

# Mapping the Landscape of Women Entrepreneurship: A Bibliometric Analysis

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## Abstract

**Background:** Women entrepreneurship plays a vital role in economic growth and job creation, highlighting the importance of understanding its landscape.

**Objectives:** The study aims to evaluate trends and advancements in women entrepreneurship research discovering future research direction.

**Method:** This study analyzed Scopus data of 5992 covering from 2001 to 2023 and utilized R Biblioshiny and VOS viers.

**Results:** The findings show increasing trends in women's entrepreneurship. USA and UK significantly contributed, identifying the International Journal of Entrepreneurship, and Entrepreneurship and Regional Development as pertinent sources. Likewise, the most frequently mentioned authors were Hoang and Antonicic, with the predominant term being entrepreneurship.

**Conclusion:** The study tracks the increasing trends of women entrepreneurship enhancing contribution to existing literature and depict the direction of the research.

**Implication:** This study shows women's entrepreneurship's growing popularity and its contributors. Further, the study shows gaps, rising trends, and other important landscapes for academician and policymakers.

**Keywords:** Bibliometric analysis, economic prosperity, female entrepreneurship, women entrepreneurship, women status,

## 1. Introduction

Women entrepreneurship indispensably cultivates economic prosperity with innovative and novel approaches. Paradigm shift in socioeconomic dimension crucially reveals recognition, empowerment, and pragmatic initiation of entrepreneurial practices. Thus, women entrepreneurship stands as a perpetual foundation of economic development, linking with employment, a driver of social change, and a source of empowerment (Gurao & Naqvi, 2025). Interestingly, several businesses comprising the small and medium-sized entities occupy a leading status in global business practices, gloriously generating fifty percent employment opportunity that sharply depicts the requirement of women-driven diverse entrepreneurial tradition to empower women participation, promote inclusion of diversity introducing the ray for paradigm shift in entrepreneurial knowledge, practice, and socioeconomic dimension (Jyoti et al., 2025). In addition, alleviation of poverty, extending jobs to the numerous family members, became an undeniable doctrine to embrace women entrepreneurship as a vibrant wing of economic prosperity that promotes inclusion, respect, and builds an empowered atmosphere even for gender equality (Cardella et al., 2021; Prabha et al., 2025).

Moreover, female entrepreneurial practice manifests a vital contribution in shaping the women-driven global business economy (Jiang et al., 2024). Female entrepreneurship brings changes and absorbs the strengths, abilities, leading towards productivity for economic development with multi-task handling skills and building a conducive relationship and business networks (Borisov & Vinogradov, 2022; Tien et al., 2022). Additionally, it significantly satisfies fundamental psychological aspirations of individuals, extending optimal well-being and proper functioning, advocating that female entrepreneurs' well-being is an integral aspect of equality in terms of gender equality (Shir et al., 2019). Furthermore, women entrepreneurship is revealed as an inclusive strategy of leadership that significantly supports driving the corporation with feminine ability, compassionate, emotional behavior, and empathetic strengths ultimately contributing to the economic aspect of the nation (Clark Muntean & Ozkazane-Pan, 2016).

Furthermore, an entrepreneur refers to an individual who is committed to bearing the risk in the commencement of a new business entity and stimulated by the feasibility of crafting a favorable mechanism to generate profitability from commercial activities (Indarti et al., 2021). Recently, a growing interest of scholarly emphasis on female-led entrepreneurial practices has prevailed, analyzing the involvement and its succession chain in family business (Anggadwita et al., 2021). Thus, evidence revealed that ten percent of global entrepreneurial practices are led by women (Machado et al., 2023). As women represent fifty percent of the global population, however, the participation of women in entrepreneurial activity depicts a smaller proportion than male-driven business activities (Muhammad et al., 2020). Several barriers hinder women's low involvement in entrepreneurial practices, including the glass ceiling, which restricts promotion opportunities, and the challenges of the glass cliff, despite their influence on entrepreneurial success (Ryan et al., 2016; Jiang et al., 2024).

In addition, the integration of female-oriented business activity reveals a tremendous impact on the economic dimension throughout the globe (Brush et al., 2018). However, highly isolated developing economies can be improved through women's entrepreneurship for boosting and spreading the wave of economic prosperity (Mandongwe & Jaravaza, 2020). Thus, exploration of the women's entrepreneurial practices relevant in this field is essential to scan the growing trends of research that reflect the entire

scenario of female participation in the business, and portray their contribution in the economic expansion (Phan-Tan, 2021). Therefore, women entrepreneurship, revealing the significant contribution to both developed and developing economies, mapping through bibliometric analysis, demonstrates its existing direction of investigation that helps to uncover the proportion of economic enhancement, employment scenario, and even landscape of female-oriented business activities exerting their impact on the construction of a vibrant economy.

However, previous studies in the field of women entrepreneurship that utilize bibliometric analysis cover only a limited time frame, specifically from 2010 to 2024 or from 2012 to 2022. Kumar and Kumar (2024) and Sanchez-Limon et al. (2025) overlooked earlier trends prior to 2010 that require further study, representing a long study period to reflect its trends. Therefore, this research paper aims to present and portray a comprehensive trend of research on women entrepreneurship through bibliometric analyses measuring the intellectual landscape and dynamic theme on the study domain (Cobo et al., 2011; Jiang et al., 2024). The bibliometric analysis on the study domain offers an understanding of the study field along with its significant procedure depicting a path, level of research trends, and its growth (Block et al., 2020). Further, this study attempts to analyze women entrepreneurship with bibliometric analysis consisting of publication trend, annual scientific production, average citations, most relevant sources, sources production, most global cited documents, most local cited references, affiliations' production, countries' scientific production, most frequent words, bibliographic coupling of countries, co-occurrence network, thematic map, and co-citation network.

The remainder of this study is structured as follows: the second section of the study encompasses data and methodology reflecting the data source and research methods. The next section of the study comprises the results of bibliometric analysis, followed by a discussion. Finally, another section covers by conclusion, implications, and future research.

## 2. Data and methodology

### Data sources

This study conducted bibliometric research assessing the trends and direction of women entrepreneurship utilizing the data from secondary sources. Further, this study accumulated relevant data from the publication of scholars' articles on the women entrepreneurship domain, especially extracted from the Scopus database. Thus, this study included only the journal articles published in English language as the source of database for the analysis. Further, this research paper relied on the analysis of data extracted from this platform as it offers a large number of scholarly publications, which offers a reliable dataset for the analysis (Scopus, 2024). The vibrating areas of women entrepreneurship and its discovery manifest intensity of investigation, reflect the landscape, and construct a foundation for future pathways. This research gathered a dataset of 5992 research articles for analysis, representing the duration from 2001 to 2023. The final publication documents written only in the English language were embraced as data for the study. The data collection was mainly based on business, management, and accounting subject areas.

### Research method

The accumulation of research data on women entrepreneurship was accomplished utilizing leading keywords relevant to the research area. The keywords used in the data exploration were women

entrepreneurship, women's status, gender role, women's employment, women's empowerment, gender equality, women, female, equality, entrepreneurship, and entrepreneurial orientation. The search of keywords was accomplished with Boolean operators. The data collection from Scopus was downloaded in CSV Excel format, and analysis was completed using R software with the biblioshiny package, and VOS viewer software was used for generating results. The following table 1 depicts the research strategy for database:

**Table 1**  
*Search strategy*

Procedure	Description
Step No 1: Field of Study	"Women Entrepreneurship" AND "Entrepreneurship" OR "Gender" OR "Entrepreneur" OR "Women" OR "Womens Status" OR "Female" OR "Women Entrepreneurs" OR "Family Business" OR "Entrepreneurial Orientation" OR "Gender Role" OR "Womens Employment" OR "Gender Equality" OR "Women Empowerment"
Step No 2: Database	SCOPUS
	5992
	Articles
	Journal
	Business, Management, Accounting
	Final
	English only
	2001 to 2023
Step No 3: Analysis	Visualization (R Studio_Biblioshiny and VOS Viewer)
	Annual Scientific Production
	Average Citations Per Year
	Three-Field Plot
	Most Relevant Sources
	Core Sources by Bradford's Law
	Sources' Production over Time
	Most Global Cited Documents
	Most Local Cited References
	Most Relevant Affiliations
	Affiliations' Production over Time
	Countries' Scientific Production
	Most Frequent Words
	Bibliographic Coupling of Countries
	Thematic Map
	Co-occurrence Network
	Co-citation Network

Source: Scopus

Table 1 reveals a search strategy in the field of women's entrepreneurship. The field of study encompasses women entrepreneurship, women's employment, women's empowerment, and gender roles. Similarly, the dataset involves 5992 Scopus-based data representing journal articles written in the English language extracted from the business, management, and accounting subject areas covering the time frame between 2001 to 2023. The analysis of data was completed using R Studio (biblioshiny) and VOS Viewer software, and reflected the analysis focusing on annual scientific production, average citations per year, and finally encompassed the co-citation network in the study.

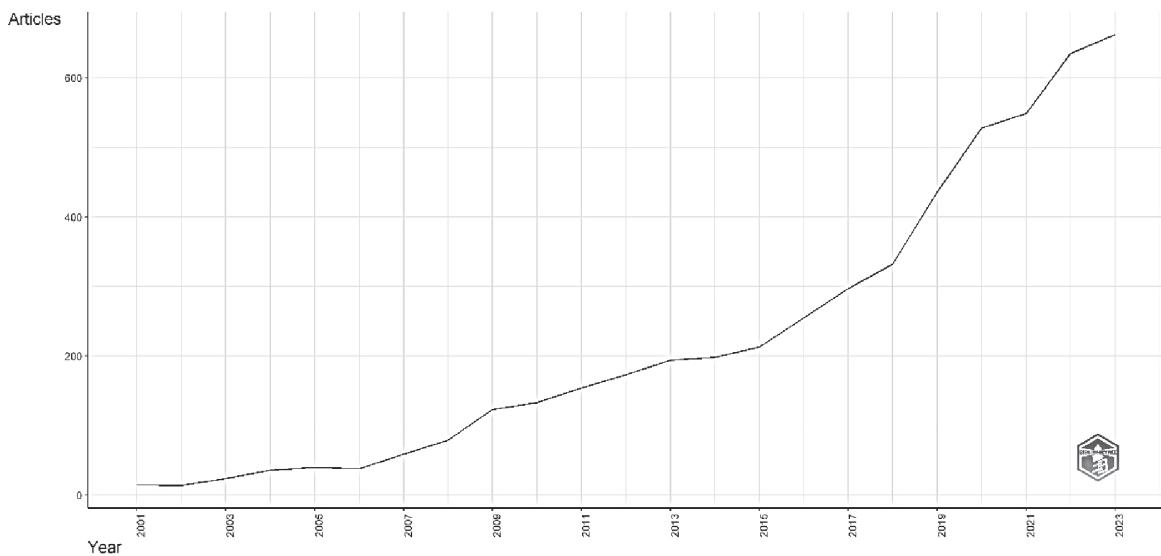
## Results

### ***Annual Scientific Production on Women Entrepreneurship***

Women entrepreneurship research depicted an ascending trend, as women entrepreneurship is considered a vital source of introducing novel doctrines of conducting business operations. The growing path of investigation in this field reflects the significant areas of the study that heavily cover the entrepreneurial practices of women.

**Figure 1**

*Annual scientific production*



Source: Scopus

Figure 1 reveals the annual scientific production representing the entrepreneurial practices with the involvement of females in business operations. The ascending trends of research depicted the significance of the research areas. Publication of articles in the year 2001 was only 15 articles published in these women's entrepreneurship fields which has increased to 24 articles in 2003. Similarly, this trend has moved above this publication, reflecting 36 publications of research articles in the year 2004. In addition, the number of research articles published until 2008 remained below 100, indicating merely 79 publications. However, the rapid growth of research articles started in 2009, demonstrating 123 articles.

Moreover, from the year 2015, the publication reached 213 research articles. Interestingly, the rapid growth in scientific production found in the years 2016, 2017, and 2018 manifested in 255, 297, and 332 publications. Finally, in the years 2019, 2020, 2021, 2022, and 2023 revealed increasing trends of publications in this field depicting 436, 528, 549, 635, and 662 articles. This trend advocates the field of women entrepreneurship as an emerging and vibrant area depicted as a significant domain.

**Table 2***Average citations per year*

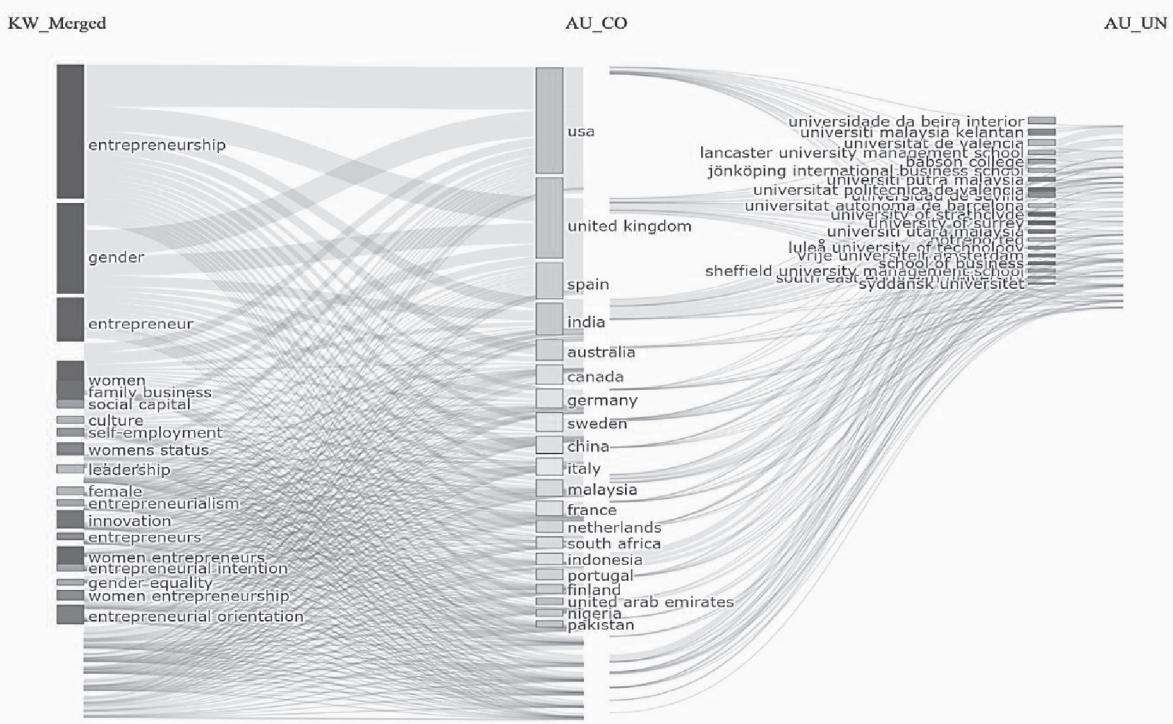
Year	Mean TC per Article	N	Mean TC per Year	Citable Years
2001	212.73	15	8.51	25
2002	121.64	14	5.07	24
2003	268.58	24	11.68	23
2004	102.53	36	4.66	22
2005	162.60	40	7.74	21
2006	76.05	38	3.80	20
2007	88.15	59	4.64	19
2008	76.89	79	4.27	18
2009	93.72	123	5.51	17
2010	69.02	133	4.31	16
2011	46.51	154	3.10	15
2012	67.83	173	4.84	14
2013	58.41	194	4.49	13
2014	52.38	198	4.36	12
2015	48.96	213	4.45	11
2016	42.69	255	4.27	10
2017	41.81	297	4.65	9
2018	34.72	332	4.34	8
2019	34.81	436	4.97	7
2020	31.53	528	5.26	6
2021	23.06	549	4.61	5
2022	17.86	635	4.46	4
2023	10.63	662	3.54	3

Source: Scopus

Table 2 depicts the average citation per year, indicating 8.51 mean total citations in 2001. Similarly, the mean total citation per year in 2002 was 5.07, which was increased to 11.68 in 2003. The trend in the mean total citation demonstrated a fluctuation and declined to 4.66 in 2004. However, this direction of citation increased to 7.74 in 2005, 3.80 in 2006, 4.64 in 2007, and 4.27 in 2008. The average citation slightly increased in 2009, indicating 5.51. Moreover, this trend found a decline in 2010 and 2011, revealing its mean total citation was 4.31 and 3.10. Next, this annual average citation trend remains almost stable

from 2012 to 2022, standing at 4.84 and 4.46, except in the year 2020, with a mean yearly citation of 5.26. Finally, the year 2023 reflected a decline in the annual average citation, showing 3.54 citations. Thus, the annual average citation landscape demonstrates that growing research trends are found in the areas of female entrepreneurship, but its citation network has declined in scholarly publication works throughout the globe during the study period.

**Figure 2**  
*Three-field plot*

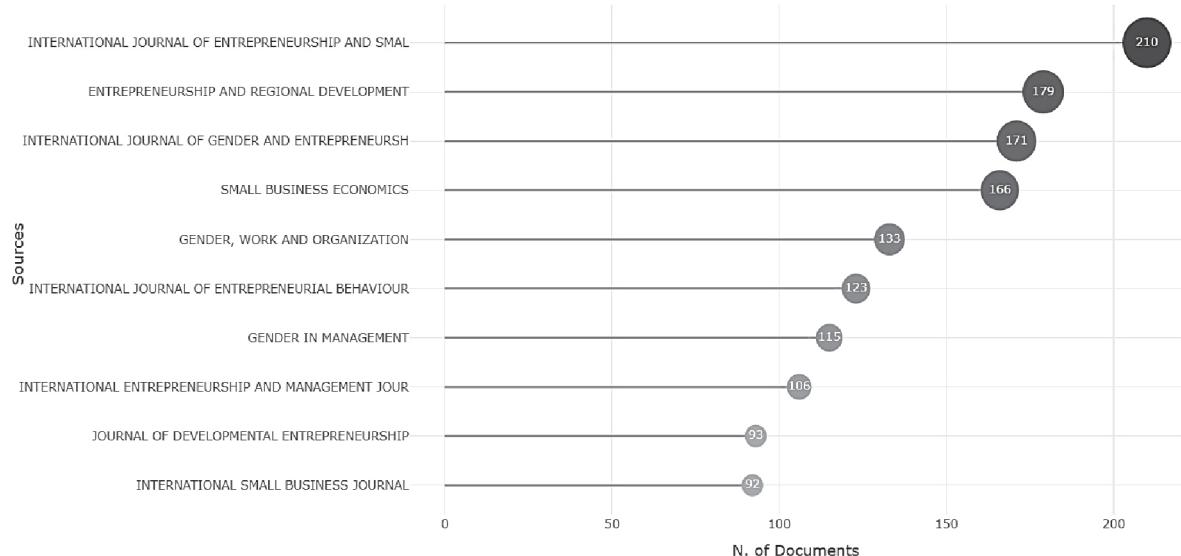


Source: Scopus

Figure 2 shows a three-field plot consisting of keywords, countries, and affiliation. The left vertical line of the figure represents keywords used for the investigation, the middle vertical indicator shows the countries representing the research works, and the right vertical line reflects the affiliation of authors. It shows that USA is a mostly published country, UK stands in the second position in terms of publication proportion, Spain, India, Australia, Canada, Germany, Sweden, China, Italy, Malaysia, France, Netherlands, South Africa, Indonesia, Portugal, Finland, UAE, Nigeria, and Pakistan are in standing in subsequent hierarchical order respectively. Similarly, mostly investigated keywords are entrepreneurship, gender, entrepreneur, women, family business, social capital, culture, self-employment, women's status, leadership, female entrepreneurialism, innovation, entrepreneurs, women entrepreneurs, entrepreneurial intention, gender equality, women entrepreneurship, and entrepreneurial orientation, respectively. In

addition, universities involved in the publication remained Universidade Da Beira Interior, Universiti Malaysia Kelantan, and others. Moreover, the three field plots comprising its keyword, countries, and affiliation showed that the USA is the most widely published country, followed by the UK. Key keywords include entrepreneurship, gender, women, family business, and social capital.

**Figure 3**  
*Most relevant sources*



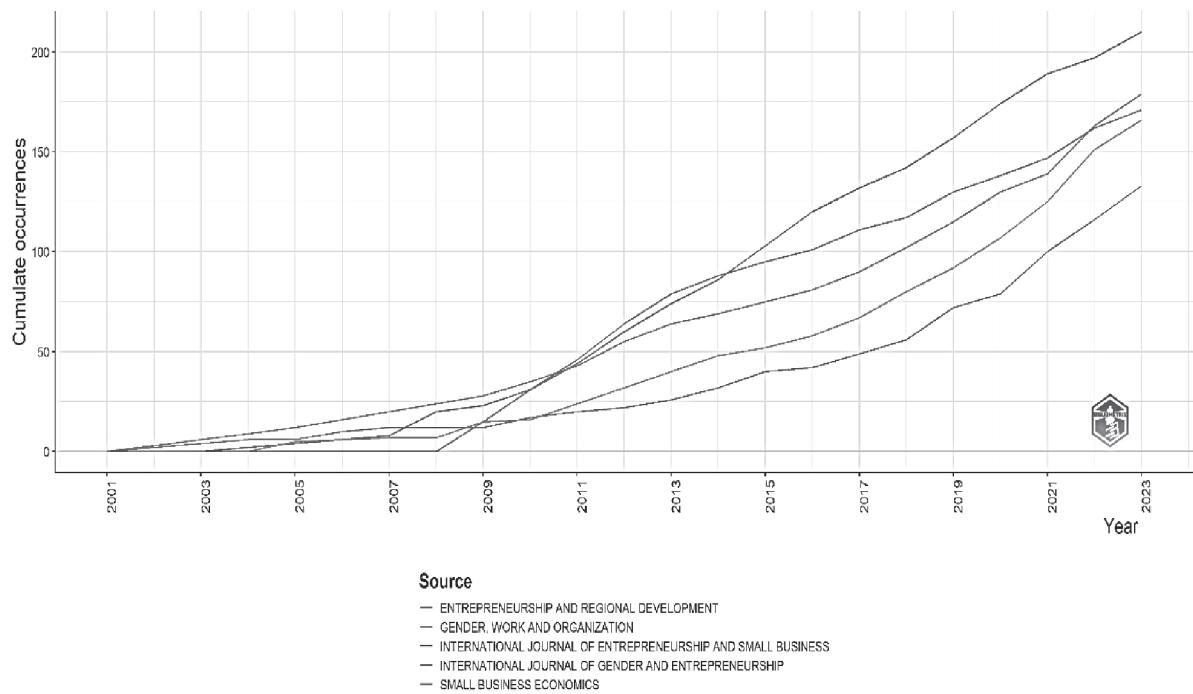
Source: Scopus

Figure 3 reveals the most relevant sources of research works on women's entrepreneurship. The leading sources of research published in the International Journal of Entrepreneurship and Small Business reflect 210 publications. Similarly, 179 scientific works were derived from entrepreneurship and regional development, standing in the second position of publication. Next, the relevant source was from the International Journal of gender and Entrepreneurship 171 during the period of 2001 to 2023. In addition, other sources from small business economics, gender, work and organization, international journal of entrepreneurial behavior, gender in management, international entrepreneurship and management journal, journal of developmental entrepreneurship, and international small business journal represent published sources 166, 133, 123, 115, 106, 93, and 92, respectively. Therefore, this scenario presents the higher sources for the most relevant sources to lower sources of research works, differentiating their total production contributing to the field of women entrepreneurship.

**Table 3***Core sources by Bradford's Law*

S.N.	Sources	Number of Articles	Bradford's Law	
			Rank	Zone
1	International Journal of Entrepreneurship and Small Business	210	1	Zone 1
2	Entrepreneurship and Regional Development	179	2	Zone 1
3	International Journal of Gender and Entrepreneurship	171	3	Zone 1
4	Small Business Economics	166	4	Zone 1
5	Gender, Work and Organization	133	5	Zone 1
6	International Journal of Entrepreneurial Behavior and Research	123	6	Zone 1
7	Gender in Management	115	7	Zone 1
8	International Entrepreneurship and Management Journal	106	8	Zone 1
9	Journal of Developmental Entrepreneurship	93	9	Zone 1
10	International Small Business Journal	92	10	Zone 1
11	Journal of Business Research	79	11	Zone 1
12	Technological Forecasting and Social Change	77	12	Zone 1
13	Journal of Business Venturing	75	13	Zone 1
14	Journal of Enterprising Communities	67	14	Zone 1
15	Journal of Small Business and Enterprise Development	56	15	Zone 1
16	Journal of Family Business Management	52	16	Zone 2
17	Journal of Women's Entrepreneurship and Education	51	17	Zone 2
18	Academy of Entrepreneurship Journal	50	18	Zone 2
19	Emerald Emerging Markets Case Studies	45	19	Zone 2
20	Journal of Business Ethics	45	20	Zone 2

Source: Scopus

**Figure 4***Sources' production over time*

Source: Scopus

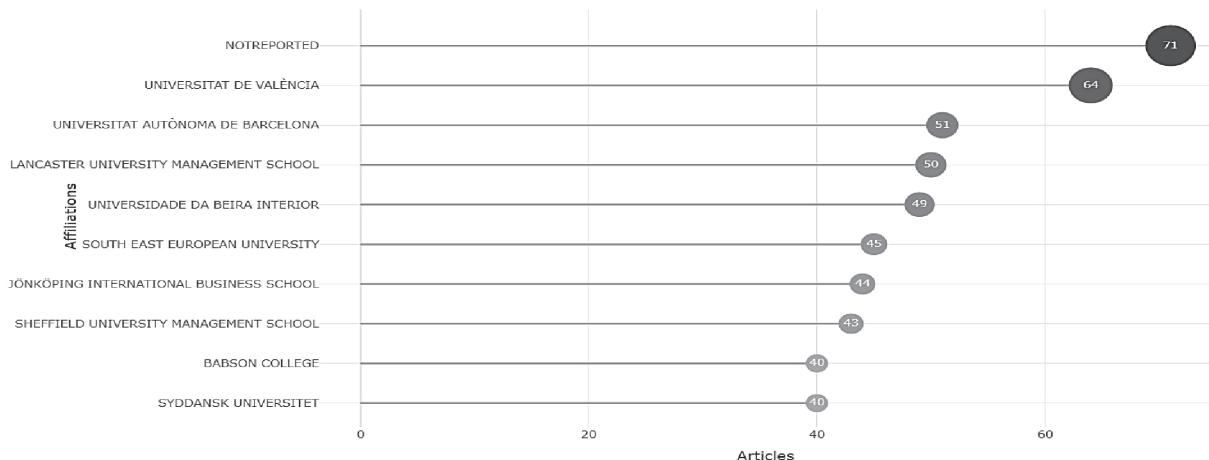
Table 3 depicts core sources by Bradford's Law, which contains journals, publication frequency, ranking, and zone. Similarly, Figure 4 shows sources' production over time. International Journal of Entrepreneurship and Small Business found in the rank 1 with a total publication number 210 and, followed by Entrepreneurship and Regional Development, occupying the second with publication of 179 publications. Similarly, the International Journal of Gender and Entrepreneurship remained in the third rank, consisting of 171 publications, and Small Business Economics stood in the fourth rank, demonstrating 166 total publications. Moreover, Gender, Work and Organization occupied fifth rank with 133 articles, and International Journal of Entrepreneurial Behavior and Research manifested in sixth rank, along with 123 published research works. In addition, Gender in Management, International Entrepreneurship and Management Journal, Journal of Developmental Entrepreneurship, and International Small Business Journal remained within the top ten ranks, reflecting the published articles 115, 106, 93, and 92. The Journal of Business Ethics remained in the 20th rank with 45 published research articles.

**Figure 5**  
*Sources' local impact*

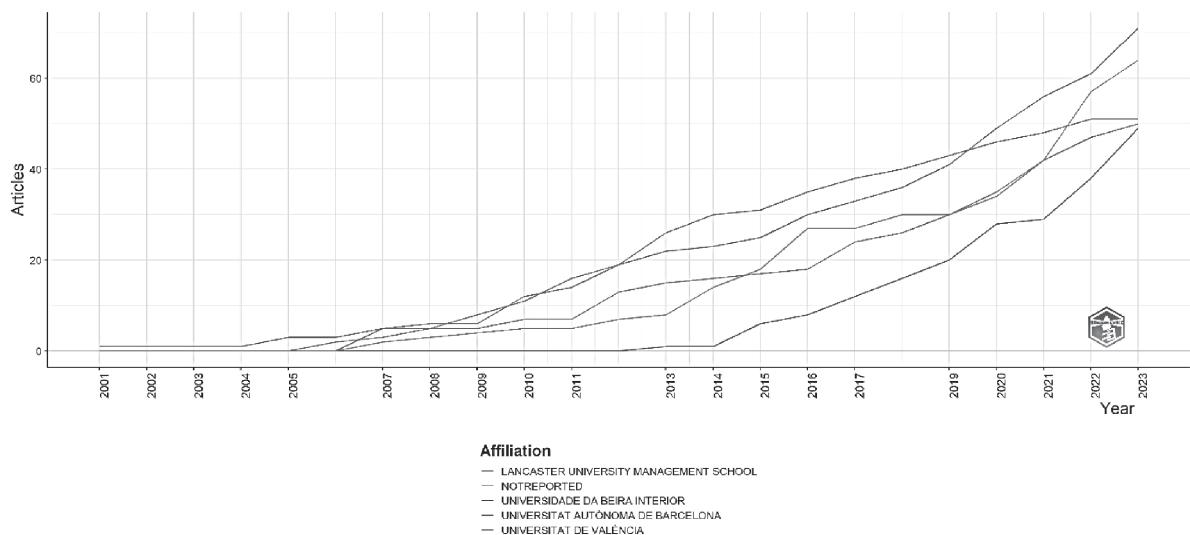


Source: Scopus

Figure 5 displays sources' local impact assessed by their H-Index, as the impact of the source can be appraised with H-Index (Sahabuddin et al., 2023). These display the influence of distinct sources in the academic areas of women entrepreneurship through H-Index-based measurement. Fundamentally, ten sources consisted in the study as entrepreneurship and regional development obtained a high H-index, gaining 67 during the study period. Small Business Economics held another level of H-index with 59, standing in the second position, and Journal of Business Venture stood in third place with 54 H-Index score. Moreover, the International Journal of gender and Entrepreneurship received a 48 H-Index, the International Journal of Entrepreneurial Behavior and Research with a 48 H-Index, the International Small Business Journal 47 H-Index, Gender, Work and Organization 39 H-Index, Journal of Business Research 39, and the least H-Index holding source depicts technological forecasting and social change with 38 H-Index.

**Figure 6***Most relevant affiliations*

Source: Scopus

**Figure 7***Affiliations' production over time*

Source: Scopus

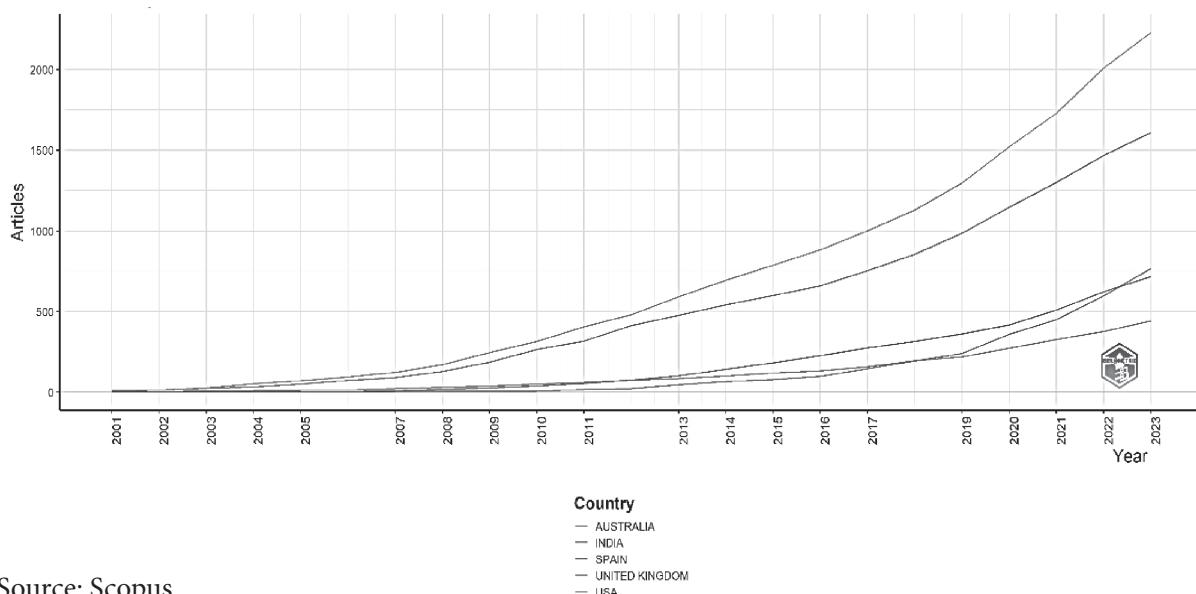
Figure 6 shows the most relevant affiliations in the field, and Figure 7 shows the affiliation's production over time covering the 2001 to 2023 period. Out of the ten most relevant affiliations, Notreported reflected 71 research publications in the field of women entrepreneurship, occupying the first rank, and Universitat De Valencia showed 64 papers, and Universitat Autònoma de Barcelona revealed 51 research

works. Similarly, Lancaster University Management School depicted 50 scientific works, Universidade Da Beira Interior represented 49, and South East European University demonstrated 45. Finally, the least scientific paper was revealed from Syddansk University with 40 papers. Therefore, this result comprises the most contributing affiliation to the least contributing one in terms of the publication in the field of female entrepreneurship.

**Table 4***Countries' scientific production*

S.N.	Country	Frequency	S.N.	Country	Frequency
1	USA	2229	11	Sweden	342
2	UK	1609	12	France	289
3	India	766	13	Indonesia	285
4	Spain	717	14	South Africa	267
5	Australia	442	15	Netherlands	256
6	Malaysia	405	16	Portugal	233
7	Canada	404	17	Finland	193
8	China	393	18	Nigeria	166
9	Germany	385	19	Pakistan	154
10	Italy	366	20	United Arab Emirates	152

Source: Scopus

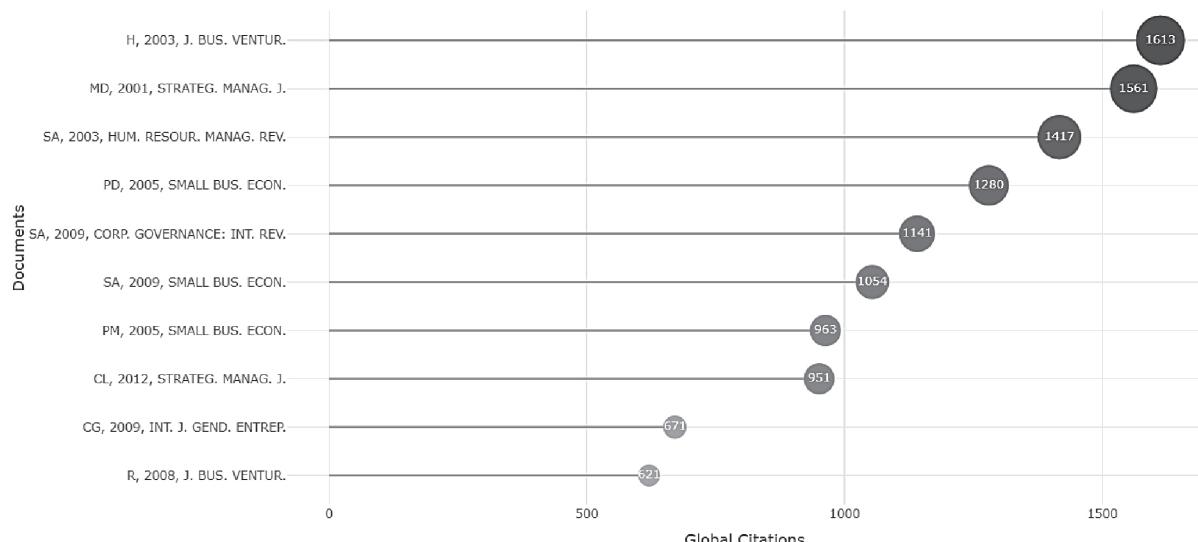
**Figure 8***Countries' production over time*

Source: Scopus

Table 4 shows the countries' scientific production during the study period from 2001 to 2023. Similarly, Figure 8 reveals countries' production over time. This result contains the top twenty countries with the publication quantity. The USA reflected 2229 publications as the top country with the highest publications and followed by the UK with 1609 scientific productions. Further, India represented 766, Spain 717, Australia 442, Malaysia 405, Canada 404, China 393, Germany 385, and Italy 366 as the top ten countries. In addition, Sweden represents the publication number of 342, occupying the eleventh position, and France itself is another country that has contributed with the publication of 289 research articles. Furthermore, Indonesia has also been revealed as another contributing country depicting the number with publication of 285 and South Africa stands as a vital country with 267 research articles. Next, the Netherlands consisted of 256 research articles, Portugal with 233, Finland represented 193 publications, Nigeria had 166 works published, and Pakistan had 154 research articles. Finally, the least production of scientific works was found in the United Arab Emirates, with 152 publications.

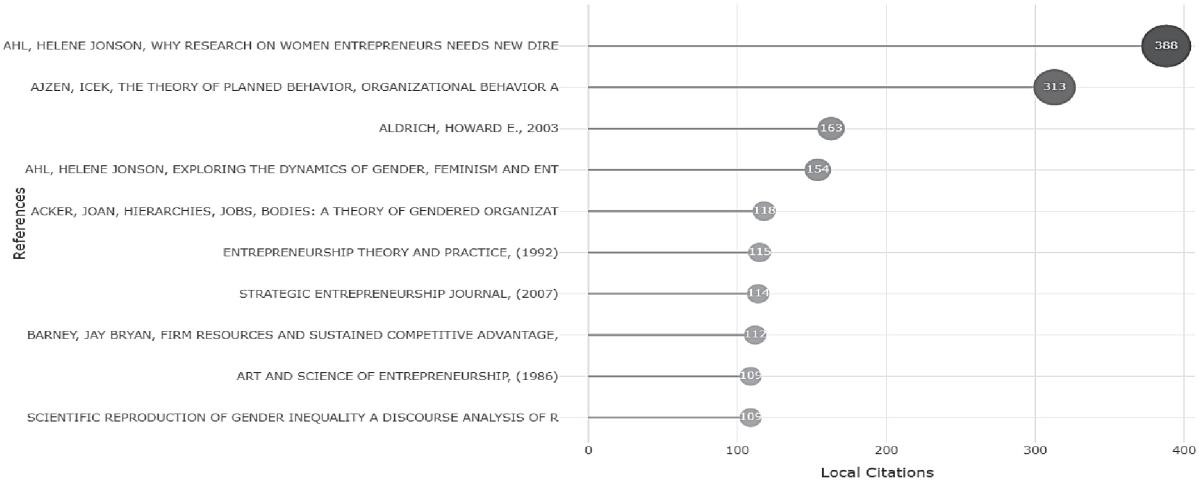
**Figure 9**

*Most global cited documents*



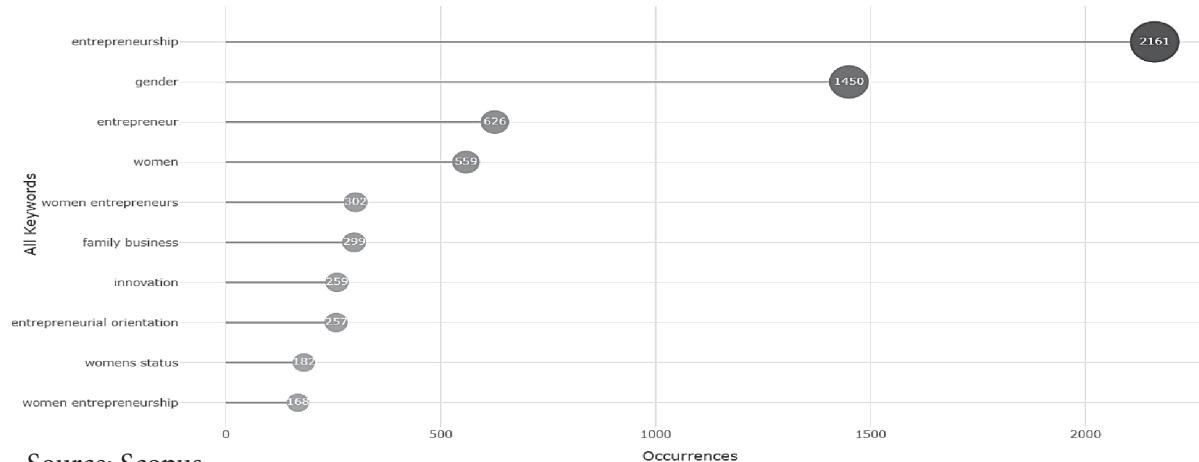
Source: Scopus

Figure 9 demonstrates the most globally cited documents. The research paper by Hoang and Antoncic (2003) was the most cited document, reflecting 1613 citations, and research work by Lounsbury and Glynn (2001) was the second most cited document, depicting 1561 global citations. Similarly, the research work by Shane et al. (2003) held third mostly cited global document status with 1417 citations from 2001 to 2023, and another scientific work published by Reynold et al. (2005) remained in fourth position in terms of global citation with 1280. Further, research work by Terjesen et al. (2009) reflected 1141 global citations, Shane (2009) depicted 1054 global citations, Arenius and Minniti (2005) revealed 963 citations, Dezso and Ross (2012) manifested 951 citations, Brush et al. (2009) displayed 671 citations, and, as the least cited scientific document by Estrin et al. (2007) reflected 621 global citations.

**Figure 10***Most local cited references*

Source: Scopus

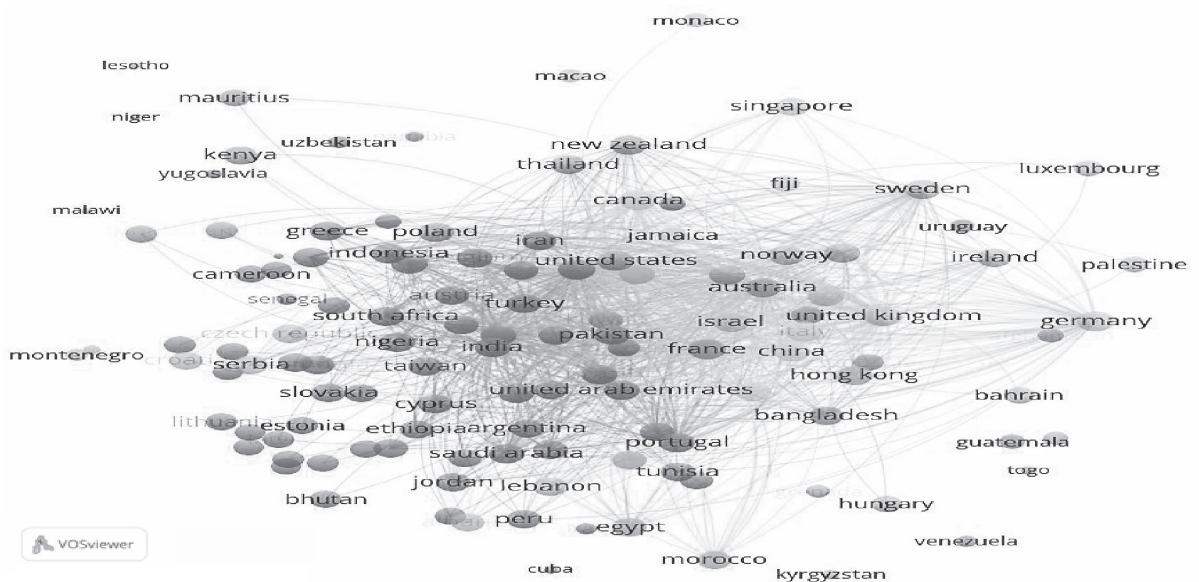
Figure 10 represents the most locally cited references. The document published by Ahl (2006) was revealed as the top scientific paper representing the highest local citation, 388, and Ajzen (1991) demonstrated the second position with a total local citation of 313. Similarly, the research document published by Aldrich and Cliff (2003) depicted a total of 163 local citations, Ahl and Marlow (2012) manifested 154 local citations. Further, the research work published by Acker (1990) displays 118 local citation, Herron et al. (1992) shows 115, Ireland (2007) with 114, Barney (1991) reflected 112 local citations, and the least local citations revealed for the scientific publication by Sexton and Smilor (1986); Ahl (2004) with 109 local citations for each author's publication.

**Figure 11***Most frequent words*

Source: Scopus

Figure 11 shows the most frequent words that occur in the field of entrepreneurship. The entrepreneurship keyword occurred mostly, reflecting 2161 occurrences, and the gender keyword found 1450 occurrences. Similarly, the entrepreneur keyword manifested 626 occurrences, and women mainly represented 559 occurrences. Further, the key areas of the study concerning women entrepreneurs revealed 302 occurrences, and family business with 299 occurrences. Moreover, the innovation keyword reflected 259 occurrences, and the entrepreneurial orientation existed with 257 occurrences. In addition, women status was found with 182 occurrences, and women entrepreneurship revealed with 168 occurrences as the least occurring keywords in the women entrepreneurship field.

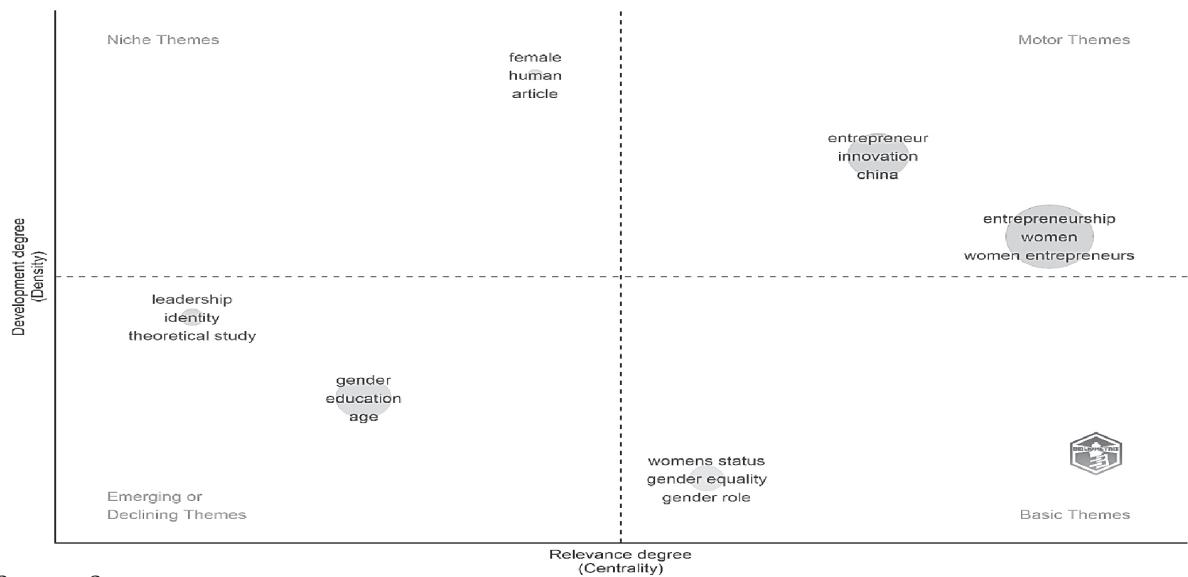
**Figure 12**  
*Bibliographic coupling of countries*



Source: Scopus

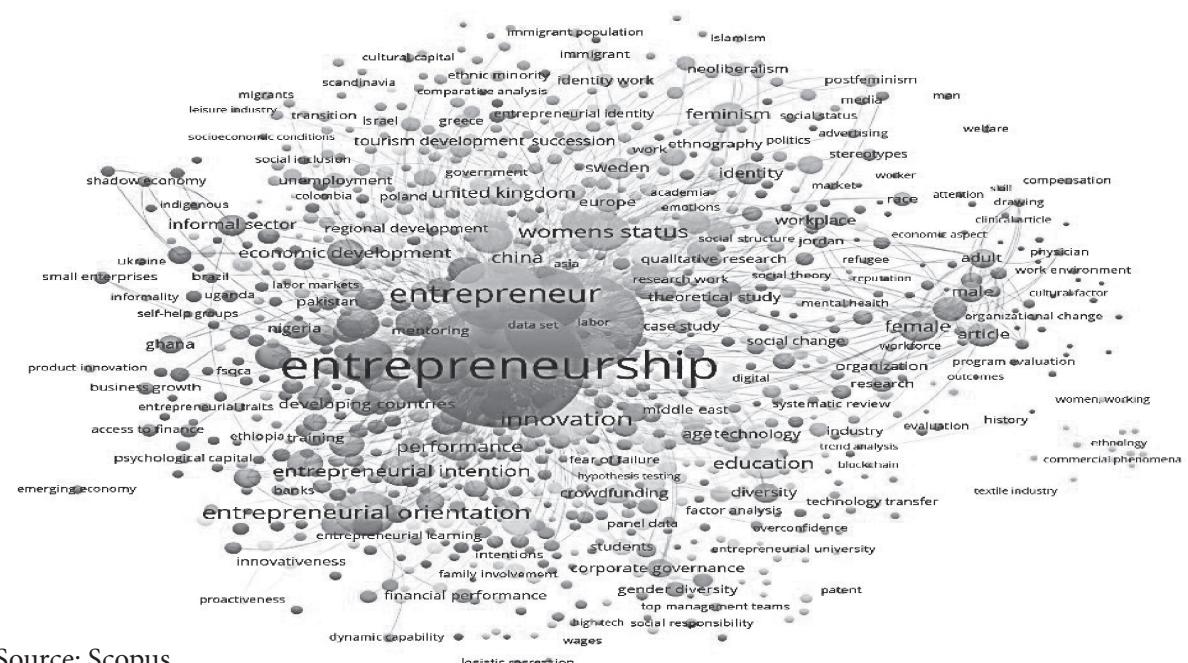
Figure 12 depicts the bibliographic coupling of countries reflected through different colors representing the distinct levels of contribution in the field of women entrepreneurship. Countries in this figure highly emphasize the significance of women entrepreneurship. Major countries emerging from within the red colored region demonstrate as highly contributing countries including the USA, Turkey, India, and several other countries. Similarly, other countries comprising the UK, Australia, France, and Bangladesh, highlighted with green color, are the next contributing countries from developed and developing countries. Further, other clusters are constructed, highlighted with blue and pink colors, which demonstrate the contributing countries in the field of female entrepreneurship. Thus, this bibliographic coupling of countries is clustered in four different groups; each segment depicts the distinct level of contribution of different countries.

**Figure 13**  
*Thematic map*



Source: Scopus

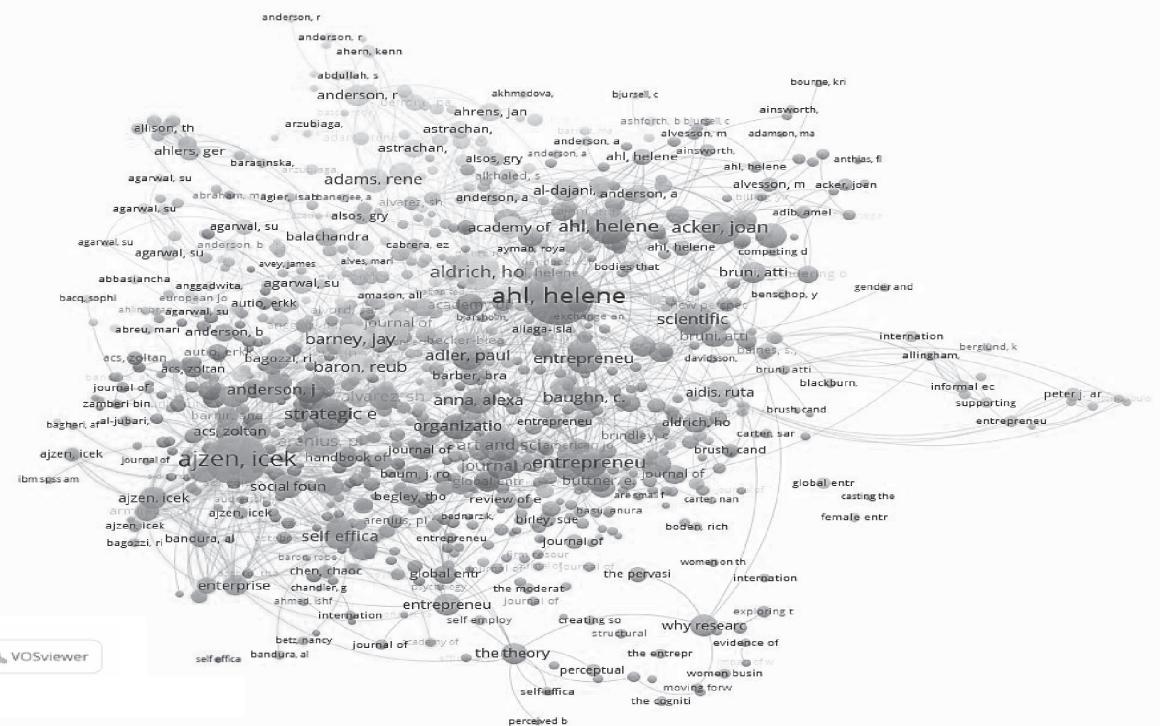
**Figure 14**  
*Co-occurrence network*



Source: Scopus

Figure 13 represents a thematic map, and Figure 14 reveals a co-occurrence network. Both figures reflected the basic themes of women's status, gender equality, and gender roles, along with the connecting co-occurrence network. Similarly, another thematic cluster representing a niche comprises the major theme of female, human, and article. The motor cluster theme contains entrepreneurs, innovation, entrepreneurship, women, and women entrepreneurs. This cluster demonstrates high density and relevance in the field of female entrepreneurship. However, the emerging or declining cluster comprises leadership, identity, theoretical study, gender, education, and age, which reveal limited development and relevance. Finally, the co-occurrence map demonstrated entrepreneurship as the leading area of the study, followed by entrepreneur.

**Figure 15**  
*Co-citation network*



Source: Scopus

Figure 15 reveals the total link or network representing the core component of the study and the authors contributing to the field of research on women entrepreneurship. Each node in the figure indicates primary concept, core words, and contributing authors, demonstrating the significance and repetitive frequency of the scientific publications. This scenario further manifested that greater nodes, especially women entrepreneurship, advocate a key theme, and each line linking to each other depicts the connection of research titles, authors, and others. Therefore, this demonstrates research scholars and the leading segment of the investigation areas, especially entrepreneurship, innovation, leadership, and gender.

## Discussion

Bibliometric analysis on the theme of women entrepreneurship was conducted using Scopus data covering the period from 2001 to 2023, and the analysis process was accomplished with R Studio (Biblioshiny) and VOS Viewer software. Consequently, the results from this reflected the increasing trends in terms of publication frequency in a growing and emerging field of study. The women entrepreneurship areas of study depicted an increasing publication pattern in the recent period, offering direction and future trends of the study areas.

Further, outcomes of the analysis on women entrepreneurship found significant growth, with articles published from 15 in 2001 to 662 in 2023, with rapid publication trends observed in various years. Similarly, average citation per year fluctuated from 8.51 in 2001 to 4.46 in 2022, with slight increases in 2009 and declining trends in 2010 and 2011, respectively. In addition, the research on women entrepreneurship was primarily sourced from international journals, with 210 publications from entrepreneurship and regional development through the analysis of the most relevant sources, core sources by Bradford's law, and sources production over time. Other relevant sources included international journals of gender and entrepreneurship, small business economics, gender, work and organization, and developmental entrepreneurship. The sources' local impact measured through H-Index manifested top ten sources, including entrepreneurship and regional development, small business economics, and the Journal of Business Venture.

In addition, sources included international journals of gender and entrepreneurship, entrepreneurial behavior and research, and technological forecasting and social change. Next, the most relevant affiliation and its productions consisted of the top ten most relevant, with Notreported having the highest number of publications, followed by Universitat De Valencia, Lancaster University Management School, Universidade Da Beira Interior, and South East European University. Moreover, country-based scientific production during the study period contained the top 20 countries, comprising the USA, UK, India, Spain, Australia, Malaysia, Canada, China, Germany, Italy, and the United Arab Emirates, with the USA having the highest publications at 2229. The most globally cited documents revealed by Hoang and Antoncic (2003), Lounsbury and Glynn (2001), Shane et al. (2003), Reynold et al. (2005), Terjesen et al. (2009), and scientific work by Estrin et al. (2007) received significant global citations. Moreover, the most locally cited documents represented ten research works by Ahl (2006); Ajzen (1991); Aldrich and Cliff (2003); Ahl and Marlow (2012); Acker (1990), and works by Ahl (2004).

The findings on most frequent words revealed entrepreneurship keywords as the most frequent, with gender keywords being the most common. Women entrepreneurs are most common, with 302 occurrences in family business, 299 in innovation, and 257 in entrepreneurial orientation. The bibliographic coupling of countries in the field of women entrepreneurship was depicted in four different groups, each with distinct levels of contribution. Major countries like the USA, Turkey, and India were highlighted in red, showing their contribution in the field, followed by the UK, Australia, France, and Bangladesh in

green. Furthermore, thematic maps and co-occurrence networks reveal themes such as women's status, gender equality, and gender roles. The motor cluster focuses on entrepreneurs, innovation, and women entrepreneurs, demonstrating high density and relevance in female entrepreneurship. Emerging clusters include leadership, identity, theoretical study, gender, education, and age, revealing limited development and relevance. Entrepreneurship is the leading area of study.

## Conclusion, Implication, and Future Research

The recent study extends a foundation to discover and track the rising trends of women entrepreneurship, offering insight to researchers to explore significant areas of study that help to extend strategic moves to enhance the sustainability of women entrepreneurship's contribution to economic development. Further, this research shows existing scenarios occurring in the field of women entrepreneurship through the analysis of annual scientific production, indicating its growing trends, and average citations per year status shows an increasing direction for the first five years and declines thereafter during the study period. In addition, the study shows the scenario of the research in women entrepreneurship through a three-field plot, most relevant sources, core sources by Bradford's law, source production over time, sources' local impact, most relevant affiliations, affiliations' production over time, and countries' scientific production. Similarly, other analysis takes place with the most globally cited documents, most locally cited references, most frequent words, bibliographic coupling of countries, thematic map, co-occurrence network, and co-citation networks. The most contributing countries include the USA, UK, India, and others in the field of women entrepreneurship. Additionally, the most contributing affiliation is Notreported, which shows 71 research publications in the field of women entrepreneurship occupying the first rank, and Universitat De Valencia shows 64 papers. This study represents developed countries with a large portion of scientific production in the field. Further, this study demonstrates leading themes of research exploring gender status, entrepreneurial intention, and accessibility of finance. The foundational doctrines in the field derive from the co-occurrence and citation networks, and Western countries hold a higher contribution proportion. Moreover, this study assists research scholars by providing a structured overview for future research, while policymakers can focus on developing targeted facilitative policies. Similarly, this study establishes a foundation for entrepreneurs reflecting the critical success factors and constraints. It further fosters the enhancement of entrepreneurial practices based on strategies deriving from evidence.

In addition, this study reflects several limitations as entirely dependent on Scopus data, which may exclude other significant literature isolating other regional publications. Moreover, it includes only publications in English, excluding non-English works. The time period spans nearly two decades, which may omit significant contributions from other periods. Thus, future study needs to embrace a comprehensive analysis integrating the base of data sources with Web of Science, regional database, and including the data of Google Scholar for representative findings. Language coverage can enhance the works published in other languages in future studies. A comparative study can take place, representing diverse cultural and region-based studies.

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