

TRENDS AND PATTERNS IN THE NEXUS BETWEEN SOCIAL ENTREPRENEURSHIP AND SOCIAL INNOVATION: A BIBLIOMETRIC REVIEW AND RESEARCH AGENDA

Abstract

Scholars' interest in social entrepreneurship (SE) and social innovation (SI) has been growing in recent decades. Despite the literature's contribution to the scientific maturity of these fields via rigorous bibliometric reviews, whether social innovation occurs within social entrepreneurship is still unclear. The extant reviews also remain limited by their use of traditional bibliometric indicators. We therefore address these theoretical and methodological limitations via a bibliometric analysis of the intersection of these two theoretical domains, combining co-citation analysis, historiography, and bibliographic coupling. Demonstrating the recent theoretical evolution of social innovation research under the social entrepreneurship umbrella, we document the beginning of a new trend that can open new research pathways. Thus, we contribute to academic research by documenting the theoretical developments, clusters, and groups of interests at the intersection of SE and SI. Finally, our suggestions for future research may support the proliferation of and cross-pollination among these studies.

Keywords: social entrepreneurship; social innovation; bibliometric analysis; co-citation analysis; algorithmic historiography; bibliographic coupling.

Introduction

In recent decades, scholars' efforts in advancing the research on social entrepreneurship (SE) that promotes equality and inclusivity by advancing social innovation (SI) have increased noticeably (e.g., Olivetti, Yunus, etc.). In this view, SE and SI have been central in tackling grand challenges (George et al., 2016; Ruskin, Seymour, & Webster, 2016; McGahan et al., 2021), rebalancing social and economic power (Lumpkin, Bacq, and Pidduck, 2018), pursuing institutional changes (Rosca et al., 2020) and, finally, contributing to poverty alleviation (Pidduck, and Clark, 2021).

Previous research has involved investigations to explore the link between SE and SI. However, while the fundamentals of SE and SI seem inseparable, many scholars argue that “*social innovation is not social entrepreneurship*” (Morris et al., 2020, pp. 1093). In this respect scholars have questioned whether SI occurs necessarily within SE and, conversely, whether social entrepreneurs necessarily need to create SI (Portales 2019).

From a theoretical standpoint, SI is conceptualized as a process that needs to transcend sectors, levels of analysis, and methods to give a holistic and comprehensive understanding of

the impacts on social problems (Phills et al., 2008). In contrast, SE is more concerned with balancing the financial and social goals necessary for the implementation, sustainability, and scaling of innovation (Phillips et al., 2015). Accordingly, the logics, challenges, and natures of the processes of SE and SI are different and yet, for example, SI has been measured as an outcome of SE (Dwivedi and Weerawardena, 2018; see also Oeij et al., 2019), proving that these two concepts conceptually and empirically overlap. Moreover, on the one hand, SI may face resistance when being adopted by some parties and stakeholders who do not believe it is viable or are threatened by the changes that it represents (de Souza João-Roland, Granados, 2020); on the other hand, SE needs to focus on actions and strategies to overcome such obstacles, establish influential relationships, harvest resources, and develop alternative platforms to promote innovation (Morris et al., 2020).

Such lack of theoretical clarity may stimulate more empirical works but ultimately hinders our understanding of these phenomena (Bacq et al., 2021). It is thus important to better understand the nexus between SE and SI so to foster reciprocal reinforcements and to encourage the generation of genuinely new insights. This would require a systematic analysis of the literature that goes beyond the methodological limits of previous work (see Rey-Martí, et al., 2016 for a review on SE and Cancino et al., 2020, for one on SI). In this paper, we start addressing this gap with an in-depth bibliometric analysis of 950 research articles from the Web of Science database. While previous work has remained limited to traditional bibliometric indicators (e.g., keywords, leading authors), we deploy a unique combination of three bibliometric techniques—co-citation analysis, algorithmic historiography, and bibliographic coupling—to enhance the comprehensiveness of our analysis (Zupic and Cater, 2015). First, we provide a review of the SE and SI literature. Second, we explain the three methodologies used to conduct our analysis. Third, we document our findings. Finally, we present a future research agenda.

Literature review

Building on the seminal works of Bowen (1953), scholars have highlighted the role of SI in the entrepreneurial process (Kickul et al., 2018). From a theoretical standpoint, these two concepts may appear complementary due to their purpose regarding the “common good”. While SI helps address the ‘*what*’ and ‘*when*’, a process of social value creation occurs, defined as “*a novel solution to a social problem that is more effective, efficient, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals*” (Phills, Deiglmeier, & Miller, 2008, p. 39). SE attempts to investigate the relevant ‘*who*’ within and ‘*how*’ and ‘*why*’ such a process unfolds by considering the “*activities and processes undertaken to discover, define, and exploit opportunities to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner*” (Zahra et al., 2009, pp. 519). In the following section, we explore the extant systematic and bibliometric reviews of SE and SI, respectively.

Extant reviews on social entrepreneurship

Over the last decade, increasing academic efforts have contributed to the development of scientific maturity in the field of SE (Table 1). In this debate, SE scholars have developed rigor and quality in their systematic reviews (Short et al., 2009; Gupta et al., 2020; Ranville et al., 2021), focusing on concepts, levels of analysis, and definitions of social enterprises (Bacq and Jansen, 2011; Saebi et al., 2019), including hybrid organizations (Doherty et al., 2014) as well as conceptual divides within such streams (Morris et al., 2020). Moreover, as contributions to society and financial sustainability are two coexisting goals of SE, the literature reviews have focused on the tensions deriving from social-financial trade-off (Smith et al., 2013) as well as the tools and methods for social impact measurement (Rawhouser et al., 2019). Finally, importance has been given to the entrepreneurial ecosystems around social enterprises, i.e., when mapping the nexus with social networks (Dufays and Huybrechts, 2014) and business relationships (Alinaghian and Razmdoost, 2021).

Insert Table 1 about here

As the field of SE has grown, scholars have developed bibliometric reviews (Rey-Martí et al., 2016). In this vein, research has documented the approaches, drivers (Macke et al., 2018), and intellectual structures of SE (Hota et al., 2020; Granados et al., 2011). Moreover, given the relevant academic contributions that have recognized SE as a powerful mechanism for alleviating social inequalities, scholars have mapped the empirical articles on sharing value creation in the base of the pyramid (Lashitew et al., 2021), on the impact of sustainable entrepreneurship (Anand et al., 2021), and on the methodological issues when investigating such phenomena (Sassmannshausen and Volkmann, 2018) (Table 2).

Insert Table 2 about here

Extant reviews on social innovation

Scholars have widely recognized the role of SI in supporting economic development toward more sustainable goals (Singh et al., 2020). Accordingly, the academic community has developed systematic reviews of SI that enable identifying knowledge gaps as well as understanding the evolution of the field (Edwards-Schachter and Wallace, 2017) (Table 3). Such reviews have mapped SI research based on different levels of analysis, including corporate SI (Dionisio and de Vargas, 2020) and public management (Voorberg et al., 2015). Moreover, the literature has also analyzed, for example, articles on the capabilities of SI (Batista and Correia, 2021) and on those within higher education institutions (Lough, 2021).

Insert Table 3 about here

A number of bibliometric analyses of SI within entrepreneurship have supported research in this field (Cancino et al., 2020; Escobar et al., 2021; Dabić et al., 2021) (Table 4). Accordingly, scholars have documented the empirical research on open innovation (Randhawa et al., 2016), on the challenges and strategies when achieving SI scalability across regions and

beneficiary targets (Bolzan et al., 2019), and on innovation during the COVID-19 pandemic (Wang et al., 2022). Finally, a map of the intellectual communities and theoretical domains that have contributed to this stream has also been developed by scholars (van der Have and Rubalcaba, 2016).

Insert Table 4 about here

These works have documented and mapped the contributions to SE and SI separately. One exception is Phills, Deiglmeier, & Miller (2008) who argued that “social entrepreneurship and social innovation share common overlaps, significantly in the process of identifying problem-solving opportunities for unmet social needs” and highlighted that “social enterprises and social entrepreneurs exist within a social innovation system—a community of practitioners and institutions jointly addressing social issues”. Building on this, de Souza João-Roland, and Granados (2020) also explored “models/tools/management behaviours that are associated with the generation of SI in SEs” (p. 776). Our works extends these seminal efforts by offering a more comprehensive explanation of the volume, trends, and clusters within the literature with the goal of offering a detailed map and future research agenda (Linnenluecke et al., 2020) that could enhance the clarity of the theoretical boundaries and overlaps between these domains.

Methodology

Bibliometric methods are not new (Kessler, 1963; Small, 1973), but they have long been held back by the lack of easy-to-use software and accessible bibliometric data. However, they have recently proliferated among management scholars. For example, 1950 papers using bibliometric methods were published in 2020. Bibliometric methods aggregate and leverage citation data to build maps of specific scientific fields (Zupic & Čater, 2015). In these ways, they consolidate the opinions of many researchers who are publishing in a field and express their opinions with citations.

Our aim is to build a thorough understanding of the foundations, development and current research in the intersection of SE and SI. To achieve that goal, we use three bibliometric methods (Zupic and Cater, 2015): (1) Co-citation analysis (Small, 1971) to examine the theoretical foundations of our area of interest; (2) Algorithmic historiography (Garfield et al., 2003) to trace the historical evolution of our area of interest; (3) and Bibliographic coupling (Kessler, 1963) to map its current development.

We followed the process outlined in Zupic & Čater (2015). First, we searched the Web of Science for the following search terms in the business, management and economics categories: "social entrep*" or "social inno*" or "impact entrep*" or "impact inno*". We excluded conference papers and book chapters to retain only papers published in scientific journals indexed by the Social Science Citation Index. This resulted in 1,236 documents. Two authors read the abstracts of all these articles in parallel and assigned them to either the scope of SE or SI. Any difference was resolved by the third author. This step led to a final dataset of 950 papers.

In the next step, we analyzed our dataset with three separate methods. Co-citation analysis (Small, 1973) examined the secondary documents cited by our primary dataset of 950 papers. This can build connections between cited documents based on their appearance in the same reference list. The more two documents that are cited together, the stronger the connection between them is (Zupic & Čater, 2015). Co-citation analysis aggregates these dyadic links to build maps of scientific fields. These maps then reveal the intellectual structure of the theoretical foundations of a field.

Historiography (Garfield, Pudovkin, & Istomin, 2003; Vogel, Reichard, Batistič, & Černe, 2020) uses citation to trace the flow of ideas over time. In essence, it builds a chronological map of a field by combining primary documents (the 950 found by our search)

and secondary documents (cited by our primary dataset documents). As such, it reveals the development of a field and the main research streams.

Finally, bibliographic coupling (Budler et al., 2021; Kessler, 1963) analyses primary documents based on overlaps of their reference lists. The more references are the same in two documents' reference lists, the stronger the connection between two documents. Again, bibliographic coupling aggregates many such dyadic links to build a bibliographic map of a field that identifies the structure of its contemporary research.

We used VOSViewer (van Eck & Waltman, 2017; Van Eck & Waltman, 2009) for co-citation and bibliographic coupling analysis and CitNetExplorer (van Eck & Waltman, 2014) for historiographic analysis. Additionally, we used bibliometrix (Aria & Cuccurullo, 2017) for citation analysis.

Findings

Study 1: Co-citation analysis

Identification and characterization of seminal texts

Through a co-citation analysis (CCA-R) we identify a set of 10 seminal papers (Table 5).

Insert Table 5 about here

The sample shows that both management and entrepreneurship journals have been the primary outlets for leading research on SE and SI (Figure 1). Interestingly, two articles were published in the same issue of *Journal of world business*, edited by Christie and Honig (2006), Mair and Marti, (2006), and Peredo and McLean (2006); both are conceptual papers that attempt to define the boundaries, concepts, and future directions of research. Moreover, the early research was predominantly published in North America, with few exceptions in Europe. Specifically, only Harvard Business School has three articles among the top 10 cited on this topic. Furthermore, it is interesting that the *Journal of Applied Behavioral Science*—not mainly focused on entrepreneurship—is included in this list, demonstrating the cross-theoretical

domains of research on SE and SI. Finally, the co-citation analysis documented articles that have been referred to in conjunction with each other, revealing six distinct groups of these.

Insert Figure 1 about here

Theoretical framing and conceptualization of social entrepreneurship

The papers in the red group have defined the conceptual boundaries of research on SE. In this vein, Austin, Stevenson, and Wei-Skillern (2006) and others compare social and commercial entrepreneurship research while investigating whether social enterprises are construed as a form of entrepreneurship. For instance, Tan et al. (2005) contribute to this dialog by providing definitions and meanings of SE.

This group of papers also includes research associated with strategy, legitimacy, and innovation, helping determine how the entrepreneurial process unfolds (Dorado, 2006). For example, Dart (2004) intersects SE with institutionalism, highlighting the role of moral legitimacy and how it relates to “neoconservative, pro-business, and pro-market political and ideological values” (p. 411) (Dey and Steyaert 2010).

Antecedents and outcomes of social entrepreneurship

The green group of articles have documented the antecedents of SE and its outcomes in society (Lumpkin et al., 2013). Scholars have provided an understanding of the antecedents that predict the intention of SE and motivation origins (Grimes et al., 2013). For instance, Zahra and Wright (2016) develop “five pillars on which the evolving social role of entrepreneurship can rest and have its impact” (p. 612). Moreover, articles in this group investigate how social entrepreneurs deal with complex social issues (Dorado and Ventresca, 2013)

Scholars have also documented the forms of capital that social entrepreneurs leverage to pursue their actions (Estrin et al., 2013) and have also investigated contextual and institutional influences on SE (Dacin et al., 2010).

Social innovation

Research included in the blue group has focused on SI and its connections with business and entrepreneurship (Van der Have and Rubalcaba, 2016). In this vein, scholars have provided an understanding of the process, meaning (Lettice and Parekh, 2010); Cajaiba-Santana (2014) define the SI process “as an organic process that unfolds from the dyadic relationship between actor and structure [...] participating in the development of social systems and institutions, which are central elements of social innovation” (p. 49).

This group includes some articles on the intersection between SI and SE. In particular, we have found two systematic literature reviews that document the links between SI and SE as well as the methods and tools for pursuing innovation and determining the overlapping domains of SE and SI (Phillips et al., 2015; de Souza João-Roland, and Granados, 2020).

Hybrid organizations, institutional logics, and social-commercial trade-offs

The yellow group of articles presents the concept of hybrid organizations and the tensions accompanying social-commercial trade-offs. A seminal paper by Doherty et al., (2014) defines social enterprises as “a prime example of a hybrid organizational form in that, by spanning the boundaries of the private, public and nonprofit sectors, they bridge institutional fields and face conflicting institutional logics” (p. 418)

Regarding this stream, the research on such tensions becomes relevant when organizations have to deal with both social and business missions (Smith et al., 2013) and relative responses; as Pache and Santos (2010, p. 445) observed in Mexico, “while institutional scholars acknowledge that organizations are often exposed to multiple and sometimes conflicting institutional demands [...] existing research makes no systematic predictions about the way organizations respond to such conflict”.

Moreover, scholars have also applied the institutional logics perspective to provide an understanding of the management of dual missions. For instance, Jay (2013) has developed a process model that “illustrates how ‘sensemaking’ amid organizational paradox that has

emerged can be an important mechanism of change in hybrid organizations, one that affects their capacity to innovate” (p. 138).

Institutional voids and resource bricolage

Articles in the purple group include research on institutional theory and resource mobilization. This field of study has introduced the concept of bricolage, defined as “making do by applying combinations of resources already at hand to new problems and opportunities” (Baker and Nelson, 2005, p. 33).

These practices require an innovative approach that shapes the institutional framework and positively impacts the wellness of societies. Di Domenico, Haugh, and Tracey (2010) have introduced a new model of social bricolage, including novel constructs such as social value creation, stakeholder participation, and persuasion.

Innovation, sustainability, and social entrepreneurship

Finally, the light blue group includes research on how markets and institutions stimulate SI. In this vein, Cohen and Winn (2007) document how radical technologies and business model innovations are responses to market imperfections, and Dean and McMullen (2007) present organizations’ efforts to pursue innovative opportunities, inherent in environmentally relevant market failures, which increase profitability while reducing environmental impacts. In this group of papers, authors have also contributed to further defining SE. For instance, Zahra et al. (2009) offer a spectrum of typologies of social entrepreneurs.

Building on this analysis, we now deploy historiography to trace its historical evolution.

Study 2: Historiography

The historiography focused on 100 nodes that represent the development of the SE and SI fields over time (Figure 2). We can observe that the rise of SE literature is due to two main scholars: Leadbeater (1997) and Dees (1998). From a theoretical standpoint, SE has been informed by institutional theory (DiMaggio and Powell, 1983, Granovetter, 1985; North, 1990)

and the resource-based view (Barney, 1991). Such theoretical development has been predominantly driven by qualitative-based studies (Eisenhardt, 1989) and case study analyses (Yin et al. 1994). While building our analysis, we detected three main time periods that have significantly determined the theoretical development in this stream.

Insert Figure 2 about here

First, between 2000 and 2005, the relative immaturity of this field of study led scholars to conduct explorative case studies on SE (Thompson et al., 2000; Alvord et al., 2004). Specifically, building a resource perspective, scholars have applied entrepreneurial bricolage (Baker and Nelson, 2005), entrepreneurial processes (Sarasvathy et al., 2001), and legitimacy (Dart, 2004). In parallel, scholars have integrated institutionalism into SE (Fowler, 2000), contributing to institutional entrepreneurship theory (Maguire et al., 2004). Moreover, in this time of period, scholars contributed to setting the boundaries of SE (Sullivan Mort et al., 2003) by, for instance, integrating its social and financial missions (Emerson, 2003).

Such research provided the theoretical basis for further developing such streams between 2006 and 2011. Specifically, scholars have extended such investigations to hybrid organizations (Pache and Santos, 2011). Moreover, the entrepreneurial process perspective has informed studies on opportunity recognition within SEs (Corner and Ho, 2010). Furthermore, efforts toward the conceptualization of SE have increased (Martin and Osberg, 2007; Peredo, and McLean, 2006;). Within this cloud of theoretical contributions, we find a number of articles focused on innovation and SI processes, which have contributed to defining the relevant concepts, definitions, and impacts on society (Mulgan 2006).

In the last five years, as detected by our historiography, we observe that scholars' attempts to further conceptualize SE have continued, defining future directions (Dacin, Daci, and Tracey, 2011; Choi and Majumdar, 2014) and contributing to measurements of SE (Lepoutre et al., 2013). Among such contributions, we find articles that have documented the links between SI

and SE (Phillips et al., 2015; Van der Have and Rubalcaba, 2016, Cajaiba-Santana, 2014). In conclusion, we can observe that knowledge in the SE and SI fields has been developed through explorative and conceptualizing works that have shifted this stream toward substantial theory development. Recently, scholars have focused on literature reviews that organize extant research and open new research paths. Leveraging on this knowledge, we now introduce a map and structure of its current development through bibliographic coupling.

Study 3: Bibliographic coupling

The coupling analysis returned seven clusters (Figure 3). Cluster 2 (13,858) had the highest number of citations, followed by cluster 3 (12,118), cluster 1 (11,885), cluster 4 (9,465), cluster 5 (8,451), cluster 6 (6,590), and cluster 7 (2,844). We present the results of our bibliographic coupling by providing an overview of each cluster that emerged from the 300 most relevant articles, as derived in our analysis.

Insert Figure 3 about here

Coupling cluster 1 (red): Social innovation process

The 66 articles in cluster 1 are primarily focused on SI. Specifically, the articles in this cluster focus on a range of the catalyzers of SI as well as the coordination between actors when creating ecosystems to unlock SI (Rey-García et al., 2018). Articles also focus on impact measurements of SI, with a particular attention on how inclusive business models and mechanisms of co-creation and embeddedness favor development in developing countries and address grand challenges (Mollinger-Sahba et al., 2021). These publications mainly appear in management journals, including *industrial marketing management*, and *research policy*.

Coupling cluster 2 (green): Organizational hybridity and dual mission management

The 61 articles in cluster 2 are primarily empirical and contribute to the literature on hybrid organizations. We can identify four main trends. The first refers to balancing dual missions, the paradoxes and strategies that emerge (Mitzinneck and Besharov, 2019). The second presents

articles about the process of creating hybrid and innovative models and the shift from nonprofit organizations to social enterprises (Shepherd et al., 2019). The third trend regards the internationalization approach of hybrid organizations and the scaling of SI (Giudici et al., 2020). Finally, some authors have focused on the relationship between founder identity and organizational hybridity (Wagenschwanz and Grimes, 2021). These articles are published mainly in leading journals of entrepreneurship, organization and management, e.g., *journal of business venturing, and entrepreneurship theory and practice*.

Coupling cluster 3 (blue): Conceptualization of social entrepreneurship

Cluster three contains 51 articles that conceptualize the boundaries of SE. We can identify four main streams of research that contribute to framing SE research. The first includes the perspectives used to investigate SE, for instance, normative, cultural, and humanistic. The second includes six reviews on the boundaries of SE, social enterprise marketing, social impact measurement, and a scientometric analysis of SE (Sassmannshausen and Volkmann, 2018). Moreover, we find four conceptual papers that provide a general framework of SE and critical appraisals of SE in international settings (Dwivedi and Weerawardena, 2018). Finally, two papers introduce two measurement scales, SE orientation and social corporate entrepreneurship (Kuratko et al., 2017). These articles have been mainly published in the following journals: *journal of small business management, and journal of business ethics*.

Coupling cluster 4 (yellow): Antecedents of social entrepreneurship.

Cluster three also includes 43 articles that mainly contribute to the understanding of the antecedents of SE. We can recognize three levels of analysis developed by these authors. The first regards the psychological antecedents of SE, such as prosocial and profit motivation, entrepreneurial self-efficacy, compassion and empathy, (Stirzaker et al., 2021). The second focuses on the behavioral and demographic characteristics of an individual, including individual-level resources, demographic variables (e.g., age and gender) (Sahasranamam and

Nandakumar, 2020). Finally, this cluster includes articles that investigate the contextual factors that promote SE, including sociocultural and economic factors (Hechavarría et al., 2017). Journals that have published articles in this stream are mainly behavioral, knowledge-based, and entrepreneurship journals, such as the *international journal of entrepreneurial behavior & research*, the *journal of innovation & knowledge*, *small business economics*.

Coupling cluster 5 (light blue): Bricolage and the entrepreneurial approach

The 37 articles included in cluster 5 mainly investigate the approaches for acquiring resources to promote growth and SI. Specifically, the articles in this cluster focus on bricolage strategies within resource-constrained contexts and their relationship with sustainable growth and scaling, as detected in Uganda by Reypens, Bacq, and Milanov (2021). Moreover, the cluster also provides contributions to expand the crossroads between bricolage and SI (Kickul et al., 2018). Articles included in this cluster are mainly published in the following journals: *entrepreneurship and regional development*, and *journal of knowledge management*.

Coupling cluster 6 (pink): Ethics and value creation within social entrepreneurship

Cluster 6 has 29 articles contributing to the literature, with three main research streams. A number of articles promote an ethical reflection on SE, including an analysis of the role of ideology in the creation of social enterprises and entrepreneurial shared value as well as of ethics in teaching SE (Osorio-Vega, 2019). Moreover, this cluster tends to focus on the role of meaningfulness in pursuing social entrepreneurial actions and sensemaking, as documented by Chandra (2017) in Indonesia. The top documents appear in a variety of journals, including *human relations*, *academy of management journal*, *journal of management studies*.

Coupling cluster 7 (orange): Sustainable entrepreneurship

Cluster 7 presents only 13 articles on sustainable entrepreneurship. These studies focus on defining the dimensions of sustainability and their relationship with entrepreneurial orientation, sustainable development and the capacity to address grand challenges. In this cluster, we find

a conceptual paper that offers an understanding of sustainability-driven entrepreneurship (Haldar, 2019). Such publications mostly appear in the following journals: *business strategy and the environment*, *entrepreneurship theory and practice*, and *journal of business venturing*.

Discussion

Research on SE and SI has grown significantly in recent decades. However, we still lack a bibliometric analysis of the intersection of these theoretical streams that is not limited to traditional bibliometric indicators, as the extant reviews of these domains are. We have addressed these two gaps by performing a bibliometric analysis that combines three techniques: co-citation analysis, historiography, and bibliographic coupling.

Based on our co-citation analysis, we recognize three main phenomena. First, the theories of resource bricolage, institutionalism, and hybrid organizations have supported the development of the SE literature (Battilana et al., 2014). Second, we detect a theoretical effort of setting conceptual boundaries between SI and SE to enhance theoretical clarity and highlight their similarities and differences (Cajaiba-Santana, 2014). Third, the three most relevant articles are conceptual and were published in leading entrepreneurial and management journals (Austin et al., 2006; Zahra et al., 2009; Edwards-Schachter and Wallace, 2017), one in a special issue of the *Journal of World Business* (Mair and Marti, 2006).

From a longitudinal perspective, our historiography highlights a continual growth of the popularity of SE and SI. Two observations emerge from this analysis. First, the foundational articles are dominated by empirical works—mainly qualitative—and characterized by an explorative approach. Only recently, since 2011, have scholars advanced such research by focusing on conceptual articles on SE and SI (Bacq and Janssen, 2011). However, this is counterintuitive; new theoretical streams have typically begun by engaging with conceptual works (see for similar argument Kouropalatis et al., 2019: 15). Such an atypical theoretical evolution might be perhaps partially explained by the large expansion—both in terms of the

number of articles and subtheoretical conversations—of relevant contributions between 2005 and 2011. This raised the need for researchers to organize the extant literature and define future research, leading to the conceptual articles and systematic literature reviews that followed (Cajaiba-Santana, 2014). Second, we observe that SI emerged quickly from and almost parallel with the SE literature. Within SE development, SI likely played the role of a quasi-outsider. Only recently have scholars investigated the theoretical intersections between SI and entrepreneurship (Phillips et al., 2015). This may represent an historical convergence and the beginning of a new trend in the research at the intersection of SI and SE. Specifically, we observe that SI scholars are moving into the field of SE rather than the contrary.

Our coupling analysis has uncovered a multidisciplinary nature and, not surprisingly, heterogeneity of the salient subfields with independent and parallel research trajectories and theoretical focuses. One possible explanation for this is that the journal outlets divide these groups. While articles in the first cluster were not predominantly published in entrepreneurship outlets, such as *technological forecasting and social change*, the clusters that include articles on SE—the second, third, and fourth—were published in leading entrepreneurship journals, e.g., the *journal of business venturing* and *entrepreneurship theory and practice*.

Finally, from a methodological perspective, we used a relatively more informative method, combining three bibliometric approaches: historiography, document co-citation, and bibliographic coupling (Zupic and Čater, 2015). This helped us overcome the limitations of the existing bibliometric reviews of both SE and SI. Indeed, most analyses have remained limited to mapping the topics' theoretical evolution by measuring the maturity of SE research (Sassmannshausen, and Volkmann, 2018); some authors have used co-citation analysis (Hota et al., 2020) or bibliographic coupling (Cancino et al., 2020; Secundo et al., 2020; Escobar et al., 2021), while others have combined them (Anand et al., 2021). Accordingly, using all three approaches we have been able to track the relevant theoretical trends and clusters.

In conclusion, the academic debate at the intersection between SE and SI is still relatively new (Phillips et al., 2015). However, whether SE requires conceptually and empirically including SI or vice versa remains unclear. Therefore, the debate on the how, why, who, and what regarding the circumstances of how SI and SE overlap, integrate, and compensate for each other is still open. In the following section, we thus introduce some potential research routes to further advance this theoretical development.

Research Agenda

Building on our discussion, we have identified four main research areas for the further development of the field at the crossroads of SE and SI (Table 6).

Insert Table 6 about here

Combining social entrepreneurship and social innovation

Disparate theoretical trajectories within SE and SI risk creating theoretical divisions, thus hindering knowledge exchange and accumulation. In particular, both our co-citation and coupling analysis showed that few studies include the implications of SE for SI and vice versa (Cohen and Winn, 2007). Hence, it is urgent to understand how these studies relate and support each other. Given their complementarity, theoretical foundations, and research priorities, increased efforts in the cross-pollination of research on these two streams are needed. This may contribute to enhancing the scientific maturity of the respective streams. For instance, Phillips and colleagues (2015) first investigated such theoretical interactions. Building on this work, we can further advance research at this theoretical intersection. To meet this goal, we propose the following research routes:

First, we encourage scholars to identify theoretical anchors that expand the intersection and convergence between SE and SI. Our co-citation and coupling analysis may lead to identifying resource bricolage as a theoretical anchor, given its implications for both SE and SI (Kickul et al., 2018; Edwards-Schachter and Wallace, 2017). Indeed, both analyses have

presented the bricolage strategies pursued by social entrepreneurs (Reypens et al., 2021), also known as social bricolage, whose peculiarities are social value creation and inclusive stakeholder participation (Di Domenico et al., 2010; Ruskin, Seymour, and Webster, 2016). Thus, future research may investigate not only how social innovation emerges from processes of resource bricolage but also how it drives social enterprises toward the selection and collection of resources. Another theoretical anchor is hybrid organizations and dual-mission management (Mitzinneck and Besharov, 2019). Our analyses have documented how scholars typically examine how social enterprises manage social and financial missions (Wilson and Post, 2013). Within this debate, scholars may investigate how the scaling of social innovation impacts tensions when balancing dual mission management.

A second path of future inquiry may be the theoretical relationships between SE and SI. In this vein, how, when and what circumstances lead SI to SE and/or vice versa are still unclear. Therefore, scholars may map and compare the antecedents of SI and SE within the same environment to identify such similarities and differences. This may help the academic community better understand the foundational variables that create a fertile environment for extending both these streams of research. For instance, scholars may investigate what circumstances, cultures, and values lead social enterprises to pursue social innovation.

Third, our historiography revealed a recent convergence between SI and SE. On the one hand, this creates a set of theoretical anchors that facilitate the convergence between them. On the other hand, it may lead to a ‘third’ independent research route via the merging of these research streams into a new theoretical construct. Recently, a novel theoretical construct has emerged from the convergence of two theoretical streams, i.e., *ethical entrepreneurship* came from the convergence of entrepreneurship and ethics (see Vallastera et al., 2019) or *corporate social entrepreneurship* as convergence between social entrepreneurship and corporate

governance (Hemingway, 2005). This may move the theoretical development in our field beyond the mere coexistence of SI and SE.

Orchestration of social innovation by social entrepreneurs

The literature clearly explains what social innovation is and how it unfolds and evolves over time. However, we have to define SI orchestration as a process that requires building and managing the relationships of an extended network of actors and is aimed at unlocking and leading the exchange of resources and knowledge to promote innovation (Giudici, Reinmoeller, and Ravasi, 2018). In this vein, social enterprises may be perfectly suited to investigate SI orchestration. It may be relevant to compare how SI processes differ based on social enterprises' various characteristics, such as working in developing or developed countries, their sizes, and their resources. This may enhance the understanding of similarities and differences across organizations and prevent knowledge duplication. Moreover, within this debate, scholars may also investigate how they catalyze and promote SI (Rey-García et al., 2018). In particular, the coordination mechanisms that orchestrate the creation of entrepreneurial ecosystems may provide an understanding of the relationships, interactions, and engagements between different actors across SI processes. Such research may also benefit from investigating the socially embedded mechanisms that support the co-creation of social value by engaging multilevel actors—from communities to multinationals—to tackle grand challenges (George et al., 2016).

Measurement of social innovation and social entrepreneurship

We have observed that social impact measurement remains an important and still unresolved issue in the literature, although it can support the transition to an inclusive and sustainable society, as declared in the SDGs of the UN (2015). Thus, it is urgent to better understand how SI and SE impact each other. This dual-side relationship can be investigated at both the geographical and firm levels. First, scholars may measure how social entrepreneurship impacts the emergence of social innovation at local and regional levels and vice versa

(Mollinger-Sahba et al., 2021). For instance, researchers can measure how processes of social innovation co-creation, promoted by social enterprises, impact the beneficiaries involved. Second, understanding whether SI enhances the likelihood of pursuing social entrepreneurial opportunities and vice versa may provide a more comprehensive perspective on the relationships between these two theoretical elements. Moreover, a stream of research may focus on measuring whether integrating SI practices within social entrepreneurial processes leads to improved nonsocial indications, such as financial sustainability or stakeholder engagement.

Geographic comparison and common journal outlets

Our co-citation and coupling analyses showed a high number of explorations in the developing economy context; Southeast Asian and Central American studies prevail in our sample. This revealed a strong bias toward African countries. However, scholars' efforts in investigating such phenomena in Africa have recently emerged. For example, a seminal work by Rivera-Santos and colleagues (2015), "*Social entrepreneurship in sub-Saharan Africa*", and a recent work on social innovation by Chandra et al. (2021) demonstrate a growing academic interest in Africa, despite the continent being largely overlooked thus far. In this academic dialog, scholars have already contributed to the intersection between SE and SI within the African context; for instance, the findings in "*Inclusive business ... for enabling social innovation*" by Lashitew et al. (2020) may open new research paths in this direction. Therefore, such a context is promising for future research, helping it adapt to and geographically compensate for biases in the extant research. Moreover, as documented above, research on SI is mainly present in specific academic outlets, which are generally overlooked by entrepreneurship scholars, and vice versa. This increases the risk of knowledge duplication rather than fostering exchange and accumulation. Thus, future research may consider targeting journals that are not within the traditional theoretical perimeter, expanding and integrating knowledge production across groups of authors.

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TABLE 1. Systematic literature reviews of social entrepreneurship (publication year order)

Authors	Journal	Unit of analysis	Brief description	Database source	Year of analysis
Ranville, and Barros (2021)	<i>Journal of Business Ethics</i>	Social entrepreneurship	It identifies the presence of normatively ambiguous concepts, fundamental justifications, and critiques regarding some central philosophies' underlying the SE literature.	Google Scholar and Microsoft Academics	1991-2019
Alinaghian, and Razmdoost, (2021)	<i>Journal of Business Research</i>	Social enterprise and business relationships	Building a thematic analysis, it reveals that social enterprises engage in four key practices of initiation, persuasion, conflict resolution, and value creation to manage their relationships with businesses.	Chartered Association of Business Schools	2006-2020
Gupta, Chauhan, Paul, and Jaiswal (2020)	<i>Journal of Business Research</i>	Social entrepreneurship	It measures the trends in research on the social impact, innovation by social entrepreneurs, business strategies and business models as well as value creation and value dissemination.	Scopus database and Google Scholar	2007-2018
Morris, Santos, and Kuratko (2020)	<i>Small Business Economics</i>	Great divides in social entrepreneurship	It provides a systematic overview of major unresolved issues, characterizing the contemporary study of SE in the form of thirteen divisions (e.g., value creation, entrepreneurial orientation).	Search did not include any data sources	Search did not include any time period limitation
Saebi, Foss, and Linder (2020)	<i>Journal of Management</i>	Social entrepreneurship	It offers a structured review of the extant SE research at the individual, organizational, and institutional levels and a research agenda.	Scopus and Web of Science	Search did not include any time period limitation
Rawhouser, Cummings, and Newbert (2019)	<i>Entrepreneurship Theory and Practice</i>	Social entrepreneurship and social impact	It generates a typology of four approaches to conceptualizing social impact, which are used to organize insights and recommendations regarding improved measurement of the social impact of entrepreneurial ventures.	ABI/Inform	1996–2016
Doherty, Haugh, and Lyon (2014)	<i>International Journal of Management Reviews</i>	Social enterprise and hybrid organizational forms	It provides a theoretical framework to explain how SEs respond to and manage conflicting logic tensions and trade-offs resulting from hybridity.	Proquest	Search did not include any time period limitation
Dufays, and Huybrechts (2014)	<i>Journal of Social Entrepreneurship</i>	Social	It shows how and why social entrepreneurship arises by bridging micro- and macrolevels of analysis, providing four different usages	EBSCOhost	Search did not include any time period limitation

		Entrepreneurship and Social Networks	of the social network concept in the social entrepreneurship literature.		
Smith, Gonin, and Besharov (2013)	<i>Business Ethics Quarterly</i>	Social entrepreneurship and Social-Business Tensions	It shows that a focus on social-business tensions expands insights into social enterprises and provides an opportunity for research on social enterprises to inform traditional organizational theories.	Search did not include any data sources	2011-2012
Bacq, and Janssen (2011)	<i>Entrepreneurship & Regional Development</i>	Social entrepreneurship	It clarifies the concepts of ‘social entrepreneurship’, ‘social entrepreneur’ and ‘social entrepreneurship organization’ and examines how these are conceived and defined.	Search did not include any data sources	Search did not include any time period limitation
Short, Moss, and Lumpkin (2009)	<i>Strategic Entrepreneurship Journal</i>	Social entrepreneurship	This literature review reveals that social entrepreneurship is informed by common areas of interest among management scholars like entrepreneurship, that conceptual articles outnumber empirical studies, and that empirical efforts often lack formal hypotheses and rigorous methods.	EBSCO, Web of Knowledge, ABI/INFORM, and Science Direct	Search did not include any time period limitation

TABLE 2. Bibliometric studies of social entrepreneurship (publication year order)

Authors	Journal	Unit of analysis	Brief description	Database source	Year of analysis
Anand, Argade, Barkemeyer, and Salignac (2021)	<i>Journal of Business Venturing</i>	Sustainable entrepreneurship	It identifies three streams of sustainable entrepreneurship 1) business, management and accounting; 2) economics; and 3) social sciences.	Scopus	2002-2020
Lashitew, Narayan, Rosca and Bals (2021)	<i>Journal of Business Ethics</i>	Social value for the 'base of the pyramid'	It offers a conceptual framework that explicates the antecedents, constraints, capabilities, and contingencies that drive social value creation.	Web of Science	2002-2017
Hota, Subramanian, and Narayanamurthy (2020)	<i>Journal of Business Ethics</i>	Intellectual Structure of Social Entrepreneurship Research	It examines the integration of ethics into social entrepreneurship literature, identifying nine distinct clusters that depict the intellectual structure of the field and scholarly communication between these works.	Web of Science	1996-2017
Macke, Sarate, Domeneghini, and da Silva (2018)	<i>Journal of Cleaner Production</i>	Social entrepreneurship	It identifies the approaches, dimensions, and drivers of social entrepreneurship research.	Web of Science	Search did not include any time period limitation
Sassmannshausen and Volkman (2018)	<i>Journal of Small Business Management</i>	Social entrepreneurship	It shows the most cited articles, discusses methodological issues and provides suggestions for overcoming them.	EBSCO	1954-2013
Rey-Martí, Ribeiro-Soriano, and Palacios-Marqués (2016)	<i>Journal of Business Research</i>	Social entrepreneurship	It guides researchers in social entrepreneurship to recognize what journals and authors to consult when studying this field of research.	Web of Science	2003-2015
Granados, Hlupic, Coakes, and Mohamed (2011)	<i>Social Enterprise Journal</i>	Intellectual Structure of Social Entrepreneurship Research	It provides an intellectual structure of the social entrepreneurship field and discusses the current maturation of the field based on an epistemological orientation.	Web of Knowledge	1991-2010

TABLE 3. Systematic literature reviews of social innovation in entrepreneurship

Authors	Journal	Unit of analysis	Brief description	Database source	Year of analysis
Batista and Correia (2021)	<i>International Journal of Innovation</i>	Social innovation and capability	It shows the pathways and trends for the use of the capabilities approach for the development of the scientific field of social innovation.	Web of Science	Search did not include any time period limitation
Dabić, Vlačić, Kiessling, Caputo, and Pellegrini (2021)	<i>Journal of Small Business Management</i>	Serial entrepreneurship	Building on the literature of serial entrepreneurship, it identifies four key research areas: entrepreneurial opportunity-recognition, technopreneurship and innovation, entrepreneurial strategy, performance, entrepreneurial ecosystem.	Web of Science Scopus	1997-2020
Lough (2021)	<i>Social Enterprise Journal</i>	Social innovation and higher education institutions	It shows the core conditions for social innovation along with the opportunities, challenges and tensions that emerge as higher education institutions work to apply these conditions in practice.	Search did not include any data sources	Search did not include any time period limitation
de Souza João-Roland and Granados (2020)	<i>Journal of Small Business and Enterprise Development</i>	Social Innovation and Social Enterprises	It offers an overview of the drivers of SI, which are mapped as three main factors: contextual, organizational, and managerial.	Web of Science, Scopus and EBSCO	Search did not include any time period limitation
Dionisio and de Vargas (2020)	<i>International Business Review</i>	Corporate social innovation	By studying a relationship between multinational corporations (MNCs) and the concept of corporate social innovation (CSI), it offers new paradigms that could reinvent the institutions for solving social problems by giving businesses a new way to innovate.	Scopus, Web of Science, Emerald, EBSCO, Google Scholar	1999-2018
Nambisan (2017)	<i>Entrepreneurship theory and practice</i>	Digital technology perspective of entrepreneurship	Analyzing the relationship between digital technologies and entrepreneurship, it offers a trend and map of the digital entrepreneurship literature, calling for the theorizing of concepts related to digital technologies.	Search did not include any data sources	Search did not include any time period limitation
Edwards-Schachter, Wallace (2017)	<i>Technological Forecasting and Social Change</i>	Social innovation	It detects trends of social innovation, showing that it was incipient in academic communities and has spread in the last decades as a normative concept fueled by development and innovation policies.	Web of Science, Scopus	1955-2014

Phillips, Lee, Ghobadian, O'Regan, James (2015)	<i>Group & Organization Management</i>	Social Innovation and Social Entrepreneurship	It provides collective insights of the research linking social innovation with social entrepreneurship, demonstrating a growing interest in the area over the last decade.	Scopus	1987-2012
Voorberg, Bekkers, Tummers (2015)	<i>Public Management Review</i>	Social and public innovation	Focusing on cocreation/coproduction with citizens in public innovation, it shows that as most studies focus on the identification of influential factors, hardly any attention is given to the outcomes.	Web of Science, Scopus	1987-2013

TABLE 4. Bibliometrics studies of social innovation in entrepreneurship (publication journal order)

Authors	Journal	Unit of analysis	Brief description	Database source	Year of analysis
Escobar, Schiavone, Khvatova, and Maalaoui (2021)	<i>Journal of Small Business Management</i>	Entrepreneurship and innovation	It shows how innovation and entrepreneurship are complementary phenomena that are linked and, moreover, the role played by small- and medium-size enterprises in this relationship.	Scopus	1991-2020
Cancino, Merigó, Urbano and Amorós (2020)	<i>Journal of Small Business Management</i>	Entrepreneurship and innovation	It investigates Ibero-American researchers, showing that the best researchers in the region come mainly from Spain and Portugal.	Web of Science	1986-2015
Bolzan, Bitencourt, Martins (2019)	<i>Innovation & Management Review</i>	Social innovation scalability	It maps the existing studies on the scalability of social innovation, showing that most of them focus on the scalability process to expand the social impacts of social innovation.	Portal Periodico Capes, EBSCOHost	2002-2017
van der Have, Rubalcaba (2016)	<i>Research Policy</i>	Social innovation	It shows that the social innovation field is grounded in four distinct intellectual communities, arising through a somewhat organized diffusion process: 1) Community Psychology; 2) Creativity research; 3) Social and societal challenges; 4) Local development.	Web of Science	1986-2013
Randhawa, Wilden, and Hohberger (2016)	<i>Journal of Product Innovation Management</i>	Open innovation	Analyzing the open innovation (OI) literature, it identifies three distinct areas within OI research: (1) firm-centric aspects of OI, (2) management of OI networks, and (3) role of users and communities in OI. It reveals that researchers do not sufficiently draw on external theoretical perspectives to examine the multiple facets of OI.	Scopus	2003-2013

Table 5. Top 10 seminal texts

No.	Citation	Journal	Group	Citations
1	Mair and Marti (2006)	<i>Journal of world business</i>	RED	297
2	Austin, Stevenson, and Wei-Skillern (2006)	<i>Entrepreneurship theory and practice</i>	RED	272
3	Zahra, Gedajlovic, Neubaum, and Shulman (2009)	<i>Journal of business venturing</i>	LIGHT BLUE	224
4	Dacin, Dacin, and Matear (2010)	<i>Academy of management perspectives</i>	GREEN	172
5	Peredo and McLean (2006)	<i>Journal of world business</i>	RED	156
6	Short, Moss, and Lumpkin (2009)	<i>Strategic entrepreneurship journal</i>	GREEN	153
7	Alvord, Brown, and Letts (2004)	<i>The journal of applied behavioral science</i>	RED	136
8	Eisenhardt (1989)	<i>Academy of management review</i>	BLUE	127
9	Dacin, Dacin, and Tracey (2011)	<i>Organization science</i>	GREEN	124
10	Battilana and Dorado (2010)	<i>Academy of management journal</i>	YELLOW	121

Table 6. Future research directions

Research areas	Theoretical perspective	Possible research questions	Exemplar references
Bringing together social entrepreneurship and social innovation	Theoretical anchors	How does social innovation influence social bricolage in social enterprises? How does scaling social innovation impact the dual-mission management of social enterprises?	Di Domenico et al., 2010 Mitzinneck and Besharov, 2019
	Theoretical relationships	In which circumstances does social innovation bring to social entrepreneurship? In contrast, how, why, and when does social entrepreneurship lead to social innovation?	Stirzaker et al., 2021
	New theoretical pattern	Can the merging of social innovation and social entrepreneurship represent a new theoretical construct?	Vallastera et al., 2019
Orchestration of social innovation by social entrepreneurs	Orchestration innovation process	How do social enterprises orchestrate an entrepreneurial ecosystem to create and coordinate process of social innovation?	Giudici et al., 2018
Measurement of social innovation and social entrepreneurs	Measuring social impact	How social innovation impact of social enterprises' survival and impact? In contrast, how do social entrepreneurs impact social innovation scaling and impact?	Mollinger-Sahba et al., 2021

Geographical comparison	Context	How does sub-Saharan context influence social innovation processes promoted by social enterprises? How does it differ from developed or other developing countries?	Lashitew et al., (2020)
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FIGURE

Figure 1. Co-citation analysis

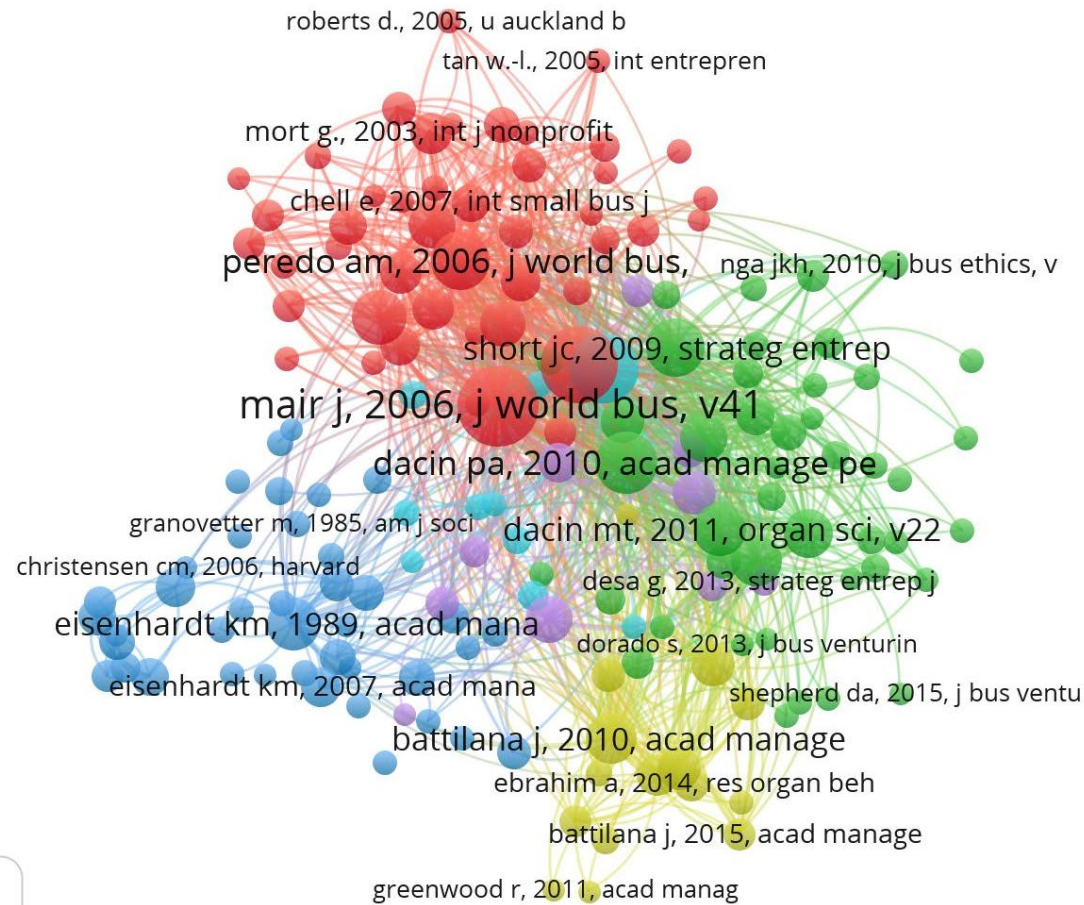


Figure 2. Historiography analysis

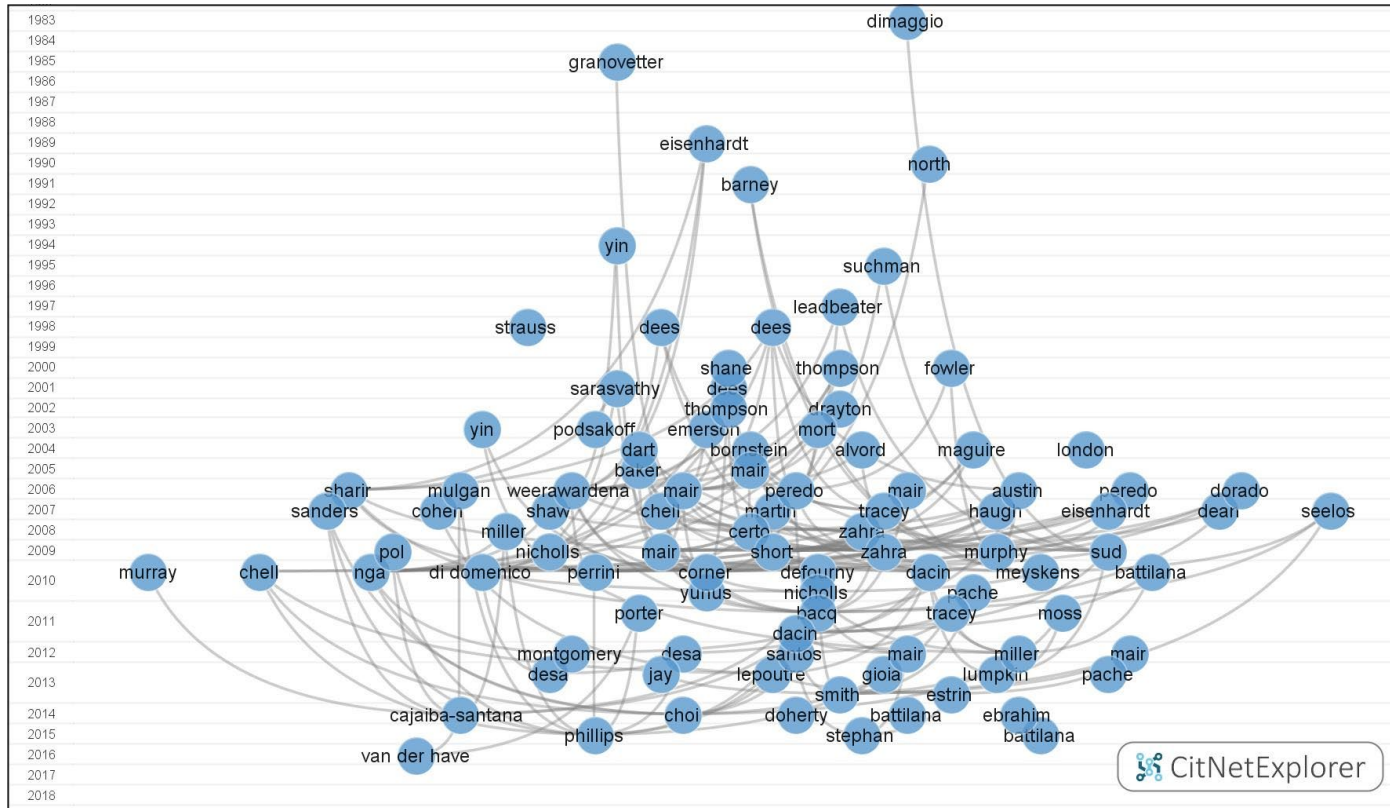


Figure 3. Coupling analysis

