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The evolution of 'creative economy' research¹

Luciana Lazzeretti², Francesco Capone³ and Niccolò Innocenti⁴

Abstract

The aim of the present research is to investigate the rise and the evolution of research on the 'creative economy', which focuses on the convergence of four research pillars: contributions on the creative class, creative industries, creative city and cultural industries.

Publications on Creative Economy Research have been collected from the ISI Web of Science database, which includes all the academic works starting from the contribution of DCMS in 1998 till 2013. Through the analysis of nearly 1.000 publications produced in 16 years, the birth and evolution of creative economy research is investigated. Besides, the second part of the paper focuses on a relational analysis developed through the use of Social Network Analysis, investigating co-citations of *disseminators* and *founders* of creative economy research.

Results underline that the Creative economy may be considered a successful multidisciplinary paradigm born and developed in English speaking, North American and European countries, which has contributed to the rise of a new economic sector: the cultural and creative industries.

Keywords: creative economy, biblio-metric analysis, creative class, creative industries, cultural industries, creative city.

JEL: Z1

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1. Creative economy: an introduction

The creative economy field is strongly related to the themes of economic development and innovation (Lazzeretti, 2013), and particularly to the study of creative cities (Jones et al., 2015), which dates back at least to the contribution of Allen Scott (1997). Originally, this strong interest in the cultural economy of cities stemmed from an increasing number of works on creativity, urban development and city planning, and on creative cities themselves (Landry and Bianchini, 1995; Landry, 2000; Evans, 2009).

This phase was followed by the highly influential work of the well-known scholar Richard Florida (2002), which discusses the impact of human capital and the 'creative class' on urban and regional development. According to Florida, cities need to attract the creative class in order to ensure successful development. Florida puts emphasis on the link between creative class and cities, but the term 'creative economy' (CE) was popularized in 2001 thanks to the contribution of Howkins (2001), who investigated 15 industries ranging from the arts to science and technology. It is generally recognised that the hype related to the creative economy comes from an intersection of multiple research themes on creativity, economic development and competitiveness, which have originated in the cultural industries domain (Hesmondhalgh, 2002; Flew and Cunningham, 2010).

Several research studies have been carried out to investigate the relationship between innovation and territory (Santagata, 2002; Mommas, 2004; Cooke and Lazzeretti, 2008; Chapain and Comunian, 2010; O'Connor 2010; Branzanti, 2015). These studies mainly focus on the creative class, creative industries and clusters/districts, and involve many different disciplines, such as economic geography, regional sciences and local development as well as management studies. Among them, the approach of Florida initially achieved wider recognition and visibility. Florida's work was first developed in North America and Northern Europe (Florida and Tinagli, 2004), but thereafter spread to other European countries and even to Asia, achieving global diffusion (Mellander et al., 2013).

Nevertheless, in order to trace the origins of this phenomenon, it is relevant to start the analysis with the studies on cultural industries that were propagated worldwide by UNESCO in the 1980s, within a wide range of fields, such as music, art, publishing and movies, etc. Cultural industries refer to forms of cultural production and consumption that have at their core a symbolic or expressive element. This definition mainly refers

to the traditional Cultural Economics (Towse, 2003; Throsby, 2001). However, the creative economy has been subjected to a particular shift from cultural to creative industries (CCIs). The research of the Cultural Department in Australia in the 1994 (Cunnigham, 2002), the influential contribution of the Department for Culture, Media and Sport of the United Kingdom at the end of the decade (DCMS, 2001) and new researches (2013) have contributed to this shift. More recently, this approach has spread even to undeveloped countries (Yusuf and Nabeshima, 2005; Barrowclough and Kozul-Wright, 2008; Kong and O'Connor, 2009) through the emergence of new differentiated approaches specifically developed for countries of the global south (UNESCO, 2013).

A third approach deals with the intersection between themes of cultural and creative industries and local and regional development, which could be mainly attributed to the thriving contributions on cultural and creative clusters/districts (Santagata, 2002; Mommas 2004; Cooke and Lazzeretti, 2008), creative regions (Anderson 1985; Mc Cann, 2007; Cooke and Schwartz, 2007) and creative networks (Belussi and Staber, 2011), and have been studied mainly in European countries.

The Creative Economy Research (CER) has become a multidisciplinary research field with a strong theoretical and empirical basis and an extensive literature has been produced from many different perspectives (O'Connor 2010; Chapain and Comunian 2010; Branzanti, 2015; Berg and Hassink, 2014). It is now well recognized that the creative economy is a successful paradigm, which has made an important contribution to the studies on economic development and innovation (Bakhshi et al. 2008; Pratt and Jeffcut 2009), although recently some criticism has been raised.

New paradigms are emerging around the creative economy such as the Green Economy (Bina, 2013), the resilience approach (Zolli and Healy, 2013) and the smart specialization (Mc Cann and Ortega-Argilés, 2013), attracting the interest of citizens, policymakers and enterprises. The debate is open between light and shadow, and there are questions about the existence of a "dark side of creativity", which has not yet been deeply investigated (Lazzeretti, 2012).

Following Glaeser (2005) in regional studies, Pratt (2008) criticizes the role that the notion of the creative class plays as a causal mechanism in urban regeneration. More recently, Pratt and Hutton (2013) discuss the creative sector after the financial crisis and how it has subverted the debates. Scott (2014) argues that the majority of existing research on creative cities tends to offer a flawed representation of urban dynamics and leads in many instances to essentially regressive policy advocacies. He

states that the Cognitive-cultural capitalism is a more robust theoretical framework through which contemporary urbanization processes can be described. Within management studies, Cohendet et al. (2010) discuss the anatomy of the creative city in terms of underground, middle ground and upper-down. The famous sociologist Zukin, in her seminal work on the "naked city" (2010), underlines both the risks of loss of authenticity of the cities and of the experience economy. Finally, Campbell (2014) defines the creative economy as an "imaginary success", through the case study of Liverpool as a European capital city. The discussion is wide-ranging and broadly differentiated from country to country. Through the only observation of the evolution of the CCIs in Europe and worldwide, it is difficult to identify the exact phase in which they are, namely development, maturity, or also the beginning of a possible decline. Perspectives can vary according to the different areas and periods, wherein the paradigm has spread, but at least in Europe the defining issue is surely worth addressing, due to its high priority (Power and Nielsen, 2010).

In North America and Europe the strategic role of the "Creative Economy" has slowed down after the economic and financial crisis of the 2008 and the criticisms have become more detailed and deepened. Besides, in emerging markets such as Asia, the interest in the creative economy is growing and cultural and creative industries are emerging also through the promotion of new museums designed by Archistar (Hong et al., 2014; De beukelaer, 2014).

However, this rich and promising field has not yet been sufficiently organized, as the existing studies, in their richness and variety, offer a seemingly fragmented framework of knowledge that is not always shared (Chuluunbaatar et al., 2013). With this study, we aim to fill this gap through the use of a bibliometric analysis. We will provide a comprehensive picture to understand the main areas of knowledge (pillars) that have been produced and shared by different authors in the field of creative economy research.

The present contribution has three objectives. Our first objective is to reconstruct the evolution of academic research on creative economy and local economic development. The second aim is to compare its four main research themes, which are known as the *main pillars*: creative cities, creative class, cultural industries and creative industries. The third aim is to investigate the community of actors/knowledge through a co-citations analysis developed through the use of the Social Network Analysis (SNA).

To this purpose, we investigated the evolution of the Creative Economy Research (CER) over a period of 16 years (1998-2013). This has allowed us to identify the most

interesting themes and the most relevant schools, authors and trends. This longitudinal study is based on 941 publications collected from the ISI Web of Science database of publications, including academic works produced in the period from 1998 (the year of publication for the *Creative Industries Mapping Document* - DCMS) to 2013.

We were then able to build a network of “knowledge” that includes more than 2000 authors.

The work is structured as follows. After this introduction, section 2 presents the research design and the methodology that we used to carry out the study. Section 3 presents the analysis and the evolution of the four pillars of the CER from 1998 till 2013, showing also the most important journals. Section 4 analyses the main roles of disseminators of the CER and founders with a Social Network Analysis that is performed on the network of authors. Some final remarks conclude the paper.

2. Objectives and methodology: the bibliometric approach and SNA

The work aims to analyse the evolution of the CER over time with particular reference to its main themes: creative class, creative city, cultural and creative industries, cultural and creative cluster/district (region/network), also by analysing the role played by the authors (founders and disseminators) in the development and diffusion of this important paradigm. The analysis allowed us to show the global expansion of the concept, in different countries and in different scientific communities.

To do so we followed a bibliometric approach based on the social network analysis (Wasserman and Faust, 1994), which has recently emerged thanks to the availability of important databases such as ISI Web of Science or Scopus.

This approach, which has now become well known, has not yet been applied to creative research as a whole. Among the more recent studies performed using similar methods on similar topics, we could cite those on the cluster research (Lazzeretti et al. 2014; Cruz and Teixeira, 2010), those on tourism literature (Ye et al., 2013; Au et al., 2012; Benckedorff and Zehrer, 2013; Capone, 2016) and finally those on service innovation (Zhu and Guan, 2013).

Concerning the specific sector of the CER, there are still few works. An example derives from two sectorial studies conducted through the SNA, one on the behaviour of Wikipedia Editors (Iba et al., 2010), and one on British classic composers by Mc Andrew (2015).

The only more general study is the work of Chuluunbaatar et al. (2013), which analyses the academic research on cultural and creative industries from the 1970s to 2013 and studies the most cited articles, authors and journals, but it does not include a co-citation analysis.

Besides, in this paper, we aim to contribute to filling the existing knowledge gaps, providing a wider framework of the evolution of the CER starting from the four pillars of creative research and also analysing authors, articles and Journals, through a co-citations analysis, and building up a map of flows of knowledge of the CER founders and disseminators.

The final goal was to try to identify a first map of the authors/concepts/articles shared by the different communities, analysed also in terms of areas of origin and of discipline. The analysis contributes to understanding the story, between lights and shadows, of one of the most interesting paradigms of this millennium.

Our data come from the ISI-Thomson Reuters Web of Science database. The choice of the ISI Web of Science as data source is motivated by its widespread international use for rating the research output of scientists from every discipline (Boyack and Klavans, 2010; Lazzeretti et al., 2014). This database presents some limitations, however; it collects only contributions published in journals with impact factors, and omits most of the contributions published in books or in languages other than English.⁵ To improve the robustness and accuracy of our data and to avoid mistakes and errors, our results have also been compared and integrated with the results of a similar search of the SCOPUS database.

The data of publications of the CER were collected from ISI database from 1998. Using the search option in the Web of Science, all publications whose topic contains the following terms were collected: 'creative class', 'creative industry', 'creative cluster', 'creative city', 'creativity economy', 'creative networks', 'cultural industry', 'cultural cluster', 'cultural district', 'cultural network', 'creativity' and 'region', 'cluster', 'district' and 'city' (both singular and plural terms).

In order to focus on the relationship between creative economy research and its contribution to local development, we intentionally excluded all contributions lacking a territorial dimension. This included research from the fields of business, cultural studies and cultural economics, as well as contributions on individual creativity,

⁵ The ISI database does not consider journals without impact factors, books not included in the ISI Book Citation Index or research reports (UNESCO, UNCTAD, NESTA, WIPO, etc.).

mainly from the fields of psychology, sociology and organisation studies, and those on creativity and innovation.

We began by selecting all publications on subjects related to the social sciences⁶. After performing a keyword analysis, we collected approximately 1,650 contributions dated from 1998 to 2013. In our first approximation, the same article could be found by more than one search object.⁷ We proceeded to skim the database by reading the abstracts of the articles and excluding duplicate results or those less relevant to CER topics. After this procedure, we obtained our final database containing 941 publications from 1998 to 2013 and comprising more than 2,000 authors.

Then we proceed with the analysis of the most important works defined as 'disseminators' of the CER and then we analysed their backward citations, identifying the related 'founders'. This allowed us, by downloading from the ISI database the backward citations of the most-cited articles, to explore the theoretical basis upon which the CER has been constructed.

This was helpful also to avoid the limit to consider only articles, published in ISI Journals (with Impact Factor), and to expand the database to books, research reports, etc.

3. The Creative Economy Research

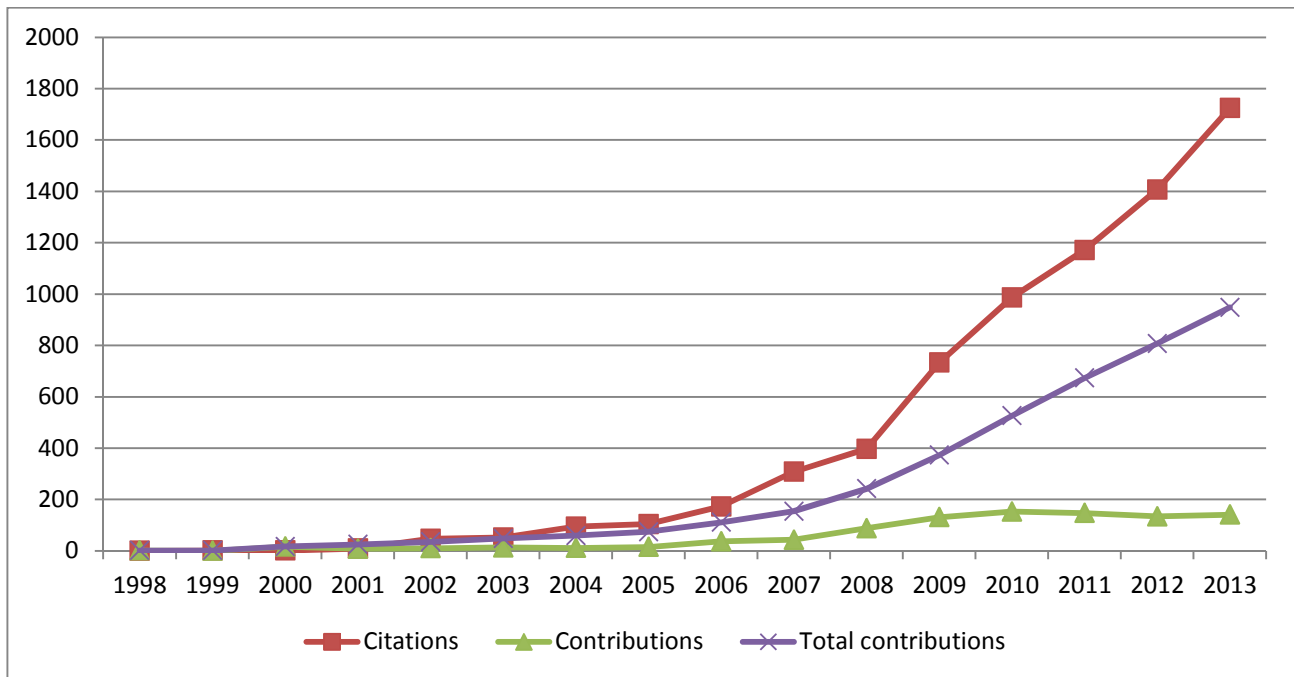
3.1. The evolution of creative economy research

Figure 1 presents the evolution of publications and citations of the CER from 1998 to 2013. As can be seen from the figure, we start with very few contributions in the nineties; in fact the CER is a phenomenon that has appeared in ISI journals since the early 2000s and has showed huge growth from 2006/2007 onwards, with more than 60 contributions per year and with more than 400 citations yearly. As it has already been highlighted in the literature, there is a growing development of the subject with a real hype in the international literature.

⁶ Using the search option at Web of Science, all publications whose topic contained the following terms were collected: 'creative class', 'creative industry', 'creative cluster', 'creative city', 'creativity economy', 'creative networks', 'cultural industry', 'cultural cluster', 'cultural district', 'cultural network', 'creativity' and 'region', 'cluster', 'district' and 'city' (both singular and plural terms).

⁷ For example, we were able to find articles that studied both the creative class and creative cities and were located in two selected groups.

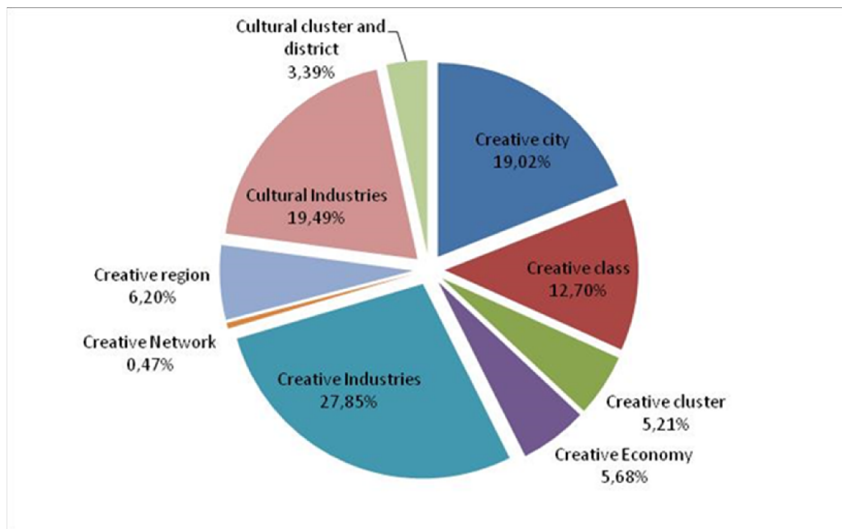
Figure 1: Evolution of CER: citations and contributions (1998-2013)



Source: our elaborations on ISI web.

Next, we confirmed the relevance of the main pillars. Figure 2 presents the distribution of CER per topic, and reveals that the four pillars included nearly 80% of all contributions. The most important topic is creative industries, which represents approximately 28% of the contributions analysed, followed by the themes of cultural industry and creative cities, both registering around 19%. The creative class stands at 12%. Other topics include: creative clusters, cultural clusters and districts, and creative regions. Creative clusters recorded only 5% and cultural clusters and districts did not reach 4%, while creative regions represented slightly over 6%. The topics of creative and cultural networks and cultural and creative industry were not significant. These findings underscore that the creative class is not the subject with the highest interest over time, despite the initial emphasis given to the relevant contributions from Florida. On the contrary, the themes of creative and cultural industries received the most publications (47%). The creative city had more results than the creative class but did not constitute a homogeneous field, as it was mainly evoked in the contributions of a few specialist areas, such as urban planning, urban economics and similar disciplines. Issues related to local development, such as cultural or creative districts and clusters, or creative regions, remained marginal. Clusters and districts stood together with less than 10% of contributions.

Figure 2: Distributions of ISI publications on CER per topic.



Source: our elaborations on ISI Web.

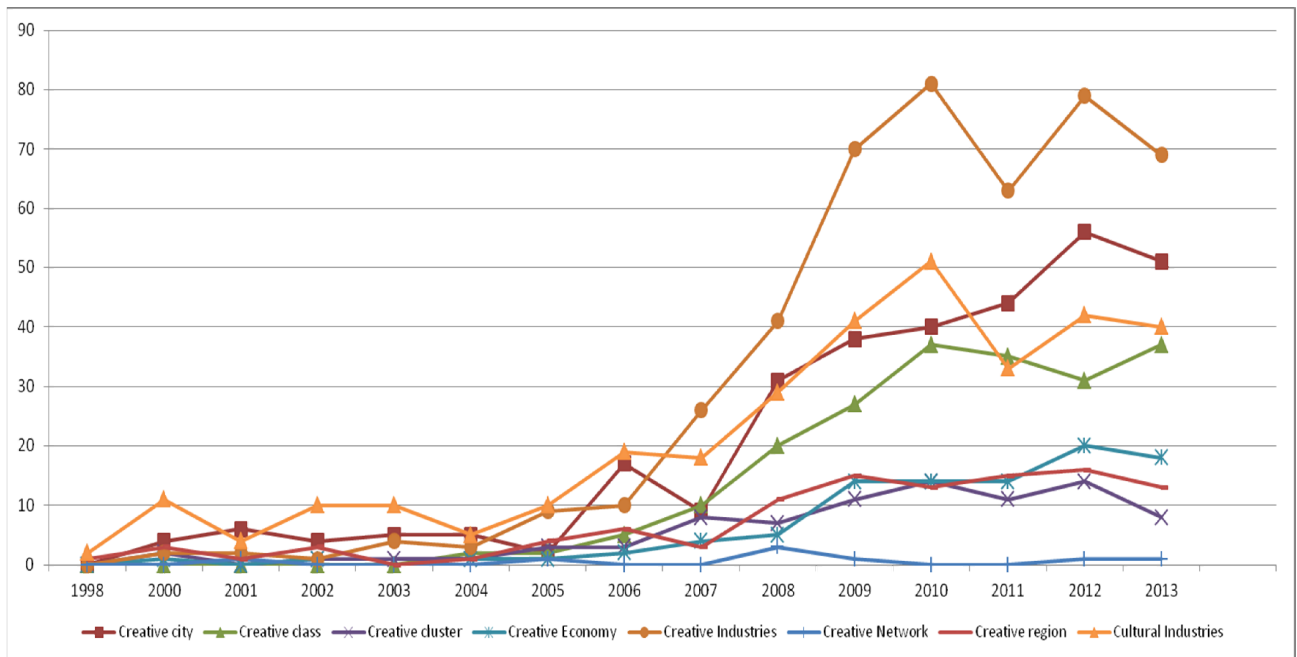
Finally we underlined the evolutionary trends of the four main pillars. Figure 3 illustrates the evolution of the publications over time. The themes related to cultural industries were the most important until 2005-2006, due to the traditional contribution of culture economics, with around 40 relevant contributions per year since 2009.

The research on the creative class grew during the initial phase, but only experienced clear-cut development in the second half of the 2000s, and has already shown a decrease in the last 2-3 years. Creative industries have been instead the main theme from 2007 onwards; beginning in 2009, there have been more than 70 contributions per year on this subject.

The topic of creative cities is an important developing theme that did not register a decline like the one related to the creative class. Among the less relevant topics, only the creative region and creative clusters showed substantial development, but reached only 10-20 contributions per year from 2009 to 2013.

The contributions on the various topics of analysis involve some repetition, as a single contribution can have multiple objects of research. In this context, these contributions present a high degree of transversality: 60% were related to only one research topic, while 24% comprised two topics, and the remaining 16% had between three and five areas of research.

Figure 3: The evolution of CER per topic (1998-2013).



Source: our elaborations on ISI Web.

3.2. The most publishing journals

Table 1 presents the journals that are mainly involved in CER and local economic development. The most important is *Urban Studies*, demonstrating that urban economics and urban planning constitute a field that welcomes contributions on creative cities and the creative class. This is further reflected also in *Journal of Urban Affairs*, etc. The second most relevant publication is the *International Journal of Cultural Policy*, which records more than 30 articles, thus confirming how the CER is well inserted in the traditional research on cultural studies and cultural economics.

Another group of journals comprises the regional sciences, with contributions on regional development and competitiveness, including *Regional Studies*, *Cambridge Journal of Regions*, etc. One of the main strands concerns economic geography, with periodicals like *JEG*, *Geoforum*, *Geografiska Annaler*, or journals dealing with issues between geography and planning, such as *European Planning Studies* or *Environmental and Planning*. In addition, we found journals of management, innovation and local development, such as *Industry and Innovation*, a fact that further underlines the multidisciplinary interest surrounding these issues. As a last remark,

we also noted the presence of Asian journals that publish both in Chinese and English.⁸

Table 1: Distribution of CER by most ISI publishing journals.

Journal	Contributions	% Contrib.	Citations	% Citations
URBAN STUDIES	38	4%	889	12%
INTERNATIONAL JOURNAL OF CULTURAL POLICY	36	4%	140	2%
ENVIRONMENT AND PLANNING A	35	4%	462	6%
CITIES	29	3%	166	2%
EUROPEAN PLANNING STUDIES	23	2%	138	2%
JOURNAL OF ECONOMIC GEOGRAPHY	19	2%	485	7%
REGIONAL STUDIES	18	2%	215	3%
INDUSTRY AND INNOVATION	17	2%	130	2%
INNOVATION-MANAGEMENT POLICY & PRACTICE	13	1%	68	1%
JOURNAL OF URBAN AFFAIRS	12	1%	232	3%
GEOGRAFISKA ANNALER SERIES B-HUMAN GEOGRAPHY	12	1%	195	3%
INTERNATIONAL JOURNAL OF CULTURAL STUDIES	10	1%	38	1%
GEOFORUM	10	1%	381	5%
CAMBRIDGE JOURNAL OF REGIONS ECONOMY AND SOCIETY	10	1%	17	0%
中国工业经济. China Industrial Economy	9	1%	17	0%
SERVICE INDUSTRIES JOURNAL	9	1%	33	0%
ECONOMIC DEVELOPMENT QUARTERLY	9	1%	148	2%
AUSTRALIAN GEOGRAPHER	9	1%	84	1%
中国软科学. China Soft Science	8	1%	10	0%
GROWTH AND CHANGE	8	1%	78	1%
EUROPEAN URBAN AND REGIONAL STUDIES	8	1%	34	0%
ECONOMIC GEOGRAPHY	7	1%	198	3%

Source: our elaborations on ISI Web.

4. Founders and disseminators of the CER

This paragraph focuses on the analysis of CER authors with a co-citations relational approach using Social Network Analysis (Wasserman and Faust, 1994). The first section investigates 'disseminators' of CER, defined as the most important contributions on the basis of the received citations. Section 4.2 investigates 'disseminators' backward citations in order to identify 'founders' of CER, as the most cited articles by disseminators.

⁸ In the period under study we found 76 contributions published in 35 Asian journals.

4.1 The disseminators of CER

In order to identify some of the main characteristics of the academic community that deals with the creative economy, we selected the most cited articles. These works can be considered the first proxy of shared knowledge of the scientific community. Through our analysis, we identified the main authors (called *disseminators*), who contributed more than others to diffuse the paradigm of the creative economy across the different disciplines.

In accordance with other works on bibliometric analysis (Lazzeretti et al., 2014), we have selected the most relevant contributions, i.e. those that have received at least 4 citations on average per year. The resulting 46 contributions are considered *disseminators* of CER.⁹

These 46 contributions received 3,600 citations, almost 50% of the total citations (7,300), thus they can be defined as the core of CER. This core emerges as a closed and coherent network of very few authors. Considering the total database, 10% of authors received 70% of total citations. In fact, around 500 contributions received one or no citations at all. It is therefore interesting to investigate this core group, recognised as the most relevant authors by fellow academics, in order to study the identity of the creative economy community.

Table 2 presents the 25 top cited disseminators. As expected, the most cited works are on creative class, including Peck (2005), Florida (2002), Markusen (2006) and Florida et al. (2008). Creative cities also register relevant contributions, such as those by Scott (2006) and Hall (2000). Among them there are several contributions from Pratt (2000) and Mommaas (2004) that also discuss the concept of cultural clusters, as does Gupta et al. (2002), or the relevance of territory (Drake, 2003). The intersection between the themes of local development and those of cultural and creative industries is also relevant and can be found in Scott (2006), Asheim et al. (2007) and Storper and Scott (2009). Pratt is also ranked at other positions in the list (Gills and Pratt, 2008; Pratt, 2008).

⁹ Obviously, taking into account only the most important contributions in terms of citations has its limits. The first and foremost is that older articles received more citations, so that the most important contributions would always be the most dated. We have tried to overcome this limit by analyzing per year rather than by absolute number of citations.

Table 2: The 25 top cited disseminators of CER.

#	Contributions	Title	Citations	Average yearly
1.	Peck, J 2005	Struggling with the creative class	393	49.12
2.	Florida, R 2002	The economic geography of talent	210	16.15
3.	Scott, AJ 2006	Creative cities: Conceptual issues and policy questions	170	18.89
4.	Markusen, A 2006	Urban development and the politics of a creative class: evidence from a study of artists	160	17.78
5.	Hall, P 2000	Creative cities and economic development	129	8.6
6.	Mommaas, H 2004	Cultural clusters and the post-industrial city: Towards the remapping of urban cultural policy	129	11.73
7.	Ley, D 2003	Artists, aestheticisation and the field of gentrification	128	10.67
8.	Florida, R; Mellander, C; Stolarick, K 2008	Inside the black box of regional development - human capital, the creative class and tolerance	109	15.57
9.	Evans, G 2003	Hard-branding the cultural city - From prado to prada	107	10.7
10.	Asheim, B; Coenen, L; Vang, J 2007	Face-to-face, buzz, and knowledge bases: sociospatial implications for learning, innovation, and innovation policy	103	12.88
11.	Storper, M; Scott, AJ. 2009	Rethinking human capital, creativity and urban growth	97	16.17
12.	Pratt, AC 2000	New media, the new economy and new spaces	95	6.33
13.	Markusen, A; Schrock, G 2006	The artistic dividend: Urban artistic specialisation and economic development implications	93	10.33
14.	Lampel, J; Lant, T; Shamsie, J 2000	Balancing act: Learning from organizing practices in cultural industries	85	5.67
15.	McGranahan, D; Wojan, T 2007	Recasting the creative class to examine growth processes in rural and urban counties	84	10.5
16.	Storper, M ; Manville, M 2006	Behaviour, preferences and cities: Urban theory and urban resurgence	80	8.89
17.	Gills, R; Pratt. A 2008	Precarity and Cultural Work In the Social Factory? Immaterial Labour, Precariousness and Cultural Work	78	15.6
18.	Gupta, V; Hanges, PJ; Dorfman, P2002	Cultural clusters: methodology and findings	75	5.77
19.	Drake, G 2003	'This place gives me space': place and creativity in the creative industries	74	6.17
20.	Pratt, Andy C.2008	Creative cities: The cultural industries and the creative class	70	10
21.	Banks, M; Lovatt, A; O'Connor, J; Raffo, C 2000	Risk and trust in the cultural industries	70	4.67
22.	Evans, G 2009	Creative Cities, Creative Spaces and Urban Policy	68	17
23.	Scott, AJ 2001	Capitalism, cities, and the production of symbolic forms	67	4.79
24.	Bathelt, H; Boggs, JS 2003	Toward a reconceptualization of regional development paths: Is Leipzig's media cluster a continuation of or a rupture with the past?	61	5.08
25.	Prentice, R; Andersen, V 2003	Festival as creative destination	55	4.58

Source: our elaboration.

It is also interesting to investigate the nationalities of the 58 authors who published the 46 contributions.¹⁰ Table 3 presents the distribution of the 46 disseminators divided by country of origin. The Anglo-Saxon approach appears dominant, with the US and UK both recording 31% of the total authors. Australia accounts for 10%, while Sweden and Germany each register a percentage of 5%, highlighting the relevance of Northern Europe. Moreover, the themes are geographically concentrated: creative class contributions have been developed by authors localised in the US, while creative industry contributions come from British and Australian authors. Northern Europe is concerned with both themes. South Europe is poorly represented, which confirms the

¹⁰ Of course, a contribution can be co-authored by more than one author.

prevalence of English-speaking countries (US, UK, Australia, Canada) or those where English is a second language (Scandinavian countries and Germany).

If we analyse the scientific domains of these scholars, we find that authors are mostly active in the following fields: regional and urban studies, cultural economics, cultural studies and economic geography, but also management and tourism. This confirms the multidisciplinary of CER and the heterogeneity of interests raised by the creative economy.

Table 3: Nationality of the authors of the 46 contributions.

Country	Authors	Percentage
UK	18	31
USA	18	31
Australia	6	10
Sweden	5	9
Canada	3	5
Netherlands	3	5
Germany	2	3
Singapore	1	2
Denmark	1	2
New Zealand	1	2
Total	58	100

Source: our elaboration.

4.2. Analysis of founders and disseminators of CER

In this section, starting from the disseminators of CER, we explore the theoretical ground upon which they are based, by downloading from the ISI database the backward citations of the 46 most-cited articles.

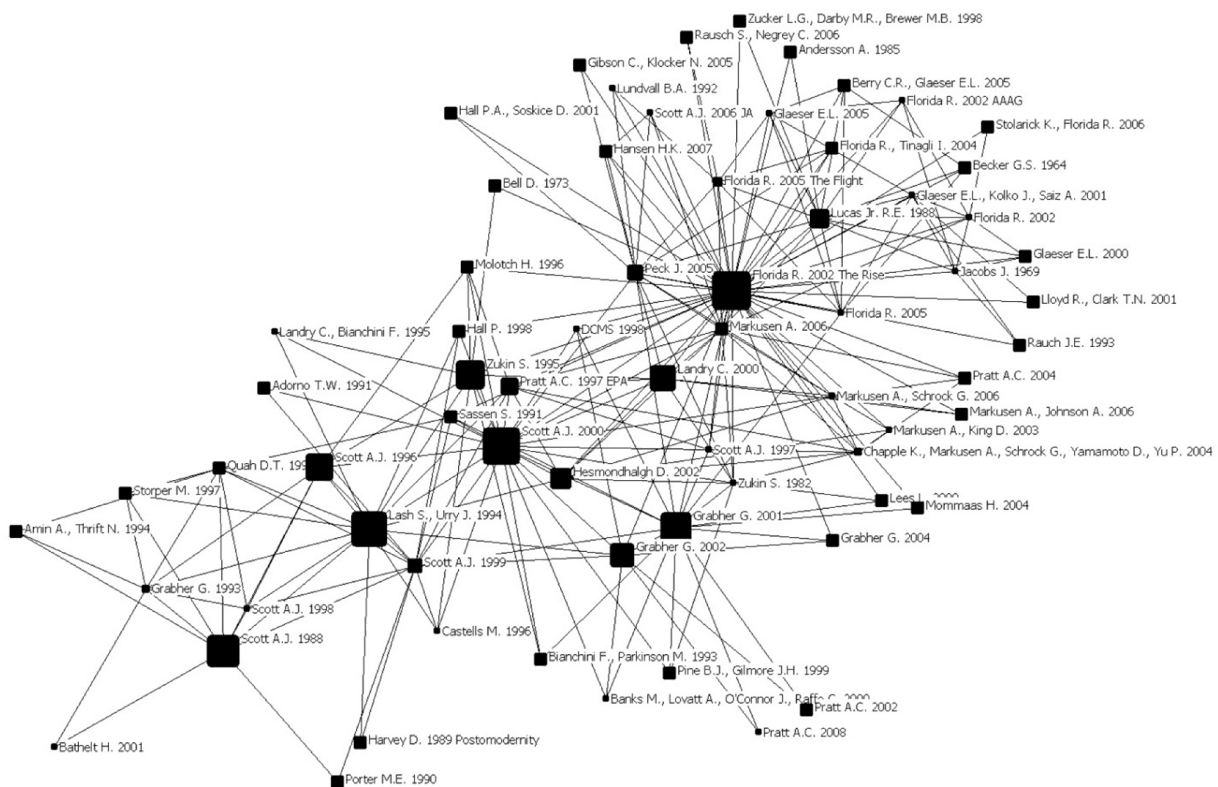
We constructed a database of 1694 references that were cited by disseminators. As other contributions (Lazzeretti et al., 2014), we use the term ‘founders’ of the CER.

Figure 4 shows the network of the founders of CER, the nodes represent the publications, while the lines indicate that two publications have been co-cited jointly by the disseminators. The graph with 1694 nodes has been reduced to 98, for those contributions that have at least 3 co-citations in common.

Figure 4 presents only the founders with at least 3 co-citations, while the size of the nodes is the importance of the contribution defined with the total number of citations received. At the centre, it is represented the biggest node of Florida (2002) on “The

rise of creative class”, which is one of the most cited contributions. Then we can see the contributions of Landry (2000), Landry and Bianchini, (1995) on creative cities, the contributions on cultural industries such as Pratt (1997), Scott (2000), Hesmondalgh (2002) and Zukin (1995) about “The culture of cities”. Lash and Urry (1994) receive many citations on “Economies of signs and space”, while Scott can be found on more than one topic (1998, 1999, 1996, 2000), etc.

Figure 4: Founders of CER with a least 3 co-citations.



Source: our elaborations.

In order to classify and facilitate the graphical presentation of the analysed publications, we decided to perform a reclassification of founders and disseminators using the abstract and the main studies’ theme. This also allows us to investigate which are the most studied topics. The main themes identified are presented in Table 4, together with the distribution of the founders and disseminators. These cover the main pillars already presented in the first part of the paper and some new issues, which mainly concern the founders.

Table 4: Distributions of disseminators and founders per main themes;

Main themes	No.	%
Creative class	30	15%
Cultural industries	43	21%
Creative industries	30	15%
Creative city	27	13%
City	23	11%
Human capital	11	5%
Society	7	3%
Creativity	13	6%
Regions/Dev/Competitiveness	18	9%
Total	202	100%

Source: our elaborations.

With the help of Social Network Analysis, we are able to graphically represent the links among contributions and individuated main themes.

A contribution could be attributed to several themes of study, this is not a problem using the network analysis, it will only correspond to multiple lines connecting a node (contribution) to a theme.

Figure 5 includes disseminators and founders that received at least 3 co-citation per year. It includes the 83 most cited disseminators, denoted by white squares, and the 98 founders, represented by black triangles, while the round nodes represent the main identified themes. A line connects publications to their themes. We think this will facilitate the reading of the matrix founders-disseminators.

Firstly, we can watch to the networks mainly composed by the founders presented in Figure 5. (and also shown in Fig. 4). A first group of isolated founders is on the themes of change at the level of society-economy, here the CER is used to identify the transition to a new way of looking at society, economy and economic development. Here we find the contributions of Lash and Urry (1994) on 'Economies of signs and space', Castells (1996) on the 'Network society', Pine and Gimore (1999) on 'The experience economy' and Harvey (1989) on 'Postmodernity' or Thrift's work on 'Knowing Capitalism' (2005). These contributions are mainly books and date before the development of the CER.

A second group of founders results to be focused on studies of city and urban development. Here are included the famous contribution of Jacobs (1961; 1969), the works of Zukin (1982, 1991), Sassen (1991) on the 'Global city', Glaeser et al. (1998;

2000; 2001) on 'Dying city' and 'Growth in cities', Amin and Thrift (2002) on 'Cities: Reimagining the Urban'.

Even these founders are all previous to the CER that was inspired by those contributions for analysis at the urban level, the creative cities and the role of cities in the urban and regional development.

A third group relates to the role of human capital, revitalized mainly by the contribution of Florida and the research on the creative class. Here we find the works before the "creative class" on human capital, and in particular Becker (1964) on 'Human Capital' and education, Rauch (1993) and Thompson and Thompson (1985) on concentrations of human capitals and development.

Another network of founders is the regional development and competitiveness on which the CER was used to include the issue of regional and local development and the issues of competitiveness. Here there are the contributions of Porter (1990), Marshall (1919), Lucas (1988) 'On the mechanics of economic development', Saxenian (1994) 'Silicon Valley and Route 128', Storper and Scott (1995) 'The wealth of regions', Storper (1997) 'The regional world' and also Lundvall (1992) about National Innovations Systems, etc.

Figure 5 shows also the four pillars that we have already discussed and which are also based on the disseminators: cultural industries, creative industries, creative city and creative class.

In the group on the creative class we can see the contributions of Florida (2002) on 'The rise' and 'The flight' of creative class and the works on Europe in the creative age (Florida and Tinagli, 2004), the known contribution of Peck (2005) 'Struggling with the creative class' and also the critics as Glaeser (2005; 2004). There are also the works about the creative class in Europe as Boschma and Fritsch (2009), Clifton (2008), Hansen (2007), Asheim and Hansen (2009) or on firm formation and development (Lee et al., 2004, Stolarick et al., 2008).

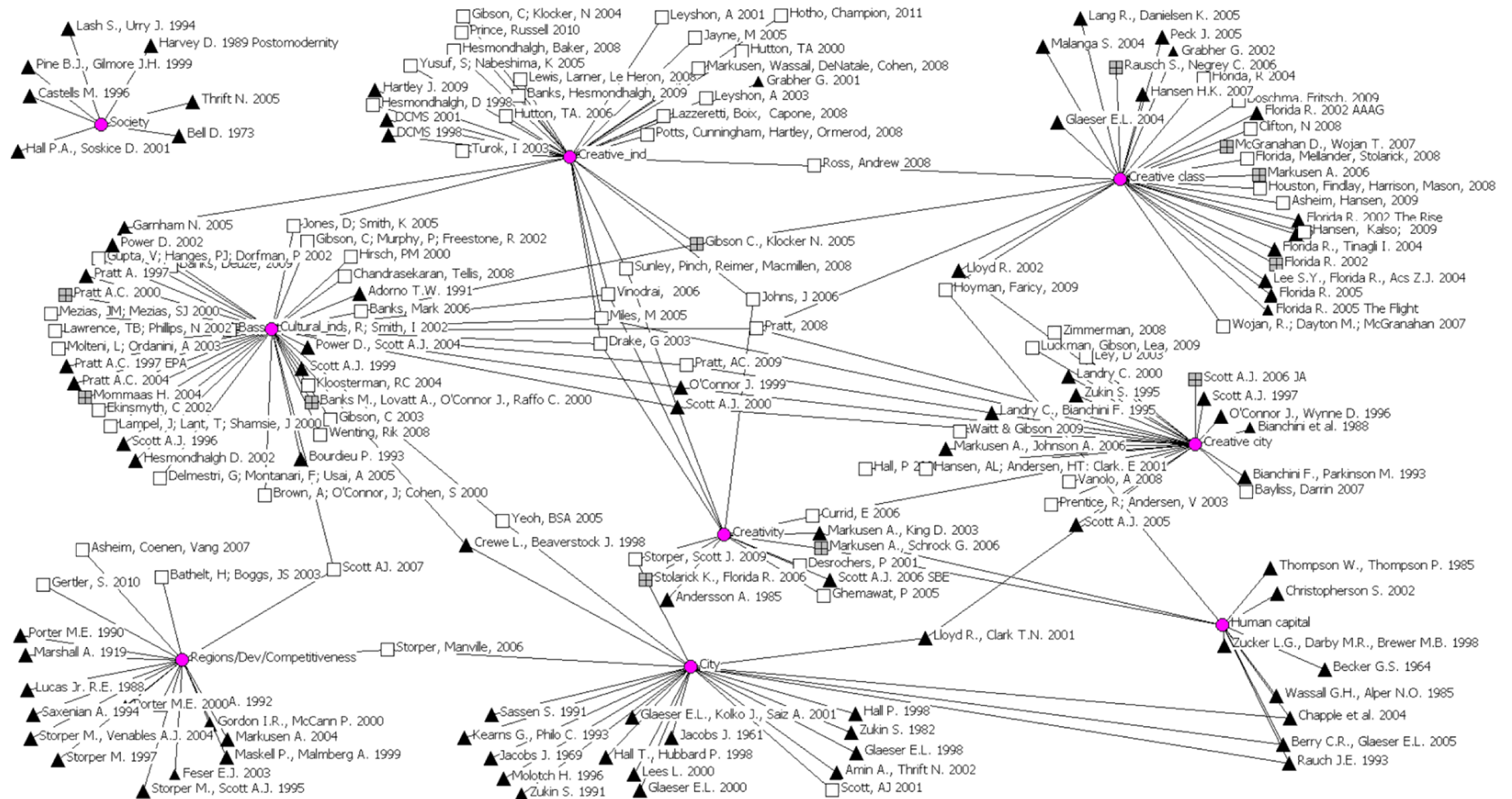
At the centre of the figure there are the three remaining pillars that have also many interconnections between them. In the creative city there are the founders Landry (2000), Scott (1997) on 'cultural economy of cities' and Scott (2000; 2005), Zukin (1995), Landry and Bianchini (1995) Bianchini and Parkinson, (1993), etc. While the disseminators are the more recent works of Hall (2000) on 'creative cities and economic development', Ley (2003) on artists and gentrifications processes, Pratt (2008) on creative cities and cultural industries.

In the group of cultural industries we find mainly the disseminators with authors coming from Cultural Economics studies. Here the contributions include works on cultural industries as Mommaas (2004), Hesmondalgh (2002), Hirsch (2000), O'Connor, (1999), Power (2002), Power and Scott (2004); Pratt (1997; 2000; 2004; 2008) and Scott (1996, 1999; 2000; 2007). And two interesting founders: Bordieu (1993) about 'field of cultural production' and Adorno (1991) on 'The cultural industry'. A small but interesting part of these works is related to the study of the cultural cluster as Gupta et al., (2002); Mommas, (2004), Basset et al., (2002), etc.

The last group is the one of creative industries. Here there are obviously the institutional works of the DCMS (1998; 2001) and of Markusen et al., (2008) about the definition of creative sector or Garnham's work (2005) 'from cultural to creative industries'. And we find also the works of Potts, Cunningham and Hartley (2010; 2009) about the Australia, Jones and Smith, (2005) New Zealand, or Yusuf and Nabeshima (2005) about creative industries in East Asia, etc. Another group of contributions on clusters of creative industries as Lazzeretti et al. (2008), Turok (2003), Hutton (2000; 2006) about the city and the spatial configuration of the creative industries.

These are the main contributions and the main schools that emerge from our bibliometric analysis that allowed us to highlight the main founders and disseminators of the CER and the main areas of study that are most cited in the literature.

Figure 5: Founders and disseminators of Creative Economy Research (with at least 3 co-citations).



Source: our elaborations. **Legend:** Disseminators: White squares; Founders: Black triangles; Crossed box: both. Main themes: purple circles.

5. Conclusions

The aim of this work was to show the evolution along time of the CER, and the interactions between its main different pillars, but also to contribute to filling the gap of the fragmentation of the literature on creative economy in order to understand how different disciplines may be very close to each other by using this perspective.

We developed a bibliometric analysis and performed a co-citations study by using the SNA on over 1.000 articles on the CER along a period of more than a decade. Our results underline how the creative economy research is a really successful and multidisciplinary paradigm born in English speaking countries (North American and European countries) and developed even to a global level. This strand of research has contributed to the rise of a new research field sector: the cultural and creative industries.

The results so far shown firstly define that this field of research is still in a development phase with a huge amount of publications per year since the 2009 and that the attention is also growing, if the CER is analysed as a whole. Nonetheless, if we focus on specific fields, some of them have been declining whereas others have been rising in the last years.

Concerning the second part of the work, the one related to the analysis of flows of knowledge, interactions and theoretical origins of the CER, we analysed more than 180 contributions that were co-cited at least 3 times in order to show only those works that really give a strong contribution to the field. This analysis showed how those fields that have been used as theoretical framework to build up the CER concept, (such the changes in main themes as society, city and human capital). Others, as the regions/development/competitiveness and the creative class have been used both as theoretical basis for the CER and also as a field of development and discussion.

Regarding the interactions among the four pillars, we find that all of them are connected each other's, finding that founders of the CER are in all of those pillars even if some of them, such as Cultural industries and creative class, contribute more than others to the foundation of this field. We saw also that journals, publishing papers on those topics, come from a wide range of disciplines giving further idea of the openness of this field.

Additional work should be dedicated to further investigate the main authors in order to better understand the interactions between the four pillars of the CER, and also to study the direction of its development in terms of geographical areas in the world.

To this day, we do not know how the CER is likely to change in the future and if the strand of research will still be in a development or in a decline phase. However, notwithstanding the limits of the research, this work proposes an interesting analysis of the creative economy research adding new knowledge to this evolving research field.

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