



## New Research Trends in Sustainability in Family Businesses: A Bibliometric Literature Review

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**Abstract** Sustainability in family businesses is becoming an exigent, interesting, and ever-evolving topic in the field of business research, owing to the requirements of sustainable development agendas for all types of companies. The growing body of research on this topic, considering traditional and new challenges for family firms, encourages the synthesis and organization of existing knowledge through a literature review. This study conducts a combination of different analyses with bibliometric techniques to provide an overview of the evolution of scientific literature on sustainability in family businesses and its structure in terms of relevant groups of researchers, most cited articles, and the contributing journals. Finally, future research endeavors are suggested for each identified open theme. Unlike previous reviews, the present work considered emergent sub-fields such as environmental studies and environmental sciences in document selection, which have been incorporated into the traditional research fields like business, management, and economics and finance in the context of family businesses.

### CÓDIGOS JEL M1, M2

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colo.

### Nuevas tendencias de investigación sobre sostenibilidad en la empresa familiar: revisión bibliométrica de la literatura

**Resumen** La sostenibilidad en las empresas familiares se está convirtiendo en un campo de investigación actual, necesario e interesante debido a las exigencias de la agenda de desarrollo sostenible para todo tipo de empresas. El creciente cuerpo de investigación sobre este tema, considerando los desafíos tradicionales y nuevos para las empresas familiares, anima a sintetizar y organizar el conocimiento existente a través de una revisión de la literatura. Este artículo realiza una combinación de diferentes análisis con técnicas bibliométricas para ofrecer una visión global de cómo se ha desarrollado el campo de investigación de la sostenibilidad en la empresa familiar, y de su estructura en términos de grupos relevantes de investigadores y las principales temáticas abiertas. Finalmente, se sugieren algunas líneas de investigación futuras. A diferencia de las revisiones anteriores, en el presente trabajo se han tenido en cuenta subcampos emergentes como los estudios medioambientales y las ciencias medioambientales en la selección de artículos, que se han incorporado a los campos de investigación tradicionales como la empresa, la gestión, la economía y las finanzas en el contexto de las empresas familiares.

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## 1. Introduction

Literature on corporate sustainability has grown over the last two decades, partly in response to the social, human, and environmental costs and externalities of unsustainable firm practices. Sustainable Development Goals (SDGs) require companies to play an active role in their commitment to sustainable development. Furthermore, a well-developed sustainability plan can help the company reduce risk and position itself to leverage value creation opportunities (Carroll et al., 2022). A large-scale global effort is required over the next decade to accelerate sustainable solutions to the world's economic, environmental, social, and governance challenges and deliver on the UN's SDGs by 2030.

Family firms represent the most extended organization type globally (Family Firm Institute, 2018) and play an important role in generating employment in the private sector and contributing to the GDP (D'Angelo et al., 2016). Thus, their involvement in sustainable development through an active contribution to the 2030 sustainability agenda is critical.

This forms the purpose of the global initiative-Family Business for Sustainable Development (FBSD) (<https://fbsd.unctad.org/about-us/>). This is a partnership between the UNCTAD—the UN body responsible for sustainable development—and Family Business Network (FBN) - the world's leading organization of business families. The purpose of the initiative is to actively promote sustainability in the family business (SFB) strategies, committing them to concrete, measurable contributions toward the SDGs. The FBSD represents a renewed framework of activities to boost Polaris- an FBN initiative and a growing global movement of business families focused on maximizing the positive economic, environmental, and societal impact.

Furthermore, Family businesses (FBs) are key to building a transformative and sustainable future because of their intrinsic long-term and local orientation aligning with family values and firm culture. Thus, the rationale of SDGs is intrinsic to family businesses; the inclusion of these goals and managerial strategies is a new compromise for this kind of firms. Following Patuelli et al. (2022), SDGs are new drivers behind transcending corporate social responsibility in family firms. The authors carry out a case study to analyze how these goals enter a family firm's strategy and activities.

Economic, social, and environmental concerns change over time, and the sensitivity to act on them varies depending on the industry, as stakeholders in different industries have different perceptions and interests (Barnett, 2007). To

address these issues, family businesses have been identified as potential bastions of stewardship, management, and practices that promote a long-term, socially responsive orientation in dealing with stakeholders (Le Breton-Miller & Miller, 2016), and take particular care to perpetuate a positive family image and reputation (Sharma & Manikutty, 2005). Socioemotional wealth substantially influences a firm's environmental practices (Berrone et al., 2010). However, there are also darker views of this form of enterprise in relation to its involvement in sustainability (Miroshnychenko & De Massis, 2022).

Sustainability has emerged as a relevant and established subject in the family business research (Rovelli et al., 2022). This growing body of research shows the specific processes by which family firms achieve sustainable goals (Ferreira et al., 2021). However, despite the contributions of family business scholars, the literature lacks a theoretical understanding and empirical analysis on how sustainability can be integrated into family businesses (Claus et al., 2022).

Previous reviews have made significant research advances on SFBs (see Table 1).

However, the present work differs significantly from previous studies, primarily because it identifies emerging subjects because of new research areas regarding the different dimensions of sustainability in family firms and not just regarding the sustainability of the family business model. In this sense, periodic reviews of the literature are essential for observing and analyzing how the research field is developing, especially when there is a sharp increase in the number of articles in general, as well as those in emergent subfields (Feng et al., 2017). Therefore, it is necessary to review the research in the field of SFB, as previous reviews only covered the period up to 2019 (Ferreira et al., 2021). Specifically, research in the field of SFB experienced exponential growth during 2020-2022 (as shown in Figure 2), with the emergence of new subfields such as environmental studies and environmental sciences.

Moreover, management and business research has addressed the issue of sustainability from different perspectives (Fellnhofer et al., 2014). The SFB literature has defined concerns related to the perseverance, continuity, and control exercised by the family in pursuit of firm survival (Memili et al., 2018). Socioemotional wealth has also promoted the goal of sustainability of companies and successful transgenerational business succession (Berrone et al., 2012). However, in the era of the SDGs, unlike previous reviews (Table 1) and following Claus et al. (2022), who provided a comprehensive integration of sustainability research and family business,

the scope of this research must consider family businesses as active agents of a paradigm shift in economic development.

**Table 1.** Overview of the literature reviews on sustainability in family businesses

Author(s) (year)	Source title	Type of re-view	Dataset	Main findings
Broccardo et al. (2018)	Corporate social responsibility and environmental management	Systematic literature review	21 articles published between 2006 and 2017	Internal corporate sustainability drivers in family firms, do not have a homogenous impact on sustainability initiatives due to the distinctiveness of these types of firms
de las Heras-Rosas & Herrera (2020)	Sustainability	Bibliometric (SCIMAT)	286 articles published between 2003 and 2019	Structures the SFB literature regarding three lines: factors that drive sustainability, methods or practices that favour sustainability and factors that endanger survival
Ahn et al. (2021)	Sustainability	Bibliometric (Network analysis)	947 articles published between 1981 and 2019	Three knowledge networks of the family governance literature: keywords networks, citations networks, and authors networks
Ferreira et al. (2021)	Technological Forecasting & Social Change	Bibliometric	161 articles published between 2003 and 2019	Four thematic clusters: family business capital, family business strategy, family business social responsibility, and family business succession.

To include these new perspectives, this review provides an overview of SFB research through a systematic literature review using bibliometric techniques. This methodology presents the bibliometric performance and analyzes the intellectual and conceptual structures of academic research in the field. To this end, the specific research questions (RQ) for the present literature review are as follows: RQ1: What are the past and current publication trends in the SFB research field?; RQ2: What are the main journals, authors, and the most followed papers in the SFB research field?; RQ3: What is the intellectual structure of the SFB research area as defined by the co-authorship collaborations?; RQ4: What is the conceptual structure of the SFB research area along with the main research themes?.

This study follows the structure and methodology of other literature reviews in family business research field (Brito-Ochoa et al., 2020; Maseda et al., 2023) in combination with the Scientific Procedures and Rationales for Systematic Literature Reviews protocol (SPAR-4-SLR) by Paul et al. (2021). While Section 2 describes the details of the methodology, Section 3 presents the results of the analyses. Section 4 offers the concluding remarks along with the avenues for future research on SFB. As suggested by Kraus et

al. (2022), literature reviews can be helpful in starting new research.

## 2. Methodology

A Systematic Literature Review (SLR) is a form of research that analyses the existing publications and follows a systematic methodology for synthesizing the publications (Tranfield et al., 2003). A SLR, unlike other common reviews, follows a review protocol to guide the decisions made in the literature review, thereby making it more transparent and replicable (Lim et al., 2022). The SLR is a scientific and rigorous secondary research method widely used in family businesses research area (Calabrò et al., 2019; Hernández-Perlines et al., 2023; Maseda et al., 2022).

The review protocol that we used was based on the SPAR-4-SLR, which is a rigorous protocol for systematic review of the literature (Paul et al., 2021). Following this protocol, the steps of this systematic literature review of the SFB research field are presented in table 2.

**Table 2.** The SPAR-4-SLR protocol for SFB literature review

<b>Assembling</b>
<p><input type="checkbox"/> <b>Identification</b>  <b>Review domain:</b> Sustainability in family firms.  <b>Research Questions:</b> (RQ1) What are the past and current publication trends in the SFB research field?; (RQ2) What are the the main journals, authors, and the most followed papers in the SFB research field?; (RQ3) What is the intellectual structure of the SFB re-search field as defined by the co-authorship collaborations?; (RQ4) What is the conceptual structure of the SFB research field along with the main research themes?.  <b>Source type:</b> Conceptual and empirical arrticles in journals.  <b>Source database:</b> Web of Science (Science Citation Index Expanded and Social Sciences Citation Index).</p> <p><input type="checkbox"/> <b>Acquisition</b>  Search mechanism and material acquisition: Web of Science (Science Citation Index Ex-panded and Social Sciences Citation Index).  Search period: Until December 2022.  Search Keywords: [("family firm*" OR "family business*" OR "family enterprise*" OR "fam-ily control*" OR "family own*" OR "family SME*" OR"family capital" OR "founder* firm*" OR "family involvement") AND ("firm*" OR "busines*" OR "company")]  AND (Sustainab*) in the topic tab (article title, abstract and keyword).</p> <p>Total number of articles returned from the search strategy: 330.</p>
<b>Arranging</b>
<p><input type="checkbox"/> <b>Organization codes:</b> Language, Subject area, and Source quality.  <input type="checkbox"/> <b>Purification</b>  <b>Document type:</b> Articles or reviews.  <b>Language:</b> English.  <b>Subject areas:</b> "Business, "Management", "Economics", "Business and finance", "Environ-mental studies" AND "Environmental sciences".  <b>Source quality:</b> List in the Academic Journal Guide (AJG) (2021).</p> <p>Total documents returned from arranging stage 180 (dataset of articles)</p>
<b>Assessing</b>
<p><input type="checkbox"/> <b>Evaluation</b>  <b>Analysis method:</b> Bibliometric analysis.  <b>Analytical technique:</b>  o Performance analysis: article publication trend, main articles, authors, and journals.  o Science mapping: coauthorship and keywords co-curreces.  <b>Software:</b> Microsoft Excel, VOSviewer.</p> <p><input type="checkbox"/> <b>Reporting</b>  <b>Conventions:</b> Figures (charts and networks), tables (metrics) and interpretations (narra-tives).  <b>Limitations:</b> Data limited to WOS and AJG (source quality). Review limited to bibliometric information.  <b>Source of support:</b> No funding received. The authors convey their deepest and most sin-cere appreciation to the editor and anonymous reviewers.</p>

Source: adapted from [Paul et al. \(2021\)](#)

### 2.1. Assembling

Identification and acquisition are the steps of the assembling. This review aims to identify academic publications (*identification*) related “Sustainability in family business” (*domain*). This is the topic of this literature review.

This review focuses on journal publications only (*source type*) because they are rigorously peer-reviewed documents (Paul et al., 2021). These journals must be indexed in the Web of Science (WoS) database (*Source database*). Many international rankings, such as the Times Higher Education World University Ranking and the Academic Ranking of World Universities, use the WoS database (Maseda et al., 2022).

In *acquisition*, the search mechanism employed were the WOS, Social Sciences Citation Index and Science Citation Index Expanded. These databases provide all metadata required for bibliometric analysis. Articles published until December 2022 were considered.

The data retrieval strategy is a combination of search words used to capture all published works in the research domain. The words used in the search were based on previously recognized family business literature reviews (Maseda et al., 2022), but delimiting the field of sustainability (Ferreira et al., 2021):

[("family business\*" OR "family firm\*" OR "family enterpris\*" OR "family own\*" OR "family control\*" OR "family SME\*" OR "founder\* firm\*" OR "family capital" OR "family involvem\*") AND ("firm\*" OR "busines\*" OR "company")] AND (Sustainab\*)

This combination of search words was considered for the “Topic” tab, which means including them into the titles, abstracts, and keywords, of the WoS. Using this search strategy, a total of 330 publications were returned.

### 2.2. Arranging

This step involved the organization and purification of the 330 documents. This review relied (*organization*) on the categorical filters used by WoS Specifically, in relation to the *purification*, this SFB review includes only “articles” or “reviews” (*document type*), because other documents may not have undergone peer review. The articles and reviews written in “English” (*language*) and categorized under the “Business,” “Management,” “Economics,” “Business and Finance,” “Environmental Studies,” and “Environment Sciences” sub-areas were considered. Finally, to apply a more quality rigorous selection of documents into the WOS, the review preferred only articles published in journals listed in the Academic Journal Guide (AJG, 2021), elaborated by the Chartered Association of Business Schools (*quality filter*).

The AJG provides ratings indicating the quality of the journal: 4\*, 4, 3, 2, and 1, where a rating of 4\* indicates the highest quality and a rating of 1 represents compliance with the minimum level of quality required (source quality). All filters reduced the dataset for literature review to 180 documents.

### 2.3. Assessing

This is the final stage of the protocol. This includes the evaluation and reporting of the documents under review. In the *evaluation*, bibliometric analysis has two main methods: performance analysis and science mapping (Cobo et al., 2011). The performance analysis reports descriptive metrics to evaluate the publications. Science mapping aims to identify the scientific field’s structure and dynamics (Zupic & Čarter, 2015).

This SFB review analyzes the 180 articles of the dataset, first by showing their performance and second by mapping the co-authorships and thematic themes that collectively represent and contribute to SFB research developments.

The performance analysis reports the metrics for the first two research questions (RQ1 and RQ2), whereas *science mapping* responds to the last two research questions (RQ3 and RQ4).

The co-occurrence analysis of authors provides information into collaborations among authors, and the keyword co-occurrence analysis provides insights into themes (knowledge clusters) and related topics.

Bibliometric software assists in this task by making mathematical and statistical calculations of co-occurrence. This SFB literature review was conducted using Microsoft Excel for the performance analysis, and VOSviewer (Van Eck & Waltman, 2010) for science mapping analysis and network visualization.

In terms of *reporting*, this review followed past bibliometric review reporting standards, using figures (*charts and network visualizations*), tables (*metrics*), and interpretations (*accompanying narratives*) to report the results.

## 3. Analyses and Results

This section presents the visualization and the interpretations of bibliometric indicators.

First, we conducted a performance analysis. The current publication trend is represented by the number of articles published per year and the main authors, journals, and articles by the total number of citations and/or publications. Second, although there are several approaches for mapping a bibliographic dataset, we used co-authorship and co-word analysis to present a holistic view of the main groups of researchers

and themes in the SFB research field.

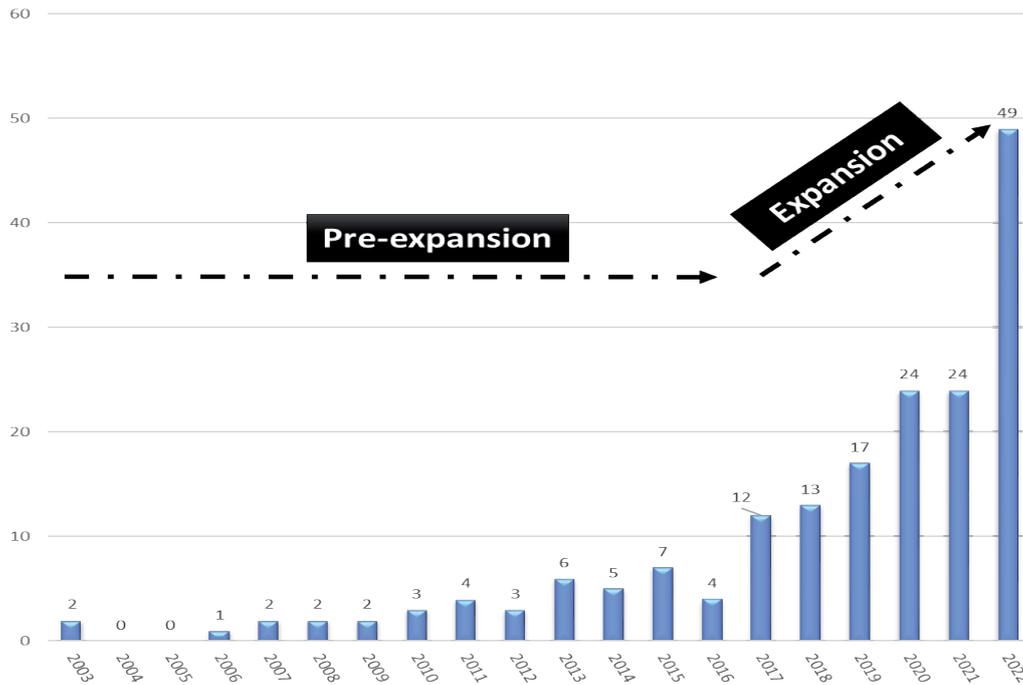
### 3.1. Descriptive overview of the field

#### 3.1.1. Publication trend

Figure 1 shows the evolution of scientific research on SFBs based on the number of articles per year. There is a progressive expansion in the number of publications, beginning in 2017.

Therefore, two different research periods can be distinguished in the dataset: the pre-expansion period (2003-2016) and the expansion period (2018-2022). Special issues of journals, such as *Technological Forecasting & Social Change* (2022) addressing specific topics in SFB, contribute significantly toward this increment in the number of publications.

**Figure 1.** The evolution of scientific research on the SFB research field



The first article in accordance with the dataset was published in 2003. Thus, SFB is not only an emergent research area, but also a relatively recent creation in family business scholarship.

#### 3.1.2. Journals' performance

The top journals for SFB research are presented in Table 1, which shows the journals with over 100 citations and/or more than four published articles. As can be inferred from the table, the most influential journals in the SFB research field, considering the number of published articles, are *Business Strategy and the Environment*, *Journal of Business Ethics*, and *Technological Forecasting and Social Change* with 22, 15, and 15 articles, respectively. This fact represents the specific approach of these three journals toward the different aspects of sustainable development.

*Journal of Family Business Strategy* and *Family Business Review*, two journals with specific publication topics on family firms, have the fourth and fifth positions in this productivity ranking.

However, other journals with only one or two publications have reached high citation rankings and thus represent their influence on the research area. These journals include *Entrepreneurship Theory and Practice* and *Journal of Business Venturing*, among others, with sub sequential positions in the ranking. It is worth noting the upcoming special issue "Sustainability in Family Firms: The Path Forward," to be published by the *Business Ethics, the Environment & Responsibility* journal. This is an indicator that the SFB is an interesting research field and thus is gaining attention of the academic community.

**Table 3.** Main journals in the SFB research field

R	Journal	TP	TC	TC/TP
1	Business Strategy and the Environment	22	684	31,09
2	Journal of Business Ethics	15	495	33,00
3	Technological Forecasting and Social Change	15	197	13,13
4	Journal of Cleaner Production	11	366	33,27
5	Journal of Family Business Strategy	9	323	35,89
6	Family Business Review	7	465	66,43
7	Journal of Small Business Management	6	347	57,83
8	Corporate Social Responsib and Environmental Manag.	5	280	56,00
9	International Journal of Entrepreneurial Behavior & Research	5	157	31,40
10	Journal of Business Research	5	84	16,80
11	Entrepreneurship Theory and Practice	4	836	209,00
12	Entrepreneurship Research Journal	4	35	8,75
13	Journal of Business Venturing	1	291	291,00
14	Entrepreneurship and Regional Development	2	193	96,50
15	Economic Geography	1	135	135,00
16	Journal of Product Innovation Management	2	131	65,50
17	European Accounting Review	1	130	130,00

Abbreviations: R = ranking, TC = total citations, TP = papers

### 3.1.3. Articles' performance

The number of citations of a document reflects its popularity, influence, and interest it has received from researchers. Table 4 lists the top ten articles with the highest number of citations. These articles have a significant impact on academic literature and should inspire prospective authors to pursue high-quality standards.

Further, the older the article in terms of year of publication, the more the opportunity of it receiving higher citations. Therefore, the years

of publication of the most cited articles in the dataset generally correspond to the pre-expansion period (2003-2016). [Le Breton-Miller and Miller \(2006\)](#) and [Zellweger et al. \(2013\)](#) are the most cited articles focused on a classic research theme in family businesses: the long-term survival of the business through family generations. However, the AJG ranking corroborated the high quality of these articles, with scoring standards of 4 and 3, respectively.

**Table 4.** The most cited articles in the SFB research field

R	Authors	Article Title	Journal	Year	TC	AJG
1	Le Breton-Miller, I; Miller, D	Why do some family businesses out-compete? Governance, long-term orientations, and sustainable capability	Entrep. Theory Pract.	2006	440	4
2	Zellweger, TM; Nason, RS; Nordqvist, M; Brush, CG	Why do family firms strive for nonfinancial goals? An organizational identity perspective	Entrep. Theory Pract.	2013	327	4

R	Authors	Article Title	Journal	Year	TC	AJG
3	Olson, PD; Zuiker, VS; Danes, SM; Stafford, K; Heck, RKZ; Duncan, KA	The impact of the family and the business on family business sustainability	J. Bus. Ventur.	2003	291	4
4	Danes, SM; Stafford, K; Haynes, G; Amara-purkar, SS	Family capital of family firms bridging human, social, and financial capital	Fam. Bus. Rev.	2009	200	3
5	Westhead, P; Howorth, C	'Types' of private family firms: An exploratory conceptual and empirical analysis	Entrep. Reg. Dev.	2007	186	3
6	Niehm, LS; Swinney, J; Miller, NJ	Community social responsibility and its consequences for family business performance	J. Small Bus. Manag.	2008	167	3
7	Lopes, CM; Scavarda, A; Hofmeister, LF; Thome, AM; Vaccaro, GL	An analysis of the interplay between organizational sustainability, knowledge management, and open innovation	J. Clean Prod.	2017	143	2
8	Wagner, M	Corporate social performance and innovation with high social benefits: A quantitative analysis	J. Bus. Ethics	2010	137	3
9	Wei, YHD; Li, WM; Wang, CB	Restructuring industrial districts, scaling up regional development: A study of the Wenzhou model, China	Econ. Geogr.	2007	135	4
10	Achleitner, AK; Gunther, N; Kaserer, C; Siciliano, G	Real earnings management and accrual-based earnings management in family firms	Eur. Account. Rev.	2014	130	3

### 3.1.4. Authors' performance

The data indicated that 451 authors contributed to the publication of 180 papers on SFB research. It should also be noted that 416 authors (92.239 %) published only one article, 29 authors published two articles, and 6 published more than two articles. Table 5 shows the top authors of SFB research, along with their productivity and

impact. Danes, with 718 citations and 9 articles, has been the most cited and most productive author. Kallmuenzer, Miller, Stafford, Basco, and De Massis are the remaining authors, who have published more than two articles. The top seven SFB authors based on total citations were Danes, Miller, LeBreton-Miller, Stafford, Brush, Nordqvist, and Zellweger.

**Table 5.** Influential authors in the SFB research field

Authors with two or more articles and more than 100 cites					Authors with 200 or more citations				
	Authors	TP	TC	TC/TP		Authors	TP	TC	TC/TP
1	Danes, SM	9	718	79,78	1	Danes, SM	9	718	79,78
2	De Massis, A	4	176	44,00	2	Miller, D	3	536	178,67
3	Kallmuenzer, A	4	7	1,75	3	Le Breton-Miller, I	2	535	267,50
4	Miller, D	3	536	178,67	4	Stafford, K	3	528	176,00
4	Stafford, K	3	528	176,00	5	Brush, CG	1	327	327,00
4	Basco, R	3	175	58,33	5	Nason, RS	1	327	327,00
7	Le Breton-Miller, I	2	535	267,50	5	Nordqvist, M	1	327	327,00
7	Wagner, M	2	210	105,00	5	Zellweger, TM	1	327	327,00

Authors with two or more articles and more than 100 cites					Authors with 200 or more citations				
	Authors	TP	TC	TC/TP		Authors	TP	TC	TC/TP
7	Short, JC	2	119	59,50	9	Duncan, KA	1	291	291,00
7	Zachary, MA	2	119	59,50	9	Heck, RKZ	1	291	291,00
7	Haynes, GW	2	109	54,50	9	Olson, PD	1	291	291,00
7	Payne, GT	2	102	51,00	9	Zuiker, VS	1	291	291,00
					13	Wagner, M	2	210	105,00
					14	Amarapurkar, SS	1	200	200,00
					14	Haynes, G	1	200	200,00

Abbreviations: R = ranking, TC = total citations, TP = papers

### 3.2. Structured overview of the field

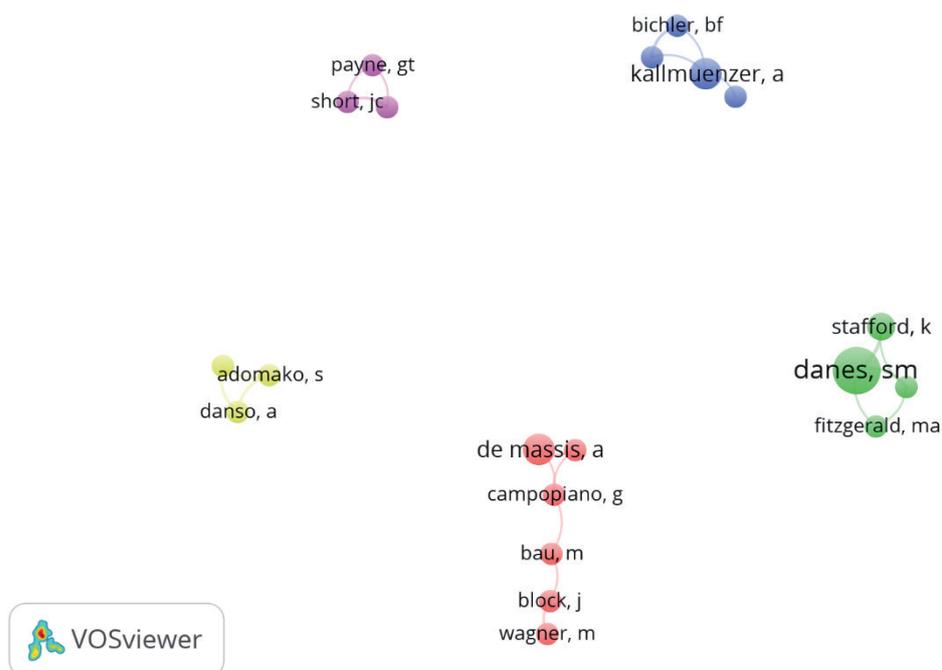
#### 3.2.1. Co-authorship analysis: intellectual structure of SFB field

To analyze collaboration trends in this research field, we analyzed the co-authorship of the SFB article dataset. This analysis provides details on the nature and scope of collaborations between co-authors (Donthu et al., 2021). This social network of scholars, created by their research concerns, offers an overview of the intellectual structure of the research area.

In this study, the networks were reduced to focus on groups of a minimum of three authors who have

published two or more documents by one of the authors in the research field. The collaborative network of leading authors is shown in Figure 2. The size of the circle represents the number of articles by the authors, while the thickness of the lines between two nodes indicates the frequency of collaboration between the two authors. Table 6 shows the articles of the group members in SFB research. The analysis of coauthorship among the most productive authors provides a holistic view of the main research groups in the SFB field and their research domains.

Figure 2: Co-authorship networks in the SFB research field



Based on the results of the collaboration network analysis (Figure 2 and Table 6), five clusters of author collaborations emerged. The first group, comprising of Danes, Fitzgerald, Haynes, and Stafford (green network), has the oldest publications, most of the articles published before 2015. It is the main group considering the number of articles and citations, with 10 articles and 724 citations, respectively. Based on the articles published in the SFB research field by the authors of this group, [Olson et al. \(2003\)](#) and [Danes et al. \(2009\)](#) stand out with 291 and 200 citations, respectively, with the sustainability of the family business model being their core research theme.

The second most important collaborative network (red network) was formed by Baù, Block, Campopiano, Siascia, De Massis, and Wagner, with 426 citations from nine articles. In the pre-expansion period, [Wagner \(2010\)](#) discussed the link between innovation with social benefits and corporate social performance, along with the role played by family businesses in this relationship. More recent publications of members of this group focus on the active implications of family businesses on environmental sustainability and sustainable development. [Doluca et al. \(2018\)](#) find that family firms lag in environment-related activities, beneficial products, processes, organizational innovations, and value creation. Despite their increasing proactiveness in sustainability practices, [Miroshnychenko and De Massis \(2022\)](#) found differences between family and nonfamily firms in their sustainability practices. They showed that, compared with the non-family businesses, the family businesses were relatively less involved in green supply chain management, pollution prevention, and green product development practices. According to [Baù et al. \(2021\)](#), other issues related to sustainability during the expansion period were the influence of globalization, digital technologies, and social and environmental concerns in the way family businesses operate both locally and internationally.

Payne, Short, and Zachary formed the third group of interrelated authors (pink network), with three articles in the pre-expansion period and 130 citations. The authors of this cluster are fundamentally concerned with the sustainability of family businesses. Specifically, their sustainable competitive advantage, transgenerational sustainability, and the problem of dissolution of the multifamily businesses.

Adomako, Amankwah-Amoah, and Danso, researchers from English universities, represent the fourth authorship group (light green network) with two publications in the expansion period, focusing on the relationship between

environmental outcomes and family business value creation. [Adomako et al. \(2019\)](#) and [Lartey et al. \(2020\)](#) focused on environmental sustainability and sustainable development as important research issue in family business field. [Adomako et al. \(2019\)](#) used insights from the research on environmental sustainability orientation and family businesses to introduce firms' age and family involvement as moderators in the environmental sustainability orientation-value creation linkage; while [Lartey et al. \(2020\)](#) discussed the possibility that the influence on lean-green strategy and company growth is due by different levels of managerial power, industry competition and family influence.

Finally, Bichler, Kallmuenzer, Kraus, and Peters formed the fifth major author collaboration network (blue network). Kallmuenzer is the central author of this group and co-author of four out of six articles published by the authors of this group, all of which were published in recent years during the expansion period. [Nikolakis et al. \(2022\)](#) studied the issue of environmental sustainability, family dynamics, and social sustainability, showing that family dynamics (family conflict, trust, and socioemotional wealth) can motivate the social and environmental and strategies in family businesses.

### 3.2.2. Co-word analysis: Conceptual structure of SFB field

Co-word analysis aims to identify relationship and connections between keywords in a research domain ([Ding et al., 2001](#)). The doctrine behind this analysis is that keywords represent the content of an article ([Maseda et al., 2023](#)). When two keywords co-occur in an article, the two topics they represent are interrelated.

To analyze the content structure of SFB research and establish the co-word networks, each keyword in a network must appear in at least four articles. By applying the keyword co-occurrence technique, VOSviewer software identified 25 keywords that appear in at least four articles.

Table 7 presents the list of keywords in each of these clusters as well as their total number of occurrences, while Figure 4 displays information on the connectedness among the keyword clusters.

**Table 6.** Authors, universities, countries, and articles on SFB topics

Research Group 1		
Authors, University, Country	Articles	TC
Danes, SM (Univ Minnesota, USA)	Olson, PD; Zuiker, VS; <b>Danes, SM; Stafford, K; Heck, RKZ; Duncan, KA</b> (2003), The impact of the family and the business on family business sustainability, <i>J. Bus. Ventur.</i>	291
	<b>Danes, SM; Stafford, K; Haynes, G; Amarapurkar, SS</b> (2009), Family capital of family firms bridging human, social, and financial capital, <i>Fam. Bus. Rev.</i>	200
	<b>Fitzgerald, MA; Haynes, GW; Schrank, HL; Danes, SM</b> (2010), Socially responsible processes of small family business owners: exploratory evidence from the national family business survey, <i>J. Small Bus. Manag.</i>	72
Fitzgerald, MA (N Dakota State Univ, USA)	Werbel, JD; <b>Danes, SM</b> (2010), Work family conflict in new business ventures: the moderating effects of spousal comitment to the new business venture, <i>J. Small Bus. Manag.</i>	64
	<b>Stafford, K; Danes, SM; Haynes, GW</b> (2013), Long-term family firm survival and growth considering owning family adaptive capacity and federal disaster assistance receipt, <i>J. Fam. Bus. Strateg.</i>	37
Haynes, GW (Montana State Univ, USA)	Yang, YX; <b>Danes, SM</b> (2015), Resiliency and resilience process of entrepreneurs in new venture creation, <i>Entrep. Res. J.</i>	22
	Hanson, SK; Hessel, HM; <b>Danes, SM</b> (2019), Relational processes in family entrepreneurial culture and resilience across generations, <i>J. Fam. Bus. Strateg.</i>	19
Stafford, K (Ohio State Univ, USA)	Jang, JY; <b>Danes, SM</b> (2013), Are we on the same page?: Copreneurial couple goal congruence and new venture viability, <i>Entrep. Res. J.</i>	9
	Lee, YG; <b>Fitzgerald, MA; Bartkus, KR</b> (2017), Adjustment strategy use in minority family businesses: Differences across gender, <i>J. Fam. Econ. Iss.</i>	6
	Jang, J; <b>Danes, SM</b> (2013), Role interference in family businesses, <i>Entrep. Res. J.</i>	4
Research Group 2		
Authors, University, Country	Articles	TC
Baù, M (Jonkoping Int Business Sch, Sweden)	<b>Wagner, M</b> (2010), Corporate social performance and innovation with high social benefits: A quantitative analysis, <i>J. Bus. Ethics</i>	137
	Kotlar, J; Fang, HQ; <b>De Massis, A; Frattini, F</b> (2014), Profitability goals, control goals, and the R&D investment decisions of family and nonfamily firms, <i>J. Prod. Innov. Manage.</i>	111
Block, J (Trier Univ, Germany)	Doluca, H; <b>Wagner, M; Block, J</b> (2018), Sustainability and environmental behaviour in family firms: A longitudinal analysis of environment-related activities, innovation and performance, <i>Bus. Strateg. Environ.</i>	73
	Astrachan, JH; Astrachan, CB; Campopiano, G; <b>Baù, M</b> (2020), Values, spirituality and religion: Family business and the roots of sustainable ethical behavior, <i>J. Bus. Ethics</i>	39
Campopiano, G (Univ Lancaster, England)	<b>Campopiano, G; Rinaldi, FR; Sciascia, S; De Massis, A</b> (2019), Family and non-family women on the board of directors: Effects on corporate citizenship behavior in family-controlled fashion firms, <i>J. Clean Prod.</i>	31

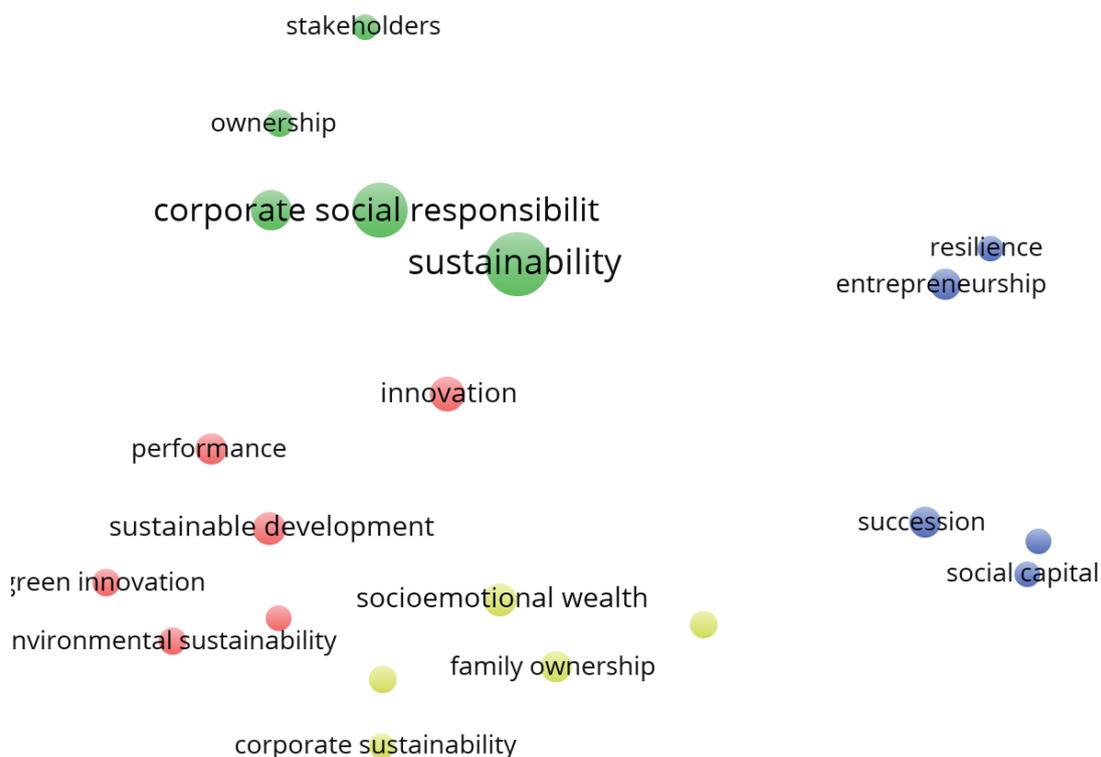
Sciascia, S (LIUC Univ Cattaneo, Italy)	Gjergji, R; Vena, L; <b>Sciascia, S</b> ; Cortesi, A (2021), The effects of environmental, social and governance disclosure on the cost of capital in small and medium enterprises: The role of family business status, <i>Bus. Strateg. Environ.</i>	30
Wagner, M (Julius Maximilians Univ Wuerzburg, Germany)	Mariani, MM; Al-Sultan, K; De <b>Massis, A</b> (2022), Corporate social responsibility in family firms: A systematic literature review, <i>J. Small Bus. Manag.</i>	24
De <b>Massis, A</b> (Free Univ Bozen Bolzano, Italy)	Miroshnychenko, I; <b>De Massis, A</b> (2022), Sustainability practices of family and nonfamily firms: A worldwide study, <i>Technol. Forecast. Soc. Chang.</i>	10
	<b>Baù, M</b> ; <b>Block, J</b> ; Cruz, AD; Naldi, L (2021), Bridging locality and internationalization - A research agenda on the sustainable development of family firms, <i>Entrep. Reg. Dev.</i>	7
<b>Research Group 3</b>		
Payne, GT (Texas Tech Univ,	Zachary, MA; McKenny, A; Short, JC; <b>Payne, GT</b> (2011), Family business and market orientation: Construct validation and comparative analysis, <i>Fam. Bus. Rev.</i>	91
Short, JC (Texas Tech Univ, , USA)	Anglin, AH; Reid, SW; <b>Short, JC</b> ; Zachary, MA; Rutherford, MW (2017), An archival approach to measuring family influence: An organizational identity perspective, <i>Fam. Bus. Rev.</i>	28
Zachary, MA (West Virginia Univ, USA)	Brigham, KH; <b>Payne, GT</b> (2015), The transitional nature of the multi-family business, <i>Entrep. Theory Pract.</i>	11
<b>Research Group 4</b>		
Adomako, S (Univ Bradford, England)	<b>Adomako, S</b> ; <b>Amankwah-Amoah, J</b> ; <b>Danso, A</b> ; Konadu, R; Owusu-Agyei, S (2019), Environmental sustainability orientation and performance of family and nonfamily firms, <i>Bus. Strateg. Environ.</i>	42
Amankwah-amoah, J (Univ Kent, England)	Lartey, T; Yirenkyi, DO; <b>Adomako, S</b> ; <b>Danso, A</b> ; <b>Amankwah-Amoah, J</b> ; Alam, A (2020), Going green, going clean: Lean-green sustainability strategy and firm growth, <i>Bus. Strateg. Environ.</i>	33
Danso, A (De Montfort Univ, England)		
<b>Research Group 5</b>		
Bichler, DF (Univ Innsbruck,	Pikkemaat, B; <b>Peters, M</b> ; <b>Bichler, BF</b> (2019), Innovation research in tourism: Research streams and actions for the future, <i>J. Hosp. Tour. Manag.</i>	55
	Clauss, T; <b>Kraus, S</b> ; Jones, P (2022), Sustainability in family business: Mechanisms, technologies and business models for achieving economic prosperity, environmental quality and social equity, <i>Technol. Forecast. Soc. Chang.</i>	11
Kallmuenzer, A (Excelia Business Sch, France)	<b>Bichler, BF</b> ; <b>Kallmuenzer, A</b> ; <b>Peters, M</b> (2020), Entrepreneurial ecosystems in hospitality: The relevance of entrepreneurs' quality of life, <i>J. Hosp. Tour. Manag.</i>	5
Kraus, AS (Free Univ Bozen Bolzano, Italy)	Mc Fritz, M; Ruel, S; <b>Kallmuenzer, A</b> ; Harms, R (2021), Sustainability management in supply chains: The role of familiness, <i>Technol. Forecast. Soc. Chang.</i>	1

Peters, SMm (Univ Innsbruck,	Nikolakis, W; Olaru, D; <b>Kallmuenzer, A</b> (2022), What motivates environmental and social sustainability in family firms? A cross-cultural survey, <i>Bus. Strateg. Environ.</i>	1
	<b>Kraus, S; Kallmuenzer, A;</b> Kanbach, DK; Krysta, PM; Steinhoff, MM (2023), An integrative framework for business model innovation in the tourism industry, <i>Serv. Ind. J.</i>	0

**Table 7.** Main keywords and themes in the SFB research field

Clusters	Keywords and frequency	Themes
Cluster 1	Sustainability (26), Corporate social responsibility (19), Corporate governance (10), Ownership (5), Stakeholders (4)	Corporate social responsibility in family business as a sustainability paradigm
Cluster 2	Entrepreneurship (6), Succession (6), Resilience (4), Small business (4), Social capital (4)	Sustainability of the family business model
Cluster 3	Innovation (8), Sustainable development (7), Performance (6), Environmental sustainability (5), Green innovation (5)	Family business environmental sustainability orientation outcomes
Cluster 4	Socioemotional wealth (7), Family ownership (6), Environmental performance (5), Firm performance (5), Corporate sustainability (4)	Antecedents of a proactive strategy for sustainability in the family business

**Figure 4.** Co-word network in the SFB research field



### *Cluster 1. Corporate social responsibility in the family business as a sustainability paradigm*

It is generally acknowledged that family businesses have some characteristics that make them different from nonfamily firms, and in this thematic area, these characteristics are considered under the sustainability research topic. That is, the underlying research question in the research field is about the internal determinants that can facilitate, or hinder, the adoption of sustainability attitudes in family businesses.

Le Breton-Miller and Miller (2016), an early reference article in this thematic, developed some propositions about the family business conditioning characteristics to be more or less likely to embrace sustainability practices due to the specificities of family business corporate governance (ownership structure and control), executive management, and board composition. To develop the research stream, the reference point of comparison in most studies is the differences between family and non-family firms based on their intrinsic business model characteristics (Halme et al., 2020; Hou, 2019). In the fundamentals of comparison with non-family counterparts, Family business stakeholders' interests are considered as part of company values and objectives. Thus, corporate social responsibility (CSR) activities can be viewed as internal determinants of sustainability in this family business research field (Mariani et al., 2022).

Nevertheless, the heterogeneity in family business characterization determines a diffuse reality to consider family business sustainability as a separate field of study. Faller et al. (2018) reviewed the literature on the relationship between corporate social responsibility and different forms of equity ownership, suggesting that some family firm corporate governance characteristics are moderators in discussing the relevant benefits and motivations of shareholders in different kinds of enterprises, family, and non-family business. This is a valuable approach to resolving the debate about diversification in family business categories and their sustainability attitudes.

As an advancement in this thematic cluster, Patuelli et al.'s (2022) work is a step forward in the traditional conception of family business corporate responsibility. Their proposition was that SDGs serve as further motivators for responsibility, building on existing family and firm's values. In this way, SDGs help align a firm's strategy with global challenges.

### *Cluster 2. Sustainability of the family business model*

Family business represent the most common business entities worldwide, contributing greatly to gross domestic product and social well-being, and play an essential role in generating employment, and contributing to communities' development (Nave et al., 2022).

Long-term family firm survival, growth, and entrepreneurship for family business ecosystem development are specific research topics in the field of family business. Successful firm management, creation, development, and business succession across generations (Bulut et al., 2021; Mallon et al., 2018; Porfirio et al., 2020; Tobak et al., 2018) are some of the key issues discussed under this thematic area. Family capital was defined as the total resources owned by the family comprising of human, social, and financial capital. Family capital contributes significantly to firm achievement and sustainability (Danes et al., 2009). Therefore, some of these articles also clarified the link between this general thematic research area and sustainable development research through the social capital and community ties of the family business ecosystem (Bichler et al., 2020; Dinger et al., 2020; Janjuha-Jivraj, 2003; Korber & Naughton, 2018).

### *Cluster 3. Family business environmental sustainability orientation outcomes*

Environmental sustainability is not only a matter of social responsibility but also of business growth and survival, as social and legal obligations in this regard have increased. However, environmental involvement as part of the broader business sustainability agenda is of particular interest to family business because of its long-term orientation and commitment to stakeholders. This thematic area focuses on the relationship between the outcomes of environment-related activities, such as green innovation, and family business performance.

The relationship between addressing environmental issues and business value creation is not fully understood, especially in family firms (Bauweraerts et al., 2022; Dangelico et al., 2019). Research at the beginning of the expansion period revealed that scarce evidence of environmental sustainability orientation on firm performance are available as few studies have addressed the issue (Adomako et al., 2019; Doluca et al., 2018). Recent research has shed more light on this topic. Bauweraerts et al. (2022) show that the influence of green innovation adoption on value creation is contingent on two important family business specific sources of top management team diversity: generational involvement and family

involvement. Adomako et al. (2019) suggested that the impact of environmental sustainability orientation on firm performance is stronger among older firms than among younger ones. Aiello et al. (2021) analyzed the differences between family and non-family firms in the implementation of innovations in green technologies. Other studies have focused on specific relationships, such as family business motivations to develop green products (Dangelico, 2017) or on the relationship between environmental commitment and export performance (Haddoud et al., 2021). The green-leanness approach of a business model to global competition and climate change has also been considered (Barth & Melin, 2018).

#### *Cluster 4. Antecedents of a proactive strategy for sustainability in the family business*

This thematic area addresses the paradox between the greater predisposition toward corporate sustainability of family business due to socio-emotional reasons (Berrone et al., 2010), and yet, the lesser proactivity in corporate sustainability initiatives that they develop, especially proactive environmental strategies (Dou et al., 2019). Dal Maso et al. (2020) show that investment in development and training practices explains part of the negative relationship between family block holders and environmental performance. Ernst et al. (2022) work helps to clarify that, as owners, family members adopt a normative corporate sustainability motivation; however, as managers responsible for the growth of the company's wealth, family members are risk-averse to proactive initiatives because they bear the residual risk of management decisions (Ernst et al., 2022).

Nevertheless, the evidence shows that positive family dynamics motivate social and environmental strategies in family business. (Nikolakis et al., 2022). Cordeiro et al. (2020), jointly analyzing the impact of ownership structure and board gender diversity, showed that most ownership types interact with board gender diversity to positively influence corporate environmental performance (Cordeiro et al., 2020). Studies explain why and when family firms engage in active corporate sustainability and establish a relationship with board composition, specifically, board gender diversity (Nadeem et al., 2020). Enko (2020) showed that both board size and composition enhance corporate environmental performance confirming the advisory function of boards. Lopes et al. (2017) studied some drivers, such as knowledge management and open innovation for sustainable innovation, to provoke significant changes in an organization's culture toward organizational sustainability.

## 4. Concluding Remarks and the Future of SFB research field

Over the last decade, there has been a growing body of research on SFB. In this context, this review aims to synthesize and organize the existing knowledge in the field through a systematic review of the literature using bibliometric techniques. The use of the SPAR-4-SLR protocol together with the combination of different analysis techniques constitutes a solid contribution to the literature. In addition, this article provides a comprehensive overview of how the research field has developed and evolved around the main research topics.

SFB is a relatively new research topic and an emerging area in family business research in the recent years. The first work identified on our dataset does not appear until 2003. The evolution of the field shows a rising trend in general publications on the subject, especially since 2017. Thus, the publication time span can be divided into two periods: the initial period prior to 2017 and the expansion period after 2017.

While SDGs, as sustainable development commitments, have only recently entered the family firm's strategic level, the rationale for such commitments have been generally considered in terms of family values and the firm's culture. In the research domains, this is reflected in the four thematic clusters identified using bibliometric analysis. Using co-word analysis, four thematic clusters were identified: Cluster 1: *corporate social responsibility in the family business as a sustainability paradigm*; Cluster 2: *sustainability of the family business model*; Cluster 3: *family business environmental sustainability orientation outcomes*, and Cluster 4: *antecedents of a proactive strategy for sustainability in the family business*.

These four thematic clusters provide two complementary approaches for SFB research. First, the traditional approach (Clusters 1 and 2) focused on the conditions under which the special corporate governance and ownership structures of family firms determine their intrinsic motivation for sustainability performance compared with non family counterparts. The heterogeneity of family businesses and the comparison between family and non-family firms must be considered to advance the knowledge on this topic.

In addition, the specificities of succession processes and dynamics, with or without formalized protocols, in relation to the transition toward a sustainable family business model need to be considered to advance knowledge on this approach.

The second was a renewed approach to sustainability in family business research

(Clusters 3 and 4). Following this new approach, some studies analyze why family firms engage in sustainable development, but the current challenges in sustainability open new research paths in SFB. For example, among others, the impact of the digital transition of family firms and their ecosystems on sustainable development, the value of collaboration networks to reduce irresponsible behaviors, family firm entrepreneurship initiatives for the good (meeting the Triple Bottom Line), and how to effectively communicate sustainable efforts according to environmental, social, and governance (ESG) disclosures.

This means that in-depth research needs to be undertaken about the SDGs as a new framework for SFB research, broadening the traditional socioemotional wealth approach and opening new research directions in relation to opportunities and challenges in family business sustainability.

Accordingly, authors propose the following interesting open themes:

- Impact of family businesses on SDGs
  - How are family businesses specifically addressing each SDG?
  - What actions are they taking to integrate sustainability principles into their operations?
- Barriers to and facilitators in adopting sustainable practices in family businesses:
  - What specific barriers (family culture, lack of resources, financial constraints, and lack of awareness or knowledge, among others) face family businesses when trying to implement sustainable practices?
  - What specific facilitators (women in boards of directors, organizational social capital, and community ties, among others) promote family businesses' implementation of sustainable practices? How can the roles of family members affect sustainable decision making, commitment to SDGs, succession policies, and governance structures?
- Innovation policies and their outputs as boosters of sustainability in family businesses:
  - How can family businesses foster innovation in products, processes, and business models to address environmental and social challenges?
  - How can innovation policies of family businesses contribute to sustainability and the achievement of SDGs?
- Sustainability values in succession processes:
  - How are knowledge and values related to sustainability transmitted across generations in family businesses?
  - What types of family businesses are rigorous in transmitting the commitment to SDGs?
- Measurement and reporting of sustainability impact of family businesses:

- Develop methods and tools to measure and report the contribution of family businesses to sustainability to stakeholders, policy-makers, and society in general.

These research themes offer different approaches to exploring the relationship between SDGs and family businesses management and examining them will contribute to a better understanding of how family businesses can play an active role in promoting sustainability and achieving the SDGs. SFB literature review also bears practical implications. The sustainability agenda 2030 and SDGs therein are motivators for family firms to behave even more responsibly, aligning firm strategy with sustainable development. However, this kind of firms, usually of small and medium sizes, are not rigorous in public disclosure and reporting on sustainability, that is, environmental, social, and governance (ESG) information. They can escape the ESG reporting obligation because of the current legal threshold of 500 employees (Directive 2014/95/EU2). The SFB literature review evidence that family businesses leaders should become conscious about prioritizing ESG reporting. Business leaders must realize that not only stakeholders but also policy-makers and society at large expect them to actively contribute to resolving global challenges. With public disclosure, family firms can gain legitimacy and strengthen their competitiveness. Their identity and reputation may also be benefit from their disclosure to public of their sustainable development contribution, transferring and robust family business brand image.

The limitations of this study lie in the dataset selection. That is, articles without the Journal Citation Report (JCR) impact and AJG classification were not considered in the present literature review. The authors considered these criteria to reduce possible duplicities with other databases and ensure quality maintenance in the state-of-the-art research field.

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