ARTIGO

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ECOSSISTEMAS DE INOVAÇÃO E ECONOMIA CRIATIVA

uma revisão bibliométrica de uma relação em evolução

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Resumo

Este estudo visa determinar se existe uma relação positiva entre a economia criativa e os ecossistemas de inovação, analisando a sua interligação na literatura internacional. A pesquisa foi realizada por meio de levantamento bibliométrico utilizando dados das bases Scopus e Web of Science, identificando setenta e nove estudos. A análise revelou que a relação ainda está em desenvolvimento, evidenciada por publicações recentes e pelo surgimento de uma nova terminologia, "ecossistemas criativos". Um número notável de documentos explora a ligação entre os sistemas regionais de inovação e os setores criativos e culturais na proposta de modelos de desenvolvimento territorial. Esta investigação é uma das primeiras a explorar a relação entre os ecossistemas de inovação e a economia criativa, estabelecendo uma base para pesquisas futuras sobre como melhorar esta relação positiva.

Palavras-chave: ecossistema de inovação; sistema de inovação; indústrias criativas; economia do conhecimento.

Innovation ecosystems and the creative economy

a bibliometric review of an evolving relationship

Abstract

This study aims to determine if there is a positive relationship between the creative economy and innovation ecosystems by analyzing their interconnectedness in the international literature. Research was conducted through a bibliometric survey using data from Scopus and Web of Science databases, identifying seventy-nine studies. The analysis revealed that the relationship is still under development, evidenced by recent publications and the emergence of new terminology, 'creative ecosystems.' A notable number of documents explore the connection between regional innovation systems and the creative and cultural sectors in proposing models for territorial development. This investigation is one of the firsts to explore the relationship between innovation ecosystems and the creative economy, laying a foundation for future research on enhancing this positive relationship.

Keywords: innovation ecosystem; innovation system; creative industries; knowledge economy.

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ECOSISTEMA DE INNOVACIÓN Y ECONOMÍA CREATIVA:
Una revisión bibliométrica de una relación en evolución

Resumen

Este estudio tiene como objetivo determinar si existe una relación positiva entre la economía creativa y los ecosistemas de innovación analizando su interconexión en la literatura internacional. La investigación se realizó a través de una encuesta bibliométrica utilizando datos de las bases de datos Scopus y Web of Science, identificándose setenta y nueve estudios. El análisis reveló que la relación aún está en desarrollo, como lo demuestran publicaciones recientes y el surgimiento de una nueva terminología, "ecosistemas creativos". Un número notable de documentos explora la conexión entre los sistemas regionales de innovación y los sectores creativo y cultural al proponer modelos de desarrollo territorial. Esta investigación es una de las primeras en explorar la relación entre los ecosistemas de innovación y la economía creativa, sentando las bases para futuras investigaciones sobre cómo mejorar esta relación positiva.

Palabras clave: Ecosistema de innovación; Sistema de innovación; Industrias creativas; Economía del conocimiento.

1 INTRODUCTION

The creative economy includes economic sectors that generate wealth and employment through creativity, skills, and talent, producing products or services characterized by symbolic value, content, and intellectual property (Potts; Cunningham, 2008; Flew, 2012; Howkins, 2012).

Recognized for their importance, these sectors utilize intangible inputs such as creativity and imagination, extending beyond technology and natural resources. They contribute to economic development by generating jobs, attracting talent, revitalizing urban areas, and enhancing local soft power (Koehorst et al, 2019; Klein; Spychalska-Wojtkiewicz, 2020; Lazarević; Koružnjak; Devetaković, 2016; Klein et al, 2021).

To maximize the impact of creative sectors on territorial development, it's crucial to engage with innovation. This occurs in creative enterprises through talent combination, networking, and the quality of actors within a region's innovation ecosystem (Comunian; Hracs; England, 2021; Klein et al., 2021; Kanó; Vas; Klasová, 2022).

Innovation ecosystems provide the infrastructure necessary for innovative entrepreneurship and ongoing innovation development. They facilitate the integration of new knowledge creation and its exploitation for co-creating value (Valkokari, 2015; Gomes et al., 2018; Matos, 2023).

Supporting the creative economy through innovation ecosystems is crucial to ensure that initiatives are not developed in isolation, preventing less impactful outcomes and the loss of information and knowledge. Moreover, the flow of tangible and intangible assets within these ecosystems aids in developing creative and cultural sectors (Klein et al., 2021; Matos, 2023). Conversely, creative industries can catalyze urban revitalization and knowledge-based local economic development, enhancing the dynamism and vibrancy of ecosystems (Kimpeler; Georgieff, 2009; Lee; Drever, 2014).

The aim is to determine the existence of a positive relationship between the creative economy and innovation ecosystems. Thus, this paper examines their interconnectivity in international literature, conducting a bibliometric review to establish inputs that address the proposed problem, identify trends and research gaps, and build a reference base for future studies.

2 THE CREATIVE ECONOMY

The knowledge economy is comprised of intangible assets, with creativity being a key component. It functions as the driving force behind the creative economy, a concept that

emerged to highlight creativity's role in modern economic life and the link between economic and territorial development and culture (Hidayat; Asmara, 2017).

Before the term "creative economy" was coined in John Howkins's book "The Creative Economy: How People Make Money from Ideas," debates about the characterization and impact of arts, culture, and creativity-related segments were already underway. DiMaggio (1982) was among the first to address cultural and/or creative entrepreneurship in the 1980s.

In the 1990s, Australian and British development policies spelled the launch of what is now known as the creative industry, including the cultural industry, creative arts, and copyright industry (Galloway; Dunlop, 2007; Hidayat; Asmara, 2017; Silvestro; Reis; Teixeira, 2023). The creative economy produces goods and services that draw on creativity, symbolic value, use value, and technology, leading to intellectual property, innovation, and positive social impact (Throsby, 2001; Howkins, 2012).

Creative industries, or creative and cultural sectors, merge traditional arts (viewed as individual talents) with cultural industries (targeting mass entertainment) against the backdrop of new media technologies (Almeida; Teixeira; Luft, 2014; Hartley, 2005). These sectors have both economic and non-economic impacts, employing young workers, generating creative spillovers, forming regional clusters, contributing to soft power, and exhibiting high innovation potential. They also support technological development and long-term growth (Throsby, 2001; Kanó; Vas; Klasová, 2022).

Research on this topic presents various ways to group and characterize creative sectors. One method for classifying creative sectors efficiently explores their relationship with the overall economy of a specific location, yielding four potential groupings (Ibrus, 2022; Potts; Cunningham, 2008).

The first model focuses on public interventions in arts and culture markets to produce inspiring goods and services for other sectors. The second model highlights self-sufficient cultural goods and services with high capitalization, including media such as television, cinema, games, literature, newspapers, and comics. The third model shows how creative sectors support other sectors through creative work, including design and architecture (Ibrus, 2022; Klein et al., 2021; Potts; Cunningham, 2008).

The fourth model positions creative industries within an innovation system that generates knowledge and value by creating new cultural meanings and responding to cultural dynamics in societies (Ibrus, 2022; Potts; Cunningham, 2008).

Analyzing the fourth model, which connects the creative economy to innovation systems, reveals that innovation in creative industries is complex, dynamic, and relies heavily

on tacit knowledge. It necessitates personalized communication, local capabilities, and buzz to innovate tangible and intangible products (Kanó; Vas; Klasová, 2022).

3 INNOVATION ECOSYSTEMS

Innovation ecosystems are viewed as evolving institutional arrangements that leverage local potential and assets, both tangible and intangible, to promote territorial development. These ecosystems use innovation in various forms as input to enhance the flow of knowledge, entrepreneurship, creativity, and relational and institutional capital (Granstrand; Holgersson, 2020; Audy, 2017; Wessner, 2007). The innovation ecosystem concept, originating from debates by Moore (1993, 1996), has evolved in concept and application, employing a biological metaphor of ecosystems (Gomes et al., 2018).

The primary elements of an innovation ecosystem include a diverse range of formal and informal actors (Elia; Margherita; Petti, 2016); horizontal, dynamic, and collaborative governance (Jucevicius & Grumadaite, 2014); the use of existing public policies and enabling environments (Russel; Smorodinskaya, 2018); a focus on relationships and market outcomes (Ritala; Almpanopoulou, 2017); nonlinear approaches (Carayannis; Campbell, 2009); and dynamism in structures and relationships that are collaborative, self-organized, and self-regulated (Russel; Smorodinskaya, 2018).

It is crucial to consider another approach to institutional arrangements from innovation, namely, innovation systems. These are defined by the composition of all components and relationships interacting during the production, dissemination, and utilization of new and economically beneficial knowledge (Lundvall, 1992). Innovation systems were conceptualized in the early 1980s following an Organization for Economic Cooperation and Development project that aimed to use innovation as a competitive differentiator in the knowledge economy (Asheim; Grillitsch; Trippl, 2015).

The main characteristics of an innovation system include a smaller number of actors focusing on formal institutions that can coordinate and regulate dynamics to favor development through innovation (D'auria et al., 2016); top-down, hierarchical, and static governance (Russel; Smorodinskaya, 2018); a focus on institutional performance and public policy creation (Laranja; Uyarra; Flanagan, 2008); a linear approach (D'auria et al., 2016); more established concepts among policymakers, economists, and research communities (Laranja; Uyarra; Flanagan, 2008); and a rare emphasis on the roles of informal actors (Pigford; Hickey; Klerkx, 2018).

Since they analyze the same phenomenon from different perspectives, the concepts of innovation systems and ecosystems often resemble each other or overlap (Matos; Teixeira, 2020). This has led some authors, such as Pucci et al. (2018), to argue there are no differences between them, as both are conceptual frameworks aiming to understand the management of knowledge and innovation dynamics characterizing actor agglomerations in a given context. However, Matos and Teixeira (2020) outlined the similarities and differences between both concepts, enabling the understanding that they are distinct structures with different characteristics and concepts, even though both aim to understand the dynamics of innovation within the development context of a given location.

4 METHODOLOGY

To achieve the goal of this study, a bibliometric review was carried out to further understand the outcomes of scientific production, focusing on generating new knowledge for application in future research or interventions (Pritchard, 1969; Verbeek et al., 2002; Soares et la., 2016).

Bibliometric reviews, a type of systematic review method, allow for the analysis of vast amounts of published research using various tools to identify trends (Criado; Paul, 2020). This approach also facilitates mapping networks of keyword co-occurrence, evolution of research fields, author and co-authorship networks, publication sources, and the origins of publications, thus depicting the landscape of scientific production at a specific time (Soares et al., 2016; Criado; Paul, 2020).

The initial step involved searching for documents related to "innovation ecosystems" and "creative economy." This search was conducted in the Scopus and Web of Science databases in 2024, selected for their multidisciplinary focus and inclusion of relevant sources, such as indexed journals and conferences with high quartile rankings and impact factors (Chapain; Sagot-Duvauroux, 2020). The search strategy included titles, keywords, and abstracts of manuscripts in the databases to identify those with greater adherence to the theme addressed:

(("innovation ecosystem" OR "innovation system") AND ("creative economy" OR "cultural economy" OR "orange economy" OR "creative industr*" OR "creative business*" OR "cultural industr*" OR "Heritage Industr*" OR "heritage economy" OR ("creative ecosystem"))

The first segment of this string targeted the terms "innovation ecosystem" or "innovation system," addressing all potential institutional and territorial arrangements of innovation and acknowledging the overlap in literature definitions as well as their synonymy used by some authors (Pucci et al., 2018; Matos; Teixeira, 2020). The second segment aimed to include all synonyms or related terms for the creative economy, utilizing controlled vocabulary from two websites: the European Union Terminology and UNESCO Thesaurus. The term "creative ecosystem" was added after initial search attempts identified its use as synonymous with innovation ecosystems contributing to the creative economy (Gasparin; Quinn, 2021; De Bernard; Comunian; Gross, 2022).

After merging the data from the searched databases into a single spreadsheet and removing duplicates, 178 documents were identified. We decided to retain all documents discovered at this stage, without excluding any based on publication year, origin, document type, or language, to fully understand the scope of material found. In the next step, documents were selected based on whether their titles, abstracts, and keywords were directly or indirectly related to the research theme. Articles focusing solely on specific creative economy sectors without linking them to ecosystems or innovation systems were excluded, as were articles focusing only on innovation.

A significant number of articles addressing generative art, artificial intelligence, creativity in organizational culture, and creative educational methods were also excluded. Ultimately, 79 documents remained in the final corpus for analysis in this article. According to Criado and Paul (2020), a systematic review should analyze between 50 and 500 documents, and Table 1 summarizes the findings at each stage described.

Table 1 - Article selection process

Steps taken	Scopus	WOS
Total searches	147	77
After excluding the redundancies	166	
After reading the title, abstract, and keywords	79	

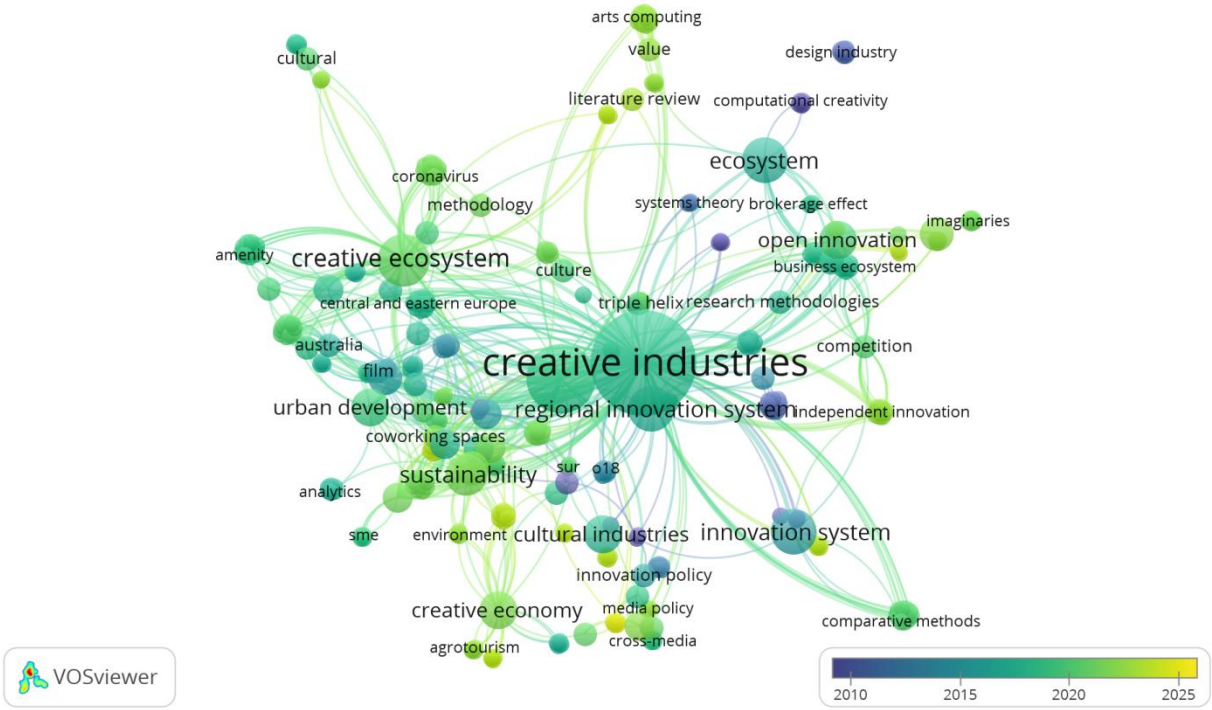
Source: developed by the authors (2024)

The bibliometric analyses were performed using the VOSviewer software to build and view the main networks through graphical occurrences, establish the relationships among the documents in the final corpus, and extract the main numbers in the Results and Discussion.

5 RESULTS: DATA, INFORMATION, AND TRENDS REVEALED BY THE BIBLIOMETRY

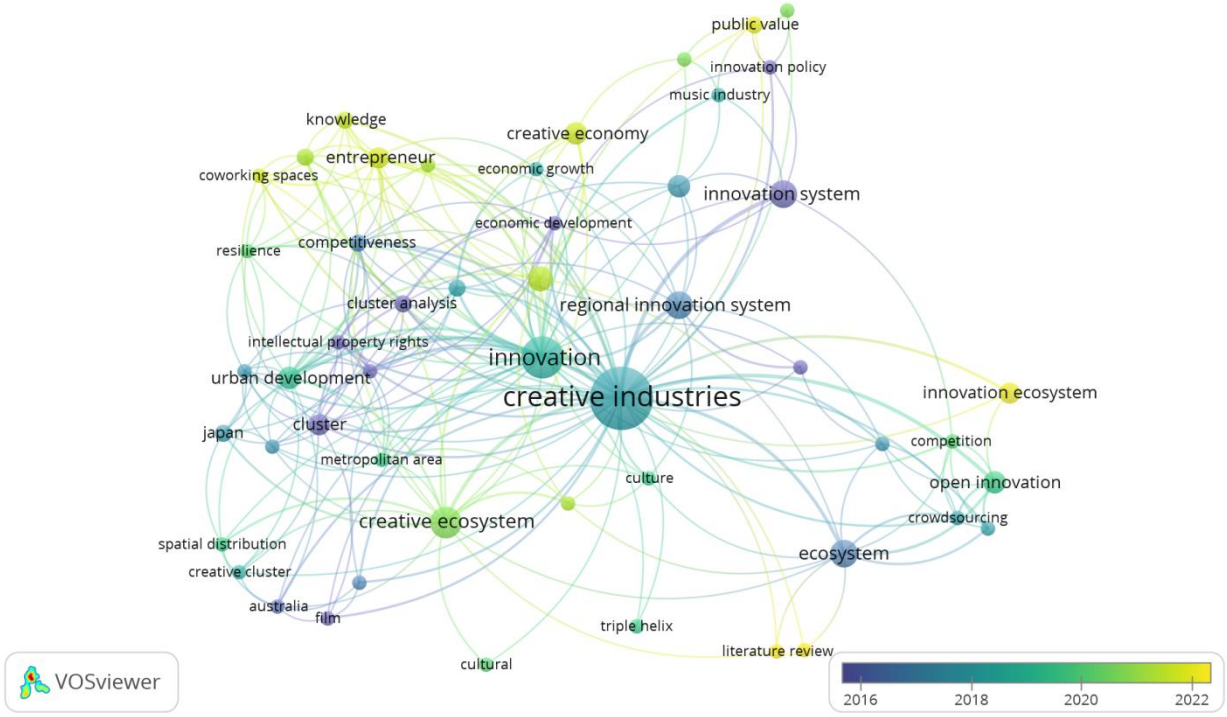
Initially, it is important to note that the final corpus analyzed in this study consisted of 79 documents. Of these, 56 were published in journals, 17 in conference proceedings, and 6 as book chapters. While there was no specific period for document selection, the documents focused on the period from 2004 to 2024, representing recent literature on the intersection between innovation ecosystems and the creative economy. The first analysis of the final corpus involved using the Vosviewer software to identify the keywords (Figures 1 and 2).

Fig. 1 - Network analysis - All keywords



Source: Survey data (2024).

Fig. 2 - Network analysis - All keywords and temporal evolution



Source: Survey data (2024).

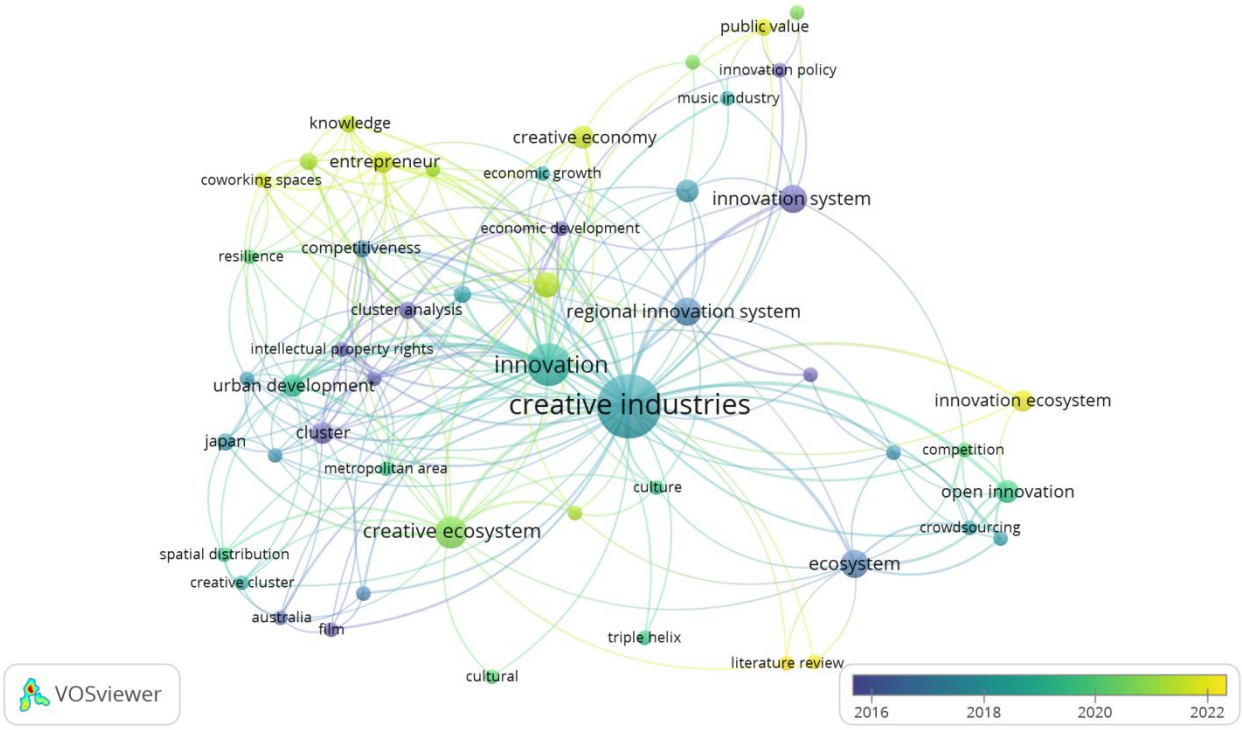
All keywords in the articles included in the final corpus are depicted in Figure 1. The term 'creative industries,' serving as the central node, is present in most documents and acts as a link between the discussed themes. It is evident that authors show a preference for terms signifying transformation, process, product delivery, or value over those suggesting a wide range of possibilities, such as 'creative economy.'

One theory suggests that the term 'creative industries' surfaced in the 1990s, introduced in public policies by the governments of Australia and the United Kingdom, while 'creative economy' first appeared in the academic sphere in the early 21st century (Howkins, 2012).

Consequently, authors have opted for the more familiar term, rather than one still gaining recognition. Figure 2 indicates that 'creative economy' has seen increased usage in recent years, especially in 2017-2018, by which time Howkins' ideas were well established. Documents such as the 'Creative Economy Report 2008: The Challenge of Assessing the Creative Economy Towards Informed Policymaking' (UNCTAD, 2008) had by then popularized the concept and underscored its significance to academics and economists.

Another theory is the strategic avoidance of 'creative economy' in favor of terms absent from titles or abstracts to enhance the likelihood of indexing and search engine visibility within databases.

Fig. 3 - Network analysis - keywords with at least two appearances and temporal evolution



Source: Survey data (2024).

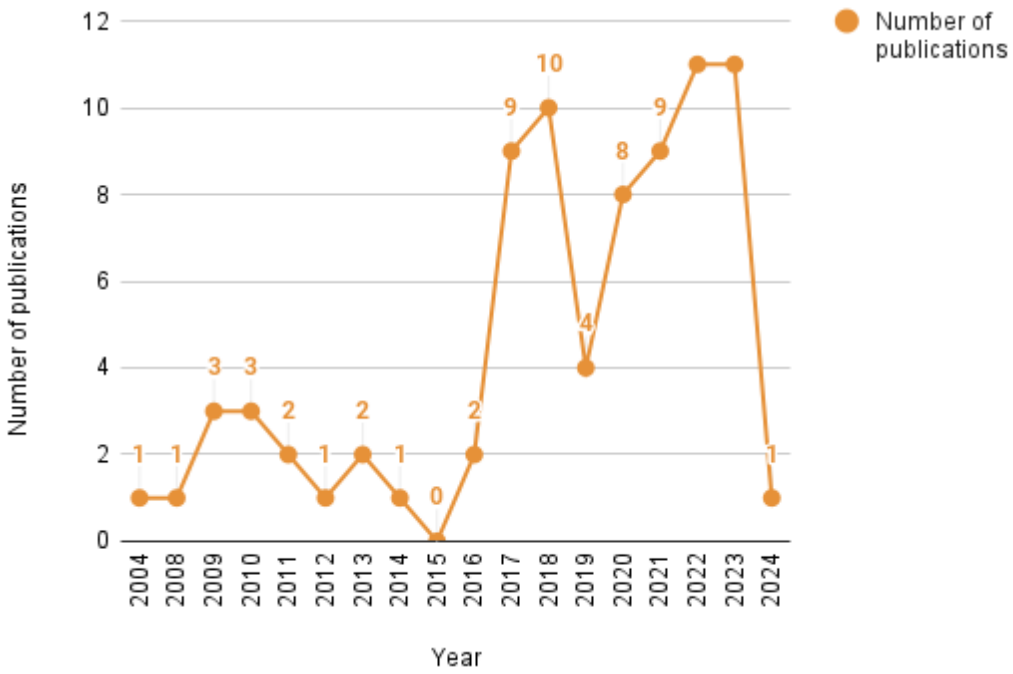
A more in-depth analysis, focusing on keywords that appeared at least twice, led to the discovery of the network visualized in Figure 3. The term "creative industries" once again appears as a central node, with connected key terms shown in relation to the innovation ecosystems universe: "triple helix,""innovation,""regional innovation system,""innovation ecosystem,""innovation system," and "innovation policy." This demonstrates the coherence of the sample with the databases' search criteria and the research objective.

Another group of keywords, prominently related to territorial development, includes "economic development,""urban development," and "economic growth." This is supported by articles that reflect on or propose solutions for regional development based on the creative economy and regional innovation systems, themes widely discussed in the literature (Chapain; Sagot-Duvauroux, 2020; Casadei et al., 2023).

The term "creative ecosystem" is gaining traction as an emerging area, primarily due to the organization of innovation ecosystems that positively affect the creative economy (De Bernard et al., 2022; Reis; Lima; Teixeira, 2022).

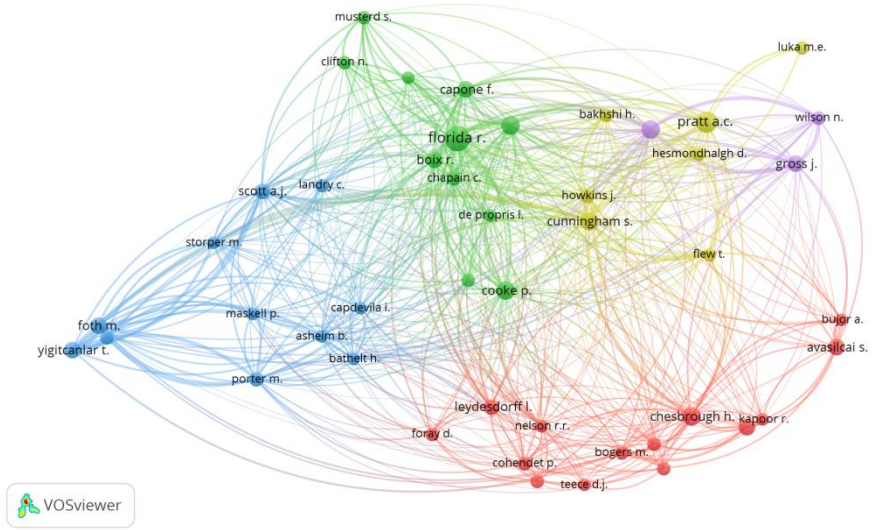
Another significant group of keywords includes "cluster,""cluster analysis," and "Intellectual property rights." These are derived from articles examining the consequences of clustering and smart specialization policies adopted by Europe and how these policies are the direct results of the intersection of concepts and practices involving innovation ecosystems and the creative economy. An important temporal observation is that the first impactful publication linking innovation systems/innovation ecosystems with the creative economy/creative and cultural industries occurred only in 2004. Over the years, the number of relevant publications has not grown exponentially, with an average of 2.5 articles published annually. However, there was a peak in publications in 2022 and 2023, with 11 publications (Figure 4).

Fig. 4 - Number of publications per year



Source: Survey data (2024).

Fig. 5 - Network analysis - Co-citation analysis by author (minimum 7 citations)



Source: Survey data (2024).

Figure 5 was created to show the co-citation relationship in the final corpus. The proximity of two authors in the co-citation network may be attributed to several factors, including the sharing of theoretical frameworks, similarity and/or complementarity of content, the closeness of subject matter between the co-cited authors, or opposition of ideas (Grácio, 2016).

Table 2 - Recurrence analysis in the bibliographical references

Author	Number of citations
Stuart Cunningham	48
Allen J. Scott	41
Richard Florida	40
Andy Pratt	34
Roberta Comunian	30

Source: Survey data (2024)

Table 2 was created to display the four authors most frequently mentioned in the bibliographical references of the corpus documents. These authors explore the creative economy from various perspectives. Stuart Cunningham focuses on creative sectors related to entertainment and social media, with numerous publications at the intersection of innovation culture and the creative economy. Allen J. Scott's contributions to the corpus include works on the economic geography of cultural industries, while Richard Florida is recognized as one

of the pioneers of the creative economy. Andy Pratt and Roberta Comunian have examined the creative economy's impact on urban development, cities, supply chains, and different types of economies.

Stuart Cunningham, an emeritus professor of communication and media studies at Queensland University of Technology, is the most cited author in the corpus documents. His work, "Social network markets: a new definition of the creative industries" (Cunningham et al, 2008), proposes a redefinition of the creative economy through the lens of new markets, challenging the industrial focus of traditional definitions. This article is the most cited in the corpus, appearing five times.

The work with the highest frequency of citation in the corpus is "The Rise of the Creative Class" (Florida, 2002), which, alongside Howkins (2012), served as an early 21st-century cornerstone for the creative economy's conceptual foundation.

In the field of innovation, notable scholars include Loet Leydesdorff and Henry Etzkowitz, creators of the triple helix theory, who have done extensive research on innovation systems and the triple helix. Henry Chesbrough, known for introducing "Open Innovation," is frequently mentioned for his work on innovating within a creative ecosystem.

The co-citation analysis used to pinpoint the most relevant journals discussed in Table 3 reveals that Regional Studies is the most recurrent journal. It holds a Q1 quartile and an impact factor of 128, underscoring its significance and focus on publishing works in social and environmental sciences related to regional development (SJR, 2022).

Table 3 - Co-citation analysis: Journals

Journals	Number of citations
Regional Studies	38
Research Policy	25
Environment and planning	17
Economic Geography	
Journal of Economic Geography	16
European planning studies	

Source: Survey data (2024)

In the next phase of the analysis, we verified the authors' countries of origin in the corpus (Table 4). The United Kingdom has the highest number of publications, followed by Australia, which is particularly significant since documents authored in Australia were cited 173 times. As mentioned earlier, Australia and the United Kingdom initiated regional

development policies focused on the creative and cultural sectors in the 1990s. Consequently, they were the first countries to gather economic and social data for analysis, studying the impacts of policies implemented in the creative economy.

Table 4 - Origin of the documents

Country	Number of citations	Number of documents
Australia	173	9
United Kingdom	92	10
Italy	68	4
Switzerland	61	2
Singapore	35	1

Source: Survey data (2024).

The most cited documents in the corpus were identified, resulting in Table 5, which lists the five documents with the highest citation counts. O'Connor (2009) is the most cited study. It is an article that explores, both conceptually and politically, the rebranding performed by the United Kingdom's Department for Digital, Culture, Media, and Sport, which replaced the term 'cultural industries' with 'creative industries.'

The paradigms analyzed include the concept of 'art' outside the creative industries, which the paper concludes is a misunderstanding that can damage cultural policies. The paper also examines the new model of creative sectors arranged according to innovation systems, moving beyond the traditional model based on art and culture. This supports the findings presented in previous analyses. Lastly, the paper discusses the notion of social network markets, proposed by Cunningham et al. (2008) and cited earlier in the text, as central to the future of creative businesses.

Table 5 - Most cited publications

Authors	Citations	Publications
O'Connor (2009)	75	Creative industries: a new direction?
Colapinto and Porlezza (2012)	61	Innovation in creative industries: from the quadruple helix model to the systems theory.
Potts (2009)	48	Why creative industries matter to economic evolution.
Gwee (2009)	35	Innovation and the creative industries cluster: A case study of Singapore's creative industries.
De Bernard et al. (2022)	30	Cultural and creative ecosystems: a review of theories and methods

		towards a new research agenda

Source: Survey data (2024)

By analyzing the articles listed in Table 5, it is evident that these articles originate from the first decade of the twenty-first century and aim to explore, through various methodological approaches and case studies, the formation of regional innovation systems rooted in the creative economy, or more succinctly, regional creative systems. Two plausible reasons for this focus are: firstly, given their age, these articles are more widely circulated within the academic community; and secondly, the observation that research on innovation ecosystems grounded in the creative economy is relatively recent, as highlighted by Figures 2 and 3, indicating these papers have not yet achieved broad dissemination within scientific and/or academic circles. An exception is the study by De Bernard et al. (2022), which investigates how the concept of the creative ecosystem is evolving through different systematic review techniques.

6 DISCUSSIONS: WHAT THE ANALYSIS TELLS US ABOUT TERMINOLOGIES, TRENDS, AND FUTURE IMPLICATIONS

6.1 FROM "CULTURAL INDUSTRIES" TO "CREATIVE ECONOMY"

One notable contribution from the most cited article in the corpus examines the evolution from "cultural industries" to "creative industries," and more recently, to "creative economy." This examination highlights how the terminology relates to systems and/or innovation ecosystems (O'Connor, 2009). It is worth mentioning that other authors, such as Koehorst et al. (2019), Flew and Cunningham (2010), and Galloway and Dunlop (2007), have raised concerns regarding this rebranding.

The term "cultural industries" initially referred to commercial entertainment and distinguished it from subsidized "arts," laying the groundwork for key European policies in the sector during the 1970s and 1980s (Adorno; Horkheimer, 1985; Galloway; Dunlop, 2007). Over time, there has been a shift towards the term "creative economy" in the 1990s and 2000s, which encompasses a broader vision of industrial aspects, combining cultural industries, cultural heritage, and the copyright industry under a single concept (Koehorst et al., 2019; Flew; Cunningham, 2010; Cunningham et al., 2008).

Critics argue that this grouping hampers cultural development since some sectors emphasize symbolic value while others focus on economic value, potentially hindering the

formulation of effective cultural policies (Galloway; Dunlop, 2007; Flew; Cunningham, 2010; O'Connor, 2009; Cunningham, 2001). Another point of criticism is the challenge of assessing the true contribution of cultural or symbolic goods within the knowledge economy (Galloway; Dunlop, 2007). Nonetheless, some authors believe that the repositioning has positively impacted cultural development. They argue that culture is often associated with elitism and exclusivity, whereas creativity is seen as democratic and inclusive (Galloway; Dunlop, 2007). Furthermore, this new arrangement supports the growth of creative sectors through regional innovation systems, positively contributing to the future of the creative economy and culture itself (O'Connor, 2009; Cunningham et al., 2008).

6.2 INNOVATION ECOSYSTEM VS. INNOVATION SYSTEM

This article examines studies that demonstrate the positive relationship between innovation ecosystems and the creative economy. It is worth noting, however, that the terms "Innovation system" and "Regional innovation system" are more commonly used than "innovation ecosystem," which has gained popularity in recent years.

The co-citation analysis reinforces this observation regarding the keywords, showing a stronger connection between the concepts of the creative economy and innovation systems, as opposed to innovation ecosystems. Based on the titles, abstracts, and keywords, it is evident that several articles in the corpus apply data from the creative and cultural sectors to the theory of innovation systems. Some utilize the triple helix approach to replicate the patterns of national or regional systems of innovation within the creative economy, proposing models or frameworks for creative regional systems (Chaminade; Martin; McKeever, 2021; Yum, 2020; Hanzawa; Yamamoto, 2019; Vang; Maher; Brambini, 2018; Hidayat; Asmara, 2017; Maher; Brambini; Vang, 2013). Organizing the creative economy as an innovation system is, in fact, one of the four economic organization models suggested by Potts and Cunningham (2008) for the creative sectors.

6.3 THEORETICAL AND PRACTICAL IMPLICATIONS

Understanding the disconnect between the creative economy and innovation ecosystems in theoretical and academic terms is crucial. Another area of investigation is the preference for organizing creative sectors using models similar to regional innovation systems. A practical implication identified is the potential for developing public policies for regional development. These policies can focus on the organization of innovation systems and the

promotion of creative sectors, including specific sectors such as digital games, audiovisuals, and cultural heritage.

An emerging concept in the literature is the formation of creative ecosystems, knowledge, and innovation networks comprised of various actors organized similarly to regional innovation systems but aimed at strengthening the creative and cultural sectors, as discussed by Mortati and Cruickshank(2011), Gasparin and Quinn (2021), and De Bernard et al. (2022).

6.4 LIMITATIONS AND FUTURE RESEARCH

Despite our promising findings, this article has a limitation with the number of documents in the final corpus (n = 79), which limits a deeper understanding and generalizations. However, comparable research in the literature (Matos, 2023; Matos; Souza; Teixeira, 2022) and the classification of bibliometric review as a systematic review requiring 50–500 documents support this study's validity (Criado; Paul, 2020).

Furthermore, the sample indicates that the relationship between ecosystems/innovation systems and the creative economy has been scientifically underexplored. Therefore, precursor studies on the topic are necessary to pave the way for future research analyzing this relationship's evolution. Moreover, these studies can also serve as a "bridge" to other review formats, such as systematic reviews and integrative reviews, to generate new and relevant data, information, and knowledge.

Furthermore, future research should expand the number of case studies examining the organization of innovation systems across various creative sectors and aim to replicate the frameworks/models observed in the corpus. Notable examples include the emergence of creative clusters conceptually similar to regional innovation systems focused on the audiovisual sector (Vang; Maher; Brambini, 2018; Maher; Brambini; Vang, 2013), the formation of regional innovation systems around technologically creative sectors, as the case of digital games (Gwee, 2009; Power, 2010; Yoon, 2017; Hanzawa & Yamamoto, 2019; Yum, 2020; Khan, 2020; Chaminade; Martin; McKeever, 2021), and the development of creative industries based on innovation system policies (Castro-Martínez; Recasen; Jiménez-Sáez, 2013; Hauge; Pinheiro; Zyzak, 2018; Liu, 2021).

7 CONCLUSIONS

This study aimed to demonstrate the positive relationship between innovation ecosystems and the creative economy through a bibliometric review of scientific production. However, instead of clearly demonstrating this correlation in the academic literature, we found that studies addressing the promotion of creative sectors through innovation ecosystems, and vice versa, are still scarce, with little literature available in the main academic databases. Nonetheless, it is evident that many studies consistently utilize the concept of innovation systems to promote creative industries. These studies have identified a range of research that explores regional development through models of innovation systems integrated with creative sectors. Analyzing keywords, co-citations, and identifying highly cited articles supports the correlation between innovation systems and the creative economy. Furthermore, the data corpus has provided insights into Australia's and the United Kingdom's notable impact in this field. This aligns with these countries' historical legacy of employing public policies to drive territorial development through creative sectors.

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