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Chapter 25
Arts, Culture and Creativity as Drivers for Territorial Development,
Innovation and Competitiveness

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Abstract

Notwithstanding the heterogeneity of the Cultural and Creative Industries (CCI) sectors, all of them exhibit similar causes of market failure and face similar challenges related to the digital shift and to increasing globalisation. CCI share a common need for policy intervention to correct their market failures facing the digital and globalization challenges. This work seeks to establish a preliminary approach to the CCI's related local/regional competitiveness and innovation policies. The general objective of the work is to develop a basic understanding of the risks and challenges (organizational, technological and institutional) of the CCI in Europe in order to be able to develop smart local and regional innovation policies for competitive CCI development and a favourable stimulation of innovative spill-over effects towards the rest of the economy. The understanding of risks and challenges is relevant for the design of effective and balanced European public policies for innovation and competitiveness in an ever-more intangible and creative economy. This work seeks to give a preliminary approach to a decisive lack of knowledge on the mechanisms of creative/cultural regional innovation policies.

Keywords: cultural and creative industries, cultural innovation policies, market failures, externalities, risks, digital, globalization

1 Introduction

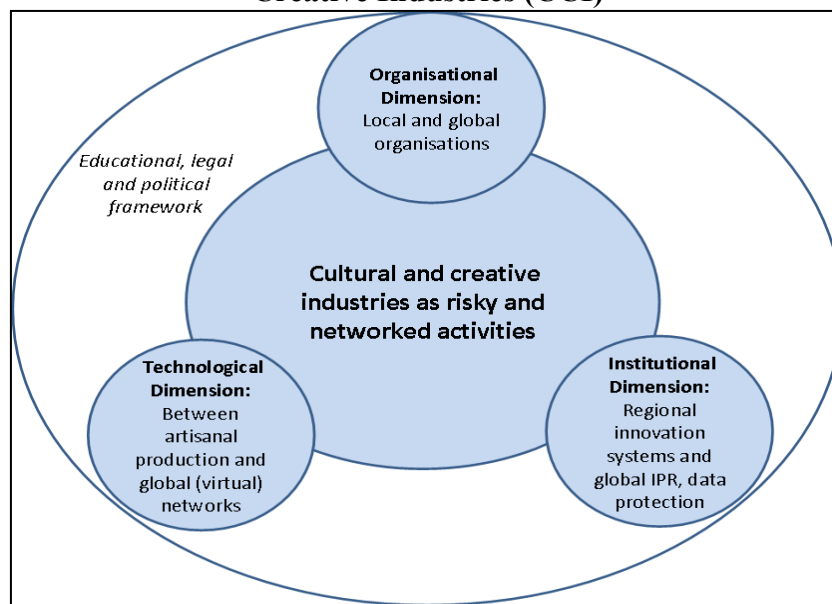
Both, economists and policymakers have shown a growing interest in the cultural and creative industries (CCI) over the past years (Söndermann et al., 2009; HKU, 2010; UNCTAD, 2010; EC, 2010b and 2011b). This can be explained by the growing economic importance and unexploited potential of these industries. In 2008, CCIs accounted for 4.5% of the European Union's GDP, and employed some 3.8% of its workforce (EC, 2011b). Furthermore, the non-cyclical CCI subsectors have boosted employment even during the recession (Dapp and Ehmer, 2011), and the number of jobs has increased by close to 2% of the workforce annually since

2003. However, the growth potential of CCIs could accelerate only if policymakers are successful in drafting appropriate incentives as well as competitiveness and innovation policies. This paper seeks to establish a preliminary approach to the CCI's related local/regional competitiveness and innovation policies. The general objective of the work is to develop a basic understanding of the risks and challenges (organizational, technological and institutional) of the CCIs in Europe in order to be able to develop smart local and regional innovation policies for their competitive development and a favourable stimulation of innovative spill-over effects towards the rest of the economy. The understanding of risks and challenges is relevant for the design of effective and balanced European public policies for innovation and competitiveness in an ever-more intangible and creative economy. This work seeks to give a preliminary approach to a decisive lack of knowledge on the mechanisms of creative/cultural regional innovation policies.

2 A General Framework for Fostering Local/Regional CCI Innovation

The CCI is an extremely diverse sector and there exists substantial lack of knowledge and disagreement about the best public support policies, both to stimulate the CCIs and to transfer their innovative and creative potential to other economic sectors (EC, 2011a; 2011b). CCIs are situated within a given legal, political and educational framework. As an economic and innovative activity, the CCIs present a distinctive character with regard to their organisational, technological and institutional dimensions (see Figure 1).

Figure 1 Organisational, technological and institutional dimensions of Cultural and Creative Industries (CCI)

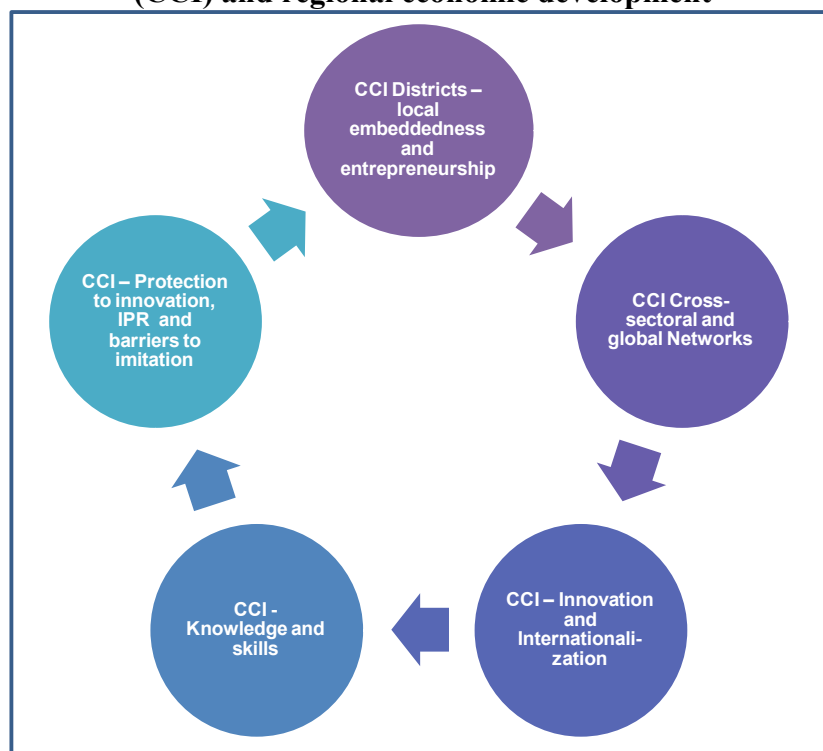


Source: Own elaboration based on Martin Heidenreich's suggestions

This characterization leads to a specific organization of the CCI-related agents (companies, entrepreneurs, associations, support entities), which differs from other economic sectors. However, on the other hand, CCIs have also a high component of risk and uncertainty (Caves, 2000; Townley et al., 2009), common to other highly-innovative activities. Therefore, there are two characteristics (mutually non exclusive) that have been used to explain the specificities of CCI: (a) CCIs face high risk and uncertainty, similar to classical R&D activities. Organizational, institutional and technological structures need to be developed and supported through adequate public policies to deal with these risks and (b) they constitute a highly networked value chain since they are based on social and cultural capital and network-intensive industries (in production, consumption and distribution), which may have both a territorial basis (cities, regions) and a virtual dimension (social media, digital networks, global companies). In the case of CCI, networks more than capital or labour, help to cope with risks and challenges.

This paper seeks to set a preliminary approach to five dimensions of the relationships between CCIs and regional economic development.

Figure 2 Five dimensions of the relationships between Cultural and Creative Industries (CCI) and regional economic development



Source: Own elaboration based on Martin Heidenreich's suggestions

In order to deepen the available knowledge on CCIs in Europe, two antipodal cultural and creative subsectors could be analyzed, representing the 'classical' cultural sector and the 'modern' creative industries: Cultural infrastructures/museums and the video game industry.

Art museums and the game industry represent two completely different business models and cover therefore a wide range of experience within the CCIs, as is shown in Table 1.

Table 1 Characterization of two specific sub-sectors within the cultural and creative industries

<i>Cultural Infrastructures/ Museums</i>	<i>Game Industry</i>
Culture, nature of a public good	Market-based creative sector
Brand-driven innovations	Technology-driven innovations
Non-technological innovations	Technological innovations
Symbolic knowledge (branding, design, advertising)	Analytical (science-based) knowledge. Synthetic (engineering) knowledge
Value to customer created at the user-end of the value network (increasing importance of new media)	Value to customer created within the technological value chain
Place-branding driven externalities	Shared pool of skilled labour and spill-over effects on ICT, etc.
Informal barriers to imitation	Intellectual Property Rights
Production of Images at the user-end (branding in New Media)	Production of Images (part of the value-chain)
Network Economies at the user-end (accumulation of the production of images)	Technology-driven Network Economies
Museums as Multinational Organizations: Global Value Chain	Games-related R&D centres: Global Innovation Networks
New eContent for new media and new image distribution channels (e.g. iPhone)	New Social Network Gaming: Changing the rules?

Source: Frey (2003); Caves (2000); Greffe (2002); Throsby (2010); de Prato *et al.* (2010); Towse (2010); Potts *et al.* (2008); Fernández-Blanco and Gil (2012); Ateca-Amestoy and Prieto-Rodriguez (2013); Cellini and Cuccia (2014); Borowiecki and Prieto-Rodriguez (2015); Dekker (2015); Benhamou (2015); Plaza *et al.* (2015).

In the following section, a preliminary approach to five dimensions of the relationships between CCI and Regional Economic Development will be presented.

3 Five Dimensions of the Relationships between CCIs and Regional Economic Development

The cultural and creative industries: An economic sector between culture and computer

According to the European Commission’s Green Paper on Creative and Cultural Industries, “the CCI represent an untapped potential to create growth and jobs” (EC, 2010b). In fact, the growth of the CCIs in the EU from 1999 to 2003 was 12.3% higher than the growth of the overall economy (UNCTAD, 2010).

Reports and studies contain different definitions and models to describe the CCIs. However, albeit the diversity of models, most descriptions lead to the same collection of

industries making up the creative sector (HKU, 2010). In general, CCI encompass, among others, performing arts, visual arts, cultural heritage, film, TV and radio, games, music, books and press, fashion, high cuisine, as well as creative service providers such as architecture, advertising, new media and design.

The cultural and creative sub-sectors are highly heterogeneous, with different organizational modes, different business models, diverse monopoly patterns and economies of scale, different cooperation structures, and diverse levels of public funding and economic performance within the EU (European Competitiveness Report, 2010a; Dapp and Ehmer, 2011; HKU, 2010).

Notwithstanding the heterogeneity of the sector, all CCI exhibit similar causes of market failure and face similar challenges related to the digital shift and to increasing globalisation (see Table 2).

Table 2 Common Challenges for Players in the Cultural and Creative Industries

Micro-firms and SMEs	CCI are strongly dominated by SMEs, especially micro-firms.
Uncertainty	CCI face considerable uncertainty in demand. High levels of unpredictability yield volatile returns to investment, leaving firms unable to rationally choose the profit-maximizing output.
Intangibles of CCIs	CCIs face valuation difficulties because of Information Failures: Immaterial value produced by CCIs eludes balance sheets. Competitive markets do not price the intangible assets of cultural and creative firms (e.g. singular and unique artistic inspiration), hindering potential investors. As a result, CCI face financial shortages.
Spill-over effects and positive externalities	CCIs face valuation difficulties because of spillovers: CCIs give rise to important spill-over effects and positive externalities that benefit other firms and communities. As a result, CCIs do not capture all the returns to their created value (cash-inflows). That is, (1) they may invest less than would be optimal from a market perspective; and (2) CCI face financial shortages.
Imitation challenges	Cultural and creative entrepreneurs' advantage largely depends on their uniqueness and exploiting first-mover advantages. Imitation at an early stage could threaten the entrepreneurs' advantages. Intellectual Property Rights (IPRs) do not work as effective protection and Barriers to Imitation of other nature need to be set up.
Network Markets and Coordination Failures	CCI operate in highly Networked Markets. Irrespective of the intrinsic aesthetic-value of the work of art, the value to the consumer arises in the social sphere, generated in the network economy. Networks usually form naturally, though coordination failures can prevent their development (e.g. while all parties potentially benefit from creating a network, there might be little incentive for one party to bear the start-up costs. As a result, (1) new relationships become difficult to forge; and (2) Well-established networks can build up barriers to entry, hindering innovation).
Non-technological Innovations versus Technological Innovations	Most traditional CCI follow business models based on non-technological innovations. However, the emergent CCI (game industry, design) follow closely the opportunities offered by new technological innovations, mainly ICT-based. In many CCI, the possibilities of non-technological innovation (organization, marketing, etc.) are not sufficiently exploited. All CCI face the challenge to protect their knowledge and their innovation-based competitive advantages against new competitors from the emergent countries.

Source: EC (2011b); Pratt (2009); Throsby (2010); Scott (2000); Power (2010 and 2011); Stobbe (2011); Plaza *et al.* (2015).

CCIs share a common need for policy intervention to correct the market failures facing the digital and globalization challenges. Today there are few comparative yet differentiated data sets and information on the subsectors and their specific characteristics with regard to size, markets, processes and outputs, entrepreneurship, skills and organization and innovation. In this context, future studies should aim to create a comparable European dataset on CCIs with a specific focus on CCI-related market failures and challenges, as well as mapping current CCI specific entrepreneurial and innovation policies in EU countries.

Cultural innovation and the importance of geographic proximity: Cultural and creative districts and their contribution to innovation

Cultural innovation often generates benefits beyond the innovative firms. Inspiration (creativity), when successfully implemented in any area of the economy, contributes to the stock of knowledge and can spill-over to other firms, leading to co-location and spatial agglomeration economies (Audretsch and Feldman, 1996). This corresponds to Marshall's (1890) notion of the 'atmosphere' in a given 'district' leveraging a local competitive advantage and the notion of locally embedded tacit knowledge. However, the benefits of sectoral clustering of CCIs are numerous (O'Hagan, 2007).

Cultural and creative firms cluster, even more than other sectors, benefitting from knowledge sharing, trust and relational capital, pools of skilled labour, and spill-overs that make them reach external scale economies. That is, firms, suppliers and services find mutual advantage in being close to other companies in a cluster, even if they compete (Lorenzen, 2007). Often there is a process of cross-fertilization between creative fields at the territorial level. Yuko Aoyama and Hiro Izushi (2003), for example, discuss how the Japanese video game industry benefits from its strengths in animated films and cartoons. Norma Rantisi (2002) attributes the success of the fashion industry in New York to the status of New York as an international centre of high art, opera and theatre. Plaza (2008) discusses how the architecture sector in Bilbao benefits from the success of the Guggenheim Museum.

Already Jacobs (1969) found that sector diversity, rather than cluster specialization, can explain longer-term growth and higher productivity in some places. That is, sector diversity facilitates cross-sector fertilization (inter-sectoral knowledge transfer).

Cross-sector spill-overs are not only present among creative industries, but more importantly, between creative and non-creative industries (Lorenzen, *et al.*, 2008). So called 'related variety' synergies support the idea that these inter-sector knowledge spill-overs are more powerful when firms (sectors) are related along the value chain (Asheim *et al.*, 2007; Cooke, 2007). These synergies are even a main element in the new 'smart specialization strategies', promoted by the DG REGIO of the European Commission as being a backbone of the future European Cohesion Policy (McCann and Ortega Argilés, 2011). Moreover, through the analysis of creative industries' location, De Propris *et al.* (2009) found that creative

industries tend to locate near each other depending on inter-sector linkages and, more importantly, technological complementarities.

There is an extended body of knowledge on cultural and creative districts. However, no general conclusions on the spatial relevance of CCIs across different subsectors could be drawn so far. In addition, the relationship between CCI districts and technology are still unexplored.

In this context, future studies should aim to deepen the understanding of how and how much agents and relationships between CCI-related agents contribute to create positive spatial effects and agglomeration benefits, both in physical and virtual spaces. Specific questions to take into account will be: What happens when new technologies (e.g., broadband mobile) are introduced into well-established districts? There is a trend for mobile eServices to become more Internet connected and more socially networked (e.g., mobile games). Yet, how do CCI districts react to new mobile technologies?

CCI and their networks as bridges for the transportation of creativity and innovation

Cultural infrastructures, as well as cultural and creative players and districts, can play an important role in creating networks between different professionals, groups, sectors and segments of society. This was observed for museums in 1989 when Star and Griesemer (1989, p. 393) took the example of a natural history research museum to show how such a cultural object can serve as a basis for cooperation between different social, scientific and professional groups, bridging diverse social backgrounds. These linkages encompass:

(a) *Tangible networks among diverse actors*: Cultural and Creative industries can bridge networks that are not directly linked, filling structural holes (Scott, 1991). A group of actors with connections to other social worlds is likely to have access to a wider range of information. In this sense, CCIs can play a critical role as innovation facilitators.

(b) *Intangible connections between brand circuits (co-branding)*: Cultural heritage and infrastructure become effective economic engines to the extent they become effective branding engines. The branding power depends on the accumulation of different brand circuits (Plaza et al., 2015).

(c) *Bridging tangible and intangible networks*: Cultural Industries contribute to bridging different constructs of meaning (multi-vocacity of meaning), which encourages innovation. Positive co-branding reinforces the effectiveness of tangible networks.

In this sense, cultural and creative industries can connect apparently far-off and dissimilar sectors, employing their ‘bridging’ function as it “connects concepts, places and paradigms from different backgrounds” Lazzeretti (2011, p. 352). Furthermore, cultural entities, like museums, can connect highly particular specialized global/national/local circuits that criss-cross the world connecting specific groups of cities (Sassen, 2010). These circuits vary

enormously. Some are specialized and some are not; some are local, some are regional and some are global. In other words, cultural industries bridge not only networks in the generic sense of the word, but more importantly they can bridge highly specialized circuits. Museums, for example, and ‘high-level culture’ institutions connect physical/material circuits: Their prestige can open access to Signature Architects (Pritzker prized circuit). They are customers for knowledge-intensive business services (e.g. signature architects) and advanced technologies (Plaza, 2008). Museums connect to high gastronomy circuits like Michelin star chefs. Branded museums connect to (attract) big international tourist flows, airlines, hotel chains and/or premium fashion brands. In addition, ‘high-level cultural’ institutions, like Fashion Shows, are important, yet informal arenas for social networking, especially among the educated population and for strategies of social distinction (Bourdieu and Wacquant, 1992). They may also contribute to the attractiveness of a region for members of transnational classes (Sklair, 2005).

Second, CCIs can also connect apparently dissimilar regions and cities (Plaza et al., 2015), bringing together, e.g. old industrialized cities, like Bilbao with global nodes (New York) through the Guggenheim brand. A cultural and creative brand’s value lies in its ability to make a city visible and to generate economic activity. Brand image plays an important role in facilitating development and innovation processes. In our globalized world, economic regeneration is as much about image as investment and production. This is because investment and production depend on images of locations that facilitate the process of simplifying and organizing information, thus enabling people to choose the locations of their various urban experiences (economic activities). Another important factor in this context is the easier attraction of creative talent and highly qualified professionals by cultural nodes, as suggested by Florida (2002a and 2002b).

Third, ‘high-level culture’ institutions symbolically assert a city’s transition into the knowledge-driven postmodern era, and its value for creativity, innovation and culture. Cultural industries produce images, and the New Media has the potential to fuel both image reproduction and image demand simultaneously. Online media (online press, blogging, Facebook, Twitter or Flickr) helps in the long run branding power of cultural infrastructures and events. The critical accumulation of these positive images supposes a break with an industrial past and the start of a new economic trajectory; they may improve the reputation of a region (Plaza et al., 2015). The economic potential of culture in regions consists mainly of breaking-up path dependencies and lock-in effects, which are so important especially in old-industrial regions. In other words, culture might be an ideal remedy against the risks of regional lock-in effects (Grabher, 1993). Last, but not least, cultural industries are the expression of specific cultures and identities and connect global audiences to specific cultural settings.

In conclusion, cultural institutions and events can play an essential role in the regeneration of regions in at least three dimensions: They are an important crystallization point

for social networks and regional identities; they may facilitate the recombination of knowledge and thus contribute to an innovative milieu (Camagni, 2001; Crevoisier, 2004); and they can break-up reputation-related path dependencies, reinforcing positive change.

Future work should study the bridging effects of cultural and creative sectors and infrastructures and generate reliable knowledge on the effects of culturally-inspired networks on economic activities and regional reputation.

Cultural and creative industries between local embeddedness and global value chains: Effects on innovation and internationalization

Cultural producers were traditionally embedded in local, regional and national cultural patterns, producing for local markets or for tourists to carry home ‘authentic’ souvenirs. But, cultural, and especially creative companies, are no longer only regional or local. Cultural and creative goods have fully entered global markets, and new business models have helped to turn them into fully-fledged export goods and services. Multinational corporations, and their Global Value Chains (GVC), have long existed in cultural spheres of production – for example Time Warner, Viacom/Paramount, News Corporation/Fox, Walt Disney, Sony and Comcast/GE in the film industry (Scott, 2005) and Random House/Bertelsmann, HarperCollins/News Corporation in the book publishing industry.

These cultural GVCs are essential protagonists of international cultural production, and organize their production and diffusion processes increasingly internationally. They provide important channels for the transfer of cultural products across national borders. In addition, the complexity and cost of innovation processes are encouraging ever more CCIs to open up and collaborate in Global Innovation Networks (GIN), desegregating R&D globally. Shortage of specialized talent in their home countries combined with R&D departments facing strong financial pressure make companies adopt GIN models (Economist Intelligence Unit, 2007). Hence, cultural GVCs can be analyzed as cross-border networks for the inner-organizational transfer of cultural products and competences (Bartlett and Ghoshal, 1989).

At the same time however, at least the core activities of creative production are still in many cases concentrated in the home countries of GVCs (Scott, 2005). Regional or even local districts play a vital role for the profile of these GVCs. The regional environment of corporate headquarters and subsidiaries are an important source of contacts with suppliers, customers and competitors, for knowledge, partners, political support and qualified employees (Cantwell and Mudambi, 2005). Therefore, GVCs are not only internationally (or in some cases even globally) active organizations, but are also nationally and regionally embedded. The organizational, institutional and cognitive proximity of regionally agglomerated cultural producers and actors facilitate interactive learning (Mattes, 2012). Their institutional and socio-cultural environments also shape the creativity, the competences and the market positions of subsidiaries (Andersson et al., 2007; Kristensen and Zeitlin, 2005).

The questions are (a) how cultural multinational corporations can combine the advantages of internationally distributed production and innovation processes with nationally and regionally embedded competences and know-how, (b) how and to what extent cultural are GVCs are socially embedded organizations, (c) how do GVCs strategically use the relative advantages of their regional and national environment, and (d) how are they able to market on a global scale their products and services (Meyer et al., 2011; Cantwell and Zhang, 2011).

An important starting point for this discussion is the observation that “the most dynamic firms in creative cities all over the world are engaged in building international networks of creative partnerships with one another, such as joint ventures, strategic alliances, co-productions” (Scott 2006, p. 13). In this context, the role of the CCIs to create new global alliances and open to international trade might have important impacts on local and regional innovation sectors and their embeddedness in international circuits (WIPO, 2007).

Future research should focus on the patterns of globalisation of CCIs, overcoming the traditional concentration on local and regional markets. Especially important will be the analysis of networks of Open Innovation/Open Creativity and the feedback to the local embeddedness of smaller players and ‘prosumers’ (consumers who co-produce and consume at the same time). Here, the analysis of both Cultural and Creative Industries will produce substantial new insights into network circuits and transaction systems.

Managing knowledge and skills in CCI in a digital and global age

The organization of work is no longer characterized by the mass production of homogeneous goods in a hierarchically and bureaucratically coordinated way. The current landscape, especially in the field of CCIs, is characterized increasingly by knowledge-based forms of work that require the ability and willingness to transform established routines and practices in the face of new situations and challenges. Reich (1992) conceives this new type of work as symbol analysis: “Symbolic analysts solve, identify, and broker problems by manipulating symbols. They simplify reality into abstract images that can be rearranged, juggled, experimented with, communicated to other specialists, and then, eventually, transformed back into reality” (Reich 1992, p. 178).

Creative work is the part of knowledge-based work which focuses on the creation of “meaningful new forms” (Florida, 2002a), for example research reports or books, software, video games, *objets d’art*, industrial design, fashion, brands. Florida (2002a, p. 34) who considers talent as one of the crucial success factors for creative industries (besides technology and tolerance) distinguishes two parts in this ‘creative class’: “the super-creative core” and “creative professionals”. These workers are in general academically trained; their work is characterized by more complex tasks and a high degree of job autonomy. They find themselves confronted with complex problems, and cannot forego continuous learning.

Studies have shown that CCIs often supply content that requires knowledge-based and labour-intensive input. However, production processes are not linearly organised but build around flexible and multidisciplinary teams, which often form on an *ad-hoc* project base. CCIs require therefore skilled employees, who are more likely to hold non-conventional forms of employment (freelancing, temporary contracts) and have difficulties to get their skills recognised or certified formally (HKU, 2010).

Very little is known on the organization of cultural and creative work and the related competences. Florida (2002a, b) for example shows convincingly that cultural activities are highly concentrated especially in urban regions. This indicates that implicit knowledge and a pleasant, stimulating environment play an important role. Sydow and Staber (2002) illustrate that project networks are essential for the organization of television content production. These networks rely in general on supportive institutions in their surroundings. These regionally concentrated and institutionally stabilized patterns of interaction which, according to the ‘innovative milieu’ approach (Crevoisier 2004, p. 377), combines the roles of technological learning of inter-organizational networks and of spatial proximity. The core of this approach is the interaction “between the urban context and urban dynamics (...) and the evolution of production systems (economic innovation).”

Therefore, one can assume that the knowledge-based work in the cultural and creative industries is characterized not only by complex tasks and a high degree of job autonomy (as all knowledge-based work, see Reich, 1992 and Heidenreich, 2004), but also by the crucial role played by inter-organizational networks and by the essential role of regional institutions which stabilize the networked interactions between territorially concentrated creative activities. These networks and institutions facilitate the exchange of tacit knowledge (e.g. non-written eSkills in relation to social networking) and contribute to the innovativeness of creative milieus.

Future studies should analyze the patterns of organization of cultural and creative work and current schemes of initial and continuous learning in complex environments, which require high levels of creativity, autonomy and adaptability.

Protection of innovation in CCIs: Intellectual property rights, new forms of value creation and informal barriers to imitation

Existing copyright and patent law is no longer coping with the ever-faster-changing digital world (Dapp and Ehmer, 2011). The ongoing technological evolution has brought important changes in how industries perform and in the relationships among players within content and cultural industry chains. Digital technologies open up new opportunities for reducing barriers to entry in content publication and distribution, enabling new possibilities of engagement. CCIs are developing new forms of value creation, especially facilitated by the digital shift and new distribution and business models. The ‘open culture’ and the availability of open source publishing platforms allow for a drastic reduction of certification, publication and platform

management costs, thus promoting the self-organization of content producers and favouring the start-up of new activities (Jeppesen and Molin, 2003). However, more than in other sectors, cultural and creative entrepreneurs' competitive advantages largely depend on their uniqueness and exploitation of first-mover benefits (European Competitiveness Report, 2010). Imitation at an early stage could threaten such advantages. Here, new forms of protection of innovation and barriers to imitation are developed and can generate important lessons also for other sectors.

Today, protection of innovation is widely restricted to the application of Intellectual Property Rights (IPR). Formal mechanisms for IPRs like design protection, trademarks, patents, utility models, copyright, but also informal IPR-mechanisms such as secrecy, restricted access to information, confidentiality, division of duties, loyalty building, client relationship management, etc. are the predominating protection schemes (HKU, 2010). IPRs offer limited monopoly exploitation rights as an incentive for investment in new knowledge generation and use. They allow creators of knowledge to appropriate returns from innovation and therefore act as a spur to innovation. However, evidence suggests that intellectual property rights are less effective when it comes to services or to intangible and moveable goods like ideas, novels, films, music (Santagata, 2002). As business models and value creation change, new production and distribution processes on the Internet known as collective product-co-creation by 'prosumers' are put in place (Abadie et al., 2008). This structural transformation produces different outcomes and sustainability models: Even if in most cases some or all content is free, the created value comes from the possibility for the content provider to aggregate big amounts of free content, strengthen his reputation, collect information about users (either through deliberate feedback or indirectly, through navigation behavior tracking) and establish new relationships among users.

There is a growing field of non-technological, and informal barriers to imitation (e.g. building CCI-related Internet communities and/or branding strategies). Power and Hallencreutz (2005) argue, for instance, that globalized networks (music industry in Stockholm and Kingston) can form the basis for supporting localized production centres and protecting property rights. Non-technological barriers to imitation can rely on the firm's advantage in distinctive organizational capabilities: Competitive advantage may be hard to replicate if the advantage is rooted in socially complex processes (e.g. when interacting social networks with online gaming). In fact, in recent years, the Internet has been the main driver in the development and rapid growth of online games. Research on social network gaming, protection of ideas and non-technological barriers to imitation still remains, however, a very small area in the broad scope of mass media research, especially in Europe.

Future studies should investigate how institutions and platforms can generate value and redistribute it among interested stakeholders in content and cultural industries. In fact, while the progressive fragmentation of value chains opens new opportunities for producers to

autonomously collect the value they create, it also transfers the burden of efficiently managing the activities. Emphasis will be put on mobile technologies as opportunities to develop innovation (in market, organizational, institutional, relational, reputational and artistic terms). Future research could also bring new insights into the possibilities of knowledge and innovation protection in other sectors, especially the service sectors. Future studies should analyse the current schemes of protection of innovation, new forms of value creation and barriers to imitation, both the formal and the informal ones, and study their effectiveness and possible transfer to other economic sectors.

4 Conclusions

CCIs represent an increasing share of the regional and national economies. They give rise to strong positive externalities (within and beyond districts), important spill-overs, but also considerable uncertainty in demand and volatile returns to investment, information failures, risks of imitation at an early stage, which could threaten their growth and hinder revenues and employment. They must adapt to new digital media and globalization processes. The lessons learned for the CCI-related sectors will bring relevant knowledge in defining a new generation of innovation and competitiveness policies that will also apply to other sectors, especially in services and other emerging industries (logistics, energy distribution).

Public policies can play an important role in fostering CCI development, to create revenues, jobs, exports as well as economic growth in general. They do so by addressing several of the common barriers and challenges for CCIs.

- (a) *Coordination and cooperation*: Effective ‘creative networks’ will influence the ability of companies, cities, regions to generate a cross-over of ideas and flows of new information to fuel innovation. Government can facilitate networking where coordination failures are present. Strong networks of persons and service providers can prevent problems arising from small-scale SMEs (Kimpeler and Georgieff, 2009). New digital technologies can open up value creation networks (e.g. living labs, open virtual laboratories, could be implemented for fuelling open source research cooperation partnerships).
- (b) *Financing*: Public policy could enable efficient supply of finance by the market (e.g. private equity, micro-finance, sponsorships, and guarantee schemes). Many CCIs have difficulties funding their projects (EC, 2011b). Volatile incomes, high ratio of self-employed workers and insufficient collateral all limit CCIs’ access to capital (Dapp and Ehmer, 2011). Micro-firms often require amounts of less than €30,000, making lending

unattractive to commercial banks due to the administrative costs required (Söndermann et al., 2009).

- (c) *Research, technology development and innovation (RTDI) and internationalization*: Policy can support the internationalization and RTDI processes of SME that constitute the majority of CCIs. However, the definition of innovation used in established public programmes does not correspond to the way CCI work (Söndermann et al. 2009). Here, new forms of research and innovation support as well as adequate internationalisation schemes are required.
- (d) *Education and training*: Policies can facilitate the creation of a pool of symbolic knowledge, analytical (science-based) knowledge and synthetic (engineering) knowledge, as well as the development of business and management skills. It should be noticed that cultural and creative SMEs require support to alleviate the risk of skilled workers fluctuations.
- (e) *Framework conditions*: Legal and tax systems should be favourable, as well as systems for intellectual property protection, regulatory frameworks and competitive environments.

Finally, public policies can strengthen, channel and guide possible spill-over effects of CCIs on other industries and society at large, so that other companies, clusters, sectors or entities can benefit from cultural and creative firms through knowledge diffusion, creative partnerships or other inputs on innovation and creativity.

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