

# Purpose and pixels: A bibliometric analysis on social entrepreneurship and digitalization

*Propósito y píxeles: Un análisis bibliométrico del emprendimiento social y la digitalización*

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- Article received:  
9 January, 2025
- Article accepted:  
5 July, 2025
- Published online in articles  
in advance:  
4 August, 2025

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DOI:

<https://doi.org/10.18845/te.v19i3.8134>

**Abstract:** This study conducts a bibliometric analysis focused on the intersection between social entrepreneurship and digitalization. Drawing on data sourced from the Web of Science database, the analysis maps the intellectual structure of the field, identifies key contributors, and highlights thematic clusters shaping current discourse. Through science mapping techniques, including keyword co-occurrence, bibliographic coupling and country-based publication trends, the study provides a comprehensive overview of the field's development. The United States, Russia, and England emerged as leading contributors, reflecting diverse regional perspectives and academic focus. The thematic analysis revealed four primary clusters: Core Focus on Social Entrepreneurship; Digital Entrepreneurship and Broader Economic Context; Innovation, Management, and Theoretical Foundations; and Behavioural and Individual-Level Factors in Social Entrepreneurship. The results underscore the growing importance of digital technologies in advancing social entrepreneurship, particularly in addressing global challenges. This research contributes to the academic community by structuring the foundational knowledge of this emerging field and offers practical insights for policymakers and practitioners aiming to leverage digitalization for social impact.

**Keywords:** Social entrepreneurship; digitalization; bibliometric; VOSviewer.

**Resumen:** Este estudio lleva a cabo un análisis bibliométrico de la intersección entre el emprendimiento social y la digitalización. Basándonos en datos obtenidos de Web of Science, el análisis proporciona la estructura intelectual del campo, identificando los principales contribuyentes y los clústeres temáticos. A través de técnicas de mapeo científico, como la coocurrencia de palabras clave o el emparejamiento bibliográfico entre otros, el estudio proporciona una visión integral del desarrollo del campo. Estados Unidos, Rusia e Inglaterra emergen como los principales contribuyentes, reflejando perspectivas regionales diversas y enfoques académicos variados. El análisis temático reveló cuatro clústeres principales: foco en el emprendimiento social; emprendimiento digital y contexto económico general; innovación, gestión y fundamentos teóricos; y factores conductuales e individuales en el emprendimiento social. Los resultados ponen de manifiesto la creciente importancia de las tecnologías digitales para impulsar el emprendimiento social, particularmente en el abordaje de desafíos globales. Esta investigación contribuye a la comunidad académica estructurando el conocimiento de este campo emergente y ofrece perspectivas prácticas para los responsables de políticas y los profesionales que buscan aprovechar la digitalización para generar impacto social.

**Palabras clave:** Emprendimiento social; digitalización; bibliométrico; VOSviewer.

## 1. Introduction

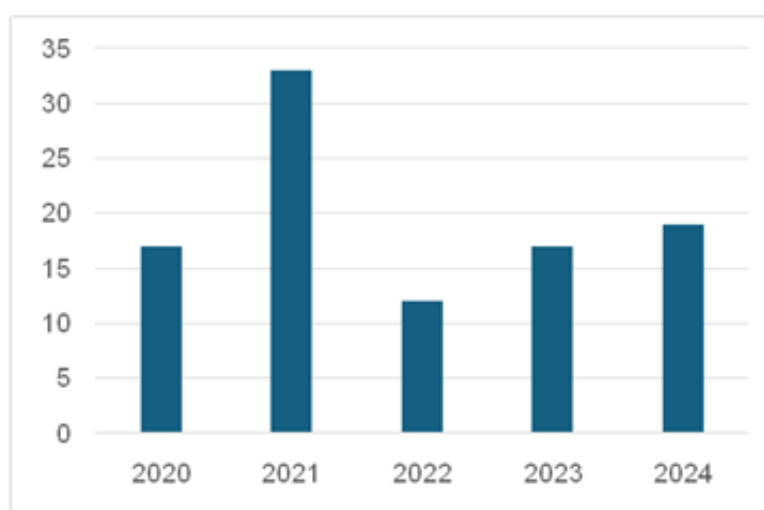
Social entrepreneurs are individuals that develop and implement innovative solutions to social, cultural, or environmental problems. Unlike traditional entrepreneurs who typically focus on generating profit, social entrepreneurs aim to create positive social change, often prioritizing impact over income. Social entrepreneurship has become increasingly important in recent years due to several key global and societal trends. The rise in awareness of social, environmental, and economic challenges has fuelled the need for innovative solutions that balance profit with purpose (Mair & Martí, 2006; Partzsch & Ziegler, 2011; Bayon et al., 2016).

Digitalization is also a concept that is not only in vogue these days, but also has become essential in today's economic world as it is driving transformation across industries (Acs et al. 2022). As indicated by Reis et al. (2020) it is “the most significant technological trend that is changing both, society and business” (p. 443). As a reflection of the significance of digitalization to a great number of industries, this topic has gained attention to scholars (Brennen & Kreiss, 2016). The number of published articles per year in Web of Science (WoS) show that research about digitalization has grown into a huge body of literature, being more than 4500, 5500 and 6000 in 2021, 2022, and 2022 respectively.

Analysing the connection between social entrepreneurship and digitalization is highly relevant for both academics and practical application. It offers an opportunity to explore how digital technologies can enhance the capacity of social enterprises to address global challenges, scale their impact, and foster sustainable innovation. For instance, digitalization increases connectivity and stakeholder integration, allowing social entrepreneurs to collaborate across geographic boundaries and access a broader range of resources and support (Fuerst et al., 2023). It is also relevant for policymakers to design frameworks to support digital transformation in the context of social innovation and inclusive development.

The literature on the intersection of these two topics has expanded since 2020, as we can see in Figure 1. Numbers show that 83% of research was published in the last 5 years. This indicates the growing interest among scholars.

**Figure 1.** Publications about social entrepreneurship and digitalization the last 5 years



We have looked for bibliometric analyses that focus at the intersection between the studied topics or a related concept in different databases (WoS, Scopus, and Google Scholar). However, the intersection of digitalization and social enterprises has been underexplored. We have not identified any previous bibliometric analyses that summarize the findings of this growing body of recent articles. Most previous bibliometric research has either focused on one domain or the other. For instance, the

only article found on a top journal (Q1 of WoS) related to the topic focuses on the relationship between social media platforms and social enterprise (Ali et al., 2023). It analyses 131 articles from 2002 until 2021, using the software VOSviewer.

Bibliometric studies are essential for synthesizing and understanding the structure of a large number of publications. Therefore, conducting a bibliometric analysis is needed to examine the previous articles. Analysing this connection can deepen our understanding of how digitalization enables social entrepreneurs to innovate, scale, and address social challenges more effectively.

Some research questions come to light: which are the most relevant authors on this field? What are the countries that are contributing the most to develop knowledge on this topic? What are the most studied lines inside this field? From these questions arise the aim of this study, which is to identify the most influential authors and countries on this topic. In addition, to structure the literature by indicating the lines of research that have been previously studied.

The paper contributes to the literature of social entrepreneurship as well as digitalization. This research is relevant for scholars because this article structures the bases of the field and pave the way for new research, as we identify key actors and trends.

In the following section we find the conceptual framework where we describe the main concepts (social entrepreneurs and digitalization). Then, the methodology, where all the search strategy is explained to facilitate the replication of the study. Next, we find the results, where we summarize and analyse the findings. And finally, the conclusions of the study.

## 2. Conceptual framework

### 2.1 Social entrepreneurs

Social entrepreneurs are individuals who create and manage ventures with the primary goal of addressing social issues and creating social value, rather than focusing solely on financial gain. They combine entrepreneurial skills with a mission to improve society.

Social entrepreneurs are recognized for driving social change and reaching sustainable development (Bansal et al., 2019). They tackle pressing issues like poverty, inequality, environmental degradation, healthcare, education, and access to clean water. With traditional government or corporate solutions sometimes insufficient (Canestrino et al., 2024; Ibáñez et al., 2022), social entrepreneurs bring fresh perspectives to solve these problems in a sustainable way. They are considered change agents who use entrepreneurial approaches to deliver solutions to social and environmental challenges (Partzsch & Ziegler, 2011).

As we can see, this type of entrepreneurs brings many benefits. Social entrepreneurs drive social change and address unmet needs through innovative solutions (Mair & Martí, 2006; Seelos & Mair, 2005). They achieve significant community benefits by addressing local issues and improving quality of life (Thompson, 2002), and encouraging businesses to adopt social and environmental responsibilities (Seelos & Mair, 2005; Lafuente et al., 2022).

While they offer significant benefits to communities and promote corporate social responsibility, they also face different barriers. The lack of financial resources is one of the difficulties that these entrepreneurs have (Diaz Gonzalez & Dentchev, 2021). Also, insufficient knowledge, abilities and experience affects them (Pelucha et al., 2017). Facing these problems may cause struggle with maintaining motivation throughout the entrepreneurship process too (Samuelsson & Witell, 2022). A lack of digital literacy and skills is an additional common barrier, particularly in rural areas (Samsudin et al., 2024) and among certain demographics, such as women entrepreneurs (Molina-López et al., 2021). This limits the ability to effectively use digital tools and platforms.

## 2.2 Digitalization

Digitalization is the integration of digital technologies into all aspects of society and business, transforming how organizations or individuals operate and deliver value. It refers “both to a transformation from “analogue” to “digital” (e.g. a shift from cash to electronic payments) and to the facilitation of new forms of value creation (e.g. accessibility, availability, and transparency)” (Hagberg et al., 2016, p. 696). It can bring changes into different levels: socio-technical ecosystem, organizations, and individuals (Frenzel et al., 2021).

Among its numerous benefits it includes increasing operational efficiency (Rosin et al., 2020), enabling new forms of cooperation between firms (Rachinger et al., 2019), or offering broader market opportunities and business ideas (Fahmi & Savira, 2023). Even some authors see it as an imperative for enterprises survival (Canestrino et al., 2024), as the new technologies are changing drastically how companies compete (Verhoef et al., 2021).

Digitalization also allows digital transformation in businesses. Digital transformation is a “company-wide phenomenon with broad organizational implications in which, most notably, the core business model of the firm is subject to change through the use of digital technology” (Verhoef et al., 2021, p.892). It goes beyond just a change in organizational processes and implies strategic changes, leading to new business models (Lafuente et al., 2023).

Digitalization is a multifaceted process that reshapes business operations, customer interactions, and industry practices. It drives innovation and efficiency while also presenting challenges. Some of the challenges that it brings to organizations are regarding data privacy and security (Hyka et al., 2023), as the widespread collection and use of data is raising concerns about privacy, security, and ethical considerations. Also, over-reliance on digital technologies can create vulnerabilities.

Even though it presents many benefits for firms, it is not easy to implement digitalization. There are some organizational barriers such as resistance to change or insufficient digital skills among employees (Hane Hagström et al., 2023; Ulrich-Diener et al., 2025). Some main external barriers are regulatory challenges, lack of government incentives, and insufficient R&D support (Rupeika-Apoga & Petrovska, 2022; Ullah et al., 2021). Lastly, unequal access to digital technologies and infrastructure creates disparities between different regions and socio-economic groups, limiting the benefits of digitalization for some communities (Lythreatis et al., 2022).

## 3. Methodology and data

To comprehensively explore the scholarly landscape at the intersection of social entrepreneurship and digitalization, this study employs a bibliometric analysis, a systematic and quantitative method for examining academic literature. Bibliometric analysis is particularly suited for identifying trends, influential works, collaboration networks, and thematic clusters within a research field, enabling a detailed understanding of its intellectual structure and evolution. This method allows for a holistic investigation by leveraging citation data, keyword occurrences, and co-authorship patterns to reveal relationships and emerging topics. The methodology is designed to ensure rigor and replicability, encompassing data collection, pre-processing, and analytical techniques. This section outlines the processes and tools used in this study, including the selection of a suitable database, the application of inclusion and exclusion criteria, and the utilization of bibliometric software to extract and analyse relevant data. The approach ensures a robust foundation for addressing the research objectives and providing actionable insights into the dynamic interplay between social entrepreneurship and digitalization.

In Table 1 we can see a summary of the search strategy that we followed. First of all, we selected WoS Core Collection because it is an internationally-recognized source adhering to the highest standards. This database is commonly preferred in bibliometric studies (Bartolacci et al., 2020; Garrigos-Simon et al., 2018; Mura et al., 2018; Zhang et al., 2019) as it includes more than 15,000 of the most relevant journals and contains more than 50,000,000 classified documents (Merigó & Yang, 2017).

The software selected is VOSviewer. This software builds two-dimensional maps based on mathematical algorithms. It is used in other bibliometric studies (Bartolacci et al., 2020; Castillo-Vergara et al., 2018; Grueso-Gala & Camisón, 2022; Seguí-Amortegui et al., 2019) because it provides especially useful graphical representations with maps based on network data (Castillo-Vergara et al., 2018). It can show the structure and networks of different types of items such as authors, references, keywords, journals, organizations and countries; and through different types of links including co-authorship, co-occurrence, citation, bibliographic coupling and co-citation.

**Table 1.** Search strategy

|                        |                                                                                                                                                                                                        |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Database               | WoS Core Collection                                                                                                                                                                                    |
| Method & software      | Bibliometric, VOSviewer                                                                                                                                                                                |
| Date of search         | 05/05/2025                                                                                                                                                                                             |
| Search strategy        | ALL FIELDS<br>("social entrepr*" AND "digital*") OR "Digital Social Entrepr*"<br>Total articles: 270                                                                                                   |
| Time frame (FILTER)    | 2005-2024 (in order to capture from the first published article, until the last full year available)<br>Total articles: 249                                                                            |
| Document type (FILTER) | Include: Article, book chapter, review articles<br>Exclude: Proceeding Paper, Editorial Material and Early Access<br>Total articles: 188                                                               |
| Categories (FILTER)    | Refined by the following categories:<br>Business, Management, Economics, Business Finance, Communication, Social Sciences Interdisciplinary, Social Issues, Development Studies<br>Total articles: 123 |
| Language (FILTER)      | Inclusion: English and Spanish<br>Final sample of total articles: 117                                                                                                                                  |
| Analyses               | Evolution of the publications<br>Main categories<br>Top journals<br>Top authors<br>Top countries<br>Keyword co-occurrence<br>Bibliographic coupling of authors                                         |

The retrieval was done the 5<sup>th</sup> of May, 2025. In order to capture and synthesise the research conducted over time in the intersection of both topics, we have elaborated the following set of keywords: (“social entrepr\*” AND “digital\*”) OR “Digital Social Entrepr\*”

These words were selected manually from the literature. The total of articles that appeared was 265. We then filtered by date, document type, language and categories (as we wanted to have a management approach). These filters reduced the total sample of articles included in our bibliometric analysis to 117 articles. The list of articles downloaded from WoS to use in the software VOSviewer can be found in [Appendix 1](#). The analysis was conducted using VOSviewer, a software that applies the visualization of similarities (VOS) methodology to examine patterns of co-citation among references. This approach eliminates the need for manual, reference-by-reference screening to identify off-topic sources. Since VOSviewer highlights only the most significant co-occurrence relationships, references that are unrelated to the central theme of the dataset are unlikely to appear in the resulting visualizations, as they do not share meaningful connections with the core body of literature.

Finally, the type of analyses that we selected to perform according to our main objectives are: top authors, top countries and keyword co-occurrence. The co-occurrence analysis improves the understanding about the thematic clusters as it is the only analysis that includes relations of terms ([Donthu et al., 2021](#)).

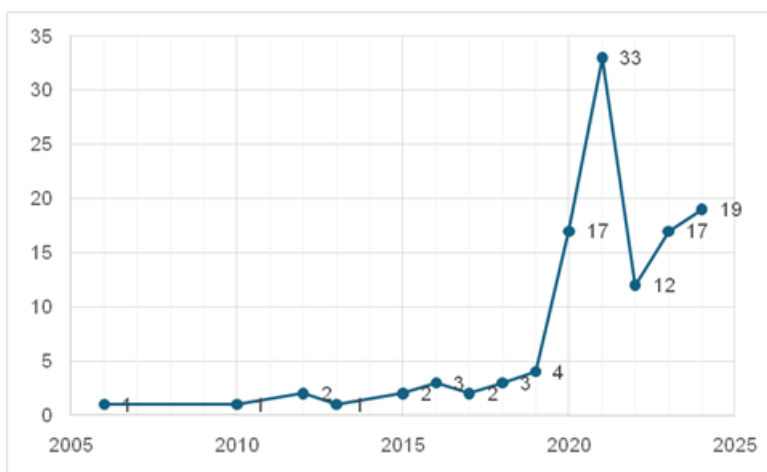
## 4. Results

### 4.1 Performance analysis

Next we will find the evolution of publications over time, the subject area of the publications, the list of journals that publish the articles, top authors and top countries.

In [Figure 2](#) we can see the evolution of the number of published articles in the field. Until 2019 the number of publications was lower than 5 per year, however, after that there is a clear rise in the publications. This indicates the interest of this topic among scholars. The year with the highest publications was 2021 with a total of 33 articles.

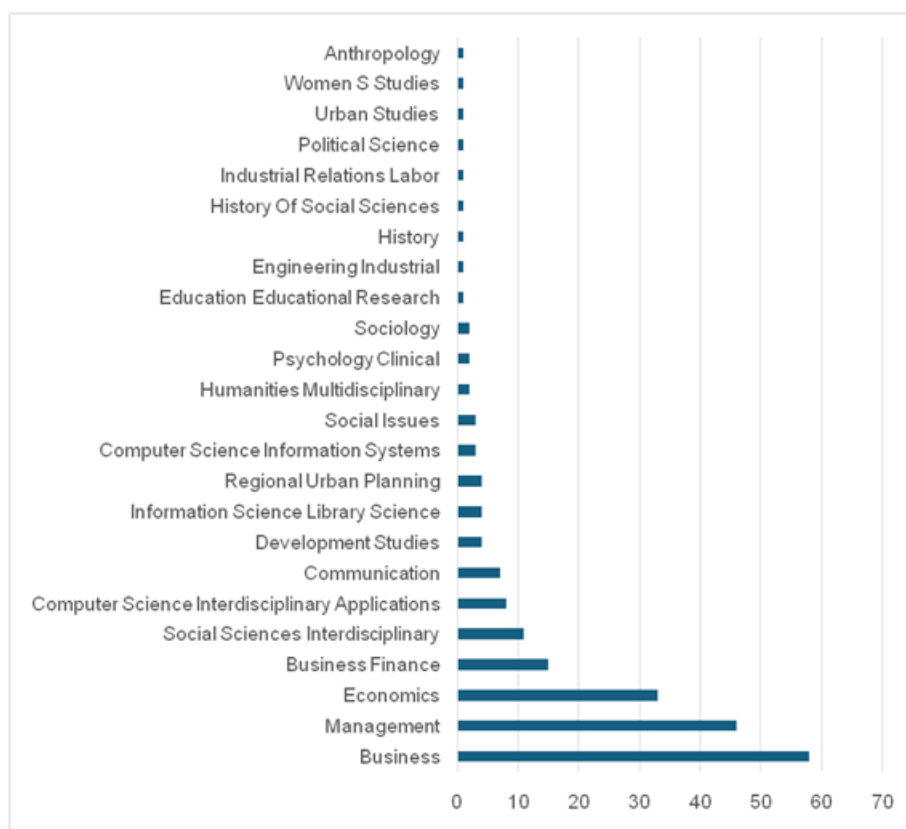
**Figure 2.** Evolution of publications



In [Figure 3](#) we can see the classification of the publications by WoS categories. In WoS, articles can be classified into more than one category depending on the topic of the publication. For instance, the same article can be categorized at the same time as ‘Management’ and ‘Sociology’. That is why the total number of articles in [Figure 3](#) does not sum 117, which is the total number of articles in our sample.

The most representative categories with more than 10 publications in each are: Business, Management, Economics, Business finance, and Social Science Interdisciplinary. This means that articles of this topic are mostly studied from a managerial perspective. Nevertheless, other minority subjects related to computer science/engineering, history, or political science, among others, are also represented. This shows the multiple disciplines views of this topic.

**Figure 3.** Publications by WoS categories



In [Table 2](#) we can see the list of journals that published at least 2 articles on the topic. The full list, which includes also journals with less than 2 articles, can be found in [Appendix 2](#). It contains 82 different journals.

We can see that the top journals are specialised on the topics of entrepreneurship and digitalization. Other journals follow a wider scope within the managerial science topics such as “Business Horizons” or “Future Business Journal”.

In Figure 4 we can see the main authors of the social entrepreneurship and digitalization intersection according to the number of contributions. There is a small difference by number of published articles, as the top contributor is Guerrero, M. with 4 articles, and all the rest follow with 3 publications. However, we find more differences by number of citations of each author. We can see that the most noticeable author is Sergi, B.S. with 150 citations; followed by Guerrero, M. with 78 citations; and Barros-celume, S., Ibáñez, M.J. and Yáñez-valdés, C. with 72 each.

**Table 2.** List of journals

| Journals                                                             | Nº articles |
|----------------------------------------------------------------------|-------------|
| ECONOMIC ISSUES OF SOCIAL ENTREPRENEURSHIP                           | 13          |
| ACCESS: ACCESS TO SCIENCE BUSINESS INNOVATION IN THE DIGITAL ECONOMY | 8           |
| JOURNAL OF SOCIAL ENTREPRENEURSHIP                                   | 6           |
| TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE                          | 4           |
| ENTREPRENEURSHIP THEORY AND PRACTICE                                 | 3           |
| JOURNAL OF INNOVATION KNOWLEDGE                                      | 3           |
| SOCIAL ENTERPRISE JOURNAL                                            | 3           |
| ACTIONS AND INSIGHTS MIDDLE EAST NORTH AFRICA                        | 2           |
| AMERICAN BEHAVIORAL SCIENTIST                                        | 2           |
| BUSINESS HORIZONS                                                    | 2           |
| CHINESE MANAGEMENT STUDIES                                           | 2           |
| FUTURE BUSINESS JOURNAL                                              | 2           |
| HUMANITIES SOCIAL SCIENCES COMMUNICATIONS                            | 2           |
| INTERNATIONAL ENTREPRENEURSHIP AND MANAGEMENT JOURNAL                | 2           |
| JOURNAL OF GLOBAL SCHOLARS OF MARKETING SCIENCE                      | 2           |
| JOURNAL OF STRATEGIC INFORMATION SYSTEMS                             | 2           |
| SOCIAL ENTREPRENEURS                                                 | 2           |

**Figure 4.** Top authors

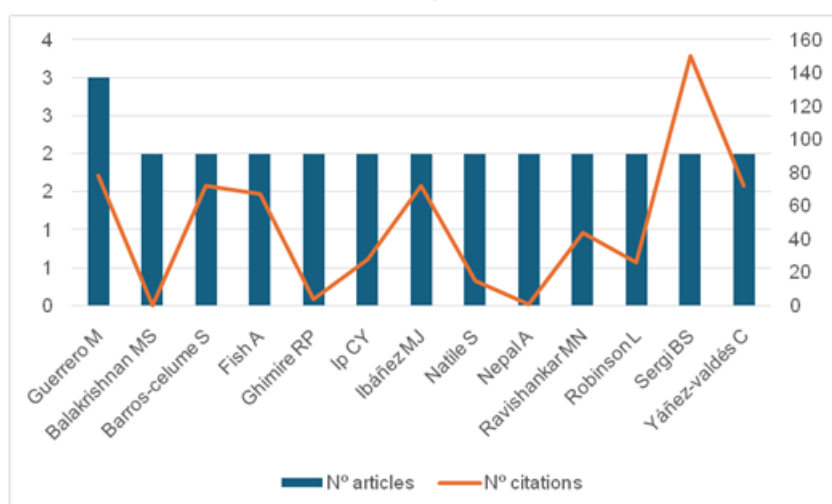
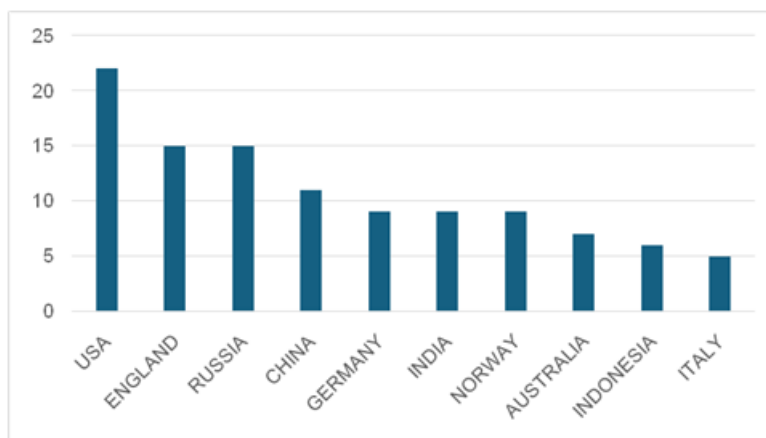




Figure 5 shows the top 10 countries by number of publications.

The United States of America (USA) emerges as the dominant leader, with over 20 publications, significantly outpacing all other countries. Following the USA, UK and Russia stand out with 15 publications each. This indicates that these countries are key players in shaping the theoretical and practical developments in this field. Emerging economies such as India and China also feature prominently, with each contributing around 10 publications.

Figure 5. Top 10 countries



Other European countries like Germany, Norway and Italy are also notable contributors, with 9, 9 and 5 publications respectively. These numbers demonstrate a steady academic interest in integrating digital tools into social entrepreneurship practices. Australia and Indonesia also show research activity, reflecting their engagement in this interdisciplinary field.

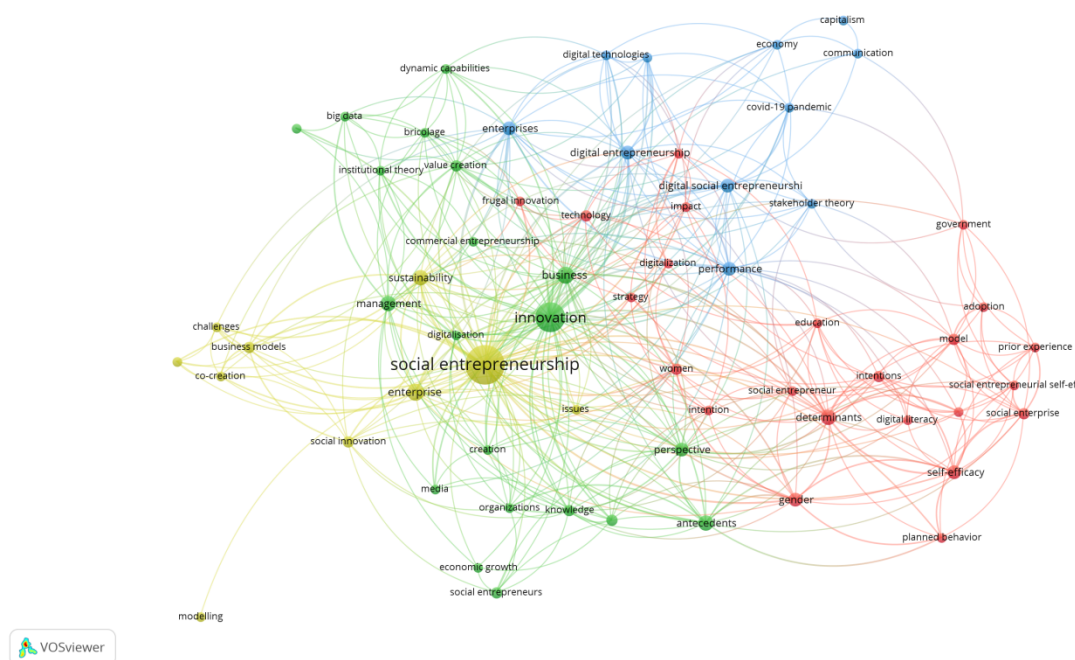
## 4.2 Science mapping

In this subsection we can find the VOSviewer analyses. In Figure 6 we find the keyword co-occurrence analysis. This thematic cluster map provides a comprehensive overview of the research landscape in social entrepreneurship and digitalization.

This bibliometric map, created using VOSviewer, displays a thematic network of terms related to social entrepreneurship and digitalization. The central position of “social entrepreneurship” reflects its prominence as the core focus of this analysis, while clusters around it represent thematic subfields. Below we will show the four thematic subfields found and the keywords they include. The occurrences of the most important keywords of each cluster will be shown in parenthesis. Having into account the keywords identified in each cluster we can set a name and describe each of them.

**Yellow Cluster: Core Focus on Social Entrepreneurship.** Key terms: social entrepreneurship (33), sustainability (5), enterprise (6), social innovation, business models, digital platforms, co-creation, challenges, issues, modelling. This cluster centres around the foundational concept of social entrepreneurship, emphasizing its role as a driver of sustainable and innovative solutions to societal challenges. With terms like *sustainability*, *social innovation*, and *enterprise*, it highlights how social enterprises aim to balance economic and social objectives. The inclusion of *business models* and *co-creation* reflects the operational strategies and collaborative approaches these organizations use to achieve their goals. Moreover, *challenges* and *issues* underline the barriers social entrepreneurs face, while *digital platforms* suggests a growing reliance on technology to amplify their impact. Overall, this cluster represents the theoretical and practical underpinnings of social entrepreneurship.

Figure 6. Keyword co-occurrence analysis



**Blue Cluster: Digital Entrepreneurship and Broader Economic Context.** Key terms: digital entrepreneurship (4), digital social entrepreneurship (4), performance (4), enterprises (4), capitalism, economy, stakeholder theory, communication, covid-19 pandemic, industry 4.0, digital technologies. This cluster explores the integration of digitalization within entrepreneurship and its impact on economic systems. The prominence of *digital entrepreneurship* and *digital social entrepreneurship* suggests a focus on how digital tools and technologies enhance entrepreneurial activities, especially in addressing social issues. *Performance* and *enterprises* highlight the role of digitalization in improving efficiency and scalability (Lafuente et al., 2020). The terms *economy*, *capitalism*, and *stakeholder theory* point to a broader exploration of how digital entrepreneurship fits into economic and social systems. Additionally, *industry 4.0* and *digital technologies* suggest that technological advancements play a pivotal role, while *covid-19 pandemic* underscores the relevance of digital entrepreneurship in adapting to global crises.

**Green Cluster: Innovation, Management, and Theoretical Foundations.** Key terms: innovation (19), digitalisation, big data, value creation, dynamic capabilities, management, sustainable development, economic growth, institutional theory, knowledge, organizations, social entrepreneurs, commercial entrepreneurship, bricolage, media, perspective, responsibility, creation. This cluster revolves around the theme of innovation and its application in social and commercial contexts. The centrality of *innovation* underscores its critical role in driving progress and addressing complex challenges. Terms like *digitalisation* and *big data* highlight how technology is utilized to foster innovation and optimize decision-making. *Dynamic capabilities*, *management*, and *value creation* point to the strategic and organizational aspects of innovation, particularly in promoting *sustainable development* and *economic growth*. Theoretical perspectives such as *institutional theory* and *knowledge* suggest that this cluster also addresses the academic foundations of innovation in entrepreneurship. Overall, it integrates technological, managerial, and theoretical dimensions of innovation.

Red Cluster: Behavioural and Individual-Level Factors in Social Entrepreneurship. Key terms: determinants (5), self-efficacy (4), gender (4), social entrepreneurial self-efficacy, social support, digital literacy, intentions, impact, strategy, adoption, prior experience, planned behaviour, education, frugal innovation, transformation, technology, government, social entrepreneur, social enterprise, women. This cluster focuses on individual and behavioural aspects of social entrepreneurship. The prominence of *determinants* and *intentions* indicates an emphasis on factors influencing individuals' engagement in social entrepreneurship. Terms like *self-efficacy* and *social entrepreneurial self-efficacy* point to the importance of confidence and personal capacity in entrepreneurial success, while *gender* and *women* highlight the role of demographics and gender-specific barriers or opportunities. *Education* and *digital literacy* suggest the necessity of skills and knowledge to navigate technological and entrepreneurial challenges. Terms such as *government*, *strategy*, and *transformation* indicate the influence of external support and strategic planning. This cluster represents the human-centered side of social entrepreneurship, examining how individual and structural factors interact to drive success.

The next analysis is the bibliographic coupling of authors. This analysis assumes that two publications that share common references are also similar in content. Therefore, it divides the publications into thematic groups based on shared references. In [Figure 7](#) we can see the bibliographic coupling of authors.

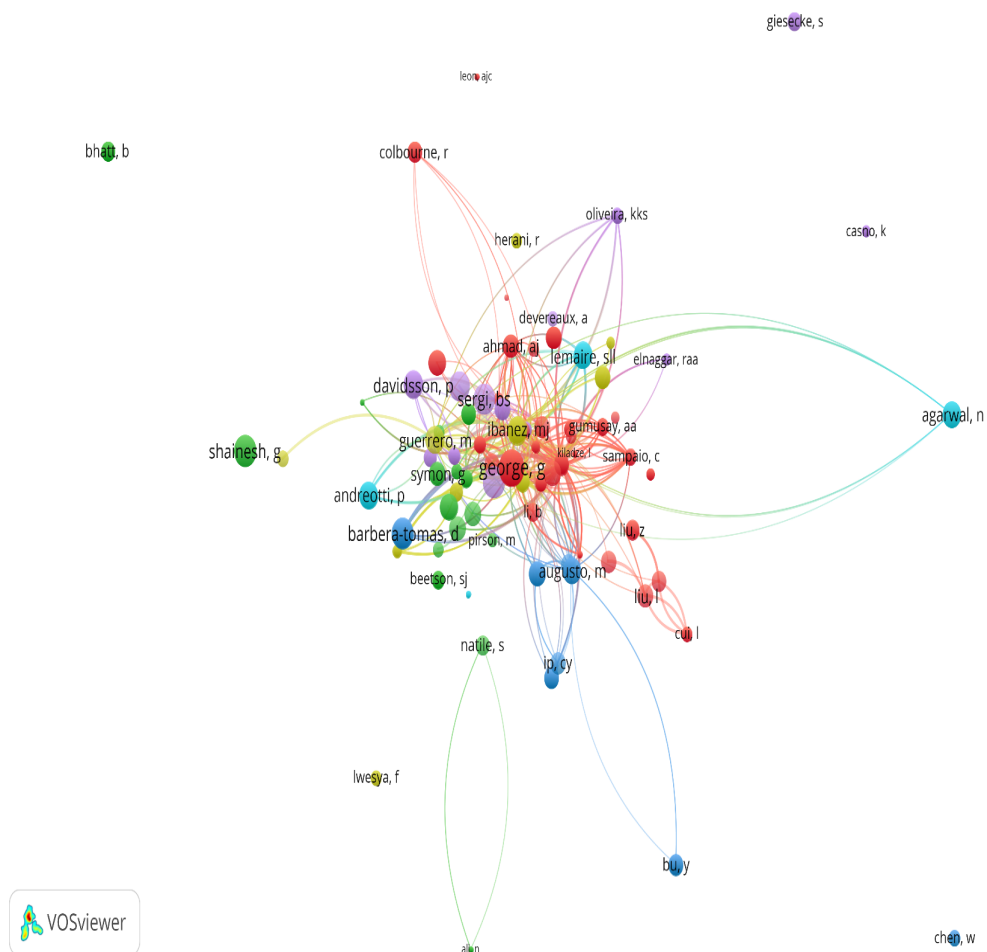
First of all, authors that we identified in [Figure 4](#) as top authors by number of publications (Barros-Celume, S., Guerrero, M., Sergi, B.S., Fish, A. and Ravishankar, M.N.), are centrally located and connected to multiple clusters. Due to their central position we can say that these authors are key contributors, and also act as bridges between clusters, facilitating knowledge exchange.

In the image we can also see isolated authors like Leon, A.J.C., Giesecke, S., Casno, K., Chen, W., or Kwesya, F. They appear marginally connected and far from the central part of the network. This may indicate different things such as: they are new to the field, their work is less collaborative or that they publish in niche subtopics with fewer authors.

Regarding the colour clusters, we find 6 groups. The largest group is the red cluster, which comprises 69 authors. This group is densely connected with frequent internal collaboration compared to the other clusters that are more dispersed. The size of the nodes is related to the citations: the bigger the node, the more citations it has. The most notable author by number of citations in the red cluster is George, G. His work gathers 374 citations and addresses the topic of how to tackle climate change and sustainable development through digital entrepreneurship ([George et al., 2021](#)).

In the green cluster we find 38 authors. The most notable ones are Shainesh, G., Fish, A. and Ravishankar, M.N. Their studies explore the intersection of digital innovation and social impact, particularly in developing country contexts like India. Each author emphasizes the transformative potential of digital tools in empowering marginalized or underserved populations, whether through telemedicine ([Srivastava & Shainesh, 2015](#)), outsourced digital labour ([Fish & Srinivasan, 2012](#); [Sandeep & Ravishankar, 2015](#)), audience-driven media participation ([Fish, 2013](#)), or microfinance platforms ([Masiero & Ravishankar, 2018](#)).

The dark blue group contains 30 authors, in which the most cited authors are Barbera-tomas, D., and Augusto, M. Their work explores the mechanisms through which social entrepreneurship drives transformation, though from different angles (micro level, and macro level. The first ([Barberá-Tomás et al., 2019](#)) focuses on emotion-driven strategies, analysing how social entrepreneurs addressing plastic pollution use visual and verbal tools to generate moral shock and emotional energy that motivate behavioural change and engagement with their cause. The second one ([Torres & Augusto, 2020](#)), in contrast, takes a macro, configurational approach, examining how digitalisation and social entrepreneurship interact with institutional contexts to influence national well-being. Together, these studies illustrate the complex, context-dependent nature of social entrepreneurship.

**Figure 7.** Authors' bibliographic coupling analysis

Next, we find the yellow cluster. The main authors of the cluster Guerrero, M., and Ibañez, M.J. Their work converges on the theme of how entrepreneurial responses to crisis events—such as the COVID-19 pandemic (Ibáñez et al., 2022; Yáñez-Valdés et al., 2023) or the Global Financial Crisis (Guerrero & Walsh, 2024)—catalyse new forms of innovation, resilience, and value creation, particularly through digital and social entrepreneurship.

The purple cluster comprises 25 authors, being Zahra, S.A., Popkova, E.G., and Sergi, B.S, the most cited ones. The studies from these authors are unified by their forward-looking focus on the evolution of entrepreneurship in response to global challenges, particularly through the lenses of social impact, digital transformation, and institutional context. Each explores how entrepreneurship—especially social and international entrepreneurship—is adapting to and shaping the future in light of major disruptions like the COVID-19 pandemic (Zahra, 2021), Industry 4.0 (Popkova & Sergi, 2020), and persistent institutional voids (Goyal et al., 2021).

Finally, the smallest group is the light blue, which comprises 24 items. The most important authors are Andreotti, P., and Agarwal, N. their work share a common interest in how entrepreneurial ecosystems and support structures—such as

incubators (Sansone et al., 2020) and digital platforms (Battisti et al., 2022)—can be designed to foster socially impactful entrepreneurship, particularly in the context of digital and data-driven economies.

## 5. Discussion

This study represents a pioneering effort to conduct a bibliometric analysis within the intersecting fields of social entrepreneurship and digitalization. As governments, international organizations, and private stakeholders increasingly prioritize digital transformation as part of their sustainable development agendas, understanding how digital technologies can enable and enhance social enterprises becomes critical.

This paper contributed by providing a structured framework for future research in the intersection of social entrepreneurship and digitalization. By mapping the intellectual foundations, we pave the way for more targeted and in-depth studies. Scholars can build on this foundation to explore under-researched areas, such as the impact of emerging technologies (e.g., artificial intelligence, blockchain) on social enterprises or the role of digital platforms in fostering cross-sector collaborations.

The identification of key authors and countries also provides a valuable resource for academic networking and collaboration. Furthermore, the thematic clusters highlight interdisciplinary opportunities, encouraging scholars from fields like management, information systems, and sustainability to contribute to the discourse.

The findings have practical implications for social entrepreneurs, policymakers, and international organizations. Digital technologies are shown to be critical enablers of innovation and scalability in social enterprises (Lafuente et al., 2020). Governments and international bodies, such as the United Nations, should recognize the potential of digitalization in achieving sustainable development goals (SDGs). For example, digital platforms can enhance access to quality education, healthcare, and economic opportunities, particularly in underserved communities.

Practitioners can leverage the insights from this study to adopt digital tools and strategies that align with their social and environmental missions. The emphasis on behavioural factors, such as self-efficacy and education, suggests that capacity-building initiatives should be prioritized.

Policymakers can draw valuable lessons from this research to design supportive frameworks that facilitate digital transformation in social enterprises. Addressing systemic barriers, such as the digital divide and limited access to technology, is crucial for ensuring that social entrepreneurs can fully harness the potential of digitalization. Moreover, the study's emphasis on sustainability and social innovation aligns with global development agendas, such as the United Nations' Sustainable Development Goals (SDGs), reinforcing the role of social enterprises as key actors in achieving inclusive and sustainable growth.

## 6. Conclusion

The primary objective of this paper was to structure the intellectual foundations of the field. To achieve this objective, we employed bibliometric techniques, analysing keyword co-occurrence, leading authors, journals, categories and influential countries. The study relied on the WoS database, focusing on relevant articles published up to 2024.

The bibliometric analysis identified the top contributing authors, journals and countries in the field, providing a roadmap for scholars to engage with active leading experts and regions. The author that has contributed the most number of publications is Guerrero, M. The top journal with 13 publications is 'Economic Issues of Social Entrepreneurship'. According to the countries analysis, overall, we can see that this topic is of a global interest, for all type of regions, developed and

developing countries. The results suggest that the USA has established itself as a central hub for academic research and innovation at the intersection of social entrepreneurship and digital technologies. The high level of publications reflects both the academic and practical importance placed on leveraging digital tools to address social challenges within the country. Next, Russia and England's strong contributions underscore their active engagement in exploring the role of digitalization in advancing social entrepreneurship. This indicates that these countries are key players in shaping the theoretical and practical developments in this field. The involvement of India and China highlights the growing recognition of digitalization as a critical tool for addressing social challenges in these rapidly developing regions. The emphasis on digital innovation in these countries aligns with their broader efforts to harness technology for inclusive development and social impact.

The thematic analysis revealed four major clusters that encapsulate the research focus within this intersection: core focus on social entrepreneurship; digital entrepreneurship and economic context; innovation, management and theoretical foundations; and behavioural and individual-level factors. With the bibliographic coupling analysis of authors we were able to find examples of studies and authors that fall into the previously mentioned thematic groups.

This bibliometric analysis has provided a comprehensive overview of the intersection between social entrepreneurship and digitalization, shedding light on key research themes, contributors, and global trends. By mapping the intellectual structure of this emerging field, the study offers valuable guidance for future research and practical applications, ultimately contributing to the advancement of knowledge and the promotion of social impact through digital innovation.

While this study provides valuable contributions, it is not without limitations. The reliance on the WoS database limits the scope of the analysis. Including other databases, such as Scopus or Google Scholar, could provide a more comprehensive view of the literature. The relatively low number of articles included for science mapping reduces the generalizability of the findings. This limitation is partially due to the emerging nature of the field. Another limitation related to the methodology used, is that due to the quantitative nature of this review method, the information that can be extracted from the literature is limited. Bibliometric analyses are useful to provide the structure of research fields; however, it does not allow the analysis of the content of the articles.

We propose several directions for future research. Future studies should incorporate multiple databases to capture a broader range of publications. This will help validate and expand the thematic clusters identified in this study. Also, investigate the role of advanced technologies, such as artificial intelligence, blockchain, and the Internet of Things, in enhancing the impact of social enterprises. Additionally, examine the role of government policies and international frameworks in promoting digital transformation in social enterprises. And finally, a more qualitative review of the literature could be done to provide more in-depth information about the thematic clusters found. It would allow for instance, to understand which topics have been studied more and which need more attention.

Despite its limitations, this study lays the groundwork for future research and offers practical insights for social entrepreneurs and policymakers. As digitalization continues to reshape the entrepreneurial landscape, it is imperative to explore its implications for social enterprises comprehensively. Future studies can further advance the understanding and practice of social entrepreneurship in the digital age.

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## Appendixes

### Appendix 1. List of references downloaded from WoS to use in VOSviewer for analysis.

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Appendix 2. List of all journals that published articles on the topic, ordered by number of publications.

| Journals                                                                                              | Nº articles |
|-------------------------------------------------------------------------------------------------------|-------------|
| ECONOMIC ISSUES OF SOCIAL ENTREPRENEURSHIP                                                            | 13          |
| ACCESS: ACCESS TO SCIENCE BUSINESS INNOVATION IN THE DIGITAL ECONOMY                                  | 8           |
| JOURNAL OF SOCIAL ENTREPRENEURSHIP                                                                    | 6           |
| TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE                                                           | 4           |
| ENTREPRENEURSHIP THEORY AND PRACTICE                                                                  | 3           |
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