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Article

Scientific Production on Leadership in Social Entrepreneurship: Co-Word Analysis and Network Mapping

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ABSTRACT

Background: The objective of the present investigation is to navigate the dynamic landscape of studies concerning Social Entrepreneurship and Leadership. We aim to scrupulously analyze extant research and emerging trajectories regarding Social Entrepreneurship and Leadership by considering the advanced co-word analysis and network mapping methods in order to provide a solid understanding of the dynamics governing leadership and SE.

Methods: A bibliographic analysis of Social Entrepreneurship and Leadership using the Web of Science was conducted using VOSviewer and SciMAT software.

Results: Despite focusing on SE, the study reveals that the SE and Leadership are intertwined, and it is necessary to emphasize that the sustainable success of SE can be attained only by pushing innovation and collaboration, and ensuring ethical business management.

Conclusions: The present analysis makes it possible to conclude that the role played by Leadership in SE is essential. Leadership is responsible for mutual communication and for impacts and regional innovation when solving the social challenge of governmental cultural SE in developing countries. Organizationally beneficial practices are responsible for organizational social practices regarding effect and collaboration networks, thus ensuring that cooperative practice has a sufficient impact. The comparative analysis revealed the importance of Leadership as regards making changes in SE in order to have a social effect. This study contributes to knowledge and provides recommendations for sustainable practice and cooperative practice for practical purposes.

KEYWORDS: entrepreneurship; impact; leadership; innovation; bibliometric

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ABBREVIATIONS

HRM, Human Resource Management; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses; SciMAT, Scientific Mapping Analysis Tool; SE, Social Entrepreneurship; SMES, Small and Medium Enterprises; WoS, Web of Science

INTRODUCTION

Social Entrepreneurship (SE) and Leadership are closely related because they are fundamental to diagnosing and solving social issues and, therefore, to changing the world for the better. Social entrepreneurs are leaders who have the authority to solve social and environmental issues, and they employ their innovative and risk-orientated spirit in order to identify opportunities and provide social benefits [1]. The wider involvement of society in business is increasingly demanded given the development of various tendencies and changes that significantly influence the direction of various organizations [2].

The source that motivates social entrepreneurs to develop their leadership abilities could, therefore, encourage an open climate for creativity and the recognition of opportunities apart from selected profit-oriented trends [3]. Moreover, a holistic definition of inclusive entrepreneurship has been presented, and this definition presents a cluster-based view, focusing on society, production and the capacity to contribute back to society [4]. An inclusive entrepreneurship strategy must include the explicitly careful consumption of environmental resources and social stability, which includes the creation of an economic base for others [5], the growth of local businesses, and the generation of sustainable livelihoods, along with the creation of jobs for the local population and the production of sustainable revenue streams [6].

The key concern is that many limits on the external reach of social organizations will be imposed at the local level [1,2]. Collaboration with other community organizations often creates a professional network through which social organizations may be frustrated and destroyed when success is not forthcoming [3], and this is especially true in times of failure as a result of the all-important dual objective of social companies [4,5]. Leadership in SE is an area of inquiry that should be explored in further depth because of the emphasis on the ability to grow [6], influence and guide a social project [7–11] or organization in order to address the social issue or environmental concern, or innovate and positively and financially affect society in the long term [12,13].

Leaders must currently steer their businesses toward sustainability and social responsibility in a strategic manner without neglecting the financial aspect of the organization, thus permitting the business to continue thriving on a long-term basis [14]. In the future, however, this will no longer be the case: leaders must strategically steer their businesses beyond economic performance or the maximization of profits by

developing their strategic vision and strategy toward environmental conservation and social responsibility. Sustainable values that are more oriented toward leadership competencies, particularly those of sustainability in the business practice, must be developed in order to make their business thrive on a long-term basis. The leadership of these organizations is equally problematic and requires more prosocial efforts to succeed, thereby ensuring that there is a better alignment of social and economic inclusion [15].

The realization of a study of this nature is academically valuable because it could be used in future research on the subject as a means to discover effectively updated works of literature, in addition to which, it will help identify gaps as regards trends and critical points. The present study is, therefore, relevant at the social level because it establishes the necessary information regarding how SE and Leadership can combat social issues, affect positive development [16], and capacitate communities [17]. This will also help establish the practices of work contributing to shaping leaders who can intervene more efficiently in order to contain social problems [18].

In methodological terms, a bibliographic investigation of the past 20 years was conducted, during which papers of interest were selected from the WoS database. This was done using a three-dimensional approach: scientific production, with the assessment of the relevance of the theme, studies that demonstrate trending, and publications that present the quality of publications [19]. A Scientific Mapping regarding the distribution and connections between the different themes was also carried out, concentrating particularly on trends, in addition to a network analysis with which to understand the pattern of interactions of the core themes and their network structure [20].

The objective of this research is to understand the current knowledge concerning the interconnection between Leadership and SE with the objective of identifying existing gaps and future research directions.

The sections below show the literature review carried out and the methodology used to construct the database. This is followed by an analysis of scientific production and co-word analysis: Scientific Mapping and Network. Finally, we suggest directions for future research and present our conclusions.

LITERATURE REVIEW

SE and Leadership have now acquired significance in contemporary research, and their role in social-economic change is recognized [21]. SE utilizes entrepreneurial approaches to tackle social and environmental issues, and Leadership rationalizes and coordinates resources so as to facilitate collective action beyond the traditional hierarchical boundaries [22,23]. The integrated application of these resources promotes innovative and sustainable solutions to current social issues that should be promoted in order to ensure positive change in communities and societies [24,25].

Moreover, within the area of SE and Leadership, the field benefits from numerous theoretical frameworks and models. Notable examples are the Resource-Based View, the Transformational Leadership Theory, and the Social Capital Theory, which particularly provide insights into SE from the perspective of resource allocation, inspiration, and networking [26–28]. There is also an opinion that some of these theories can be applied in various contexts implicitly, and that more detailed theoretical underpinning reflecting social and cultural aspects could sometimes emerge as being valuable [29]. This critical review therefore emphasizes the importance of the holistic perspective that can be provided only by integrative frameworks.

Furthermore, it should be noted that the intersection of SE and Leadership reveals a complex interplay that is paramount to sustained societal impact. The use of Transactional Leadership Theory and Social Identity Theory in this work has shown that SE leaders create a collective identity and generate resources/energy for unified goals [30]. Both approaches have revealed the inspirational nature of visionary leadership that propels innovative solutions to societal problems, thus demonstrating the radically changing nature of combining entrepreneurial efforts with effective leadership.

Moreover, the historical synthesis of research into SE and Leadership traces the evolution of studies in these areas over a considerable period. The specific objective of early investigations was to outline the uniqueness of social ventures [22]. Work then continued with leadership specifics in SE [31], followed by increases in interdisciplinary research alliances with management, sociology and psychology [23] focused on the influence of hybrid organizational forms and the formation of new theoretical angles for social problems [24].

Recent trends in SE and Leadership research indicate the emergence of interdisciplinary work and greater empirical rigor [32]. Moreover, scholars pay more attention to the role played by digital technologies [33] and the impact of relevant cultural contexts on entrepreneurial leadership practices [32]. In addition, more studies focusing on the correct ways in which to measure social impact and perform a valid assessment of leadership effectiveness within social enterprises have appeared in the last decade [34]. These trends indicate a significant evolution of the field, which ultimately contributes to a better understanding of the mechanisms through which social entrepreneurial projects and ventures are presented.

Current literature reveals gaps as regards understanding the nuanced interaction between leadership styles and the organizational culture within social enterprises [35]. Debates persist regarding the scalability of SE initiatives and the sustainability of their impact [36]. These areas warrant further exploration in order to advance knowledge and inform practice in the dynamic landscape of SE.

In light of the existing discourse, we hypothesize that:

There is a burgeoning nexus between SE and Leadership domains, as evidenced by recent scientific output. Co-word analysis and network mapping techniques will reveal significant patterns in research exploring the intersection of SE and Leadership, shedding light on emerging topics and common areas of interest.

MATERIALS AND METHODS

Construction of the Database

In bibliometrics, quantitative tools analysis is used for more objective data interpretation. The objective of bibliometric analysis is to examine a related document group in a statistical manner and present a picture of a research field on the basis of indicators. Bibliometric data obtained from the Web of Science (WoS) database was used in the present study, since the academic community recognizes it as a reliable source of information reflecting scientific publications and highly rated quality indicators [37].

In addition to its broad coverage, the WoS provides detailed information on citations, keywords and references, thus making it an indispensable tool for researchers. The reputation of the WoS in the academic community is further substantiated by the rigorous selection and evaluation processes employed by scientific journals, meeting high standards of quality and including peer review. The use of the WoS database gives researchers access to a wide range of reliable works, ensuring the validity and quality of the information underpinning their research, along with the credibility of the results and conclusions they advance.

The search was conducted during February 2024 using the following search terms: “Social entrepreneur” or “Social Venture” and “Leadership”. This search yielded a total of 4077 papers.

Selection of the database for scientific mapping and network analysis

The decision was made to review scientific papers from the past 20 years (2005–2024) in order to ensure the relevance and timeliness of the research. This timeframe was selected so as to capture the latest trends and changes in the relationship between SE and Leadership, which are crucial as regards understanding the current research landscape. Furthermore, the observation that over 50% of papers were published after 2014 reinforces the significance of this time range, indicating a recent significant increase in scientific production and the need to explore the latest academic contributions. Limiting the sample to the last 20 years therefore made it possible to obtain a more representative overview of research on SE and Leadership, thereby increasing the robustness and relevance of the results obtained in this study. The total number of papers obtained for analysis was 3474.

Moreover, the decision to include only indexed papers is justified for several reasons. Firstly, since these papers have undergone a rigorous

peer review process, the quality and accuracy of the findings and conclusions are ensured. Peer-reviewed papers provide an additional validation of the results and conclusions, as they are evaluated by experts in the field. Furthermore, being registered and available in a consolidated and well-known database such as WoS facilitates and expedites researchers' access to these papers, leading to collaboration, dissemination and the expansion of knowledge. The use of indexed papers ensures that our research builds upon existing literature and is related to current advances and debates in the field. Finally, the use of only indexed papers significantly enhances the quality and credibility of a research work, thus strengthening the scientific foundation and facilitating advancements in the area of study. This process consequently made it possible to reduce the sample size to 1740 papers (see Figure 1).

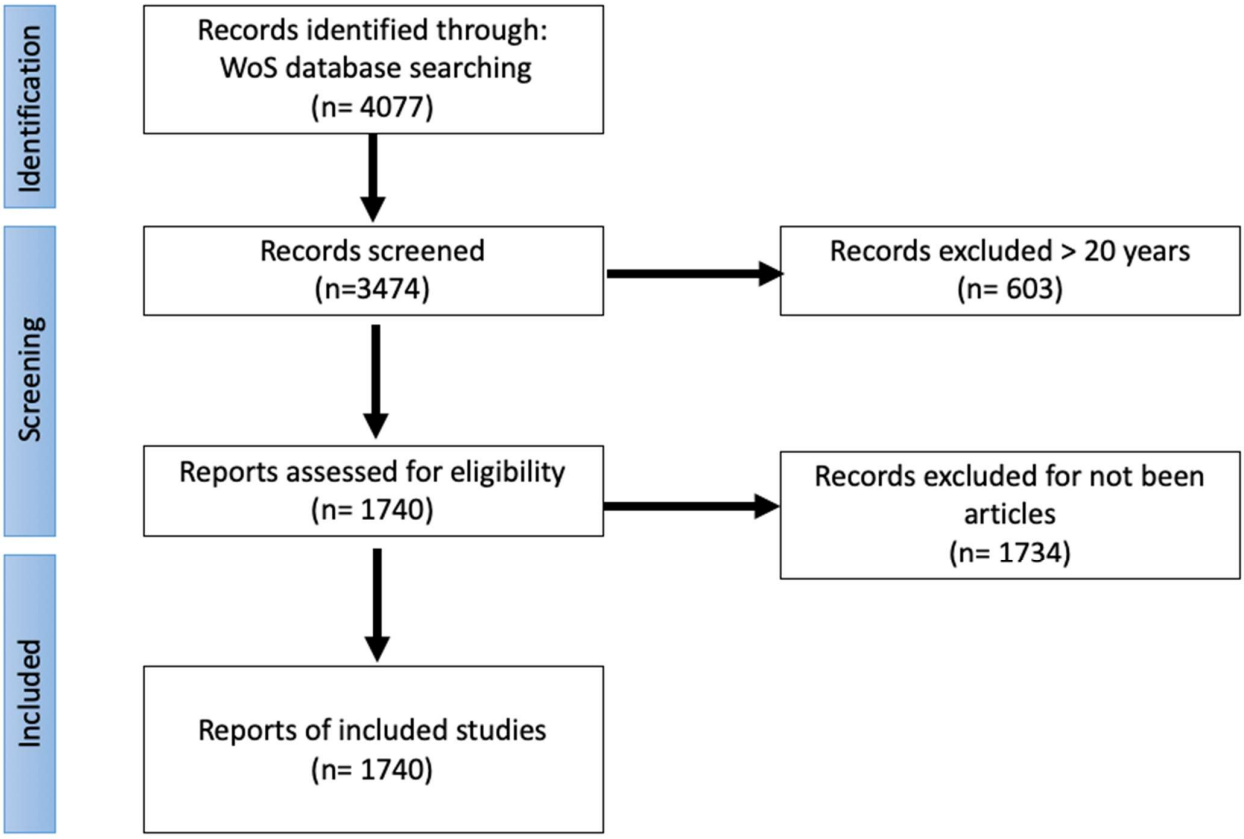

Figure 1. Identification of studies. Source: The authors, based on WoS database using PRISMA [38].

The following section shows how the bibliometric co-word analysis was begun using the refined database.

Bibliometric co-word analysis

Co-word analysis is a bibliometric technique that makes it possible to study the thematic relationships between keywords within a certain amount of documents through the use of both a direct contextual and a

statistical analysis. Co-word analysis enables the discovery of patterns and trends within literature, and provides an insight into the structure and development of a scientific discipline, along with possible fields for study and cooperation. Moreover, by making links between concepts and topics, co-word generates a map of the scientific body of knowledge that sheds light on the overall picture, thus enabling knowledge creation and the identification of new research lines.

The intention of the present bibliometric co-word analysis on "SE and Leadership" is to help discover future scenarios in which to foster the development of future research lines as a source of knowledge. The co-occurrence in the use of keywords in scientific literature allows the delimitation of the most relevant field of research, along with multiple conceptual links that connect the research lines outlining it [39]. By articulating both the structure and the evolution of knowledge of this field, it was possible to identify several valuable research lines and several research gaps that suggest unexplored research lines [40]. The co-word analysis proposed provides a diagnosis of the relationships established between SE and Leadership, in addition to the solutions with which to tackle sustainability and social issues. It is consequently possible to provide new insights into the topic and identify innovative means of thinking about sustainable development and corporate social responsibility in the context of leadership and entrepreneurship so as to build new knowledge and practices.

Moreover, the selected sample size of 1740 articles for the bibliometric co-word study seems appropriate, and is rational for many reasons. Firstly, since our aim is to explore all existing knowledge on SE and Leadership, a large and random sample was required in order to make the research results representative and valid, covering as many scientific papers on the topic as possible. In this case, we had the opportunity to "cover" the entire corpus of literature and obtain a comprehensive and exhaustive knowledge base on which to identify regularities and relationships between the key terms employed in the papers. Secondly, since we put forward and confirm the associative vision, in addition to envisaging the possibility of observing the evolution of the problem and the literature on the topic, a sufficient number of papers that would allow the identification of changes in research interests and approaches was also required. The third reason is that analyzing a significant number of papers would make it possible to identify the main "white spots" and new directions for research, as a result of which it might be possible to influence its development. In this case, the optimum sample size for the study was 1740 papers.

RESULTS

Analysis of Scientific Production

The initial data construction resulted in a total of 4077 papers. Figure 2 depicts the evolution of publications on the topic analyzed since 1988. The first paper, by Miller [41] suggests that Benjamin Franklin's civic leadership approach offers valuable lessons for leaders in turbulent environments, emphasizing the importance of building a community and seeking civic unity in order to address social and systemic challenges. Subsequent papers have further developed the theory on the interconnection between Leadership and SE as key drivers of social change toward a more sustainable society, merging business objectives with the creation of social capital to promote effective and lasting transformation [42–44]. There has been a clear upward trend in the number of citations that have appeared since 2005.

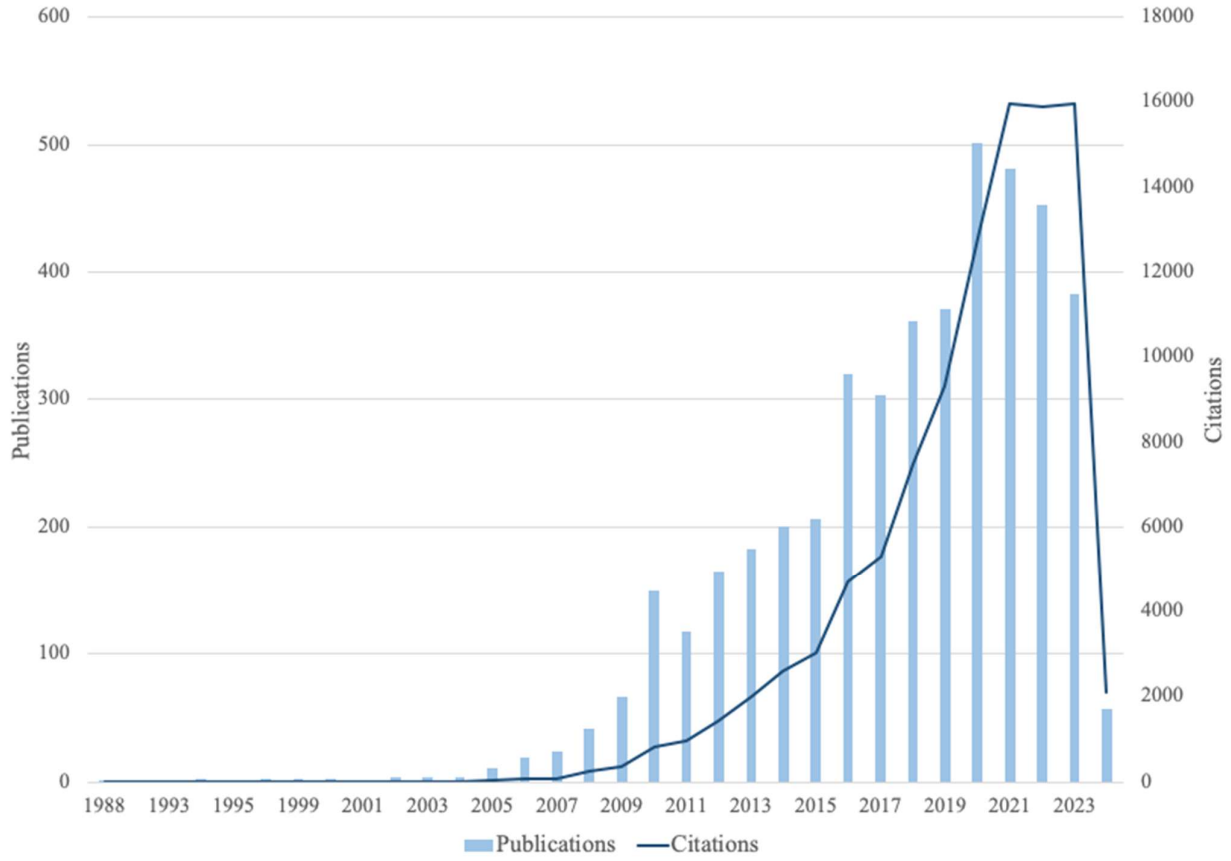

Figure 2. Evolution of publications. Source: The authors, based on Web of Science [45].

Table 1 presents a list of the 5 most frequently cited papers related to the theme studied herein. Notably, the most frequently cited paper, by Anderson, Potocnik & Zhou [46], highlights the role of creativity and innovation as essential components for the successful performance of organizations. The second paper, by Fulmer & Gelfand [47], recognizes

that trust is a fundamental pillar in diverse areas such as negotiation, leadership, team processes, human resource management, organizational change, entrepreneurship, and strategic alliances. The third paper, by Westley et al. [48], addresses the importance of leaders as regards introducing innovations and transforming management and governance approaches. In the fourth paper, by Nga & Shamuganathan [49], social entrepreneurs are highlighted as being significant agents of change owing to their profound commitment to a social vision, sustainable practices, innovation, and the ability to build social networks.

Table 1. Most frequently cited papers.

Authors	Total Cites	Name of paper
Anderson, Potocnik, & Zhou, 2014 [46]	1893	Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework
Fulmer & Gelfand, 2012 [47]	663	At What Level (and in Whom) We Trust: Trust Across Multiple Organizational Levels
Westley et al., 2013 [48]	477	A Theory of Transformative Agency in Linked Social-Ecological Systems
Nga & Shamuganathan, 2010 [49]	426	The Influence of Personality Traits and Demographic Factors on Social Entrepreneurship Start Up Intentions
Stephan & Uhlaner, 2010 [50]	381	Performance-based vs socially supportive culture: A cross-national study of descriptive norms and entrepreneurship

Source: The authors, based on Web of Science [45].

Finally, the fifth paper, by Stephan & Uhlaner [50], states that a socially supportive culture can significantly influence entrepreneurial activity through both the availability of social resources and the institutional environment that promotes innovation and entrepreneurship.

Scientific Mapping (Co-Word Analysis)

A bibliographic co-word analysis was conducted using VOSviewer software, a tool developed by van Eck and Waltman [51] for the construction and visualization of bibliometric networks. The clustering algorithm reveals primary themes and research trends at the intersection between SE and Leadership [20,52]. This process involved refining data in order to homogenize and facilitate visualization and group analysis. Synonyms, plurals, abbreviations and keywords unrelated to the research were eliminated. The main node was utilized in order to name each cluster, determined by the frequency of its occurrence and the strength of connection with other keywords. The results, which are illustrated in Figure 3, identified four thematic clusters, providing valuable insights into

the current research landscape regarding SE and Leadership relationships.

Figure 3. Scientific mapping (Co-word). Source: The authors, based on WoS database using VOSviewer software [51].

Table 2 presents a thesaurus file containing the terms associated with the clusters represented in Figure 3.

Table 2. Thesaurus file.

Topic	Total Link Strength	Associated Topics
Innovation	125	Competition, Creativity, Decision Making, Developing Countries, Economic and Social Effects, Education, Entrepreneurship Education, Information Management, Project & Knowledge Management, Marketing, Societies & Institutions
Social Entrepreneurship	129	Community development, Empowerment, Employment, Governance, Social Capital, Social Change, Social Entrepreneurs, Social Innovation, Social Network, Sustainability
Organization & Management	951	Ethics, Financial Management, Investment, Organizational Culture, Politics, Social Behavior
Leadership	435	Culture, Government, Skill, Social Identity & Media

Source: The authors, based on WoS database using VOSviewer software [51].

Upon examining the map configuration and the arrangement of the different groups, the central core highlighted in yellow, denoted as "Leadership", stands out. This group plays a fundamental role by acting as a bridge to the rest of the network. In the context of the relationship between SE and Leadership (Leadership), leadership plays a crucial role by interacting with various cultural and governmental aspects, along with those concerning skills, social identity and the media [53–57]. Leaders in SE must understand and adapt to local culture in order to build strong relationships and gain community support [58]. They must also collaborate with the government so as to ensure a regulatory environment that is favorable to SE initiatives and access to public resources [59]. Leadership skills such as communication, negotiation and decision-making are fundamental as regards inspiring others and mobilizing them toward a common cause [60]. Leaders must additionally have a strong social identity reflecting the values and vision of SE, thus facilitating connection with stakeholders [61,62]. Finally, the strategic use of media can amplify the impact of leadership and disseminate the SE message to a wider audience, generating awareness and support [63].

The red-colored group, entitled "Innovation", underscores its importance in the SE and Leadership relationship. Innovation is a vital component that cuts across diverse areas, from competition to decision-making and socioeconomic development [64]. Innovation drives creativity and fosters an environment in which social leaders can identify opportunities, creatively solve problems, and make informed decisions with which to address social challenges [65]. In developing countries, innovation is crucial as regards overcoming economic and social constraints, thereby promoting growth and sustainable development [66]. Education in entrepreneurship and knowledge management play an essential role in equipping social leaders with the skills required in order to leverage innovation opportunities fully [67]. Moreover, innovation significantly impacts on areas such as marketing, project management, and the creation and strengthening of more resilient and prosperous institutions and societies [68,69].

The green-colored group, denominated as "Social Entrepreneurship", plays a crucial role in addressing various aspects of community development, job creation, empowerment, governance improvement, social capital promotion, social change driving, and innovation [70]. Social leaders can, through their innovative approach and commitment to social change, catalyze sustainable development by identifying and solving social problems through the use of sustainable business models [71]. By building strong social networks and fostering collaboration among different actors, social leaders can generate lasting positive impacts on communities, thereby strengthening the social fabric and promoting equity and inclusion [72].

Finally, the blue-colored group, "Organization & Management", in the context of the interconnection between SE and Leadership, underscores

the idea that organization and management are fundamental to the success and sustainability of entrepreneurial initiatives seeking to address social problems [73]. Sound management involves the integration of ethical values into all facets of operation, ensuring responsible financial practices and careful resource allocation so as to maximize social impact [74]. An organizational culture that fosters innovation and social responsibility contributes to the adaptability and creativity that are necessary in order to address complex social challenges [75]. Moreover, Leadership entails understanding and navigating political aspects and power dynamics so as to garner support and promote meaningful changes [76].

The analysis provided above is now complemented with the analysis of the co-word network (centrality index) of the papers selected for this study. This is shown as follows.

Network Analysis (Centrality Index)

The network analysis of co-words is a technique that is used to visualize and explore the relationships among the keywords used in scientific papers. In this study, the co-occurrence analysis methodology of keywords in documents was employed. The number of citations and the total number of publications are used as measures with which to evaluate the influence and impact on the co-word network [77]. The number of citations is considered an indicator of the relevance and impact of a study in the scientific community, while the total number of publications is considered to reflect the quantity of scientific works published. The use of these quality measures made it possible to identify the most influential topics in the co-word network, i.e., those with a high number of citations and a large number of publications in the WoS. It was consequently possibly to obtain a quantitative view of the quality and impact of research on a topic within the co-word network analyzed.

The strategic diagram on the topic analyzed was developed using SciMAT software, a tool developed by Cobo et al. [78] to perform a science mapping analysis. This software is employed for strategic diagram mapping in bibliometric studies as it allows the effective visualization and analysis of the structure and relationships between scientific documents. We first selected our previously created database linked to our research objective. We then used the “co-word” as the unit of analysis in order to study the keywords of the documents retrieved, after which we based our matrix on “co-occurrence”, since it captures the relationships and connections between the keywords used in the scientific documents selected for this study. This information revealed the thematic structure and associations between concepts, thus enabling the identification of trends, research areas and scientific communities within academic literature in an objective and quantitative manner. The fourth step consisted of selecting the “Equivalence Index” as a normalization measure, which allowed us to compare and balance the contribution of

different authors or elements within the co-word network. This measure considers both the number of links and the relevance of nodes, avoiding biases and providing a more accurate assessment of the importance and centrality of each element in the network analysis. In the fifth step, we used the “Simple Centers” algorithm as a clustering measure owing to its simplicity and efficiency as regards identifying thematic groups in co-word network analysis. The principal model was then used as a mapping model, after which we employed the “H-Index” as a bibliometric quality measure in order to select the number of documents on the basis of their performance, and the “Sum of Citations” in order to evaluate the impact of citations in this study. Finally, as a longitudinal measure of our mapping, we used "Jaccard's and Inclusion" indices as measures of evolution and overlap.

Figure 4 shows the strategic diagram representing the groups in the research field. The method used for the equivalence index in this research diagram is divided into four distinct groups. The clusters are classified according to: the cluster centrality index (x-axis), which indicates the strength of the links of one group with other groups and represents the importance of the group in the development of research; density (y-axis), which is calculated as the weighted degree of all documents included in each group, and average citations per year (the size of each ball). This analysis seeks to discover the future perspective of the groups [79,80]. All these calculations were performed using SciMAT software.

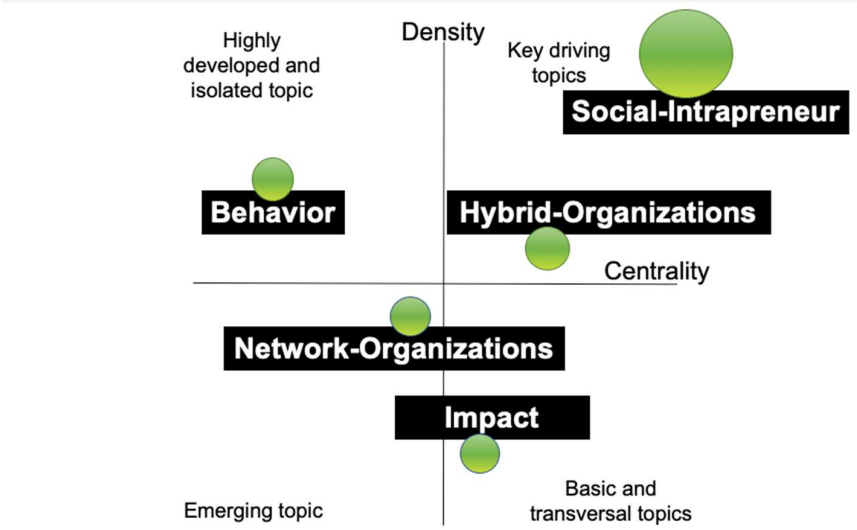

Figure 4. Strategic diagram. Source: The authors, based on WoS database using SciMAT software [78].

Basic and transversal topics

The Impact of Social Enterprise (Impact). There is a significant relationship between the impact of SE and Leadership. SE entails the establishment of entrepreneurial initiatives with a focus on having a positive impact on society [81]. Leadership plays a crucial role in driving

and directing these ventures, leading teams and making strategic decisions [82]. A leader can enhance the social impact of an enterprise by inspiring others, fostering innovation and promoting sustainability [83]. Together, SE and Leadership closely relate to having a significant social enterprise impact as regards addressing social problems and sustainable development [84]. Moreover, the "Impact" group establishes a relevant connection with key terms such as "Social Innovation Systems", "Environment" and "Education". These concepts are intrinsically related in the context of social impact. Social impact seeks to generate positive and measurable changes in society, requiring the development of social innovation systems that foster creative solutions to social challenges [85]. These systems must also consider environmental care, as a positive impact must be sustainable and respectful of the natural environment [86]. Additionally, education plays a fundamental role in raising awareness and building capacities with which to address social and environmental issues, along with training professionals committed to making a positive impact on society [87] (see Figure 5a).

Key driving topics

Hybrid organizations. These may have a close relationship with SE and Leadership. They combine the characteristics of both for-profit and nonprofit organizations [88]. SE, however, focuses on creating social and environmental value through innovative and sustainable business models [89]. Leadership in this context can be crucial as regards guiding an organization's members toward a social mission and motivating them to do so, and aligning business and social objectives [90]. Together, these three areas can work synergistically to generate a positive social and environmental impact through sustainable business models and committed Leadership [71,91]. Moreover, the "Hybrid-Organizations" group establishes a network of connections with key terms such as "Social Value", "Marketing Strategy", and "Sensemaking". These concepts are closely related in the context of hybrid organizations. Their focus on social value leads them to develop marketing strategies that highlight the social and environmental benefits of their products or services [92]. Sensemaking simultaneously plays a fundamental role as regards communicating the mission and vision of these hybrid organizations by enabling them to establish meaningful connections with their various stakeholders and maximize their social impact [93] (see Figure 5b).

Social intrapreneur. This role acts as an entrepreneur within an organization, seeking opportunities to achieve social goals [94]. There is consequently a close relationship between the social intrapreneur, SE and Leadership, as they all focus on having a positive social impact [95]. The Social Intrapreneur group additionally establishes a significant connection with key terms such as "Performance", "Model", "Innovation-Ecosystem", and "Business-Ecosystem". This relationship is based on the interaction and mutual influence of these concepts. Furthermore, the

group of Social Intrapreneurs is characterized by individuals within organizations who promote social innovation and entrepreneurship in a business context [96]. These individuals have a high performance as regards implementing business models that integrate into innovation and business ecosystems, thereby driving the growth and sustainability of enterprises [97] (see Figure 5c).

Highly developed and isolated topic

Behavior of Social Enterprises (Behavior). The performance of social enterprises involves adopting specific attitudes, skills and actions that promote social innovation and change [98]. Leadership, on the other hand, plays a fundamental role in the performance of social enterprises, as leaders can influence organizational culture, establish a clear vision, and foster creativity and initiative in the business environment [99]. A leader must inspire and motivate the organizational team, providing its members with the support and resources needed to implement their ideas and projects [100]. Moreover, the "Behavior" group has a direct connection with key terms such as "Perception", "Motivation", "Intention" and "Experience" in the context of social enterprises and Leadership. In the realm of social enterprises, it is crucial to identify social needs, analyze opportunities and develop innovative solutions that will have a positive impact on society [101]. Leaders' perceptions influence how they interpret social challenges and design strategies with which to address them [102]. The need for achievement, the propensity to take risks, innovation, proactivity, empathy and moral obligations, and their social entrepreneurial intention are key drivers for leaders as regards undertaking actions and pursuing social goals [103]. Meanwhile, those leaders' previous and current experience enriches their decision-making and approaches within the organization [104] (see Figure 5d).

Emerging topic

Network Organizations. These have a close relationship with SE and Leadership. These organizations, which are characterized by their collaborative and flexible structure, foster cooperation among various actors, such as social entrepreneurs, community leaders and nonprofit organizations [105]. Network collaboration allows the sharing of knowledge, resources and best practices, thus promoting innovation and the generation of joint solutions to social problems [106]. Leadership in network organizations plays a fundamental role in facilitating coordination, communication and the empowerment of participants, creating a conducive environment for SE and the implementation of impact initiatives [107]. Moreover, the "Network-Organization" group has a significant connection with key concepts such as "Community Organizations", "Co-Creation", "Policy", "Partnerships" and "Firms". These terms are closely interrelated in the context of network organizations. Network organizations are characterized by the fact that they collaborate

with diverse entities, including community organizations, in order to achieve collective outcomes [108]. Co-creation is a key element within these networks, involving the active participation of multiple actors in generating innovative solutions and making joint decisions [109]. Policy plays an important role in establishing the regulatory framework and regulations that guide collaboration and network creation [110] (see Figure 5e).

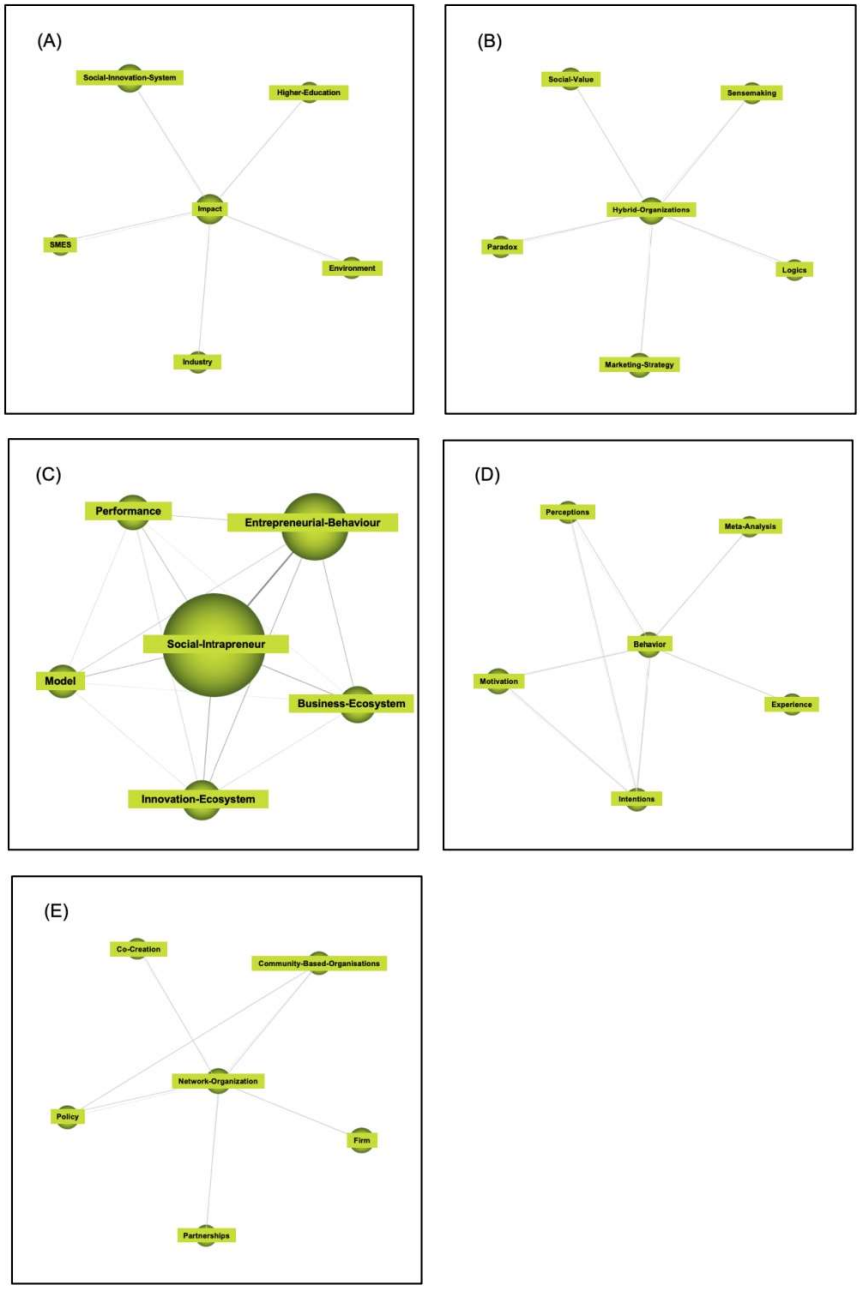

Figure 5. Thematic networks. Source: The authors, based on WoS database using SciMAT software [78].

DISCUSSION

Interpretation of the Results Obtained

The research on understanding the knowledge structure of the relationship between SE and Leadership indicates the interdependence of these two domains as regards serving social issues and sustainable development. In particular, leadership in the context of SE implies having local culture cues and being able to communicate with local communities. Furthermore, in order to implement the above, it is necessary to coordinate a leader's actions with those of the government owing to responsibility to SE, along with the use of public resources [58,111]. Moreover, communication, negotiation and decision-making skills are essential abilities that allow social leaders to make people move toward common goals [112]. Social leaders should also have a stable social identity that reflects SE values and expectations [61,62].

Innovation appears to be another critical element that is involved in Leadership's cause with SE. In this respect, innovation not only sparks creativity but also allows social leaders to identify opportunities, solve problems creatively and facilitate collaboration, especially in countries that rely heavily on innovation to escape their economic and social constraints [113]. The need to pay more attention to the pair of fundamental factors comprising entrepreneurship education and knowledge management is emphasized here in order to prepare social leaders to engage with innovation opportunities, thus stimulating sustainable growth and development [114].

Moreover, there is a significant relationship among impact, SE and Leadership. SE involves the creation of entrepreneurial initiatives with a focus on having a positive impact on society [17], while Leadership plays a crucial role in driving and directing these ventures, leading teams and making strategic decisions [115].

SE, as an essential component, contributes to community development and promotes change and innovation by means of various approaches [116]. Social leaders can trigger sustainable development by identifying and solving social issues through the use of sustainable business models [117], thus influencing the social fabric, making more people feel included and achieving equity [118].

In terms of "organization and management", the importance of solid and transparent management for the success and sustainability of social entrepreneurial initiatives is emphasized [119]. Leaders must integrate ethical values into all aspects of operation so as to maximize social impact and ensure responsible financial practices [120,121].

Lastly, the knowledge structure indicates the critical role played by "Collaborative Networks" in SE and Leadership. These networks emerge in a situation in which a company or market players, including entrepreneurs, businesses, states, and civil society and NPOs, collaborate to solve social challenges and attain a beneficial result [122]. Leadership

plays an active part in developing these collaborative networks and stimulates active involvement, trust-building, commitment, and coordination in order to attain a substantial social performance [123,124].

Comparing Research Findings with Others Bibliometric Reviews regarding the Topic Dealt with Herein Utilizing SciMAT or VOSviewer Software

In a constantly changing and dynamic research field such as that of SE, conducting a comparative analysis and contrasting it to previous experience is critically important in order to understand the emerging themes and newly-revealed perspectives and the dynamically growing nature of existing concepts. This can be enabled by the aforementioned bibliometric studies based on VOSviewer and SciMAT.

Screening multiple bibliometric studies concerning SE with the help of VOSviewer makes it possible to identify both the commonalities and the distinctions between research themes and perspectives. Thus, created a stolen record with synonyms Innovation and Creativity and Economic & Social Effects within SE [64,125]. The importance of Social Capital and Community Development is similarly recurrent, highlighting the role played by SE in fostering Empowerment and Social Change [70,98]. However, apart from similarities in the direction, there are differences in the coverage of themes. For instance, we have explored the role of Leadership in great depth, but others have considered a relatively new direction such as Crowdfunding or have taken a broader view of the growth of the field and influential factors [126,127].

A comparison between the present study and that of Coronel et al. [128] provides some valuable information on the progress made in the research landscape in terms of this topic. Both the present paper and that of Coronel et al. apply SciMAT to a bibliometric analysis in order to study thematic structures and the interrelationships between themes. It is notable that leadership emerges as the central theme [81,83]. Furthermore, while our study investigates the relationship between leadership and SE, and Social Impact, Coronel et al. explore leadership and environmental care, and measure environmental care as a part of Social Impact [85], while environmental management is identified as a separate theme within Sustainable HRM [128]. Both studies also provide a visualization of the multifaceted nature of SE research [81,83,128].

Nonetheless, there are differences between the two studies. One of these is related to the specificity of the papers. Ours focuses on Leadership in SE, while the other is more general and provides an overview of SE themes [128]. Hybrid Organizations and Social Intrapreneurs are driving topics in our study [88,94],while the other study does not explore specific organizational forms or roles in any depth [128]. In contrast, while we state that Networks-Organizations are an emerging theme, the other study categorizes Sustainable Leadership and Environmental Performance [128]. We consequently shed light on the centrality of leadership as

regards the generation of Social Impact and the significance of sustainable activity in SE [81,83]. The results differ owing to the specificity of our study, since the other is general.

In conclusion, the comparative analysis carried out in our study by means of the aforementioned research endeavors indicates the ever-changing nature of SE research and the changing landscape of the main themes and perspectives. By attaining more similarities and differences, we provided more in-depth knowledge on the multi-faceted nature of SE and Leadership, Innovation and Sustainability as drivers of Social Impact and Socioeconomic stickiness within social enterprises.

Theoretical Model Connecting SE and Leadership

Using the previously identified and described groups as a basis, some essential conceptual relationships can be inferred from the proposed knowledge model based on our bibliometric analysis (see Figures 3 and 4). As our theoretical model shows (see Figure 6), there is a relationship between Leadership and SE, and success in articulating and managing the latter affects its performance. Our model also reveals the detailed relationships among all other previously analyzed groups, according to the knowledge obtained from literature, and how these are fundamental to the performance of SEs.

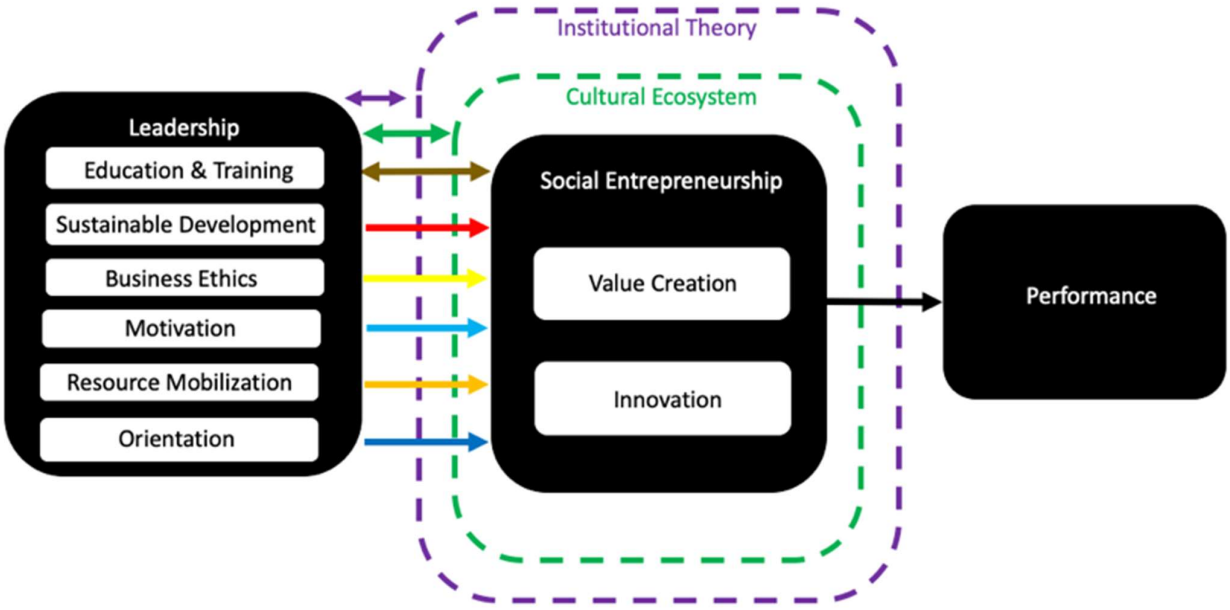

Figure 6. Theoretical model connecting SE and leadership. Source: The authors, based on Web of Science [45].

Leadership is presented as a multidimensional concept formed of:

(1) Education and Training: A first layer of SE-related leadership involves the context of education and training. SE leaders tend to have

education or training programs similar to specialized programs that provide them with layers of skills and knowledge with which to address the complexities entailed in tackling social and environmental issues [129]. These educational endeavors should comprise “social innovation, sustainability practices concerning business, community involvements, or ethical leadership”[130].

(2) Sustainable Development: Leadership is closely entwined within the framing of sustainable development in SE. More precisely, leaders in SE must contend with social objectives counterpoised against one another such as competitive objectives, management by support, government support, sponsor resources, and founder aspirations and developmental goals. From this vantage point, individuals in leadership within this context are tasked with ensuring that the organization pursues a strategy that will guarantee its sustainability in the long-term, environmental responsibility and social equality and economic growth, while ensuring that the environment of the business and society is maintained in a positive manner [14,131].

(3) Business Ethics: Ethical leadership is a cornerstone of the realm of SE, embodying principles focused on integrity, transparency and societal responsibility. Leaders in the remaining space have the charter to uphold the highest ethical standards in their decision-making processes, organizational practices and relationships with stakeholders. This ranges from fair trade practices, protecting human rights, advancing environmental conservation, and being responsible for various stakeholders. By upholding business practices consistent with the general societal values and norms, the SE leader has an opportunity to instill an ethical organizational culture that builds trust and sustainability [132,133].

(4) Motivation: This is one of the most critical factors influencing leadership in the area of SE. The leader has to be the person that inspires the targeted individuals and teams to pursue a common contribution to social change and impact [134]. This requires the cultivation of purpose, autonomy, mastery, and belonging, which promotes intrinsic motivation and dedication toward the organization’s mission and goals [135].

(5) Resource Mobilization: Leadership in SE entails adeptly mobilizing resources with which to support organizational objectives and initiatives. Mobilization of resources: another important aspect of leadership in SE is the effective mobilization of resources in order to achieve organizational aims and projects. This includes not only financial capital but also staff and networks, the material base and equipment foundation, and other resources [75]. Leaders need to be able to identify relevant sources of resources, and attract and strategically utilize them, thereby making the necessary contribution to the promotion of their own social mission of the organization and the creation of added value for stakeholders [136].

(6) Orientation: The SE field of knowledge includes several orientations, which are essential for the analysis of its peculiarities. One notable

approach revolves around a focus on innovation, rooted in the idea of new solutions that need to be developed in order to solve social problems [137]. Another is the orientation toward community empowerment, reflecting the idea that SE measures help to empower community members. Orientation toward the hybrid business model argues for the inclusion of the social and economic component in SE ventures [138].

SE is similarly also presented as a multidimensional concept formed of:

(1) Value Creation: SE focuses on creating social and environmental values. The SE leaders' task is to discover and pursue opportunities that lead to positive impacts on people and the planet through the implementation of innovative business models, products, and services [139]. In addition to all stakeholders, which, of course, include shareholders, there are also employees, customers, societies, and, therefore, the environment [140].

(2) Innovation: A critical force is innovation in this area, in which SE ensures the emergence of innovative aspects that drive the creation of creative solutions to acute social and environmental dilemmas [141]. As a result, SE leaders create a conducive atmosphere in which innovation develops within the organizations, thus fostering creativity, experimentation and a willingness to take calculated risks in order to address complex problems effectively [98]. It is broader than a focus on innovation products and processes, but also includes social innovation which has the objective of driving systemic changes in social behavior and perspectives for the betterment of society [142].

Each of these sub-dimensions is essential for the development of SEs and their subsequent impact on performance. The effect of Leadership on SE can consequently be observed. There is a direct relationship among the previously analyzed groups (red, yellow, light blue, orange, and blue): the green and purple groups have an indirect relationship, and the brown group has a reciprocal relationship. In this model, we wish to highlight two things: first, the mobilization of resources stemming from the relationship with Leadership, which is crucial for the long-term sustainability of SE, and second, the regulatory effect of sub-dimensions: Cultural and Institutional Ecosystems regarding the multidimensionality of SE and how these sub-dimensions have a reciprocal relationship with the multidimensionality of Leadership. Finally, the theoretical framework presented illustrates the central relationships found in literature and presented in the multidimensional factors obtained in this study and depicted in this theoretical model.

CONCLUSIONS

A bibliometric analysis spanning the past two decades (2005–2024) was conducted in order to scrutinize the intricate relationship between SE and Leadership. This research, which was carried out by means of a sophisticated co-word analysis and network mapping, sheds light on

fundamental dynamics within these domains and offers insights that are crucial as regards providing more knowledge in this field.

Leadership is a common thread that integrates interrelated aspects of SE, such as cultural assimilation, collaboration with authorities and adequate communication. Strong leadership in particular encourages societal backing, enhances the effect of SE through strategic media usage, and enhances innovation, which is critical if SE is to respond to societal challenges, especially in developing contexts. Furthermore, our findings emphasize the mutually dependent association among SE, Leadership and impact. Leadership guides society while conceptualizing SE, since the former seeks to maximize the good it may bring to the population.

Strong organizational and managerial practices are seen as necessary for the success and longevity of SE initiatives. The embedding of ethical organization enables the ethical distribution of resources, which increases social sustainability. Collaborative initiatives are observed as Leadership outcomes that encourage trust and dedication among the key players. Overall, the leadership of SE initiatives is compared to previous studies through bibliometric analysis, ultimately making Leadership a central manifester of social impact in SE.

In summary, although our analysis provides an in-depth exploration of connections between SE and Leadership, this is sometimes revealed only in particular contexts, such as cultural patterns, collaboration with authorities and strategic media usage. We also discovered that Leadership facilitates innovations, whose synergy proves to be essential as regards addressing multi-faceted societal challenges in the settings of developing societies, and leads SE to have a greater societal impact. However, the study has its limitations. Primarily, relying on the bibliometric nature of data may simplify the complicated interplay and contextuality of SE and Leadership, focusing on qualitative intercorrelations between general indicators, whereas there are nuanced processes and vague boundaries. Moreover, relying on the co-word analysis and stationary network mapping deprives us of the comprehensive and flexible nature of interactions between SE and Leaders. Nevertheless, our study contributes to the ongoing discussion on SE and Leadership, providing valuable insights and research directions.

FUTURE RESEARCH DIRECTIONS

The literature review conducted in this study has led to the identification of several research gaps that could be the focus of future studies, thus enabling the scientific community to direct its efforts more effectively. Table 3 presents these research gaps in four categories: decision-making, sustainability, suitable Leadership types according to the organization's operating context, and networking.

Table 3. Research gaps in the current literature on leadership and SE.

Topic	Future Research Directions
Leadership in SE Decision Making	• Process in social leaders' decision-making • Effect of social leader's decisions on the performance of the social enterprise
Leadership in SE Sustainability	• Sustainable business models that promote project continuity in the long term • Innovation in order to create effective solutions for social and environmental issues
Suitable Leadership Type in Social Enterprises according to the cultural, social and/or economic context of the operating region	• Ideal leadership in order to motivate team members to achieve their full potential and project objectives • Power Dynamics within SE: Exploring Succession Planning • New forms of Leadership Styles in SE
Networking in SE	• Social leader networking capability in order to build and maintain strong relationships with partners and collaborators so as to maximize project impact

Source: The authors, based on Web of Science [45].

With regard to Leadership in SE decision-making, literature notes that leaders have particular skills and qualities that help instill a balance between social and financial goals while making informed decisions in the manner of approaches [143]. However, there is still a need for more analyses regarding social leaders' decision-making processes, with a focus on the transparency of information in order to achieve financial and social balance [144,145]. There is also a need for detailed metrics on the impacts of such decisions on SE operations [146,147].

Similarly, with regard to Leadership in SE sustainability, most references assume that Leadership is a significant factor in SE sustainability that provides a clear vision, a healthy environment and communication [148], allowing the company to become focused on a long-term prospect that is relevant to environmental changes and the long-term prospect, and to maintaining its position and success [66]. There is a question regarding which sustainable business model will allow the company to continue with the project over a long period of time, which is a gap in knowledge. With regard to Leadership in social innovation, some references have started researching the idea that the leader's primary role is to stimulate the birth of creative effective market solutions to social questions [149]. Social innovation leaders: these achieve this via their vision, enhanced cooperation with other leaders, caring and flexibility, and persistent motivation and passion [150]. Further research is required in order to discover the ways in which this innovation is achieved and to compare its effect with competitors by means of labor productivity, job satisfaction, the social impact, and the environmental footprint [151–153].

Moreover, a Suitable Leadership Type in SE is influenced by the cultural, social and economic environment of a given region. The ability to achieve organizational goals related to inclusion, community cohesion,

participation, and horizontal relationships is valued [154] when choosing a suitable Leadership type for SE [60,155]. There is consequently a gap in literature regarding the adaptability of these Leadership styles to the specifics of a region's culture and socioeconomic factors [156], including motivational practices that help inspire and stimulate team members to reveal their full potential in heterogeneous environments [157]. Furthermore, an exploration of Power Dynamics within SE reveals the significance of succession-planning strategies. The study of the smooth transition of power in SE is vital for its continuity and the preservation of impact [158]. However, there is a lack of literature on the most applicable power transition models that would work in the specific social enterprise framework [159]. Furthermore, the new forms of Leadership Styles in SE perhaps also require greater attention. New forms of leadership include distributed leadership or collective leadership [160,161]. These models disrupt the traditional hierarchical structure by assuming that power is shared and decisions are made together. Knowledge of these forms of leadership is necessary in order to develop viable and adaptive social enterprises [162].

Finally, networking in SE should be emphasized as crucial for building business relationships and connections with other actors in the social enterprise ecosystem, including governmental organizations, foundations, and businesses [108,163]. However, networking skills such as building relationships and making strategic partnerships that contribute to SE success have not yet been detailed [164].

DATA AVAILABILITY

The dataset of the study is available from the authors upon reasonable request.

AUTHOR CONTRIBUTIONS

María Guzmán, Yolanda Salinero, and Pablo Ruiz-Palomino designed the study. María Guzmán analyzed the data. All three authors participated in writing the paper.

CONFLICTS OF INTEREST

The authors declare that there is no conflicts of interest.

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REFERENCES

1. Smitskikh VK, Titova NY, Shumik EG. The model of Social Entrepreneurship dynamic development in Circular Economy. Rev Univ Soc. 2020;12(5):248-53.
2. White GRT, Samuel A, Pickernell D, Taylor D, Mason-Jones R. Social entrepreneurs in challenging places: A Delphi study of experiences and

perspectives. Local Econ. 2018;33(8):800-21.
3. Westley F, Antadze N, Riddell DJ, Robinson K, Geobey S. Five Configurations for Scaling Up Social Innovation: Case Examples of Nonprofit Organizations From Canada. J Appl Behav Sci. 2014;50(3):234-60.
4. Smollan R, Singh S. How Social Entrepreneurs Respond to Enterprise Failure. J Soc Entrep. 2021;15(1):1-25.
5. Popkova EG, Sergi BS. Dataset Modelling of the Financial Risk Management of Social Entrepreneurship in Emerging Economies. Risks. 2021;9(12):211.
6. Al Taji FNA, Bengo I. The Distinctive Managerial Challenges of Hybrid Organizations: Which Skills are Required? J Soc Entrep. 2019;10(3):328-45.
7. Barba-Sánchez V, Salinero Y, Estévez PJ. Monetising the social value of inclusive entrepreneurship: the case of the Abono Café social economy enterprise. Esp Rev Econ Public Soc Coop. 2021;101:115-41.
8. Bhatia S, Olivola CY, Bhatia N, Ameen A. Predicting leadership perception with large-scale natural language data. Leadersh Q. 2022;33(5):101535.
9. Allen S, Rosch D, Ciulla J, Dugan J, Jackson P, Johnson S, et al. Proposals for the future of leadership scholarship: Suggestions in Phronesis. Leadership. 2022;18(4):563-89.
10. Abina A, Batkovic T, Cestnik B, Kikaj A, Lukman RK, Kurbus M, et al. Decision Support Concept for Improvement of Sustainability-Related Competences. Sustainability. 2022;14(14):8369.
11. Danaeefard H, Boustani HR, Khaefelahi A, Delkhah J. Attraction-Selection-Attrition Theory in the Public Organization: The Effects of Personality Traits on Psychological Ownership with Regard to the Mediating Role of Emotional. Iran J Manag Stud. 2018;11(2):323-49.
12. Ruiz-Palomino P, Martínez-Cañas R, Bañón-Gomis A. Is unethical leadership a negative for Employees' personal growth and intention to stay? The buffering role of responsibility climate. Eur Manag Rev. 2021;18(4):535-49.
13. Roy MJ, Sato K, Calò F. Further Limits to Institutional Isomorphism? Introducing the 'Neo-contingency Approach' to the Field of Community-Led Social Ventures. Voluntas. 2015;26(6):2536-53.
14. Suriyankietkaew S, Krittayaruangroj K, Iamsawan N. Sustainable Leadership Practices and Competencies of SMEs for Sustainability and Resilience: A Community-Based Social Enterprise Study. Sustainability. 2022;14(10):5762.
15. Nguyen MHT, Hodgetts DJ, Carr SC. Fitting social enterprise for sustainable development in Vietnam. Sustainability. 2021;13(19):10630.
16. Srisathan WA, Ketkaew C, Naruetharadhol P. The intervention of organizational sustainability in the effect of organizational culture on open innovation performance: A case of thai and chinese SMEs. Cogent Bus Manag. 2020;7(1):1717408.
17. Kelly L, Perkins V, Zuraik A, Luse W. Social Impact: The Role of Authentic Leadership, Compassion and Grit in Social Entrepreneurship. J Entrep. 2022;31(2):298-329.
18. De la Garza M, Guzman E, Armando J, Sierra A. Social entrepreneurship innovation: A study from Mexico. Entrep Bus Econ Rev. 2020;8(4):201-20.
19. Sousa E da S, Silveira Fontenele RE, Leocadio Silva AL, De Sousa Filho JM.

Mapping the international scientific production about entrepreneurial intention. Rev Gest E Secr. 2019;10(3):114-39.
20. Nájera-Sánchez JJ, Ortiz-de-Urbina-Criado M, Mora-Valentín EM. Mapping Value Co-creation Literature in the Technology and Innovation Management Field: A Bibliographic Coupling Analysis. Front Psychol. 2020;11:588648.
21. Austin J, Stevenson H, Wei-Skillern J. Social and commercial entrepreneurship: Same, different, or both? Entrep Theory Pract. 2006;30(1):1-22.
22. Dees JG. Enterprising nonprofits. Harv Bus Rev. 1998;76(1):55-67.
23. Mair J, Marti I. Social entrepreneurship research: A source of explanation, prediction, and delight. J World Bus. 2006;41(1):36-44.
24. Battilana J, Lee M. Advancing Research on Hybrid Organizing—Insights from the Study of Social Enterprises. Acad Manag Ann. 2014;8(1):397-441.
25. Brugmann J, Prahalad CK. New social compact. Harv Bus Rev. 2007;85(2):50-60.
26. Barney J. Firm resources and sustained competitive advantage. J Manage. 1991;17(1):99-120.
27. Avolio B, Bass B. Individual consideration viewed at multiple levels of analysis—A multilevel framework for examining the diffusion of transformational leadership. Leadersh Q. 1995;6(2):199-218.
28. Chitsazan H, Bagheri A, Yusefi A. Intellectual, Psychological, and Social Capital and Business Innovation: The Moderating Effect of Organizational Culture. Iran J Manag Stud. 2017;10(2):307-33.
29. Dacin PA, Dacin MT, Matear M. Social Entrepreneurship: Why We Don't Need a New Theory and How We Move Forward From Here. Acad Manag Perspect. 2010;24(3):37-57.
30. Dorjee T, Ting-Toomey S. Understanding Intergroup Conflict Complexity: An Application of the Socioecological Framework and the Integrative Identity Negotiation Theory. Negot Confl Manag Res. 2020;13(3):244-62.
31. Jokela P, Elo M. Developing Innovative Business Models in Social Ventures. J Entrep Manag Innov. 2015;11(1):103-18.
32. Hueso JA, Jaen I, Linan F. From personal values to entrepreneurial intention: a systematic literature review. Int J Entrep Behav Res. 2021;27(1):205-30.
33. Fuerst S, Sanchez-Dominguez O, Rodriguez-Montes MA. The Role of Digital Technology within the Business Model of Sustainable Entrepreneurship. Sustainability. 2023;15(14):10923.
34. Broadstock DC, Matousek R, Meyer M, Tzeremes NG. Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental & social governance implementation and innovation performance. J Bus Res. 2020;119:99-110.
35. Pasricha P, Singh B, Verma P. Ethical Leadership, Organic Organizational Cultures and Corporate Social Responsibility: An Empirical Study in Social Enterprises. J Bus Ethics. 2018;151(4):941-58.
36. Islam SM. Social impact scaling strategies in social enterprises: A systematic review and research agenda. Aust J Manag. 2022;47(2):298-321.
37. Schiuma G, Kumar S, Sureka R, Joshi R. Research constituents and authorship

patterns in the Knowledge Management Research and Practice: a bibliometric analysis. Knowl Manag Res Pract. 2023;21(1):129-45.
38. Page MJ, McKenzie JE, Bossuyt P, Boutron I, Hoffmann TC, Mulrow CD, et al. The prisma 2020 statement: An updated guideline for reporting systematic reviews. BMJ. 2021;57(4):444-65.
39. Luc PT, Lan PX, Le ANH, Trang BT. A Co-Citation and Co-Word Analysis of Social Entrepreneurship Research. J Soc Entrep. 2022;13(3):324-39.
40. Tuncay SS. Structural social capital articles in business administration literature on the Web of Science database: co-word analysis. Middle East J Manag. 2022;9(6):589-611.
41. Miller I. Lessons from Franklin, Benjamin Civic Leadership: The Pennsylvania-Hospital story. Hosp Health Serv Adm. 1988;33(4):497-503.
42. Gundry LK, Kickul JR, Griffiths MD, Bacq SC. Creating social change out of nothing: The role of entrepreneurial bricolage in social entrepreneurs' catalytic innovations. In: Lumpkin GT, Katz JA, editors. Social and Sustainable Entrepreneurship. Leeds (UK): Emerald Group Publishing Limited; 2011. p. 1-24.
43. Purdue D. Neighbourhood governance: Leadership, trust and social capital. Urban Stud. 2001;38(12):2211-24.
44. Campbell S. Social entrepreneurship: how to develop new social-purpose business ventures. Health Care Strateg Manage. 1998;16(5):17-8.
45. Clarivate Analytics. Web of Science. Available from: https://www.webofscience.com. Accessed 2024 Feb 19.
46. Anderson N, Potocnik K, Zhou J. Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework. J Manage. 2014;40(5):1297-333.
47. Fulmer CA, Gelfand MJ. At What Level (and in Whom) We Trust: Trust Across Multiple Organizational Levels. J Manage. 2012;38(4):1167-230.
48. Westley FR, Tjornbo O, Schultz L, Olsson P, Folke C, Crona B, et al. A Theory of Transformative Agency in Linked Social-Ecological Systems. Ecol Soc. 2013;18(3):27.
49. Nga JKH, Shamuganathan G. The Influence of Personality Traits and Demographic Factors on Social Entrepreneurship Start Up Intentions. J Bus Ethics. 2010;95(2):259-82.
50. Stephan U, Uhlaner LM. Performance-based vs socially supportive culture: A cross-national study of descriptive norms and entrepreneurship. J Int Bus Stud. 2010;41(8):1347-64.
51. van Eck NJ, Waltman L. VOS: A New Method for Visualizing Similarities Between Objects BT—Advances in Data Analysis. In: Decker R, Lenz HJ, editors. Advances in Data Analysis: Studies in Classification, Data Analysis, and Knowledge Organization. Berlin (Germany): Springer; 2007. p. 299-306.
52. Shela V, Ramayah T, Noor Hazlina A. Human capital and organisational resilience in the context of manufacturing: a systematic literature review. J Intellect Cap. 2023;24(2):535-59.
53. Bencheva N, Stoeva T. Entrepreneurial skills evaluation of social business advisors in the European Union. Sci Pap Manag Econ Eng Agric Rural Dev.

2020;20(1):83-8.
54. ElNaggar RAA, Hammad R. Determinants of online social entrepreneurs' brand loyalty: a value creation model. Int Rev Public Nonprofit Mark. 2024;21(1):155-76.
55. Jiatong W, Li C, Murad M, Shahzad F, Ashraf SF. Impact of Social Entrepreneurial Factors on Sustainable Enterprise Development: Mediating Role of Social Network and Moderating Effect of Government Regulations. Sage Open. 2021;11(3):21582440211030636.
56. Lee B, Kelly L. Cultural leadership ideals and social entrepreneurship: an international study. J Soc Entrep. 2019;10(1):108-28.
57. Solorzano M, Guzman C, Savall T, Villajos E. The identity of the social entreprise in Spain: analysis from four different socioeconomic realities. Esp Rev Econ Public Soc Coop. 2018;92:155-82.
58. Canestrino R, Cwiklicki M, Magliocca P, Pawelek B. Understanding social entrepreneurship: A cultural perspective in business research. J Bus Res. 2020;110:132-43.
59. Calderón R, De Urbina MO, Expósito L. Follow the genuine leader: The "green imitation". Bus Ethics Environ Responsib. 2023;32(2):570-81.
60. Luc PT. The relationships between Big-Five personality traits and social entrepreneurship intention. Cogent Bus Manag. 2022;9(1):2137950.
61. Sotiropoulou A, Papadimitriou D, Maroudas L. Personal Values and Typologies of Social Entrepreneurs. The Case of Greece. J Soc Entrep. 2021;12(1):1-27.
62. Ramirez Alvarez ML. The Strategic Visions of the Social Entrepreneurs in the Social Business Model: Proposition for a Typology. Rev Univ Empres. 2019;21(36):196-227.
63. Ali I, Balta M, Papadopoulos T. Social media platforms and social enterprise: Bibliometric analysis and systematic review. Int J Inf Manag. 2023;69:102510.
64. Oduro S. Entrepreneurial orientation and innovation performance of social enterprises in an emerging economy. J Res Mark Entrep. 2022;24(2):312-36.
65. van Assen MF, Caniels MCJ. Economic and social LMX and innovative work behaviour: the moderating effect of paradox mindset. Eur J Innov Manag. 2022;25(6):1057-75.
66. Alonso Dos Santos M, Huertas M, Staniewski MW. Analytical editorial: Ensuring the future of our world: innovation, management and governance for sustainable growth. Acad Latinoam Adm. 2022;35(2):117-30.
67. Prabowo P. Designing and developing innovators' skills in Indonesia through entrepreneurship education: A case study of Kejar AURORA. Int J Bus. 2018;23(1):63-72.
68. Nascimento L, Steinbruch F, Oliveira D, Da Costa J, Luce F. Strategic marketing approaches impact on social enterprises. Mark Intell Plan. 2021;39(7):944-59.
69. Cannon SM, Byrne D, Donnelly-Cox G, Rhodes ML. Institutional influences on social enterprise types in the Republic of Ireland. Irish J Manag. 2022;41(2):119-34.
70. Guzman J, Oh J, Sen A. What Motivates Innovative Entrepreneurs? Evidence from a Global Field Experiment. Manage Sci. 2020;66(10):4808-19.

71. Zawislak P. Business Models of “New Cooperativism” Organizations as an Instrument of Sustainable Development Stimulation. Cent Eur Manag J. 2020;28(3):168-95.
72. Cho SM. The Effects of Organizational Culture on Social and Economic Performance of Social Enterprise in Seoul Area: Focusing on the Mediating Effect of Network Activity. J Reg Stud Dev. 2018;27(1):151-93.
73. Desiana P, Ma’arif M, Puspitawati H, Rachmawati R, Prijadi R, Najib M. Strategy for Sustainability of Social Enterprise in Indonesia: A Structural Equation Modeling Approach. Sustainability. 2022;14(3):1383.
74. Permatasari A, Dhewanto W, Dellyana D. Creative Social Entrepreneurial Orientation: Developing Hybrid Values to Achieve the Sustainable Performance of Traditional Weaving SMEs. J Soc Entrep. 2023;1-15. doi: 10.1080/19420676.2022.2148715
75. Desa G, Dunham I, Jeong N, Basu S, Kleinrichert D. Culture Matters: Antecedent Effects of Societal Culture on the Resource Mobilisation Strategies of Social Ventures. J Soc Entrep. 2023;1-28. doi: 10.1080/19420676.2023.2213734
76. Jarrodi H, Byrne J, Bureau S. A political ideology lens on social entrepreneurship motivations. Entrep Reg Dev. 2019;31(7–8):583-604.
77. Leiva F, Lopez M, Marti B. Discovering prominent themes of the application of eye tracking technology in marketing research. Cuad Gestión. 2022;22(1):97-113.
78. Cobo MJ, López-Herrera AG, Herrera-Viedma E, Herrera F. SciMAT: A New Science Mapping Analysis Software Tool. J Am Soc Inf Sci Technol. 2012;63:1609-30.
79. Naeini A, Zamani M, Daim T, Sharma M, Yalcin H. Conceptual structure and perspectives on “innovation management”: A bibliometric review. Technol Forecast Soc Change. 2022;185:122052.
80. Nájera-Sánchez JJ, Martinez-Cañas R, García-Haro MÁ, Martínez-Ruiz MP. Exploring the knowledge structure of the relationship between value co-creation and customer satisfaction. Manag Decis. 2022;60(12):3366-87.
81. Matzembacher D, Raudsaar M, De Barcellos M, Mets T. Sustainable Entrepreneurial Process: From Idea Generation to Impact Measurement. Sustainability. 2019;11(21):5892.
82. Carmeli A, Tishler A, Edmondson A. CEO relational leadership and strategic decision quality in top management teams: The role of team trust and learning from failure. Strateg Organ. 2012;10(1):31-54.
83. Hoos F. Showing off or showing impact? The joint signalling effect of reputation and accountability on social entrepreneurs’ crowdfunding success. Manag Account Res. 2022;54:100778.
84. Maseno M, Wanyoike C. Social Entrepreneurship as Mechanisms for Social Transformation and Social Impact in East Africa An Exploratory Case Study Perspective. J Soc Entrep. 2022;13(1):92-117.
85. Tapsell P, Woods C. Social entrepreneurship and innovation: Self-organization in an indigenous context. Entrep Reg Dev. 2010;22(6):535-56.
86. Middermann L, Kratzer J, Perner S. The Impact of Environmental Risk

Exposure on the Determinants of Sustainable Entrepreneurship. Sustainability. 2020;12(4):1534.
87. AAstebro T, Hoos F. Impact measurement based on repeated randomized control trials: The case of a training program to encourage social entrepreneurship. Strateg Entrep J. 2021;15(2):254-78.
88. Gillett A, Tennent K. Hybrid goals: institutional complexity and “legacy” in a global sporting mega-event. Public Manag Rev. 2022;24(3):372-97.
89. Goyal S, Agrawal A, Sergi B. Social entrepreneurship for scalable solutions addressing sustainable development goals (SDGs) at BoP in India. Qual Res Organ Manag. 2021;16(3–4):509-29.
90. Ketkar S, Puri R. Investigating the “Mission and Profit” Paradox: Case Study of an Ecopreneurial Organisation in India. J Soc Entrep. 2022;1-22. doi: 10.1080/19420676.2022.2132277
91. Michelini L, Fiorentino D. New business models for creating shared value. Soc Responsib J. 2012;8(4):561-77.
92. Nascimento LS, da Costa Júnior JC, Salazar VS, Chim-Miki AF. Coopetition in social entrepreneurship: a strategy for social value devolution. Int J Emerg Mark. 2023;18(9):2176-97.
93. Drencheva A, Stephan U, Patterson M, Topakas A. Navigating interpersonal feedback seeking in social venturing: The roles of psychological distance and sensemaking. J Bus Ventur. 2021;36(4):106123.
94. Brenneke M, Spitzeck H. Social Intrapreneurs—Bottom-Up Social Innovation. Int Rev Entrep. 2010;8(2):157-76.
95. Chahine T. Toward an Understanding of Public Health Entrepreneurship and Intrapreneurship. Front Public Heal. 2021;9:593553.
96. Manjon M, Merino A, Cairns I. Tackling energy poverty through social intrapreneurship in large-scale energy companies. Soc Enterp J. 2021;17(4):604-24.
97. Lee C, Bang H. The Effects of Social Entrepreneur’s Competence on the Performance of Social Enterprise. Korean Leadersh Rev. 2019;10(2):25-55.
98. Valadez B, Cruz B, Huesca M, Castillo M. Social Entrepreneurship and Social Innovation: A bibliometric analysis. Rev Inquietud Empres. 2023;23(2):1–19.
99. Arghode V, Lathan A, Alagaraja M, Rajaram K, McLean G. Empathic organizational culture and leadership: conceptualizing the framework. Eur J Train Dev. 2022;46(1–2):239-56.
100. Rivera RG, Santos D, Martin M, Requero B, Cancela A. Predicting attitudes and behavioural intentions towards social entrepreneurship: the role of servant leadership in young people. Rev Psicol Soc. 2018;33(3):650-81.
101. Ip C, Zhuge T, Chang Y, Huang TH, Chen YL. Exploring the Determinants of Nascent Social Entrepreneurial Behaviour. Int J Environ Res Public Health. 2022;19(6):3556.
102. Lee E, Lee M. Followers’ Perception on CEO’s Prototypicality on Leader Endorsement. J CEO Manag Stud. 2017;20(3):179-95.
103. Tan L, Pham L, Bui T. Personality Traits and Social Entrepreneurial Intention: The Mediating Effect of Perceived Desirability and Perceived Feasibility. J Entrep. 2021;30(1):56-80.

104. Ghalwash S, Tolba A, Ismail A. What motivates social entrepreneurs to start social ventures? An exploratory study in the context of a developing economy. Soc Enterp J. 2017;13(3):268-98.
105. Bonomi S, Ricciardi F, Rossignoli C. Network organisations for externality challenges: how social entrepreneurship co-evolves with ICT-enabled solutions. Int J Knowledge-Based Dev. 2017;8(4):346-66.
106. Folmer E, Nederveen C, Schutjens V. Network importance and use: commercial versus social enterprises. Soc Enterp J. 2018;14(4):470-90.
107. Ferrara A, Ferrara C, Tomasi S, Paviotti G, Bertella G, Cavicchi A. Exploring the Potential of Social Farmers' Networking as a Leverage for Inclusive Tourism. Sustainability. 2023;15(7):5856.
108. Dongul ES, Artantas E. Exploring the link between social work, entrepreneurial leadership, social embeddedness, social entrepreneurship and firm performance: a case of SMES owned by Chinese ethnic community in Turkey. J Enterp Communities. 2022;17(3):684-707.
109. Cheung C, Kwong C, Manzoor H, Rashid M, Bhattarai C, Kim YA. The co-creation of social ventures through bricolage, for the displaced, by the displaced. Int J Entrep Behav Res. 2019;25(5):1093-127.
110. Ghazali E, Mutum D, Javadi H. The impact of the institutional environment and experience on social entrepreneurship: a multi-group analysis. Int J Entrep Behav Res. 2021;27(5):1329-50.
111. Kimmitt J, Mandakovic V, Munoz P. Social problem scale, public investment and social entrepreneurship action. Int J Entrep Behav Res. 2022;28(6):1391-413.
112. Dhesi A. Diaspora, social entrepreneurs and community development. Int J Soc Econ. 2010;37(9):703-16.
113. Baskaran A, Chandran V, Ng B. Inclusive Entrepreneurship, Innovation and Sustainable Growth: Role of Business Incubators, Academia and Social Enterprises in Asia. Sci Technol Soc. 2019;24(3):385-400.
114. Montes R, Ramirez M. Systematic mapping: educational and social entrepreneurship innovations (2015–2020). Educ Train. 2022;64(7):923-41.
115. Deng W, Liang QZ, Fan PH, Cui L. Social entrepreneurship and well-being: The configurational impact of institutions and social capital. Asia Pac J Manag. 2020;37(4):1013-37.
116. Rios M. Social entrepreneurship and social change: a practice-based study in non-governmental organizations. Rausp Manag J. 2021;56(2):170-85.
117. Asarkaya C, Taysir NK. Founder's background as a catalyst for social entrepreneurship. Nonprofit Manag Leadersh. 2019;30(1):155-66.
118. Trivedi C, Ray S. Equity, Empowerment, and Social Justice: Social Entrepreneurship for Formerly Incarcerated Individuals. New Horizons Adult Educ Hum Resour Dev. 2024;36(1):48-64.
119. Molderez I, Fets J. Dark sides of social entrepreneurship: Contributions of systems thinking towards managing its effects. Bus Soc Rev. 2023;128(4):672-709.
120. Osorio P. The Ethics of Entrepreneurial Shared Value. J Bus Ethics. 2019;157(4):981-95.

121. Parekh N, Attuel L. Social entrepreneurship finance: the gaps in an innovative discipline. Int J Entrep Behav Res. 2022;28(1):83-108.
122. De Bernardi P, Bertello A, Venuti F. Online and On-Site Interactions within Alternative Food Networks: Sustainability Impact of Knowledge-Sharing Practices. Sustainability. 2019;11(5):1457.
123. Trivellato B, Cristofoli D, Galizzi G, Sicilia M, Steccolini I. Do networks get emotional? The role of leaders' emotions for (network) success. Public Manag Rev. 2023;1-25. doi: 10.1080/14719037.2023.2270484
124. Balahurovska I. Network leadership is a promising direction in management science. Mark Manag Innov. 2023;14(1):133-45.
125. Trabskaia I, Gorgadze A, Raudsaar M, Myyrylainen H, Myyryläinen H. A Bibliometric Analysis of Social Entrepreneurship and Entrepreneurial Ecosystems. Adm Sci. 2023;13(3):75.
126. Ahmad S, Bajwa I. The role of social entrepreneurship in socio-economic development: a meta-analysis of the nascent field. J Entrep Emerg Econ. 2023;15(1):133-57.
127. Talukder S, Lakner Z. Exploring the Landscape of Social Entrepreneurship and Crowdfunding: A Bibliometric Analysis. Sustainability. 2023;15(12):9411.
128. Coronel K, Heras D, Aguirre J, Mora P, Durán K. Social Entrepreneurship: A Bibliometric Analysis of Its Fields of Study. Sustainability. 2023;15(18):13432.
129. De Sousa-Filho J, Granados M, Fernandes J. Social entrepreneurial intention: educating, experiencing and believing. Stud High Educ. 2023;48(7):1067-81.
130. Bodolica V, Spraggon M, Badi H. Extracurricular activities and social entrepreneurial leadership of graduating youth in universities from the Middle East. Int J Manag Educ. 2021;19(2):100489.
131. Silvestri A, Veltri S. Exploring the relationships between corporate social responsibility, leadership, and sustainable entrepreneurship theories: A conceptual framework. Corp Soc Responsib Environ Manag. 2020;27(2):585-94.
132. Au K, Jeong SS, Hsu AJC, Xiao Y. When Does Prosocial Motivation Deliver? A Dual-Motivations Approach to Social Enterprise Outcomes. Available from: https://doi.org/10.1007/s10551-023-05452-7. Accessed 2024 Jun 19.
133. Swaim JA, Roebuck D. The role of empowered employee ethical voice in supporting social entrepreneurship. J Dev Entrep. 2021;26(04):2150028.
134. Tiwari P, Bhat A, Tikoria J. Mediating Role of Prosocial Motivation in Predicting Social Entrepreneurial Intentions. J Soc Entrep. 2022;13(1):118-41.
135. Viswanath P, Annapally S, Kumar A. Social entrepreneurial opportunity recognition among higher education students: scale development and validation. Available from: https://doi.org/10.1108/SEJ-04-2023-0051. Accessed 2024 Jun 19.
136. Reypens L, Bacq S, Milanov H. Beyond bricolage: Early-stage technology venture resource mobilization in resource-scarce contexts. J Bus Ventur. 2021;36(4):106110.
137. Xiabao P, Horsey E, Song X, Guo R. Developing Social Entrepreneurship Orientation: The Impact of Internal Work Locus of Control and Bricolage. Front Psychol. 2022;13:877317.

138. Shan T, Tian X. The effects of mindfulness upbringing perception on social entrepreneurship orientation: A moderated mediation model of prosocial motivation and perceived pressure from external stakeholders. Front Psychol. 2022;13:968484.
139. Mulloth B, Rumi S. Challenges to measuring social value creation through social impact assessments: the case of RVA Works. J Small Bus Enterp Dev. 2022;29(4):528-49.
140. Do M. The key for success in the value chain of a social entrepreneur in Vietnam. J Enterp Communities. 2023;17(6):1193-208.
141. Manohar H. Social Innovation Capability of a Social Entrepreneur: Scale Development and Validation. J Soc Entrep. 2022;1-12. doi: 10.1080/19420676.2022.2127853
142. Scuotto A, Cicellin M, Consiglio S. Social bricolage and business model innovation: a framework for social entrepreneurship organizations. J Small Bus Enterp Dev. 2023;30(2):234-67.
143. Wang F, He H. Identification and decision making of social entrepreneurship opportunities based on family social capital and prior knowledge. Int J Electr Eng Educ. 2020;57(1):73-84.
144. Moore B, Styron R, Styron J. Authentic Leadership: Applications in Academic Decision-Making. Available from: https://www.igi-global.com/chapter/authentic-leadership/175183. Accessed 2024 Jun 19.
145. Hong J, Gill S, Javaid H, Ali Q, Murad M, Shafique M. Hunting the Best Opportunity Through the Arrow of General Decision-Making Styles: Unfolding the Role of Social Capital and Entrepreneurial Intention. Front Psychol. 2022;13:814424.
146. Aritz J, Walker R, Cardon P, Li Z. Discourse of Leadership: The Power of Questions in Organizational Decision Making. Int J Bus Commun. 2017;54(2):161-81.
147. Da Silva A, Fernandez B, Gago S. Impact of leadership style on the use of accounting information for decision making. Entrep Sustain Issues. 2023;11(1):164-77.
148. Jardon C, Martinez X. Leadership and Organizational Culture in the Sustainability of Subsistence Small Businesses: An Intellectual Capital Based View. Sustainability. 2019;11(12):3491.
149. Pless N, Murphy M, Maak T, Sengupta A. Societal challenges and business leadership for social innovation. Soc Bus Rev. 2021;16(4):535-61.
150. Yun Jongjin, Jae-Uk J. A Comparative Study on Concept and Ecosystem of Social Venture: focused on Sungsu Social Innovation Cluster and Bulgwang Seoul Innovation Park. J Soc Value Enterp. 2022;15(1):3-27.
151. Zhu J, Jin Y. How flexible leadership ability affects manufacturing enterprises' digital transformation willingness: The role of innovation commitment and environmental dynamics. PLoS One. 2023;18(11):e0288047.
152. Orlova E. Innovation in Company Labor Productivity Management: Data Science Methods Application. Appl Syst Innov. 2021;4(3):68.
153. McIntyre J, Lethole P, Makaulule M, Wirawan R, Widianingsih I, Romm N. Towards eco-systemic living: learning with Indigenous leaders in Africa and

Indonesia through a community of practice: implications for climate change and pandemics. Syst Res Behav Sci. 2023;40(5):779-86.
154. Budin D, Wafa S. The relationship between culture and leadership style preference among Malay-Brunei, Bajau and Kadazan-Dusun community in Sabah, Malaysia. J Manag Dev. 2015;34(10):1202-10.
155. Xiao Y, Liu Z, Ahlstrom D, Bai Y. Entrepreneurs' Personality Traits and Social Enterprise: A Legitimation Perspective. Entrrepreneursh Res J. 2022. doi: 10.1515/erj-2022-0216
156. Yalcinyigit S, Aktas H. A Research on the Relationship of Social Intelligence and Cultural Intelligence with Leadership Styles. Istanbul Bus Res. 2023;52(1):107-32.
157. Van der Klashorst E. Exploring the economic, social and cultural rights of youth leaders working in Sport for Development initiatives at grassroots level in South Africa. Leis Stud. 2018;37(1):109-16.
158. Lo A, Diochon P. Unsilencing power dynamics within third spaces. The case of Renault's Fab Lab. Scand J Manag. 2019;35(2):101039.
159. Bang NP, Calabrò A, Valentino A. Strategic transitions: unraveling the impact of socioemotional wealth and generational cohorts on succession planning in family SMEs. Int J Entrep Behav Res. 2023;30(1):23-51.
160. Harris A, Jones M, Ismail N. Distributed leadership: taking a retrospective and contemporary view of the evidence base. Sch Leadersh Manag. 2022;42(5):438-56.
161. Fu L, Qin K, Li R, Li Y. Distributed leadership, open innovation, and organisational ambidexterity: the moderating roles of connectedness and environmental dynamism. Technol Anal Strateg Manag. 2022;1-17. doi: 10.1080/09537325.2022.2137669
162. Eustrachio J, Caldana A, Leal W. Sustainability leadership: Conceptual foundations and research landscape. J Clean Prod. 2023;415:137761.
163. Vieira V, Oliveira V, Miki A. Social Entrepreneurship Measurement Framework for Developing Countries. Rev Adm Contemp. 2021;25:1-8.
164. Liu Z, Li J, Shen J, Wang X, Chen P. Leader-follower UAVs formation control based on a deep Q-network collaborative framework. Sci Rep. 2024;14(1):4674.

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