

MANAGERIAL IMPLICATIONS OF GENDER EQUALITY: A BIBLIOMETRIC PERSPECTIVE

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ABSTRACT

The topic of gender equality has captured the attention of the public and researchers throughout the crystallization of modern society, especially in the recent period, when a significant increase in publications addressing it from various perspectives has been noted. This concept has usually been put in relation to educational and labor market contexts in order to highlight the presence or absence of an inclusive attitude and equitable treatment of both genders. The present paper aims to investigate the connection between management and the concept of gender equality by means of bibliometric analysis, highlighting the evolution over time of theoretical approaches, the differentiating elements between the production of publications on this topic and the influence manifested by them, as well as the way in which the conceptual and social structure regarding this subject was developed over time. A number of 717 publications resulting from a filtered search in the Web of Science Core Collection database were researched, the bibliometric analysis and structural maps being performed with the help of VOSviewer and Bibliometrix software programs.

KEYWORDS: *diversity, equity, gender equality, organizational implications, management.*

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1. INTRODUCTION

During the 20th century, both women's and men's lives were influenced by economic development (Wu & Cheng, 2016). Nowadays, the necessity to pay more attention to the principle of gender equality comes from the fact that women represent more than half of most societies (Inglehart et al., 2003), these being part of everyone's life and in almost any activity, including the labor market. Considering the strong competition in the business world, it would be a great loss for organizations to miss the competences and talent of ladies (Chang & Milkman, 2020). In business practice, even if women integrate very well in professional life, there are situations in which they are disadvantaged compared to men, especially when it comes to positions of power and top management (Cavero-Rubio, 2019).

The European Union introduced in 1997 the principle of integrating the gender perspective, referring to the participation of both genders in all the stages intended for the elaboration of various policies (Coron, 2020). Currently, one of the 17 Sustainable Development Goals formulated by the United Nations (2023) aims at gender equality, this being a fundamental human right, by respecting which one, people can contribute to the formation and preservation of a stable and healthy society for the entire population.

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The issue of gender equality represents an interesting topic both for researchers and for modern society, especially in the contemporary period, a fact that determined its approach from many and different perspectives over time, from finding ways for women to continue their activity in the labor market after they give birth (Chung & Van der Horst, 2018) to how blockchain technology can help corporate governance models promote gender equality and social inclusion politics (Di Vaio et al., 2023).

The purpose of this research is to answer the following questions, highlighting the implications in the field of management manifested by the principle of gender equality:

RQ1. *What was the evolution over time of theoretical approaches on the topic of management and gender equality?*

RQ2. *What are the differences between the production of publications on this topic and the bibliographic influence manifested by them depending on the authors' country of origin?*

RQ3. *How did the conceptual and social structures evolve regarding the paper topic?*

To fulfill the previously stated above, we will use bibliometric analysis, which is a method that allows observation of the evolution of certain trends regarding the topic addressed, by exploring significant amounts of scientific data (Donthu et al., 2021).

2. THEORETICAL FRAMEWORK

2.1. Evolution of gender equality principle

The evolution of the equality principle, and especially gender equality, has changed considerably over time. Since the founding of the European Union, the principle of equality between men and women has been regarded as fundamental in Community policies. In a broad sense, this choice refers to a respect for the various identities of Union citizens, the consideration and protection of minorities, the fostering of differences, and the development of a social, cultural, and legal environment that supports the balance between men and women (Lomazzi & Crespi, 2019). It is essential to consider the larger meaning that the concept "gender equality" has within the cultural context and policies of the European Union, as well as of each state, while discussing the subject of equal chances and how it has been and is currently addressed (Lomazzi & Crespi, 2019).

Likewise, a significant coordinate related to this topic is represented by populating the labor market with females and, respectively, putting them in management positions so that the organizational approach can be equitable to both genders, many countries of the world making recommendations for companies in order to include women in the boards of directors (El-Dyasty & Elamer, 2023). The research conducted by Garcia-Blandon et al. (2022) points out that organizations headed by women have a higher level of gender diversity in top management positions, a very important aspect for the principles of sustainable and inclusive development.

Currently, formal equality and substantive equality (Di Torella, 2006), also known as liberal and radical perspectives (Lomazzi & Crespi, 2019), are the two main theoretical frameworks that have historically promoted and influenced gender equality (Di Torella, 2006). Moreover, a blend of those approaches has consistently defined the European Union's strategy to gender equality (Di Torella, 2006).

According to the first (the formal equality or liberal perspective), equality exists when everyone has access to the same level of social recognition (Lomazzi & Crespi, 2019). In other words, this perspective requires that men and women should be treated equally, being based on preconceptions and presumptions and excluding structural differences. Consequently, it is considered that this concept of formal equality is not completely prepared to attain actual equality of genders (Di Torella, 2006), especially that both men and women have different perceptions about this concept (Sörlin et al., 2011).

In contrast, the radical approach (or substantive equality) presents an improved option as it emphasizes the necessity of direct involvement in order to achieve a fair distribution of the first point of view (Lomazzi & Crespi, 2019). Moreover, this perspective takes into consideration people in their real-life circumstances. As an example, it considers the fact that women are, sometimes, discouraged from applying for certain job-positions because it is said that "they have to provide a significant amount of the childcare" (Di Torella, 2006, p. 341). For this reason, providing women the possibility to work flexibly is crucial, supporting them to remain active in the labor market, which can have a positive impact on reducing the gender pay gap (Chung & Van der Horst, 2018). At the same time, it may be claimed that in recent years the focus has gradually changed toward a more substantive perspective (Di Torella, 2006). The more interventionist radical approach is frequently perceived negatively as reverse discrimination, special treatment, or a minimum effort because it tends to empathize with women's lower position in the social context, whereas the liberal approach has been seen as unable to deliver equality because it faces the general framework of multiple inequalities as different levels (Lomazzi & Crespi, 2019). Thus, this could involve favorable discrimination at work and, however, several studies noted that both strategies face strong criticism (Lomazzi & Crespi, 2019).

Since the establishment of the International Women's Year by the United Nations in 1975, the majority of occidental nations have recognized gender inequality as a major problem that requires governmental intervention. Discrimination against women has evolved to focus on gender, understood as discrimination due to the cultural and social effects associated with biological differences (Lomazzi & Crespi, 2019), existing even at the present time many places in the world where the lack of gender equality makes its presence felt, such as the work, political, educational and medical framework (Milner et al., 2021).

According to the United Nations statement (2023), gender equality involves the perspectives, experience and interests of both men and women in policymaking, planning and decision-making. It also strives to place gender equality concerns at the forefront of analyses and policy choices. In this context, it was created the "mainstreaming" term which was defined as a process and technique which contains what might otherwise be considered a marginal issue (gender issue) into the organization's central decision-making process. The execution of such a widespread gender equality policy aims to secure equal treatment for men and women on the justification that discrimination would be eradicated if people are treated similarly (Lomazzi & Crespi, 2019). These types of solutions can start from the educational area, teachers being trained on how to approach the problems of gender equality in front of the students, which would result in their appropriate attitudes and behaviors. Moreover, educational institutions can develop campaigns aimed at raising awareness of the importance of gender equality and its positive effects on society (Orfan & Samady, 2023).

Gender mainstreaming, the current phase of European policy, was born from a worldwide viewpoint in 1995 and has since evolved into a global plan to advance equality between men and women. The concept "gender mainstreaming" specifically refers to the encouragement from governments, as well as other individuals or institutions, for an effective action of mainstreaming a gender consideration in all practices and initiatives. Thus, before making a decision, a thorough examination is made to establish the decisions' impact on men and women. This means that all community policies and activities must systematically consider the variations between the circumstances and needs of men and women (Lomazzi & Crespi, 2019), being necessary for these practices to intensify their presence within societies because there are still gaps between the roles of women and men both in terms of education and career (Blossfeld et al., 2023).

In order to observe concerns linked to equal chances, the European Commission adopted the Union Nation recommendations, taking the idea of gender mainstreaming as a starting point. After addressing the question of the connection between the family and the workplace, the European Commission adopted the Union Nation guidelines from 1995. These serve as the broad foundation

around which contemporary European policy is developed. Women’s participation in decision-making is supported through mainstreaming, according to the European Institute for Gender Equality (2023). This strategy calls for the horizontal implementation of equal opportunities in the broadest range of industries while ensuring that equal opportunity concerns are strictly related to the notion of gender mainstreaming as a transformative agenda and considered at all stages of the policy-making process. Also, according to the European Commission, gender mainstreaming is “the systematic examination of the distinctions between the necessities of women and men in all Community policies, at the point of designing for the goal of achieving gender equality” (Lomazzi & Crespi, 2019, p. 19). Gender mainstreaming perspective goes beyond the idea of comparing the disadvantageous position of women with the privileged position of men, wishing this concept to penetrate all fields, having a global approach, rather than one for each individual state (Walby, 2005).

2.2. Gender equality – managerial implications

Gender mainstreaming incorporates all areas of planning, implementing and monitoring any social, political or economic action. This implies changes also for the organizations, in both their internal and external operations. Internal change means a circumstance in which the organizations adopt a new method of change management process, for integrating the principles and objectives of gender mainstreaming and also for adapting systems and processes in order to accomplish these goals. On the other hand, the external change for organizations refers to the development operations: planning, execution and assessment, considering previous objectives (Guzura, 2017).

Gender equality is one of the fundamental human rights, as well as a fundamental value of the European Union, which has intensified its efforts in recent years to achieve this goal. The research on this subject indicates that “European Union is a world leader in gender equality: 14 of the 20 countries in the world with the best results in terms of gender equality are European Union Member States” (Matefi, 2023, p. 68). Moreover, a thoroughly researched topic in gender equality literature is the resistance to gender equality interventions, which are modifying the uneven gender order by involving disputing prevailing norms, values and power relations. In general, it is believed that the opposition to these initiatives for gender equality can’t be avoided since they are likely to have aims and strategies that are incompatible with those of the organization. Change is hampered or even prevented by the change recipients’ resistance to such interventions, which is a major challenge. In order to achieve transformational change, researchers urge a deeper investigation of the opposition to initiatives for gender equality (Lansu et al., 2020).

According to the researchers, gender equality is a specific form of organizational change, a continuously disruptive process in which negotiations, for illustration, create “new concepts and understandings of organizational activities” (Lansu et al., 2020, p. 2). Top managers are given special emphasis in the literature on gender equality change because, according to specialists on research, their engagement is required to bring about gender equality change. In other words, they describe managers as gatekeepers to gender equality reform, allowing (or declining) this principle initiatives inside their firms (Lansu et al., 2020).

The involvement of top management serves as essential in providing the intervention legitimacy, because of their “long-established authority”. They are in the position to establish and develop strategic objectives, challenge gender norms and behaviors, control resources, alter cultures, and also inspire workers. In addition, this means that managers have “the authority or span of control to initiate and drive diversity initiatives through the organization” (Mattis, 2001, p. 375). An example of an initiative in this regard can be the creation of internal regulations and policies for employees, considering gender equality and the sustainable development of the company. Organizations adopt practices and strategies for managing diversity, promoting equal opportunities and efficiency in managing employee differences, with the goal of turning diversity into a sustainable economic opportunity (Popa, 2022). There are several reasons why it is so important that gender equality and

sustainable development have to be integrated. In principle, establishing more equitable interactions between genders that maintain the human rights, dignity and competencies of all women and men, crossed by differences of social class, racial background, orientation of sexuality, maturity level, is an essential requirement for an ethical system (Leach, 2015).

3. METHODOLOGICAL FRAMEWORK

This paper is intended to expose managerial approaches to the principle of gender equality, emphasizing the importance of the integration of both genders into the labor market, in management and executive positions, and at the same time, of diversity and fair treatment. As specialized papers in this bibliometric sphere have a clearly defined purpose (Popa et al., 2023), this article aims to show how the bibliometric connection between the concepts of management and gender equality evolved over time, but also to make a comparison between the production of publications on this topic and the bibliographic influence manifested by them depending on the geographical area.

The bibliometric analysis of this paper was carried out with the help of the Web of Science Core Collection database (Clarivate, 2023), from which data relating to a number of 717 publications were exported. To perform the search in the database, the keywords "management" and "gender equality" were used, with the search filter "Topic". The next step consisted in refining the data in the following way: the manuscripts from the period 1995-2022 were selected, the year 2023 not being taken into account as it was not completed, and only publications of the type "Article", "Proceeding paper", "Review article", "Early access" in English were selected. Table 1 presents the essential data of the methodological framework, highlighting the way the publications search was made to develop the bibliometric analysis. Furthermore, to create the bibliometric maps of the social and conceptual structures, the VOSviewer software program version 1.6.19 was used (Van Eck & Waltman, 2023).

Table 1. The methodological framework of the research

Scientific Database	Web of Science Core Collection
Keywords	"management" and "gender equality"
Search field	Topic
Document type	Article, Proceeding Paper, Review Article, Early Access
Years	1995 - 2022
Language	English
Number of results	717

Source: authors' conception based on data provided by the WoS Core Collection (2023)

4. DATA ANALYSIS

In order to understand how management and gender equality publications have changed over time, bibliometric data were analyzed. The analysis of the bibliometric data took into account the authors' keywords, the Web of Science categories, the countries that collaborated to develop this topic and the most cited papers. Moreover, the social and conceptual structure of the research was outlined by means of authors' countries of origin and keywords maps.

4.1. Analysis of Scientific Production and Influence

Figure 1 illustrates the development over time of the number of papers on management and gender equality, from 1995 to 2022.

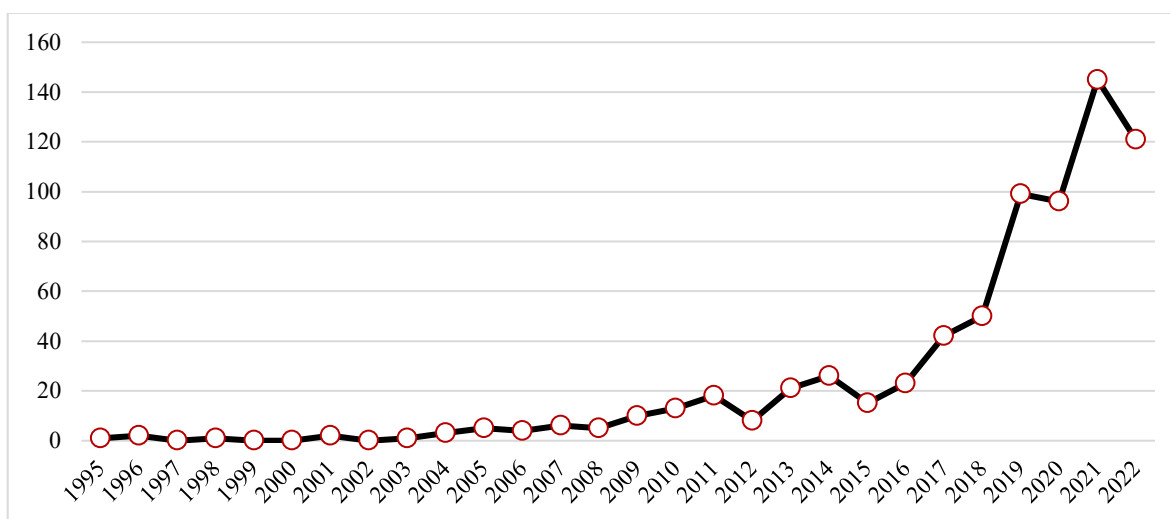


Figure 1. The evolution of research publications
Source: data provided by the WoS Core Collection (2023)

As was expected, the number of publications on management and gender equality has increased over time, and the topic has recently received more attention. The first study on this subject, however, was written by Jill Rubery and published in the *Journal of Management Studies* in 1995. According to Rubery (1995), the issue of gender equality for managerial positions in the firm is important from the standpoint of the pay structure and the environment in which it is used, particularly in terms of the dynamics of working relationships. When talking about professional growth, advancement, or pay increases during time, women were significantly at a disadvantage compared to men.

The number of papers published on this subject increased in variability after 2004, when there were only 1-2 papers released annually. A minor increase in the number of publications between the years 2004 and 2014 indicates that, during the past ten years, the authors' interest in this subject has grown, particularly as a result of changes in the business environment.

Exactly 10 years later, Kyaw et al. (2015) and Larrieta-Rubín de Celis et al. (2015) explore the subject of gender differences for management positions within an organization. According to Kyaw et al. (2015), gender diversity on a company's board of directors increases revenue efficiency in nations with high rates of gender equality. Larrieta-Rubín de Celis et al. (2015) examine the effects of women's involvement on corporate boards, middle management, and top management as corporate social responsibility (CSR) department directors. According to their findings, there is a direct correlation between CSR and gender equality policies, with the impact being greater when there are more women in management positions.

In 2019-2020, 100 documents were published, bringing the total to three digits. The year 2021, when 143 papers were published, appears to have been the peak. The following details on the relationship between the presence of women in management of an organization and the economic and social impact are provided by Yarram and Adapa (2021), who round out the picture that has been painted thus far about women in managerial positions. It may seem that having just one woman on the board of directors would not have much of an impact on the organization but having at least two women on the board would demonstrate the good effects of corporate social responsibility (CSR). Additionally, increasing the number of women on boards enables organizations to benefit from the expertise that women offer to strategic decision-making boards.

The top 10 countries with the most publications are presented in Table 2.

Table 2. Ranking of the most publications according to the country

No.	Country/Region	Number of documents	Share of 717 (%)
1	England	110	15.342
2	United States of America	101	14.086
3	Spain	79	11.018
4	Australia	71	9.902
5	Germany	49	6.834
6	Italy	40	5.579
7	Canada	35	4.881
8	Sweden	35	4.881
9	Netherlands	29	4.045
10	France	23	3.208

Source: data provided by WoS Core Collection (2023)

As a result, we can see that England, with 110 publications out of a total of 717 papers, is in first place. With a total of 101 publications, the United States of America (USA) ranks next, while Spain, a European country, with 79 publications, is placed third. Australia, with 71 articles, is not far behind Spain. With only 23 items, France stands at the bottom of the list. Although slightly higher, the Netherlands (29) and Sweden (35) have a comparable number of publications to France. There are several arguments that justify this classification.

It is not surprising that England and the United States have the top rankings, given that the majority of the articles are published in English. This would benefit nations where English is widely spoken, such as England, because researchers there might find it easier to write and publish their findings, using their native language. Additionally, collaboration across trade agreements in terms of research may be another reason for why the USA and England are the top two nations. The growth of research output is another important aspect. Research production for nations with high-income economies, including the United States, Germany, and the United Kingdom, has steadily increased since 1996. The increased number of publications may be a result of this steady rise (Science and Engineering Indicators, 2023). Spain, the first country in Europe to produce the most articles on the topic, is a surprise. Research and development (R&D) have an impact on how many scientific papers are published. Spain may conduct more research and, as a result, produce more publications if it invests more in R&D than other countries.

Furthermore, even if it does not occupy a place in the top 10, according to the Web of Science Core Collection database (Clarivate, 2023), Romania has a number of seven documents associated with the gender equality subject, an aspect that demonstrates the interest of its researchers in studying and encouraging the application of this principle, which denotes an attitude of equity, inclusion and respect for diversity.

According to the number of documents pertaining to each research field, Table 3 presents the top Web of Science categories.

It is evident that the Management domain has the greatest number of publications (186), followed by the Business domain with 80 papers, and the Environmental Studies area with 75 papers. Women's Studies and Environmental Sciences are also highly ranked, with Sociology coming in last on the list with only 36 related publications.

The classification is relevant as a result of the papers that were considered in its construction, which focused on the importance of gender equality as a fundamental human right and the general issue of the relationship between management and gender equality. In addition, society must always consider gender equality if it is to be peaceful, wealthy, and sustainable (United Nations, 2023). Furthermore,

management is essential to overcome any problem because the business environment is constantly changing. However, a balanced board of men and women is required to make the best judgments in order to present the most accurate picture of reality and the most effective solutions to the challenges faced (Yarram & Adapa, 2021). Additionally, both government and private companies have enacted an increasing number of rules and policies in recent years to support gender equality, particularly when talking about managerial positions within an organization.

Table 3. Ranking of publications according to the Web of Science Categories

No.	Web of Science Categories	Number of documents	Share of 717 (%)
1.	Management	186	25.941
2.	Business	80	11.158
3.	Environmental Studies	75	10.460
4.	Environmental Sciences	73	10.181
5.	Women's Studies	73	10.181
6.	Economics	47	6.555
7.	Education Educational Research	47	6.555
8.	Green Sustainable Science Technology	47	6.555
9.	Social Sciences Interdisciplinary	37	5.160
10.	Sociology	36	5.021

Source: data provided by WoS Core Collection (2023)

Table 4 presents the most important global publications that consider the sphere of gender equality. Thus, it can be observed that the first of these is Sustainability with a number of 31 documents allocated, a fact that highlights the pronounced interest of the journal in bringing information about this subject to the public, especially since gender issues are a component of the sustainability concept (Barreiro-Gen et al., 2021).

Table 4. Ranking of the most relevant publications for the gender equality topic

No.	Journal Name	Number of documents	Share of 717 (%)
1.	Sustainability	31	4.324
2.	Gender Work and Organization	30	4.184
3.	Gender in Management	11	1.534
4.	Proceedings of the 2nd International Conference on Gender Research (ICGR 2019)	9	1.255
5.	Equality Diversity and Inclusion	8	1.116
6.	Corporate Social Responsibility and Environmental Management	6	0.837
7.	Frontiers in Psychology	6	0.837
8.	Gender and Education	6	0.837
9.	Human Relations	6	0.837
10.	Journal of Business Ethics	6	0.837

Source: data provided by Bibliometrix (Aria & Cuccurullo, 2017)

The next two publications in the ranking, namely Gender Work and Organization (30 documents) and Gender in Management (11 documents) bring to the fore the importance of gender inclusion in the labor market, including leadership positions, while the following top journals focus on the connection between the concept of gender equality and diversity, inclusion, corporate social responsibility, psychology, education, human relationships, and business ethics.

The five most cited documents are listed in Table 5 along with the key findings. The publishing year should be noted first.

Table 5. List of the most cited documents

No.	Article Title	Authors	Journal Name	NC
1	<i>Global mental health 1 – No health without mental health</i>	Prince, M., Patel, V., Saxena, S., Maj, M., & Maselko, J. (2007)	Lancet	2.021
2	<i>Women and fisheries: Contribution to food security and local economies</i>	Harper, S., Zeller, D., Hauzer, M., Pauly, D., & Sumaila, U. R. (2013)	Marine Policy	185
3	<i>Women on Boards: Do They Affect Sustainability Reporting?</i>	Fernandez-Feijoo, B., Romero, S., & Ruiz-Blanco, S. (2014)	Corporate Social Responsibility and Environmental Management	174
4	<i>Parasites, democratization, and the liberalization of values across contemporary countries</i>	Thornhill, R., Fincher, C. L., & Aran, D. (2009)	Biological Reviews	154
5	<i>Changing gender domination in a Big Four accounting firm Flexibility, performance and client service in practice</i>	Kornberger, M., Carter, C., & Ross-Smith, A. (2010)	Accounting Organizations and Society	151

NC – number of citations

Source: data provided by WoS Core Collection (2023)

The year of publication is the first aspect that draws notice. All documents were published between 2004 and 2014, a period in which authors' interest in the subject of the managerial consequences of gender equality started to gradually increase. It makes sense that they also have the most citations, since they are all at least ten years old since their publications. Even though the authors continued on publishing, they have always cited previous works. The topics covered in these publications add another interesting element. They specifically analyze the topic of the current publications in a variety of domains, including politics (Thornhill et al., 2009), economics (Fernandez-Feijoo et al., 2014), biology (Harper et al., 2013), and business (Kornberger et al., 2010). Therefore, we may conclude that the topic of gender equality is discussed from a variety of perspectives and that the conclusions are consistent: gender equality has a good impact on the environment, the organization (Fernandez-Feijoo et al., 2014), the economy (Harper et al., 2013), and society (Thornhill et al., 2009). Though the idea of gender equality has become more prevalent in the last ten years, it appears that men have always held an advantage over women. We can have a better understanding of this topic by recognizing that the most cited publications come from a variety of fields. Additionally, it demonstrates the difficulties women, particularly in the workplace, face, including their inability to advance and hold managerial positions, their lack of access to certain information, their inability to practice a specific occupation because it is thought to be only appropriate for a particular gender, and their lack of responsibilities. Moral standards, organizational culture, law, doctrine, politics, and education are just a few of the causes of these challenges. They also offer solutions to current challenges, such as putting women in leading positions within organizations, allowing anyone to practice a profession, providing everyone with access to education and healthcare, and building trust between workers and their employers, as well as between individuals and institutions.

4.2. Mapping the conceptual and social structure of research

A bibliometric map of the 717 authors' keywords was made using the VOSviewer tool, and it adhered to the requirement that each keyword had been used at least seven times. The primary topics and trends in the area of gender equality, as well as how these themes are connected, can be better understood using this bibliometric map. It offers a graphic summary of this field's research landscape. The presence of six clusters can be seen in Figure 2, as follows:

The red cluster includes seven nodes, these are represented by the keywords “gender sustainability”, “gender quotas”, “gender diversity”, “board of directors”, “corporate governance”, “women directors”, and “glass ceiling”, thus linking the importance of the top management approach, the proportion of women board members and employee equality.

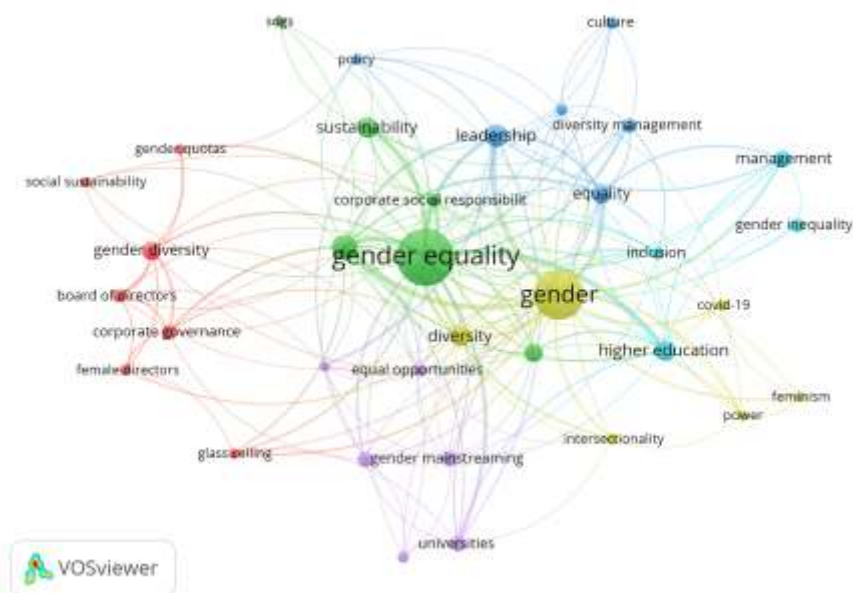


Figure 2. Authors' keyword map

Source: authors' conception with the help of VOSviewer (2023)

The green cluster contains six strongly connected nodes, including “sdgs”, “sustainability”, “corporate social responsibility”, “gender equality”, “women”, and “sustainable development”, emphasizing the interest of researchers in developing systematic analysis papers on integrating gender equality with sustainability principles.

The purple cluster also has six nodes: “governance”, “universities”, “equal opportunities”, “gender mainstreaming”, “masculinity”, and “sustainable development”, indicating that there is a strong connection between academia and business and that equal opportunities should be promoted and encouraged from the university level so that all students have equal opportunities.

The six nodes in the *dark blue cluster*, labeled “policy”, “culture”, “leadership”, “diversity management”, “human resource management”, and “equality” indicate that what occurs inside a company, specifically, a leader's approach, corporate rules, organizational culture, and the idea of equality, are deeply connected. Also relevant at both the micro (organization) and macro (country) levels are policy, culture, and leadership.

The only four nodes in the *light blue cluster* are “inclusion”, “management”, “gender inequality”, and “higher education”, indicating that there is still opportunity contrast and emphasizing the importance of management and education in addressing this issue. The subject is frequently handled from the standpoint of inclusion, namely how we might use the answers we have discovered to address current issues with opportunity disparity.

“Gender”, “diversity”, “covid-19”, “power”, “feminism”, and “intersectionality” are among the six nodes in the *yellow cluster* that are closely correlated. This suggests that gender and ideas like power or diversity are related. A new definition of “normal” has emerged as a result of the COVID-19 period, which is also an intriguing topic from the perspective of gender.

By tracking how the writers' keywords changed over time, the conceptual structure of the analysis was made more in-depth, as can be observed in Figure 3.

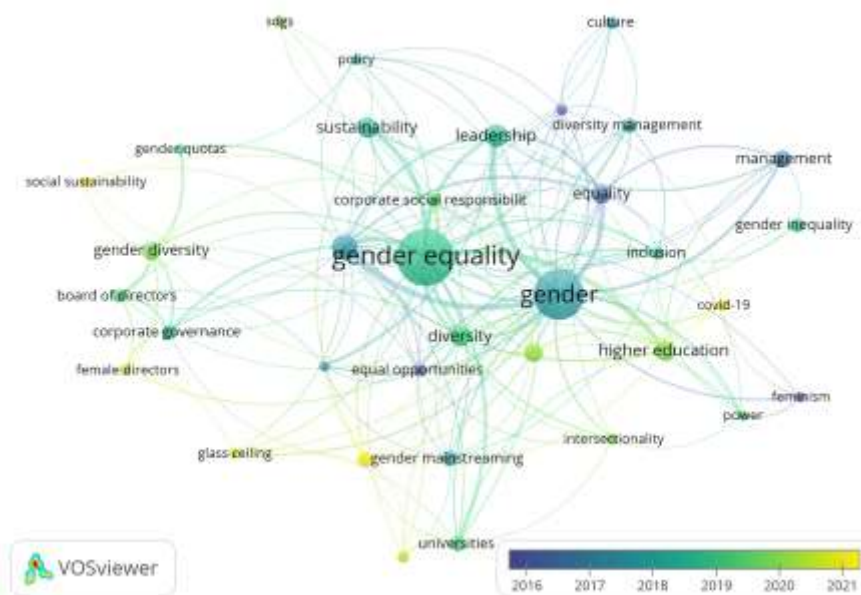


Figure 3. Evolution over time of the authors' keywords
Source: authors' conception with the help of VOSviewer (2023)

This evolution was documented between 2016 and 2021. It appears that “management”, “equality”, “diversity” or “feminism” were the most popular terms seven years ago. This can be explained by the fact that these tendencies had only recently begun at the time. Then, as people's awareness of the world around them and of gender-based injustices increased, the notions of “gender”, “sustainability”, and “leadership” also deepened. The authors' attention has been drawn to education, as it has grown in importance as they recognize the close connection between academics and business. Due to the pandemic's significance as a time of major transformations, “covid-19” and “social sustainability” have become the terms used on this subject most frequently in the last two years.

The analysis in the VOSviewer software program produced 27 connected nodes representing the countries whose authors had expressed interest in the importance of sustainability and the subject of gender equality. This information was used to examine international collaborations and to realize the social structure of the bibliometric analysis, as shown in Figure 4.

As a result, there are five distinct clusters that can be identified: (1) the purple cluster, which is made up of China, South Korea and the United States; (2) the blue cluster, which is made up of Austria, the Netherlands, Norway, and South Africa; (3) the yellow cluster, which is made up of the nations of England, France, Switzerland, and Pakistan; (4) the red cluster, which is made up of Australia, Canada, Scotland, Ireland, Indonesia, Malaysia, and India; and (5) the green cluster with countries such as Italy, Spain, Portugal, Germany, and Denmark.

The bibliometric map illustrated in Figure 4 demonstrates the substantial international cooperation between researchers investigating gender equality. The majority of scholarly connections are made between scholars in Europe, then those in Asia and North America. This may indicate a rise in interest in gender equality on a worldwide scale. The analysis's finding that there is a close connection between researchers in developed and developing nations is another intriguing finding. This implies that regardless of their nation's degree of economic development, researchers around the world have a serious interest in gender equality.

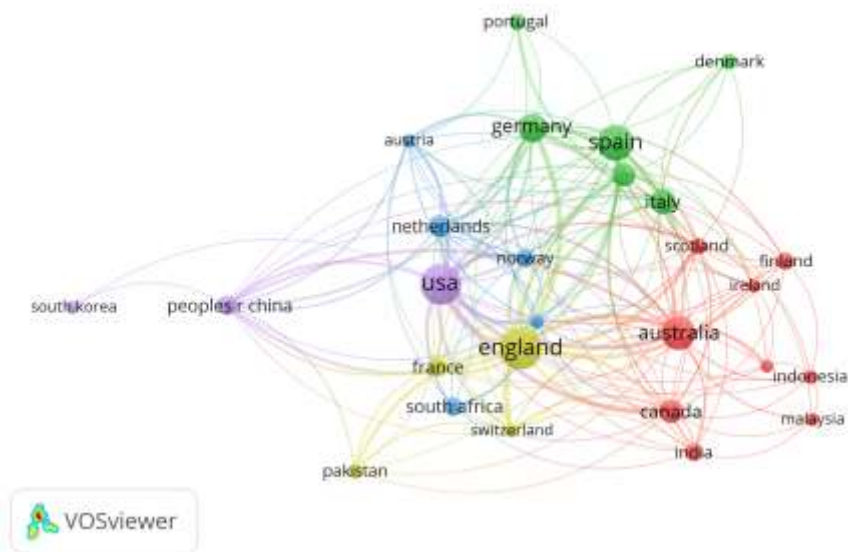


Figure 4. Bibliometric map of the authors' collaborations according to the country

Source: authors' conception with the help of VOSviewer (2023)

Figure 5 represents the collaboration relationships over time between the authors interested in the subject of gender equality depending on their country of origin.

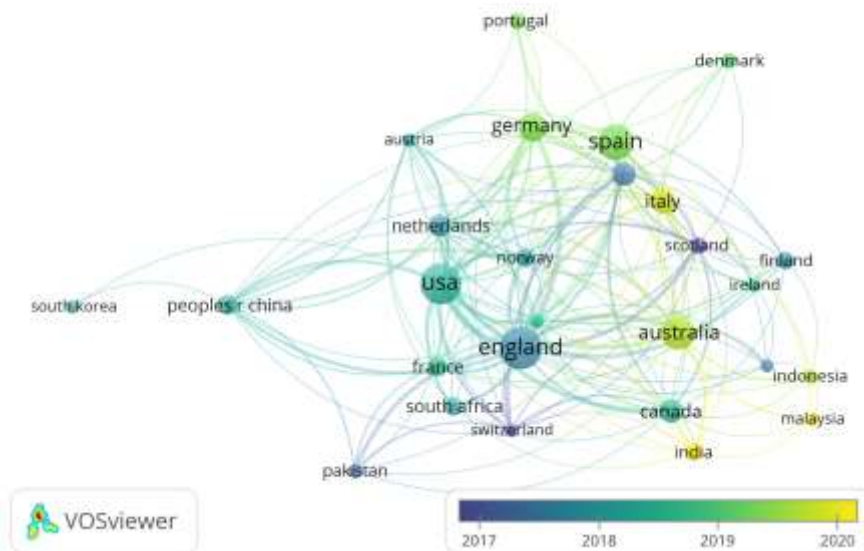


Figure 5. Authors' collaborations over time according to the country

Source: authors' conception with the help of VOSviewer (2023)

Researchers from various nations are collaborating more often to explore gender equality. In 2017, authors from industrialized nations like Scotland and Switzerland published the majority of publications. The subject has gradually gained popularity in China, England, Canada, and the United States, specifically in Europe, Asia, and America. By 2020, researchers from poor nations such as Malaysia and India had a growing presence in the field of gender equality. These nations are among those remaining to offer fresh perspectives on the entire discussion. The rise in publications on gender

equality is encouraging since it shows that the subject is becoming more significant and that there is a growing demand for studies in this area. Thus, the findings of the bibliometric analysis shown in Figure 5 point to the expansion and diversification of gender equality research. This bodes well for the advancement of gender equality throughout the world.

5. CONCLUSIONS

In the last period, interest in the gender equality topic has grown more and more, a fact that stands out through the multitude of recent publications that consider it (Wu & Cheng, 2016; Chang & Milkman, 2020; Di Vaio et al., 2023). Being a far-reaching theme in the contemporary world, this paper aimed to highlight the managerial implications of the gender equality principle, with the help of a bibliometric analysis that shows the evolution over time of theoretical approaches, the differences between the production of publications and the influence manifested by them, and social and conceptual structures regarding the topic.

The main results of this study highlight the upward trend of publications on the topic, noting their exponential growth starting from 2020, but also the fact that England, United States of America, and Spain occupy the first positions in the ranking of article production. Also, according to Web of Science categories (Clarivate, 2023), it is observed that the majority of papers are enclosed in the fields of Management, Business, and Environmental Studies, and the most relevant journals worldwide in terms of gender equality are Sustainability, Gender Work and Organization, and Gender in Management, an aspect that emphasizes the importance of a bibliometric approach regarding this article topic.

The most cited article worldwide in the field of gender equality is 'Global mental health 1 - No health without mental health' (Prince et al., 2007), which supports the fact that the concept of mental health is based on certain specific objectives for sustainable development, such as achieving the principle of gender equality. Regarding the evolution over time of the conceptual structure, it seems that the transition from terms like "management", "equality", "diversity" to "gender", "sustainability" and "leadership" was achieved in a relatively short time. Moreover, the topic of gender equality has attracted the attention of many nations, being addressed in almost all continents of the globe.

Considering the theoretical implications, this study helps to build an overall perspective regarding the theoretical approaches to the subject of gender equality and its managerial implications, to understand the certain connections and links that form between these two concepts, as well as those with which they relate, respectively: the labor market, diversity, equity, inclusion, management positions, differences between women and men in terms of organizational culture, sustainability, etc. In terms of practical implications, this study can be useful to the small and medium-sized enterprises and large companies, as well as public institutions in establishing appropriate policies for the inclusion of both genders, but also in understanding the need to have in leadership positions both women and men due to their different but complementary perspectives.

Future research on the topic of gender equality can consider achieving the principle of equity by involving women in industries such as technology, electrical industry, construction, and highlighting the importance of the role they can have within them, but also the barriers they encounter when obtaining jobs like those on the labor market.

REFERENCES

- Aria, M., & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959-975. <https://doi.org/10.1016/j.joi.2017.08.007>.
- Barreiro-Gen, M., Lozano, R., Temel, M., & Carpenter, A. (2021). Gender equality for sustainability in ports: Developing a framework. *Marine Policy*, 131, 104593. <https://doi.org/10.1016/j.marpol.2021.104593>.
- Blossfeld, P., Pratter, M., & Uunk, W. (2023). Gender-specific inequalities in education and the labor market. *Frontiers in Sociology*, 8, 1254664. <https://doi.org/10.3389/fsoc.2023.1254664>.
- Cavero-Rubio, J. A., Collazo-Mazón, A., & Amorós-Martínez, A. (2019). Public recognition of gender equality in the workplace and its influence on firms' performance. *In Women's Studies International Forum*, 76, 102273. Pergamon. <https://doi.org/10.1016/j.wsif.2019.102273>.
- Chang, E. H., & Milkman, K. L. (2020). Improving decisions that affect gender equality in the workplace. *Organizational Dynamics*, 49(1), 100709. <https://doi.org/10.1016/j.orgdyn.2019.03.002>.
- Chung, H., & Van der Horst, M. (2018). Women's employment patterns after childbirth and the perceived access to and use of flexitime and teleworking. *Human relations*, 71(1), 47-72. <https://doi.org/10.1177/0018726717713828>.
- Clarivate. (2023). *Web of Science Core Collection*. Retrieved September 28, 2023, from <https://www.webofscience.com/wos/woscc/basic-search>.
- Coron, C. (2020), "What does "gender equality" mean? Social representations of gender equality in the workplace among French workers". *Equality, Diversity and Inclusion*, 39(8), 825-847. <https://doi.org/10.1108/EDI-06-2019-0185>.
- Di Torella, E. C. (2006). The principle of gender equality, the goods and services directive and insurance: A conceptual analysis. *Maastricht journal of European and comparative law*, 13(3), 339-350. <https://doi.org/10.1177/1023263X06013003>.
- Di Vaio, A., Hassan, R., & Palladino, R. (2023). Blockchain technology and gender equality: A systematic literature review. *International Journal of Information Management*, 68, 102517. <https://doi.org/10.1016/j.ijinfomgt.2022.102517>.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of business research*, 133, 285-296. <https://doi.org/10.1016/j.jbusres.2021.04.070>.
- El-Dyasty, M.M., & Elamer, A.A. (2023), "Female leadership and financial reporting quality in Egypt". *Journal of Applied Accounting Research*, 24(3), 583-605. <https://doi.org/10.1108/JAAR-11-2021-0315>.
- European Institute for Gender Equality. (2023). What is gender mainstreaming. Retrieved October 14, 2023, from <https://eige.europa.eu/gender-mainstreaming/what-is-gender-mainstreaming>.
- Fernandez-Feijoo, B., Romero, S., & Ruiz-Blanco, S. (2014). Women on boards: do they affect sustainability reporting?. *Corporate Social Responsibility and Environmental Management*, 21(6), 351-364. <https://doi.org/10.1002/csr.1329>.
- Garcia-Blandon, J., Argilés-Bosch, J., & Ravenda, D. (2022). CEO demographics and gender diversity in senior management in large Scandinavian firms. *Gender in Management: An International Journal*. <https://doi.org/10.1108/GM-12-2021-0379>.

- Guzura, T. (2017). An overview of issues and concepts in gender mainstreaming. *Afro Asian Journal of Social Sciences*, 8(1), 1-21.
- Harper, S., Zeller, D., Hauzer, M., Pauly, D., & Sumaila, U. R. (2013). Women and fisheries: Contribution to food security and local economies. *Marine Policy*, 39, 56-63. <https://doi.org/10.1016/j.marpol.2012.10.018>.
- Inglehart, R., Norris, P., & Welzel, C. (2003). Gender equality and democracy. In *Human values and social change*, 91-115. Brill. https://doi.org/10.1163/9789047404361_007.
- Kornberger, M., Carter, C., & Ross-Smith, A. (2010). Changing gender domination in a Big Four accounting firm: Flexibility, performance and client service in practice. *Accounting, Organizations and Society*, 35(8), 775-791. <https://doi.org/10.1016/j.aos.2010.09.005>.
- Kyaw, K., Olugbode, M., & Petracci, B. (2015). Does gender diverse board mean less earnings management? *Finance Research Letters*, 14, 135-141. <https://doi.org/10.1016/j.frl.2015.05.006>.
- Lansu, M., Bleijenbergh, I., & Benschop, Y. (2020). Just talking? Middle managers negotiating problem ownership in gender equality interventions. *Scandinavian Journal of Management*, 36(2), 101110. <https://doi.org/10.1016/j.scaman.2020.101110>.
- Larrieta-Rubín de Celis, I., Velasco-Balmaseda, E., Fernández de Bobadilla, S., Alonso-Almeida, M. del M., & Intxaurburu-Clemente, G. (2014). Does having women managers lead to increased gender equality practices in corporate social responsibility? *Business Ethics: A European Review*, 24(1), 91-110. <https://doi.org/10.1111/beer.12081>.
- Leach, M. (2015). *Gender equality and sustainable development*. Routledge. Retrieved October 2, 2023, from https://observatorio2030.com.br/wp-content/uploads/2022/03/10.4324_9781315686455_previewpdf-1.pdf.
- Lomazzi, V., & Crespi, I. (2019). *Gender mainstreaming and gender equality in Europe: Policies, culture and public opinion*, 9-18. Policy Press. <https://doi.org/10.56687/9781447317722>.
- Matefi, R. (2023). Gender Equality-Fundamental Value of the European Union. *Rev. Universul Juridic*, 3, 64-68. Retrieved October 3, 2023, from <https://heinonline.org/HOL/LandingPage?handle=hein.journals/univjurid2023&div=45&id=&page=>.
- Mattis, M. C. (2001). Advancing women in business organizations: Key leadership roles and behaviors of senior leaders and middle managers. *Journal of management development*, 20(4), 371-388. <https://doi.org/10.1108/02621710110389009>.
- Milner, A., Kavanagh, A., Scovelle, A. J., O'Neil, A., Kalb, G., Hewitt, B., & King, T. L. (2021). Gender equality and health in high-income countries: a systematic review of within-country indicators of gender equality in relation to health outcomes. *Women's Health Reports*, 2(1), 113-123. <http://doi.org/10.1089/whr.2020.0114>.
- Orfan, S. N., & Samady, S. (2023). Students' perceptions of gender equality: A case study of a conflict-stricken country. *Cogent Social Sciences*, 9(1), 2225819. <https://doi.org/10.1080/23311886.2023.2225819>.
- Popa, C. F. (2022). *Manageri și leadership*, Bucharest, ProUniversitaria.
- Popa, I., Cicea, C., Ștefan, S. C., Marinescu, C., & Botez, D. (2023). Bibliometric Analysis of Electrical and Electronic Equipment Production and Consumption in the Context of the Circular Economy. *Amfiteatru Economic*, 25(62), 63-79. <https://doi.org/10.24818/EA/2023/62/63>.

- Prince, M., Patel, V., Saxena, S., Maj, M., & Maselko, J. (2007). Global mental health 1: No health without mental health. *Lancet (British edition)*, 370(9590), 859-877. [https://doi.org/10.1016/S0140-6736\(07\)61238-0](https://doi.org/10.1016/S0140-6736(07)61238-0).
- Rubery, J. (1995). Performance-related pay and the prospects for gender pay equity. *Journal of Management Studies*, 32(5), 637-654. <https://doi.org/10.1111/j.1467-6486.1995.tb00792.x>.
- Science & Engineering Indicators. 2023. Publications Output: U.S. Trends and International Comparisons. Retrieved October 10, 2023, from <https://nces.nsf.gov/pubs/nsb20214/publication-output-by-country-region-or-economy-and-scientific-field>.
- Sörlin, A., Lindholm, L., Ng, N., & Öhman, A. (2011). Gender equality in couples and self-rated health – A survey study evaluating measurements of gender equality and its impact on health. *International Journal for Equity in Health*, 10(37), 1-11. <https://doi.org/10.1186/1475-9276-10-37>.
- Thornhill, R., Fincher, C. L., & Aran, D. (2009). Parasites, democratization, and the liberalization of values across contemporary countries. *Biological Reviews*, 84(1), 113-131. <https://doi.org/10.1111/j.1469-185X.2008.00062.x>.
- United Nations. (2023). *Goal 5: Achieve gender equality and empower all women and girls*. Retrieved October 14, 2023, from <https://www.un.org/sustainabledevelopment/gender-equality>.
- United Nations. (2023). *The 17 Goals*. Retrieved October 01, 2023, from <https://sdgs.un.org/goals>.
- Van Eck, N. J., & Waltman, R. (2023). *VOSviewer version 1.6.19*. Retrieved September 28, 2023, from <https://www.vosviewer.com>.
- Walby, S. (2005). Introduction: Comparative gender mainstreaming in a global era. *International Feminist Journal of Politics*, 7(4), 453-470. <https://doi.org/10.1080/14616740500284383>.
- Wu, R., & Cheng, X. (2016). Gender equality in the workplace: the effect of gender equality on productivity growth among the Chilean manufacturers. *The Journal of Developing Areas*, 50(1), 257-274.
- Yarram, S. R., & Adapa S. (2020). Board gender diversity and corporate social responsibility: Is there a case for critical mass? *Journal of Cleaner Production*, 278(123319). <https://doi.org/10.1016/j.jclepro.2020.123319>.