Development of Women Entrepreneurship Research in Global Perspective through Bibliometric Study

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ABSTRACT

Women entrepreneurship has increasingly been recognized as a key driver of economic growth, social empowerment, and innovation on a global scale. Over the past decades, scholarly interest in this field has expanded significantly, exploring diverse themes from gender equality and socio-cultural barriers to technology adoption and entrepreneurial ecosystems. This study aims to map the intellectual structure, thematic evolution, and collaboration patterns of global women entrepreneurship research through a comprehensive bibliometric analysis. Data were retrieved from the Scopus database without year restrictions, covering peer-reviewed articles, reviews, and conference papers. The dataset was analyzed using VOSviewer to perform performance analysis and science mapping, examining publication trends, prolific authors, leading countries, and keyword co-occurrence networks. The results reveal that *economic development*, *gender equality*, and *empowerment* are central, persistent themes, while emerging topics such as *entrepreneurial ecosystem*, *social media*, and *motivation* indicate a shift toward technology-enabled and ecosystem-based approaches. Collaboration networks highlight the dominance of countries like the United States, United Kingdom, and India, alongside growing contributions from developing economies. This study contributes to the theoretical understanding of women entrepreneurship by consolidating fragmented literature and identifying future research opportunities, offering practical implications for policymakers and development agencies aiming to foster inclusive and sustainable entrepreneurship globally.

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1. INTRODUCTION

In recent decades, women's entrepreneurship has emerged as a pivotal driver of economic growth, innovation, and social development worldwide. Increasing participation of women in entrepreneurial activities contributes not only to job creation and poverty reduction but also to the diversification of business ideas and market expansion [1], [2]. The global entrepreneurial landscape has witnessed a steady rise in women-led ventures, supported by evolving socio-economic structures, improved access to education, and gender-focused policy interventions. This evolution reflects a shift from viewing women merely as beneficiaries

of economic growth to recognizing them as active agents in shaping markets and communities [3], [4], [5].

Scholarly interest in women entrepreneurship has expanded significantly, encompassing various dimensions such as leadership styles, innovation capabilities, access to financing, and socio-cultural barriers. Research has explored how women entrepreneurs operate across diverse sectors, ranging from traditional small enterprises to technology-driven startups [6]. This body of work highlights the complex interplay between individual competencies, institutional frameworks, and macroeconomic conditions in enabling or constraining women's entrepreneurial success. Consequently, women entrepreneurship has become an essential field of study within management, economics, and development disciplines [7], [8].

The global perspective of women entrepreneurship research is increasingly relevant due to variations in cultural norms, regulatory environments, and resource accessibility across countries [9]. Comparative studies have shed light on the influence of gender equality policies, microfinance initiatives, and digital technologies in fostering women's entrepreneurial activities in both developed and developing nations. Moreover, cross-national analyses help to identify transferable best practices and context-specific interventions that can enhance women's business participation and sustainability [10], [11].

In recent years, bibliometric methods have gained prominence in mapping the intellectual structure and research trends of women entrepreneurship studies. By systematically analyzing scholarly publications, citation patterns, and co-authorship networks, bibliometric analysis offers an objective lens to evaluate the evolution of this research domain. Such an approach helps identify influential authors, high-impact journals, emerging themes, and geographic research clusters that define the current state and future trajectory of the field.

Given the growing body of literature on women entrepreneurship, there is a pressing need to synthesize global research outputs systematically. Understanding the thematic evolution, methodological approaches, and collaborative networks in this area is crucial for scholars, policymakers, and practitioners aiming to design informed interventions. A bibliometric perspective can reveal knowledge gaps, uncover underexplored contexts, and support evidence-based strategies to promote inclusive and sustainable entrepreneurship worldwide.

Although women entrepreneurship has attracted increasing scholarly attention, existing literature is highly fragmented across disciplines, geographic regions, and thematic focuses. Many prior studies are country-specific or sector-specific, making it difficult to develop a comprehensive global understanding of the field's development. Furthermore, there has been limited effort to quantitatively map the evolution of women entrepreneurship research using bibliometric techniques, leaving knowledge gaps in identifying dominant research trends, key contributors, and emerging themes. This lack of integrated insight hinders the formulation of coherent policies and the advancement of theory in the global context. This study aims to conduct a comprehensive bibliometric analysis of global research on women entrepreneurship, examining publication trends, influential authors, key thematic areas, and collaborative networks.

2. METHODS

This study adopts a **bibliometric analysis** approach to systematically examine the global research landscape on women entrepreneurship. Bibliometric analysis is a quantitative research technique that enables the identification of publication patterns, citation structures, and collaboration networks within a defined research domain. The method was chosen for its ability to provide an objective, data-driven overview of the field's intellectual structure and thematic evolution. The research design follows established bibliometric procedures, including data collection, data cleaning,

performance analysis, and science mapping, ensuring both replicability and analytical rigor.

The data for this study were collected from the **Scopus** database, selected for its comprehensive coverage of high-quality, peer-reviewed publications across disciplines and its advanced search and export functions. The search query combined relevant keywords such as *"women entrepreneurship"*, *"female entrepreneurs"*, and *"women-owned business"*, applied to titles, abstracts, and keywords. The search was limited to articles, reviews, and conference papers to maintain scholarly quality, without restricting publication year to capture the field's complete historical development. All retrieved records were exported in BibTeX and CSV formats for subsequent analysis. Prior to analysis, the dataset underwent cleaning to remove duplicates, standardize author names, and consolidate keyword variations to improve mapping accuracy.

Bibliometric performance analysis and science mapping were conducted using **VOSviewer** software. Thematic clusters and temporal evolution were identified to track shifts in research focus over time. The combination of these analytical techniques provided both a macro-level overview of the field and micro-level insights into influential research streams.

3. RESULTS AND DISCUSSION
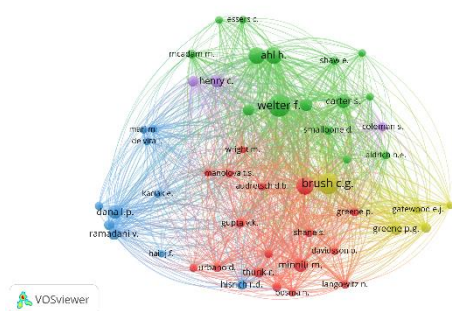
Co-Authorship Analysis

Figure 1. Author Visualization
Source: Data Analysis

Figure 1 illustrates the collaborative structure among the most influential authors in the field of women entrepreneurship research. Each node represents an author,

with the size of the node indicating the number of publications or citation impact, and the connecting lines (links) representing co-authorship relationships. The color clusters indicate distinct collaborative groups or research communities. For example, the green cluster—featuring authors such as Welter F. and Ahl H.—suggests a concentration on institutional and gendered perspectives in entrepreneurship. The red cluster, with key figures like Brush C.G. and Minniti M., appears to focus on global entrepreneurship trends, policy impacts, and gender-specific entrepreneurial ecosystems. The blue cluster, containing authors such as Dana L.P. and Ramadani V., may be associated with regional entrepreneurship studies and cross-cultural analyses, while the yellow cluster, including Gatewood E.J. and Greene P.G., likely focuses on entrepreneurial intentions, education, and women's business performance.
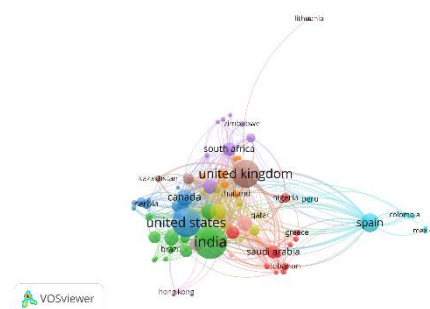

Figure 2. Country Visualization
Source: Data Analysis

Figure 2 highlights the global research partnerships in women entrepreneurship studies. Each node represents a country, with the node size reflecting its research output and the connecting lines indicating co-authorship ties between countries. The largest and most central nodes—**United States**, **United Kingdom**, and **India**—demonstrate their roles as leading contributors and hubs for international collaboration. The color clusters signify regional research alliances: for instance, the red cluster links Middle Eastern and Asian countries such as **Saudi Arabia**, **Bangladesh**, and **Thailand**; the blue cluster connects **Spain**, **Colombia**, and **Mexico**, suggesting strong Spanish-speaking research

ties; the green cluster connects the **United States**, **Canada**, and parts of Africa, indicating North American-led collaborations; and the purple cluster links **United Kingdom**, **South Africa**, and **Zimbabwe**, suggesting Commonwealth-based cooperation.
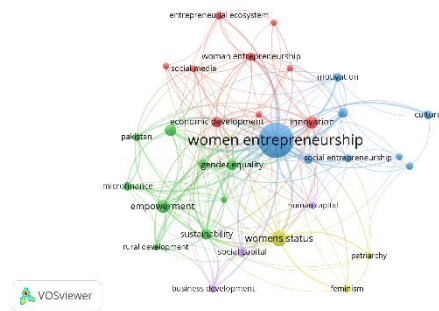
Keyword Co-Occurrence Analysis

Figure 3. Network Visualization
Source: Data Analysis

Figure 3 depicts the thematic structure of global research on women entrepreneurship. The central and most prominent keyword, **"women entrepreneurship"**, serves as the core node around which various thematic clusters are organized. Its high frequency and strong connections to other keywords signify that it acts as the primary conceptual anchor linking diverse subtopics within the field. The thickness of the connecting lines indicates the strength of association between themes, revealing that women entrepreneurship research is closely intertwined with topics such as *gender equality*, *economic development*, and *empowerment*. The map suggests that these interconnected topics collectively form the intellectual backbone of the research domain.

The red cluster focuses on **entrepreneurial ecosystems** and structural enablers of women entrepreneurship. Keywords in this group, such as *entrepreneurial ecosystem*, *social media*, and *motivation*, highlight research exploring the environmental, technological, and psychological factors that support or hinder women entrepreneurs. Studies in this cluster often examine how access to networks, digital platforms, and entrepreneurial culture shapes the ability of women to start and grow their businesses. This thematic concentration

suggests a growing interest in the systemic factors that contribute to gender-inclusive entrepreneurship environments.

The green cluster encompasses themes related to **empowerment, sustainability, and women's socio-economic status**. Keywords such as *empowerment*, *sustainability*, *microfinance*, and *social capital* indicate that this stream of research often investigates the transformative impact of entrepreneurship on women's lives, particularly in developing countries. The frequent association with *rural development* and *economic growth* suggests that many studies explore how women's entrepreneurial activities can drive both personal empowerment and broader community development, with microfinance and cooperative models frequently discussed as tools for inclusion.

The blue cluster connects **women entrepreneurship with social and cultural dimensions**. Keywords such as *social entrepreneurship*, *culture*, and *motivation* indicate research that bridges business creation with societal transformation. This thematic group often addresses how cultural norms, values, and social expectations influence women's entrepreneurial intentions and practices. It also points to the role of social entrepreneurship as a pathway for addressing gender disparities and promoting inclusive development, particularly in contexts where commercial motives intersect with social goals.

The yellow cluster covers **gender equality, women's status, and feminist perspectives**. Keywords like *women's status*, *patriarchy*, and *feminism* indicate critical and socio-political approaches to studying women entrepreneurship. This research stream often challenges structural gender inequalities, examines discriminatory practices, and advocates for policy reforms that enhance women's access to resources and decision-making. The interlinkage with *human capital* and *business development* reflects an interest in how education, skills, and capacity-building programs can empower women entrepreneurs to compete in markets historically dominated by men.
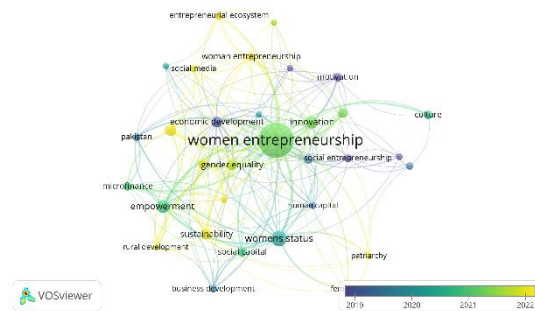
Figure 4. Overlay Visualization
Source: Data Analysis

Figure 4 illustrates the temporal evolution of research themes in women entrepreneurship from 2019 to 2022. The color gradient—from blue (earlier years) to yellow (more recent years)—indicates the average publication year for each keyword. Central terms like **"women entrepreneurship"**, **"economic development"**, and **"gender equality"** appear in green, suggesting they have been consistently studied throughout the observed period. These terms form the conceptual foundation of the field, linking various thematic areas, and indicating that they remain core focal points for researchers across time.

Newer and emerging research directions are represented by yellow-colored nodes such as **"entrepreneurial ecosystem"**, **"social media"**, and **"motivation"**, indicating increasing scholarly attention in recent years. This trend suggests a shift towards exploring the role of digital tools, online networks, and supportive ecosystems in enabling women's entrepreneurial activities. Such topics reflect the growing influence of technological change, social innovation, and global connectivity in shaping opportunities for women entrepreneurs, especially in the post-pandemic context where digital adoption accelerated.

Conversely, blue-colored nodes like **"culture"**, **"patriarchy"**, and **"social entrepreneurship"** indicate research themes that were more prominent in earlier years of the dataset. These topics largely focus on socio-cultural barriers, gender norms, and value-driven business models, which formed the basis for much of the early discourse on women entrepreneurship. While they remain

relevant, their relative decline in recent keyword emergence suggests that the research focus has gradually expanded from diagnosing gendered barriers to identifying enabling factors and strategies for scaling women-led ventures in a rapidly changing economic and technological landscape.
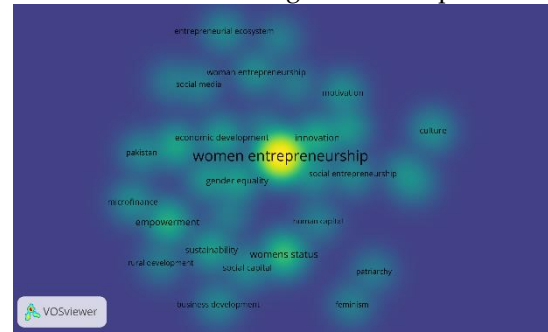

Figure 5. Density Visualization
Source: Data Analysis

Figure 5 highlights the most frequently occurring and influential keywords in global women entrepreneurship research. The brighter yellow areas, particularly around **"women entrepreneurship"**, **"economic development"**, and **"gender equality"**, indicate high-frequency keywords that represent central themes in the field. These concepts form the core of scholarly discourse, showing that research consistently links women's entrepreneurial activities to broader economic outcomes and gender equity goals. The dense concentration of these terms suggests a strong and sustained academic focus on the intersection of entrepreneurship with socio-economic empowerment.

In contrast, the green and blue areas, such as **"entrepreneurial ecosystem"**, **"social media"**, **"motivation"**, and **"sustainability"**, represent moderately explored but emerging topics. Their positioning away from the brightest cluster indicates that while they are gaining attention, they have not yet reached the same level of scholarly dominance. Peripheral keywords like **"patriarchy"**, **"feminism"**, and **"rural development"** appear in less dense areas, suggesting niche or context-specific research streams.

Citation Analysis
Practical Implication

The findings of this study provide valuable insights for policymakers, development agencies, and entrepreneurial support organizations aiming to foster women's participation in business globally. By identifying dominant research themes such as *economic development*, *gender equality*, and *empowerment*, stakeholders can align policy interventions with the most impactful areas of scholarly focus. The emergence of topics like *entrepreneurial ecosystems*, *social media*, and *motivation* highlights the need for programs that integrate digital literacy, access to online markets, and ecosystem-based support for women entrepreneurs. Additionally, understanding the geographic collaboration patterns can help international agencies prioritize cross-border partnerships and knowledge-sharing initiatives, ensuring that best practices from high-performing regions are adapted to the needs of developing economies.

Theoretical Contribution

This study enriches the theoretical discourse on women entrepreneurship by mapping its intellectual structure and revealing the thematic evolution of the field. It provides empirical evidence on how women entrepreneurship research has transitioned from an initial focus on socio-cultural barriers and gender norms to a more holistic exploration of enabling factors such as ecosystems, technology, and innovation. By employing bibliometric techniques, the research offers a structured overview of key authors, countries, and thematic clusters, which can serve as a foundation for future theoretical advancements. Furthermore, it bridges fragmented literature across disciplines (management, gender studies, development economics) into a coherent framework that can inform both comparative and integrative theories of gendered entrepreneurship.

Limitations

Despite its comprehensive scope, this study has certain limitations. First, the analysis relies solely on the **Scopus** database,

which, although extensive, may exclude relevant studies indexed in other repositories such as Web of Science, Google Scholar, or regional databases. Second, the bibliometric method focuses on quantifiable patterns of publication, citation, and keyword occurrence, which may not fully capture the qualitative depth and contextual richness of individual studies. Third, the interpretation of clusters and themes is influenced by the selection of keywords and the cleaning process, which might introduce classification bias. Finally, as the field of women entrepreneurship is evolving rapidly, particularly with the impact of technological change and global economic shifts future studies should update and expand the analysis to capture emerging trends beyond the study's publication window.

4. CONCLUSION

This bibliometric study provides a comprehensive overview of the global development of women entrepreneurship research, mapping its thematic structure, key contributors, and evolving trends. The analysis reveals that while foundational themes such as *economic development*, *gender equality*, and *empowerment* remain central, newer topics like *entrepreneurial ecosystems*, *social media*, and *motivation* have gained prominence, reflecting shifts toward technology-driven and ecosystem-based approaches. Collaboration networks indicate that research is globally dispersed yet concentrated in specific leading countries, with growing cross-national partnerships. By integrating insights from performance analysis and science mapping, this study not only highlights the field's intellectual evolution but also identifies emerging research opportunities. Ultimately, the findings serve as a valuable reference for scholars, policymakers, and practitioners seeking to design informed strategies that promote inclusive, sustainable, and impactful women entrepreneurship worldwide.

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