# 1. Introduction: creative regions in the 21st century

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## 1. INTRODUCTION: WHY A HANDBOOK ON CREATIVE REGIONS?

Having worked on creativity in regions for years, we recognized the relevance to research and regional policy of focusing not only on the regions from the point of view of creativity, but also on creativity from the point of view of the regions. Admittedly, we assumed the topic had already been extensively covered in books and monographs. We were mistaken. The creative city has been the subject of intense research and use in policymaking. However, the creative region continues to be a grey swan: the thought on the creative region is much less extensive than it might seem and is far from sufficiently advanced.

As an example, at the beginning of 2025, Scopus had indexed more than 1,300 documents that include the terms "creative city" or "creative cities" in their titles, abstracts or keywords. Surprisingly, there are only 70 on "creative region" or "creative regions". Something similar would be observed in Google Scholar, where creative city or cities appear somewhere in the text in about 18,000 documents. Meanwhile, creative region(s) are only cited in less than 3,000.

In this book, we address for the first time an integrated and multidimensional account of the creative regions. In this opening chapter, we explain the need for this book on creative regions, trace the origins of the concept in the scientific literature and policymaking, and explain the topics addressed by the *Handbook* as well as those that remain pending for the future.

The reader will find that the *Handbook of Creative Regions* (HoCR) is not only a compilation of topics on creative regions but an ambitious project that addresses some of the major issues that remain to be explained and proposes a present and future research agenda.

## 2. CREATIVE REGIONS: GENESIS AND EVOLUTION OF A CONCEPT

### 2.1 The First Generation: Knowledge, R&D and Innovation

The concept of creative regions emerged in response to the changing global economy in the late 20th century. As traditional manufacturing jobs declined, many regions sought new pathways to economic resilience, leading to an increased focus on knowledge, creativity and innovation.

The concept could be traced back to Gunnar Törnqvist. According to Peter Hall (2000), in 1978 Törnqvist developed the first notion of creative milieu characterized by the transmission

of information, the accumulation of knowledge, the skills demanded by the environment, creativity, and the structural instability that pushes it to change.

The first explicit references to the creative region are found in the papers of the seminar edited by Anne Buttimer (1983) "Creativity and context: a seminar report". In that volume, Törnqvist's chapter (1983) "Creativity and the renewal of regional life" introduces creativity in the context of regional renewal.

Andersson et al. (1984) and Andersson (1985a,b) reflect shortly afterwards on the idea of a regional policy based on poles of growth and creativity. Andersson uses the creative region to understand the relationship between the formation of new knowledge and economic development. Creativity is inherently social, necessitating spatial considerations. The creative region, which in Andersson is once again assimilated with large cities and their metropolitan regions, is a prerequisite for generalized conclusions for research and development (R&D) policies. Creativity develops in regions characterized by high levels of competence, academic and cultural activity in multiple fields, excellent possibilities for internal and external communications, widely shared perceptions of unmet needs, and a general situation of structural instability that facilitates synergistic development.

In The Cosmo-Creative Society (Andersson et al., 1993) the idea of a creative region is related in a more complex way to the importance of education in expanding the knowledge base of cities. Cosmo-creative activities revolve around global R&D programmes. Changes in communications and telecommunications systems determine changes in logistics and the emergence of global networks of cities. In this same volume some reinterpretations and extensions of the creative region appear. In Andersson et al. (1993), the creative region is a set of cities that are articulated in a network to obtain synergies and complementarities and prioritize knowledge-based activities such as education and the arts. Yoshikawa (1993) reinterprets the Osaka Bay Area as a cosmo-creative metropolis. A city-port that serves as a transit and meeting point where information is exchanged, commodities are creatively diversified in an environment of simultaneity of urban functions, interaction between creative minds, global accessibility, incubation of new business opportunities, the provision of amenities, and the sophistication of the polycentric urban structure.

Another well-known reference to the creative region appears in 1987, in the article by E.J. Malecki entitled "The R&D location decision of the firm and creative regions – a survey" (Malecki, 1987). Malecki follows the line pioneered by Andersson, and again his concern is R&D. He argues that the location of R&D is determined by the job market for scientists and engineers, so R&D has a tendency to be located in large urban regions. The success of regions that aspire to be great areas of creativity is determined by the joint preferences of R&D workers, investors and high-tech employers.

A final example of this first period is the idea of creative functions as an alternative to routine mass production in regional profiles by Tarkhov and Treivish (1992). The creative region is once again linked to the idea of generating innovation. The authors establish an innovative hierarchy. At the top, the creative regions, the scarcest, generate native innovations and absorb other innovations, which will later be transmitted through the urban system by the so-called innovative regions. At the bottom of the hierarchy are the adopter and conservative regions.

## 2.2 The Second Generation: Culture, Intellectual Property and the Emergence of the Creative Economy

In the 1990s, there was a shift in content and semantics. Creativity became more directly related to culture and intellectual property. At the base of this change were two phenomena: the creative turn and the spatial turn.

The creative turn introduced creativity as a pivotal term in cultural policies. It is also related to the redefinition of the policies of the "cultural industries" as "cultural and creative industries" or simply "creative industries". In "Creative Nation: Commonwealth cultural policy", the Department of Communications and the Arts (1994) of the Government of Australia expands the scope of cultural industries from just fine arts to other activities based on creativity such as film, radio or multimedia, among others. With this broad definition, the cultural industries give significant weight to the economy, exports and innovative capacity, and emphasize their relevance for a new economic model in terms of wealth, jobs and citizenship: "The level of our creativity substantially determines our ability to adapt to new economic imperatives. ... It is essential to our economic success" (DCA 1994, p. 7).

In 1998, the use of the term "creative industries" was consolidated in two important documents in the United Kingdom: "Creative Britain" by Chris Smith and the "Creative Industries Mapping Document" by the Department of Culture, Media and Sports (DCMS). The DCMS (1998, 2001) provides a defined perimeter (list of activities/sectors) and a measurement of the value of the creative industries in terms of revenue, employment and exports. In an environment usually lost in vague narratives, the reification of the creative industries through their perimeter and value was an important step forward.

Richard Florida (2002) definitively underpins the creative turn in *The Rise of the Creative Class*. Florida's discourse does not focus on activities or sectors but on people (human creativity), and the notion of "class" has the same effect of compacting and agglutinating the different creative professions as the perimeter of creative activities in the DCMS (1998). The creative regions in Florida (2002) are the places where creatives and talent cluster, and therefore highlight aspects such as social life, amenities, the environment and tolerance. Again, as in the case of the DCMS, the quantification of the phenomenon became crucial.

The spatial turn came simultaneously from multiple notions of space and territory, especially cities, clusters and regions. The approach is twofold. The new conceptualization of creativity is applied to territorial units, which are containers for what we can call the "creativity-to-territory" approach. At the same time, territorial analysis and policy will discover the "territory-to-creativity" approach.

An early creativity-to-territory approach par excellence is represented in "Creative Industries: The Regional Dimension" (DCMS, 2000). The report focuses on the translation of the creative industries policy agenda to regions by Regional Development Agencies (RDAs) in the United Kingdom. Regional and sub-regional dimensions were consequently made explicit in the Mapping Document of 2001 (DCMS, 2001). Jayne (2005) is critical of the uneven application and results of this regional agenda. In the rest of the European Union, the implementation of creative policies in regions was also largely urged by the European institutions themselves through smart specialization agendas, the European Regional Development Fund (ERDF) or other support programmes (OMC, 2012).

However, the most characteristic quality of the territorial turn is the territory-to-creativity approach. We find an early example in Goldstein and Luger (1994) who identify three

types of region in the context of high-tech-based economic development in the United States. Propulsive regions are identified by a robust industrial base, infrastructures and business environments. Innovative regions focus on knowledge creation and technological improvement, emphasizing innovation as a driver of economic success, for which they favour collaboration between research institutions, universities and companies. Unlike the previous ones, creative regions are characterized by their cultural and artistic output and promote a vibrant community life that values diversity, artistic expression and creativity. Goldstein and Luger highlight the role of the creative economy in enhancing regional identity and attracting talent, which can further contribute to economic growth. At the same time, Landry and Bianchini (1995) and Landry (2000) explicitly introduce creativity into urban revitalization strategies, reaching the creative city.

The *Creative Regions* volume coordinated by Cooke and Schwartz (2007) is possibly the first attempt to address the phenomenon of the creative region in a comprehensive and multidisciplinary way. The book focuses on the factors that affect creativity in regional innovation processes under the conditions of the knowledge economy and in the context of global markets. The notion of the creative region is linked here to that of the regional innovation system (RIS), social life, the regionalization of knowledge based on cultural identity, connectivity and co-location in innovation, creative clusters and regional innovation clusters, economic development through culture, and science and R&D. As in the first generation, the creative region is an unstable environment. In the introduction to the book, Cooke and Schwartz link this instability to a Schumpeterian environment of evolutionary economic geography, so that the term "creative" takes on a double dimension and the creative region is an environment of creative destruction by nature.

Other compilations in journals have also addressed the study of creativity under the label of the creative region. For example, *Regional Studies* (2013, vol.47:2) analyses the problem of the creative region under the title *Understanding Creative Regions* (Chapain, Clifton and Comunian as coordinators) and explores the connection between global creative discourses and regional and national contexts. The special issue of *European Planning Studies* (Clifton et al., 2015) coordinated by Clifton, Chapain and Comunian is entitled *European Creative Regions* (subsequently published by Routledge under the title *Creative Regions in Europe*) and incorporates different scales (neighbourhoods, cities, regions) and levels of discussion (large metropolitan areas, peripheral regions, cross-border regions).

The notion of creative region is also widespread in policy briefs and policymaking strategies. As in the case of academic literature, we do not usually find the direct label of "creative region", but only that of "region" about which creativity-related strategies are analysed, discussed or developed. The report on *Creative industries in Wales* (Cooke, 2006) is an early intent to critically explain that a regional policy grounded on creativity not only has potential but is also particularly risky for some regions, is subjected to pitfalls and requires high doses of realism. Van Thiel (2007) develops a policy model in which the success of a creative region depends on collaboration between cultural small and medium-sized enterprises, the educational and creative sectors, large business, and the regional government. Perrin (2016) associates the notion of creative region to a transnational scale for cross-border policymaking (Pyrenees-Mediterranean Euroregion between France and Spain; Greater Region between Luxembourg, Germany, Belgium and France) that emphasizes culture, identity and creative resources in strategies of territorial attractiveness and institutional capacity-building. The differentiated effect of creativity on regions and different regional spaces in Europe is also

the focus of strategic programmes such as *Sostenuto* and *Creative MED* in Europe (Rausell-Köster, 2012) or BCEC (2021) in Australia.

## 3. DEFINING CREATIVE REGIONS

The concept of creative region is one of those elusive ideas about which we hear a lot, but of which it is very difficult to find a definition. This is because the creative region is a conceptual model, that is, a metaphor or a simile, like most concepts and models in science.

We can establish a hierarchy from non-concepts, different types of notions, and concepts. In most references, both academic and policy reports, the creative region is an absent concept: it is implicitly used but its meaning is not defined.

We find different types of notions of creative regions. Firstly, very vague notions, e.g. the area where creative industries or creative class are located, or where R&D companies are located; these notions should be discarded because of their limited usefulness. The notion of a creative region can be also an economic policy objective. For example, in Van Thiel (2007, p.23), the creative region is defined as "clustering and collaboration to develop creativity and innovation in a specific, recognisable geographical area (whether a city, two cities, or a province)". Finally, we find compositional and empirical notions that allow for better delimitation. For example, Anderson et al. (1984) and Andersson (1985a) define creative regions based on a set of items or characteristics. An empirical notion is found in de Miguel Molina et al. (2012), where the creative region is relatively specialized in creative industries, that is, its creative base is higher than in other regions.

In Chapter 3 of this volume, Boix-Domènech provides one of the few attempts to conceptualize the creative region based on its components and the structural relationships that are established between them: "... a *creative region* typically refers to a geographical area that fosters and supports creativity, innovation, and cultural expression across various fields such as art, design, technology, and entrepreneurship. These regions often have vibrant artistic communities, a strong presence of creative industries, and supportive infrastructure like coworking spaces, art studios, and cultural institutions."

A second point to consider is the spatial scale of the creative region: in the literature, the scale of the creative region has been associated with multiple scales (Boix-Domènech, Chapter 3). The creative region can be a metropolitan area, a network of cities, an administrative region or even a transnational region. That is why the HoCR does not focus on a single scale, but the book exploits a multiplicity of scales depending on research interests and the information available.

## 4. A WORLDWIDE GEOGRAPHY OF CREATIVE REGIONS

A preliminary attempt to address the geography of creativity is the *Handbook on the Geographies of Creativity* (from de Dios and Kong, 2020). In that volume, the spatialities of creativity are critically analyzed from the West to Asia to the rest of the world: clusters, peripheralities and local–global relations.

Geography plays a crucial role in creativity and vice versa, as evidenced by the studies of Florida (2002, 2005, 2008) and Scott (2010). These authors' maps for the United States show

the concentration of talent and creativity on the two coasts and in a corridor from Minnesota to Texas, coinciding with the location of the population. They also show some creative professions are particularly concentrated in certain states and metropolitan areas.

In Europe, most countries have generated their geographical maps of creative regions, although there are very few exercises for Europe as a whole. Power and Nielsen (2010) show one of the first geographies of creative regions in the European Union. The authors highlight a two-tiered geography of the creative industries in Europe. On the one hand, there is greater specialization in central and northern Europe in creative industries; on the other, greater specialization in creativity of regions containing large cities. Boix-Domènech et al. (2015) elaborate the first exercise of generalized identification of geographic clusters at the infra-regional level based on geolocated microdata for 16 European countries. That research shows intense clustering and co-clustering patterns of the creative industries and their disproportionate appetite for urban areas.

There are also many geographies of creative regions at the national level – for example, De Propris et al. (2009) for the UK, or Yu et al. (2014) for China. All of these geographies, in addition to their limited coverage, are difficult to compare.

Through its chapters, the HoCR presents arguably the greatest contribution yet to understanding the geographies of creativity. Boix-Domènech (Chapter 3) addresses the elaboration of the world's first detailed geography of creativity through geolocated microdata by city for 168 countries, and regionalization by administrative regions and pixel regions. This work allows for observing that the largest number of regions with both a high number and a high density of creative firms can be found in the central part of Europe and both coasts of the USA, and other large agglomerations of creative regions appear in South America, India, southeast Asia and east Australia, and with lower intensity in some parts of Africa.

Based on pixel regions, and inspired by satellite pixel aggregation methods (Florida, 2008), Vittorio Galletto, Joan Marull, Joan Trullén Thomàs and Rafael Boix-Domènech (Chapter 7) design a new methodology based on the agglomeration of adjacent pixel regions that allows for the generation of the world's first geography of creative megaregions. They find 40 creative megaregions that concentrate around 79% of all creative companies on the planet. Creative megaregions span every continent, but the largest creative megaregion is found in central Europe. This megaregion covers most of Europe and contains almost 30% of the world's creative companies. The other major megaregions are Porto Alegre–São Paulo in Brazil, USA East (from Florida to Montreal), Mumbai–New Delhi–Benares in India-Pakistan, and Los Angeles–San Francisco in the United States. Other megaregions identified include Western South Europe, Istanbul–Bursa, Moscow, Rostov–Krasnodar–Tbilisi, Jerusalem–Amman–Beirut, United Arab Emirates, Delhi, Hyderabad, Bangalore–Cochin–Chenai, Honshu, South Korea, East China, Northeast China, Southeast China, China Chengdu–Deyang, Taiwan, Hanoi and Ho-Chi-Min, Bangkok, Singapore-Kuala Lumpur, Brisbane, Sydney, and Melbourne.

Geographies are also shown for specific activities. For the United States, Carlos Gayán-Navarro and Marcos Sanso-Navarro (Chapter 21) show that the highest percentages of employment in arts, entertainment and recreation tend to be in the counties of the two coasts and the central ridge, and how creatives flee from dangerous neighbourhoods. Alessandro Muscio and Michele Rinaldi (Chapter 16) shows in which cities in the world the companies that make us dream within video games are located. London emerges as the city with the highest number of game creation and distribution companies, closely followed by Tokyo and Los Angeles.

Montreal, analysed by Etienne Capron, Patrick Cohendet and Laurent Simon (Chapter 17), is another major centre of game development. Globally, 78% of game companies are located in Europe and North America.

Unfortunately, we do not yet have data to measure production at the same level of detail. However, we can compare with Fernando Álvarez-Teresa (Chapter 9) to see that the pattern of localization of creative companies is transferred to value added at the country level. The United States, European countries, Canada and Australia, but also India and Nigeria, present the greatest contributions of creativity to their production.

These global patterns are confirmed in some of the chapters. In Gallelli (Chapter 4), the official Eurostat statistics confirm the highest concentration of cultural and creative employment in the regions of central Europe. Feng et al. (Chapter 5) note for China an impressive concentration of creative enterprises in the most densely populated regions, concentrated in the east of the country.

## 5. CREATIVE CITY-REGIONS, CREATIVE METROPOLITAN AREAS AND CREATIVE DIGITAL ECOSYSTEMS

In the HoCR, the details of what happens within those creative regions and the singularity that everyone presents is analyzed in detail for four metropolitan regions across three continents: Barcelona, Manchester, Montreal and Florianópolis.

Josep-Maria Arauzo-Carod, Eva Coll-Martínez and Montserrat Pareja-Eastaway (Chapter 18) explore the development of the cultural and creative industries in the Barcelona Metropolitan Area, analysing their geographical evolution and their economic impact. Barcelona is a large creative metropolitan area of about 5 million inhabitants located in the south of Europe and on the shores of the Mediterranean Sea. Since the end of the 19th century and associated with its role as the industrial capital of Spain, the city is characterized by creative avant-gardes led by architecture and urban planning (Gaudí, Sardà), industrial design (Milà, Ricard) and is the epicentre of the publishing industry in Spanish. The authors explore three different approaches to the concept of creative region in Europe: one that emphasizes the agglomeration effects of creative and cultural industries, another that focuses on local policies to promote them, and a third that highlights the importance of transnational collaboration between regions. The most relevant fact is the hyper-concentration of creative business in the centre of the metropolitan region. But the authors find that the core of the metropolitan region is suffering from creative congestion, which favours the suburbanization of some industries to cheaper neighbourhoods and the creation of new centralities. The authors anticipate a greater diversification and geographical expansion of the creative and cultural industries, with the appearance of new poles of creative activity in the peripheral municipalities.

The Manchester region (Greater Manchester) has a population of around 2.8 million and an economy that is larger than that of Wales or Northern Ireland. Manchester and Barcelona share some very particular characteristics. Both cities played a crucial role during the Industrial Revolution led by textile manufacturing; they have undergone significant transformations going from industrial cities to modern centres of business, culture and innovation; they are home to some of the most important football clubs in the world; and they are multicultural destinations that attract millions of tourists annually. Bruce Tether (Chapter 19) examines the presence and geographical distribution of the creative business, creative workplaces and

creative employment across the Manchester city region. Manchester is more specialized in creative industries than other comparable cities such as Birmingham or Leeds. However, the geographical distribution of the creative industries within the Manchester region is uneven: there are several creative clusters but also very substantial sparse spaces with little or no presence of creative industries. The chapter links the geography of Manchester creative industries to socioeconomic inequalities, showing that the presence of creative industries is strongest in the most affluent areas and weak in the most disadvantaged areas.

Montreal is the third creative regional city analysed by the HoCR, in this case by Etienne Capron, Patrick Cohendet and Laurent Simon (Chapter 17). Greater Montreal has a population of 4.4 million. It shares common points with Manchester and Barcelona. Like them, Montreal was an important industrial and transportation centre thanks to its strategic location on the Saint-Laurent River. In all three cities there have been recent urban renewal processes characterized by the creation of creative urban districts (Quartier des Spectacles in Montreal, 22@ Poblenou in Barcelona, MediaCityUK in Manchester), large university systems, and a vibrant international cultural scene. Montreal and Barcelona are also bilingual cities, with a strong cultural identity of their own and which have hosted the Olympic Games. Montreal has also hosted a Universal Exposition and is the headquarters of Cirque du Soleil, the largest circus producer in the world. Montreal, as explained by Capron, Cohendet and Simon, is a creative region that has been renewed through technological change and, in particular, through the interaction between creativity and digital technologies.

Creative regions can be digital ecosystems. Dinorá Eliete Floriani, Beatrice Ma Zanellato Fonseca Mayer, and Silvio Luís de Vasconcellos (Chapter 13) discusses the transformation of the entrepreneurial and innovative ecosystem of Florianópolis, Brazil, from a territorial system based on geography to an ecosystem driven by digital creativity. Florianópolis is the capital of the state of Santa Catarina, in southern Brazil. The city has a population of more than half a million and the metropolitan area of 1.2 million. Florianópolis is known as the Silicon Valley of Brazil, and it is currently one of the most entrepreneurial, innovative cities with the highest quality of life in Brazil. Floriani et al. explore the historical evolution of the city, from its foundation in the 16th century to the present day. From the mid-20th century, the city was a tourist centre with geographical and institutional limitations that hindered the development of the manufacturing sector. The response to these limitations, together with the existence of an educated population and the high entrepreneurial capacity, resulted in the constitution of a territorial ecosystem based on knowledge. Subsequently, based on the infrastructural, social and cognitive dimensions, the island was transformed into an innovative digital ecosystem. Overall, factors such as education, public policies, technological development and the presence of a creative class have contributed to its metamorphosis into a centre of technological innovation. The role of universities, the creation of technology parks, the arrival of international companies and the importance of collaboration between government, academia and the private sector in this process are highlighted.

## 6. THE RURAL–URBAN CREATIVE DIVIDE

The HoCR also addresses the question of whether creativity is concentrated in urban or rural regions through the findings of several chapters. Most works have highlighted the concentration of creativity in large cities and urban regions, although there has always been a tension

in the literature between those who took for granted the urban nature of creativity and the defenders of creativity in rural regions. Without going into these nuances, Boix-Domènech (Chapter 3) provides data on the location of creative enterprises in urban and rural regions, concluding that, depending on the definition of rural and urban, between half and two-thirds of the world's creative enterprises are located in urban regions. However, urban regions are only 10% of the regions, so we can provide two interpretations: creativity prefers urban regions, but also many companies are distributed throughout the rural regions of the planet.

One of the most polarized countries in this regard is perhaps China. Qianni Feng, Chuan Li and Jing Wang (Chapter 5) devote part of their chapter to analyzing the differences in the development of creativity in urban and rural regions of China. The authors explain that the creative industries have grown rapidly and have consolidated in urban areas, while they continue in their infancy in rural areas, where they suffer from low levels of production and consumption. The authors associate both with the low level of income in rural areas that prioritizes the consumption of physical goods over creative ones.

Leandro Valiati, Gustavo Möller and Camilla Cauzzi (Chapter 8) also detect differences between urban and rural areas in Brazil, highlighting the disparity in access to education and training as one of the fundamental factors.

## 7. THE LIGHT SIDE OF THE CREATIVE REGIONS

*What advantages does creativity bring for regions?* One of the most exciting twists of the creative class and the creative industries, applicable to creative regions, is that they are a generator of economic value and human well-being (DCA, 1994; DCMS 1998; UNESCO, 2008). Let us remember that one of the most controversial points of the transition from the cultural industries to the creative industries had been precisely that they were a source of wealth, employment and development. This orientation has also been criticized to ulteriorly result in a supposed neoliberal orientation to cultural production and consumption. Regardless of this, the success of creative regions is not exempt from problems such as spatial and wealth polarization, duality in creative cities, or the precariousness of cultural and creative work (Cunningham, 2002; Roodhouse, 2006; O'Connor, 2007; Hesmondhalgh, 2008; Scott, 2010).

Pau Rausell-Köster (Chapter 2) discusses the importance of creativity as a multifaceted resource and a key tool in the economic, social and cultural development of creative regions in a global context. Creativity, traditionally associated with the arts, has become an essential engine for economic and social development in different territories that generates economic, social, symbolic and political value. Rausell-Köster highlights the role of education and culture in the consolidation of creative regions. Innovative education systems and inclusive cultural policies are essential to develop creative talent and ensure that it translates into sustainable economic and social benefits. By linking creativity, innovation and sustainability, creative regions can position themselves as leaders in an ever-changing world.

One of the biggest problems has been to measure the generation of value and well-being provided by creativity, in a conceptual paradigm extremely biased by the vision of culture since Baumol and Bowen (1966). Baumol and Bowen (1966) analyzed the live performing arts and concluded that, in general, they consumed more income than they produced (income gap) so they tend to be subsidized. However, in the last 60 years a lot has happened. For example, Forbes reports that Taylor Swift's blockbuster Eras Tour grossed about $1.04 billion from 60

shows performed in 2023,[1] which was arguably unimaginable in 1966. In addition, Baumol and Bowen (1966) measure direct effects, but do not consider indirect effects, such as job creation, multiplier effects on income or effects on productivity derived from the happiness and well-being of consuming cultural and creative products.

DCA (1994) and DCMS (1998, 2001) initially resolve the contribution of the cultural and creative industries by explaining that they grow and generate employment above the average of the economy. The scenario is, however, more complex. Creativity generates direct economic effects in the regions, but also indirect knock-on effects. The aggregate contribution to the economy of all these direct and indirect effects can be negative, neutral or positive (Potts and Cunningham 2008; Boix et al., 2017). Boix-Domènech et al. (2022) explain different ways of measuring the total contribution of creativity and the average effects obtained by different authors on different indicators such as GDP per capita, labour productivity, total factor productivity, wages and sales. Boix-Domènech et al. (2021, 2022) show that, in addition, these effects are heterogeneous between regions and countries and depend on the levels of development of places.

The HoCR offers new broad-spectrum evidence of the effects of creativity on regions that we have not seen before. Jordi Sanjuán (Chapter 10) analyzes the impact of cultural and creative industries on well-being in 206 European Organisation for Economic Co-operation and Development (OECD) regions and the 11 dimensions of well-being in the OECD's Better Life Index. Jordi Sanjuán finds some very relevant new results. First, that the average effects of creativity are positive for all dimensions of well-being. Also, that the average (relative) effects are very different between dimensions of well-being. The highest impacts are on education, where an additional percentage point of employment in cultural and creative industries over the total employment translates to an increase of 2.7 percentage points in the share of people with post-compulsory education. The smallest impacts are on health, where an additional percentage point of employment in CCIs over the total employment raises life expectancy by 22 days. But another relevant result is that the distribution of effects between regions is very heterogeneous, so much so that the impact can be positive for some regions and negative for others. In addition, there may be cross-effects of different signs in the same region; for example, in some highly urbanized regions creativity improves income, but has a negative effect on housing.

Fernando Álvarez-Teresa (Chapter 9) uses the OECD's Inter-Country Input-Output Tables of 76 countries and a Global Multi-Regional Input-Output (GMRIO) model to calculate the multipliers of the value added of the creative industries. Álvarez-Teresa notes the heterogeneity of the effects between countries. In general, the greatest multiplier effects on value added are found in the most developed countries. Thus, by large global regions, the greatest multiplier effects of creativity on production are generated in Oceania and Europe, and the lowest in Africa. In addition, the author offers evidence that the magnitude of creative multipliers of value added depends on the levels of development of countries, such that countries with higher levels of development obtain greater returns from specialization in creativity. This relationship is not altered when the development index is weighted by gender or inequality, although it is reduced when weighted by pressures on the planet or when only income is considered as an indicator of development.

Jue Peng and Robert Hassink (Chapter 12) discuss the usefulness of creativity (creative industries) as policy mechanisms for the revitalization of cities or industries, and for development in general. They also ask whether policymakers should use the creative industries to

build economic resilience in the face of an economic crisis. Peng and Hassink use the concept of (new) path dependence to analyze the evolution of the creative industries as they are inherently place dependent. Creativity is a place-dependent concept because it is characterized by two aspects that are path dependent: the different distribution of creative elements between regions (cultural heritage, infrastructures for creative production), and the fact that creativity is embedded in place-specific social systems (the market and the regulatory policy). The productive process linked to creativity, such as the creative industries in the DCMS (1998), was initially proposed to break negative lock-ins in the post-industrial economy. The authors conclude that the creative industries are not the panacea for locking out and suggest a cautious and locally strengths-based approach to regional policies for the development of the creative industries. Moreover, as the creative industry is place dependent and extra-regional spillovers are limited, they call into question whether peripheral economies can develop by attracting major players.

Alejandra Luzardo (Chapter 20) explores the potential of the audiovisual industry in Latin America as an engine of economic and social development. The current context of the Latin American audiovisual industry is characterized by a boom in streaming platforms and the growing production of original content in Spanish and Portuguese. However, certain challenges are encountered, such as the lack of trained talent, limited access to financing and the absence of solid public policies to boost the sector. The author highlights the need to build a competitive and sustainable regional audiovisual industry, emphasizing four fundamental pillars: human capital, access to financing, infrastructure development, and public policies that encourage investment. To address these challenges, she proposes a series of strategies and recommendations, including the creation of training programmes to develop local talent with international quality standards, the creation of specific investment funds for the audiovisual industry, the promotion of a favourable regulatory environment for foreign investment, and the protection of intellectual property. Luzardo also highlights the importance of film commissions and audiovisual production associations to promote country locations, facilitate production processes and generate synergies between the different actors in the sector. Finally, the chapter ends with a call to action, emphasizing the need for a strategic and collaborative vision between governments, the private sector and multilateral institutions to harness the potential of the audiovisual industry in Latin America and turn it into an engine of economic and cultural growth.

## 8. THE FLIP SIDE: POTENTIAL DOWNSIDES AND THE DARK SIDE OF CREATIVE REGIONS

However, not all is sunshine and roses in creative regions. The dark side of creative regions refers to the downsides and challenges in social, economic and cultural dimensions that often accompany their development.

One of these downsides is the increase in inequality within regions that leads to processes of spatial polarization and/or gentrification. The influx of wealthier individuals and businesses into creative areas often drives up property values and rents, displacing long-time residents and marginalized communities. It exacerbates socioeconomic gaps between areas and can generate an erosion in the cultural identity of a region. Bruce Tether (Chapter 19) discusses the dynamics of deprivation and prosperity in the Manchester city-region. The author finds very

large intra-regional inequalities in the presence of the creative industries. Creative industries tend to concentrate in the most affluent neighbourhoods while their presence is weak in areas of high deprivation and low prosperity, which in addition are relatively isolated due to poor public transport. The author highlights the need to address these inequalities to "level the playing field" of opportunities in disadvantaged areas. He suggests that policies are needed that not only expand access to existing opportunity hot spots, but also bring opportunities to people living in marginalized areas. However, Tether explains the difficulty of balancing the situation with policies, since the existence of agglomeration economies and network effects make it easier to support the growth of existing creative clusters than to create new ones.

Carlos Gayán-Navarro and Marcos Sanso-Navarro (Chapter 21) approach the dynamics of spatial segregation from a more extreme point of view: the safety of places. To do it, they wonder how mass shootings in the United States affect employment in the arts, entertainment and recreation sector, compared to overall employment. The authors use a unique dataset that includes information on the geographic location of mass shootings to determine the effects of these events. The results show that employment in the arts, entertainment and recreation sector is disproportionately affected compared to overall employment, especially at zip codes and census tracts level, and when incidents occur in public spaces. This suggests that workers in creative industries are less tied to specific locations and more sensitive to the negative impacts on amenities and productivity caused by violent events. Gayán-Navarro and Samso argue that mass shootings can disincentivize creative workers from living and working in affected areas due to safety and productivity concerns, leading to a decline in employment in the sector.

Phil Cooke (Chapter 15) introduces another critical problem. Some of these creative regions are also clusters of fintech companies and institutions, a type of knowledge-intensive services which combine financial services and technology and whose behaviour is not always virtuous. Creative regions can also host, in parallel, clusters of unfair financial management, money laundering and crime. The author argues that these crimes are not limited to the activities of organized crime groups but are often being carried out within major global financial institutions, involving banks, consultancies and auditing firms. The chapter focuses on the "geography of assemblages", looking at how certain places, such as Delaware in the United States and Zurich in Switzerland, have emerged as centres of dark financial activity, attracting companies and individuals seeking to avoid taxes or engage in illegal practices. Cooke argues that these assemblages not only facilitate financial crime, but also create a culture of impunity and corruption that spreads through global financial institutions.

Blanca de Miguel Molina and María de Miguel Molina (Chapter 14) address the topic of female entrepreneurship in high-tech companies. The authors review the literature on female entrepreneurship, identifying nine key contexts that influence women's decision to create and expand businesses. These contexts encompass factors such as access to finance, family support, educational training, professional experience, social environment, community participation, and the gender pay gap. Then, they analyse the relationship between these contexts and the gender gap in entrepreneurship in 26 countries of the European Union, using two statistical methods: multiple correspondence analysis and comparative qualitative analysis. The first method identifies the relative importance of different contexts in explaining the differences in entrepreneurship rates between men and women in each country. The second method determines whether the presence or absence of certain contexts can be considered as a necessary or sufficient condition to explain the gender gap in entrepreneurship. The results show that the gender gap in entrepreneurship is influenced by a combination of factors, without any specific

context being a necessary condition for its reduction. Access to finance and community participation are highlighted as key factors to consider. The chapter concludes with the need to further investigate the different contexts and develop strategies to address the specific barriers faced by women entrepreneurs in the realm of high-tech companies.

Leandro Valiati, Gustavo Möller and Camilla Cauzzi (Chapter 8) find the downsides of creativity in the form of disparities in the creative economy in Brazil. The first is gender segmentation, since only 63% of the workforce is female, and their salary is 42% lower than that of men. The second segmentation is by ethnicity, as nearly 60% of the creative workforce are white workers, who tend to hold more important jobs in formal employment, and whose average salary tends to be higher than that of the rest of the creative sector. The third difference is between formal and informal work, as Valiatti, Möller and Cauzzi observe that 42% of employment is informal, which causes the salary of formal workers to be more than double that of informal workers and, in addition, significant differences in terms of gender and ethnicity. A last segmentation occurs between rural and urban regions. Education and skill development are crucial to nurturing the creative industries. However, there is a strong disparity in access to education between rural and urban areas, which limits the development of the creative economy in rural areas.

The dark side of creative regions includes other issues that have not been discussed in depth in the HoCR but are worth mentioning because they derive from some of the narratives and results in the book. The first is that the economic success of creative regions increases inequality between regions (Boix-Domènech et al., 2022). The second is labour exploitation. The creative industries are characterized by an abundance of micro-enterprises and self-employment, and by a highly competitive market. This ends up translating into insecurity, inequality, exploitation (sometimes self-exploitation), unpaid labour, precariousness of talent and, ultimately, stress, burnout and mental health struggles (Banks and Hesmondhalgh 2009; Sánchez-Moral et al., 2014). The third is the increase or perpetuation of social fragmentation. This occurs, on the one hand, in creative gentrification processes, which can cause tensions between long-time residents and the new creative-class, lack of deep roots in the community, and economic and social gaps. And on the other hand, in the perpetuation of inequalities of class, gender, ethnicity or birthplace (O'Brien et al. 2016; Valiati et al. 2025, Chapter 8) due to barriers to entry, the high cost of entering some circles, gatekeeping or lack of access to networks. The fourth is the over-commercialization of cultural assets, causing tourism saturation, cultural appropriation, cultural homogenization, loss of authenticity, and focus in the most easily marketable but less innovative parts of creativity. Finally, the very success of creative regions can lead to increases in population density (creative and non-creative), generating problems of housing prices, environment, weakening of citizen participation and social cohesion networks, strain of public services and transportation, and higher energy consumption, pollution, and waste (Sanjuán, Chapter 10).

## 9. THE NEW DRAGONS' NEST: THE RISE OF CREATIVE REGIONS IN BRICS COUNTRIES

The HoCR pays special attention to creativity in emerging countries and regions. It presents case studies for the two largest BRICS countries in terms of production: China and Brazil.

Qianni Feng, Chuan Li and Jing Wang (Chapter 5) discuss the trends and issues of creative regions in China. With 1.407 billion inhabitants and 17.5% of the world's population, China is the second most populous country in the world after India. In addition, it is the second largest economy in the world after the United States, and accounts for 17% of the total world production of goods and services. The creative economy in China is rapidly increasing its weight and already exceeds 4.5% of GDP, with a global volume of $2.24 trillion. The notion of the cultural industry was introduced into China's economic planning in 2000. The country followed a strategy of clusters, creative industrial parks, and plans by large cities such as Shanghai and Beijing to develop their creative industries. The progressive development of intellectual property rights since 2000, the improvements in the financing of creative enterprises since 2009 (multi-level investment and financing system in cultural finance) and the introduction of technology and digitalization from 2016 onwards mark turning points in the dynamics of China's cultural and creative industries.

China's creative regions follow what Feng, Li and Wang call the "East-strong, West-weak" pattern. Most of the enterprises, jobs and creative production are concentrated in the eastern part of China, while their presence in the western part of the country is scarce and dispersed. This concentration is extended when we consider only profit-oriented businesses, while concentration is reduced in the case of the public welfare sectors. The development paths also differ between regions, and three groups of regions are identified: those in the east, more developed and with an urban creative class that demands creative goods; those of the centre, focused on the manufacturing industry and that seek to integrate creativity into their manufacturing processes; and those in the west, which capitalize on their unique tourist and cultural resources.

Leandro Valiati, Gustavo Möller and Camilla Cauzzi (Chapter 8) analyze creativity in Brazil. With 205 million inhabitants, Brazil is the seventh most populous country in the world. It is also the world's eighth largest producer and the second largest BRICS in terms of production, accounting for 2% of global production. According to Valiatti, Möller and Cauzzi, 5.1% of the country's workforce (7.7 million) is employed in the creative economy and this share has increased gradually in the last few years. The most important creative activity is Advertising, which represents more than 11% of the total creative workforce. In fact, Boix-Domènech (Chapter 3) finds that the profile of Brazil's creative regions is also strongly specialized in Advertising compared to other regions. The second most important activity group is the craft sector which accounts for more than 7% of the workforce. This also demonstrates the duality of the creative economy in Brazil, where traditional sectors of creativity are still very relevant.

The heterogeneity of the spatial patterns of creativity in Brazil is reflected in the global geography of creativity in Chapter 3 of the HoCR, where the highest concentration and density of creative regions in southern Brazil, from São Paulo to Porto Alegre, can be observed. It is precisely on this axis, halfway between the two metropolises, that Florianópolis is located, which is analyzed in detail in Chapter 13.

## 10. INNOVATION

Alessandro Muscio and Michele Rinaldi (Chapter 16) investigate the role of creative designers in video game innovation. The authors argue that creativity is a key factor in creating

successful, high-quality games, and that creative designers play a critical role in developing original and innovative games. To support this idea, the text presents an empirical analysis of a sample of open-world games, using data from rankings, sales and design features. The analysis shows that games that introduce creative elements, according to the opinion of critics, tend to get better ratings and generate higher sales, compared to games that do not present innovation in their design. Although independent studios seem to have more creative freedom, they lack the marketing and distribution capacity of larger studios, which limits their sales potential. The text concludes by emphasizing the importance of creativity in the video game industry, arguing that investment in creative talent can lead to greater innovation and commercial success.

The WIPO (World Intellectual Property Organization) is characterized by approaching creativity from the point of view of intellectual property. This allows us to cross the more traditional notions of creativity, linked to symbolic innovation, with those linked to the creation of scientific and practical innovation. In Chapter 6, Ernest Miguelez, Julio Raffo, Christian Chacua, Massimiliano Coda Zabetta, Deyun Yin, Francesco Lissoni and Gianluca Tarasconi explore the dual dynamics of knowledge concentration and global dispersion. They highlight how innovation activities tend to cluster in select metropolitan hubs – often referred to as "creative regions" – while simultaneously spreading through international networks. Using patent applications and scientific publications, the authors illustrate how knowledge production, historically dominated by Western Europe, Japan and the U.S., has expanded to emerging economies like China and India. However, this dispersion is uneven, as innovation remains highly concentrated within specific urban regions, reinforcing economic hierarchies. The chapter frames creative regions as key nodes in a globalized innovation network, where firms, universities and researchers connect across borders. These regions benefit from skilled labour agglomeration, market scale and knowledge spillovers. Yet, their increasing connectivity also exacerbates intra-country inequalities, as peripheral areas struggle to integrate into global innovation systems. This evolving geography of innovation underscores the critical role of creative regions in shaping the global knowledge economy

## 11. CREATIVE REGIONS AND ARTIFICIAL INTELLIGENCE (AI): THE RISE OF AI-POWERED CREATIVITY

Let's imagine there are some concerns that a region is hitting on a major point of tension. Some people can see AI as a tool for empowerment as introduced by Pau Rausell-Köster (Chapter 3) while others worry it could make human creativity obsolete. But it all depends on how we use it. Luciana Lazzeretti, Stefania Oliva and Niccolò Innocenti (Chapter 11) delve into the relationship between AI and creativity in creative regions. They focus on the role of place-embedded resources (cultural assets and creativity in regions) in the digital transition of cultural and creative organizations and sectors. At the time that cultural and creative industries are increasing dematerialization and changes in business models, AI is a disruptive technology that reshapes the contours of cultural production, distribution, consumption and conservation.

Through a bibliometric analysis, Lazzeretti, Oliva and Innocenti manage to trace the evolution of the introduction of AI in the literature on creative regions. This was residual until 2014, began to grow between 2015 and 2017, and took off from 2018, accelerating after the Covid-19

pandemic. Despite everything, the authors consider that it is still in an exploration phase and has not really exploded. Four groups of contributions are identified in the relationship between AI and creative regions. The first focuses on tourism and uses big data from social networks (Instagram, Flickr, Tripadvisor) to analyze the behaviour of tourists in cultural cities. The second group focuses on UNESCO World Heritage Sites and the use of big data for monitoring the territory. The third group includes studies of specific creative activities (media and entertainment, fashion, gaming, and traditional 'Made in Italy' manufacturing) analyzed through the activity of celebrities, the emotional structure of films and revenues, the manipulation of fashion-related attributes of big cities, the interplay between virtual and real worlds, industry 4.0, and the relations between culture and AI technology in the algorithmic society. The fourth group analyzes the relationship between AI and creative regions by focusing on the role of creative workers, including the role of creative migrants, the competition between human creative workers and AI, and the institutional framework for governing regional technology-driven structural change.

A key point in the relationship between creative regions and AI is that technologies enable creators to translate abstract ideas into tangible productions and facilitate innovation. The emergence of digital technologies has stimulated the emergence of new forms of creation and some industries have formed around these innovations. Etienne Capron, Patrick Cohendet and Laurent Simon (Chapter 17) define them as techno-creative industries, since they use digital technologies (analytical knowledge) and a combination of synthetic (engineering-oriented) and symbolic (aesthetic-oriented) knowledge bases to produce new types of goods and services. In creative regions, specialization in the creative industries can be complemented with technological and AI activities, and not only to cover the value chain but also as a way to renew and evolve, as explained by Peng and Hassink in Chapter 12.

The Montreal region analyzed by Capron, Cohendet and Simon is an example of a place where AI technologies are triggering major changes in three creative industries: circus, video games and immersive experiences. The Montreal case study also highlights the importance of the intermediation mechanisms. They are bridges between the creative and tech worlds that connect creatives with AI developers, such as for example: organizations that contribute to knowledge and dissemination recursive events such as meetings or festivals and places such as cultural venues and studios. These mechanisms help ensure that AI is used in a way that benefits both sides. Thus, technology and AI are not replacing human creativity, they are elevating human creativity to a whole new level.

## 12. DATA AND METHODS IN THE HOCR

One of the main problems we face in the creation of intelligence and in the design of policies for creative regions is that of information. The HoCR pays special attention to the use of traditional sources and new sources about the creative region. Throughout the chapters, these sources are explained, as well as the advantages and limitations that each one has.

Andrea Gallelli (Chapter 4) discusses the importance of official statistics on culture in the European Union. Gallelli describes the institutional evolution that led to the creation of a common statistical framework for the European cultural sector, emphasizing the importance of harmonizing definitions and methodologies among member countries and the methodologies employed by the European statistical office (EUROSTAT) for data collection. The chapter

then explores the economic dimension of the cultural sector, focusing on two main aspects: cultural employment in EU regions and international trade in cultural goods. Both data allow us to observe the trends in creativity in the regions of the European Union. Finally, the author describes the priorities and prospects for the EU's cultural and creative sectors, based on official policy documents such as the New European Agenda for Culture and the EU Roadmap for Culture. The priority actions are detailed, highlighting the importance of digital transformation, sustainability, cultural participation and the improvement of artists' working conditions.

Fernando Álvarez-Teresa (Chapter 9) and Jordi Sanjuán (Chapter 10) use data from international institutions. Sanjuán (Chapter 10) uses well-being data from the Better Life Index (access to services, civic engagement, community, education, environment, health, housing, income, jobs, life satisfaction, safety) collected by the OECD from different sources, employment from Eurostat, plus other control data from multiple official sources. Álvarez-Teresa uses the OECD's Inter-Country Input-Output (ICIO) Tables, which currently show sufficient sectoral detail to calculate the multiplier effects of creativity on the value added of 76 countries; and in the final part of the analysis, he adds data from the different United Nations Human Development Indices (HDI).

The official national statistics are the primary source of data in other HoCR chapters. Feng, Li and Wang (Chapter 5) use data on cultural income and expenditure from the Statistical Yearbook of Culture and Related Industries (National Bureau of Statistics of China and Publicity Department of CPC Central Committee) and the National survey on cultural consumption. Tether (Chapter 19) uses employment, workplaces, income, house prices, residents by social class, deprivation and prosperity data from the Office for National Statistics' (ONS) Business Register and Employment Survey (BRES). For their part, Valiatti, Möller and Cauzzi (Chapter 8) employ for Brazil data RAIS (Annual Social Information Report) and PNAD (National Household Sample Survey). And Carlos Gayán-Navarro and Marcos Sanso-Navarro (Chapter 21) combine official employment data from the LEHD Origin-Destination Employment Statistics (LODES) (U.S. Census Bureau) with shooting data from various sources: the Violence Prevention Project, Mother Jones, Associated Press/USA Today, and Mass Shootings in America.

Other chapters focus on the use of microdata. Boix-Domènech (Chapter 3) uses georeferenced microdata from ORBIS companies at 4 digits ISIC, population grids from Global Human Settlement (GHSL) and satellite lights from VIIRS Nighttime Lights Annual VNL V2.2 provided by the Colorado School of Mines. Galletto, Marull, Trullén Thomàs and Boix-Domènech (Chapter 7) also use ORBIS' microdata from companies. Arauzo-Carod, Coll-Martínez and Pareja-Eastaway (Chapter 18) use the equivalent of ORBIS for Spain, called SABI, also with the detail of the companies at 4 digits ISIC georeferenced. The internet has recently become another source where we can obtain abundant specialized microdata. Muscio and Rinaldi (Chapter 16) use microdata from Wikipedia to obtain revenue from the largest video game companies, Metacritic for game quality scores, and Gamedevmap for the worldwide localization of video game companies.

Another different type of microdata is bibliometric data. Lazzeretti, Oliva and Innocenti (Chapter 11), and de Miguel Molina and de Miguel Molina (Chapter 14) use bibliometric data from the Web of Science.

Finally, other authors combine mixed data from websites, media and academic articles, industry reports, academic books and papers. This is the case for the chapters by Capron,

Cohendet and Simon (Chapter 17), Luzardo (Chapter 20), Cooke (Chapter 15), Floriani, Zanellato Fonseca Mayer and de Vasconcellos (Chapter 13) and Rausell-Köster (Chapter 2).

The methodologies used in the HoCR are also very varied, ranging from narratives and literature reviews to machine learning and new methodologies created by the authors. Floriani, Zanellato Fonseca Mayer and de Vasconcellos (Chapter 13) uses historical analysis based on secondary, historical and contextual data. Feng, Li and Wang (Chapter 5), Gallelli (Chapter 4), Tether (Chapter 19) and Valiati, Möller and Cauzzi (Chapter 8) elaborate narratives based on maps and data analysis. On the other hand, Cooke (Chapter 15), Luzardo (Chapter 20), Peng and Hassink (Chapter 12) and Rausell-Köster (Chapter 2) use literature review or literature review enhanced with other sources (reports, newspapers, internet specialized sites).

Other chapters use data analysis techniques or statistical methodologies. Álvarez-Teresa (Chapter 9) uses a Global Multi-Regional Input-Output (GMRIO) model estimated from the OECD's Inter-Country Input-Output (ICIO). Arauzo-Carod, Coll-Martínez and Pareja-Eastaway (Chapter 18) use geostatistical mapping methods. Boix-Domènech (Chapter 3) uses geostatistical methods of binning, in addition to specialization coefficients and cluster analysis. Capron, Cohendet and Simon (Chapter 17) employ case studies and a zoom-out plus zoom-in approach. Galletto, Marull, Trullén Thomàs and Boix-Domènech (Chapter 7) design their own geostatistical methodology based on the morphological aggregation of pixel regions. Lazzeretti, Oliva and Innocenti (Chapter 11) mix bibliometric analysis and a qualitative literature review. De Miguel Molina and de Miguel Molina (Chapter 14) depart from bibliometric analysis, and then apply Multiple Correspondence Analysis and Qualitative Comparative Analyses. Muscio and Rinaldi (Chapter 16) employ plots and independence t-tests. Gayán-Navarro and Sanso-Navarro (Chapter 21) focus on Difference-in-Differences (DiD) estimation. Finally, Sanjuán (Chapter 10) uses machine learning causal forest.

## NOTE

1. https://www.forbes.com/sites/conormurray/2023/12/08/taylor-swifts-eras-tour-is-first-in-history-to-gross-over-1-billion-report-says/ January 13, 2025

## REFERENCES

Álvarez-Teresa, F. (2025). "The economic effect of the cultural and creative industries: an input-output analysis for 76 countries using inter-country input-output tables", in Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.

Andersson, Å. E., Törnqvist, G., Snickars, F., and Öberg, S. (1984). *Regional mångfald till rikets gagn*. Stockholm: Liber.

Andersson, Å. E. (1985a). "Creativity and regional development", *Papers of the Regional Science Association*, 56(1), 5–20.

Andersson, Å. E. (1985b). *Kreativitet, storstadens framtid* (Creativity and the future of the metropolis). Stockholm: Prisma.

Andersson, Å.E., Batten, D.F., Kobayashi, K. and Yoshikawa, K. (eds) (1993). *The Cosmo-creative Society. Advances in Spatial and Network Economics*. Springer. Berlin: Heildelberg.

Arauzo, J.-M., Coll-Martínez, E., and Pareja-Eastaway, M. (2025). "The creative region of the Metropolitan Area of Barcelona", in Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.

Banks, M., and Hesmondhalgh, D. (2009). "Looking for work in creative industries policy", *International Journal of Cultural Policy,* 15(4), 415–430.
Bankwest Curtin Economics Centre (BCEC) (2021). *Creativity at the Crossroads? The Creative Industries in Western Australia*. Perth: Curtin University.
Baumol, W.J., and Bowen, W.G. (1966). *The Performing Arts – The Economic Dilemma*. New York: The Twentieth Century Fund.
Boix-Domènech, R. (2025). "A worldwide geography of creative regions", in Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions,* pp.xx. Edward Elgar.
Boix-Domènech, R., De Miguel Molina, B., and Rausell Köster, P. (2022). "The impact of cultural and creative industries on the wealth of countries, regions and municipalities", *European Planning Studies*, 27(10), 1940–1958.
Boix, R., Hervás-Oliver, J.L., and De Miguel-Molina, B. (2015). "Micro-geographies of creative industries clusters in Europe: From hot spots to assemblages", *Papers in Regional Science*, 94(4), 753–773.
Boix-Domènech, R., Peiró-Palomino, J., and Rausell-Köster, P. (2021). "Creative industries and productivity in the European regions. Is there a Mediterranean effect?", *Regional Science Policy & Practice*, 13(5), 1546–1564.
Boix, R., Rausell, P. and Abeledo, R. (2017): "The Calatrava model: reflections on resilience and urban plasticity", *European Planning Studies*, 25(1), 29–44.
Buttimer, A. (Ed.) (1983). "Creativity and context: a seminar report", *Lund Studies in Geography. B. Human Geography*, No. 50, pp. 91–112. Lund: Gleerup.
Capron, E., Cohendet, P., and Simon, L. (2025): "Leveraging technological change to renew creative regions – the case of Montreal". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
Clifton, N., Chapain, C., and Comunian, R. (2015). European Creative Regions. Special Issue. *European Planning Studies,* 23 12.
Clifton, N., Chapain, C., and Comunian, R. (2016). *Creative Regions in Europe*. London: Routledge.
Cooke, P. (2006). *Creative Industries in Wales: Pontentials and Pitfalls*. Cardiff: Institue of Welsh Affairs.
Cooke, P. (2025). "The dark side of creative regions". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
Cooke, P., and Schwatz, D. (eds) (2007). *Creative Regions: Technology, Culture and Knowledge Entrepreneurship.* Abingdon: Routledge.
Cunningham, S. (2002). "From cultural to creative industries: theory, industry, and policy implications", *Media International Australia*, 102(1), 54–65.
DCMS (1998). *Creative Industries Mapping Document*. London: DCMS.
DCMS (2000). *Creative Industries: The Regional Dimension*. London: DCMS.
DCMS (2001). *Creative Industries Mapping Document*. London: DCMS.
de Dios, A., and Kong, L. (2020). *Handbook on the Geographies of Creativity.* Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.
de Miguel Molina, B., and de Miguel Molina, M. (2025). "Creative regions and gender". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
De-Miguel-Molina, B., Hervas-Oliver, J.L., Boix, R., and De-Miguel-Molina, M. (2012). "The importance of creative industry agglomerations in explaining the wealth of European regions", *European Planning Studies*, 20(8), 1263–1280.
De Propris, L., Chapain, C., Cooke, P., MacNeill, S., and Mateos-Garcia, J. (2009). *The Geography of Creativity. London*: NESTA.
Department of Communications and the Arts (DCA) (1994). *Creative Nation: Commonwealth Cultural Policy*. Canberra: DCA.
Feng, Q., Li, C., and Wang, J. (2025). "Creative regions in China", In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
Floriani, D.E., Zanellato Fonseca Mayer, B.M., and de Vasconcellos, L. (2025). "Creative regions as digital ecosystems". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions,* pp.x x. Edward Elgar.
Florida, R. (2002). *The Rise of the Creative Class*. New York: Basic Books.

Florida, R. (2005). *Cities and the Creative Class*. New York: Routledge.
Florida, R. (2008). *Who's Your City.* New York: Basic Books.
Gallelli, A. (2025). "Creative regions in the European Union". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions,* pp.xx. Edward Elgar.
Galletto, V., Marull, J., Trullén Thomàs, J., and Boix-Domènech, R. (2025). "Creative Megaregions in the world". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
Gayán-Navarro, C., and Sanso-Navarro, M. (2025). "Do not shoot the creative: mass shootings and residential mobility of creative in the United States". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
Goldstein, H.A., and Luger, M.I. (1994). "Theory and practice in high-tech economic development". In R.D. Bingham and R. Meir (eds), *Theories of Local Economic Development: Perspectives from Across the Disciplines*, 147–74. London: Sage.
Hall, P. (2000). "Creative cities and economic development", *Urban Studies,* 37(4), 639–649.
Hesmondhalgh, D. (2008). "Cultural and creative industries". In Tony Bennett and John Frow (eds), *Handbook of Cultural Analysis*, 552–69. Oxford and Malden, MA: Blackwell.
Jayne, M. (2005). "Creative industries: the regional dimension?", *Environment and Planning C, Government and Policy*, 23(4), 537–556.
Landry, C. (2000). *The Creative City: A Toolkit for Urban Innovators.* London: Earthscan.
Landry, C., and Bianchini, F. (1995). *The Creative City.* London: Demos.
Lazzeretti, L., Ovila, S., and Inoncenti, N. (2025). "Creative regions and artificial intelligence". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions,* pp.xx. Edward Elgar.
Luzardo, A. (2025). "The promotion of audiovisual creation in Latin America". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions,* pp.xx. Edward Elgar.
Malecki, E.J. (1987). "The R&D location decision of the firm and 'creative' regions-a survey", *Technovation*, 6(3), 195–222.
Muscio, A., and Rinaldi, M. (2025). "Creative regions in digital words: an empirical analysis of creative design in videogames creation". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
O'Brien, D., Laurison, D., Miles, A., and Friedman, S. (2016). "Are the creative industries meritocratic? An analysis of the 2014 British Labour Force Survey", *Cultural Trends*, 25(2), 116–131.
O'Connor, J. (2007). *The Cultural and Creative Industries: A Review of the Literature*. London: Arts Council England.
Open Method of Coordination (OMC) on Cultural and Creative Industries (2012). *How can Cultural and Creative Industries Contribute to Economic Transformation Through Smart Specialisation? Policy Handbook on How to Strategically use the EU Support Programmes, Including Structural Funds, to Foster the Potential of Culture for Local, Regional and National Development and the Spill-over Effects on the Wider Economy?* Expert Group on Cultural and Creative Industries. European Union: Luxembourg.
Peng, J., and Hassink, R. (2025). "Path development in creative industries". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
Perrin, T. (2016). "Creative regions on a European cross-border scale: Policy issues and development perspectives", *European Planning Studies*, 23(12), 2423–2437.
Potts, J., and Cunningham, S. (2008). "Four models of the creative industries", *International Journal of Cultural Policy*, 14(3), 233–247.
Power, D., and Nielsén, T. (2010): *Priority Sector Report: Creative and Cultural Industries*. Europe INNOVA. European Cluster Observatory.
Rausell-Köster, P. (coord.) (2012). *Culture as a Factor of Economic and Social Innovation. SOSTENUTO Final Report*. Valencia: University of Valencia – IIDL.
Rausell-Köster, P. (2025). "Methodological issues to understand what creativity is, how to measure it and how to use it in policy strategies for creative regions". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.
Roodhouse, S. (2006). "The creative industries: Definitions, quantification and practice". In Christiane Eisenberg, Rita Gerlach and Christian Handke (eds). *Cultural Industries: The British Experience in International Perspective*, 13–32. Berlin: Humboldt University.

Sánchez-Moral, S., Méndez, R., and Arellano, A. (2014). "Creative economy and employment quality in large urban areas in Spain", *Urban Geography*, 35(2), 264–289.

Sanjuán, J. (2025). "The effect of the creative and cultural industries on the well-being of the regions: a machine learning approach". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions,* pp.xx. Edward Elgar.

Scott, A. J. (2010). "Cultural economy and the creative field of the city", *Geografiska Annaler: Series B, Human Geography*, 92(2), 115–130.

Tarkhov, S.A., and Treivish, A.L. (1992). "Geographical location and diffusion of basic innovations: The case of the European USSR", *GeoJournal*, 26(3), 341–348.

Tether, B. (2025). "Creative clusters and sparse spaces: Manchester's creative industries and the geographies of deprivation and prosperity". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.

Törnqvist, G. (1983). "Creativity and the renewal of regional life". In A. Buttimer (ed.), *Creativity and Context: A Seminar Report,* pp. 91–112. *Lund Studies in Geography. B. Human Geography*, No. 50. Lund: Gleerup.

UNESCO (2008). *Creative Economy. Report 2008*. Geneva and New York: United Nations.

Valiati, L., Möller, G., and Cauzzi, C. (2025). "Creative intensity methodology applied to Brazil". In Boix-Domènech, R. and Lazzeretti, L. *Handbook of Creative Regions*, pp.xx. Edward Elgar.

Van Thiel, M. (2007). "Creative regions: A recipe for success". In G. Hagoort, A. Oostinjen, M. van Thiel, and J. Szita (eds), *Read This First, Growth and Development of Creative SMEs*, 23–9. Bunnik: Libertas.

Yoshikawa, K. (1993). "Creative renaissance of the Osaka Bay area – Towards a cosmo-creative region in the 21st century". In Å.E. Andersson, D.F. Batten, K. Kobayashi, and K. Yoshikawa (eds), *The Cosmo-Creative Society. Advances in Spatial and Network Economics*, 281–94. Berlin Heildelberg: Springer.

Yu, W., Hong, J., Zhu, Y., Marinova, D., and Guo, X. (2014). "Creative industry clusters, regional innovation and economic growth in China", *Regional Science Policy & Practice*, 6(4), 329–248.