Spatial concentration of creative industries: A theoretical review

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Resumen:

This paper aims at providing solid theoretical framework for the empirical study of creative industries. Firstly, it reviews the existing literature on the concept and definition of creative industries. The paper contextualises creative industries in the broader framework of knowledge-based industries and describes the various definitions proposed so far in the academic as well as in the institutional domain, both at the national and at the international level. A main finding of such a review is the heterogeneity of the existing definitions, which may hinder the feasibility of comparative cross-country studies.

Secondly, the paper analyses the main reasons reported in the literature for the clustering of creative industries. In this regard, traditional theoretical models such as the Industrial Location Theory or the Clustering models only provide a partial explanation of the determinants that might affect the location of creative industries. Indeed, external economies (localisation and urbanisation economies) presented by the traditional models have been seen as partial explanatory elements that might explain why creative industries tend to be geographically concentrated. The main results of a theoretical analysis point to the existence of other determinants that could help to explain the tendency of the creative industries to concentrate in
the space. In this line, the existence of cultural infrastructure, the presence of 'soft' factors, the access to gatekeepers, the presence of patronage, the proximity to political power, the location of 'star' artists and the creative class, the existence of a particular identity and a place brand and image, have been observed as factors of attraction of creative industries.

Palabras Clave: knowledge bases, creative industries, concentration, location theories.

Clasificación JEL: C46, R12, R30, Z00
1. Introduction

Creative industries can be defined as those industries that produce and commercialise creative goods and services. Over the last years, creative industries have become an object of interest for academics and policy makers. Indeed, creative industries have experienced an important economic growth accompanied by important levels of trade and employment. As a consequence, the EU considered these industries as a driving force to reach the goal established in the Lisbon agenda to make Europe "the most competitive and dynamic knowledge-based economy".

Creative industries are characterised by their tendency to concentrate in space (Scott 2006a; Cooke et al. 2007; Florida 2008; Florida et al. 2008; Cooke and Lazzeretti 2008; Lazzeretti et al. 2008; Boix et al. 2012) giving place to more creative intensive locations (Maskell and Lorenzen 2004; Cooke et al. 2007) such as local creative systems (Lazzeretti et al. 2008) and creative clusters (Cooke and Lazzeretti 2008; Boix et al. 2014a). A creative cluster is defined in the literature as “a place that brings together i) a community of ‘creative people’ (Florida 2002) who share the same interest in novelty but not necessarily in the same subject; ii) a catalysing place where people, relationships, ideas and talents can spark each other; iii) an environment that offers diversity, stimuli and freedom of expression; and iv) a thick, open and ever-changing network of interpersonal exchanges that nurture individuals’ uniqueness and identity” (De Propris et al. 2009).

There is a growing interest in the study of the factors that explain the clustering pattern of creative industries in Europe. This paper explores the main reasons observed in the literature for the clustering of creative industries. Traditional approaches such as external economies (localisation and urbanisation economies) have been seen as partial explanatory elements that might explain why creative industries tend to be geographically concentrated (Tschang and Vang 2008, p.3; Cooke et al. 2007; Wenting et al. 2011, pp.1335-1336). The main results of a theoretical analysis point to the existence of other determinants that could help to explain the tendency of the creative industries to concentrate in the space. In this line, related variety of activities and people, urban assets and creative class have been observed as factors of attraction of
creative industries (Florida 2005a,b; Sivitanidou 1999; van Oort et al. 2003; Lazzeretti et al. 2012a,b; Lorenzen and Frederiksen 2008).

2. Creative intensive locations

The spatial clustering of firms is one of the core research questions of urban and regional economic studies. Marshall (1890/2009) was the first to describe the existence of industries specialised in one production activity (generally small and medium size firms) concentrated in certain places of England, called industrial districts. During the past two decades, firm clustering has also become relevant for sub-national policies (Malmberg and Maskell 2001, p. 4). Indeed, governments (local and regional) from developed economies have introduced and implemented policies aimed at facilitating the emergence of clusters as well as at supporting existing clusters (Karlsson 2008, p. 1).

Suarez-Villa and Walrod (1997), Maskell and Lorenzen (2004) and Cooke et al. (2007) define cluster as a concentration of activities or workers in space, which are capable of generating, transferring and using knowledge. Bergman and Feser (1999) underline that the common element between clusters, industrial districts and milieux innovateurs is that the spatial proximity between agents provides competitive advantages. As a result of the concentration of different agents and their face to face interaction, information, know-how and technology are easily exchanged by imitation or learning (Suarez-Villa and Walrod 1997; Globerman 2001; Cooke et al. 2007), and as a result new ideas emerge.

And indeed spatial proximity matters in the innovative or creative process (Cooke et al. 2007, p. 30). Marshall (1980/2009, p. 226) points out that in a knowledge-dense context, tacit knowledge can benefit from spatial proximity. These kinds of knowledge spillovers occur mostly among geographically proximate individuals and organisations (OECD 2008, p. 10). Several scholars see this as a dynamic process called "knowledge spiral" (Nonaka and Takeuchi 1995; OECD 1996; Becattini 2005, pp. 52-53; Cooke et al. 2007, p. 29): the inventions as well as the organisational or process improvements achieved by a company located in a territory are made explicit, and then shared, analysed and adopted by the rest of the companies located in the same territory. Such
knowledge is more effectively transmitted in a local context where there is proximity between individuals with a common social context (OECD 2008, p. 8). Thus, as Audretsch and Feldman (1996, p. 634, 637-639) note, industries which are more knowledge oriented will be expected to be more concentrated, given the need of transmitting tacit knowledge informally through face-to-face interactions and repeated contact (Pratt 2004, p. 122; Audretsch 1998, p. 21; Von Hippel 1994; Audretsch 2003; OECD 2008, p. 28).

Recent studies have analysed the spatial organisation of creative activities. They emphasise that creative activities are not distributed uniformly across space (Scott 2005; Cooke et al. 2007; Florida 2008; Florida et al. 2008; Cooke and Lazzeretti 2008; Lazzeretti et al. 2008; Boix et al. 2012). Studies such as Cooke et al. 2007 affirm that spatial proximity matters in the process of information exchange. In this line, several authors point out that activities with a high propensity to innovate tend to be more clustered than manufacturing industries (Feldman 2000, p. 378-379; Scott 1996, p. 327) due to their intrinsic characteristics. Similarly, companies in which tacit knowledge plays an important role tend to be clustered in space (OECD 2008) in order to benefit from the external economies (Pascal and McCall 1980; Cooke et al. 2007). Suarez-Villa and Walrod (1997) and Globerman (2001) underline that these externalities derive from the concentration of companies, suppliers and workers with specialised abilities. In this line, Boix et al. (2013, p. 10) point out that symbolic knowledge and knowledge spillovers tend to be locally sensitive. Industries such as media, advertising, design and fashion with a symbolic knowledge base, are mainly based on tacit knowledge. This knowledge is normally linked to the habits and norms learned in specific social groups and which are exchanged mainly through informal interpersonal interaction in the professional community (face-to-face).

New ideas generated from the spatial concentration of creative activities, give place to more creativity intensive locations (Maskell and Lorenzen 2004; Cooke et al. 2007). Creativity will thus be concentrated in creative clusters (Le Blanc 2000; Lazzeretti et al. 2008), industrial districts and cities or metropolitan areas. Building on this observation, De Propris et al. (2009) define a creative cluster as “a place that brings together i) a community of ‘creative people’ (Florida 2002) who share the same interest in novelty but not necessarily in the same subject; ii) a catalysing place where people,
relationships, ideas and talents can spark each other; iii) an environment that offers diversity, stimuli and freedom of expression; and iv) a thick, open and ever-changing network of interpersonal exchanges that nurture individuals’ uniqueness and identity”.

3. Location theories and creative industries
Acs and Varga (2002, p. 134) underline that a central research issue in economics is to explain why economic activities tend to be concentrated in certain places while in other places they remain relatively underdeveloped. The current interest in agglomeration has old roots. Several authors have analysed the different advantages generated by spatial proximity which motivate firms to locate close to other firms (Marshall 1890/2009; Weber 1909; Ohlin 1933; Hoover 1937/1971). Recently researchers have showed interest on the understanding of the factors that explain why creative industries, in particular, tend to be geographically concentrated (Hanson 2000; Tschang and Vang 2008; Vang 2005, 2007; Lazzeretti et al. 2008, 2012a). Indeed, there is a need to understand if the multiple types of externalities that contribute to explaining the spatial concentration of the economic activity in general can also help to explain the spatial organisation of creative industries in particular (Vang 2007). Authors such as Tschang and Vang (2008, p. 3) suggest that traditional approaches provide only a partial explanation of the determinants that might affect creative industries.

As highlighted above, creative firms agglomerate in specific places in order to benefit from advantages generated from geographical and sectorial proximity. Several theories have been proposed over the last century in order to account for the industrial concentration that can be used to explain the concentration of creative industries. These are presented in what follows.

3.1. Global framework or Industrial Location Theory
The Industrial Location Theory is the oldest branch of regional economics having the objective of studying the static economic mechanisms that explain the organisation of the activity\(^1\) in the territory (Capello, 2004, p. 23). According to this theory, the two

\(^1\) Location theory explains the economic mechanism of the localisation of firms but also of the residential activities and the configuration of urban systems (Capello 2004, p. 42).
main economic forces that determine the organisation of the economic activity over space are: the reduction of transport costs and the increase of productivity.

i) Reduction of transport costs: Alfred Weber in 1909, based on the seminal contribution of von Thünen (1826), identified the reduction of transportation costs as the main determinant of industrial location. Indeed, under several assumptions, Weber showed that the optimal location of the firm is based on the minimisation of the transportation costs between the source of raw materials and the final product market. This theory is considered as the foundation of modern location theories. Actually, Weber’s theory shed some light on the spatial location of firms where the frequency of delivery of goods and services is high, and also on the location of industries where the transportation of the raw material is really costly (e.g. heavy industry), particularly in the first half of the twentieth century.

As noted above, creative industries are defined by Asheim and Vang (2005, pp. 29-30) and Asheim et al. (2007a, p. 11) as characterized by the fact that innovation is mainly produced by a recombination of existing tacit knowledge. Thus, even if the organisation and the transfer of tacit knowledge does not imply transportation costs, creative industries require spatial proximity to other agents holding tacit knowledge.

ii) Increase of productivity: Agglomeration economies explain the tendency to spatial concentration on the basis of the increase of efficiency and thus the reduction of production costs. Agglomeration economies can thus be defined as all the economic advantages that firms can benefit from in concentrated locations. This idea is the result of the combination of the conceptualisation developed by four authors: Marshall (1890/2009, pp. 222-225), who refers to natural resources and internal and external economies to explain the production, which can be interpreted as location factors; Weber (1909, pp. 124-173), who introduces the concept of “factors of agglomeration” understood as transportation cost advantages, to refer to the elements that cause a dense industrial localisation on the territory; and Hoover (1937/1971, pp. 90-91), who clarifies and extends the concept of “concentration economies” building on Ohlin (1933, p. 203). Concentration economies encompass both internal and external economies. These

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2 Weber’s theory was based on the following assumptions: (1) perfect competition exists in the market, (2) there are perfectly mobile factors of production, (3) firms’ technology exhibits constant returns to scale, (4) raw material and output markets are fixed at certain specific points, (5) production factors are available in unlimited supply, (6) transportation costs are proportional to the weight of the goods and distance to the markets.
external economies are usually divided in two sub-categories (Hoover 1937/1971): *localisation* and *urbanisation economies*.

*Localisation economies* (Marshall 1890/2009, p. 222) are the advantages derived from the concentration in a particular location of specialised companies, suppliers and workers. In preliminary stages of the development of a technology or a new product or service, fast and direct contact with other concerned actors, such as specialised suppliers, workers and firms, is needed (Prager and Thisse 2009, p. 43). Creative industries are project-based industries where a group of agents work together with the aim of combining existing tacit knowledge and producing a new product. Thus, creative industries can benefit from the location of firms in the vicinity of specialised companies or suppliers, since this enhances professional association and knowledge exchange. Cooke *et al.* (2007, p. 31) and Audretsch (1998, p. 18) claim that since knowledge is created and shared more efficiently at local proximity, firms relying on a combination of existing knowledge will have a high propensity to cluster over space. In this line, Carlton (1983, p. 446) found that in industries where sophisticated technology is needed, the presence of concentrated technical expertise from the same industry or related industries is crucial. Creative industries are characterized by generating products that tend to be ephemeral since they attract the consumer’s attention for a limited period of time. In this sense, creative industries need to adapt their production and thus their labour force to the market needs. Thus, spatial proximity of creative industries to the labour market might facilitate efficient matching between labour supply and demand.

*Urbanisation economies* are advantages derived from urban environment characteristics, which are directed in an indistinct way (without coming necessarily from the same productive sector) to all the economic activities that are located in it (Camagni 2005, pp. 24 and 34). In this line, Chinitz (1961, pp. 281-282) presented economic variety (or diversity) as determinant of economic concentration.

Turok (2003, p. 562) underlines that the city size as well as the density of the economic agents of a territory determine the importance of the benefits that creative industries could gain from their co-location. Indeed, the innovation process of the creative industries is mainly market oriented. Thus, creative industries will cluster in particular locations to take advantage of close proximity to concentrations of customers.
3.2. Clustering models

Since the early 1990’s, industrial clusters received considerable attention both by policy makers and by researchers. Literature on industrial clusters has focused its attention on the causes of a non-random spatial concentration of economic activity in space. In the specialised literature several typologies of clusters have been identified.

Gordon and McCann (2000, pp. 516-521) provided a comprehensive assessment of various typological frameworks used in the literature for the analysis of industrial clusters. The authors adopted a transactions-costs perspective to address the relations between the firms within the cluster, such as transportation or communication costs. As a result they identified three distinct types of industrial clusters: pure agglomeration, the industrial complex, and the social network.

The classic model of pure agglomeration, refers to the external economies of scale or scope that benefit firms located in the same area. These externalities can arise from three different sources (Gordon and McCann 2000, p. 516). Firstly, firms benefit from access to a more extensive labour pool, making it easier to find skilled labour force and thus to maximize the job matching by adjusting labour needs according to the market conditions. Secondly, firms benefit from access to a large range of specialised industries and suppliers. Thirdly, firms benefit from the exchange of knowledge between specialised and concentrated firms, such as in the filière. Glaeser et al. (1992, p. 1127) also suggest that these knowledge externalities are often shared through the inter-firm movement of highly qualified people. Such external economies are essentially economic externalities that are derived from a geographical proximity between economic agents. Thus, co-location of creative industries might increase their opportunity to benefit from a skilled labour pool, to trade with specialised suppliers as well as to cooperate with other specialised firms to overcome market uncertainties.

The second model of clustering is the industrial complex, which is characterized mainly by stable trading relations between firms in the cluster (Gordon and McCann 2000, pp. 518-519). In this line, Rosenfeld (1992) has demonstrated the importance of fostering cooperation and collaboration in industrial environments where multiple small firms coexist. According to Boschma and Iammarino (2009), “related variety” is understood as industrial sectors that are characterized by complementary competences. The
concentration of these elements in the same place could facilitate the generation of a
dense and varied network of agents that foster economic and social collaboration,
enhancing knowledge transfer through cross-fertilisation mechanisms and thus
promoting innovation (Lazzeretti et al. 2011; Lorenzen and Frederiksen 2008, p. 171).
It is important to note that some authors have shown that the access to a diversified pool
of firms will not have the same effect as a pool of diversified related firms and
industries (Porter 2000, p. 259). According to Lazzeretti et al. (2012a, p. 1246) related
variety enhances creativity due to spillover processes of innovation in other sectors. In
this line, Porter (1990, p. 52) notes that innovation will be fostered in geographically
concentrated clusters of small firms due to: i) strong local rivalry, that requires firms to
distinguish themselves through creativity, and ii) the changing final product demand
which requires cooperation and collaboration among firms with complementary
products (marketing, research, among others) to act rapidly and turn opportunities into
real products and thus maintain the cluster reputation.

The third form of clustering is the social network that facilitates cooperation between
firms (Gordon and McCann 2000, pp. 519-521). According to authors such as Malecki
(1994), Camagni (2008) and Bergman et al. (1991), cooperation requires the presence in
the territory of social networks and relationships of trust. In the creative domain,
creative industries are characterized by the need of flexible production units in order to
change their process and product configurations according to the unstable and
dependable needs of the market. In order to operate in this way, Scott (2006b, p. 5-6)
highlights that creative industries are generally connected to dense networks of
specialised and complementary firms, which require high levels of trust to allow for the
flow of information and ideas between them. Scott (2006b, p. 6) also notes that these
networks of creative industries are frequently dominated by large firms.

Over the past decade, economic geography has been influenced by evolutionary
thinking giving place to Evolutionary Economic Geography (EEG) models. EEG aims
to explain the uneven distribution of economic activities underlying the industrial
7-8) underline four elements that explain the spatial concentration of firms: first, self-
reinforcing and irreversible dynamic processes; second, path dependency on early
decisions in the formative stage; third, location choices, and fourth, market competition
driven by scale economies at the firm level. Additionally, according to this theory, spatial clustering of firms is the result of spatial historical conditions that contribute to the creation, maintenance and transmission of established organisational procedures, underlying the importance of related variety. In this line, Berg and Hassink (2013) contributed to explaining the spatial distribution of creative industries by using an evolutionary economic perspective. They remark that five essential elements explain this spatial trend: path dependence, lock-ins, path creation, related variety and co-evolution.

Cluster policy initiatives have been used in several European countries as a platform to increase innovation and thus to contribute to sustainable growth. In recent years, national and regional authorities have started to see creative industries as important elements for the economic performance of their territories, and thus have started supporting initiatives through industrial policies (Power and Jansson 2006, p. 8). For instance, programs such as the VinnVäxt in Sweden, have provided funding for knowledge-intense cluster initiatives since 2002, thus strengthening the linkages between local nodes of knowledge and innovation. This model is also known as “triple helix” and the main idea is to enable the effective cooperation between companies, institutions of research/high education and the public administration. One of the main aims of this program is to create environments which are attractive to national and international companies and researchers.

3.3. Specific creative models

Authors such as Tschang and Vang (2008, p. 3) suggest that traditional approaches only provide a partial explanation of the determinants that might affect the location of creative industries. New approaches have suggested taking into account residential or worker amenities, which are exogenous goods or services that could increase the attractiveness, value or comfort of a specific place. These amenities are important to attract and retain highly skilled workers, which tend to be extremely mobile (Turok 2003, p. 562). The academic debate on the determinants of localisation and clustering of creative industries is thus shifting from a business to a more people-oriented approach (Selada et al. 2010, p. 5).
According to Boix et al. (2014a, p. 3), these alternative explanations can be summarized on the basis of the particular characteristics of the creative industries’ clusters taken into account: the existence of cultural infrastructure, the presence of ‘soft’ factors, the access to gatekeepers, the presence of patronage, the proximity to political power, the location of ‘star’ artists and creative class, the existence of a particular identity and a place brand and image:

i) The presence of cultural infrastructure and the proximity to political power have been highlighted by several authors such as Sivitanidou (1999, p. 9); Viladecans (2002, p. 9); van Oort et al. (2003, p. 516); Reardon (2009, pp. 13-16) and Selada et al. (2010, p. 7-10). According to them, it is possible to identify 3 categories of non-productive amenities that affect residents and workers utilities: a) Governance, understood as the leadership and management of places as well as the coordination of different actors and innovative and creative policies; b) Natural and historical-cultural amenities, understood as the natural, architectonic, archaeological heritage, the urban landscape and image, the climate and public spaces among others. Indeed, Kourtit et al. (2013, p. 4) highlight that the presence of historic authenticity in a place, such as cultural heritage, contributes to the emergence of an appropriate urban location favouring creative minds; c) Good access to economic activities and cultural facilities, understood as the structures essential for the health, social well-being and economic prosperity of local communities.

ii) Several authors highlight also the existence of a particular identity, place brand and image and the importance of ‘soft’ characteristics to explain the spatial concentration of creative industries. Indeed, it is in these places, according to several authors, where creative people prefer to live (Sivitanidou 1999, p. 25; van Oort et al. 2003, p. 521). Pareja et al. (2009, pp. 28-33; 2010, pp. 9-10) point out that quality of life and diversity are two important elements that help to attract and retain creative industries and individuals. On the one hand, quality of life should be understood as a set of elements on which people rely for leisure or to increase their well-being (local gastronomy, quality of public services and cultural, leisure and sport entertainment; among others). On the other hand, diversity is understood as the level of tolerance (openness, social cohesion, equality) and ethnic and professional diversity of a territory which, according to these authors, will reinforce the informal professional networks between creative
individuals. Similarly, Markusen et al. (1986) and De Vol (1999) highlight the impact of quality of life on the spatial distribution of innovative firms. According to them, places with accessible natural environments can increase the attractiveness of certain locations to creative industries and employees. Also in this line, Asheim et al. (2007b, p. 666) point to the relevance of quality of live, understood as the presence of bars, cafés, nightclubs, to attract creative workers. Additionally, the level of openness, diversity and opportunity to work (tolerance), also highlighted by Jacobs (1961/1971 and 1969), Florida (2002), Saxenian (1996), Bounken (2009, p. 189) and EIS (2008, p. 11), is a characteristic that creative people evaluate positively. Furthermore, Bourdieu (1980) defines social capital as the set of actual or potential resources related to a long lasting network or relationships among a set of individuals. In this sense, the presence of public or semi-public spaces such as bars or restaurants can encourage people to meet (Murphy and Redmond 2009, p. 73) and thus facilitate social interactions.

iii) The externalities generated by the concentration of human capital or the creative class in a place can be seen as a reason for the clustering of economic activities (Glaeser 2000; Fritsch and Stützer 2008) as well as creative industries (Lazzeretti et al. 2012a). The location of educated people and the necessary infrastructures for their education (such as universities and other educative institutions) plays a fundamental role in the location and performance of companies, especially for those where individuals with high levels of human capital constitute a primary input to the production process (Arora et al. 2000). The externalities generated by the concentration of human capital in a place can indeed be seen as a reason for the clustering of economic activities (Muñiz, 1998; Glaeser, 2000; Fritsch and Stützer, 2008) as well as for the generation of new ideas, and the attraction of new creative industries (Lazzeretti et al. 2012a).

iv) Additionally, the presence of people working in creative occupations can attract other kinds of talent and creative industries (Clifton and Cooke 2007, p. 23). Assmo (2010, p. 314) shows that creative actors are crucial for the development of new creative and cultural firms and products. In this context, knowledge exchange takes place mainly on the basis of cognitive proximity, through informal interpersonal interaction in the professional community (face-to-face). Face-to-face interactions between different actors will facilitate spillovers of information, know-how and technology by imitation or learning (Suárez-Villa and Walrod 1997; Globerman 2001; Cooke et al. 2007), and
as a result new ideas will emerge. As an example, Lucas (1988, p. 38) and Hanson (2000, p. 480) note that creative professionals such as musicians or actors may learn from other colleagues working in the same environment techniques that will improve their performance.

v) Finally, patronage and gatekeepers can contribute to the diffusion of knowledge inside the cluster. In this line, Scott (2006b, p. 6) stresses that in creative environments, free exchange of information between members of a network is of critical importance for the development of new production processes. However, he also points out that low levels of trust can impede the flow of knowledge between the members of the network. Scott highlights that industrial associations or private-public partnerships can sometimes solve knowledge spillover failures in competitive environments.

4. Location of creative industries and identification of creative clusters in Europe

4.1. The location of creative industries in Europe

The creative sector in Europe has been analysed by several researchers, national and international institutions. Table 1 shows a list of the more exhaustive studies dealing with the measurement of creative industries\(^3\) at the European and national level that where published in the last 10 years.

The creative sector ranges from 2.3% to 6.5% of the total workforce, depending on the definition of creative industries used in each study (Figure 1).

Lazzeretti et al. (2008) and Boix et al. (2012) are one of the first academic contributions that analysed and compared the geography of the creative industry in European countries. Understanding the creative sector as a combination of traditional cultural industries and technology-related creative industries, they observed that Italy, France, Spain and the United Kingdom concentrated over 4 million of jobs in creative industries (around 5% of the total jobs). In 2001, Italy accounted 879,000 jobs in creative industries, representing 5.6% of the total jobs in that country. The United Kingdom in 2007, accounted for 1,495,395 jobs in creative industries, which represented around 5.7% of the total jobs. France, in 2006, concentrated almost a million of jobs in creative industries.

\(^3\) In this study both creative and cultural industries have been considered as creative industries, according to the modern conception of the creative sector described in section 2.3.3.
industries, representing 4.5% of the national jobs. And Spain, concentrated in 2001 673,363 jobs in creative industries (4.1% of the national jobs).

Some institutions also carried out studies about the creative sector in Europe using heterogeneous definitions of the creative industries. For instance, KEA (2006) and the BMWI (2009) analysed the creative sector by counting the number of cultural employees. According to these studies, the creative sector in the 5 European countries under study contained between 2% and 3.8% of the total employees. Other studies such as TERA (2010, 2014), Power and Nielsén (2010), WIFO (2011) and ECCL (2013) observed that the creative sector accounted for a total share of the total employment that ranged between 2.1% and 9.2%.

4.2. The location of creative industries in Italy

National and international studies about the creative sector in Italy have been focused on both cultural and creative industries.
Table 1 shows that studies which focus on cultural industries quantify this sector in Italy in a range between 1.7% and 5.8% of the total national employment. Employment in creative industries was quantified in Italy ranging from 2.2% and 6.1% of the total national employment. Finally, employment in cultural and creative industries together have been quantified ranging from 2.7% to 9% of the total Italian employment.

Santagata (2009) was the first study of the creative industrial sector in Italy commissioned by a public institution. This White Paper on creativity in Italy analyses the creative sector based on three main types of cultural and creative industries: material culture, production of content and ICT, and historic and artistic heritage. According to this study, the creative sector in 2004 accounts for 5.7% of the total jobs of the country (1,385,500 creative jobs). Bertacchini and Borrione (2013) is one of the most relevant academic papers focused on the creative industries in Italy. They observed that also in 2001 this sector represented 9% of the total national jobs (1,751,409 creative jobs).

4.3. The location of creative industries in the United Kingdom
The creative sector has been mainly described in the United Kingdom through the analysis of creative industries.
Table 1 highlights that research of the creative industries in the UK quantifies the creative sector between 3.9% and 9.2% of the total creative jobs. These shares are a bit lower among the studies that focus on cultural industries, between 3.1% and 3.8%. The studies that take creative and cultural industries together quantify it between 3.1% and 4%.

The UK Department for Culture, Media and Sport highlighted that over 1.5 million people were employed in creative industries in 2010, representing 5.1% of the total employment (DCMS 2011). The DCMS (2015) stressed that this sector grew until the year 2013, accounting for over 2.6 million people (8.5% of the total national jobs). Similarly, the NESTA quantified in 2001 the creative sector in the UK in 1,887,878 creative jobs, over 7% of the total jobs (Higgs et al. 2008). This research institution quantified the sector in the year 2010 with 2,495,700 creative jobs representing 8.5% of the total workforce. And in 2013 with 2,616,000 of creative jobs representing 8.3% of the total workforce.

4.4. The location of creative industries in Spain

The research on creative industries in Spain by national institutions has been mainly focused on cultural employment. In the year 2000 cultural activities gave employment to 397,600 people, which represented 3.6% of the total employment (Ministerio de Cultura 2005). This sector has increased over the years until 485,300 jobs in 2013, representing 2.8% of the total national employments (Ministerio de Cultura 2014). Among all the studies, cultural industries occupied between 2% and 2.8% of the national jobs.

The main study focusing exclusively on the creative industries in Spain is the one conducted by Boix and Lazzeretti (2012). According to this study, creative industries gave employment to 1,287,000 people in 2007, representing 6.5% of the total national employment. Over the last decade, several studies analysed this sector quantifying it between 3% and 6.5% of the total employment.
4.5. The location of creative industries in France

The main contribution to the study of creative industries by a national institution comes from the Ministère de la Culture. According to the reports conducted in 2005 and 2006 by the Ministère de la Culture, this sector accounted for 4 million of firms, which represented between 2.1% and 4% of the total active people in France.

In a more recent study based on 2006 data, Sánchez-Serra (2014) found that over 1 million workers were employed in creative industries, over 4.5% of the total employment. The EY (2013) also found that 1.2 million people were employed in cultural and creative industries in France in the year 2011, representing 5% of the total national jobs.

4.6. The location of creative industries in Portugal

The research on creative industries in Portugal has been mainly focused on cultural employment. These studies have quantified the creative sector between 1.4% and 2.3% of the cultural employment. Other studies analysed both creative and cultural employment and observed that this sector accounted between 1.8% and 2.6% of the total national employment. For example, according to Mateus et al. (2010), the creative and cultural sector in Portugal represented 127,079 employees in 2006, which accounted for 2.6% of the total national employment. Santos Cruz and Texeira (2012) quantified the creative sector in Portugal in the year 2009 in 215,525 creative workers, which represent 6.9% of the total employment.
### Table 1: List of the more exhaustive studies dealing with the measurement of the creative industries in 5 European countries

<table>
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<tr>
<th>Author (year)</th>
<th>Methodology</th>
<th>Year</th>
<th>France</th>
<th>Italy</th>
<th>Portugal</th>
<th>Spain</th>
<th>UK</th>
<th>EU (5 countries)</th>
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<tbody>
<tr>
<td>IAU (2010)</td>
<td>Employment in creative industries</td>
<td>2000</td>
<td>3.3%</td>
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Table 1. List of the more exhaustive studies dealing with the measurement of the creative industries in 5 European countries (continued)

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<th>Year</th>
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<th>Portugal</th>
<th>Spain</th>
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</table>
Figure 1. Boxplot of the shares of employment in creative industries based on a review of the literature

Note: The boxplot is used here to show the distribution of the shares of employment in cultural and creative industries based on a revision of the literature. The data is split into quartiles (which contain 25% of the distribution) and the body of the boxplot consists here of two blue boxes which represents the second and third quartile (dark blue and light blue respectively). The lines dividing the two groups is the median of the distribution. Finally, the extremes of the figure display the extreme maximum and minimum value of the distribution.
Source: Own computations based on
5. Conclusions
This article has presented a state of the art of the different approaches to the study of the location of creative industries and by so doing it has contributed to filling the gap of the creative industries and the determinants for its concentration in the territory. By reviewing the different location theories proposed in the literature the article sets the ground for the identification of the main drivers of the concentration of creative industries in the territory. Beyond traditional factors of agglomeration such as localisation and urbanisation externalities, the article emphasises the relevance of specific creative forces accounting for the uneven location of creative industries in the territory.

6. Bibliography