

The Evolution and Future Directions of Women's Entrepreneurship: A Bibliometric Review

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Abstract. *This research examines the evolution of female entrepreneurship and identifies future directions through a systematic bibliometric analysis of existing literature. Female entrepreneurship plays a crucial role in economic and social development, having both positive effects and specific challenges. The purpose of this study is to assess the trends and opportunities in this field, as well as to analyze the impact of female entrepreneurship on organizational competitiveness. Using the recognized academic database (Web of Science (WoS)), relevant literature is collected to obtain an overview of previous research. The methodology involves the application of bibliometric tools to assess scientific production, frequency of citations and influence of key authors. Analyzing these data, the research identifies collaborative networks between researchers and emphasizes the importance of studying female entrepreneurship in the context of organizational competitiveness. The results highlight not only the progress made in this field, but also the opportunities and future directions in female entrepreneurship research.*

Keywords: entrepreneurship, female entrepreneurship, evolution, bibliometric analysis.

Introduction

The female entrepreneur has become an essential research topic due to its impact on economic development and the promotion of gender equality (Brändle et al., 2023). In recent decades, the number of women founding and running their own businesses has increased significantly, contributing to the diversification of the global entrepreneurial environment (Aldag & Stearns, 1991; Dinu et al., 2024; Ejaz et al., 2023). This trend is fueled by recognition of the critical role women play in driving innovation, job creation and economic growth (Aldag & Stearns, 1991; Aldrich, 1989). However, female entrepreneurship remains faced with unique challenges such as limited access to finance, lack of professional support and cultural barriers (Bastida et al., 2023; Brändle & Kuckertz, 2022; Candida, 1992; Duflo, 2012). Women entrepreneurs often have difficulty accessing business networks and finding the necessary resources to grow their business (Eagly & Carli, 2007). Despite these challenges, they continue to find innovative ways to overcome these obstacles and contribute to the sustainability of the global economy (Chen & Xu, 2020; Driga et al., 2009).

In this context, an in-depth understanding of how women's entrepreneurship is evolving, the factors influencing women's business success and the support needed to facilitate the growth of this sector is essential (Gawel & Toikko, 2024; Henry et al., 2016). The purpose of these papers is to perform or bibliometric review of existing literature to identify major trends and future research directions in the field of female entrepreneurship. The results provide an overview of academic contributions and knowledge gaps, facilitating a better direction of future research (Georgieva, 2022).

Literature review

Female entrepreneurship is a topic of interest in the literature of social and economic contributions, but also of the unique challenges that women face in the entrepreneurial environment (Jabeen et al., 2020). Early research on female entrepreneurship focused on the motivations and personal traits of female entrepreneurs, such as the desire for financial independence, passion for innovation, and the need to balance work and personal life (Candida, 1992). Over time, the context in which women entrepreneurs operate has been examined, including factors such as access to finance, social capital, government support and the cultural environment.

Limited access to financial resources is considered one of the main barriers women face in starting and developing businesses. Investors and lenders often exhibit a gender barrier, favoring male entrepreneurs in funding processes. This discrepancy in access to capital is also accentuated by the narrower professional networks to which women have access, which limits opportunities for professional collaboration and support (Aldrich, 1989; Sayeed et al., 2021).

Another aspect examined in the literature is the role of public policies and government initiatives in promoting female entrepreneurship (Rivo-Lopez et al., 2022; Suganya, & Sreeja, 2019). Countries such as the United States and Canada have implemented specific support programs for women entrepreneurs, but their effectiveness is variable depending on the economic and cultural context (Henry et al., 2016; Powell, & Eddleston, 2008). Additionally, research suggests that in developing countries, access to such initiatives is limited and women face additional obstacles due to restrictive cultural norms (Roomi, & Parrott, 2008; O'Brien et al., 2022). These studies highlight the need for tailored support policies that take into account the diversity of women's experiences and needs.

Gender differences in leadership and management styles are also highlighted, with the literature revealing women's tendency to adopt a collaborative, people-oriented, and social impact business leadership style (Eagly, & Carli, 2007; Jennings, & Brush, 2013). This approach is often associated with long-term sustainability and social innovation, which helps create resilient and sustainable businesses. Women entrepreneurs also make significant contributions to economic diversification and reducing gender inequalities, particularly by creating jobs and boosting local economies (Jennings & Brush, 2013; Koch, & Kuckertz, 2024). In addition to economic contributions, female entrepreneurship is often associated with values such as equity, sustainability and social responsibility (Powell, & Eddleston, 2008; Jiang et al., 2022; Morrish et al., 2019; Sahut et al., 2021).

In conclusion, the literature on female entrepreneurship highlights a clear evolution of this field, from a knowledge of individual motivations and traits, to the complex analysis of contextual and structural factors that influence the success of female entrepreneurs (Roomi, & Parrott, 2008; Venkatesh & Ravikiran, 2012). At the same time, gaps persist, especially in researching the impact of public policies, cross-cultural differences and long-term performance. Future development of this field would benefit from greater attention to the influence of the social and economic

environment, as well as studies that provide new insights into the diversity of female entrepreneurship (Kuckertz et al., 2020; Melak, & Derbe, 2022).

Methodology

This research explores the evolution of female entrepreneurship, through a systematic bibliometric analysis of literature from 1993-2024. The main objective is to identify the major lines of research and to examine the networks of collaboration between the authors, providing a detailed perspective on how women's entrepreneurship has evolved during this period. Using the Web of Science (WoS) database, relevant publications were analyzed to better understand the dynamics and trends in this field from 1993 to 2024 (Table 1).

Table 1. Data selection in the WOS Core Collection

Year of publication	Number of items (all types of documents)
November 2024	288
2023	351
2022	342
2021	309
2020	232
2019	232
2018	218
2017	182
2016	149
2015	110
2014	93
2013	77
2012	83
2011	80
2010	77
2009	47
2008	26
2007	23
2006	20
2005	8
2004	5
2003	6
2002	1
2001	4
2000	3
1999	2
1998	8

Year of publication	Number of items (all types of documents)
1997	3
1996	3
1995	2
1994	3
1993	1
Total articles published	2988

Source: developed by the authors.

The software tool VOSviewer, version 1.6.15, was used to construct and visualize bibliometric maps, highlighting collaborative networks and the impact of publications on female entrepreneurship research. This research not only improves the understanding of the phenomenon of female entrepreneurship, but also helps to outline policies and initiatives that support its long-term growth and development.

Results and discussions

The bibliometric analysis carried out on the specialized literature highlighted the emerging trends in female entrepreneurship research. This study also mapped collaborative networks between researchers and identified the most influential authors and publications in the field. Thus, the detailed analysis of specialized literature not only highlights the emerging trends and opportunities offered by female entrepreneurship, but also emphasizes the need to continue research and develop public policies that effectively support these transformations in the contemporary business environment.

Regarding the entire analyzed time interval (1993 - November 2024), the "term co-occurrence map based on text data" (Figure 1) generated 244 elements - grouped into six clusters, developing 13324 links and a total link strength of 54031. Among the most relevant items within each group (along with their total link strengths) are:

Red cluster (center-left): This appears to be centered on the terms "entrepreneurship" and "growth", and includes terms that suggest economic and social factors such as "economic growth", "informal sector", "developing countries" and "poverty". This cluster therefore focuses on the role of women's entrepreneurship in economic development, especially in developing countries, and on issues related to economic growth and poverty.

Blue cluster (center): Includes the terms "gender", "women", and "gender equality". This cluster explores themes of gender equality and the specific role of women in entrepreneurship. This cluster suggests a focus on the social and political aspects of women's entrepreneurship, with an emphasis on encouraging and supporting women in business.

Green cluster (right): Focuses on concepts such as "self-efficacy", "entrepreneurial intention", "education", and "perceptions". It shows a focus on the psychological and educational aspects of female entrepreneurship, including topics such as motivations, entrepreneurial intentions and the role of education in shaping and sustaining the entrepreneurial spirit.

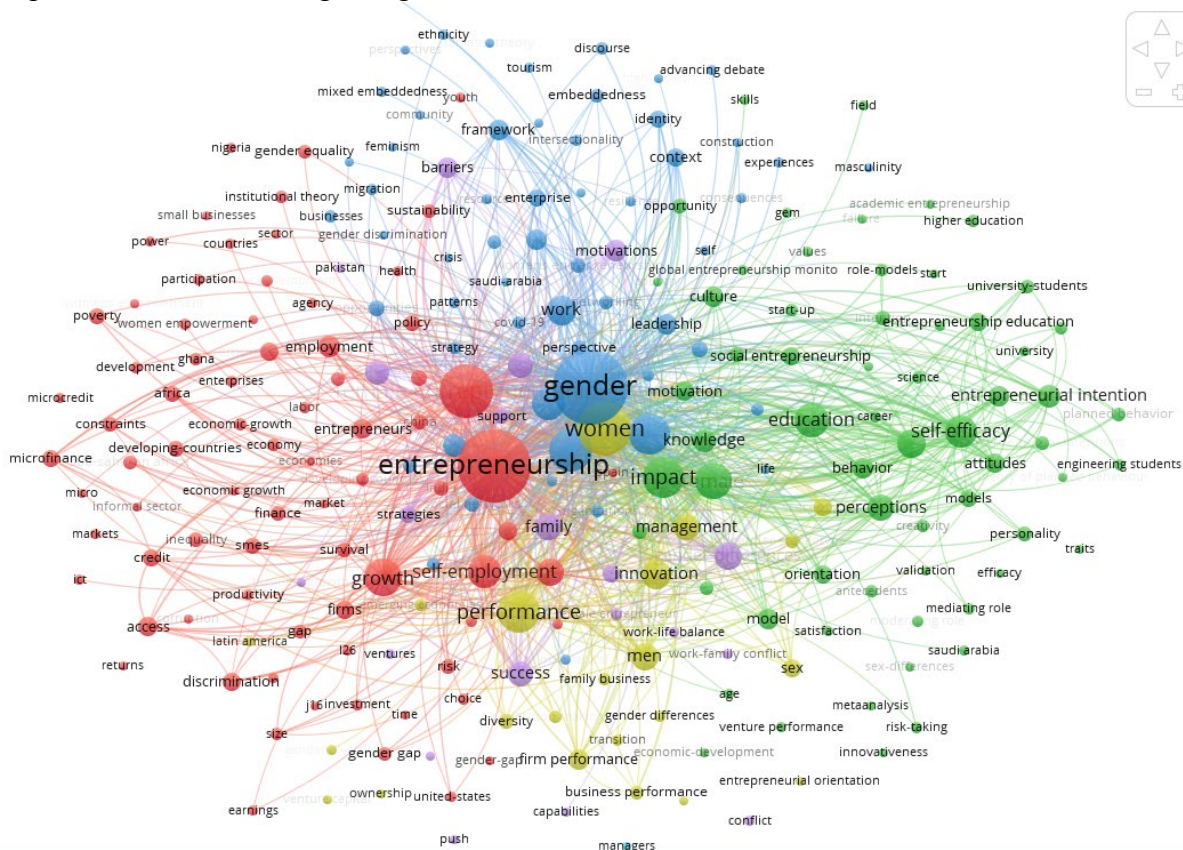
Yellow cluster (bottom right): Includes terms like "management", "innovation", "success", and "business performance". It is focused on the practical aspects of business performance and success, exploring management and innovation topics in entrepreneurship, but also the success factors of women-led businesses.

Purple cluster (top left): Includes terms like "agency", "developing countries," and "microfinance". This cluster deals with regional development issues, focusing on the specifics of female entrepreneurship in Africa and other developing regions.

The red cluster is closely related to the blue one, suggesting that the economic aspects of entrepreneurship are heavily influenced by social and gender dynamics. This emphasizes the importance of gender equality in promoting economic growth and reducing poverty.

The green cluster has strong links with the yellow cluster, indicating that entrepreneurial motivations and intentions are central to the success and performance of women-led businesses. This suggests an interdependence between the development of entrepreneurial skills and the achievement of business performance.

The purple cluster is connected to the red and blue clusters, showing that female entrepreneurship in developing countries is influenced by socio-economic factors and gender equality. These links underline the importance of support and access to resources for women entrepreneurs in disadvantaged regions.



**Figure 1. Co-occurrence map of terms based on text data
(1993 – November 2024) - Network visualization**

Source: VOSviewer software report.

This structure shows a multidimensional approach to female entrepreneurship, where economic, social, educational, and management aspects are interconnected and influence each other. These clusters and their connections suggest a complex network of subfields in marketing, management, and sustainability, each influencing the other in meaningful ways.

Figure 2 shows another visualization generated in VOSviewer, this time using an overlay visualization graph that displays the time evolution of related concepts. The map is similar to the previous one, but this time the colors vary on a time scale, highlighted at the bottom of the image (1993-November 2024), indicating the periods when the respective terms and concepts were more intensively researched.

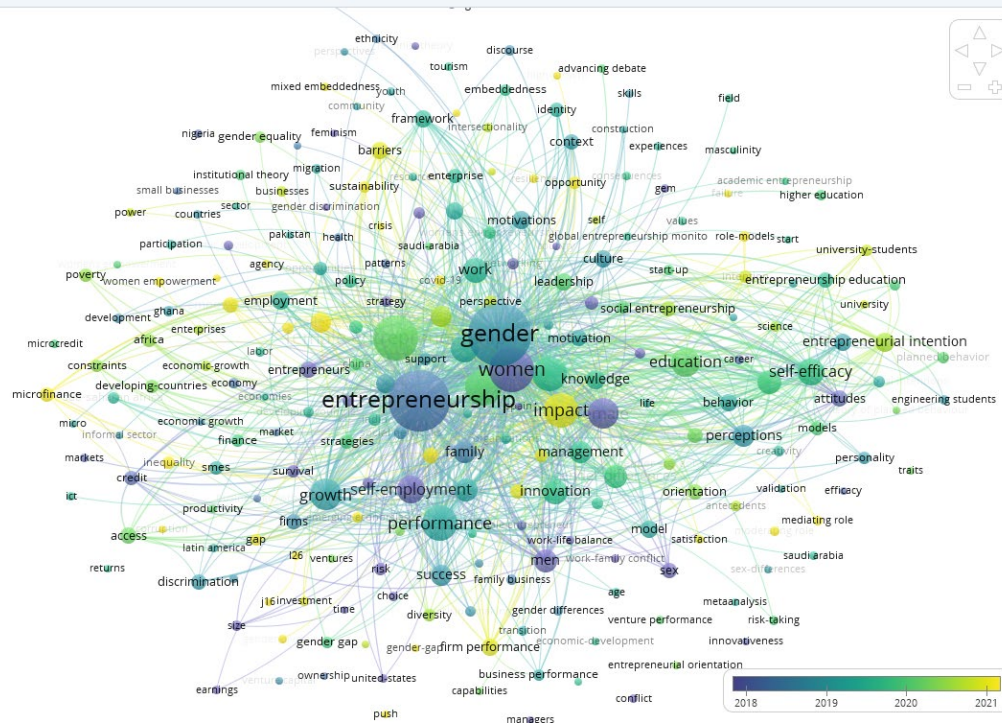


Figure 2. Overlay view in VOSviewer

Source: VOSviewer software report.

The central node of the network is the term "entrepreneurship", having dense connections with other important terms such as "gender", "women" and "performance". These links indicate the focus of research around gender roles and performance in entrepreneurship. Colored clusters suggest distinct subthemes such as gender challenges, stereotypes, and performance gaps, providing an overview of research directions and thematic influences in this area. This framework highlights the need for better development of how gender and stereotypes influence access and success in entrepreneurship, which could lead to more inclusive policies and practices.

Each point on the map below is colored according to the density of terms in that area. Warm colors, such as yellow or orange, indicate areas with high (frequently occurring) keyword densities, while cool colors, such as green and blue, signal areas with lower densities. (figure 3)

Source: VOSviewer software report.

To better understand the distribution and connections between academic works and essential keywords in this field, we can analyze a bibliometric map generated by VOSviewer, which illustrates the density and correlations between various cited sources. This gives us a clear picture of the main articles and authors in the specialized literature (figure 4).

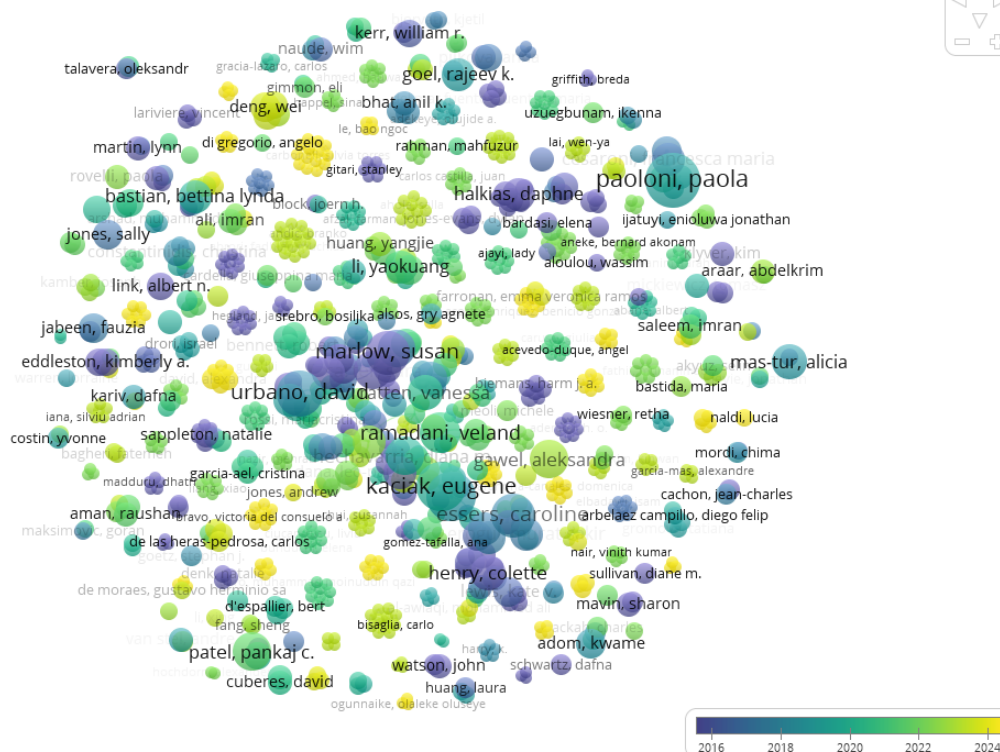


Figure 4. Most relevant cited articles (1993 – November 2024)

Source: VOSviewer software report.

Each node an author, and the size of the node suggests the importance and frequency of the author's appearance in the academic literature – the larger the node, the more influence the author has within this network.

Colors vary on a time scale from dark blue (2016) to yellow (2024), indicating the author's predominant year of activity or influence. For example, authors with yellow nodes, such as "Paoloni, Paola" and "Mas-Tur, Alicia," are actively involved in recent publications, while authors with blue or green nodes, such as "Kerr, William F." and "Goel, Rajeev K.," had their impact

Authors with large and central nodes, such as "Marlow, Susan", "Urbano, David", "Ramadani, Veland", "Kaciak, Eugene", and "Henry, Colette", are noted for their considerable influence and frequent collaboration in this field. this suggests that these authors are opinion leaders and that their work is often cited and used as the basis for further research.

The network structure highlights distinct collaboration clusters that suggest thematic sub-domains and interdisciplinary collaborations in entrepreneurship research. For example, the authors "Paoloni, Paola" and "Mas-Tur, Alicia" form a group together with other authors active in recent years, suggesting interest in emerging themes in this field. In contrast, clusters of authors with blue or green nodes indicate groups that have had a significant impact in the past but may not be as active recently.

The network provides an overview of the dynamics of academic collaborations in entrepreneurship, showing how key authors contribute to the development of knowledge and how their interactions support thematic evolution in this field.

Table 2 shows the most influential countries in macromarketing and organizational competitiveness research published in WOS.

Table 2. Top 10 most influential countries in female entrepreneurship research published in WOS

Nr. crt.	Country	Documents
1.	USA	589
2.	ENGLAND	316
3.	SPAIN	262
4.	CHINA	225
5.	INDIA	151
6.	GERMANY	147
7.	ITALY	145
8.	CANADA	128
9.	AUSTRALIA	125
10.	FRANCE	100

Source: developed by the author.

To explore even more deeply the relationships between the countries that contribute to the specialized literature, we can analyze a co-citations map, also generated with the help of VOSviewer, which highlights the links between international publications (figure 5).

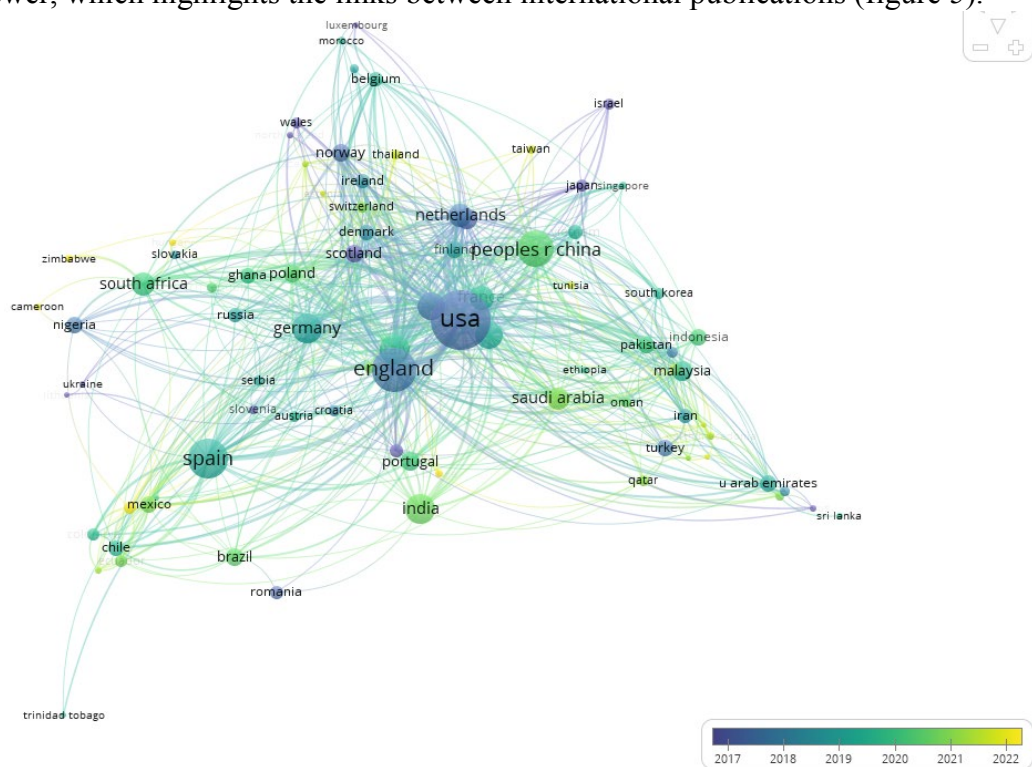


Figure 5. Production of articles by country (1993 – November 2024)

Source: VOSviewer software report.

This visualization in Vosviewer shows a cross-country academic and documentary collaboration network on the keywords "entrepreneurship" "gender". The size of the nodes and the lines connecting them suggest the countries' contributions to global research and the collaborations between them. The largest node in the network "USA" is the country with the most publications or documents related to the analyzed topic.

Conclusion

Findings from author and thematic network analyzes show that female entrepreneurship is a growing research topic, strongly influenced by factors such as gender, performance, and specific challenges faced by female entrepreneurs. There is intense interest in understanding the role of gender in entrepreneurial performance and access to resources, with studies exploring the barriers and stereotypes associated with women in business. Important authors such as Susan Marlow, David Urbano and Veland Ramadani have made a major contribution to the literature.

In addition, the authors' network suggests an interdisciplinary and international collaborative structure, with clusters of researchers collaborating on specific themes such as gender inequalities, entrepreneurial performance and support strategies for women entrepreneurs. Timeline views indicate that interest in female entrepreneurship is growing, with new authors and themes emerging in recent years, suggesting a continuing evolution.

Based on these findings, it is recommended that future research explore more deeply effective support strategies for women entrepreneurs, including mentoring models, access to finance and the creation of dedicated professional networks. It is also important to look at how technology and digitization can help reduce barriers for women entrepreneurs, giving them more opportunities to access global markets and resources.

Continuing the above conclusions and suggestions, it is essential to further investigate the impact of education and skill development on the success of women entrepreneurs. Research could explore how specialized educational programs, such as those in leadership and management, influence the performance and sustainability of women-led businesses. Another valuable direction is to examine the impact of networking and support networks dedicated to women entrepreneurs and how they facilitate access to opportunity.

From an organizational point of view, it is important that public and private institutions promote initiatives and policies that encourage gender diversity in business, creating safe spaces and supporting the growth of women in leadership and founding positions. Also, given that gender barriers persist in many regions, it is recommended to promote some awareness campaigns to combat stereotypes.

In conclusion, female entrepreneurship is a growing and evolving field, with a significant impact on the economy and societies. While there is progress in understanding the unique challenges and success factors for women entrepreneurs, many barriers remain to be overcome, including gender stereotypes, limited access to finance and insufficient support networks.

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