GENDER DIVERSITY AND PERFORMANCE IN FAMILY SMALL AND MEDIUM-SIZED BUSINESSES: MAPPING AND CLUSTERING BIBLIOMETRIC NETWORKS

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Article info

Abstract

Over the past few years, firms have increasingly begun to consider inclusion and gender diversity as a source of competitive advantage and, in particular, as a key factor for growth. Prior literature has addressed the topics of gender diversity and performance in large and medium enterprises finding controversial results in this relationship. In this context, less attention has been paid to family SMEs and to exploring the key factors of such relationships.

This article answers the call for a deeper understanding on women's experience and role in family SMEs, supporting the claim to adopt new methodological research tools.

Accordingly, this paper explores the connections between gender diversity in family SMEs and performance as reflected in established research, through a bibliometric analysis conducted on 125 articles published in the period 1999-2021. Keyword analysis reveals the existence of three independent clusters of research which can be traced back to the following three topics: Women's involvement in Corporate Governance and Performance (Green Cluster), Women's formal engagement in Family Business (Blue Cluster), and Female Ancillary Role (Red Cluster). In each of these clusters, it is possible to identify key aspects of women's profile within family SMEs. This study offers valuable results from both the academic and business perspectives. The bibliometric analysis carried out clearly illustrates the different stages of this field of study, as well as the emerging lines of research, which can be studied in greater depth.

1. Introduction

Over the past few years, firms have increasingly begun to consider inclusion and gender diversity as a source of competitive advantage and a key factor for growth. Furthermore, the beneficial effect of higher levels of diversity on business results is increasingly manifest. As evidenced by the results of a study conducted by McKinsey (McKinsey, 2020) - which analyzed a sample of over 1,000 firms in 2017 - there is a positive correlation between the presence of women in management teams and financial performance. In detail, top-quartile firms for gender diversity were not only 21% more likely than fourth-quartile firms to exceed national industry peers on EBIT margin but were also 27% more likely to have industry-leading performance on long-term value creation, as evaluated by economic profit margin.

Much empirical evidence points to a positive relationship between gender equality and large firm performance; however, the presence of high heterogeneity in the results of the studies conducted so far (Schneid, 2015; Bartolacci et al., 2017; Naciti, 2019;) should also be emphasized. In the analysis of Carter, Simkins and Simpson (2003), a positive relationship was highlighted between the presence of women and Tobin's Q; similarly, analyzes by Erhardt et al. (2003), Smith at al. (2006), Christiansen Lin et al. (2016) and Darko et al. (2016) observed how a gender-diversified board of directors has a positive impact on performance as measured by ROA and ROE. Conversely, other studies such as Adams and Ferreira (2009) and Hassan et al. (2018) found that the presence of women has negative effects on some performance indicators. Conversely, other studies such as Adams and Ferreira (2009) and Hassan et al. (2018) found that the presence of women has negative effects on some performance indicators.

In short, firms with more women in top positions may perform better.

These numbers support the thesis that it is increasingly important to promote gender diversity and inclusiveness in firms to strengthen organizational effectiveness (Naciti, 2019).

In this context, gender diversity has been studied through the lens of Diversity Management (DM) which can be defined as a strategic approach aimed at eliminating organizational barriers created by diversity (Mc Nerney, 1994). Indeed, DM emerged in response to the need to effectively manage the different human resources working in organizations. Negative aspects linked to diversity are inherent to the underestimation of minorities' skills and inner characteristics. It has been shown that though most research on gender diversity focuses on large firms, attention to the relationship between gender diversity and organizational performance has also been paid to family small and medium-sized enterprises (SMEs).

The available data show that women's participation in family firm boards of directors (BoD) has risen, owing in part to the establishment of

corporate governance standards in numerous Western nations, notably the United States and Europe (Diaz et al., 2018; Chamochumbi et al., 2018).

In Italy, for example, the percentage of listed family firms with at least one female director increased from 53.3% in 2007 to 92.7% in 2016. However, it is apparent that this was not a natural occurrence, but rather the result of the implementation of the so-called "pink quotas" (Law no. 120/2011). This is supported by the fact that in unlisted family firms the percentage of BoDs with at least one woman has stayed essentially stable over the previous 10 years, given that these firms are not subject to legal responsibilities (Diaz et al., 2018).

Women in leadership and management positions, particularly in family businesses, should have a say in strategy, choices, and outcomes. The adoption of management techniques is linked to the influence of strategies, choices, and outcomes. In other words, women's participation in family SMEs may be connected to the expansion of the firm's management mechanisms or the level of "professionalization," (Songini and Gnan, 2009). In truth, professionalization of family SMEs does not always require women's engagement; it may be handled by professional managers with relevant competences and capacities, regardless of gender.

Although prior literature has addressed the topics of gender diversity and performance, less attention has been paid to the evolution of studies that analyze their relationship. To the best of our knowledge, there are no studies that provide a bibliometric analysis on the link between gender diversity and performance in family business, which this study has attempted to present.

Following the methodology proposed by Van Eck and Waltman (2017), this paper employs co-occurrence keywords and co-citation-based clustering analysis of literature over the last 2 decades, from 1999 to 2021. This methodology identifies the main theoretical building blocks of gender diversity in family SMEs, by revealing the type and intensity of connections existing between them, thus uncovering the different paths that scholars have taken in the past. Based on the results of this analysis, the paper then proposes possible theoretical extensions that might be explored in future research. Using co-citation bibliometric analysis, co-occurrence keywords, and chronological keyword analysis, this study explores answers to the following research questions:

- RQ1. Which channels (authors, journals, and articles) are the most influential in the research of gender diversity in family SMEs and performance?
- RQ2. How are articles clustered, which research streams are likely to emerge in family business studies, and what has been the evolution over time of studies focused on gender diversity in family SMEs and performance?

- RQ3. What are the main topics (keywords) underlying the relationship between gender diversity and performance in family SMEs?

This article answers the call for a deeper understanding on women's experience and role in family SMEs and the claim to adopt new methodological tools (Bannò et al., 2021). It provides both managerial and theoretical implications. The bibliometric study clearly outlines the different stages in this field of knowledge and allows to identify lines of research that can be explored further, as well as being useful drivers for family business decision makers to enhance all the performance benefits related to gender diversity.

The paper proceeds as follows: Section 2 briefly reviews the extant general research on diversity management in corporate settings. Section 3 explains the criteria used for identifying past publications on gender diversity and performance as well as the analytical methods employed to analyze them. Section 4 presents the results of the analysis. Finally, Section 5 discusses the implications of findings and draws conclusions.

2. Theoretical Background

2.1 General research in diversity management

The stream of research on Diversity Management (DM) dates back to the early 1990s in the United States, when firms began for the first time to consider the problem of promoting an increasingly "diverse" society (Flood & Romm, 1996). Interest in DM became financial with the dissemination of certain theories, such as "The Bottom-Line Value of Diversity" (McNeney, 1994), which strongly advised organizations to immediately take the positive effect of diversity on performance onboard (Lorbiecki and Jack, 2000).

Therefore, organizations realized that traditional governance had become insufficient to meet the needs of the demand from a global market (Ozbilgin and Taltli, 2008). Thus, diversity in the workplace became a central theme for organizations (Addabbo et al., 2020). According to Cox (1994), diversity can support organizations by providing a wide range of ideas, skills, and knowledge that can improve capabilities to solve problems and make better decisions. Many researchers have emphasized the important role of DM in organizations. Early scholars on this topic, such as Thomas and Ely (1996), suggested that effective leadership links diversity to employee effectiveness. Effective leadership promotes diversified teams to enhance different perspectives and appreciate different opinions and ideas. Research has shown mixed results on the impact of diversity in permanent law, race, and genus of organizational activity. In general, when speaking of DM, the most widespread protection measures in the historical

reference period are those related to the management of gender differences (gender diversity), age differences (age management), and cultural differences (cultural diversity).

Although today the significant impact of the presence of women on the proper functioning of the firm is recognized, their contribution is often underestimated (Constantinidis and Cornet, 2008; Barrett and Moores, 2009; Scott, 2020). Proof of this is the fact that women are involved in decision making processes to a relatively limited extent, and that their commitment is not adequately remunerated in terms of salary and firm position (Martinez Jimenez, 2009). Yet, at the same time, gender diversity is an intrinsic element of society (Mor Barak et al., 2016).

Studies of women as directors or managers in large firms are not new to management literature. Indeed, some scholars have shown that higher diversity in the workforce is expected to bring higher returns (Adams & Ferreira 2009; Marinova et al., 2016; Fernando et al., 2020), but others fail to support this claim (Darmadi, 2013; Duppati et al., 2020). Moreover, research has shown that gender diversity in organizations leads to improved reputation, both directly and indirectly (Pulejo, 2011; Ajaz et al., 2020). Directly, because it has been demonstrated that firms with a higher percentage of female board directors are favorably viewed in sectors that operate close to the final customer. Indirectly, female directors are more likely to notice, and less likely to commit, fraud (Cumming et al., 2015). Furthermore, gender diversity policies seem also to be correlated with increased corporate social responsibility (CSR), as well as having better overall organizational performance. Additionally, it has been demonstrated that gender diversity on boards increases the diversity of ideas by introducing different perspectives and problem-solving approaches (Kakabadse et al., 2015).

The reason for this specific focus is related to the fact that financial performance can be considered "global" since it is directly or indirectly influenced by the choice of every person working in the organization – for example, physicians choosing one treatment instead of another influence the decision regarding the consumption of resources and thus overall expenditure. This is not always the case when dealing with other performance dimensions, such as quality of care – e.g., the quality of a certain specialist treatment is exclusively attributable to the performance of the people involved in the delivery of that service and not to other people. Moreover, financial results are more easily comparable between organizations that may have different organizational structures, and which may operate in different governance settings.

Management literature identifies various determinants of firm performance. In the last decade, a growing number of studies have focused on gender diversity as a driver to foster performance (Campbell & Mínguez-Vera, 2008; Fernando et al., 2020; Galletta et al., 2022). Much empirical

evidence points to a positive relationship between gender diversity and performance; however, the presence of high heterogeneity in the results of studies conducted so far should also be emphasized (Naciti, 2019; Martinez-Jimenez et al., 2020). In the analysis of Carter et al. (2003), a positive relationship was highlighted between the presence of women and Tobin's Q; similarly, Darko et al. (2016) and Moreno-Gómez et al. (2018) observed how a gender-diversified board of directors has a positive impact on performance as measured by ROA and ROE.

2.2 Gender Diversity in family businesses and SMEs

By focusing on family SMEs, it can be seen that a traditional cultural model prevails based on the attribution of distinct roles to men and women. There are pros and cons of diversity in family SMEs: firstly, due to the closeness of the head of the household to the firm, women can have more immediate access to governance/managerial roles, without running into the obstacles that are present in the labor market; secondly, the small size favors personal relationships and more immediate access to leadership roles; on the contrary, the culture of family SMEs prevents women from reaching top positions (Nasmara, 2021). Moreover, since the boundaries between business and family are often thin and poorly defined in family businesses, the same patterns and relational dynamics prevailing in the family environment tend to recur within the firm (Sundaramurthy and Kreiner, 2008). The consequence is that also within the firm, women often find themselves forced to fill, sometimes even for free, ancillary and support functions compared to the male figure, to whom positions of greater responsibility and power are reserved (Eagly and Carli, 2018). The unpaid work of women is conceived as a natural extension of the support and assistance role that women traditionally play within the family.

Studies up to now have been oriented towards analyzing the degree of the presence of women in family businesses and identifying the individual and contextual factors that affect the role of women within these businesses, the objectives pursued, and the contribution offered to the management (Sharma, 2004; Brundin et al., 2014). Women are present in every firm, and their presence in both leadership and managerial roles is also important in the case of family businesses that are, by definition, businesses *"governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families"* (Chua et al., 1999, p.25).

Although the relationship between gender diversity in top-middle management and performance has been widely analyzed in large firms, only a few studies have focused on family SMEs (Fairlie and Robb, 2009; Cruz

et al., 2012; Arzubiaga et al., 2018; Nekhili et al., 2018) and a call for deeper investigation within the context of family small firms has been launched. Through an analysis of literature, this study intends to shed light on specific features explaining this linkage within the context of family SMEs, trying to identify the drivers and mechanisms that can support the explanation of the relationship investigated, envisaged as key factors in interpreting the impact of gender diversity on performance. In brief, the bibliometric analysis allows for interpretation of existing literature, revealing peculiarities of research fields. Since prior studies have been mainly focused on large firms, this research attempts to enhance our knowledge of gender diversity also in family SMEs.

3. Research design

3.1 Sample and data collection

Past publications on gender diversity in family SMEs and performance have been drawn from the Web of Science electronic database and then analyzed with VOSviewer software, which is a tool for constructing and visualizing bibliometric networks.

Thomson Reuters' Web of Science (WOS) is widely regarded as one of the most important bibliographic databases. While WOS data may appear to be less commonly utilized in literature reviews, using Scopus data to create networks with VOSviewer presents a significant problem since the data is not in a suitable format - Scopus data is more diverse than WoS data, and conversion is a difficult process (Linnenluecke et al., 2020).

A publication search was conducted by using the tag listed in Table 1, where TS refers to the "topic" of the publication (Naciti et al., 2021). Two of the authors independently reviewed the publications and compared their results, resulting in changes to the categorization scheme.

Following the sample criterion used by Testa et al. (2020) and Lazzaretti et al. (2017), we restricted the examination to only English-language texts from 1999 to 2021 (see Table 1). The result is a set of 125 articles, cited 1690 times up to 2021, with 13.52 citations per article on average and a h-index of 20 (see Table 1).

Table 1. Sample criteria

Rationale and objective	This paper seeks to understand the connections between gender diversity in family SMEs and performance, proposing a bibliometric analysis of existing publications
Study design	The study applies a bibliometric analysis to summarize existing literature evidence based on a rigorous process
Eligibility criteria	We considered only articles published in peer-reviewed journals for eligibility; we identified studies by searching Web of Science electronic databases and applying the codes defined by the authors; we mapped and clustered bibliometric data.
Publication time frame	1999 to 2021
Language	English
Search strategy	We selected the following codes to be searched in the source database: 1) TS=("women" AND "family business" AND "performance") 2) TS=("gender diversity" AND "family business "AND "performance") 3) TS=("women "AND "family SME" AND "performance") 4) TS=("gender diversity" AND "family SME"AND "performance") 5) TS=("women" AND "family firm" AND "performance") 6) TS=("gender diversity" AND "family firm "AND "performance") Codes were separately searched on the title, abstract, and keywords sections of each record for both the identification and screening phase.
Sample	Results found: 125 Sum of the Times Cited: 1690 Average Citations per Item: 13.52 H-index: 20

3.2 Methodology

To analyze the selected papers, we adopted a methodology proposed by Waltman et al. (2010), for mapping and clustering bibliometric networks. This method can assist researchers with summing up existing literature evidence based on a rigorous, unequivocal, and straightforward stepwise iterative process. From among many similar tools, we performed the analysis using the VOSviewer software.

The software uses citation data to identify networks and clusters in various shapes and colors. These clusters are based on a link analysis, which includes the strength of linkages between the sample articles (Terminology used by the software is shown in Table 2.)

Table 2. Terminology used by VOSviewer software (Van Eck and Waltman, 2018)

Term	Description
Items	Objects of interest (e.g., publications, researchers, keywords, authors)
Link	Connection or relation between two items (e.g., co-occurrence of keywords)
Link strength	Attribute of each link, expressed by a positive numerical value. In the case of co-authorship links, the higher the value, the higher the number of publications the two researchers have co-authored
Network	Set of items connected by their links.
Cluster	Cluster Sets of items included in a map. One item can belong to only one cluster.
Weight attribute: number of links	The number of links of an item with other items.
Weight attribute: total link strength	The cumulative strength of the links of an item with other items.

The interest in gender diversity and performance in family SMEs, as theorized in this paper, likewise comprises a first evaluation of the significance of this literature gap: in this perspective, this methodological approach can provide feedback on the relevance of the gap.

Furthermore, bibliometric analysis solves some limitations of the literature review methodology by quantifying the existing literature. Indeed, literature reviews – a typical approach to transforming literature content into objective and systematic forms for identifying, specifying, mapping, and evaluating content – have often failed to recover related intellectual domains (Tranfield et al., 2003).

Additionally, this methodology gives a premise to dissecting enormous bibliometric information and grouping and envisioning it. It allows us to identify the main topics—in terms of keywords—that have most frequently appeared in literature on gender diversity and performance in family SMEs. In other words, the occurrence of a topic in literature and its co-occurrence structures represent the prominence of the topic and the strengths of the connections between them, respectively. The size of the circle shows how many times a keyword/author occurs, and colors identify which cluster the keywords belong to. Moreover, the frequency of the publications ('items' hereafter) denotes the prominence of a keyword. The strength of the connections between two keywords, say i and j, is the number of items, each one containing both keywords in the title, abstract, or author keywords (Naciti et al., 2021).

Furthermore, to examine whether the frequency of keywords in literature has changed over time, we employed a chronological analysis of keywords with weighted average of the years. The average year of occur-

rence for a keyword *i* is calculated by:

$$y_i = \frac{\sum_t (n_{it} t)}{\sum_t n_{it}}$$

Where n_{it} represents the number of items where keyword *i* occurs in year t (t =1999, 2009, …, 2021)

Finally, we broke down the most frequently cited items and related journals in literature on gender diversity in family SMEs and performance and their co-occurrence network. The co-citation clustering procedure looks at the theoretical foundations of sampled publications and tries to distinguish which hypothetical pillars have been reviewed by examined distributions to address the topics.

4. Results

Bibliometric analysis methodologies develop across two categories: (1) performance analysis and (2) science mapping. In essence, performance analysis considers the contributions of research sections, whereas science mapping considers the links among them. The next subsections describe results from both categories.

4.1 An Overview of the selected items

Following the criteria set out above, we identified 125 items. More than half of these (74) were published over the last 5 years (Figure 1, a). This shows that recent years have seen rapid growth in this field, with the fewest papers published during the first years and the greatest number published in 2019. Moreover, these items have been cited in recent years (Figure 1, b) confirming that the topic still represents a new research frontier for scholars.

a)
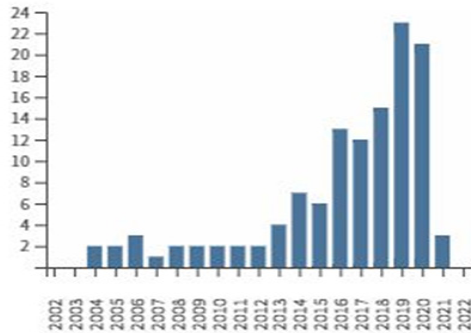
b)
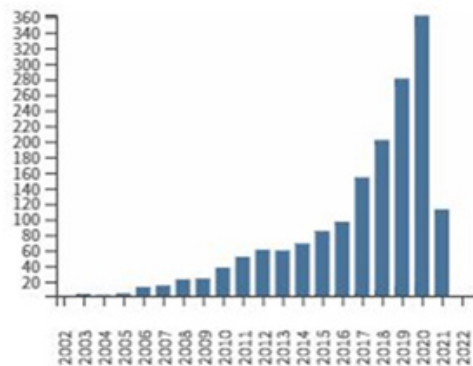
4.2 Sources

Table 3 shows the journals where at least two items of our sample have been published. The sources with a high number of publications are the *Journal of Family Business Management* (8), the *Journal of Family Business Strategy* (6), the *International Small Business Journal: Researching Entrepreneurship* (6), and the *International Journal of Gender and Entrepreneurship* (5). Thus, the main contributions to the field have been published in management and business journals.

The most cited sources are the *Small Business Economics* (230), the *International Small Business Journal: Researching Entrepreneurship* (170), the *Journal of Business Venturing* (154), and the *Family Relations* (93).

Table 3. Sources with a minimum of two items

SOURCE	ITEMS	CITATIONS
Small Business Economics	3	230
International Small Business Journal: Researching Entrepreneurship	6	170
Journal of Business Venturing	2	154
Family Relations	3	93
Family Business Review	2	84
Journal of Family Business Strategy	6	77
International Journal of Gender and Entrepreneurship	5	42
History of The Family	4	36
International Entrepreneurship and Management Journal	2	31
Education and Training	2	26
Journal Of Management & Organization	2	26
Academia-Revista Latinoamericana De Administracion	2	23
Journal of Business Ethics	2	22
International Journal of Human Resource Management	2	20
International Journal of Entrepreneurial Behavior & Research	2	18
Journal of Family Business Management	8	11
Journal of Enterprising Culture	2	9
Maritime Studies	2	4

4.3. Authors

The 125 items were written by 289 authors. Only 19 have published at least 2 articles (Table 4), while four have been cited more than 50 times. The most cited authors are Danes, Sharon M. (108), Welsh, Dianne H. B. (92), Kaciak, Eugene (84), and Memili, Esra (71).

Table 4. Authors with a minimum of two items

AUTHOR	ITEMS	CITATIONS
Danes, Sharon M.	3	108
Welsh, Dianne H. B.	5	92
Kaciak, Eugene	4	84
Memili, Esra	2	71
Bilimoria, Diana	2	39
Campopiano, Giovanna	3	36
De Massis, Alfredo	2	33
Rinaldi, Francesca Romana	2	33
Sciascia, Salvatore	2	33
Ramadani, Veland	3	30
Dana, Leo-Paul	2	23
Hisrich, Robert D.	2	22
Nason, Robert S.	2	18
Byrne, Janice	2	10
Fattoum, Salma	2	10
Clinton, Eric	2	9
Mcadam, Maura	4	9
Beatriz Hernandez-Lara, Ana	2	4
Pablo Gonzales-Bustos, Juan	2	4

Co-citation analysis defines the frequency with which pairs of scientific items are cited together in source articles. The most cited articles contain key concepts, methods, or experiments in a specific field. This analysis informs us as to which items define the intellectual structure of the main issues related to women and performance in family SMEs. The analysis reveals (Fig. 2) that 6896 authors have been considered within the papers, but only 26 have been cited at least 10 times. The publication years of these papers span from 1989 to 2017.

Density analysis highlights that a large and highly concentrated area of the research (yellow zone) is based on the studies of Overbeke et al. (2013), who examined the drivers that influence succession in family businesses, using gender theory combined with the theory of planned behavior; Nelson and Constantinidis (2017) who also investigated family business succession under the lens of gender theory as socially constructed to identify further research avenues; Vera and Dean (2005), investigating on the challenges of daughters in family SMEs in the United States, found that women are not necessarily making the succession process easy for their female counterparts; finally, Hamilton (2006) analyzed the complex relationships in a family business, putting the family at the heart of the research as op-

posed to an individual owner-manager, pointing out the evidence of clear resistance to patriarchy.

Fig. 2: Density analysis of co-citation of the authors
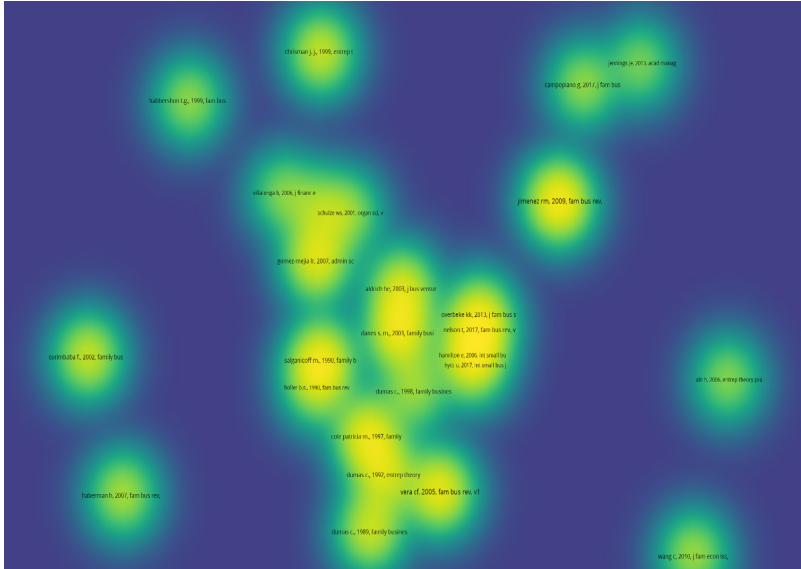
4.4.Keywords

Co-occurrence of keyword analysis uses the authors' provided keywords to investigate the conceptual structure of the field (Ji et al., 2018). Despite the existence of common traits between topics, multidisciplinary fields of study such as gender and performance require deep analysis of the literature to develop new insights. Thus, a keyword analysis (Fig. 3) was performed to evaluate the specifics of the debate on gender diversity in family SMEs and performance.

WOS data contain two types of keywords: Author Keywords, which are given by the original authors, and KeyWords Plus, which are derived by Thomson Reuters from the titles of cited references. KeyWords Plus are terms or phrases that appear often in the titles of an article's references, but not necessarily in the title of the article or as Author Keywords and are created by an artificial computer system (Zhang et al., 2016). KeyWords Plus keywords, according to Garfield (1990), can capture an article's substance in greater depth and diversity.

For our purposes, we have used the KeyWords Plus function to harmonize the keywords authors used in their papers: analysis reveals that 399 keywords were used. However, only 55 appear at least twice on the list.

In terms of clusters, the normalization method of the strength of word association used by VOSviewer indicates that there are three in total, which can be distinguished by their colors, here entitled Women's Involvement in Corporate Governance and Performance (Green Cluster), Women's Formal Engagement in Family Business (Blue Cluster), and Female Ancillary Role (Red Cluster). To locate a research stream in each of these clusters, we proceeded to read the articles linking them to the keywords found in the title of the references cited. Moreover, this analysis led us to the identification of three women's profiles within family businesses, described below.

The first cluster, in blue, consists of 18 keywords and includes keywords that primarily refer to the topic of gender and family business. Indeed, the most important words in this cluster are *family business* with a link strength of 87 and gender with a link strength of 67. Due to the size of the nodes and to a large number of connections with other groups of words, this is considered to be the main cluster, which seems logical since this cluster contains basic terms from the academic articles that address the presence of women in family SMEs. The word "entrepreneurship" is linked to words like "succession", "embeddedness", and "self-employment" in the blue cluster, which are not exactly related to the word "performance" (our main research filter) or even the phrase "corporate governance" (Cassia et al., 2011).

The profile identified by this cluster refers to a category of women that are effectively part of the management of the firm and take part in the governance, but their participation as members and administrators is justified exclusively by the exercise of a formal role, hence their presence in the BoD does not result in any real power to give direction to corporate strategy.

The second cluster, green, is characterized by high connections to the main cluster, as we can see a large number of short, thick lines connecting these two groups. This cluster has words that are primarily related to the words "corporate governance" and "performance", where "performance" with a link strength of 24 is one of the most influential words in this group. Words like "engagement" and "ownership" may be found in the performance cluster. As a result, women in the second profile have a formal and significant function in the organization. These are women who have positions of responsibility in the family SMEs, are part of the decision-making process and participate actively in its management.

The third cluster, in red, contains words that complement the two previous clusters since it deals with strategies, business, female entrepreneurship, marriage. In this case, where the connections are weaker as the words are more scattered, there is no high density as in the blue and green clusters. Words like "unpaid work", "marriage", and "stereotypes" appear in this cluster, leading to another profile: women who carry out tasks in the firm, aiding men in their jobs, but without having a formal position or getting

paid (Haberman and Danes, 2007). The aid supplied to human work by spouses, mothers, sisters, and daughters is considered as an extension of the family care activity in this scenario (Nelson and Constantinidis, 2017).

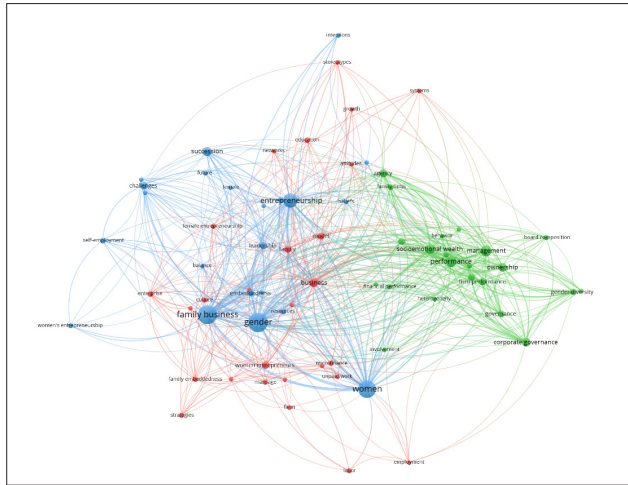*Fig.3: Co-occurrence of keyword analysis*

Fig 4 shows the weighted average year of keyword occurrence of 125 items. The change from blue to dark green, light green, and yellow represents the average years of keyword occurrence from 2010 to 2020. Transition in this period reflects the evolution of the topic in gender diversity in family SMEs and performance over the last decade (Naciti et al., 2021). Overall, we observe that, initially, the main objective of researchers was to discover the role of women in corporate governance and management. On the other hand, emerging lines of research focus on very current topics, such as performance and ownership.

From the 125 items, selecting the most cited in the last four years, it emerges that they are addressed to investigating the relationship between the entrepreneurial orientation of the firm, gender leadership, and female participation in the board of directors. We can somehow observe a shift in the research stream that opens the way to further development of the research line, as will be commented on below.

Fig. 4: Overlay visualization for chronological analysis of keywords
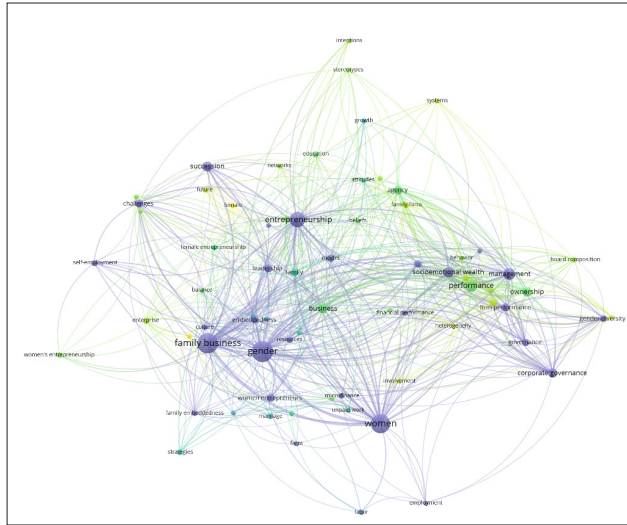
5. Discussion and Conclusion

This paper aims to explore the current state of research in gender diversity and performance in family SMEs, contributing to an understanding of literature through the systematic grouping of articles into clusters and the exploration of new research streams.

The bibliometric analysis allows for interpretation of specific features of women's engagement in the board of family SMEs and corresponding implications in explaining the relationship between gender diversity and performance.

In order to answer research question (1), we conducted a performance analysis in terms of authors, journals, and articles. The study highlights the most influential journals on research of gender diversity in family SMEs and performance, showing that the main contributions in the field have been published in management and business journals. In addition, the study shows the most influential authors by number of publications. The authors of the articles presented are all university professors, suggesting a lack of interdisciplinarity among academics and scholars from diverse fields (non-university research bodies).

With regard to the research question (3), as described in section 4.4, the analysis of Keywords revealed the existence of three independent clusters of research: Women's Involvement in Corporate Governance and Performance (Green Cluster), Women's Formal Engagement in Family Business (Blue

Cluster), and Female Ancillary Role (Red Cluster). In each of these clusters, by matching the keywords with the articles, we identified key aspects of women's profiles within family businesses. In particular, we saw that the red cluster concerns studies focused on women who carry out an activity in the firm, assisting the male figure in his work, but without having any role or being paid. In this case, the assistance provided by wives-mothers-sisters-daughters to human work is seen as an extension of the family care activity (Haberman and Danes, 2007; Nelson and Constantinidis, 2017).

The second profile (blue cluster) concerns those women who have been attributed only a formal role in the firm. As mentioned, we identified a category of women that are part of the decision-making process, but who do not fully exercise their rights as members and administrators. Hence, the role of women in family entrepreneurship is almost always one of assuming a role apparently of "support", consistent with the family stereotype which they were obliged to take up, often also in conflict with a situation in which they expressed their own ability but still in a formally subordinate way (Ratten et al., 2017). In some cases, for instance, where they inherited the activities or were called on to replace husbands, fathers or brothers who died, however, women often managed to regain the value of their commitment, but still in social contexts that penalized female entrepreneurial figures who were too autonomous, authoritarian, or independent.

Finally, the third profile (green cluster) refers to women that have a substantial role in the firm. These are women who work in the family business in positions of responsibility (Ratten et al., 2017), they are entrepreneurs, and may be members of the firm (Cesaroni et al., 2021), having a role in the governing and management bodies, assisting the male figure in all decision-making processes as co-leaders, while the male figure is recognized as the only point of reference for all the main stakeholders of the firm (Xian et al., 2021).

Overall, we observe that only the green cluster refers to women who have a substantial and responsible role closely linked to the topic of performance. Indeed, previous studies show how women executives bring experience and knowledge to the board of directors which, if contemplated and expressed , can help BoDs consider the implications of strategic decisions for a wider range of corporate stakeholders, leading to improved performance, in terms of both financial and social results (Bocquet et al., 2019; Salloum et al., 2019; Shehata et al., 2017; Galletta et al., 2021).

With reference to research question (2) on the evolution over time of studies, the overlay chronological analysis of keywords highlights that, more recently, the focus of research is shifting from issues of family conflict, succession features, and female compensation toward the investigation of the role of women in company boards in relation to *financial performance*. This reveals a gradual change in the perspective of research, no longer guided by the need to investigate gender inequality (and, under a normative ap-

proach of research, to overcome it), but inspired by an awareness that it makes more sense to discover key elements of value in gender empowerment as a driving force to achieve the firm's objectives. Indeed, the emerging topic that seems to boost the rising number of studies in this field is the role of women in family SMEs as a moderating factor in financial performance. As outlined by some empirical contributions (Arzubiaga et al., 2018; Nekhili et al., 2018; Ramadani et al., 2019; Alkhaled and Berglund, 2018) entrepreneurial orientation and performance are stronger in firms with higher levels of gender diversity on the board. The active participation of women in strategic choices seems to positively effect financial performance, playing a moderating role in family members' involvement, in contrast to the negative relationship observed in prior research between family ownership and control of the business and financial performance. It should be highlighted that an external female figure appears to be more capable of driving this change. In other words, we cannot but observe that barriers to women's involvement in family firms remains much higher for family members: this is likely due to the commingling of roles that does not allow female SME members to receive adequate recognition, nor to implement their full potential of management skills.

This study offers valuable results from both the academic and business perspectives. The bibliometric analysis clearly illustrates the different stages of this field of study, as well as the emerging lines of research, which can be studied in greater depth.

First, in the analysis of 125 articles, as regards performance, it was found that this is an area of rising interest. Furthermore, processing the keywords we found no reference to performance indicators such as ROE, ROA, and Tobin's q. Numerous studies adopt qualitative approaches of analysis-interviews, case studies, and surveys, while few quantitative studies have been conducted on the relationship between gender diversity (or female directors) and performance in family SMEs (Maseda et al., 2019). We believe that this gap is due to the lack of databases on financial reports but also to relatively poor information disclosed by family SMEs, which makes it difficult to have access to reliable and statistically relevant sources.

Second, the analysis of keywords, identifying the "words" that have appeared most frequently in literature, helps us to identify the major drivers and mechanisms underlying the main topic of gender diversity in family SMEs. Unlike the studies that have been conducted so far on large firms (Ott,2011; Bolouta,2013; Orazalin and Baydauletov, 2020; Galletta et al., 2022), keyword analysis reveals that nothing has emerged on "social performance", "environmental performance" or "sustainability performance". Indeed, over the past few decades, the concept of corporate social responsibility has gained importance and meaning, making it a topic that is widely covered in scientific articles, books, and conferences today.

Implementing and disseminating corporate social performance can reap significant benefits for a firm's reputation and legitimacy (Naveed et al., 2021; Naciti and Centorrino, 2022). This is one of the areas of a firm where women are of vital importance, as having more women in leadership has a positive impact on the firm and corporate social responsibility outcomes.

Therefore, another avenue for the academic world could be to investigate performance following a "triple bottom line" approach, thus considering the three spheres of performance (financial, social and environmental). Admittedly, the shortage of studies in this field is more affected by the lower level of disclosure, a non-financial one, also, associated with small firms, and risks amplifying the knowledge gap regarding results and their determinants in this specific setting.

Third, the role of women in small and medium family businesses must be explicitly and empirically studied as their role is essential and unavoidable in this typology of businesses for the innovation process (D'Allura et al., 2019; Floris et al., 2020), and in the involvement of stakeholders, (Nair, 2020; Bannò et al., 2020), but research on this topic is scarce.

Finally, as seen through the lens of the bibliometrics study conducted here, the growth of academic dialogue offers possible future research avenues from a transdisciplinary perspective. Consequently, we have identified some research issues to pursue as future research questions (see Table 5).

Research streams	Future research questions
Women's involvement in Corporate Governance and Performance	1. What are the relevant features explaining gender diversity and financial performance in family SMEs?
	2. Is there an association between women's involvement in decision-making positions and social and environmental performance in family SMEs?
	3. Can women in top positions in family SMEs improve the innovation process and stakeholder engagement?
	4. Are women's skills, personal experience and education associated with a) the position held and b) the levels of financial, social and environmental performance of the company?
Women's formal engagement in Family Business	5. What is the nature and source of women's integration in family SMEs that leads them to have only a formal role?
	6. Is it possible to envisage a process of gradual recognition of the role of women in the strategic decision-making process in family businesses, despite the initial formal involvement of women?
	7. Is there differentiation of wages and positions in the long run?
	8. Is family bonding vs the selection of women outside the family members somewhat an expression of professionalization of the roles attributed to women?
Female Ancillary Role	9. To what extent do cultural issues, as well as country-specific institutional factors and local regulation (and incentives related to business creation and tax benefits), affect women's engagement in family SMEs in an ancillary role?
	10. Is the family SME sector (industry) an explanatory aspect of the ancillary nature of women's engagement?
	11. Regarding the planning of top position succession in family SMEs and the engagement of women, to what extent does it represent a necessary choice, leading to substantial subordination to male leading figures?

In addition to the literature implications explained above, this document also offers managerial implications. The discussion can assist managers to acquire consciousness of the relevance of gender diversity in improving the effectiveness of strategic choices, hence, to find benefits in women being substantially involved in governing bodies and executive positions. The findings highlight the need to overcome the gender pay gap and boost women's empowerment as an opportunity to obtain better results, in diverse dimensions of performance.

Despite the great value of the outcomes obtained in this investigation, it suffers from some limitations. The essential constraint of our study is that it was carried out utilizing only one information base (Web of Science) to acquire the record test, while a more noteworthy assortment of items and themes could be obtained utilizing extra data sets. This additionally

restricts the understanding of the outcomes. Future lines of exploration should examine the solidification of the emerging research lines featured in this analysis and keep on investigating the development of the presence of gender diversity in family SMEs.

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