

**FULL ARTICLE**

Cultural participation in Cultural and Creative Cities: Positive regional outcomes and potential congestion concerns

Silvia Cerisola | Elisa Panzera

Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano, Milan, Italy

Correspondence

Elisa Panzera, Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano, Milan, Italy.

Email: elisa.panzera@polimi.it

Abstract

Following the hype that has been given to culture as trigger and enhancer of local economic performance in the last 20 years, the cultural character of cities is considered as a strategic strength and opportunity that can favour the economic system of the entire regions in which the cities are located. According to this perspective, this paper explores the role of cultural participation, intended as individuals' involvement in cultural activities, in affecting regional output. Exploiting a regional production function and data from the Cultural and Creative Cities Monitor (CCCM) provided by the European Commission Joint Research Centre (JRC), the effect of urban cultural participation on the regional economy is econometrically investigated. Potential congestion effects possibly related to (excessive) cultural tourism are also examined. Cultural participation in Cultural and Creative Cities emerges as a strategic resource for development, although some congestion mechanisms could reduce its positive effect. Related policy implications are thoroughly discussed.

KEYWORDS

cultural and creative cities, cultural participation, regional economy, touristic congestion

JEL CLASSIFICATION

O18, R11, Z3, Z10



1 | INTRODUCTION

The strand of research aimed at discussing the role of *cultural heritage* in favouring (local) development has been experiencing a continuous growth, especially in the last twenty years. *Cultural heritage*, in fact, has been seen as an enhancer of *livability* and *resilience* (European Commission, 2015), as a contributor to *sustainable development* (Council of the European Union, 2018) and as an overall favourable element in the process of *economic growth*. In addition, it is by now a recognized component of *territorial capital*, that is, a territorial asset able to generate endogenous development, especially when combined with other tangible or intangible local resources (Camagni et al., 2020).

Moreover, cultural heritage has been widely perceived as a facilitator of community links, shared pride, sense of belonging, local cultural identity, community cohesiveness and inclusion, shaping collective identity and strengthening social ties (Hutter, 1996; Sacco et al., 2009). In this sense, it is not regarded as a luxury anymore, but as a vital resource for citizens.

Within this overall framework, *cultural participation* has been more and more frequently highlighted as an especially relevant aspect, since individuals' participation in cultural activities has been generally associated with virtuous pro-active behaviours and favourable outcomes at different levels (e.g., supportive environmental attitude, overall well-being, but also better mental health, and even survival).¹ In addition, borrowing from the Council of the European Union (2018, p. 14), "Access to culture and participation in cultural life promote individual empowerment, democratic consciousness and social cohesion through exchanges with other people and civic engagement."

In particular, cities have been identified from many parts as the main *loci* where all these favourable elements—linked to the beneficial action of people engagement in cultural activities (cultural participation)—can germinate and develop (e.g., Florida, 2002; Hall, 1998; Landry & Bianchini, 1995; Scott, 2000; UNESCO and World Bank, 2021; Zukin, 1995). As reported by the European Commission (2015, p. 10), for instance, "Europe's cities are unique in being both the powerhouses of the continent's economy whilst also being ancient settlements full of character and interest. They are often great places to live, work and visit. Many cities have recognised that their unique history is a powerful magnet for attracting talent, tourists, and investment. Many have used their historic environment as the basis of regeneration." Therefore, an urban environment characterized by vibrant cultural participation seems to be an extremely interesting territorial fabric, promoting holistic and sustainable development.

According to this perspective, in fact, the agglomerated nature of cultural characteristics may also be associated with the advantages linked to urban efficiency (through the attraction of people and production factors and higher productivity). In addition, dynamic cities often favour the economic performance of their surrounding areas (OECD, 2016, 2018) and in fact do not represent only economies of density, but also economies of interaction (Baycan, 2011). In other words, the presence of a culturally active city can be thought of as an engine for the development of the whole region it belongs to (Braudel, 1977; Glaeser, 2011; Mumford, 1938). The idea is that economic conditions of regions hosting cultural and creative cities might be favoured by the pulling role played by urban cultural vibrancy.

More specifically, the general situation described above led us to wonder if the degree of people engagement in cultural activities in cultural cities, here interpreted as *cultural participation*, can drive positive effects to the output of the whole *region* hosting those cities and, if so, if such mechanisms can be subject to some possible *congestion* issues.

Despite all the potential benefits that have been stressed both at the academic and at the institutional level, in fact, the evidence on the role of cultural participation in local development is still extremely scant. In addition, although we do expect the involvement of citizens in cultural activities to play a positive role in local development, there might be some elements that could possibly hinder its beneficial action. For instance, some drawbacks related to (cultural) tourism could reduce the favourable impact of cultural participation through different types of *congestion*

¹See Konlaan et al. (2000), Grossi et al. (2012), Crociata et al. (2014), Crociata and Mattoscio (2016), and Quaglione et al. (2017).



costs, and this could also affect the wider regional space, since the direct benefits of tourism tend to be concentrated in specific economic sectors and areas, while the costs tend to be more diffused (Ashworth & Page, 2011).

Within this overall framework, the aim of the present work is to explore the potential pulling effects that urban cultural participation might have on the whole regional economy, also taking into account possible adverse impacts potentially related to touristic congestion. In this sense, this study addresses the following research question: *Does cultural participation, meant as direct people engagement in cultural activities, show beneficial effects from cultural cities to the output of their regions? Are such effects potentially subject to congestion issues?* Therefore, the value added of the paper is twofold, in that on the one hand it explores the impacts of a local cultural dynamic on a regional outcome, and on the other hand it integrates two usually independent strands of literature and research lines in considering both the economic importance of urban cultural participation and possible mechanisms of touristic congestion.

To empirically engage with the investigation of these issues, the present work makes use of the Cultural and Creative Cities Monitor (CCCM), i.e., an interesting and suitable database issued by the European Commission Joint Research Centre (JRC) and including important pieces of information on so-called Cultural and Creative Cities (CCCs). In more details, a *regional production function* is estimated and then *augmented* for taking urban cultural features into account, thus highlighting their role in affecting regional output.

The article is organized as follows: Section 2 provides a thorough explanation of our approach on cultural participation and a literature review on its role in socio-economic development and on the potential congestion issue; Section 3 presents the empirical part (data and econometric strategy), describing the regional production function the quantitative analysis is based on, while Section 4 presents the econometric results. Finally, Section 5 concludes.

2 | CULTURAL PARTICIPATION, ECONOMIC DEVELOPMENT, AND POTENTIAL CONGESTION ISSUES

2.1 | The importance of cultural participation

Taking part in cultural activities is a fundamental feature of vibrancy and vitality of local cultural lives. Participation brings life to heritage sites, cultural venues, arts exhibitions, museums and all the other cultural expressions and manifestations. Exchange, communication, and connection with the audience allow arts and culture to be permeated and mingled with individuals and societies. If, on the one hand, cultural participation is a necessary and integral condition for cultural dynamism and liveliness, on the other hand, participants benefit from cultural engagement in several ways, both individually and collectively.

The major value for human beings of partaking to culture was made explicit by the United Nations' Universal Declaration of Human Rights. Article 27 of the Declaration states that “Everyone has the right to freely participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and benefits” (United Nations, 1948). In the European context, the 2005 Faro Convention represents a milestone in which active involvement, commitment, and participation of communities in local cultural life are recognized as essential to ensure that heritage promotes social, cultural, and economic benefits for societies. According to the Convention, every person has the right to engage with cultural heritage and everyone should be encouraged to take part to its contemplation and interpretation but also to conservation activities, public reflections, debates on opportunities and challenges related to cultural life (European Council, 2005).

Several beneficial effects associated with cultural participation justify such support and encouragement. In fact, positive—individual and collective—psychological, socio-cultural, and political influences are linked to cultural engagement. At the *individual* level participating to culture might improve emotional and physical health as well as psycho-physics well-being (UNESCO Institute for Statistics, 2009). Both the rational and the emotional spheres are stimulated with cultural involvement that also functions as a form of lifelong learning. Access to culture is considered as particularly important for young people as it is interpreted as a complementary form of education able to instill



and inspire, besides traditional content-related topics, subjective sensitivity, creative imagination and freedom of initiative and expression (Parliamentary Assembly, 2012).

Furthermore, cultural participation could benefit *communities* and *collectivities* by strengthening sense of belonging to a place, local identity, and cohesion, therefore supporting and favouring bonding collective relationships. Also, representing an occasion for social connectedness and intercultural dialogue, cultural engagement might encourage mutual understanding, harmonious living together and trust towards other people, thus promoting bridging cultural ties. As highlighted in Bertacchini et al. (2021), engagement in leisure, cultural and arts activities is an important sphere of human socialization and integration. A *political* dimension could be as well associated with cultural participation as it is a form of citizenship expression (O'Toole, 2006), the backbone of human rights related to culture (Laaksonen, 2010), and a vehicle of democratic values such as freedom of expression and respect for human dignity. When cultural participation becomes an essential part of everyday life and an integral element of cultural vitality a strong support for *cultural* spending and policies could also arise from the public opinion, thus supporting financial sustainability of cultural sectors and safeguarding the future of cultural heritage.

Moreover, indicators of cultural participation are also representative of the willingness to socialize and of the individual enjoyment of cultural activities and events. This adds forms of collective experience and relationality to the pure presence of cultural opportunities. Moreover, such an element is bound to lead to a more intentional and emotionally deep fruition of culture, enhancing its potential inspirational role in other dimensions of social life, including the economic one (Cerisola & Panzera, 2022).

However, the positive economic consequences that could potentially develop—both directly and indirectly—from cultural engagement are scarcely investigated in the existing literature, especially in empirical terms. In order to deepen our thinking on this particular issue, the following subsection focuses on the economic effects linked with cultural participation and on the reasoning behind the idea that such effects might drive the improvement of the economic situation in a wider area.

2.2 | Urban cultural participation and regional economic output

As highlighted by the OECD, museums, cultural heritage sites and cultural productions have increasingly been acknowledged as drivers of territorial development and regeneration directly favouring the creation of jobs and economic value as well as improving the quality of life and the positive image and attractiveness of places (OECD, 2008). We here put forward the idea that it is the activation of cultural sites through participation and public involvement that triggers and stimulates these economic consequences. This is in fact an original contribution, since—even though the interest shown by the scientific literature in investigating the links between culture and economy is increasing—the effort in deepening and analysing specifically *cultural participation* and its economic consequences is still scant and sparse. Furthermore, we here propose the novel hypothesis that the potential economic benefits associated with cultural participation may also exert a pulling effect on the broader regional area.

More specifically, the effective fruition of and engagement in cultural heritage and cultural facilities activates and stimulates a bundle of activities and services linked to the culture-related value chain. Starting from the creation of heritage, passing through management and dissemination, reaching the exhibition and transmission, several economic sectors are involved such as construction, archaeology, advertising and marketing, retail, and tourism (ESPON, 2019). As proposed by Greffe (2004), the idea of the existence of a *heritage ecosystem* supports the understanding of the synergies and interrelations between cultural heritage and cultural facilities with other connected sectors. Related to this, an increased demand for tangible forms of cultural heritage and new cultural goods is also activated through a greater stock of intangible cultural capital directly linked with cultural participation through the “social reinforcement of activities and practices with cultural significance” (Quaglione et al., 2017, p. 505). All these synergies influence employment, turnover and value added that can be treated as measures of the economic impact of the fruition of different forms of culture. Moreover, participating in culture inspires creativity and innovativeness



that, in turn, affect local economies (Bakhshi et al., 2008; Cerisola, 2019). The economic benefits related to the activation of a heritage ecosystem, thanks to cultural engagement, are not circumscribed by the urban perimeter, for example, the economic activities directly stimulated by cultural participation might both be located outside the urban boundaries or people employed in cultural-related businesses might be inhabitants of areas located in the regions to which the city belongs.

Furthermore, cultural participation can be expected to have a positive interaction with the regional economic sphere by representing an alternative and complementary form of education and individual and collective learning. In this sense, cultural engagement influences human capital (see for instance Crociata et al., 2020) which is commonly recognized as an endogenous resource for local economic development. At the individual level, as Ferilli et al. (2011) argue, experiential forms of training and capability building acquired through cultural fruition encourage embracing new ideas, getting more familiar with forms of divergent thinking, reconsidering traditional models under a more critical light, and making new associations between fields and ideas. In addition, increased possibilities of self-expression together with learning of transferrable skills can also be considered as enhancers of the quality of local human capital. As highlighted in Everingham (2003), the accumulation of human capital linked with cultural participation is not limited to individuals and in fact the fruition of culture also functions as a platform for collective education processes as well as social regeneration and networking within and beyond the people engaged (for a detailed review of the literature on the relationship between cultural participation and human capital see Crociata et al., 2020).

More implicitly and indirectly, several socio-cultural and psychological aspects linked with cultural participation can in turn bring along some positive economic outcomes. For instance, fostered local identity, social cohesion, sense of belonging and active citizenship triggered and enhanced by cultural participation (Laaksonen, 2010; O'Toole, 2006; UNESCO Institute for Statistics, 2009) might in fact reflect costs reduction in terms of crime or conflict resolution. Moreover, the positive effects of cultural participation on well-being and life satisfaction might be also linked to longer life expectancy (Konlaan et al., 2000). The contribution of participating in cultural life on shaping shared systems of meaning and fostering a greater awareness of social consequences of individual behaviours can influence the effectiveness of resources saving measures and strategies that are nowadays extremely important for sustainable local development.

Finally, besides working as an engine for their whole region development, cultural and creative cities are attractive poles for the inhabitants of the regions hosting them. Through their urban cultural engagement people resident in the surrounding areas can absorb the benefits and potentialities flourishing from cultural participation and spread them to the wider regional area. It is worth noticing, however, that this potentially virtuous mechanism might be threatened and hindered by excessive flow of visitors and tourists to the urban cultural facilities. The following section aims at deepening the reasoning behind this potential congestion-related issue.

2.3 | Potential congestion effects

The beneficial outcomes associated with urban cultural participation and potentially pulling the economic conditions of the whole region might be significantly jeopardized when cultural and creative cities experience congestion and overcrowding issues related to tourism. In fact, as previously highlighted, cultural engagement and participation in cultural life are usually associated with urban environments, as cities are vibrant places often characterized by great concentration of cultural heritage, venues, events and, overall, cultural vibrancy. In Baycan's (2011, p. 4) words: "Cities have always been meeting places for people of different cultures, education and talents." What is more, cities are the most important components of cultural tourism in Europe (García-Hernández et al., 2017; Richards, 2017). However, some controversial consequences might arise in those urban contexts characterized by an extensive endowment of cultural sites and landmarks, and therefore likely to be popular destinations for (cultural) tourists, who could interfere with the cultural participation of residents and potentially undermine its beneficial effects.



Several concerns are linked with uncontrolled flows of cultural tourists that might generate disadvantages for local audiences (both urban and regional) and discourage local inhabitants to participate in cultural activities and events (Richards, 2017). An excessive physical exploitation of cultural sites and venues, for instance, might generate increased costs related with conservation and maintenance needs (Albaladejo & Gonzalez-Martinez, 2019; Du Cros & Kong, 2020; Riganti & Nijkamp, 2008). Negative externalities in terms of environmental concerns (e.g., pollution or waste management) and social concerns (e.g., crime) could also be linked with overtourism in heritage cities (Fang et al., 2018). Because of these congestion-related issues, regional inhabitants might be discouraged and disincentivized to participate in the urban cultural life and, therefore, the corresponding beneficial aspects could be precluded.

Furthermore, issues raised by cultural overexploitation, especially when caused by touristic pressure, might contribute to empty cultural heritage and cultural facilities from their original symbolic values and authenticity (Adie et al., 2020; Rasoolimanesh et al., 2019), thus inducing losses both in terms of inhabitants' sense of belonging and quality of life. Historic city centres of European cities are places that attract many visitors due to their relevance in terms of heritage, but tourism may be a threat to the conservation of their values (García-Hernández et al., 2017). Citing from Pasquinelli and Trunfio (2020, p. 4), overtourism causes “permanent changes...to people's sense of place; weakens socio-cultural connectivity and increases exploitation of local environmental resources.” Therefore, even when regional inhabitants do participate in urban cultural life, overcrowded cultural sites and facilities might be deprived from their authenticity and symbolic values therefore hindering the underlying socio-cultural and psychological positive effects for local inhabitants and visitors. Moreover, as heritage cities – thanks to their cultural venues and sites – represent such an attractor for cultural tourists, more peripheral and less popular areas might suffer from an excessive concentration of touristic activities in the cities (Cocola-Gant & Gago, 2019; García-López et al., 2020). This aspect exacerbates urban congestion and might be detrimental to the development of the surrounding (regional) areas.

It is worth noticing, however, that cultural heritage and tourism have a “hate-love relationship” (Fusco Girard & Nijkamp, 2009). On the one hand, tourism is an attraction force that stimulates and triggers local socio-economic development and emphasizes local pride and sense of identity. On the other hand, excessive flows of cultural tourists might cause several issues for local communities, for example, displacement and alienating effects or damage of the essential characteristics of places (Milano et al., 2019). Furthermore, as highlighted by Throsby (2009), tourism represents an essential resource of recurrent revenue to maintain and preserve certain heritage sites even if it simultaneously threatens the survival of those sites. As argued by Milano et al. (2019), unregulated and uncontrolled urban overtourism especially in popular destinations is associated with strategies aimed at selling cities as tourism commodities with the costs borne by local communities.

The following section of the paper translates in empirical terms our research question in the attempt of originally verifying the existence of positive regional economic outcomes driven by urban cultural participation as well as the presence of threats linked with touristic congestion of cultural and creative cities.

3 | URBAN CULTURAL PARTICIPATION AND REGIONAL ECONOMIC OUTPUT: MEASUREMENT AND EMPIRICAL METHOD

3.1 | The data

Aiming at empirically investigating if in fact a positive relationship can be detected between local cultural participation in CCCs and their regions' economy and if the suspected negative touristic congestion effects in Cultural and Creative Cities are actually there, we resort to the estimation of an augmented regional production function.

In more detail, the cultural data used to translate in empirical terms our theoretical hypotheses are retrieved from the Cultural and Creative Cities Monitor Database (CCCM). The tool has been developed by the Joint Research

**TABLE 1** Selection of indicators from the JRC Cultural and Creative Cities Monitor (CCCM)

<i>Cultural Vibrancy</i>	
<i>Cultural Venues & Facilities</i>	<i>Cultural Participation & Attractiveness</i>
Sights & landmarks Museums & art galleries Cinemas Concert & music halls Theatres	Tourist overnight stays Museum visitors Cinema attendance Satisfaction with cultural facilities

Centre of the European Commission and provides several cultural and creativity-related standardized indicators for 191² Cultural and Creative Cities (CCCs). European Capitals of Culture, UNESCO Creative Cities and cities that hosted at least two international cultural festivals are the CCCs included in the Monitor, which provides corresponding data for two temporal waves, released in 2017 and 2019, respectively. The available indicators reflect three main facets of the urban cultural and creative life, namely, *cultural vibrancy*, *creative economy* and *enabling environment*.

For the aim of the present work, we specifically selected some sub-indicators belonging to the main category of *cultural vibrancy*, which consists of *Cultural venues and facilities* and *Cultural participation and attractiveness*. Each of these two dimensions is in turn composed of different related variables: *cultural venues and facilities* include in fact *sights and landmarks*, *museums and art galleries*, *cinemas*, *concert and music halls* and *theatres*; *cultural participation and attractiveness* include instead *tourist overnight stays*, *museum visitors*, *cinema attendance* and *satisfaction with cultural facilities* (for further details the reader may refer to JRC, 2019).

In order to address our research question, we use the measure of *cultural participation and attractiveness* provided by the JRC. However, since we are specifically interested in *local* cultural participation, we leave out *tourist overnight stays* from the indicator.³ In addition, while *cinema attendance*⁴ (total number of tickets sold over population) can be reasonably considered as a measure of *local* cultural participation and the quality assessment provided by the *satisfaction with cultural facilities* component (percentage of population that is very satisfied with cultural facilities in the city) refers to the residents, admittedly museums can be visited by both tourists and residents. Therefore, the econometric analysis was also run excluding museum visitors from the cultural participation variable. The results remain consistent.

Furthermore, we selected the measure for *sights and landmarks* (number, weighted by population) as a proxy for urban cultural tourism following the idea, well documented in the literature (see for instance Yang et al., 2010; Patuelli et al., 2013; Petit & Seetaram, 2018; Faber & Gaubert, 2019; Panzera et al., 2020) that tangible forms of cultural heritage represent an important attractor of tourism flows. Table 1 summarizes the indicators selected where Sights and landmarks ranges from 0.13 to 100 with an average value of 22.76 and our selected measure of Local Cultural Participation ranges from 7.02 to 60.02 with an average value of 30.19.

Once the urban variables of interest have been selected from the CCCM database, each city has been associated with its NUTS 2 region.⁵ Subsequently, regional data on GDP (the dependent variable), capital and labour have been collected. Table 2 provides computational details and sources on all the included variables.

²Swiss cities were not included in our sample due to difficulties in retrieving data needed at the regional level.

³The sub-indicators are standardized measures between 0 and 100 (this elaboration is provided by the JRC). The synthetic indicator we used for cultural participation is computed as the arithmetic mean of the three selected components. This is consistent with what is done by the JRC itself, which associates equal weight to the three components we used.

⁴Cinema attendance is used as a measure of cultural participation also in Bertacchini et al. (2021).

⁵A few cities included in the database are themselves an entire NUTS 2 region (Vienna, Prague, Berlin, Hamburg and London). For those cases, all the adjacent NUTS 2 regions have been associated to the urban region to be able to detect the impact of urban variables on the wider surrounding area. A map representation is provided in Appendix Figure A1.



TABLE 2 Variables' description

Variable	Description	Measure	Territorial unit of reference	Data source
GDP	Gross Domestic Product	Regional output	NUTS 2	Cambridge Econometrics
Capital Stock	Capital Stock computed through Permanent Inventory Method (PIM) from data on Gross Fixed Capital Formation	Regional capital stock	NUTS 2	Cambridge Econometrics
Employment with Tertiary Education	Number of employed people with tertiary education	High-skilled regional labour force	NUTS 2	Eurostat
Employment without tertiary education	Number of employed people without tertiary education	Medium low-skilled regional labour force	NUTS 2	Eurostat
Urban Population Share	Share of the urban population over total regional population	Relative importance (size) of the city within its region	Urban/ NUTS 2	Eurostat
Cultural participation	Synthetic indicator including urban population weighted museum visitors, cinema attendance, and satisfaction with cultural facilities	Local cultural participation	Urban	JRC CCCM
Cultural tourism	Urban population weighted sights and landmarks (points of historical, cultural and or artistic interest, such as architectural buildings, religious sites, monuments and statues, churches and cathedrals, bridges, towers, and fountains)	Cultural tourism	Urban	JRC CCCM



3.2 | Econometric strategy

The present section considers all the reflections explained before and proposes to explore the issue through a classical regional production function, where regional (r) GDP is expressed as a function of capital (K) and labour (L), augmented to consider some cultural characteristics (C) at the urban level (c), as follows:⁶:

$$GDP_r = f(K_r, L_r, C_c). \quad (1)$$

In this way, the regional economic output is explained, among other important and traditional production factors, by CCCs urban cultural features, thus allowing to highlight possible pulling effects from the city to the region. In practice, each city was associated with the corresponding NUTS 2 region. This was done to be able to catch the relationship between the local cultural participation at the urban level with the surrounding area.⁷

Log transforming Equation (1) and adding a few relevant controls, we obtain the following specifications, suitable for a *panel fixed effects* econometric estimation:

$$\ln GDP_{rt} = \alpha + \beta_1 \ln K_{r(t-3)} + \beta_2 \ln L_{\text{nontertiary}}_{r(t-3)} + \beta_3 \ln L_{\text{tertiary}}_{r(t-3)} + \beta_4 \ln \text{CulturalTourism}_{c(t-3)} + \beta_5 \ln \text{CulturalParticipation}_{c(t-3)} + \beta_6 \ln \text{PopShare}_{c(t-3)} + \beta_7 \text{time} + \varepsilon_r, \quad (2a)$$

$$\ln GDP_{rt} = \alpha + \beta_1 \ln K_{r(t-3)} + \beta_2 \ln L_{\text{nontertiary}}_{r(t-3)} + \beta_3 \ln L_{\text{tertiary}}_{r(t-3)} + \beta_4 \ln \text{CulturalTourism}_{c(t-3)} + \beta_5 \ln \text{CulturalParticipation}_{c(t-3)} + \beta_6 \ln \text{CulturalTourism}_{c(t-3)} * \ln \text{CulturalParticipation}_{c(t-3)} + \beta_7 \ln \text{PopShare}_{c(t-3)} + \beta_8 \text{time} + \varepsilon_r, \quad (2b)$$

where $\ln GDP$ is the log GDP in region r (NUTS 2 level) in 2016 and 2019, $\ln K$ is the log regional capital, and regional labour is distinguished by “quality” into the log of non-tertiary educated employment ($\ln L_{\text{nontertiary}}$) and the log of tertiary educated employment ($\ln L_{\text{tertiary}}$). As for the city-level (c) variables, $\ln \text{CulturalTourism}$ is measured through the log of an indicator including sights and landmarks (see Section 3.1), while $\ln \text{CulturalParticipation}$ corresponds to local cultural participation and it is our main variable of interest. It is quantified as the log of an indicator including museum visitors, cinema attendance, and satisfaction with cultural facilities (see subsection 3.1). Finally, $\ln \text{PopShare}$ is the log share of the city population over the total population of the NUTS 2 area, to control for the relative importance (size) of the city within its region. Besides the automatic city-level fixed effects, time fixed effects are also included.

Equation (2a) is subsequently slightly modified into Equation (2b), so to investigate, through an interaction term, the effect of local cultural participation when accompanied by cultural tourism (measured as sights and landmarks). On the one hand, in fact the joint impact could be expected to be positive, since an important cultural participation in a city that attracts tourism through cultural sights could in principle trigger synergetic mechanisms and therefore push the whole regional economy. On the other hand, however, the touristic congestion concerns expressed above could find confirmation through a negative coefficient of the interacted term; this would in fact be representative of a situation in which “too many” cultural tourists compromise the overall influence of urban cultural participation on the regional output.

Since we estimate a regional (NUTS 2) production function, we also controlled for NUTS 2 level fixed effects using pooled OLS regressions. The results do not change and are displayed in Table A1 in the Appendix.

⁶A similar approach was presented in Cerisola and Panzera (2021).

⁷In some cases, there is more than one CCC in the same NUTS 2 region. As a robustness check, all the regressions presented below were also run randomly keeping only one CCC for each of the NUTS 2 regions for which the case occurs. The results do not change substantially.



The analysis is carried out for two periods and, to avoid as much as possible potential endogeneity, the explanatory variables are three years lagged with respect to the dependent one.⁸ In fact, regional GDP (the dependent variable) of course measures the regional production and is *per se* mainly associated with the regional size. In this sense we do not expect particular problems of reversed causality, since we do not think that in principle larger regions could cause a higher urban cultural participation in relative terms.⁹ An additional check to prevent endogeneity concerns was performed: a panel fixed effects econometric analysis was carried out, making *urban* cultural participation dependent on previous year *regional* GDP (plus city and time fixed effects). Such relationship is not significant. Therefore, we are reassured on our reasoning.

Moreover, one may reasonably think that there could be an issue of omitted variables, since local cultural participation can be associated with local wealth and education. In fact, education is considered in the splitting of the employment (labour) variable and the fixed effects at the city level do control for these characteristics. In addition, most dimensions of the cultural participation measure are logically independent of wealth (see subsection 3.1).¹⁰ We did not want to pervert the nature of the regional production function through the inclusion of too many controls at the urban level; however, as an additional check we carried out the estimation also entering GDP *per capita* and share of tertiary educated population¹¹ among the regressors. In addition, we carried out the estimation also including measures of sectoral specialization, accessibility and further indicators of urban agglomeration economies. Again, the results remain consistent.

What is more, a further panel fixed effects econometric analysis was carried out, making *urban* cultural participation dependent on previous year *per capita* GDP and human capital (plus city and time fixed effects). Such relationships are not significant. Once more, we are reassured on our reasoning.

Finally, we also estimated our main model in its intensive form, that is, regressing labour productivity on capital intensity and total labour force plus additional controls on regional size, sectoral structure, human capital, and accessibility. Once more, the results do not change.¹² The next section presents the results.

4 | RESULTS

The results obtained estimating Equations (2a) and (2b) are displayed in Table 3. Two main messages emerge. On the one hand, *urban* cultural participation is indeed a key resource for the *regional* output. The positive and significant coefficient associated with local cultural engagement indicates that our expectations on its beneficial role for the economic output of the entire region are met. On the other hand, adverse touristic congestion effects seem to rise in the presence of important cultural tourism (proxied by urban sights and landmarks), as demonstrated by the negative and significant coefficient associated with the interaction between urban cultural participation and cultural tourism.

In order to deepen our understanding of the results displayed in column (2b) above, the meaning of the interaction term was explored through the marginal effects computation of the variables of interest. *Local cultural participation* emerges again as an important determinant of regional output, with a marginal effect of 0.079, significant at the 1% level. On the other hand, the marginal effect of *cultural tourism* is positive (0.034) but not statistically significant. Our interpretation is that the positive action of local cultural participation is hindered by (excessive) cultural tourism, as it may well be the case in Cultural and Creative Cities characterized by an important presence of cultural sights.

⁸The choice of the three-year lags depends on the time of the data available from the JRC and on our willingness to lag the explanatory variables as much as possible using the most recent GDP data (excluding 2020 because of the pandemic).

⁹In any case we also controlled for a measure of region size (region population) and the results remain completely consistent.

¹⁰Access to cultural institutions (museums) is often free, and entrance prices are not necessarily related to the true costs of producing and providing cultural goods.

¹¹Complete and comparable data on education are not available at NUTS 3/urban level. Therefore, the share of tertiary educated population is entered in the regressions at NUTS 2 level.

¹²All these results are available from the authors upon request.

**TABLE 3** Urban cultural participation and regional economic output results

	Equation	
	(2a)	(2b)
Capital stock	0.456*** (0.054)	0.453*** (0.054)
Employment with tertiary education	0.098** (0.047)	0.118** (0.048)
Employment without tertiary education	0.050 (0.063)	0.035 (0.063)
Cultural tourism	0.036 (0.063)	0.202** (0.080)
Local cultural participation	0.080*** (0.029)	0.218*** (0.061)
Local cultural participation*cultural tourism		-0.050*** (0.017)
Urban population share	0.024 (0.041)	0.012 (0.039)
City fixed effects	YES	YES
Time fixed effects	YES	YES
Constant	4.529*** (0.778)	4.077*** (0.786)
Observations	372	372
Number of city_id	186	186
R-squared (within)	0.911	0.914

Notes: Panel fixed effects regressions. Dependent var: regional (NUTS 2) GDP. All the variables are expressed in logs. Robust standard errors in parentheses. The main coefficients of interest are in bold.

***p < 0.01. **p < 0.05. *p < 0.1.

To make our explanation even clearer, the average marginal effects of local cultural participation for increasing values of cultural tourism are graphed in Figure 1: although always positive, the favourable impact of local cultural participation decreases and loses statistical significance for increasing values of cultural tourism (sights and landmarks). This suggests that a high (excessive) number of cultural tourists hampers the positive effects of local cultural participation on regional economic output.

As anticipated before, the analyses were also run excluding the “museum component” of the local cultural participation variable, and the results are reported in Table 4. As can be easily seen, they do not differ substantially from the previous ones. The marginal effects computed on the second specification (the one including the interaction term) are positive (0.065) and significant at the 5% level for local cultural participation (without museums) and positive (0.085), but not statistically significant, for cultural sights and landmarks.

Thus, our results show how urban cultural participation in fact benefits the economic output of the whole region. People participating in urban cultural activities promote the role of CCCs in being an engine for the economy of their wider region and possibly furtherly facilitate the beneficial regional impact through their individual enrichment, which is taken back from the cultural activity enjoyed in the city to their home-places within the same region. However, touristic congestion in Cultural and Creative Cities can hamper such favourable mechanism.

These considerations stress the importance of establishing an intrinsically motivated and firmly empowered community commitment to active and purposeful participation in cultural life (Ferilli et al., 2011; Sacco & Crociata, 2012; Sacco & Tavano Blessi, 2009). At the same time, they give rise to some necessary reflections on the best ways to catch the advantages associated with cultural tourism, but also avoid as much as possible the related detrimental effects. In this sense, Hall (2019, p. 1056) in his discussion of tourism and the Sustainable Development Goals, calls for “shifting from a growth mentality to one that explicitly commits humanity to prospering and travelling within the limits of the ecosystems of which we are a part” (reported in Adie et al., 2020). Some possible suggestions in this direction are provided in the conclusions.

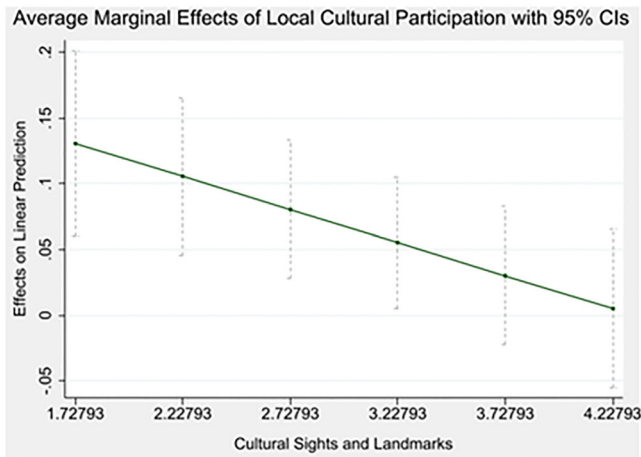


FIGURE 1 Marginal effects of local cultural participation for increasing values of cultural tourism

TABLE 4 Urban cultural participation and regional economic output. Results when excluding the “museum component” from the local cultural participation variable

	Equation	
	(2a)	(2b)
Capital stock	0.449***(0.054)	0.443***(0.053)
Employment with tertiary education	0.113**(0.048)	0.121**(0.047)
Employment without tertiary education	0.044(0.068)	0.031(0.068)
Cultural tourism	0.070(0.066)	0.391***(0.134)
Local cultural participation (without museums)	0.088** (0.039)	0.309***(0.097)
Local cultural participation (without museums) * Cultural tourism		-0.088*** (0.032)
Urban population share	0.052(0.044)	0.048(0.042)
City Fixed effects	YES	YES
Time fixed effects	YES	YES
Constant	4.491***(0.792)	3.774***(0.824)
Observations	372	372
Number of city_id	186	186
R-squared (within)	0.909	0.913

Notes: Panel fixed effects regressions. Dependent var: regional (NUTS 2) GDP. All the variables are expressed in logs. Robust standard errors in parentheses. The main coefficients of interest are in bold.

***p < 0.01. **p < 0.05. *p < 0.1.

5 | CONCLUSIONS

The paper provided original value added in two main respects: it developed an analysis aimed at investigating the link between *urban* cultural participation and *regional* output in Cultural and Creative Cities, and it combined reasonings that are usually explored within two different strands of literature, that is, the one related with cultural participation and the one investigating potential touristic congestion.

In more details, this work showed that there is in fact a positive relationship between local cultural participation and economic output and that the beneficial impact of urban cultural participation can be a driver for the



development of the whole region hosting the city. In this sense, cultural participation can be seen as an important and worth-incentivizing element of regional performance and accessibility to cultural heritage should be fostered so that all categories of people can participate in culture (including people with disabilities, minorities and migrants) (ESPON, 2021). Furthermore, *active* cultural participation should be encouraged also to support cultural heritage maintenance and valorization and should become a strategic priority (ESPON, 2021).

However, our study also highlighted some possible risks, potentially associated with (excessive) cultural tourism in Cultural and Creative Cities. In these cases, overloaded infrastructures, damage to nature and threats to material heritage could alienate the residents, and this would of course hamper their cultural participation and reduce its beneficial contribution.

Such detrimental effects can possibly be limited and counterbalanced through the adoption of suitable policies aimed at fostering those types of tourism that promote local involvement (commercial, public, and social) and benefits, while minimizing tourism that provide few local advantages or have negative local impacts. Smoothing visitors over time is of course a possible action, as well as spreading tourists across different sites, so distributing them more evenly, also including under-visited, but all the same interesting, areas.¹³ Such goals can be pursued via promotion, new attractions, better transportation options, and tours (see IPOL, 2018). This last strategy seems to have been pushed in particular as a consequence of the COVID-19 pandemic, which also brought to the fore the need for a less crowded fruition of attractive cultural facilities, in this sense accelerating a process that had already started.

This work represents a first attempt at valorizing the positive contribution of local cultural participation to economic development and at focusing on potential congestion issues that could possibly hinder such interesting relationship. Nonetheless, further research is needed. In particular, the present paper investigated the role of local cultural participation in Cultural and Creative Cities. It would be extremely interesting to extend the reasoning and the empirical analyses to a wider sample, so as to be clearer on the generalizability of the results.

ORCID

Silvia Cerisola  <https://orcid.org/0000-0001-6283-8982>

Elisa Panzera  <https://orcid.org/0000-0003-2229-6634>

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¹³A very nice example is the “Veneto – The Land of Venice” campaign, ideated by the Veneto agency for touristic promotion and aimed at making known (and visited) many less famous artistic and natural beauties located in the Venice region (<https://www.veneto.eu/EN/Home/>, accessed 28 January 2022).



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APPENDIX A.

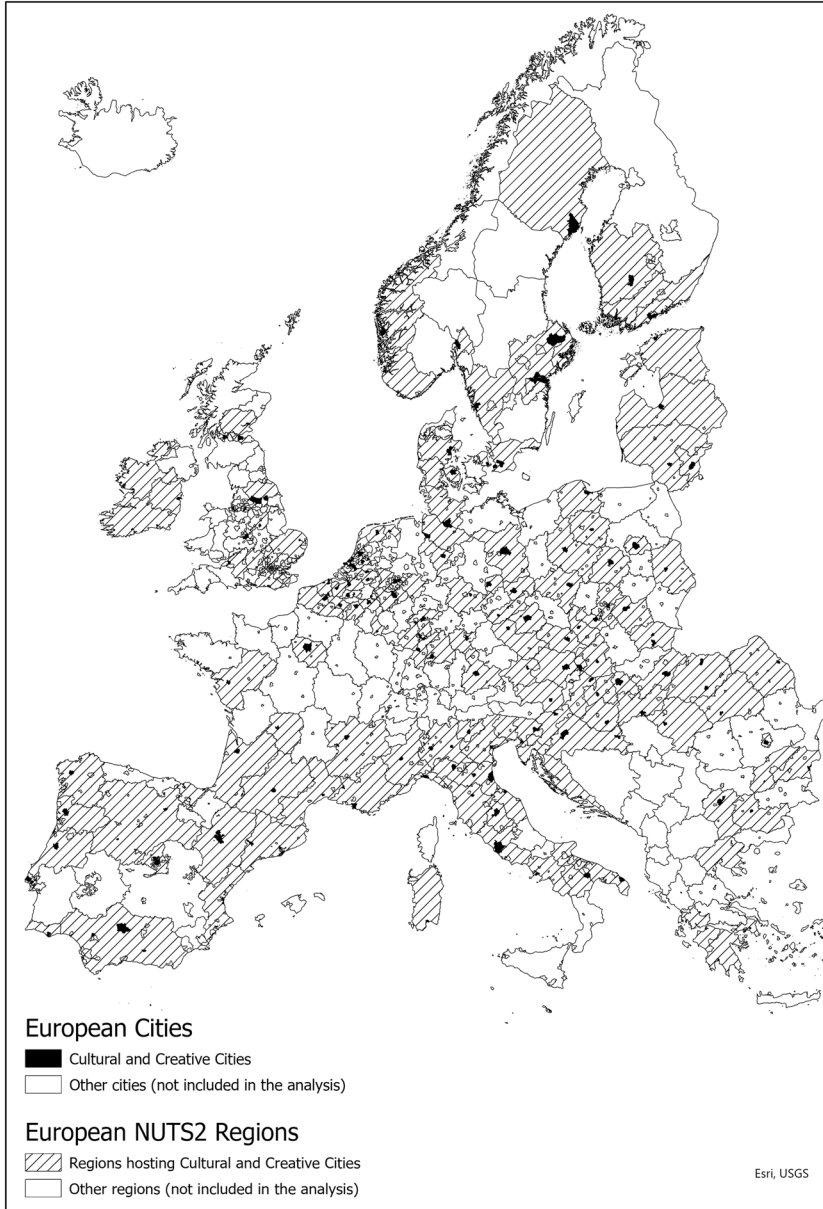


FIGURE A1 Cultural and Creative Cities and related NUTS 2 regions

**TABLE A1** Pooled OLS controlling for NUTS 2 level fixed effects

	Equation	
	(2a)	(2b)
Capital stock	0.454***(0.049)	0.451***(0.049)
Employment with tertiary education	0.096**(0.043)	0.118***(0.043)
Employment without tertiary education	0.047(0.057)	0.033(0.057)
Cultural sights and landmarks	0.012(0.024)	0.190***(0.059)
Local cultural participation	0.082***(0.025)	0.220***(0.054)
Local cultural participation*cultural sights and landmarks		-0.051***(0.016)
Urban population share	0.000(0.002)	0.000(0.002)
Time fixed effects	YES	YES
NUTS 2 fixed effects	YES	YES
Constant	4.748***(0.767)	4.267***(0.780)
Observations	372	372
R-squared	0.999	0.999

Notes: Pooled OLS regressions. Dependent var: Regional (NUTS 2) GDP. All the variables are expressed in logs. Robust standard errors in parentheses, significance levels as follows:

***1%.

**5%.

*10%.



Resumen. Tras la publicidad que se ha dado a la cultura como factor desencadenante y potenciador de los resultados económicos locales en los últimos 20 años, el carácter cultural de las ciudades se considera una fortaleza y una oportunidad estratégicas que pueden favorecer el sistema económico de todas las regiones en las que se encuentran las ciudades. De acuerdo con esta perspectiva, este artículo examina el papel de la participación cultural, entendida como el involucramiento de las personas en actividades culturales, en lo que afecta a la producción regional. Se utilizó una función de producción regional y datos del Monitor de Ciudades Culturales y Creativas (CCCM, por sus siglas en inglés) proporcionados por el Centro Común de Investigación (JRC, por sus siglas en inglés) de la Comisión Europea para investigar desde el punto de vista econométrico el efecto de la participación cultural urbana en la economía regional. También se examinaron los efectos de congestión potenciales relacionados posiblemente con un turismo cultural (excesivo). La participación cultural en las Ciudades Culturales y Creativas emerge como un recurso estratégico para el desarrollo, aunque algunos mecanismos de congestión podrían reducir su efecto positivo. Se analizan a fondo las implicaciones políticas.

抄録: 過去20年間では文化は地域の経済的パフォーマンスの誘因及び促進者として過大に扱われたが、その後、都市の文化的特性は、都市が位置する地域全体の経済システムに有利に作用する戦略的な強さと機会であると考えられている。この見方に基づき、本稿では、地域のアウトプットに影響を与えることにおける、個人の文化活動への関与を目的としての文化的参加の役割を探求する。欧州委員会共同研究センター (Joint Research Centre: JRC) が提供する文化創造都市モニター (the Cultural and Creative Cities Monitor:CCCM) のデータと地域の生産関数を利用して、都市部の文化的参加が地域経済に及ぼす影響を計量経済学的に調査した。さらに、(過剰な)文化的観光産業に関連する可能性のある混雑効果も検討した。文化創造都市における文化的参加は、開発のための戦略的資源として出現しているが、混雑のメカニズムのいくつかは、そのプラスの効果を減少させる可能性がある。関連する政策的インプリケーションについて広く考察する。