

Satisfaction with Cultural Facilities in European Cities: The Role of Income, Overtourism and Congestion Effects

Research Paper

Olegs Krasnopjorovs*

University of Latvia, Faculty of Economics and Social Sciences, Aspazijas 5-331, Riga, LV-1050, Latvia; ORCID: <https://orcid.org/0000-0003-3986-4730>

Received 10 May 2025; Accepted 25 November 2025

Abstract: Culture is a constitutive part of urban life quality and a crucial urban policy dimension. Most of European cultural heritage is concentrated in cities. European cities differ substantially with regard to how well residents are satisfied with cultural facilities.

Research purpose. The purpose of this research is to find which city characteristics are linked to higher or lower satisfaction with cultural facilities across European cities. In particular, the study explores the relationship between the perceived quality of cultural facilities and income level, tourist inflows and local congestion effects (measured as population density and traffic congestion), while controlling for the city size, capital city status and the overall urban life satisfaction.

Design / Methodology / Approach. Satisfaction with cultural facilities is based on the European Commission survey data on the quality of urban life in 83 European cities. Respondents assess perceived quality of cultural facilities (museums, theatres, concert halls and libraries) on a 5-point Likert scale ranging from “not at all satisfied” to “very satisfied.” This article calculates the balance of replies to the respective question, ranks European cities according to the perceived quality of cultural facilities, and then employs a multifactor regression analysis to check the relationship between satisfaction with cultural facilities and different city characteristics.

Findings. The findings indicate that residents of Zurich, Vienna, and Groningen are the most satisfied with cultural facilities in their cities, while those in Tirana, Valletta, and Skopje are the least satisfied. Satisfaction with cultural facilities is positively associated with income level, overall satisfaction with urban life, as well as with the actual per capita number of cultural facilities in a given city. In turn, large tourist inflows, high population density and traffic congestion decrease satisfaction with cultural facilities. Residents of the European capital cities tend to be less satisfied with cultural facilities, even after controlling for city size, overtourism and local congestion effects.

Originality / Value / Practical implications. This study offers several contributions. First, it utilises the most recent wave (2023) of the European Commission survey on the quality of life in European cities and focuses on satisfaction with cultural facilities, while outlining the role of culture in urban economic development and general well-being. Second, it formally shows how tourist inflows and local congestion effects decrease satisfaction with cultural facilities in several European cities. Third, it highlights that the perceived quality of cultural facilities is lower in the capital cities, even after controlling for the actual per capita number of cultural facilities, tourist inflows and local congestion effects. These findings can provide insights for policymakers seeking to enhance the efficient use of cultural infrastructure and improve satisfaction with cultural life across Europe.

Keywords: urban quality of life • cultural facilities • European Commission survey • overtourism • congestion

JEL codes: C31, I31, Z1

Introduction

Culture is a constitutive part of urban life quality and a crucial urban policy dimension in addressing city attractiveness (Morais & Camanho, 2011; Morais et al., 2013). Culture uniquely defines a city, with each city embodying its own cultural identity. Cultural heritage is concentrated in cities and is often reflected in cultural facilities like museums, theatres, libraries

* Email: Olegs.Krasnopjorovs@lu.lv

and concert halls. However, European cities differ substantially regarding how well residents are satisfied with cultural facilities. On the one hand, cultural landmarks are often found in bigger cities, particularly in the capital cities. On the other hand, overtourism and local congestion seem nearly inevitable consequences of culturally vibrant places (Saleh & Drouillon, 2025). How important are these factors in shaping satisfaction with cultural facilities across European cities?

The aim of this research is to find which city characteristics are linked to higher or lower satisfaction with cultural facilities across European cities. The study addresses the following objectives:

- Review the scientific literature on the: (a) role of cultural facilities in shaping urban quality of life and city attractiveness; (b) city characteristics associated with higher and lower satisfaction with cultural facilities and urban well-being in general;
- Identify which European cities had the most and the least satisfied respondents with respect to cultural facilities based on the most recent wave of the Eurobarometer survey on the quality of life in European cities;
- Employ multifactor regression analysis to explore how the satisfaction with cultural facilities is related to the income level, tourist inflows and local congestion effects, while controlling for the city size, capital city status and the overall urban life satisfaction.

The following hypotheses are tested:

- H1: Satisfaction with cultural facilities in the European cities is positively associated with the overall urban life satisfaction, income level, as well as the actual per capita number of cultural facilities in a given city;
- H2: Large tourist inflows and local congestion effects substantially decrease satisfaction with cultural facilities in the European cities;
- H3: Residents of large European cities, as well as capital city residents, are less satisfied with cultural facilities.

Every four years European Commission surveys the urban population regarding their perceived quality of life. The most recent survey took place in 2023, including responses from more than 70,000 individuals across 83 European urban areas. One of the questions in this survey reflects satisfaction with cultural facilities. Respondents assess perceived quality of cultural facilities (museums, theatres, concert halls and libraries) on a 5-point Likert scale ranging from “not at all satisfied” to “very satisfied.” This article calculates the balance of these replies and employs a multifactor regression analysis to check which city characteristics are linked to higher and lower satisfaction with cultural facilities across 83 European cities.

The results indicate that residents of Zurich, Vienna and Groningen are the most satisfied with cultural facilities in their cities, while those in Tirana, Valletta and Skopje are the least satisfied. Satisfaction with cultural facilities is positively associated with income level, overall satisfaction with urban life, as well as with the actual per capita number of cultural amenities in a given city. In turn, large tourist inflows and local congestion effects (measured by traffic congestion and population density) substantially decrease satisfaction with cultural facilities. Residents of European capital cities tend to be less satisfied with cultural facilities, even after controlling for city size and congestion effects.

Literature review

The literature review section is structured as follows. First, we discuss the crucial role of culture in modern urban development. Second, we outline the channels through which cultural infrastructure shapes city branding and urban life quality. Third, we review how creative city strategies, placing culture at the heart of urban development, can revitalise European city centres and fuel the economy with tourist inflows. Fourth, we present the critiques of creative city strategies and the phenomenon of overtourism. Finally, we discuss which city characteristics are likely to drive satisfaction with cultural facilities of urban residents.

Culture as a constitutive part of urban development

Culture is a complex and multidimensional concept (Montalto et al., 2019). Not only does it affect people's everyday lives, but it also may drive urban change. As a separate economic sector, culture contributes to urban regeneration, social inclusion and wellbeing (Van Puyenbroeck et al., 2021). Culture influences the economy, social health, sense

of pride and belonging, the environment, as well as everyday behaviours and practices (Saleh & Drouillon, 2025). It is widely regarded as key to promoting inclusive development, enhancing social cooperation, as well as fostering creativity and innovation (Montalto et al., 2019). Cultural production positively affects skill development and cognitive functions (Mecocci et al., 2022). It can also generate positive externalities, including improved education, enhanced social cohesion, greater civic engagement, and boosting economic activity alongside contributions to local development through tourism promotion and the revitalisation of urban spaces (Gomez-Antonio et al., 2022).

Culture uniquely defines a city, and each city develops its own distinct cultural identity. Even cities within the same country can exhibit substantial cultural differences, as demonstrated by Blessi et al. (2016) in their study about two Italian cities - Bolzano and Siracusa. This underscores the role of culture as a constitutive component of urban quality of life. In recent years, culture has become a crucial policy dimension for addressing urban attractiveness and social cohesion. Culture-led development is inherently multidimensional, spanning the economy, society, and individual lives (Montalto et al., 2019; Van Puyenbroeck et al., 2021).

Cultural infrastructure, city branding and urban life quality

Most of the cultural heritage is concentrated in urban areas and is often expressed through cultural facilities such as museums, theatres, concert halls and libraries. Historically, cities served as the homes of prominent talents and the repositories of great artworks, symbolising political power and economic strength (Montalto et al., 2019). The urban environment remains a privileged context for cultural infrastructure (Van Puyenbroeck et al., 2021), and while the role of cultural facilities in urban space evolves over time, it continues to be of major importance (Redaelli et al., 2025).

Cultural heritage has been recognised as one of the fundamentals of local development (Cerisola & Panzera, 2022). It serves as a powerful medium for communication, growth and soft power (Saleh & Drouillon, 2025). As such, cultural facilities in European cities are integral to long-term urban branding (Błaszczuk & Kryszinski, 2023) and are a key determinant of international tourism flows (Panzera et al., 2021). For example, although Vienna ceased to be the capital of a major empire more than a century ago, its historical cultural heritage continues to elevate its international prominence beyond what the current population and economic size of Austria would suggest (Hatz, 2008).

Larger cities typically possess a greater stock and wider variety of cultural resources. Empirical evidence shows a strong correlation between high population density - characteristic of larger cities - and the concentration of creative industries, which benefit from agglomeration economies. Nonetheless, significant cultural assets can also be found in smaller cities. In fact, many smaller cities may exhibit more cultural amenities per capita than their larger counterparts (Montalto et al., 2019).

Creative city strategies and cultural tourism

Culture is also increasingly recognised as an independent creative industry that contributes to economic growth, employment and innovation (Van Puyenbroeck et al., 2021). The creative industries are widely viewed as central in shaping urban economic development (Błaszczuk & Kryszinski, 2023), particularly in the restructuring and revitalisation of former industrial areas (Gormar, 2023).

Cultural tourism is a relatively recent but impactful phenomenon, with the potential to foster economic regeneration and significantly benefit local communities (Saleh & Drouillon, 2025). It encompasses activities such as revitalising city centres, constructing cultural infrastructure, and promoting local heritage. Cultural tourism is especially relevant for medium-sized, second-tier cities in Central and Eastern Europe that formerly specialised in industrial production (Sroda-Murawska, 2025). The presence of cultural attractions and infrastructure, institutional quality, and the hospitality of residents are among the key factors influencing the development of cultural tourism (Vaishar et al., 2025), which may constitute a non-negligible part of the urban economy and employment even in such large and rich European cities as Rome, Paris or Vienna.

Overtourism and critiques of creative city strategies

However, the effectiveness of creative city strategies is not without controversy. For instance, cities with notable cultural landmarks may experience negative externalities such as high population density, traffic congestion and overtourism with its detrimental impacts on urban and social development (Saleh & Drouillon, 2025). At the same time, attempts to preserve historical urban landscapes can constrain the development of the modern economy and cultural expressions (Tena et al., 2025). Furthermore, European city centres with notable cultural landmarks

typically have high apartment prices, which makes them less accessible to creative and often low-income youth, hindering cultural dynamism (Montalto et al., 2023).

Creative city strategies may exacerbate income inequality by disproportionately benefiting elite workers, instrumentalise culture for political or economic purposes, or promote a narrow and subjective understanding of cultural production. Indeed, traditional top-down governance approaches to urban cultural development often neglect the voices of local citizens (Nelaeva & Iermolenko, 2024). Ferilli et al. (2017) question the effectiveness of constructing new cultural facilities and organising flagship events, advocating instead for inclusive cultural participation by residents. In addition, some cultural projects may overly depend on public subsidies and fail to generate the anticipated employment benefits (Souliotis, 2013). As a result, Montalto et al. (2023) find no strong association between cultural vibrancy and creative economy performance across European cities.

It is also essential to consider the sustainability of business models in the cultural and creative industries, which have proven vulnerable to economic shocks, such as the COVID-19 pandemic (Penarroya-Farell & Miralles, 2022). Particularly, European countries and regions which previously enjoyed large tourist inflows experienced the sharpest economic activity contractions in 2020.

City characteristics and the satisfaction with cultural facilities

What drives the cultural satisfaction of urban residents? On the one hand, people enjoy cultural landmarks, which are often found in bigger cities, particularly in the capital cities. On the other hand, academic literature reveals that overtourism and city congestion effects seem to be nearly inevitable companions of culturally vibrant places (Saleh & Drouillon, 2025).

Overall, urban culture satisfaction can be linked with several city characteristics:

Actual number of cultural facilities. One could expect a positive relationship between satisfaction with cultural facilities and the actual number of cultural facilities per capita. This relationship, however, is far from perfect. For instance, Perucca (2019) finds that the provision of cultural amenities has no significant effect on satisfaction with cultural facilities. It means residents tend to adjust their cultural demands according to the amenities supplied in their city and, therefore, the pure endowment of cultural assets is not directly associated with their satisfaction.

Urban congestion. Urban congestion can limit accessibility to cultural facilities in several ways. Population density and traffic congestion increase the time necessary for travelling between different city districts, therefore rising effective costs (including lost time) of attending cultural events. Furthermore, overtourism can particularly increase congestion near landmarks, lead to longer lines at museums, as well as decrease seat availability in theatres and concert halls, thus decreasing visitors' satisfaction (Zemla & Szromek, 2021).

Overall quality of urban life satisfaction. One may expect a positive relationship between satisfaction with cultural facilities and overall quality of urban life satisfaction at a city level for several reasons. First, as culture is a constitutive part of urban life quality (Morais & Camanho, 2011), respondents who are satisfied with cultural facilities are also more likely to report higher overall urban life satisfaction. Second, "satisfaction with cultural facilities" may partly measure satisfaction with other urban well-being areas, such as access to cultural facilities by public transport or safety of attending cultural events. Third, some other factor, like income level or respondents' health status, could simultaneously affect both satisfaction with cultural facilities and the overall urban quality of life satisfaction.

Income level. Quality of life satisfaction often rises with income, at least until a certain income level (Goerlich & Reig, 2021). A positive relationship between income and satisfaction with cultural facilities can reflect several channels. First, higher income of households may raise the affordability of cultural events with paid admission to the general public. Second, wealthier individuals usually spend a bigger share of their income (and therefore, also larger amounts of money) on cultural services (this is revealed, for instance, in the Eurostat Household Budget Survey data), implying more often participation in high-quality cultural events, which may lead to higher satisfaction with cultural life. Higher income also may reflect a higher education level (Psacharopoulos & Patrinos, 2018), which may translate into higher demand for cultural services. On the opposite, wealthy individuals may be more demanding subject to the amount and quality of cultural services in a city. Third, higher income is likely to translate into higher tax revenues, which means greater resources for state and local authorities to maintain cultural facilities in a decent capacity and quality. Fourth, rich European cities also tend to have better infrastructure, including better functioning public transport systems, which would raise connectivity between different city districts, thus improving access to cultural facilities in a city. Rich European cities are also perceived as physically safer, which may enhance attendance of cultural events during late evening hours.

City size and capital city status. People enjoy cultural landmarks, which are often found in bigger cities, particularly capital cities. Moreover, large cities offer more cultural diversity with a bigger number of different theatres, museums, libraries and concert halls. This, however, does not automatically translate into greater availability of cultural services in large cities, as they may have a smaller number of cultural facilities when measured in per capita terms (Montalto et al., 2019). Furthermore, the negative relation between the city size and urban well-being can reflect congestion, stress and work pressure, higher living costs, as well as lower cooperation and support between individuals (Loschiavo, 2021).

Research methodology

The main data source of this study is the European Commission survey on the perceived quality of urban life. This survey is conducted every four years. The most recent wave was conducted in 2023 and covers 83 urban areas (European Union and Balkan countries, as well as the United Kingdom, Iceland, Norway, Switzerland, and Turkey). From 800 to 900 respondents were surveyed in each city. Respondent-specific weights were applied to ensure representativity of the survey sample to the general population in a given city by age and gender, as well as education level at the NUTS-2 region level.

The European Commission survey contains dozens of questions on satisfaction with different urban quality of life areas, such as safety, infrastructure, city governance and many others. One of these questions, which is the focus of this study, relates to satisfaction with cultural facilities such as museums, theatres, libraries and concert halls. Respondents rated their satisfaction using a 5-point Likert scale - from very satisfied to not at all satisfied.

It should be noted that there is no precise definition of what the satisfaction with “cultural facilities such as concert halls, theatres, museums and libraries” really entails. For instance, it could measure the subjective quality, diversity and relevance of cultural facilities, its price affordability, availability of free seats in theatres and concert halls, ease of accessing cultural facilities by public or private transport, emotional engagement or some combination of these or other factors. Therefore, a response to this question may reveal satisfaction with other urban quality of life areas, such as physical safety or public transport services.

Moreover, results of well-being surveys could be biased due to the subjectivity of individuals as well as cultural differences across nations. Furthermore, it is not clear to what extent different respondents may consider the availability of unconventional cultural facilities when answering this question. The inability to distinguish these effects is an important limitation of this research.

We create one variable reflecting satisfaction with the cultural facilities in a given city, reflecting a balance of replies to a particular question. This transformation is in line with Okulicz-Kozaryn and Valente (2019). We express this variable in a 0–100-point scale, with 0 representing a situation when all respondents are strongly unsatisfied, and 100 if all respondents are strongly satisfied. A usual caveat applies that this approach intrinsically assumes the same distance between Likert scale points, which may not always be the case. One could create an alternative variable reflecting satisfaction with the cultural facilities by counting only the share of those respondents who are “very satisfied”, “very or rather satisfied” or “very or rather dissatisfied”. These alternative variables, however, have their own drawbacks. For instance, the share of respondents who are “very or rather satisfied” does not distinguish neither between “very satisfied” and “rather satisfied”, nor between “very unsatisfied”, nor between “rather unsatisfied” and “no answer”, which could be regarded as a big information loss. Therefore, we believe that the balance of replies we employed in this study is an adequate way to measure satisfaction with cultural facilities at the city level.

Furthermore, we employ multifactor regression analysis to test the relationship between satisfaction with cultural facilities and several city characteristics:

- Actual number of cultural venues and facilities, which reflects the per capita number of museums, art galleries, cinemas, theatres, concert halls and landmarks in a city; these data come from index D1.1 of Cultural and Creative Cities Monitor 2023.
- Tourist inflows, which are reflected by the total nights spent in tourist accommodation establishments during a year (Eurostat data), are divided by city population.
- Traffic congestion level is measured as the average additional time (in per cent) lost in traffic within a respective metropolitan area, compared to driving in free-flow conditions (TomTom data).

- Gross Domestic Product (GDP) per capita reflects an average income level in a given city and is adjusted for purchasing power parity (Eurostat data).
- City size is reflected by population (Eurostat data).
- Capital city status is a dummy variable with values 1 and 0.

Research results

Residents of Zurich (Switzerland), Vienna (Austria) and Groningen (Netherlands) are the most satisfied with cultural facilities in their cities. In contrast, residents of Tirana (Albania), Valletta (Malta) and Skopje (North Macedonia) are the least satisfied. Generally, Northern European cities show higher satisfaction with cultural facilities than Southern European cities (Appendix 1).

Results of multifactor regression analysis reveal that European cities with a greater number of actual cultural amenities per capita tend to show higher satisfaction with cultural facilities. In line with the literature, this effect, however, is offset by overtourism, as can be particularly seen in the cases of Rome or Paris. Landmarks and other cultural venues attract tourists, which in turn can reduce access for residents, decreasing their satisfaction. Access to cultural amenities can also be reduced by local congestion factors such as heavy traffic and high population density.

European cities with higher GDP per capita tend to exhibit higher satisfaction with cultural facilities. Note that a positive linear term and a negative squared term reflect a non-linear relationship between income level and satisfaction with cultural facilities. While this result is broadly in line with the literature showing that income enhances well-being, especially at low-income levels, our results outline this relationship specifically for the case of satisfaction with cultural facilities.

Capital city residents tend to be less satisfied with cultural facilities, which might represent their higher demands for cultural vibrancy in a city. This relationship is observed even after controlling for other city characteristics such as city size, income, local congestion effects and overtourism.

While it is true that larger cities, on average, have lower satisfaction with cultural facilities, this usually reflects higher population density, more traffic congestion, and a greater number of tourists. When controlling for these factors, city size is not a statistically significant predictor of satisfaction with cultural facilities. Moreover, when controlling for overall urban life satisfaction, larger cities may exhibit even higher satisfaction with cultural facilities, which may reflect the presence of notable cultural heritage and landmarks (Table 1).

Neither GDP per capita nor traffic congestion is a statistically significant correlate of satisfaction with cultural facilities when controlled for overall urban life satisfaction. This result suggests that low income and heavy traffic decrease satisfaction across several well-being areas, rather than being exclusively tied to cultural satisfaction.

The magnitude of multifactor regression coefficients implies that in several European cities, satisfaction with cultural facilities is substantially dampened by overtourism and local congestion effects. For instance, consider the case of Rome, which has one of the largest tourist inflows among the European cities considered in this study (the number of annual tourist nights per capita in Rome is 13.5, compared with the sample average of 5.5). Results of equations (2) – (4) in Table 1 imply that larger tourist inflows (compared with the sample average) may have reduced satisfaction with cultural facilities in Rome by about 6 points (on a 0-100 points scale). In comparison, the fact that Rome has larger cultural amenities per capita than the sample average increases satisfaction with cultural facilities in Rome by only approximately 2 points. Therefore, residents of Rome may suffer from overtourism more than they benefit from a larger number of cultural amenities per capita.

One may also consider the case of severe traffic congestion in Bucharest, where, according to TomTom data, commuting time is 46% longer than driving in free-flow conditions (considerably higher than the sample average of 27%). Severe traffic congestion in Bucharest (compared with the sample average) may have reduced satisfaction with cultural facilities by about 5 points. By comparison, if the actual per capita number of cultural amenities in Bucharest were at the sample-average level, this would raise satisfaction with cultural facilities in Bucharest by approximately 3 points.

These results should be interpreted with caution due to the intrinsic assumption of identical factor elasticities in all European cities, i.e. a 1% increase in commuting time is assumed to decrease satisfaction evenly in all European cities considered in this study, which may not be the case. Nevertheless, the results clearly suggest that satisfaction with cultural facilities in Europe reflects not only the per capita number of cultural amenities in a city, but also many different factors, including income level, overtourism and local congestion effects.

Table 1. Relationship between the satisfaction with cultural facilities and different city characteristics (83 European cities; in 2023) (Source: author's elaboration based on European Commission survey, Eurostat, TomTom, UK Statistics Office, Cultural and Creative Cities Monitor data).

Dependent variable: satisfaction with cultural facilities (index; 0–100-point scale).

	(1)	(2)	(3)	(4)
Overall life satisfaction	0.82*** (0.09)	0.75*** (0.10)	0.79*** (0.09)	
Actual cultural venues and facilities		0.22** (0.08)	0.24*** (0.08)	
Tourist nights per capita (squared)		-0.05*** (0.01)	-0.04*** (0.01)	-0.03* (0.02)
Population (log)			3.25*** (0.80)	
Population density			-3.97*** (1.19)	-6.31*** (1.49)
Capital city status			-3.34** (1.42)	-4.98*** (1.18)
GDP per capita				0.38*** (0.08)
GDP per capita (squared; *100)				-0.09*** (0.03)
Traffic congestion				-0.26** (0.12)
Constant	6.88 (7.34)	10.40 (8.01)	-32.69** (14.41)	55.42*** (5.79)
R2	0.49	0.65	0.79	0.65
Number of observations	83	50	47	53

Notes: ***, ** and * reflect statistical significance at the 1%, 5% and 10% significance level, respectively. Standard errors are in parentheses. Actual cultural venues and facilities represent index D1.1 of Cultural and Creative Cities Monitor and reflect the per capita number of museums, art galleries, cinemas, theatres, concert halls and landmarks in a city. Tourist nights per capita reflect total nights spent in tourist accommodation establishments during a year, divided by population. Capital city status is a dummy variable with values 1 and 0. Traffic congestion level is the average additional time (in per cent) lost in traffic within a respective metropolitan area, compared to driving in free-flow conditions. Different numbers of observations reflect the unavailability of actual cultural venues, tourist nights, traffic congestion and population density data for some cities.

Conclusions

This research explores which city characteristics are linked to higher or lower satisfaction with cultural facilities across 83 European cities participating in the most recent wave of the European Commission survey on the quality of life in European cities (year 2023).

Results of multifactor regression analysis reveal that European cities with a greater number of actual cultural amenities per capita tend to show higher satisfaction with cultural facilities. Moreover, there is a positive relationship between satisfaction with cultural facilities and overall urban life satisfaction, as well as a non-linear relationship with the income level in a city. Therefore, the first hypothesis is confirmed.

This effect, however, can be offset by overtourism. Landmarks and other cultural venues attract tourists, which in turn reduces access for residents, decreasing their satisfaction. Satisfaction with cultural facilities can also be reduced by local urban congestion, such as heavy traffic and high population density. Therefore, the second hypothesis is also confirmed.

While it is true that larger cities on average have lower satisfaction with cultural facilities, this usually reflects higher population density, more traffic congestion and a greater number of tourists. When controlling for these factors, city size is not a statistically significant predictor of satisfaction with cultural facilities. Moreover, when controlling for overall urban well-being, larger cities may exhibit even higher satisfaction with cultural facilities, which may reflect the presence of important cultural heritage and landmarks. Therefore, the third hypothesis is confirmed only partly.

Capital city residents tend to be less satisfied with cultural facilities, which might reflect their higher demands for cultural vibrancy in a city.

Overall, the results of this study clearly suggest that satisfaction with cultural facilities in Europe reflects not only the per capita number of cultural amenities in a city but also various other factors, including income level, overtourism and local congestion effects.

Future research may explore the temporal dimension of the potential determinants of satisfaction with cultural facilities in European cities by employing panel data regressions. However, the small number of time periods (the European Commission survey runs once every four years and data are available only since 2006) may limit the opportunity to establish a causal relationship in a panel data setup. Alternatively, the reasons for satisfaction with cultural facilities can be explored at the individual respondent level. Respondents' income, however, is not observed in the survey and thus should be proxied by other factors.

Disclosure statement

Results of this research are not impacted by any financial, professional or personal interests.

Funding

The research was supported by the project "Internal and External Consolidation of the University of Latvia" [Nr. 5.2.1.1.i.0/2/24/I/CFLA/007].

Declaration of generative AI in scientific writing

During the preparation of this work the author has not used any type of generative AI or AI-assisted technologies.

References

- Blaszczyk, M., & Kryszinski, D. (2023). European Capital of Culture and creative industries: Real impact or unproven belief? The case of Wrocław. *City, Culture and Society*, (35), 100552. <https://doi.org/10.1016/j.ccs.2023.100552>.
- Blessi, G. T., Grossi, E., Sacco, P. L., Pieretti, G., & Ferilli, G. (2016). The contribution of cultural participation to urban well-being. A comparative study in Bolzano/Bozen and Siracusa, Italy. *Cities*, (50), 216–226. <https://doi.org/10.1016/J.CITIES.2015.10.009>.
- Cerisola, S., & Panzera, E. (2022). Cultural cities, urban economic growth, and regional development: The role of creativity and cosmopolitan identity. *Papers in Regional Science*, 101(2), 285–302. <https://doi.org/10.1111/pirs.12654>.
- Ferilli, G., Sacco, P. L., Tavano Blessi, G., & Forbici, S. (2017). Power to the people: When culture works as a social catalyst in urban regeneration processes (and when it does not). *European Planning Studies*, 25(2), 241–258. <https://doi.org/10.1080/09654313.2016.1259397>.
- Goerlich, F. J., & Reig, E. (2021). Quality of life ranking of Spanish cities: A non-compensatory approach. *Cities* 109, 102979. <https://doi.org/10.1016/j.cities.2020.102979>.
- Gomez-Antonio, M., Arce, I. & Hortas-Rico, M. (2022). Are VAT reforms an effective tool for promoting culture? A quasi-experiment in Spain. *Journal of Policy Modeling*, 44, 1016–1040. <https://doi.org/10.1016/j.jpolmod.2022.10.002>.
- Gormar, F. (2023). Loss and change: Culture narratives in old industrial regions in East Germany. *Regional Science Policy & Practice*, 15(7), 1577–1595. <https://doi.org/10.1111/rsp3.12689>.
- Hatz, G. (2008). City profile: Vienna. *Cities*, 25, 310–322. <https://doi.org/10.1016/j.cities.2008.02.002>.
- Loschiavo, D. (2021). Big-city life (dis)satisfaction? The effect of urban living on subjective well-being. *Journal of Economic Behavior Organization*, 192, 740–764. <https://doi.org/10.1016/j.jebo.2021.10.028>.
- Mecocci, F. B., Maghssudipour, A., & Bellandi, M. (2022). The effect of cultural and creative production on human capital: Evidence from European regions. *Papers in Regional Science*, 101(6), 1263–1288. <https://doi.org/10.1111/pirs.12702>.

- Montalto, V., Alberti, V., Panella, F. & Sacco, P. L. (2023). Are cultural cities always creative? An empirical analysis of culture-led development in 190 European cities. *Habitat International*, 132, 102739. <https://doi.org/10.1016/j.habitatint.2022.102739>.
- Montalto, V., Tacao Moura, C., Langedijk, S. & Saisana, M. (2019). Culture counts: An empirical approach to measure the cultural and creative vitality of European cities. *Cities*, 89, 167–185. <https://doi.org/10.1016/j.cities.2019.01.014>.
- Morais, P., & Camanho, A. S. (2011). Evaluation of performance of European cities with the aim to promote quality of life improvements. *Omega*, 39(4), 398–409. <https://doi.org/10.1016/j.omega.2010.09.003>.
- Morais, P., Migueis, V. L., & Camanho, A. S. (2013). Quality of life experienced by human capital: An assessment of European cities. *Social Indicators Research*, 110(1), 187–206. <https://doi.org/10.1007/s11205-011-9923-5>.
- Nelaeva, A., & Iermolenko, O. (2024). Do we hear the voices of local citizens when we arrange cultural megaprojects for them? A case of the European capitals of culture. *Cities*, 152, 105227. <https://doi.org/10.1016/j.cities.2024.105227>.
- Okulicz-Kozaryn, A., & Valente, R. R. (2019). Livability and subjective well-being across European cities. *Applied Research in Quality of Life*, 14, 197–220. <https://doi.org/10.1007/s11482-017-9587-7>.
- Panzer, E., de Graaff, T. & de Groot, H. L. F. (2021). European cultural heritage and tourism flows: The magnetic role of superstar World Heritage Sites. *Papers in Regional Science*, 100(1), 101–123. <https://doi.org/10.1111/pirs.12562>.
- Penarroya-Farell, M., & Miralles, F. (2022). Business model adaptation to the COVID-19 crisis: Strategic response of the Spanish cultural and creative firms. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(1), 39. <https://doi.org/10.3390/joitmc8010039>.
- Perucca, G. (2019). Residents' satisfaction with cultural city life: Evidence from EU cities. *Applied Research Quality Life*, 14, 461–478. <https://doi.org/10.1007/s11482-018-9623-2>.
- Psacharopoulos, G., & Patrinos, H. A. (2018). Returns to investment in education: a decennial review of the global literature. *Education Economics*, 26(5), 445–458. <https://doi.org/10.1080/09645292.2018.1484426>.
- Redaelli, E., Hansen, L. E., & Brandt, D. M. (2025). Museums as public spaces in the city: Insights from Aarhus, Denmark. *Cities*, 159, 105778. <https://doi.org/10.1016/j.cities.2025.105778>.
- Saleh, R., & Drouillon, P. (2025). Innovative cultural entrepreneurship. Testing and prototyping solutions in 6 European regions. *Cities*, 162, 105924. <https://doi.org/10.1016/j.cities.2025.105924>.
- Souliotis, N. (2013). Cultural economy, sovereign debt crisis and the importance of local contexts: The case of Athens. *Cities*, 33, 61–68. <https://doi.org/10.1016/j.cities.2012.06.003>.
- Sroda-Murawska, S. (2025). Models for cultural development strategies and the experience of medium-sized cities in Central and Eastern Europe — A case of Poland. *City, Culture and Society*, 40, 100621. <https://doi.org/10.1016/j.ccs.2024.100621>.
- Tena, P. A., Sanchez, X. G., Vicente, V.A.Q., & Garcia-Esparza, J. A. (2025). Unpacking World Heritage cultural clusters through the interplay of urban tourism and gentrification. *Cities*, 158, 105634. <https://doi.org/10.1016/j.cities.2024.105634>.
- Vaishar, A., Stastna, M., & Zapletalova, J. (2025). From industry to cultural tourism: Structural transformation of the second-order city. Case Brno. *Cities*, 158, 105685. <https://doi.org/10.1016/j.cities.2024.105685>.
- Van Puyenbroeck, T., Montalto, V., & Saisana, M. (2021). Benchmarking culture in Europe: A data envelopment analysis approach to identify city-specific strengths. *European Journal of Operational Research*, 288, 584–597. <https://doi.org/10.1016/j.ejor.2020.05.058>.
- Zemla, M., & Szromek, A.R. (2021). Influence of the residents' perception of overtourism on the selection of innovative anti-overtourism solutions. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3), 202. <https://doi.org/10.3390/joitmc7030202>.

Appendix

Appendix 1. Satisfaction with cultural facilities in the 83 European cities (in descending order: balance of replies in European Commission 2023 survey) and other city characteristics.

City	Satisfaction with cultural facilities	GDP per capita	Population (thousand)	Population density	Tourist nights per capita	Traffic congestion	Cultural venues and facilities	Overall urban life satisfaction
Zurich	88.9	186	705	955	6.98	21	28.55	92.7
Vienna	86.3	131	1767	349	7.61	25	27.40	85.5
Groningen	83.7	131	238	302	8.01	21	18.10	91.0
Munich	83.6	200	1512	555	12.09	28	21.40	86.8
Cardiff	82.8	91	364	750		28		87.5
Aalborg	82.8	103	203	77	2.23	15		89.0
Hamburg	82.5	147	1892	482	8.07	31	18.91	87.8
Graz	82.3	127	270	192	3.68	22	39.63	85.7
Amsterdam	81.9	159	1060	811	11.83	24	39.88	85.4
Leipzig	81.8	99	616	276	5.85	29	25.12	87.8
Copenhagen	81.6	181	559	798		21	45.48	90.5
Stockholm	81.3	168	1614	374	7.09	20	15.31	90.6
Malmö	80.6	105	362	129	5.19	13	17.44	86.4
Oslo	80.3	222	700	1664	5.01	21	28.20	90.3
Paris	80.3	172	10307	1,037	6.93	29	21.58	72.0
Tallinn	80.1	110	454	149	7.19	29	32.76	82.6
Reykjavik	80.0	125	140			22		83.8
Helsinki	79.9	142	675	191	6.66	25	30.65	83.9
Antwerpen	79.5	146	541	1127	3.97	32	23.59	84.8
Luxembourg	79.5	266	115	256	6.76	22	44.35	88.2
Berlin	79.2	112	3755	320	9.09	29	25.17	80.1
Gdansk	79.2	90	486	297		33	16.26	87.4
Krakow	79.1	97	803	355	7.58	36	25.03	78.5
Ostrava	79.0	71	280	224	1.51	17	12.05	75.3
Prague	78.9	142	1275	250	10.15	31	49.20	80.4
Rotterdam	78.8	133	1264	1105	1.15	30	9.92	82.9
Strasbourg	78.5	100	435	245	7.83	18		82.6
Geneve	77.6	199	419	2116	7.48	23	32.95	86.7
Cluj-Napoca	77.5	104	325	104	2.73		13.44	88.5

(Continued)

Appendix 1. Continued

City	Satisfaction with cultural facilities	GDP per capita	Population (thousand)	Population density	Tourist nights per capita	Traffic congestion	Cultural venues and facilities	Overall urban life satisfaction
Dortmund	77.5	115	593		2.43	25		82.3
Ljubljana	76.8	131	293	241	7.60	27	26.52	84.0
Rennes	76.5	101	277	164	5.32	29		84.7
Dublin	76.4	273	1326	293		41	23.10	84.1
Białystok	76.4	64	293	95	1.23	28		84.1
Glasgow	76.3	121	624	504		27		81.8
Warsaw	76.3	164	1863	544	3.51	32	17.38	79.6
Essen	75.0	123	585		2.85	34	14.27	82.0
Budapest	74.9	118	1671	442	6.41	32	20.70	75.3
Vilnius	74.6	133	587	90	4.24	38	21.48	85.7
Lille	74.5	92	962	456	2.85	24	13.13	76.3
Oulu	74.4	93	215		3.00	15	13.02	84.3
Bologna	74.3	133	389	276	9.30	23	48.72	77.5
Brussel	74.1	150	1253	697	5.58	33	21.69	76.8
Belfast	74.0	122	341	443		34		82.3
Kosice	73.2	60	227	116	2.46	29	18.68	83.2
Tyneside	73.2	78	200	217				84.8
Zagreb	72.8	102	764	243	3.45		15.65	80.0
Bordeaux	72.6	103	763	171	6.53	28	20.39	83.2
Verona	72.4	110	256	318	11.06	18		78.4
Liege	72.3	88	408	453	1.15	17	22.39	78.1
Riga	72.3	93	609	98	5.44	32	21.59	70.1
Turin	72.2	107	847	325	4.17	22	24.64	72.0
London	71.9	166	8867	1435		33		77.9
Manchester	71.8	90	547	828		32		79.4
Bratislava	70.0	147	476	360	5.99	25	34.66	80.2
Malaga	69.9	59	587	241	5.87	16		82.8
Miskolc	69.6	52	145	87	2.71		15.31	69.1
Marseille	67.7	111	972	296	4.29	33	18.96	70.5
Barcelona	67.3	100	3767	751		22	16.16	75.3
Belgrade	66.8	83	1382					62.5

(Continued)

Appendix 1. Continued

City	Satisfaction with cultural facilities	GDP per capita	Population (thousand)	Population density	Tourist nights per capita	Traffic congestion	Cultural venues and facilities	Overall urban life satisfaction
Bucharest	66.4	171	2131	1306	1.59	46	9.66	73.7
Sofia	64.9	110	1221	151	1.62	35	10.41	71.6
Oviedo	64.9	76	217	95	3.83	18		85.1
Braga	64.5	72	202		3.17	22	9.85	79.7
Piatra Neamt	63.9	46	113		0.86			87.2
Burgas	63.8	44	198	50	1.85	22		83.2
Lisbon	63.1	96	1936	1032	8.67	23	18.43	75.7
Lefkosia	63.0	94	241	100			45.06	77.3
Madrid	62.9	116	5115	862	4.45	18	15.55	74.0
Rome	62.7	121	2755	801	13.52	34	30.58	63.6
Antalya	61.9	81	1319			26		86.0
Rostock	61.4	95	210	121	10.90			87.4
Ankara	60.2	101	5803			29		76.8
Athens	57.0	87	2622	1302	2.29	34	24.41	58.4
Palermo	55.9	63	632	242	2.98	34		57.0
Diyarbakir	55.8	31	1097					78.9
Istanbul	55.7	118	15660			39		58.0
Naples	55.5	64	2809	2539	1.85	33	13.08	60.1
Irakleio	53.6	54	151		3.00			73.2
Podgorica	53.1	51	172					69.1
Skopje	50.7	57	527					66.6
Valletta	46.0	108	259	2048	17.37	37	23.99	76.4
Tirana	44.3	42	536					59.2
Sample average	71.9	113.7	1339	534	5.5	27.1	23.49	79.5

Notes: Data represent the year 2023 or the most recent available data. Blanks indicate unavailable data.

Satisfaction with cultural facilities and overall urban life satisfaction are balances of replies which come from the Eurobarometer survey on the quality of life in the European cities (questions Q1a_4 and Q2_1 respectively).

GDP per capita reflects Gross Domestic Product per capita in a given city, adjusted for purchasing power parity, measured in % of the EU average.

Population density is the number of city residents per km².

Tourist nights per capita reflect total nights spent in tourist accommodation establishments during a year, divided by population.

Traffic congestion level is the average additional time (in per cent) lost in traffic within a respective metropolitan area, compared to driving in free-flow conditions.

Cultural venues and facilities represent index D1.1 of Cultural and Creative Cities Monitor and reflect the per capita number of museums, art galleries, cinemas, theatres, concert halls and landmarks in a city.

Source: author's elaboration using Eurobarometer survey, Eurostat, TomTom, UK Statistics Office and Cultural and Creative Cities Monitor data.