



Article

# Gender Diversity in Leadership: A Bibliometric Analysis and Future Research Directions

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**Abstract:** Gender diversity in management has become of increased interest to academics and researchers in the last decades since women and men have different personal and psychological characteristics that affect their decision-making process in management actions and leadership. A female presence has been under-represented on companies' boards of directors, which affects management decisions and leadership style. This article aims to contribute to the analysis of gender diversity and leadership state of knowledge, conducting a bibliometric review of the existing literature. In this context, we analyze the evolutionary research studies published in the Scopus digital library, considering a period of five years, from 2017 to 2021. We focus our analysis on the top 24 cited articles after a wider review of articles published relating to the explored topic (402 articles). Considering the bibliometric analysis done, we then present scrutiny of the state of knowledge on this subject, a summary of the existing gaps, and suggestions for future research.

**Keywords:** gender diversity; leadership; bibliometric analysis



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## 1. Introduction

In recent years, the interest in gender-related issues has increased noticeably (Belingeri et al. 2021). There are several research topics related to the role of gender diversity, such as education, decision-making processes, career progression, entrepreneurship, participation on boards of directors, and leadership. One of the topics that has been characterized by a constant interest among researchers in the field of management is the issue of leadership. Combining the two topics: gender and leadership, we aim to understand what the research trends are concerning the relationship between gender diversity and leadership.

In reality, the presence of women in management does not offer consensus in the financial literature. Recently, Hewa-Wellalage et al. (2022) provide evidence of a slight gender bias in debt financing. During the COVID-19 pandemic, the authors found that creditors favor female entrepreneurs when dealing with cash flow problems, and there was no evidence of gender bias in equity financing. Farooq et al. (2022) explored the relationship between female CEOs and related-party transactions, using a sample of Chinese listed firms, finding that female CEO firms engage in fewer related-party transactions meaning that female CEOs are not only risk-averse but also more ethical, not allowing opportunistic behaviors which seem to be worsening when the authors consider solely a sample of state-owned enterprises. Investigating the relationship between board feminization and innovation through corporate venture capital (CVC) investments, Benkraiem et al. (2021) found these innovative vehicles to be useful to the French economy. Previously, evidence

of a negative and significant effect of the percentage of female directors on financial firm performance also using a sample of French firms was pointed out by [Boubaker et al. \(2014\)](#). Thus, it is stated that indiscriminately adding more women to boards of directors may be counter-productive, leading to lower firm performance. However, the authors found different behaviors using different proxies for the presence of women on corporate boards (the effect on firm performance is found to be insignificant when this presence is measured using a dummy variable). Thus, different samples, periods, or variables may induce different results, making it important to assess appropriately the current status of the literature relating to diversity and leadership, as the present work proposes through a bibliometric analysis.

Several empirical studies report the significant role of gender on leadership styles and the positive effect of women's leadership on the firm's performance ([Moreno-Gómez et al. 2018](#); [Triana et al. 2019](#)). However, [Seo et al. \(2017\)](#) argue that an increasing number of studies report more similarities in leadership styles between women and men than differences, and [Belingheri et al. \(2021\)](#) emphasize the difficulty of women to access leadership positions. Even so, considering laws and quotas in countries all over the world, their presence has been more visible, contributing to gender equality representation, to building a diverse and inclusive workforce, and to supporting the implementation of the five Sustainable Development Goals (SDGs) in global finance, management, and leadership.

Although we found several literature reviews based on gender diversity in corporate governance (e.g., [Mumu et al. 2022](#)), and some on leadership (e.g., [Samul 2020](#)), to the best of our knowledge, there is no existing bibliometric analysis on gender diversity in leadership. Thus, we want to fill this gap with the present work. For that, we rely on a bibliometric literature review to infer what at present is the most relevant research done in the field, while proposing to identify future avenues of research based on the existing literature. Another gap was found relating to gender diversity, corporate social responsibility, and leadership, which we also tried to include in our bibliometric analysis. Several interesting findings and avenues for future research have been identified based on the analysis here presented. The aim of this article is to explore the current literature on gender diversity in leadership provided the literature gap is identified. Given that one of the corporate social responsibility (CSR) drivers is the board of directors ([Sheehy and Farneti 2021](#); [Fallah Shayan et al. 2022](#)), nowadays the board members' role in CSR implementation is increasing. As an example, the presence of women and diversity on the board is making boards more likely to drive CSR. Thus, leadership, CSR, and diversity are strictly connected but few studies exist exploring the current literature status.

Considering these aspects, our results are important in economic terms, namely pointing out directions for companies pursue to fulfill sustainable development goals and also identifying the importance of these types of strategies for the financial performance of companies which contribute to the economic and financial growth of a country. Gender diversity and leadership are strictly connected to risk-taking behaviors, influencing leadership, financial performance, development, and growth (of the firm and the economic growth of a country). [Teodósio et al. \(2021\)](#) provide a literature review revealing that women's presence on the board of directors and top management teams impacts corporate risk-taking in different ways. Findings were organized into two major categories. First, according to gender measures, firm type, and country of origin, the authors state that women decrease firms' litigation risk, failure risk, and operational risk, having no impact on insolvency risk. Second, it was found that women have contingent effects on financial risk, manipulation risk, total risk, idiosyncratic risk, and systematic risk.

Findings concerning CSR suggest that the presence of women seems to influence CSR performance, although there is a lack of empirical research on manager leadership styles and CSR perceptions from a gender perspective. The existing research on the impact of women's leadership on a firm's performance is inconclusive. More research on gender issues' effects on financial performance in developing economies offers valuable research opportunities when compared to the existing literature on developed economies. Additionally, exploring

the significance of business celebrity role models and their potential to compensate for the under-representation of women in management and leadership is necessary. Moreover, researchers claim that innovation requires a supportive environment to improve innovation performance, remaining unclear how transformational leadership is related to climate.

The rest of the chapter is organized as follows. The next section presents the materials and methods used in the study. Afterwards, the results are presented, followed by a discussion. The final section concludes the article and offers some future research agendas regarding gender diversity and leadership.

## 2. Materials and Methods

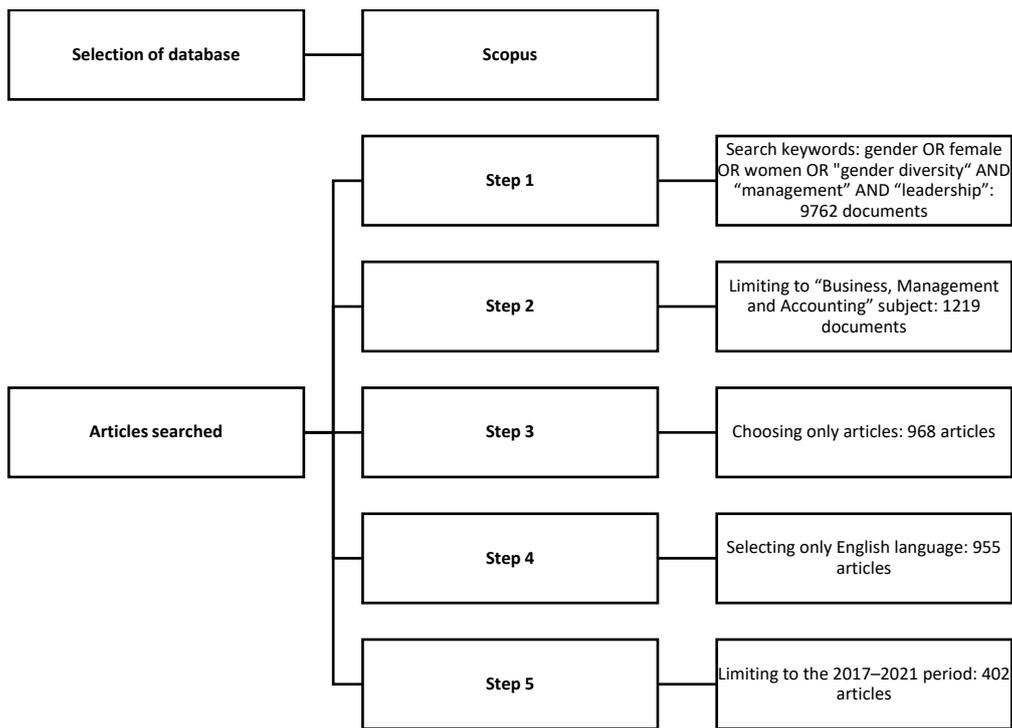
According to [De Bakker et al. \(2005\)](#), bibliometric analysis consists of the application of statistical methods to analyze the evolution of a given scientific research topic, establish the profile of publications, and detect trends in future research, based on the evidence evolution and gaps detected. It is a common method applied in disciplines of science ([Almind and Ingwersen 1997](#)), providing valuable information to experts, since it serves as a guide concerning the status of research ([Duque Oliva et al. 2006](#)).

We adopt a bibliometric analysis to understand the core of gender diversity and leadership. We select the Scopus database (<https://www.scopus.com/search/>, accessed on 12 May 2020) for several reasons. First, it has extensive access to academic literature, is one of the favorite databases for academic researchers ([Marlowe and Clarke 2022](#)), and offers continuous admission to research output all over the world ([Elsevier 2021](#)). Second, several authors argue that the Scopus database is suitable for carrying out bibliometric analysis ([Aksnes and Sivertsen 2019](#); [Nawaz et al. 2020](#)). Finally, Scopus covers a wide range of scientific articles on business and management ([Aksnes and Sivertsen 2019](#)), which is the focus of this study. Additionally, while jointly using the Web of Scienedatabase, for the final filters used, it was noticed that all articles presented in Scopus were also included in WoS (Web of Science). Therefore, we excluded the repeated articles from the current analysis.

The next step was to select the filters to implement the bibliometric analysis, which was carried out on 27 April 2022. We used the following filters to conduct the analysis:

1. Starting with the following criteria: (TITLE-ABS-KEY (gender OR female OR women OR “gender diversity”) AND TITLE-ABS-KEY (management AND leadership)), we obtained 7762 results.
2. Limiting the study field to “Business, Management and Accounting”, the results declined to 1219.
3. Considering only “articles”, we obtained 968 results.
4. Setting the language to “English”, 955 results were considered.
5. Finally, limiting the research to the last five years (2017–2021), and excluding the year 2022 to reduce the influence of the chronological factor on the statistical results, we finished with 402 papers.

Using the filters 1 to 5: (TITLE-ABS-KEY(gender OR female OR women OR “gender diversity”) AND TITLE-ABS-KEY (management AND leadership)) AND (LIMIT-TO (SUBJAREA, “BUSI”)) AND (LIMIT-TO (DOCTYPE, “ar”)) AND (LIMIT-TO (LANGUAGE, “English”)) AND (LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017)), the final collection used in this review comprises 402 documents, from 2017 to 2021. [Figure 1](#) shows the methodological approach to conducting the bibliometric analysis.

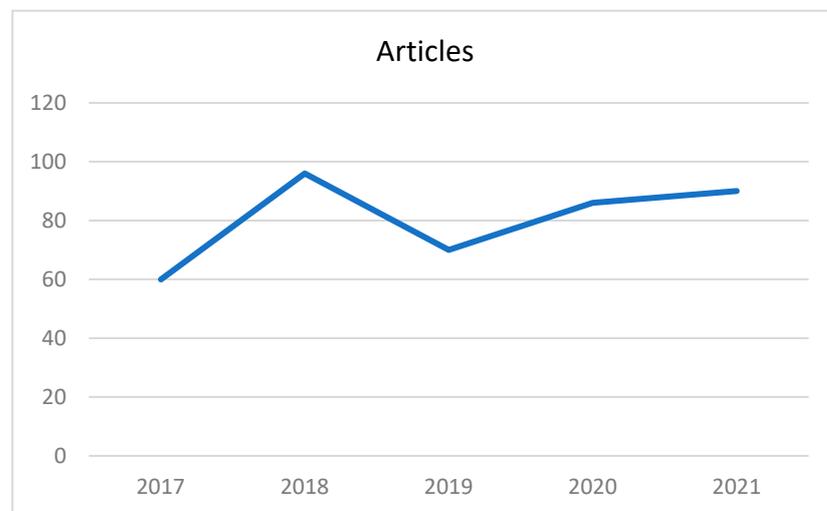


**Figure 1.** Methodological approach used to determine the sample selection process. Notes: This figure provides the number of articles found during the research methodology, for each of the steps pursued.

The final dataset consisted of the analysis of the 402 articles, considering also 3 articles selected from Scopus studies in gender diversity and leadership, published in 2022, and already with citations.

### 3. Results of Bibliometric Analysis

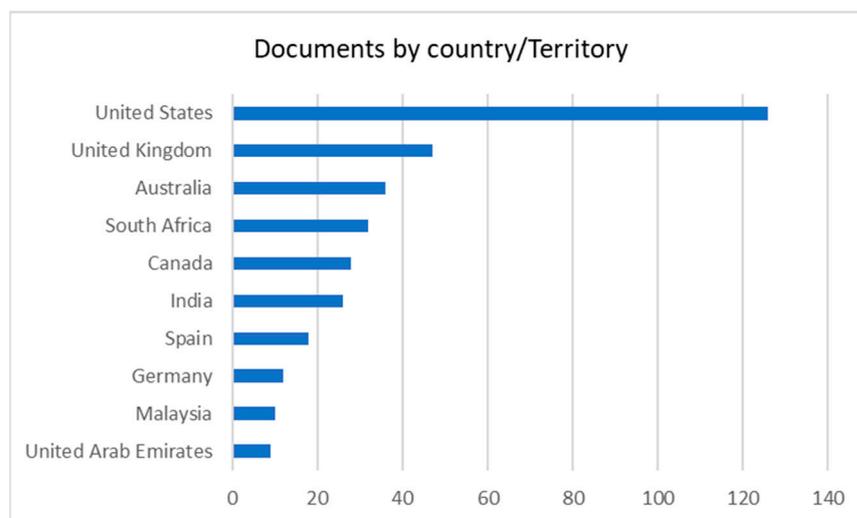
Based on the sample selection process, we started the bibliometric analysis by focusing on the 402 papers published during the 2017–2021 period. The number of articles published each year is summarized in Figure 2.



**Figure 2.** The number of articles published by year: 2017–2021. Notes: The x-axis respects years of publication and the y-axis considers the absolute number of articles published during the analyzed period.

During the period from 2017 to 2021, the number of articles published per year ranges between 60 (in 2017) and 96 (in 2018). After a decline in the number of papers published in 2019 (70), compared to the previous year (96), the number of articles on these subjects increased continuously. The evolution of publications during the last five years might suggest that the research on these subjects is in a maturity phase. However, the papers from the last two years represent almost 44% of the articles, and there were 32 papers published in 2022, following the same criteria (27 April), suggesting an increase in research on these topics. For curiosity, the first paper published on these subjects registered in Scopus is from 1967 (54 years ago).

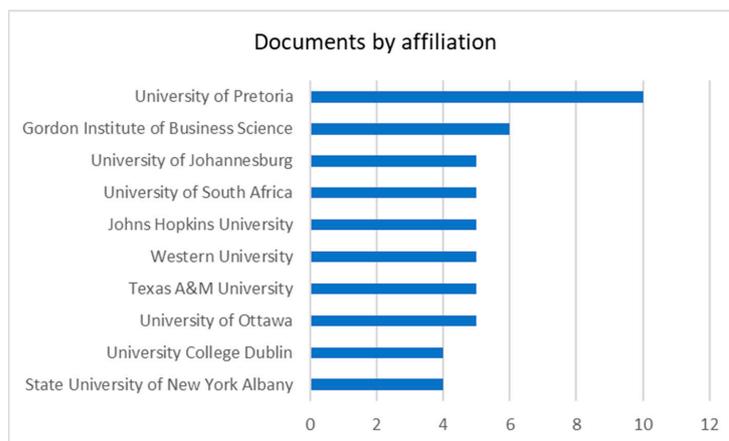
Figure 3 displays the documents by country or territory, considering the authors' affiliations, during the period 2017–2021.



**Figure 3.** Documents by country or territory: 2017–2021. Notes: The x-axis considers the absolute number of articles published by the affiliation country of the authors during the analyzed period and the y-axis identifies those countries or territories.

Regarding the articles published by country or territory, it is obvious that the research is concentrated in the United States, with 126 publications, followed distantly by the United Kingdom, with 47 publications. Australia has 36 publications, followed by South Africa (32), Canada (28), and India (26). The other countries in the top ten documents by country are Spain, Germany, Malaysia, and the United Arab Emirates, with 18, 12, 10, and 9 publications, respectively. The studies are concentrated in North America (the United States and Canada) and Western Europe (the United Kingdom, Spain, and Germany), which represent 44.8% and 22.4% of the publications, respectively. Asia (India, Malaysia, and United Arab Emirates), Oceania (Australia), and Africa (South Africa) represent, respectively, 13.1%, 10.5%, and 9.3% of the published papers. However, on the African continent, only one country represents more than 9% of publications. There is still a scarcity of research on these topics on several continents and regions, such as South America, Eastern Europe, some of Western Europe, and Africa.

Figure 4 presents the top 10 documents published by affiliation of all authors under the sample selection method.



**Figure 4.** Documents per year by affiliation: 2017–2021. Notes: The *x*-axis considers the absolute number of articles published by the top 10 documents published by affiliation of all authors under the sample selection method and the *y*-axis identifies those affiliations/universities.

Concerning the affiliation of the authors, the University of Pretoria (South Africa) stands out from the others with 10 publications, followed by three organizations also from South Africa: the Gordon Institute of Business Science (6), University of Johannesburg (5), and the University of South Africa (5). These results are in accordance with the evidence that only one country is responsible for more than 9% of the publications (Table 1). With five publications, we have two Universities from the USA (Johns Hopkins University and Texas A&M University), and two from Canada (Western University and the University of Ottawa). Finally, the lowest top ten affiliations are the University College Dublin (Ireland) and the State University of New York Albany, both with four articles published.

Figure 5 shows the documents published by source title, considering the five sources with most publications.



**Figure 5.** Documents per year by source title: 2017–2021. Notes: The *x*-axis respects years of publication and the *y*-axis considers the absolute number of documents published by source title, considering the five sources with most publications during the analyzed period.

The top five journals with most publications in the domain of gender diversity and leadership during the period 2017–2021 are *Leadership in Health Services*, *Health Care Management Review*, *Evaluation, and Program Planning*, *Gender in Management*, *The International Journal of Health Care*, and *Quality Assurance*. The decline of publications in 2021, compared to other years, except for *Gender in Management*, suggests that this topic of research is relevant since it is becoming less explored, somewhat in agreement with the evidence in Figure 2. This may cause researchers to point in this direction. One possible explanation for the decrease in studies may be difficulties in collecting all the necessary data.

Figure 6 highlights the authors with the most published papers during the period 2017–2021.

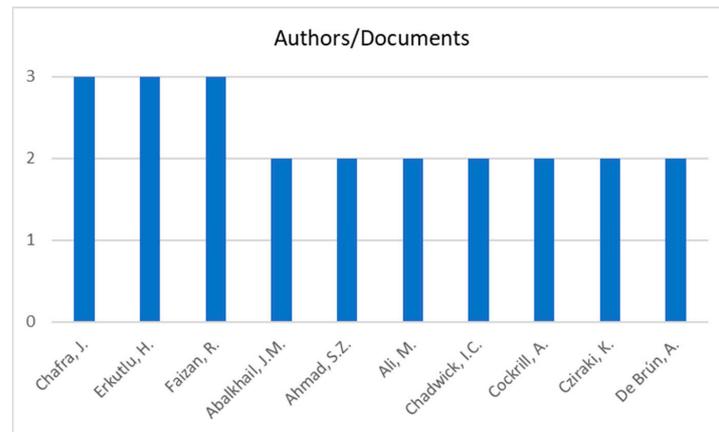


Figure 6. Documents per year by author: 2017–2021. Notes: The x-axis presents the names of the authors with most published papers during the analyzed period, whereas the y-axis considers the absolute number of documents published by each of these authors during the analyzed period.

The authors with most publications during the analyzed period are Chafra, J., Erkutlu, H., and Faizan, R., with three publications each. Seven of the 10 authors have two published articles (Abalkhail, J.M.; Ahmad, S.Z.; Ali, M.; Chadwick, I.C.; Cockrill, A.; Cziraki, K.; De Brún, A.).

After an overview of the publications on gender diversity and leadership during the period 2017–2021, as well as the classification of the top 10 articles by country, affiliation, source, and authors, we will now narrow our analysis, sorting the articles by those that are most cited. Thus, we identify the h-index (Hirsch 2005), which combines the number of publications and the number of citations (excluding self-citations), using the option “view citation overview” of the Scopus database. The results are presented in Figure 7.

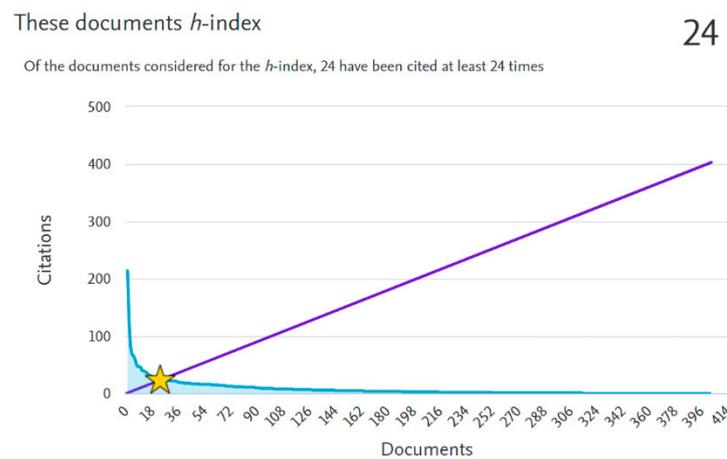


Figure 7. h-index: 2017–2021. Notes: The x-axis presents the number of absolute documents cited and the y-axis the number of citations. From these documents considered by their h-index, 24 have been cited at least 24 times.

The h-index is 24, which means that of the 402 articles examined, 24 have at least 24 citations. Consequently, we will focus our analysis on the top 24 cited articles between 2017 and 2021.

#### 4. Discussion

In this section, we present and discuss the main results and conclusions of the top-cited articles. Table 1 presents the top 24 articles ranked by citations.

**Table 1.** Top 24 cited articles during the period 2017–2021.

	Document Title	Citation	Cited by
1	The role of board gender and foreign ownership in the CSR performance of Chinese listed firms	(McGuinness et al. 2017) <i>Journal of Corporate Finance</i> , 42: 75–99	214
2	The Business Case for Women Leaders: Meta-Analysis, Research Critique, and Path Forward	(Hoobler et al. 2018) <i>Journal of Management</i> , 44: 2473–99	131
3	The monitoring role of female directors over accounting quality	(García Lara et al. 2017) <i>European Journal of Innovation Management</i> , 45: 651–68	83
4	The role of CEO transformational leadership and innovation climate in exploration and exploitation	(Zuraik and Kelly 2019) <i>European Journal of Innovation Management</i> , 22: 84–104	69
5	How does Sustainability Leadership Affect Firm Performance? The Choices Associated with Appointing a Chief Officer of Corporate Social Responsibility	(Wiengarten et al. 2017) <i>Journal of Business Ethics</i> , 140: 477–93	66
6	The more, the merrier? Women in top-management teams and entrepreneurship in established firms	(Lyngsie and Foss 2017) <i>Strategic Management Journal</i> , 38: 487–505	61
7	Navigating the family business: A gendered analysis of identity construction of daughters	(Hytti et al. 2017) <i>International Small Business Journal: Researching Entrepreneurship</i> , 35: 665–86	52
8	Gender diversity in the board, women’s leadership and business performance	(Moreno-Gómez et al. 2018) <i>Gender in Management</i> , 33: 104–22	47
9	Talent management practice effectiveness: investigating employee perspective	(Khoreva et al. 2017) <i>Employee Relations</i> , 39: 19–33	47
10	Identity leadership going global: Validation of the Identity Leadership Inventory across 20 countries	(van Dick et al. 2018) <i>Journal of Occupational and Organizational Psychology</i> , 91: 697–728	46
11	Why are there so few female leaders in higher education: A case of structure or agency?	(Shepherd 2017) <i>Management in Education</i> , 31: 82–87	40
12	Tourism’s lost leaders: Analysing gender and performance	(Pritchard and Morgan 2017) <i>Annals of Tourism Research</i> , 63: 34–47	40
13	Analysis of skill gap for business graduates: managerial perspective from banking industry	(Abbasi et al. 2018) <i>Education and Training</i> , 60: 354–67	38
14	Effects of responsible human resource management practices on female employees’ turnover intentions	(Nie et al. 2018) <i>Business Ethics</i> , 27: 29–41	37
15	Psychological Capital, Team Resources and Organizational Citizenship Behavior	(Bogler and Somech 2019) <i>Journal of Psychology: Interdisciplinary and Applied</i> , 153: 784–802	34
16	Leadership styles and corporate social responsibility management: Analysis from a gender perspective	(Alonso-Almeida et al. 2017) <i>Business Ethics</i> , 26: 147–61	32
17	Gender diversity in senior management, strategic change, and firm performance: Examining the mediating nature of strategic change in high tech firms	(Triana et al. 2019) <i>Research Policy</i> , 48: 1681–93	31
18	Hospital cultural competency as a systematic organizational intervention: Key findings from the national center for healthcare leadership diversity demonstration project	(Weech-Maldonado et al. 2018) <i>Health Care Management Review</i> , 43: 30–41	30
19	Women and leadership: challenges and opportunities in Saudi higher education	(Abalkhail 2017) <i>Career Development International</i> , 22: 165–83	28
20	Impact of relational coordination on staff and patient outcomes in outpatient surgical clinics	(Gittel et al. 2020) <i>Health Care Management Review</i> , 45: 12–20	27
21	‘Female Heroes’: Celebrity Executives as Postfeminist Role Models	(Adamson and Kelan 2019) <i>British Journal of Management</i> , 30: 981–96	27
22	Peer knowledge sharing and organizational performance: the role of leadership support and knowledge management success	(Muhammed and Zaim 2020) <i>Journal of Knowledge Management</i> , 24: 2455–89	26
23	The impact of corporate governance characteristics on banks’ corporate social responsibility disclosure: Evidence from Poland	(Matuszak et al. 2019) <i>Journal of Accounting in Emerging Economies</i> , 9: 75–102	25
24	Conceptual Review of Underrepresentation of Women in Senior Leadership Positions from a Perspective of Gendered Social Status in the Workplace: Implication for HRD Research and Practice	(Seo et al. 2017) <i>Human Resource Development Review</i> , 16: 35–59	25

Notes: The table presents the top 24 cited articles during the period 2017–2021, identified by document title, authors, publication year, the source details (journal, volume, number, pages), and the number of identified citations for each. CEO stands for the chief executive officer.

In total, 1256 citations of these 24 articles were found. There are two papers with more than 100 citations. The article by McGuinness et al. (2017) is by far the most cited, with

214 citations at the time of data collection, followed by the one by [Hoobler et al. \(2018\)](#), with 131 citations. The citations of the other publications in the top 24 range from 25 to 83. Concerning the publication year, it varies between 2017 and 2020; a major number of papers are from 2017 (45.8%), and the least number are from 2020 (8.3%), suggesting once more that these research topics are in a maturity phase. With regard to source, three journals appear twice in the list: *Business Ethics*, *The European Journal of Innovation Management*, and *The Health Care Management Review*.

Several studies focus their analysis on Corporate Social Responsibility (CSR). [McGuinness et al. \(2017\)](#) analyze the effect of women board members on the CSR of Chinese firms, finding that higher gender balance in management reinforces CSR performance, concluding that female leadership and gender diversity are both determinants to drive CSR changes. [Wiengarten et al. \(2017\)](#) examine how the engagement of a chief executive of CSR with the top management team influences a firm's performance. The authors find that a new chief officer of CSR tends to result in financial performance improvements, especially if the new element is a woman. [Alonso-Almeida et al. \(2017\)](#) study styles of manager leadership and CSR perceptions, focusing on a gender perspective, based on a survey given to top Spanish managers. The results indicate that Spanish women seem to be more flexible and effective at following company sustainability than Spanish men when using transformational and dual leadership styles. More recently, [Matuszak et al. \(2019\)](#) explore the relationship between corporate governance characteristics and CSR disclosures in Polish banks, finding evidence that corporate governance characteristics help banks improve their CSR reporting practices. There is a significant positive influence of board size, female board leadership, and foreign board members on CSR disclosure. However, CSR disclosure is not affected by supervisory board and ownership variables.

Other studies explore the organization's performance dimension. [Hoobler et al. \(2018\)](#) investigate the relationship between women's representation in top management and companies' financial performance through a meta-analysis, concluding that women's leadership might influence firm performance. However, the evidence on the degree of influence or moderated effects of women on a firm's performance is mixed. [Moreno-Gómez et al. \(2018\)](#) study the association between gender diversity in top management and business performance based on a sample of Colombian companies. The authors find evidence that gender diversity has a positive impact on firms' performance. In the same vein, [Triana et al. \(2019\)](#) analyze the gender diversity effect on a firm's performance, focusing on a sample of American high-tech firms. Their findings show that firms' performance is positively influenced by gender-diverse senior management.

[Muhammed and Zaim \(2020\)](#) investigate whether peer sharing of knowledge influences firms' performance in Turkey. The results suggest that the extent of employees' commitment to knowledge sharing with their peers and the support of their managers' leadership have a positive impact on the success of organizational management, which positively affects the organizations' performance. Additionally, the evidence shows that the contribution to knowledge sharing among peers towards the success of organizations may differ between male and female respondents. However, knowledge sharing did not impact significantly knowledge management success among female respondents.

[Lyngsie and Foss \(2017\)](#) analyze the relationship between companies' business outcomes and gender composition through a questionnaire, finding that the women's presence on the top management team has a positive impact on business outcomes. However, the authors find evidence that despite the initial presence of women top managers, more female presence is related to more business outcomes, but this effect becomes weakened in companies that have a significant presence of women in the workforce.

[Zuraik and Kelly \(2019\)](#) explore the relationship between CEO leadership and organizational innovation, designing a questionnaire that was distributed to persons that work in teams in USA firms, finding that CEO leadership positively influences organizational innovation. However, their results must be interpreted with caution, since the questionnaire was answered mainly by women rather than men, and there is a low percentage of female

CEOs in the sample. [García Lara et al. \(2017\)](#) consider a sample of UK firms to examine the effect of the presence of female directors on financial statement quality, finding that the higher the representation of women among the independent directors, the lower the earnings management practices. Nevertheless, in firms that do not discriminate against females in terms of access to directorships, this effect disappears.

[Hytti et al. \(2017\)](#) focus their study on gender in family firms and business successions, utilizing case study research and narrative analysis. The authors' results suggest that daughters use their leadership style and interact with others, making use of the gender scripts available to them. They adopt two postures: either they hide the identity of a leader, or they produce a masculine identity, approaching the figure of a strong owner.

There is empirical literature focusing on leadership characteristics. [Seo et al. \(2017\)](#) argue that gender social status related to women may compromise the effectiveness of human resource development actions initially considered to help women, which leads to a re-examination of existing human resource development interferences to support women's career progress into leadership roles in organizations. [Khoreva et al. \(2017\)](#) try to understand whether talent management practices influence employees' commitment to the development of leadership competencies. Among several results, the authors find that female employees possess a more solid reaction to the success of talent management practices, showing higher levels of commitment to the development of leadership competence than males. Based on the results of an international project with data from more than 20 countries/regions, [van Dick et al. \(2018\)](#) find evidence supporting the construct, discriminant, and criterion validity of the identity leadership inventory across the analyzed countries. Their findings show the cohabitation of different dimensions of leadership. [Abbasi et al. \(2018\)](#) conducted a questionnaire-based survey given to bank officers to identify the difference between skills expected by managers and skills owned by business graduates employed in the bank sector, finding that the skills of graduates are lower than predicted by the managers. Concerning the skills related to problem-solving, the authors conclude that this skill is superior in men than in women. Finally, [Adamson and Kelan \(2019\)](#) examine the role of contemporary businesswomen as role models for women aspiring to be business leaders. Through autobiographical narratives, the authors conclude that successful businesswomen have three key leadership characteristics: confidence to face gender barriers; control of the management of these barriers; and courage to go through them.

[Nie et al. \(2018\)](#) study the moderating effect of a supervisor's gender on human resource management practices on female employee turnover intentions, considering a sample of female employees in Finland. The results suggest that human resource management practices that promote equal career opportunities play a relevant role in reducing women's turnover intentions. There is evidence that gender affects this relationship; it is stronger in the case of female supervisors than male supervisors. [Bogler and Somech \(2019\)](#) find that team psychological capital produces an atmosphere that inspires team members to exhibit high levels of organizational citizenship behavior, this relationship being stronger when team learning values succeed.

Some studies explore the context of higher education and others concentrate on health services. [Shepherd \(2017\)](#) analyses women's role in higher education in the UK, finding that they emphasize the importance of three structural factors related to the selection process: mobility and external career capital, conservatism, and homosociality. According to the author, it is unlikely that an approach to placing women in the university's executive management teams is sufficient to correct the gender imbalance. [Pritchard and Morgan \(2017\)](#) analyze the gender issue in tourism higher education. Based on a reflection of recent studies, the authors conclude that gender bias, even unconsciously, weakens women's voices, having an impact on the production of knowledge, with the references of academic tourism leadership being biased towards a male standard, limiting the opportunities for female leadership. [Abalkhail \(2017\)](#) explores women managers' perceptions about the features that positively influence their career progression to reach leadership positions

in Saudi Arabia's higher education system, through interviews. The findings suggest that females face several challenges that make it almost impossible for them to reach an equitable representation in leadership positions. According to the author, it is essential to change the broader cultural and social forces that perpetuate their status socially and economically for Saudi women to progress in their careers.

Weech-Maldonado et al. (2018) analyze the impact of an organizational level cultural competency initiative on hospital services performance, finding that organizational level competencies improve with leadership and climate diversity. Gittel et al. (2020) analyzed whether relational coordination contributes to staff well-being and patient satisfaction in surgical clinics. The authors find evidence that relational coordination amongst workgroups is significantly related to staff outcomes, including job gratification, work engagement, and burnout, and that relational coordination is also associated with patients' satisfaction with staff and their visits.

Table 2 summarizes the three articles from 2022 that have already been cited in the data of data collection on Scopus.

**Table 2.** Most trending articles on gender and leadership literature in 2022.

Authors	Findings	Citations
Zengul et al. (2022)	- The results show that from a semantic analysis and topic analysis covering a large number of abstracts, there is evidence of strong associations with the topics of finance, company performance, managerial subjects, gender concerns, technology and innovation, and workforce well-being	2
Schmidt (2022)	- The evidence shows that, although Scandinavian countries have implemented policies and programs to ensure gender diversity in society since the mid-1970s, the progress is generally slow - The three Scandinavian countries (Denmark, Norway, and Sweden) differ regarding public and political attention to gender equality - A long-term policy, based on an empowering legislative framework and a strategic design must promote gender equality	2
Chen and Hassan (2022)	- The results show that the relationship between corporate performance and executive cash payment is not significant - The equity-based compensation of the executives is positively associated with the firm's performance - The participation of women executives is negatively related to a firm's performance	2

Notes: Table 2 presents the main findings of the three most trending articles identified as being published in 2022 which explore the relationship between gender and leadership, as well as the number of identified citations for each.

The empirical evidence of the most trending articles, already with citations, exhibits evidence that gender diversity is a research topic that deserves to be continuously studied.

## 5. Conclusions

This study presents a bibliometric analysis of gender diversity in leadership to understand the areas within which researchers are exploring these topics, the trend in the number of articles published from year to year, the main countries or territories where the documents have been published, the documents classified by affiliation in the analyzed period, the most relevant journals in which the papers have been published, the top ten authors with most publications, as well as the most cited articles. The search for articles was conducted on the 27th of April 2022, gathered from the Scopus database. Considering the criteria defined previously, we obtained 402 articles, published between 2017 and 2021.

The country responsible for most articles published on the topic is the United States (126 documents) and the university with the highest number of documents published during the analyzed period is the University of Pretoria (South Africa), with 10 publications. The journal that published most on this issue during the period 2017–2021 is *Leadership in Health Services* (23 documents). The authors with most documents published are Chafra, J., Erkutlu, H., and Faizan, R., with three publications each. Finally, the most cited article is the one by McGuinness et al. (2017), with 214 citations.

This study has some limitations. First, we conducted a bibliometric analysis considering data only from the Scopus database, which is a potential bias in the sampling approach. As a further direction of research, it would be worth using another bibliometric source, such as the Web of Science, to examine trends in gender diversity in leadership. Second,

we performed a quantitative analysis. Future studies should focus on a qualitative analysis, such as a content analysis.

Notwithstanding these limitations, this study discloses some findings that can guide and help researchers to form a truthful image of this subject.

Concerning CSR, the findings suggest that the presence of women seems to influence CSR performance. Nevertheless, there is a gap in the empirical evidence on manager leadership styles and CSR perceptions from a gender perspective, which brings research opportunities. Regarding the impact of women's leadership on a firm's performance, the conclusions are not consensual, leaving space for new developments in research. Moreover, the impact of gender diversity on performance is considerably more in need of research in developing economies, such as Latin American businesses, than in developed countries. Additionally, a research opportunity is to examine the significance of business celebrity role models and their potential to compensate for the under-representation of women in management and leadership. Triana et al. (2019) suggest that future research may examine inter-organizational strategic alliances to investigate intra-organizational networks. Although researchers claim that innovation requires a supportive environment to improve innovation performance, it is not obvious how transformational leadership is related to climate, therefore, there is still a gap in the literature concerning the explanation of how CEO transformational leadership and climate interrelate and whether they have effects on innovation. In the education sector, there is also a scarcity of studies on gender issues.

Future research could also analyze the specific case of gender role in family business leadership and succession, since it is not explored, and family businesses are common worldwide. Furthermore, recent bibliometric studies analyze bibliographic coupling and clustering of the research, as well as other bibliometric indicators. These would be interesting to be considered in the future to validate the "clustering" of our research findings.

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