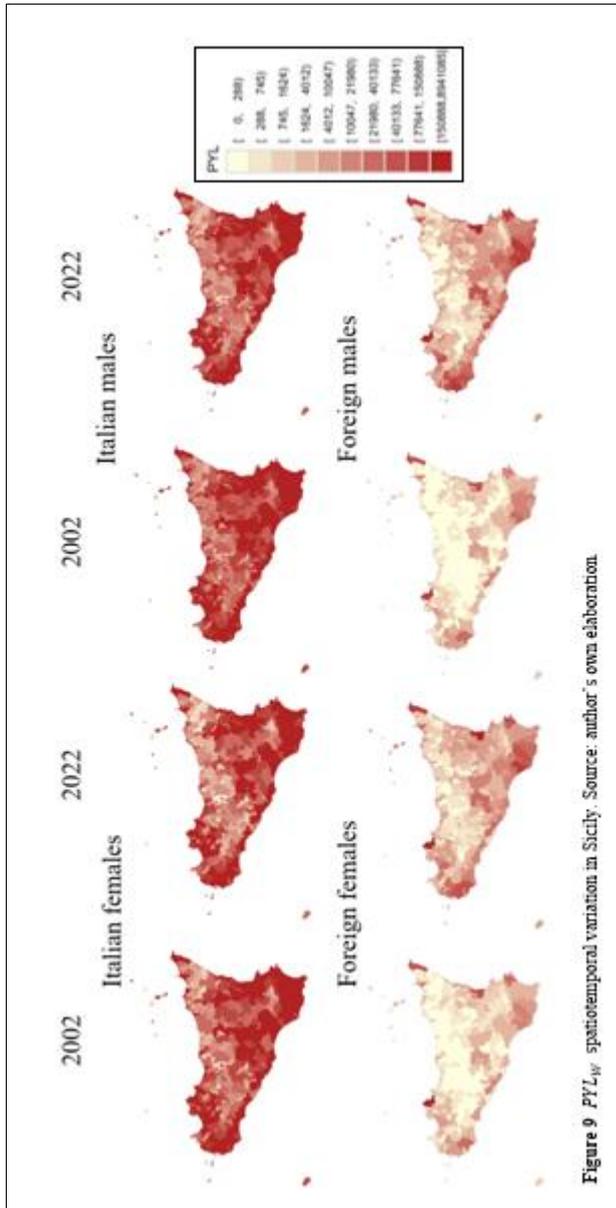


Figure 7 Temporal dynamics in the IAs of Sicily (Inset rose diagrams to compare the standardized directionality of movements). Source: author's own elaboration.

The mean growth rate for  $PYL_w$  at the municipality level in 2002-2022 is illustrated in Figure 8. Quite all the Sicilian municipalities have experienced a decrease in  $PYL_w$  on average during the time period considered. Among them, the areas registering the largest loss are mainly located in the northeastern mountainous regions of Mt. Etna and Nebrodi, and in some inland regions in North-West and South-East. Not all of them are included among the PAs.



The visualization of the  $PYL_w$  spatial distribution at the beginning of the time period considered (2002) and at the end (2022), while splitting it by gender and citizenship highlights that the contribution to the working age of Italians and foreigners has taken opposite direction both trough time and over space (Figure 9). In particular, the foreigners have increased their contribution with the passing of the time and also in the inner areas while Italians have decreased it. A slight loss of the female contribution can be recorded in IAs as compared to the males' one, both for Italians and immigrants.



## 8. DISCUSSION AND CONCLUSIONS

The phenomenon of depopulation, driven by complex socioeconomic and geographical factors, has been extensively studied across various regions worldwide, including both rural and urban areas. Economic cycles, industrial shifts, and urbanization have led to significant population declines in regions characterized by geographical challenges and limited access to essential services and infrastructure. The consequences of depopulation extend beyond demographic shifts, affecting economic development, public services, and employment opportunities, leading to a spiral of marginalization and decline.

The Italian National Strategy for Inner Areas represents an attempt to address the challenges posed by depopulation, particularly focusing on the provision of essential services in designated IAs.

However, criticisms have been raised regarding the adequacy of the criteria used for classification and the neglect of broader socioeconomic indicators in identifying areas affected by population decline.

Efforts to refine the classification of inner areas and understand the underlying dynamics of depopulation are ongoing and the current report, as afore mentioned, describes the first phases dedicated to the ultimate objective of proposing a territorial classification in alternative to SNAI. Alternative approaches, such as potential demography, offer a more nuanced understanding of population dynamics and economic potential. By considering factors beyond population density, including age structure, migration patterns, and economic indicators, is key to develop more comprehensive strategies for addressing depopulation and fostering sustainable development in vulnerable regions.

The case study of Sicily highlights the multifaceted nature of depopulation dynamics, with significant variations in demographic trends across different municipalities. The demographic profile of Sicilian municipalities has been highlighted as a crucial aspect that needs to be considered in the identification of areas suffering from population drain. The analysis underscores the importance of considering temporal dynamics, labor force potential, and the socioeconomic context in designing effective interventions to mitigate the impacts of depopulation. Specifically, by analyzing the dynamics of population growth and age distribution over time, and the PYL in working ages, we have demonstrated the complex nature of demographic distress in different areas. The PYL analysis has underscored a great heterogeneity occurring both temporally and spatially, between Italians and immigrants, even within the IAs themselves. The main findings show that the increasing contribution of immigrants to the future socioeconomic vitality of the IAs cannot still offset the marked reduction in the Italians' PYL (and especially their  $PYL_W$ ). Nevertheless, between 2002 and 2022 the foreign population has increased its PYL level not only in the most densely populated Sicilian areas but also in the IAs, with a slightly higher contribution due to the males. The opposed spatiotemporal directionality of PYL between native and immigrant population could be attributed to a different age structure, migration preferences or fertility profile but such factors need a specific and in-depth investigation which is programmed for the future extension of the work. The consideration of such dynamics can lead to more targeted and effective intervention plans. Indeed, the concepts of potential demography help in prospectively evaluating the socioeconomic sustainability of territories and their ability to attract investment, both in the public and private sector. Overall, population matters when it is considered in its age group components and in its potential to create and maintain wealth.

The results have been represented cartographically, making it easy to visualize the areas facing greater difficulties and those that are not as peripheral. This visual representation can aid policymakers and stakeholders in identifying priority areas for investment and development initiatives.

Overall, this study contributes to the ongoing debate on how to effectively support and revitalize inner areas in Italy, and it emphasizes the importance of taking into account various factors beyond the provision of essential services. By adopting a more comprehensive approach, we can develop better-informed policies that address the unique needs and challenges of different municipalities, ultimately fostering sustainable development and minimizing wasteful efforts. As a final note, it is essential to recognize that regional contexts may vary significantly. Continued research and the future creation of an IAs reclassification model will be essential to ensure that development policies

are well-tailored and effective in supporting the growth and well-being of all communities across the country.

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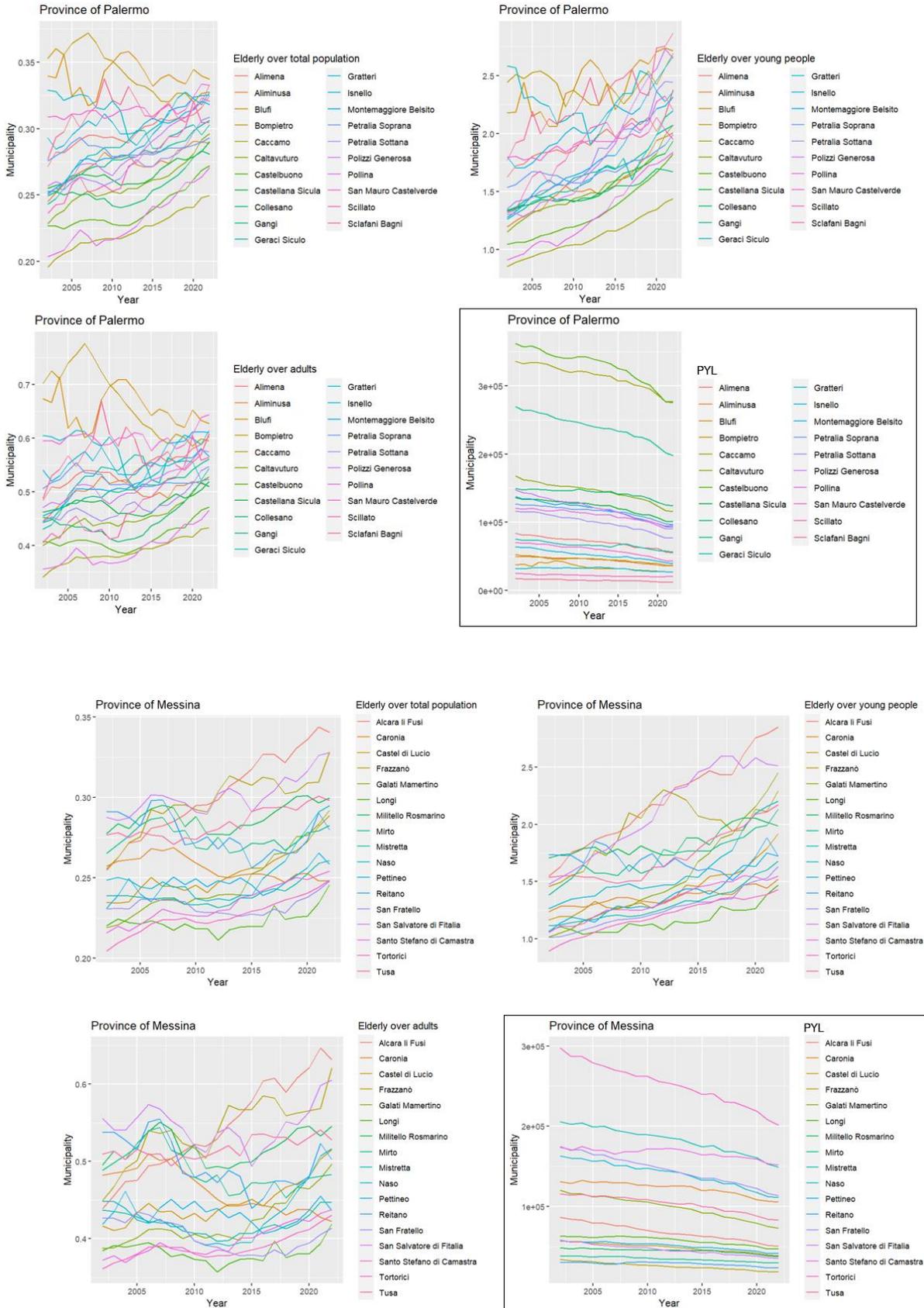
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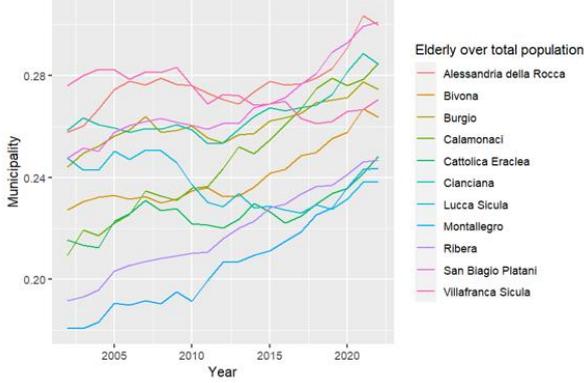
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APPENDIX

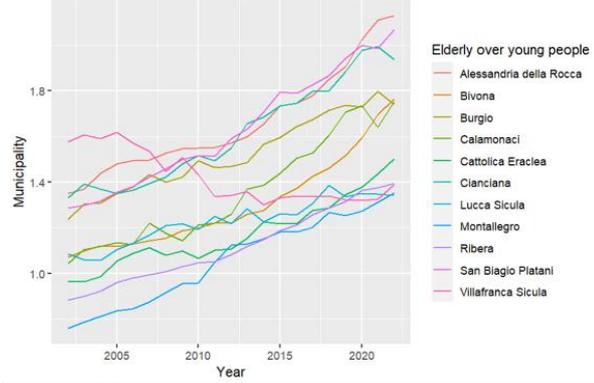
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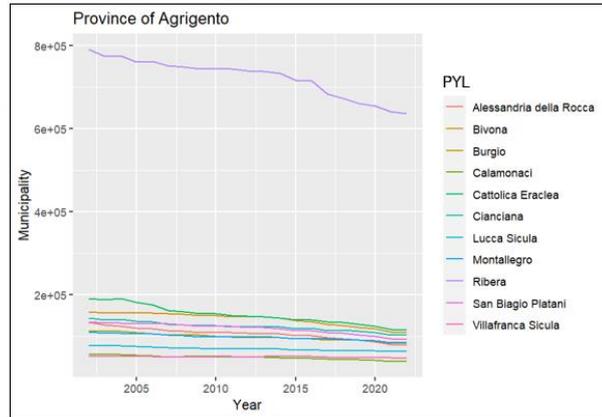
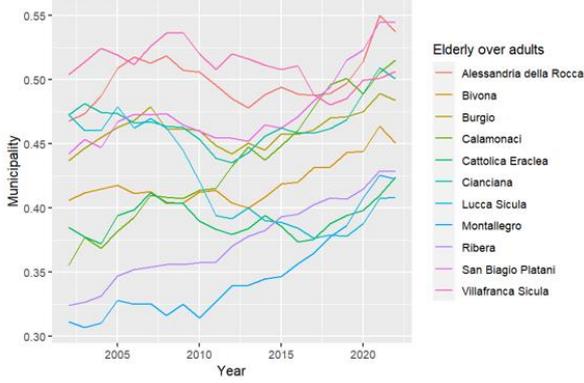
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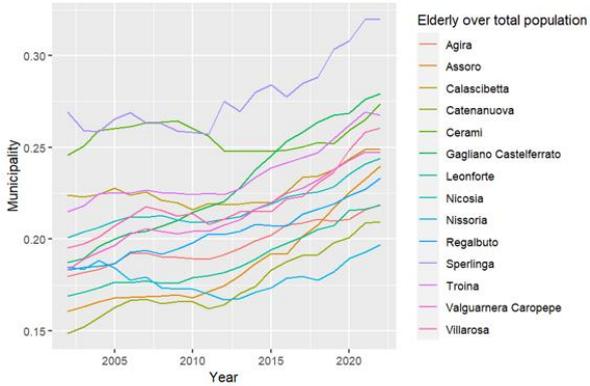
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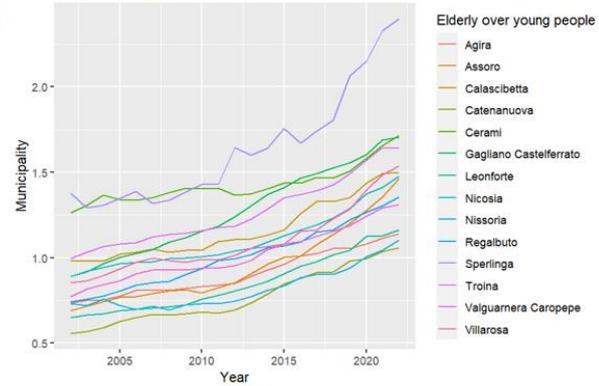
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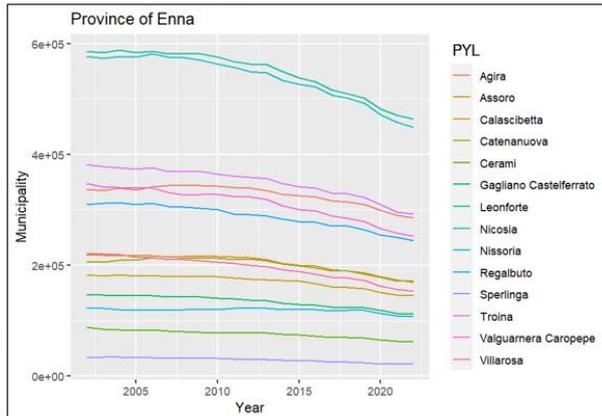
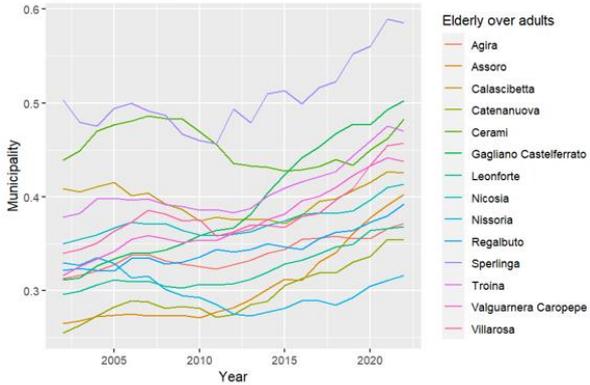
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## 9. Report 7

# People's Perception on Migration and Social Cohesion

### OUTLINE

1. INTRODUCTION
  2. DATA COLLECTION
  3. METHODOLOGY
  4. DISCUSSION OF THE MAIN RESULTS
  5. CONCLUSIONS
- SELECTED REFERENCES

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The content of this Report was developed with contributions from the research unit of UniCA. Specifically, the Report is based on a research by Contu G., Massidda C., Ortu M., Tunis S..

## 1. INTRODUCTION

Immigration has emerged as one of the most prominent and polarizing topics in contemporary public discourse, particularly in Western societies. The issue has become a focal point of national debate in Italy, often inciting strong opinions from both supporters and critics. On the one hand, immigration is viewed as a source of cultural diversity and economic opportunity, while on the other, it raises concerns about national security, economic integration and social cohesion. This polarization is especially visible in online forums, social media platforms, and televised discussions, where conversations can quickly escalate and become emotionally charged (Grigorieff et al., 2020; De Coninck et al., 2021; Chen et al., 2022). The core idea is that strong sentiment polarization reflects a divided society, where social cohesion is at risk not only between natives and migrants but also among natives themselves. In this context, Opinion Mining, namely a set of techniques designed to analyze subjective information from textual data, provides a valuable tool for understanding the range of perspectives and emotional responses in such debates.

Under these premises, this Report aims to examine the public's perception of immigration in Italy by analyzing reactions to news related to immigration shared on Facebook. Social media platforms like Facebook have become essential spaces for public debate, where users frequently express their views on current events. By focusing on the interactions between Italian Facebook users and immigration-related news posts, this study seeks to reveal the underlying topics that drive discussions and the sentiments they evoke.

Two key methodologies are employed in this analysis: **Sentiment Analysis**, which categorizes user comments based on emotional tone (positive, neutral, or negative), and **Topic Modeling**, which identifies the recurring themes present in both media posts and user comments (Habbat et al. 2020). Through this dual approach, the study seeks to uncover how the media's portrayal of immigration influences public sentiment and the specific themes that spark the most significant online engagement. By examining these patterns, the study contributes to a better understanding of the relationship between media coverage and public opinion on immigration, providing insights that may be useful for policymakers, media organizations, and researchers interested in the dynamics of online discourse on polarizing social issues.

## 2. DATA COLLECTION

### 2.1 The Dataset

The so-called “Web Scraping” technique was applied to generate the dataset. This computing methodology automatically extracts data and information from web pages. Web Scraping is typically employed to collect structured or unstructured data from websites, optimizing the time required for the task and allowing the user to analyze, process, and/or store the obtained data. It is worth

noting that the term “scraper” comes from the English verb “to scrape”, which means “to scrape off”, evoking the image of a scraper gathering material from a surface.

The search for the most active Italian newspapers was carried out on Facebook. One key metric in selecting these newspapers was the engagement rate, which measures user involvement through common social network interactions such as likes, comments, and shares. Based on an active search on the social network and through the scraping phase conducted between April and July 2023, 19 newspapers with the highest engagement rates were selected, resulting in a total of 25,626 posts, which constitute the reference dataset. Table 1 below anonymizes the newspapers and lists the number of posts extracted from each.

**Table 1: Dataset (Newspaper and Extracted Posts)**

NEWSPAPER NAME	# EXTRACTED POSTS
Newspaper 1	2904
Newspaper 2	1761
Newspaper 3	1720
Newspaper 4	1670
Newspaper 5	1568
Newspaper 6	1286
Newspaper 7	1262
Newspaper 8	1260
Newspaper 9	1260
Newspaper 10	1259
Newspaper 11	1256
Newspaper 12	1256
Newspaper 13	1254
Newspaper 14	1239
Newspaper 15	1156
Newspaper 16	1077
Newspaper 17	1033
Newspaper 18	965
Newspaper 19	440

This dataset helps study the interactions between the most active Italian newspapers and Facebook users, as it enables the analysis of trends and preferences in the content that most engages and interests the audience.

## 2.2 Filtering by keywords

We used a keyword filtering phase to identify posts dealing with immigration-related topics. The keywords used were: sbarchi, sbarco, migranti, migrante, immigrati, immigrato, immigrazione, frontiere, richiedenti asilo, richiedente asilo, permesso di soggiorno, permessi di soggiorno. Following this phase, 310 posts related to the issue of immigration were identified. The table below shows, in anonymized form, the newspapers and the respective number of thematic posts identified.

**Table 2: Migration-Related Posts Filtered by Keywords**

NEWSPAPER	# THEMATIC POSTS
Newspaper 13	67
Newspaper 17	47
Newspaper 10	33
Newspaper 19	27
Newspaper 16	22
Newspaper 9	17
Newspaper 11	16
Newspaper 7	14
Newspaper 14	13
Newspaper 18	13
Newspaper 1	9
Newspaper 12	7
Newspaper 6	7
Newspaper 15	6
Newspaper 2	5
Newspaper 8	5
Newspaper 5	1

### 2.3 Comments collection

After developing the post collection and applying keyword filtering, scraping was employed once again to extract users' comments on the various posts. This process resulted in the creation of a new dataset of 10,645 comments related to the selected posts. Table 3 presents the data distribution.

**Table 3: Comments Extracted from Posts**

NEWSPAPER NAME	# COMMENTS
Newspaper 13	2398
Newspaper 17	1899
Newspaper 10	1375
Newspaper 19	900
Newspaper 16	876
Newspaper 9	721
Newspaper 11	607
Newspaper 7	605
Newspaper 14	500
Newspaper 18	326
Newspaper 1	209
Newspaper 12	198
Newspaper 6	128
Newspaper 15	126
Newspaper 2	79
Newspaper 8	47
Newspaper 5	1

### 3. METHODOLOGY

This study employs two primary techniques to analyze the online discourse surrounding immigration: **Sentiment Analysis** and **Topic Modeling**.

**Sentiment Analysis** (Habbat, 2020) is performed to evaluate the emotional tone of user comments. A pre-trained **GPT-3 model** was applied to classify comments into three sentiment categories: positive, neutral, and negative. This classification allows for the quantitative analysis of public sentiment in response to immigration-related news. The distribution of sentiments is analyzed across different posts and newspapers, providing insights into how different media outlets influence public reactions.

**Topic modeling** (Egger, 2022) is employed to extract the predominant themes from the textual corpus of media posts and user comments related to immigration. This technique is particularly suited when analyzing large collections of unstructured data, as it helps identify patterns and latent structures within the text. For this analysis, Non-Negative Matrix Factorization (NMF, Lee 1999) is the primary algorithm utilized. NMF is a well-suited approach for topic modeling due to its ability to factorize the document-term matrix into non-negative components, which correspond to latent topics and their associated word distributions. This method was selected over alternative approaches like Latent Dirichlet Allocation (LDA, Blei 2003) because it often provides more interpretable results, particularly in datasets that exhibit clear distinctions between topics.

Before applying NMF, the text data from both posts and comments need to be preprocessed to ensure that only relevant and clean data are used. Preprocessing steps includes:

1. **Tokenization:** Texts were broken down into individual words or tokens.
2. **Stopword Removal:** Common words (such as "and", "the", "is", etc.) that do not contribute meaningfully to the topic analysis were removed.
3. **Stemming/Lemmatization:** Words were reduced to their base or root form to consolidate word variations (e.g., "migrants" and "migrant").
4. **TF-IDF Transformation:** The Term Frequency-Inverse Document Frequency (TF-IDF) metric was used to weight words according to their importance across the dataset. This step ensured that common but non-informative words (e.g., "immigration") did not dominate the topic modeling process, while rare but significant words had a higher impact.

Following the preprocessing, NMF is applied separately to the dataset of media posts and user comments to uncover latent topics. The document-term matrix, where rows represent documents and columns represent terms, is factorized into two non-negative matrices:

- A document-topic matrix, where each document is represented by its association with a set of topics.
- A topic-term matrix, where each topic is defined by a set of words with corresponding weights.

The number of topics was determined using an iterative approach, where the interpretability and coherence of the topics are evaluated at each iteration.

For each identified topic, we then selected the five most significant keywords that best represent the specific topic. Selecting keywords for each topic allows for a more immediate and intuitive understanding, facilitating the interpretation of the results. This approach reduces the complexity of text representation, simplifies analysis, and enhances topic visualization.

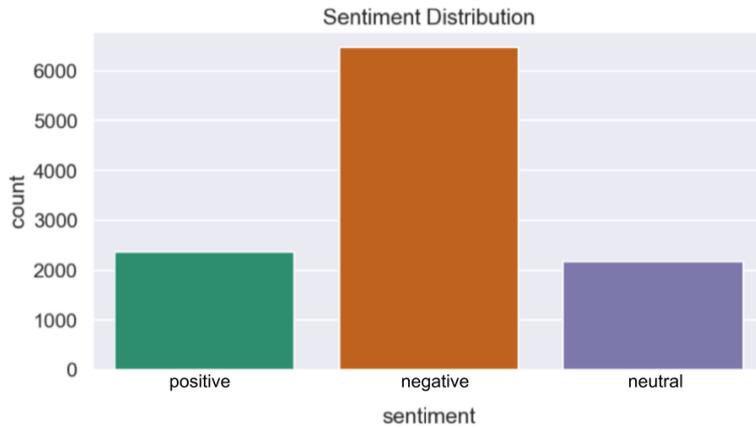
Word Clouds are used to display the extracted keywords for each topic. A Word Cloud is a graphic representation where the keywords are randomly arranged within an area, with the size of each word proportional to its importance in the topic. This method provides readers with an immediate sense and understanding of the most relevant words for each theme, thereby highlighting the main topics discussed in the text corpus. Then, to measure the degree to which the words in a topic appear together in similar contexts, we calculated the coherence score. Higher coherence scores indicate more interpretable and meaningful topics. Topics were manually evaluated to ensure that they were distinct and interpretable, with a focus on relevance to the main research question concerning the public perception of immigration. Sentiment distribution was manually reviewed to ensure alignment with the thematic context of the media posts and comments.

## 4. DISCUSSION ON THE MAIN RESULTS

### 4.1 Detected sentiments

This subsection analyzes the sentiments contained in the extracted posts and comments. At this scope, the user comments extracted from the posts during the scraping phase (as shown in Table 3) were automatically labelled for "sentiment" using the GPT-3 model. The sentiments were categorized into three specific labels: Negative (label 0), Neutral (label 1), and Positive (label 2). Figure 1 illustrates the distribution of the detected sentiments.

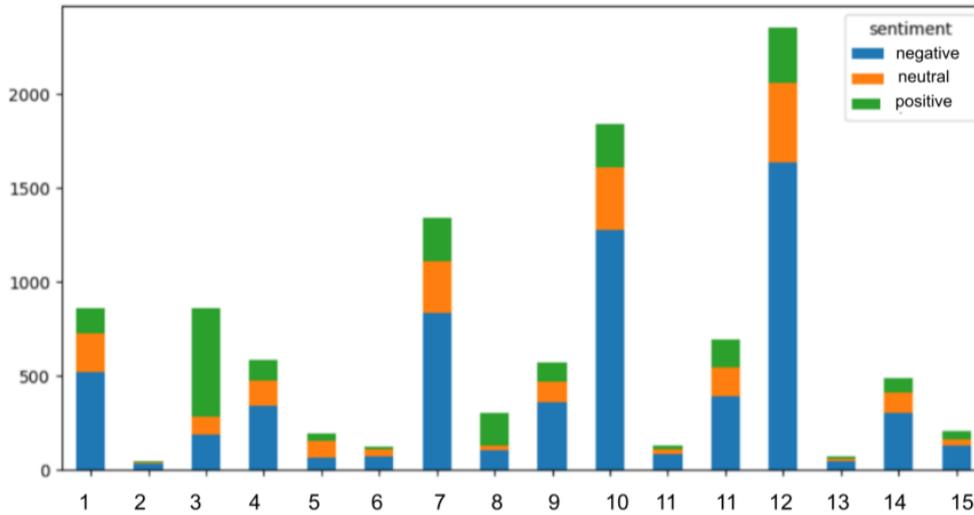
**Figure 1: Distribution of Detected Sentiment**



Considering the total of 10,645 comments, approximately 60% are characterized by a negative sentiment. The remaining 40% is evenly split, with 20% of the comments exhibiting a positive sentiment and 20% showing a neutral sentiment.

<i>Comment</i>	<i>Sentiment</i>
“L'arrivo dei migranti in Italia ha arricchito la nostra cultura e la nostra economia. Grazie alla loro dedizione, molte aree del paese sono rifiorite. Dovremmo continuare a supportare e integrare queste persone.”	Positive
“Negli ultimi anni, l'Italia ha visto un incremento degli arrivi di migranti. Le politiche di accoglienza sono state al centro di dibattiti sia a livello nazionale che internazionale.”	Neutral
“L'afflusso di migranti in Italia sta causando problemi sociali ed economici. Il governo non è in grado di gestire questa crisi, e la situazione sta peggiorando giorno dopo giorno.”	Negative

**Figure 2: Distribution of Detected Sentiment in Each Facebook Page**



Analyzing the sentiment composition (Figure 2) at the newspaper level reveals a general prevalence of negative comments compared to positive and neutral ones. This finding suggests that immigration elicits intense reactions and drives online debate. Only two exceptions exist where positive sentiment prevails despite the highly polarized context. It is important to note that multiple factors, such as heterogeneity among users across different newspaper pages, the dynamics of the discussions, and how information about immigration is presented can influence sentiment distributions.

In conclusion, the sentiment analysis confirms a strong polarization on migration and raises concerns on the issue of integration and social cohesion.

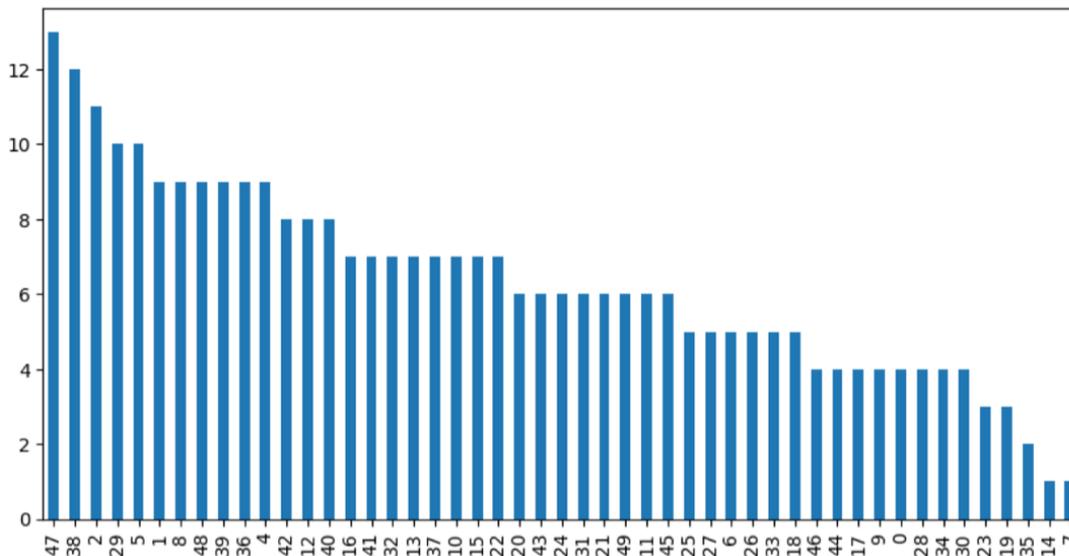
## 4.2 Topics extraction

This subsection is aimed at analyzing the topics extracted from the collected posts and comments. As previously anticipated, the main topics were extracted employing NMF. The primary goal is to extract the predominant topics from the collection of texts automatically. Then, for each identified topic, we select the five most significant keywords that best represent the specific topic.

### Topics extraction from the posts

NMF facilitates the identification of 50 distinct topics, each marked by a unique Topic ID and characterized by a set of keywords (Topic Words) defining the relevant topics' relevant terms. Furthermore, the Topic Count represents the frequency of each topic within the dataset. Figure 3 summarizes this information by displaying the distribution of the detected topics, with the Topic Count on the y-axis and the Topic ID on the x-axis.

**Figure 3: Distribution of Detected Topics in Collected Posts**



The Word Cloud in Figure 4 provides a quick overview of the most relevant topics.

**Figure 4: Word Cloud – Posts**



By aggregating topics focused on homogeneous issues, the following list summarizes the macro-topics (and terms) that emerge with greater frequency:

1. **Migration and Migratory Flows in the Mediterranean:** Mediterraneo, rotte, naufragi, migranti, Catania, Lampedusa, arrivati, partenze, tragedia, sbarchi;
2. **Politics and Immigration Management:** immigrazione, pd, sinistra, ungheria, polonia, fronte, pensioni, politico, premier, ue, ricollocamenti;
3. **Specific Events and Situations:** naufragio, morti, policlinico, porto, situazione, confine, caotica, bordo, costiera;
4. **International Relations and Foreign Policy:** ucraina, guerra, europa, francia, diplomatica, tunisia, europea;
5. **Political and Social Opinions:** meloni, giorgia, destra, sinistra, proteste, diritti, ong, giorgiameloni, polemica.

### *Topics extraction from the comments*

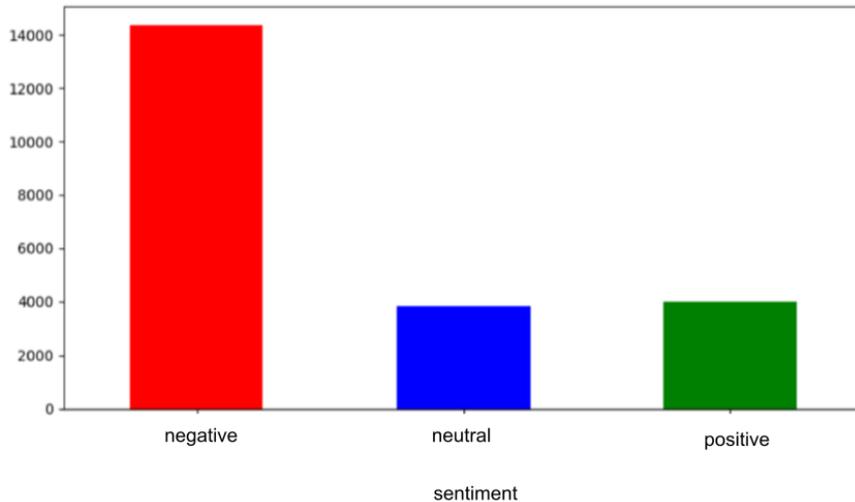
Regarding the content analysis of comments, NMF identified 140 topics from a dataset of 1,605 collected comments. This very high number of topics in the comments reflects the more complex and varied nature of user reactions compared to the more focused and structured content in the posts.

As illustrated in Figure 5, the thematic landscape is considerably more intricate than that observed for posts (Figure 4). Key emergent themes encompass appreciation and recognition, political perspectives, concerns about security and integration, and emotional responses.



content interesting, entertaining, helpful, or worthy of attention. Figure 6 shows the distribution of the 22,200 “likes” left by Facebook users about the detected sentiment.

**Figure 6: Distribution of "Likes" in Comments by Sentiment**



The distribution of “likes” is influenced by the dataset’s prevalence of negative sentiment comments. The average number of likes per type of sentiment has been calculated to provide clearer insights. The results are as follows:

- Negative sentiment: 2.25 likes per comment on average
- Neutral sentiment: 1.85 likes per comment on average
- Positive sentiment: 1.81 likes per comment on average

The data indicates that negative comments receive more likes than positive and neutral ones, suggesting that comments expressing negative emotions attract more reactions on average than other comments.

### *Topics with the most interactions*

Among the detected topics, those that received the highest number of interactions (comments and likes) are:

- Illegal immigration across the Mediterranean Sea (Topic ID 36, 47).
- The management and humanitarian implications of migratory flows (Topic ID 48, 31).
- Issues related to the political aspects of the phenomenon (Topic ID 1, 4, 21).

It can be stated that users tend to interact more with posts addressing topics such as illegal immigration, migrant management (Topic ID 48, 36, 39), and the political issues related to the phenomenon (Topic ID 4, 1).

### 4.3 Topics and sentiments

Through our analysis, we have extracted and analyzed the topics from the posts and comments and identified the sentiments expressed by users. We have organized the data into three distinct tables to provide a clearer and more summarised view. These tables list the top 10 topics that garnered the highest number of negative comments (Table 4), positive comments (Table 5), and neutral comments (Table 6). Specifically, the tables are structured as follows: the top 10 topics (Topic ID), the 5 keywords (Topic Words) that characterize each topic and the total number of comments (Negative, Positive, or Neutral count).

**Table 5: Top 10 Topics for Negative Sentiment**

Posizione	Topic ID	Topic Words	Negative Count
1	36	"['italiani', 'illegale', 'traversata', 'tunisino', 'criminale']"	570
2	21	"['macron', 'disumana', 'ingiusta', 'partito', 'giorgiameloni']"	376
3	4	"['ungheria', 'polonia', 'ue', 'laccordo', 'salta']"	347
4	12	"['libero', 'schlein', 'giornale', 'quotidiano', 'buongiorno']"	316
5	29	"['sinistra', 'regge', 'vogliono', 'fronte', 'pensioni']"	312
6	31	"['proteste', 'immigrati', 'diritti', 'social', 'pensioni']"	285
7	1	"['meloni', 'giorgia', 'parole', 'politico', 'premier']"	264
8	39	"['mare', 'nuova', 'tragedia', 'partenze', 'destra']"	244
9	47	"['mediterraneo', 'rotte', 'naufragio', 'migranti', 'catania']"	240
10	38	"['immigrazione', 'qua', 'pd', 'borseggiatrici', 'emergenza']"	224

Table 5 illustrates the topics that attracted the most negative comments. The results reveal that illegal immigration and political issues surrounding migration management are the subjects that most frequently prompt negative user opinions.

**Table 6: Top 10 Topics for Positive Sentiment**

Posizione	Topic ID	Topic Words	Positive Count
1	10	"['papa', 'gemelli', 'roma', 'francesco', 'policlinico']"	670
2	36	"['italiani', 'illegale', 'traversata', 'tunisino', 'criminale']"	178
3	48	"['gestione', 'minorenni', 'rissa', 'limmigrato', 'emiliana']"	121
4	4	"['ungheria', 'polonia', 'ue', 'laccordo', 'salta']"	94
5	12	"['libero', 'schlein', 'giornale', 'quotidiano', 'buongiorno']"	88
6	1	"['meloni', 'giorgia', 'parole', 'politico', 'premier']"	70
7	31	"['proteste', 'immigrati', 'diritti', 'social', 'pensioni']"	61
8	29	"['sinistra', 'regge', 'vogliono', 'fronte', 'pensioni']"	60
9	2	"['notte', 'lampedusa', 'arrivati', 'largo', 'migranti']"	58
10	39	"['mare', 'nuova', 'tragedia', 'partenze', 'destra']"	56

Table 6 displays the topics that received the highest number of positive comments. It is interesting to note that, despite the topic of illegal immigration being primarily associated with negative sentiments, it also appears in this list with several positive reactions.

**Table 7: Top 10 Topics for Neutral Sentiment**

Posizione	Topic ID	Topic Words	Neutral Count
1	36	"['italiani', 'illegale', 'traversata', 'tunisino', 'criminale']"	183
2	12	"['libero', 'schlein', 'giornale', 'quotidiano', 'buongiorno']"	170
3	47	"['mediterraneo', 'rotte', 'naufragio', 'migranti', 'catania']"	95
4	48	"['gestione', 'minorenni', 'rissa', 'immigrato', 'emiliana']"	94
5	21	"['macron', 'disumana', 'ingiusta', 'partito', 'giorgiameloni']"	90
6	29	"['sinistra', 'regge', 'vogliono', 'fronte', 'pensioni']"	88
7	1	"['meloni', 'giorgia', 'parole', 'politico', 'premier']"	81
8	4	"['ungheria', 'polonia', 'ue', 'laccordo', 'salta']"	75
9	39	"['mare', 'nuova', 'tragedia', 'partenze', 'destra']"	71
10	38	"['immigrazione', 'qua', 'pd', 'borseggiatrici', 'lemergenza']"	70

Finally, Table 7 provides an overview of the topics that generated neutral reactions. Issues such as illegal immigration and the political aspects of managing migratory flows persist, highlighting their capacity to evoke various reactions among users, including neutral ones. The data thus reflects the complexity and polarization of opinions expressed on these sensitive topics. Indeed, although some topics seem to provoke stronger reactions, it is interesting to note that they generate positive and neutral sentiments, underscoring the polarizing nature of the discussed issues.

## 5. CONCLUSIONS

### 5.1 Main findings

The primary aim of this study was to analyze public perceptions of immigration in Italy through the application of Opinion Mining techniques, focusing on the content shared on social media. Specifically, the study aimed to explore the topics and sentiments surrounding immigration-related discussions on Facebook by applying Sentiment Analysis and Topic Modeling. These methods were used to identify the predominant themes in media posts, user comments, and the associated sentiments to understand how media coverage of immigration influences public discourse.

The results from the Sentiment Analysis revealed a strong polarization of opinions. Approximately 60% of the comments displayed negative sentiment, while the remaining 40% was split evenly between positive and neutral reactions. The high prevalence of negative sentiment aligns with the nature of the immigration debate, which often evokes intense emotional responses. However, the distribution of sentiments across different media outlets showed notable variation, suggesting that factors such as the tone of the news coverage, audience demographics, and the framing of immigration stories might contribute to differing public reactions.

The Topic Modeling results identified key themes discussed in both media posts and user comments. For the media posts, 50 distinct topics were detected, most frequently related to immigration flows in the Mediterranean, political discussions on immigration management, specific events (such as migrant shipwrecks), and international relations. In the user comments, 140 topics emerged, reflecting a broader range of public concerns, including security, cultural integration, social cohesion, emotional reactions, and political viewpoints. The complexity of the topics in the

comments demonstrates the multifaceted nature of public discourse on immigration, with many users expressing polarized opinions.

One important observation from the analysis is that while certain topics, such as illegal immigration and political aspects of migration, frequently attracted negative sentiments, they also generated significant engagement, reflected in the high number of comments and interactions. This suggests that these issues resonate strongly with the public, prompting more active participation in online debates. On the other hand, despite eliciting negative sentiments, some topics also received positive reactions, indicating that public opinion on immigration is not uniform but rather highly polarized and subject to various interpretations.

## 5.2 Limitations and future research

The results of this study highlight the emotionally charged and polarized nature of public discourse on immigration, as well as the significant role that media coverage plays in shaping public sentiment. The use of Opinion Mining techniques, particularly Topic Modeling, has provided valuable insights into the themes that dominate online discussions, and the sentiments associated with these themes.

However, the study has limitations. While the sentiment analysis captured the overall emotional tone of the comments, further refinement is necessary to distinguish between different types of negative sentiment. For example, a comment might express dissatisfaction with immigration policies rather than with immigrants themselves. Future work should incorporate more nuanced sentiment analysis models capable of distinguishing between these subtleties, providing a deeper understanding of the nature of public opinion.

Moreover, the current study focused on a specific period and set of media outlets. Future research could extend this work by analyzing a broader range of social media platforms over longer periods and across different geographic regions. Additionally, incorporating demographic data of social media users could offer further insights into how opinions on immigration vary across different population groups.

Finally, future studies could explore how the topics and sentiments evolve over time, especially in response to significant political or social events. This temporal analysis could provide a more dynamic view of public discourse, contributing to more informed policy discussions on immigration.

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## Concluding remark

This Deliverable has presented nine reports, two of which take the form of Focus, aimed at showcasing some of the key findings achieved thus far by researchers from various universities collaborating on Work Package 2 (WP2) of Spoke 8 within the GRINS Project. WP2 specifically examines cultural, social, and political participation and how these contribute to the sustainable development of Italian regions and territories.

The research approach adopted in this work is inherently interdisciplinary, which is why the reports adopt different perspectives and analytical lenses. The initial reports, for instance, employed a sociological investigative approach to refine and define complex and abstract concepts such as cultural participation and social participation. Other reports, in contrast, adopted a predominantly economic analysis, particularly in efforts to quantify resilience in cultural participation through specific indices, measuring the impact of recent shocks on various forms of cultural engagement. The various reports also aim to illustrate the different methodological approaches adopted by the WP researchers. Some are based on multivariate statistical analyses; one employed spatial analysis techniques; another applied sentiment analysis. This methodological heterogeneity is intentional, as it reflects the richness and diversity of analytical tools used by the project's researchers.

All the reports included in this Deliverable have been crafted with a strong focus on accessibility and knowledge dissemination. Special attention has been given to ensuring that the content is immediately comprehensible to non-academic stakeholders and policymakers, so that theoretical insights can effectively translate into actionable economic and social policy measures. At the same time, each report has a corresponding academic article with a more rigorously scientific approach, currently under review in international peer-reviewed journals.

It is also important to note that this Deliverable should be read and considered in conjunction with other Deliverables from Spoke 8—particularly D1.2, submitted by WP1, which focuses on defining and measuring social sustainability indicators, and D3.1, submitted by WP3, which examines indicators of criminal activity and infiltration. The overarching goal of this research is to analyze how different dimensions of socio-economic behavior influence the sustainable growth of regions. While this Deliverable specifically focuses on cultural participation, the ultimate objective remains a comprehensive analysis of sustainable growth in all its socio-economic facets.