Social Entrepreneurship and Sustainable Development: 
A Bibliometric Analysis

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Abstract

Social entrepreneurship incorporates characteristics from several disciplines, but lacks a dominant framework and literature though it is a rapidly expanding area. Therefore, our paper aims to carry out bibliographic mapping of relevant publications with the help of Biblioshiny software (R studio) and VoSviewer based on the publications in the Scopus database. The primary outcomes indicated an upsurge in the interest of scholars particularly after 2015. The analysis displays that a significant number of publications originated from industrialised Western countries and suggests that the research field is quite new-fangled and requires authors to collaborate with each other. Moreover, numerous sustainability-related themes have been discovered through keyword co-occurrence analysis. The themes identified here are significant for practitioners and regulators who seek to take advantage of the synergy existing between our research areas. The directions for future research studies can be guided by quantitative research from underdeveloped nations or emerging economies.

Keywords: Social Value Creation, Bibliometric Analysis, Social Entrepreneurship, Sustainable Development Goals, Social Innovations

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Introduction

Interest in social entrepreneurship (SE) has gained momentum in recent years among entrepreneurship scholars (Bansal et al., 2019; Saebi et al., 2019; Sullivan Mort et al., 2003; Weerawardena & Mort, 2006). SE encompasses the achievement of social objectives by supporting sustainable development and thereby assisting in accomplishing sustainable development goals (SDGs). SDGs are a group of 17 objectives and 169 supporting targets that were developed and endorsed by 193 United Nations (UN) member nations as part of the 2030 agenda for sustainable development (United Nations, 2017). The impact of SE can be seen in terms of its contribution to societal and economic development (Peredo & McLean, 2006; Rey-Martí et al., 2016). At the same time, social entrepreneurs can be described as change agents (Dees, 2001), having the aim of exploiting entrepreneurial opportunities to provide systemic answers to social and environmental problems (Bansal et al., 2019; Partzsch & Ziegler, 2011) and ensuring their existence and sustainability within the market at the same time (Mair & Martí, 2006). However, social activists, philanthropists, environmentalists, and other practitioners with a social aspect can all be acting as social entrepreneurs.

Nevertheless, prior bibliometric literature evaluations on SE have been criticised for their narrow scope, lack of integration with sustainability themes, and the requirement for more objective, network analysis methods. For instance, bibliometric analysis was performed by Rey-Martí et al. (2016) exclusively on SE articles, without any identification of emerging themes. The author Dionisio (2019) seeks to examine the development of the SE field from 2005 to 2017 to outline the primary themes covered in the literature of this developing discipline but was concentrated on ‘Social Enterprise Journal’ only. Likewise, Campos et al. (2020) list the number of international findings and research publications on SE and the Economy for the Common Good (ECG) model published during the 2008-2017 period. However, the study revealed that only 1 of the 25 ECG model articles that the authors found throughout their search met their research criteria. In this context, the authors concluded that academics and scholars are dealing with field research that is still in its infancy and will continue to grow in the upcoming years. Henceforth, they were unable to locate any published papers linking the SE and ECG models. Further, Raman et al. (2022) studied women's entrepreneurship through the lens of sustainable development the results of which cannot be generalised to all social entrepreneurs. In the same vein, Ahmad and Bajwa (2022) undertook a bibliometric analysis to study the interplay between SE and economic development. The preliminary research suggests that SE is in the embryonic stage, which is truly captivating.
Accordingly, past literature has approached the concept of SE with sustainable consumption, social enterprises, social innovation, and economic development and paid scant attention to sustainable development. Furthermore, SE incorporates characteristics from several disciplines but lacks a dominant framework and literature though it is a rapidly expanding area. Therefore, to address the abovementioned research gaps, we have employed bibliometric analysis to provide a retrospection of the prevailing literature on this domain. The present study will allow scholars to recognise publishing patterns, research progression, and influential publications that will contribute to better comprehension of the research area where the foundation and theme of the literature can be determined by bibliometric review and thematic analysis. In addition, bibliographic coupling and co-occurrence analysis shall pinpoint the prominent keywords and countries along with future research directions in this area.

In SE, opportunities are identified, assessed, and taken advantage of resulting in creating social value creation over individual or shareholder gain and addressing the fundamental and long-term needs of society (Austin et al., 2006). Nonetheless, social value creation is a desirable but not sufficient prerequisite to itself. Any one of the following requirements must support the development of social value: the presence of social entrepreneurs, involvement in organisations of some kind (social businesses), a focus on the market, and use of social innovation (Dees, 2001) to address the societal problem (Choi & Majumdar, 2014). In addition to producing social value, SE also generates wealth and produces employment opportunities (Rey-Martí et al., 2016). Moreover, we need SE that employs entrepreneurial skills like creativity, ingenuity, and motivation coupled with the ability to confront society’s most pressing social concerns to achieve the goals of sustainable development (Iwueke Obinna & Nwaiwu Blessing, 2014) such as environmental preservation, social inclusion, gender inequity, and poverty (Di Zhang & Swanson, 2013; Šimundža et al., 2016). Social innovations and entrepreneurship have been acknowledged as essential to quell sustainability demands.

This paper gives us an overview of ‘social entrepreneurship’ and its differentiation from other forms of enterprises which is followed by the conceptualisation of ‘sustainable development’ explaining the case studies of social entrepreneurs who are contributing to this phenomenon. In the next section, we shall delve into the research methodology, discuss research findings, arrive at conclusions, scrutinise implications, provide recommendations, and contemplate possible future directions.
Social Entrepreneurship

Business and philanthropy were seen as two distinct and opposing concepts until the 1900s. After that, SE became a managerial prowess to support business activity and entrepreneurship while addressing social challenges in the 1970s. However, non-profit groups considered SE in 1990 as a way to generate social prosperity. The author Cornwall (1998) suggests that entrepreneurs have a social obligation to enhance their communities. Finally, in 2000, SE was acknowledged as a distinct academic research discipline (Hossain, 2019). A myriad of innovative models of value generation can be found in the SE sector because it makes use of novel resource kinds and combines them in novel ways (Seelos & Mair, 2005). In SE, a concentration on responsibility and discipline is mixed with the concepts of value creation from Say, the pursuit of opportunity from Drucker, resourcefulness from Stevenson, and innovation and change agents from Schumpeter (Dees, 2001). According to case study data, social entrepreneurs take immediate action to address market gaps left by the commercial and public sectors (Leadbeater, 1997). Though the literature on SE has expanded greatly over the past few years there are still considerable disagreements over how to conceptualise the SE construct. SE is still a new but nebulous notion according to past literature (Basilio, 2009; Choi & Majumdar, 2014; de los Ríos-Sastre & González-Sánchez, 2019; Dickel & Eckardt, 2021; García-Jurado et al., 2021; Harding, 2004; Littlewood & Holt, 2018; Saebi et al., 2019; Weerawardena & Mort, 2006). While it lacks theory and definition, it is intensely passionate and driven.

Social entrepreneurs are different from conventional entrepreneurs in the sense that the former prioritises fulfilling social needs (Carraher et al., 2016; Roberts & Woods, 2005; Welsh & Krueger, 2012) rather than just earning profit and accumulating wealth. Entrepreneurial attitude, performance measurement, firm mission, and resource mobilisation are key dimensions that separate SE from conventional entrepreneurs (Austin et al., 2006). It is worthwhile to mention that SE is acknowledged as a contribution but not as a panacea for solving societal issues (Waddock & Post, 1991). Social entrepreneurs exhibit particular behavioural traits in how they react to their surroundings. Their strategic choices and vision set them apart from the not-for-profit organisations (NFPs) (Weerawardena & Mort, 2006). Income-generating activities for nonprofit/ philanthropic organisations need to have a long-term strategic vision as well as measurable revenue and growth targets to qualify as social enterprises (Saebi et al., 2019). Furthermore, initiatives for corporate social responsibility (CSR) "seem to further some social benefit, beyond the interests of the corporation and that which is required by law" (McWilliams & Siegel, 2001, p-1) but “CSR is not necessarily linked to entrepreneurial action and innovation but often
denotes societal engagement of organizations (e.g., funding a sports club or donations to social organizations)” (Shepherd & Patzelt, 2011, p. 7).

Moreover, SE also entails the blending of economic/financial interest and social value while ecopreneurs typically concentrate on the environmental side of sustainable development (Bansal et al., 2019). The social enterprise has the option of using a hybrid, for-profit, or non-profit model. A hybrid social business model (HSBM) mixes conventional and socially responsible business concepts to balance their social impact and financial values (Jbara & Darnton, 2019). Hybrid organisations follow two bottom lines out of which focuses on profitability and the other on social value. However, authors Certo and Miller (2008) argued that an organisation pursuing a hybrid model cannot be considered a social entrepreneur as it can be challenging to determine a motive.

Social Entrepreneurship and Sustainable Development

Sustainable development is defined as the “development that meets the needs of the present generations without compromising the ability of the future generations to meet their own needs” (Brundtland, 1987, p. 41). As part of the 2030 framework for sustainable development, 193 UN member countries developed and adopted the Sustainable Development Goals (SDGs), a collection of 17 goals and 169 corresponding targets (United Nations, 2017), and were formally implemented on January 1st, 2016.

A report by Gregory (2015) provides a strong argument for the crucial part that social enterprises play in achieving these sustainable goals due to social enterprises' predisposition to handle problems that others overlook or are too difficult for them to manage effectively (de los Ríos-Sastre & González-Sánchez, 2019). Authors Littlewood & Holt (2015) determine how social enterprises may create good effects on society and the environment throughout their value chains and how they make the most out of scarce resources and behave effectively under institutional restrictions (Desa, 2012). In another study, authors Bansal et al. (2020) made an effort to understand, analyse, and interpret the role that social entrepreneurs play in accomplishing sustainable development and continue by suggesting policy changes to support SE to ensure sustainable development that is in line with the SDGs. However, it is imperative that SE within the framework of sustainable development can result in a decrease in poverty through improved financial performance, greater access to education through effective market competition, or cleaner access to water through the discovery and exploitation of new ideas (Apostolopoulos et al., 2018).
Therefore, policymakers should concentrate on promoting sustainability since it has emerged as a crucial goal to achieve for meeting present needs without undervaluing the relevance of other goals (Rennings et al., 2004). Moreover, authors Dickel and Eckardt (2021) demonstrated that women are more likely to transfer favourable desirability into SE goals while authors Yan et al. (2022) identified the macro and structural behaviours of the local governments for achieving sustainable growth. The authors Zhang et al. (2022) contributed to the understanding of how to identify and seize social opportunities in SE and proposed a theoretical framework for sustainable growth.

Further, Bill Drayton who founded “Ashoka: Innovators for the Public” is committed to locating and supporting social entrepreneurs all around the world. In the same way, Muhammad Yunus who is the creator of Grameen Bank offers microcredit loans to those in need to make them financially independent. Similarly, CEO Scott Harrison oversees the non-profit organisation ‘Water’. Another study is from India about Urvashi Sahni. She is the founder and CEO of SHEF (Study Hall Education Foundation), an organisation that has positively and directly or indirectly impacted the lives of between 150,000 and 270,000 girls through its work in India with more than 900 schools to provide education to the most disadvantaged girls.

SE is not only those who do good deeds; they also have a clear ambition to advance social welfare and create long-term projects (Basilio, 2009). Consequently, SE is actively involved in politics and is well-represented in the media (Dey et al., 2006). According to Welsh and Krueger (2012), SE has the potential to offer viable solutions to the most pressing issues in society. However, the authors Granados et al. (2011) found that there has been a noticeable growth in recent years in the scholarly exploration of social entrepreneurship along with more international research and collaboration. Given the emphasis on quality of life, the interplay between SE and sustainable development is particularly relevant and calls on entrepreneurs to balance sustainability considerations with the social life dimension. The topic is therefore large and complex and requires an array of approaches as it is of great importance to the academic community, the scientific community, and policymakers (Al-Qudah et al., 2022). Therefore, our paper aims to shed some light on the academic production of SE with sustainable development.

Research Methodology and Data

This paper employs the bibliometric review method, a kind of systematic literature review (SLR) for analysis. Bibliometrics has developed into a vital tool for
evaluating and examining scientific output, university collaboration (Moral-Muñoz et al., 2020), and presenting research results using keywords (Raman et al., 2022). Moreover, by utilising statistical tools to examine qualitative and quantitative changes in a certain scientific research topic, bibliometric analysis creates a profile of publications on a given topic and identifies major trends within a field (Rey-Martí et al., 2016).

We browse the scientific publications in the Scopus and Web of Science (WoS) databases generally as they are regarded as the largest and most significant multidisciplinary bibliometric databases since they index 22,878 peer-reviewed publications together and are two well-known databases (Van Eck & Waltman, 2019). Although WoS is regarded as a verified data source, we have selected the Scopus database for analysis as it has recently advanced to become the preferred database for analysis. However, we believe that the study's inclusion of only the Scopus database and exclusion of other academic databases is a major shortcoming of our study. In the first stage, we searched the keyword “Social entrepren* AND Sustainable development” in the search query, limiting the search to “titles, abstracts, and/or keywords”. As a result, the Scopus database returned 357 matches as a result of this search (Figure 1). All the papers published till 16 February 2023 were taken into the research study. In the second stage, additional research was done and certain inclusion criteria were established to lower the possibility of incorporating false positives that would not add value to our data collection. These inclusion criteria were: (i) document type only as “Article” or “Review” (ii) publication stage as “Final” (iii) source type as “Journal” (iv) language as “English” (refer Table 1).

### Table 1: Research Strategy Database Searching

<table>
<thead>
<tr>
<th>Search Word</th>
<th>“Social entrepren* AND Sustainable development”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Title, Abstract, and Keywords</td>
</tr>
<tr>
<td>Document Type</td>
<td>Articles and Reviews</td>
</tr>
<tr>
<td>Subject Area</td>
<td>All</td>
</tr>
<tr>
<td>Source Type</td>
<td>Journal</td>
</tr>
<tr>
<td>Language</td>
<td>English</td>
</tr>
<tr>
<td>Publication stage</td>
<td>Final</td>
</tr>
<tr>
<td>Search Date</td>
<td>16 February, 2023</td>
</tr>
</tbody>
</table>

However, book chapters, conference proceedings, notes, letters, short surveys, etc., and papers written in a language other than English that could not be used to
indicate a study into entrepreneurship in the social area and sustainable development were excluded from the analysis. After applying the inclusive criteria, the Scopus search result returned 213 documents (Figure 1).

**Figure 1: The PRISMA Model**

![PRISMA Model Diagram]

In the final stage, after reading full-text articles, 45 articles were excluded due to the lack of relevance, and 168 scientific articles were finalised out of 213 which had the main theme as social entrepreneurship and sustainable development. All the 168 bibliographic records of articles generated by Scopus were exported to a .csv file. This file contained the names of the authors, their publications' years, their affiliations, titles, author keywords, abstracts, journal names, citations, and references.

Bibliometric analysis using R with an inbuilt utility Biblioshiny has been used for analysing citation and publication structure in SE and sustainable development.
literature and for analysis of leading journals, countries, and authors. The VoSviewer software has been used for network analysis of co-occurrence of keywords and bibliographic coupling of sources and countries. To visualise bibliometric networks, VoSviewer uses a distance-based method, and any type of bibliometric network can be visualised through this software (Van Eck & Waltman, 2014). The graphical depiction of bibliometric maps receives extensive importance in VoSviewer as this functionality allows for the simple and clear viewing of large bibliometric maps (Van Eck & Waltman, 2010).

Results and Discussion

The following four subsections cover the study results: (i) publication and citation structure (ii) analysis of leading authors, journals, and countries (iii) literature review of top-10 relevant articles, and (iv) network analysis of co-occurrence of keywords, bibliographic coupling of sources and countries and conceptual thematic map have been carried out.

Publication and Citation Structure

Figure 2 depicts the number of annual publications in SE and the sustainable development field corresponding to publication years. Initial research trend illustrates that up until 2010, the number of publications remained near to the ground (at most five publications a year). It is an extremely recent research area with a very sluggish but consistent trend that has drawn the attention of academics more and more as seen by the rise in publications particularly after 2015 onwards. However, 157 scientific articles were produced after the first decade of the 2000s representing 94.57% of the total publications. This precipitous increase in scholarly interest in SE has resulted in an expanding body of literature and further institutionalisation of social entrepreneurship in academia.

Figure 3 enlist the overall patterns in the volume of average citations per article about SE and sustainable development over time. The data indicates that papers released from 2004 to 2010 received a noteworthy citation impact, with the most substantial peak transpiring in 2005. Nevertheless, there was a distinct decrease in citation levels after that time. A minor peak was identified from 2016 to 2017. It appears that there has been a downward trend in the average number of citations following 2017. This may be because newer publications tend to receive fewer citations compared to older ones. Most of the published research attempts to advance definitions, theoretical framework and foundation, and conceptions of social entrepreneurship.
Figure 2: Scopus Annual Scientific Publications on the Subject of Social Entrepreneurship and Sustainable Development by Years

![Number of Publications](image)

Figure 3: Average Total Citations (TC) Per Article

![Number of Publications](image)

**Leading Authors, Journals, and Countries**

There was a considerable geographical imbalance in this knowledge base even though contributions to our research study came from researchers from 55 different countries (See Table 2). The following data represents that half of our publication is coming from Spain (n=48), United Kingdom (n=19), Germany (n=27), India (n=32), China (n=31), Italy (n=16), Romania (n=13) and Sweden (n=12). These countries are showing a high number of citations probably mainly due to the evolving character of SE. The majority of the research on sustainable development is supported by developed economies (Bansal et al., 2019; Patzelt & Shepherd, 2011) nevertheless India took the fourth rank where 25% of the population in the country still makes less
than $1.25 (US dollar) each day (Genit, 2022), which is worth mentioning. In India, social entrepreneurship is growing as a result of its capacity to bring about change by tackling the issues raised by the 17 SDGs (Bansal et al., 2020).

However, countries like Denmark, France, Germany, Bulgaria, Switzerland, Uganda, Saudi Arabia; and Singapore generated at most 5 publications till now. This is a gap that should not be ignored, particularly given the prospective benefits that social entrepreneurship activities could have in keeping society and the environment in order even during times of a global pandemic like COVID-19. Henceforth, fostering social entrepreneurship is more of a necessity than a choice (Singh, 2020).

Table 2: Countries with the Most Scientific Productions and Citations

<table>
<thead>
<tr>
<th>R</th>
<th>Country</th>
<th>TC</th>
<th>TP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spain</td>
<td>884</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>United Kingdom</td>
<td>730</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Germany</td>
<td>495</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>Malaysia</td>
<td>409</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>Sweden</td>
<td>252</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>India</td>
<td>145</td>
<td>32</td>
</tr>
<tr>
<td>7</td>
<td>Iran</td>
<td>126</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Austria</td>
<td>107</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>China</td>
<td>95</td>
<td>31</td>
</tr>
<tr>
<td>10</td>
<td>New Zealand</td>
<td>90</td>
<td>11</td>
</tr>
<tr>
<td>11</td>
<td>Italy</td>
<td>82</td>
<td>16</td>
</tr>
<tr>
<td>12</td>
<td>Australia</td>
<td>61</td>
<td>6</td>
</tr>
<tr>
<td>13</td>
<td>Canada</td>
<td>53</td>
<td>10</td>
</tr>
<tr>
<td>14</td>
<td>Mexico</td>
<td>46</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>Romania</td>
<td>22</td>
<td>13</td>
</tr>
</tbody>
</table>

Identifying the journals with the greatest impact is pertinent for assisting future researchers in choosing the most suitable journals to publish their work. Out of 86 journals, we have included the top 10 journals in our study (see Table 3). The most productive journal with the greatest number of citations is “The Journal of Applied Behavioral Science” which has citations 758 globally. The Journal “Sustainability” (Switzerland) having the aim of achieving sustainable development for humanity has a total of publications = 25, h index = 13, and has been cited by 445 which is almost double that of the journal “Corporate Governance: An International Review”. Specifically, “The Journal of Cleaner Production" is dynamically involved in the area of sustainability having h index = 7 and citations = 333. In general, articles published
in prestigious journals signify progress in a field of study and ignite future research interests.

**Table 3: Scientific Journals with the Most Citations**

<table>
<thead>
<tr>
<th>Sources</th>
<th>Publisher</th>
<th>Citations</th>
<th>h-index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal of Applied Behavioral Science</td>
<td>Sage</td>
<td>758</td>
<td>74</td>
</tr>
<tr>
<td>Business Horizons</td>
<td>Elsevier</td>
<td>629</td>
<td>106</td>
</tr>
<tr>
<td>Business Strategy and the Environment</td>
<td>Wiley</td>
<td>505</td>
<td>131</td>
</tr>
<tr>
<td>Sustainability (Switzerland)</td>
<td>MDPI</td>
<td>445</td>
<td>136</td>
</tr>
<tr>
<td>Journal of Business Ethics</td>
<td>Springer</td>
<td>369</td>
<td>229</td>
</tr>
<tr>
<td>Journal of Cleaner Production</td>
<td>Elsevier</td>
<td>333</td>
<td>268</td>
</tr>
<tr>
<td>Corporate Governance: An International Review</td>
<td>Wiley</td>
<td>219</td>
<td>99</td>
</tr>
<tr>
<td>Landscape and Urban Planning</td>
<td>Elsevier</td>
<td>175</td>
<td>197</td>
</tr>
<tr>
<td>Business and Society</td>
<td>Sage</td>
<td>167</td>
<td>90</td>
</tr>
<tr>
<td>Entrepreneurship: Theory and Practice</td>
<td>Sage</td>
<td>81</td>
<td>16</td>
</tr>
</tbody>
</table>

**Table 4: Authors with Most Publications and Citations**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Documents</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiona Tilley</td>
<td>2</td>
<td>285</td>
</tr>
<tr>
<td>Stefan Schaltegger</td>
<td>2</td>
<td>138</td>
</tr>
<tr>
<td>María-Soledad Castaño-Martínez</td>
<td>2</td>
<td>101</td>
</tr>
<tr>
<td>Galindo-Martín Miguel-Angel</td>
<td>2</td>
<td>101</td>
</tr>
<tr>
<td>Méndez-Picazo Marfa-Teresa</td>
<td>2</td>
<td>101</td>
</tr>
<tr>
<td>Rafael Ziegler</td>
<td>2</td>
<td>68</td>
</tr>
<tr>
<td>Sara Calvo</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>Andrés Morales</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>Kseniya M. Kozinskaya</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Elena G. Popkova</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Anna Yu. Veretennikova</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Brizeida Raquel Hernánde</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Jose Carlos Sanchez-Garcia</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Yanto Chandra</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Bruno S. Sergi</td>
<td>2</td>
<td>18</td>
</tr>
</tbody>
</table>
The analysis showed a total of 436 authors, with roughly an estimate of 2-3 authors for each article. Nevertheless, only 23 authors have exceeded the threshold limit of a minimum of 2 published articles and therefore we have incorporated the top 15 authors in our analysis. The most prominent authors in this discipline are listed in Table 4 sorted by the number of publications and citations. The majority of the article citations have been received by the authors Fiona Tilley (285), Stefan Schaltegger (138), María-Soledad Castaño-Martínez (101), Galindo-Martín Miguel-Angel (101) and Méndez-Picazo María-Teresa (101), making them most influential researchers in this field. Surprisingly, each author has only published two documents implying that the research field is still in its early stages and requires collaboration among authors. Collaborating is vital for social enterprises as it helps them access resources and funding and enhances their legitimacy.

**Literature Review of Top-10 Papers**

Another search query on the Scopus database has been made with the keyword “Social entrepreneurship and sustainable development” and we have applied a relevance filter to narrow down our search for the most influential publication. Consequently, only 10 documents were deemed relevant and found in the Scopus database without any exclusion criteria since knowledge of how entrepreneurship can support the SDGs and how its implementation can change businesses is currently inadequate (Apostolopoulos et al., 2018; Bansal et al., 2019). Henceforth, the top 10 papers that integrate sustainable development and social entrepreneurship are enlisted in Table 5.

**Network Analysis**

This section covers the network analysis of the Co-occurrence of keywords and bibliographic coupling of sources and countries using VoSviewer. Items are represented in the network analysis by their label and by default by a circle as well. The size of the circle determines the weight of an item and the label for that item and the label and circle of an item grow in size in proportion to its weight (Van Eck & Waltman, 2021).

**Analysis of Co-occurrence of Keywords**

Some keywords that are identical to other keywords have been replaced before analysis. The word "entrepreneurship" has been used in place of the word "entrepreneur". Similarly, the keywords “social enterprise”, “social entrepreneur”
<table>
<thead>
<tr>
<th>Type of analysis</th>
<th>Method</th>
<th>Key areas</th>
<th>Objectives</th>
<th>Contribution to our research field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative</td>
<td>Multilevel perspective (MLP) approach</td>
<td>Poverty, rural-urban migration, and green city</td>
<td>To examine the history of SE and sustainable growth based on different development stages of Yiwu.</td>
<td>The study primarily talks about the behaviours and activities of residents, businesses, and governmental entities involved in the collaborative effort and cooperation in attaining SE and sustainable development in Yiwu, and then provides a valuable process model to the field.</td>
</tr>
<tr>
<td>Quantitative</td>
<td>Pre and post-test survey</td>
<td>Social work education</td>
<td>To assess differences between graduate social work students who received traditional instruction and those who received standard training for the same SE and sustainable development issue (n=21).</td>
<td>The result indicated that after the post-test, the expanded instruction given to the group outperformed the comparison group in terms of knowledge about the issue.</td>
</tr>
<tr>
<td>Quantitative</td>
<td>Structural equation model and bidirectional causality model</td>
<td>RECP countries, innovation, and institutions</td>
<td>To scientifically investigate the connection between SE and sustainable development in the context of 15 countries that are part of a region.</td>
<td>The authors examined that SE and sustainable development are positively correlated, as are innovations and sustainable development. The study also discovered that institutions have</td>
</tr>
<tr>
<td>Type of analysis</td>
<td>References</td>
<td>Method</td>
<td>Key areas</td>
<td>Objectives</td>
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<tr>
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<tr>
<td>Qualitative</td>
<td>(Zhang et al., 2022)</td>
<td>Case study method</td>
<td>Rural poverty, social opportunity, and value chain</td>
<td>To inspect the social entrepreneurship processes of nine businesses and the method for addressing rural poverty based on the discovery and development of social possibilities.</td>
</tr>
<tr>
<td>Quantitative</td>
<td>(Méndez-Picazo et al., 2021)</td>
<td>Structural Equation model</td>
<td>Corruption, economic, and socio-cultural factor</td>
<td>The objective is to examine how sociocultural and economic variables interact with general and social entrepreneurship as well as how these two forms of entrepreneurship affect sustainable development.</td>
</tr>
<tr>
<td>Quantitative</td>
<td>(Galindo-Martín et al., 2020)</td>
<td>Structural equation</td>
<td>Green Innovation,</td>
<td>The aim is to examine the connections using two</td>
</tr>
<tr>
<td>Type of analysis</td>
<td>References</td>
<td>Method</td>
<td>Key areas</td>
<td>Objectives</td>
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<tr>
<td>Conceptual</td>
<td>(De los Ríos-Sastre &amp; González-Sánchez, 2019)</td>
<td>N/A</td>
<td>Fourth industrial revolution and job creation</td>
<td>To highlight the major advancements in SE over the past few years, outline the problems and opportunities ahead.</td>
</tr>
<tr>
<td>Qualitative</td>
<td>(Paliwal &amp; Chaturvedi, 2019)</td>
<td>Case study method</td>
<td>Triple bottom line (TBL), employment and social ventures</td>
<td>To respond to the following questions namely how does entrepreneurship support and contribute to sustainable development, what impact that social enterprises have on society and how do SE and</td>
</tr>
<tr>
<td>Type of analysis</td>
<td>References</td>
<td>Method</td>
<td>Key areas</td>
<td>Objectives</td>
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</tr>
<tr>
<td>Qualitative</td>
<td>(Popescu et al., 2020)</td>
<td>Multiple case studies from different countries</td>
<td>Cross-cultural, social value and SDGs</td>
<td>To propose a conceptual model of SE and SDGs considering various stakeholder viewpoints, organisational processes, and multiple value-creation strategies.</td>
</tr>
<tr>
<td>Conceptual</td>
<td>(Elkington, 2006)</td>
<td>N/A</td>
<td>Corporate governance, World Economic Forum, and TBL</td>
<td>To provide a succinct summary of Sustainability’s work on corporate governance and an analysis of the three main waves of societal pressures on business since 1960.</td>
</tr>
</tbody>
</table>
and “social entrepreneurs” were substituted by the keyword “social entrepreneurship”. The additional replacements are: “social innovation” with “social innovations” and “environmental entrepreneurship” with “sustainable entrepreneurship”. Finally, the keywords “sustainable development goal” and “sustainable development goals (SDGs)” were replaced by “sustainable development goals”.

The initial default setting for the minimum number of times a keyword must appear in a publication was 5. Twenty four out of 872 keywords fulfil the criteria. The resulting image gave us a small number of keywords and we cannot generalise the results on that basis. Therefore, we decline the minimum occurrence of keywords by 1 and get 42 keywords out of 872. By setting the value of minimum occurrence of keywords 3, we get 73 keywords but the final image is too scattered to allow for any significant analysis. Hence, the best results were found by keeping the value four of the minimum occurrence of keywords. In the end, 42 keywords, 6 clusters, and 300 links were found with a total link strength of 878. Figure 4 displays the generated image.

Each cluster has been assigned a theme which is described below:

**Cluster 1: Small and medium-sized enterprises innovations for sustainability.** Red colour lines have been used to indicate this cluster. The most significant keywords in this cluster are “sustainability” with 43 occurrences, “innovations” with 17 occurrences, “environmental economics” with 8 occurrences, small and medium-sized enterprises with 5 occurrences, and “sustainable entrepreneurship” with 4 occurrences. However, we cannot overlook the role of small and medium-sized enterprise in realising sustainable development goals as they generate employment, reduce poverty, and improves the standard of living. They have the potential to enhance their sustainability by integrating eco-friendly practices and technologies. This can be accomplished by utilising renewable energy sources, incorporating recyclable materials, streamlining production processes, and implementing responsible environmental management strategies. Furthermore, scholars Sondhi et al. (2022) have done a literature review on the subject of sustainable entrepreneurship and concluded that green, environmental, ecopreneurship, and social entrepreneurship all fall under the heading of sustainable enterprises. This cluster represents environmental economics having a total link strength of 38 which focuses on how to use and manage limited resources in a way that benefits the people and addresses environmental effect concerns.
Cluster 2: Social entrepreneurship and sustainable development. Green colour lines have been used to indicate this cluster. The relevant keywords in this cluster are “social entrepreneurship” with 112 occurrences, “sustainable development” with 93 occurrences, and “entrepreneurship” with 50 occurrences. Based on the gathered data, it seems that the majority of scholars have focused their attention on the interlinkage between SE and sustainable development. Besides, they have presented substantial empirical data to substantiate their claims (Al-Qudah et al., 2022; Galindo-Martín et al., 2020; Paliwal & Chaturvedi, 2019). Furthermore, social capital plays an imperative role in shaping social entrepreneurial intention (Ha et al., 2020; Jemari, 2017; Mahfud et al., 2020). However, the majority of the studies under this cluster are coming from China and Vietnam.

Cluster 3: Qualitative analysis of sustainable development goals. Dark blue colour lines have been used to indicate this cluster. As we can see in Figure 4, the “sustainable development goals” keyword circle appears larger due to its link strength of 57. In this regard, Authors Bansal et al. (2020) presented how social entrepreneurship-related policy efforts have contributed to sustainable development goals attainment using a qualitative approach. Nevertheless, we need SE which uses
entrepreneurial skills like creativity, ingenuity, and motivation coupled with the ability to confront society's most pressing social concerns to achieve the goals of sustainable development. The most cited authors who presented case studies related to the domain of sustainable development goals are Cumming et al. (2017), Fleming et al. (2017), Huan et al. (2021), and Yungkhanching and Black (2012).

Cluster 4: Economic and social effect of corporate social responsibilities. Yellow colour lines have been used to indicate this cluster. The keyword “Corporate social responsibilities” has the highest number of occurrences (9). There are three more keywords in this cluster specifically “economic and social effects”, “planning”, and “social economy”. In the current business world, numerous companies have embraced corporate social responsibility (CSR) as a strategy to advance ethical practices, sustainability, and positive social impact. Through its effective implementation, businesses can improve their reputation, stimulate greater community involvement, and convey their wider mission and values to stakeholders. Besides, the social economy helps to build more diverse, resourceful, and sustainable societies and economies by offering creative answers to address socioeconomic and environmental issues (Organisation for Economic Co-operation and Development, 2020).

Cluster 5: Social innovations for environment sustainability. Violet colour lines have been used to indicate this cluster. This cluster contains only three explicit keywords. "Social innovations" appears most frequently, with 13 occurrences. While "environmental sustainability " and business development with 4 occurrences. From this cluster, we get an idea of how social innovations can help in building the environment for constructive social change and in addressing social issues like poverty. These social changes can affect the economy and society therefore making it a social economy. Some of the major research work related to social innovations are (Maclean et al., 2013) with 250 citations, (Eichler & Schwarz, 2019) with 135 citations, and (Phillips et al., 2015) with 786 citations.

Cluster 6: India’s strategic approach towards sustainable development goals. Black colour lines have been used to indicate this cluster. Only two keywords “India” and “strategic approach” constitute this cluster with 5 and 4 occurrences respectively. India is an enterprising country that is experiencing rapid change and adopting a strategic approach towards fostering innovation and speeding progress toward meeting the sustainable SDGs with the help of cross-sector partnerships.
**Bibliographic Coupling**

Unlike co-citation analysis, the bibliographic relation between the two publications gets stronger when they share a large number of common reference lists (Kessler, 1963). Figure 5 represents the bibliographic coupling of major sources or journals in the domain of social entrepreneurship and sustainable development.

**Figure 5: Bibliographic Coupling of Sources**

![Bibliographic Coupling Image]

We have selected only those sources (journals) having at least two publications and citations of publication set to the default value of 0. However, out of 106 sources, 18 meet the criteria. Some sources have hardly shown any bibliographic coupling relations with other sources. In that situation, it is preferable to keep these sources out of a bibliographic coupling network (van Eck & Waltman, 2014). Therefore, we have excluded two sources from our analysis showing minimal bibliographic coupling relation. Finally, 16 sources have been considered for analysis. The resulting image is shown in Figure 5.

After conducting an analysis using VoSviewer, we were able to identify four distinct clusters. The first cluster (in red) is comprised of seven sources focusing on the following domains, for instance, entrepreneurship, society, and sustainability. In this cluster, the “Journal of Cleaner Production” emerged as the source with the second-highest number of publications (10), citations (333), and total link strength (495), and has linkage with 14 sources, and “Frontiers in Psychology” journal has only 4 publications, but its total link strength is 214 highlighting connections with 13 journals. On the other hand, the second cluster (green) has five sources. Where “Sustainability (Switzerland) journal has shown the highest number of publications
(25), citations (445), a total link strength of 672, and has an association with almost all journals. Cluster 3 represented by dark blue colour lines has only 2 journals. Nevertheless, both journals are predominately related to the domain of entrepreneurship. For example: the International Journal of Entrepreneurship and Small Business and International Journal of Entrepreneurship. Cluster 4 consists of two sources represented by yellow colour lines explicitly a journal of business research and the journal of security and sustainability issues. Although, the journal "Emerald Emerging Market Case Studies" from cluster 2 publishes real-life case studies, it appears to be closely allied with a sustainability journal.

Figure 6: Bibliographic Coupling of Countries

Furthermore, Figure 6 shows the most productive counties in our research field that have minimum publications of 2 and however citations of publication set to the value of 1. As a result, out of 71 countries, 34 meet the thresholds. Calculations were made for each country's total number of publications, citations, and link strength. We have excluded Nigeria from our analysis due to its minimal bibliographic coupling relation. Thus, 33 countries, 6 clusters, and 496 links with a total link strength of 12369 were finally obtained. Spain, Germany, the United States, the United Kingdom, and India are leading the research field extensively together with link strength of 2611, 2023, 1573, 1548, and 1514 respectively. This means that these countries are strongly connected to other countries. This cluster gives us an indication
of the presence of many European countries and have strong connection between them. Surprisingly, emerging economies like Mexico, Pakistan, and Nigeria did not give glowing representation in this field.

Figure 7 provides the thematic mapping of our research field divided into four quadrants where driving themes are shown in the upper right quadrant (Q1), very focused topics in the upper left quadrant (Q3), emerging or fading themes in the lower left quadrant (Q4) and underlying themes in the lower right quadrant (Q2). Thematic analysis derives themes from author keyword clusters and two dimensions define these themes explicitly density and centrality. Density reflects the degree of theme development as determined by the internal keyword interconnection. The second factor is centrality, which describes how relevant the topics are as determined by external relationships between the keywords (Bretas & Alon, 2021). These two properties assess a subject's importance and degree of development.

Figure 7: Conceptual Thematic Map

Our analysis exposed that driving themes in this domain are “sustainable development goals”, “sustainability” and “entrepreneur” which build the foundation and are peculiar to the field development. Besides, the most cited authors related to sustainable development goals are Cumming et al. (2017), Fleming et al. (2017), Huan et al. (2021), and Vungkhanching and Black (2012). Notably, the second quarter theme centres on the strategic planning of social enterprises that promote
economic and societal growth capable of constructing the research domain. The development of the discipline depends greatly on the fundamental and transversal themes of “economic and social effects”, “social enterprise” and “planning” which evidently can be seen in Q2. Contrarily, the research areas in quadrant type four have low values for centrality and density and are either underdeveloped or nascent themes that need to be developed further. In that way, tourism development and cultural heritage is the principal theme addressed in this cluster. From the keyword co-occurrence analysis (Figure 4), we can conclude that tourism development and preserving cultural heritage through social entrepreneurs suggest an emerging trend. Finally, research examining the motivation behind community care and cooperation exemplifies a niche theme. Scholars in this area may analyse the driving forces that inspire social entrepreneurs to enhance the welfare and progress of societies.

Conclusion

The study identified a significant upward trend in scholarly interest, particularly after 2015, which is relevant as it implies the growing prominence of the research field. Analysis of leading countries unveils that Spain and Germany are the leading countries and surprisingly, countries like Denmark, France, Germany, Bulgaria, Switzerland, Uganda, Saudi Arabia, and Singapore have contributed at most five publications till now and demanding major research work gaps that should be filled. Concerning the SE field, scholars may consider publishing in the dominant journals enlisted in Table 3. Furthermore, the results give us an indication that the research field is quite new and requires authors to collaborate. More specifically, this study has explored the interplay between social entrepreneurship and sustainable development and found that they are positively correlated which is in line with prior studies conducted in this domain (Al-Qudah et al., 2022; Galindo-Mart, 2020; Paliwal & Chaturvedi, 2019). The country's bibliographic coupling analysis also unveils a poor level of engagement from underdeveloped nations. No emerging economy like Mexico, Pakistan, and Nigeria other than India has given better representation in this field and contributed to the growth of the SE knowledge base.

Over the past few years, the body of research on SE has grown promptly and institutionalised as a field of study in academia. The study has provided four valuable theoretical contributions to this work. First of all, to the best of the author's knowledge, this is the primary study that has expressly done a bibliometric examination of social entrepreneurship in combination with sustainable development. Some authors have contributed to the literature of this field (Al-Qudah et al., 2022; Bansal et al., 2019, 2020; Iwueke Obinna & Nwaiwu Blessing, 2014) combining both
aspects but no one has done a bibliographic coupling network of this area. Secondly, by systematising the body of knowledge and offering insightful analyses of the intellectual structure, this review adds to the body of knowledge on SE. Third, the literature review of top-10 relevant papers focuses on deeper insights into the evolving landscape of SE within the context of sustainable development. The connection between SE and sustainable development has emerged as a dynamic and multidisciplinary research area of outside significance and highlights the future scope area like how government programmes can be created to evoke highly driven entrepreneurs who will become inventive and creative in seeking answers to socio-economic challenges. Finally, different sub-themes have emerged from our cluster analysis (see Figure 4), prompting us to understand how strongly they are associated with each other. Consequently, scholars studying this area can collaborate with other sub-themes to create a shared research pool.

Our research has significant policy and practice ramifications especially if we are going to significantly advance the global goals and fulfil the 2030 target of sustainable development. Moreover, by demonstrating how social entrepreneurs can contribute positively to the SDGs, our work has implications for national and international policymakers. These decision-makers must consider social entrepreneurs more than just for-profit, public, and nonprofit organisations and acknowledge the potential contribution of hybrid social enterprises. Furthermore, the government should vigorously support the growth of social entrepreneurs because of their capacity to address social problems and their contribution to the SDGs. Further, authors Al-Qudah et al., (2022) recommended that to boost social entrepreneurs some tax benefit can be given to them and as a result, they may access finance effortlessly which will help the economy to grow. In addition, entrepreneurship education and government programmes can be created to evoke highly driven entrepreneurs who will become inventive and creative in seeking answers to socio-economic challenges.

This study is not without its limitations. Our study has considered only the Scopus database for analysis and there are undoubtedly many article databases that Scopus does not include. The WoS database can also be considered for having the complete panorama as it will increase our number of documents, and better analysis or networks can be made. Secondly, we have applied some exclusion criteria in our PRISMA model. Therefore, some more value additions can be made by deploying a variety of sources (such as letters, book chapters, conference papers, etc.), works written in languages other than English, and various bibliometric indicators to continue researching the area of study that seems to be continually changing. Future
aspects may look at why some social enterprises support and promote the SDGs while others do not (Littlewood & Holt, 2018). Another research might focus on a comprehensive strategy that integrates social businesses with corporate reporting (Diaz-Sarachaga & Ariza-Montes, 2022). Furthermore, the conceptual paradigm developed by Cardella et al. (2021) can be leveraged by scholars and the community to comprehend the field better. From thematic mapping, it is quite evident that emerging themes like tourism development and preserving cultural heritage through social entrepreneurs hold significant importance for future research. Finally, we encourage scholars in this area to look at the driving forces that stimulate social entrepreneurs for community care and development in their forthcoming research.

**Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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