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Article

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Women and female entrepreneurship: Past, present, and future trends in developing countries

Muhammad Ashraf Fauzi, Noraina Mazuin Sapuan, Nurhaizan Mohd Zainudin

ABSTRACT

Objective: This article provides an understanding of the knowledge structure based on the publications on women's entrepreneurship in developing and emerging countries based on bibliometric analysis. Women entrepreneurs play a pivotal role in economic and social development.

Research Design & Methods: By analysing citations, co-citations, and co-words, this study unveiled the most significant publications in the study context, link their knowledge structure, and map future research direction based on the two analyses, respectively. From the Web of Science (WoS), 208 journal publications were obtained.

Findings: Four themes were discovered in the co-citation analysis: 1) differences between men and women entrepreneurs, 2) the development of women's entrepreneurship, 3) challenges among women entrepreneurs in developing countries, and 4) progress in women's entrepreneurship studies. Subsequently, four themes were discovered in the co-word analysis: 1) innovation in women's entrepreneurship, 2) women's entrepreneurship performance, 3) empowerment of women entrepreneurs, and 4) self-employment and assistance to women entrepreneurs.

Implications & Recommendations: Theoretical and practical implications are presented by enhancing and developing women's entrepreneurship participation in developing countries.

Contribution & Value Added: This review provides a comprehensive knowledge structure based on the past, present, and future trends in women's entrepreneurship in developing countries.

Article type: research article

Keywords: women's entrepreneurship; developing countries; emerging countries; bibliometric analysis; gender equality

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INTRODUCTION

Women represent nearly half of the working population, but their participation in specific areas of the workforce, such as entrepreneurship, is underrepresented (Strawser *et al.*, 2021). Women's role in economic development and nation-building is no longer an issue of human rights or social justice, but rather an integral component in the ecosystem aiming to attain sustainable development (Shah & Saurabh, 2015; Foss *et al.*, 2019). Women's presence in the labour force has been more than significant. It is crucial for job creation and economic growth, particularly in developing countries (Welsh *et al.*, 2018). Women's participation is deemed more relevant than ever in these countries (De Vita *et al.*, 2014; Correa *et al.*, 2022).

Despite their contribution to economic growth, there has been disparity and significant differences in the way they are treated, such as receiving lower wages compared to men (Jha *et al.*, 2018). Especially in the context of developing and emerging countries, women are still primarily associated with domestic responsibilities and family obligations (*e.g.*, children's upbringing, caring for the elderly and

the sick, and attending to house chores) (Yousafzai *et al.*, 2015). As the world progresses, women's socio-economic status has improved, but some issues persist in social equity and equality, discrimination, atrocities, and violence committed against them.

There is a significant knowledge gap in studies reviewing women's entrepreneurship involvement. There have been several studies that reviewed women's entrepreneurship in the developing countries context (De Vita *et al.*, 2014; Panda, 2018; Rashid & Ratten, 2020; Correa *et al.*, 2022) and reviews on women entrepreneurs in general (Cabrera & Mauricio, 2017; Bastian *et al.*, 2018; Chreim *et al.*, 2018; Foss *et al.*, 2019). Regardless of the reviews available in the study context, no review provided a comprehensive knowledge structure on the subject from the bibliometric approach, except for Moreira *et al.* (2019). Despite adopting such a method, Moreira's study did not provide a detailed analysis of co-citation and co-word analysis that would capture researchers' understanding of women's entrepreneurship based on the knowledge structure of the network among key publications and plausible future trends.

This study was motivated by two premises. Firstly, it aimed to provide the perspective of equality and equity in entrepreneurship without bias or discrimination on gender. Regardless of the prevalent importance of women's entrepreneurship in economic development and social growth through job creation, wealth capitalization, and innovations, many suggested that entrepreneurship lingered around gender differences (Neumeyer *et al.*, 2019; Nair, 2020). Some urged to remove the barriers to women's entrepreneurship to pave the way for equal investment opportunities (Carter *et al.*, 2015).

Secondly, since the full potential of women's entrepreneurship has not been reached, there is still much room for growth and development (Strawser *et al.*, 2021). For such growth to be realized, implicit knowledge structure in women's entrepreneurship must be understood and factors that hinder such progress must be addressed. Thirdly, there is a lack of theoretical understanding regarding women's entrepreneurship in the literature reviews, particularly in the context of developing countries. Several relevant studies have provided a significant overview of the phenomenon. For instance, Panda (2018) reviews women entrepreneurs' challenges and constraints in developing countries, suggesting that the top priority is to address the business, economic, and political environments. Bastian *et al.* (2018) present a narrative review of women's entrepreneurship in the Middle East and North Africa. The study found that there is a lack of theoretical foundations at the macro level comprising culture and religion and at the organizational level within the scope of ethnic groups by acknowledging the complex cultural, social, and religious diversity of the region.

Furthermore, in acquiring the knowledge structure, even limited studies performed science mapping through bibliometric analysis. Aggarwal and Johal (2021) present a bibliometric analysis of rural women's entrepreneurship by conducting a performance analysis on the top published authors, countries, institutions, and journals. Despite these relevant studies, according to the authors' knowledge, there has yet to be a study that reviewed women's entrepreneurship in developing countries through bibliometric analysis. There is a need to further explore this topic as there is a pertinent gap in understanding the fundamental research streams from the literature on the current context. As such, to explore the structure of this subject, this study uncovered such phenomena from bibliometric perspectives in addressing the following research objectives:

1. To investigate the knowledge structure of women's entrepreneurship through co-citation analysis.
2. To evaluate and predict the evolution of future trends in women's entrepreneurship through co-word analysis.

This article is structured as follows. We will first discuss the role of women's entrepreneurial contribution to economic development. Next, we will elaborate on the specific role of women entrepreneurs in developing countries. Then, we will explain the methodology applied using the bibliometric analysis. Subsequently, we will highlight the discussion points based on the study context and present the theoretical and practical implications. The article will close with a conclusion and suggestions for future work.

LITERATURE REVIEW

Women's entrepreneurship involvement has been recognized as a significant contributor to developing countries' economic growth (Isaga, 2019; Shastri *et al.*, 2019; Sahu *et al.*, 2021). Due to the lack of jobs in the mainstream workforce, entrepreneurship drives economic growth and helps generate employment opportunities, reducing poverty, and raising living standards (Zeb & Ihsan, 2020). According to Worlddata.info, in developing countries, the standard of living, income, economy, and development are well below average (World Data, 2022). Currently, there are 152 developing countries with a population estimated at 6.62 billion people, amounting to 85.22% of the world population. Countries categorized as developing countries include the whole of Africa, Central and South America, almost all Asian countries, and the majority of the island states (World Data, 2022).

In most developing countries, men have control over women within a patriarchal society (Xhenei *et al.*, 2019; Zeb & Ihsan, 2020). Women are restricted from venturing into business and entrepreneurship activities. They are expected to look after their families and stay at home to fulfil household chores, while men go to work. Thus, entering the job market or being an entrepreneur is a big challenge for women in today's modern society (Essers *et al.*, 2021; Nasir *et al.*, 2019). They face gender discrimination, a lack of resources and infrastructure, work-family conflict, capital difficulty, and an unstable economic and political environment (Panda, 2018; De Clercq & Brieger, 2021). A geographically concentrated study would provide a colossal understanding of the factors that constrain women entrepreneurs in developing nations (Panda, 2018).

Women are motivated to start businesses and become entrepreneurs based on pull-push factors. Pull factors are driven by independence, social status, autonomy, and personal control, while push factors are related to low salary and job satisfaction (Al Matroushi *et al.*, 2020). The challenges women entrepreneurs face in developed and developing countries come from external and internal factors (Isaga, 2019). Challenges include work-family conflict, financial constraints, unstable business, lack of training, infrastructure, and economic and political environment (Panda, 2018). Despite facing similar challenges, women in developing countries face more unpredictable constraints than women in developed countries. Women in developed countries face less gender discrimination and are treated equally to men in society, thus leading to greater opportunities to venture into entrepreneurship. They are more likely to secure suitable jobs as society is more open to women becoming entrepreneurs (Cardella *et al.*, 2020).

In contempt of the importance of women's entrepreneurship, emerging and developing countries are facing low entrepreneurial education among their people due to institutional voids (Yadav & Unni, 2016). Women struggle in entrepreneurship as they face financial problems, socio-cultural bias, and lack of motivation, leading to low self-esteem. There are many opportunities and constraints in increasing women's participation in entrepreneurship (Moreira *et al.*, 2019). There is an urgent need for policy reform to change the social structure affecting women's involvement in the workplace especially in developing countries (Cho *et al.*, 2020; Asravor & Acheampong, 2021). Understanding women's entrepreneurship through this particular lens would enhance the current understanding of entrepreneurship from a macro perspective, particularly by drawing urgent attention to the cultural and institutional levels and how gender equality impacts women in developing regions. In essence, this review will provide an overview of the structures and dimensions of women's entrepreneurship which requires further studies and the development of gender equality.

RESEARCH METHODOLOGY

Bibliometric Analysis

In recent years, scholars have adapted the bibliometric approach in reviewing the knowledge structure in supplement to meta-analysis and qualitative systematic literature review. Applying a bibliometric analysis enables researchers to map the knowledge structure and link the relationship between different disciplines, publications, scholars, countries, and institutions (Zupic & Carter, 2015). VOSviewer software

version 1.6.17.0 was utilized as the tool in this bibliometric analysis. The software is useful for two main reasons. It 1) creates knowledge maps and 2) visualizes and explores maps based on bibliographic databases (van Eck & Waltan, 2014). To meet the objective of this review, two analyses were proposed:

- Co-citation analysis: The analysis explores the intellectual linkages within a discipline (Hota *et al.*, 2020; Farrukh *et al.*, 2022). Co-citation analysis assesses the similarity between documents, authors, or journals (McCain, 1990). The main function of the analysis is to show that when two items are cited together, the higher their content is (Zupic & Carter, 2015). To investigate the knowledge structure of the current topic, this study utilized document co-citation analysis as a means to evaluate the structural linkages between these publications.
- Co-word analysis: Co-word analysis is a form of content analysis method that applies the words in documents to link and build the structure of a discipline (Callon *et al.*, 1983). The analysis extracts the keywords from various parts of the publication, including the title, abstract, and keywords (van Eck & Waltman, 2014). The underlying idea is that when words appear frequently, the concept behind such words is related to each other (Zupic & Carter, 2015).

Search Strategy and Data Collection

A specific and detailed search string was applied through the WoS database consisting of two main domains of women's entrepreneurship and developing countries (Table 1). The search strings covered all relevant articles related to women's entrepreneurship, developing countries and other related words and terminologies. The asterisk symbol '*' in wom*n and other words in the search string would capture all words, including 'women' and 'woman.' The search utilized the 'topic' field in the WoS database to extract publications based on the keywords in the title, abstract, and keywords. The WoS is the best database as it is the most reliable and robust database available (Mongeon & Paul-Hus, 2016). Furthermore, the WoS's Journal Citation Report is the best-known indicator for evaluating research activity for top peer-reviewed journals. Recent studies have also adopted the WoS as the database for their bibliometric analysis (Shonhe, 2020; Akintunde *et al.*, 2021; Küster-Boluda *et al.*, 2022).

The review only included journal publications, leaving out conference proceedings, book chapters, and books to ensure that only peer-reviewed publications were included in the analysis to ensure the quality inclusion of documents. Moreover, we have limited publications until 2021 to include the only full calendar year for a better understanding based on the publication structure on a full-year basis. The search and data retrieval were conducted on 4 February 2022.

Table 1. Search string adapted via WOS

String	Justification
'wom*n entrepreneur*' OR 'female entrepreneur*' OR 'gender entrepreneur*' OR 'wom*n business*' OR 'wom*n firm*'	To identify literature on women entrepreneurs
'developing countr*' OR 'developing econom*' OR 'emerging countr*' OR 'emerging econom*'	To identify literature on developing countries

Source: own elaboration.

RESULTS AND DISCUSSION

Descriptive Analysis

The initial search resulted in 242 publications. After limiting to only journal publications until 2021, the final list amounted to 208 publications. There was no restriction on the timeframe, generated from as early as 1970 up to 2021. The number of citations was 2804 with 2497 without self-citations. The average citation per item was 13.48, with an h-index of 25. Figure 1 shows the number of publications and citations of the 208 publications on women's entrepreneurship in developing countries. The first known publication in this field was found in 1996, but the pace started in 2007. The topic is highly anticipated and expected to grow higher in the coming years as developing countries are highly populated, leading to pertinent issues like unemployment and job security.

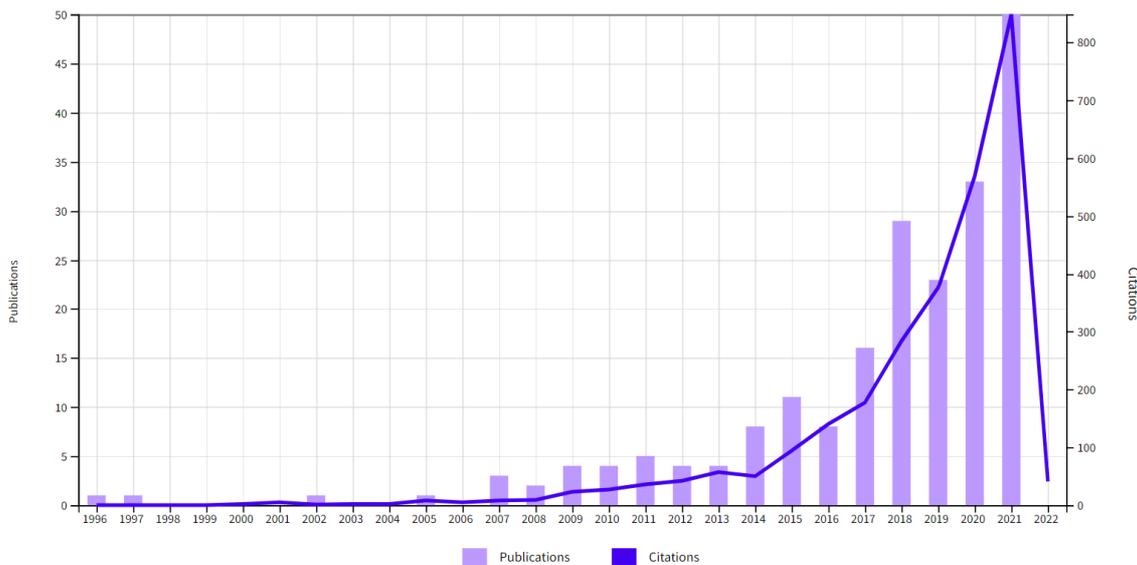


Figure 1. Number of publications and citations

Source: Web of Science.

Co-citation Analysis

From 11.629 cited references, 68 met the threshold of 10 cited references. The network analysis was built on women’s entrepreneurship in developing countries based on these 68 cited references. The highest co-cited publications were Jamali (2009) (45 times), Ahl (2006) (40 times), and De Vita *et al.* (2014) (36 times). Table 2 lists the top 10 documents with the highest co-citation with their total link strength. Subsequently, Figure 2 illustrates the co-citation network that provides knowledge of the node’s strength and positioning related to citation.

Table 2. Top 10 documents in women’s entrepreneurship with the highest co-citation and total link strength

Documents	Citation	Total link strength
Jamali D, 2009, Gend Manag, v24, p232	45	410
Ahl H, 2006, Entrep Theory Pract, v30, p595	40	337
De Vita I, 2014, Eur Manag J, v32, p451	36	340
Brush CG, 2009, Int J Gen Entrep, v1, p8	34	337
Baughn CC, 2006, Entrep Theory Pract, v30, p687	29	299
Roomi MA, 2008, J Entrep, v17, p59	27	198
Jennings JE, 2013, Acad Manag Ann, v7, p663	26	261
De Bruinn A, 2007, Entrep Theory Pract, v31, p323	25	232
Amine LS, 2009, Entrep Region Dev, v21, p277	24	221
Minniti M, 2010, Eur J Dev Res, v22, p277	22	165
Langowitz N, 2007, Entrep Theory Pract, v31, p341	20	162

Source: own elaboration using VOSviewer analysis.

Co-citation analysis produced four clusters, as shown in Figure 3. The following bullet points discuss each of the clusters by specifying labels based on the author’s inductive interpretation:

- Cluster 1 (red) was labelled ‘Differences between men and women entrepreneurs.’ There is a significant difference between men and women entrepreneurs according to the literature. Morris *et al.* (2006) asserted that women make a deliberate choice to venture into entrepreneurship and become entrepreneurs. They have a clear sense of the cost and benefits of growth in entrepreneurship and understand their trade-off decisions. Klapper and Parker (2011) discovered that women venture into different entrepreneurial activities than men. Women excelled in labour-intensive sectors such as

trade and services compared to capital-intensive sectors such as machinery and manufacturing. Performance gaps between male and women entrepreneurs in three regions were analysed by Bardasi *et al.* (2011) (Latin America, Europe and Central Asia, and Sub-Saharan Africa). Findings revealed a significant difference in firm size but a smaller gap in firm efficiency and growth between male and female-owned firms. Female entrepreneurs were found to be less successful than male entrepreneurs due to low startup capital, less business human capital obtained from prior work experience, and a lack of work experience in family-owned businesses (Fairlie & Robb, 2009). The study also discovered that female entrepreneurs work fewer hours and have different business goals than men.

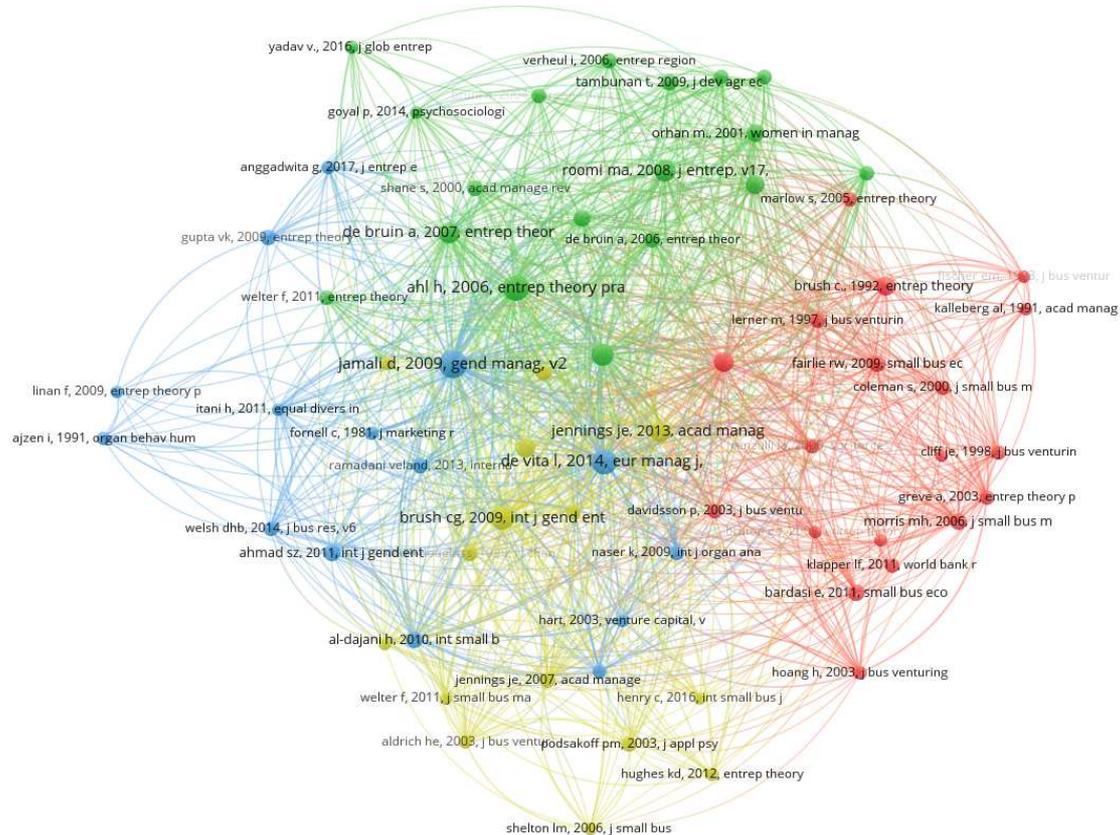


Figure 2. Network of co-citation analysis

Source: own elaboration using VOSviewer.

- Cluster 2 (green) was labelled ‘Development of women’s entrepreneurship.’ This cluster posits the idea of the creation of women-led businesses. Brush and Cooper (2012) delineate the Diana Project International as a platform for women entrepreneurs and business-oriented growth. The platform develops, conducts, and shares through facilitation from international scholars. Ahl (2006) suggests that a new research direction is needed to reproduce women entrepreneurs by capturing the wealthier aspect of the business. It is further reiterated by De Bruin *et al.* (2007) that dramatic growth in women’s entrepreneurial participation is needed to expand the body of knowledge in both generic and specific theoretical understanding. Findings suggest that multi-agency cooperation is needed to foster development in women’s entrepreneurship. Government agencies, educational policymakers, and the media should cooperate in providing business development access for women through local, regional, and national networks (Roomi & Parrot, 2008).
- Cluster 3 (blue) was labelled ‘Challenges among women entrepreneurs in developing countries.’ Jamali (2009) captures insight into the challenges and barriers among Lebanese women and discovered the relevance of micro-, meso-, and macro-level factors on the complexity women entrepreneurs face. With the existing gap in theoretical and empirical findings, De Vita *et al.* (2014) present a systematic literature review on women entrepreneurs in developing countries. Barriers are differ-

ent based on geographical location, including social and cultural factors. Anggadwita *et al.* (2017) explored the role of the socio-cultural environment on women's entrepreneurial behaviour in Indonesia. The findings show that women entrepreneurs need to overcome socio-cultural environment issues, especially in a multi-diverse socio-cultural environment like Indonesia.

- Cluster 4 (yellow) was labelled 'scholarship of women's entrepreneurship studies.' Brush *et al.* (2009) opined that 'motherhood' is a metaphor that represents the female entrepreneurs within the household and family context, having a more significant impact on women than men. Minniti and Naude (2010) review the understanding of motivations, constraints, and issues in female entrepreneurs in developing countries. Jennings and Brush (2013) demonstrated that entrepreneurship is a gendered profession, in which women entrepreneurs had come a long way, surpassing man developmental milestones. It was also described that entrepreneurship is derived from family activities, results from necessity and opportunity, and that becoming an entrepreneur is not necessarily motivated by economic gain. Henry *et al.* (2016) explore the methodological innovation in women's entrepreneurship scholarship. Due to the lagging of women's entrepreneurship research, it was suggested that radical qualitative and innovative methodologies like in-depth interviews, case studies, life histories, ethnography, and discourse analysis be employed to further understand the subject (Henry *et al.*, 2016). This would offer the opportunity to delve deeper into women's entrepreneurship endeavour and thus better understand it rather than unduly criticise it.

Table 3. Co-citation clusters on women's entrepreneurship in developing countries

Cluster	Cluster label	Number of articles	Representative publications
1 (red)	Differences between men and women entrepreneurs	19	Klapper and Parker (2011), Bardasi <i>et al.</i> (2011), Morris <i>et al.</i> (2006), Fairlie and Robb (2009)
2 (green)	Development of women's entrepreneurship	18	Ahl (2006), De Bruin <i>et al.</i> (2007); Roomi and Parrot (2008), Brush and Cooper (2012)
3 (blue)	Challenges among women entrepreneurs in developing countries	15	Jamali 2009, De Vita <i>et al.</i> (2014); Anggadwita <i>et al.</i> (2017)
4 (yellow)	Progress in women's entrepreneurship studies	15	Brush <i>et al.</i> (2009), Jennings and Brush (2013), Minniti and Naude (2010), Henry <i>et al.</i> (2016)

Source: own elaboration.

Co-word Analysis

Using the same database, we analysed the co-word knowledge structure of women's entrepreneurship in developing countries. From 968 keywords, 55 met the occurrences eight times. The highest co-occurrence keywords were gender (99), women entrepreneurs (76), and entrepreneurship (46). The list of the highest 15 co-occurred keywords is presented in Table 4.

The network visualization of the co-word analysis of women's entrepreneurship is presented in Figure 3. From the network, it can be deduced that there are four distinct clusters on the topic. Each cluster provides the knowledge structure on the likely future trends in women's entrepreneurship. Each cluster was labelled based on the link of the keywords that appeared based on the author's qualitative assessment:

- Cluster 1 (red). Cluster 1 comprises 18 words and was labelled as 'Innovation in women's entrepreneurship.' Innovative ideas among entrepreneurs are considered essential in today's challenging environment. They are needed to identify startup opportunities, new employment, revive of social networks, and increase productivity (Jha *et al.*, 2018). They are more crucial in developing countries as these countries must develop a balanced approach between national and entrepreneurial framework that relies on national strategic development. Nair (2020) discovered that stakeholders' engagement and involvement could enhance women's entrepreneurship innovation. Innovation has greatly influenced women's entrepreneurial performance (Zeb & Ihsan, 2020). Women with technological innovation ideas would determine higher productivity and acquire better results. It is argued that women with innovativeness would be able to succeed not

only in entrepreneurship, but also in other aspects of life, such as contributing to countering climate change through the promotion of awareness (Lemaire *et al.*, 2021).

Table 4. Top 15 keywords in the co-occurrence of keywords analysis

Ranking	Keyword	Occurrences	Total link strength
1.	Gender	99	480
2.	Women entrepreneurs	76	338
3.	Entrepreneurship	46	188
4.	Female entrepreneurship	40	201
5.	Performance	40	171
6.	Developing-countries	33	183
7.	Impact	30	154
8.	Women	29	99
9.	Business	27	158
10.	Developing countries	27	127
11.	Growth	21	116
12.	Emerging economies	21	105
13.	Women’s entrepreneurship	21	80
14.	Female entrepreneurs	18	74
15.	Firm performance	17	91

Source: own elaboration.

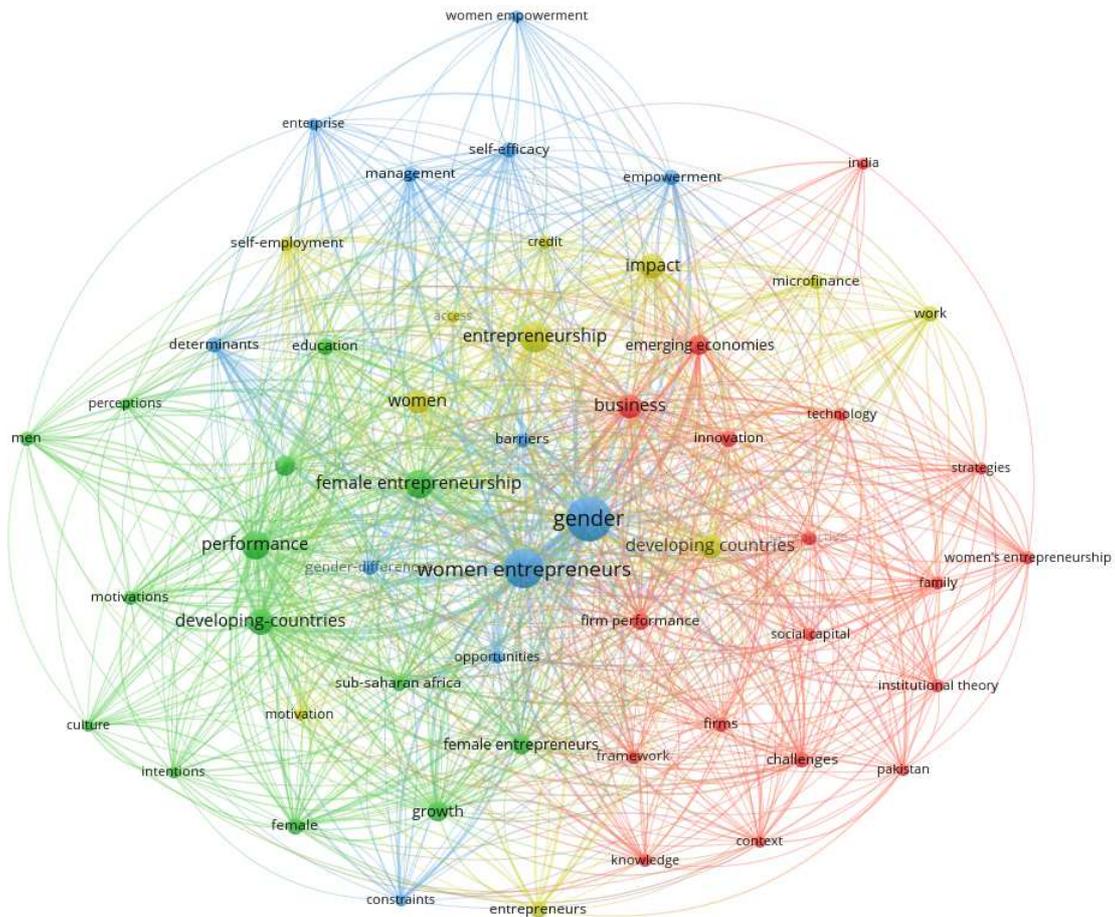


Figure 3. Network of co-citation analysis

Source: own elaboration using VOSviewer.

- Cluster 2 (green): With 14 words, this cluster was labelled ‘self-efficacy and performance.’ An essential part of empowering women is to enhance their self-efficacy. It is a crucial component of women’s entrepreneurial activity (Kazumi & Kawai, 2017). Self-efficacy is the crucial aspect of psychological capital that positively impacts the self-regulation of individuals’ complex decision-making capabilities. Self-efficacy influences one’s perceived feasibility, desirability, and entrepreneurial potential, leading to entrepreneurial intention (Chhabra *et al.*, 2020). Women are more influenced by self-efficacy compared to men (Cho *et al.*, 2020), which ultimately impacts their performance, positively or negatively, in comparison to men. Empirical studies have shown that self-efficacy increases when women are exposed to role models, especially family members (*e.g.*, parents, siblings, or husbands) and are likely to become entrepreneurs (Austin & Nauta, 2015). The use of technology has increased women’s self-efficacy to be involved in entrepreneurship (Ajjan *et al.*, 2019). Through technology, women are able to transform their economic lives by reshaping and changing their day-to-day activities (Crittenden *et al.*, 2019). Advancement in technology usage would bridge women in many socio-economic developments and thus increase their self-efficacy in entrepreneurship.
- Cluster 3 (blue): This cluster comprises 12 keywords and is labelled ‘empowerment of women entrepreneurs.’ Through entrepreneurship, women can be a source of empowerment that contributes to social change (Essers *et al.*, 2021). A piece of growing empirical evidence shows that entrepreneurship has brought changes in economic benefits and social change through women empowerment in developing countries (Haugh & Talwar, 2016; Kabeer *et al.*, 2017). Empowerment is defined as expanding people’s ability to make strategic life choices in a context, in which this ability was previously denied to them (Kabeer, 1999). Women’s empowerment is primarily influenced by culture (Lenka & Agarwal, 2017). In many developing countries, particularly in Asia, women faced inferior status due to traditional culture and religious beliefs (Cho *et al.*, 2020). Furthermore, women’s leadership has been a challenging issue with the notion of appointing women to high-ranking appointments remaining a taboo in many parts of the world.
- Cluster 4 (yellow): Consisting of 12 keywords, this cluster was conceptualized and labelled as ‘self-employment and assistance to women entrepreneurs.’ Based on Figure 3, it can be seen that cluster 4 is closely related to cluster 3, as some of the words are interchangeably linked within the two clusters. Empowerment is somewhat subjective, while assistance and aid are more objective in a way that tends to be more tangible. Women in developing countries are drawn to self-employment to earn more money and anticipate reducing the unemployment rate (Zhu *et al.*, 2018). Self-employment provides more time flexibility, as women in developing countries are more likely to take care of the family and children than women in developed countries. They have more independence and the ability to control their work conditions. Despite the opportunity to become self-employed, women face different problems and challenges compared to men (Gupta & Mirchandani, 2018; Laudano *et al.*, 2019). They face adversity in pursuing their entrepreneurship endeavour in accessing institutional finance, lengthy processes, collateral disputes, conservative attitudes, preconceptions, and suspiciousness leading to complicity in the loan process (Ghosh *et al.*, 2018).

Table 5 summarizes the co-word analysis on women’s entrepreneurship in developing countries, comprising cluster number and colour, cluster label, number of keywords, and representative keywords.

RESULTS AND DISCUSSION

The main focus in women’s entrepreneurship revolves around gender differences in social equality (Jha *et al.*, 2018; Strawser *et al.*, 2021). Social equality concerning many aspects of gender lies in cognitive bias, where society fails to recognize women’s social progress in the twenty-first century (Georgeac & Rattan, 2022). Certain cultures and countries fail to note that the world has advanced and society has modernized. Most of the time, women excel in their ventures when provided the same opportunities and chances. Women should face only the same obstacles as men and be given full access to equal opportunities. The influence of social capital in women entrepreneurial venturing. The ‘social’ in social capital belongs to the individual but is found in the relationship network (Muniady *et al.*, 2015). Social capital in women’s entrepreneurship can be described as the potential or actual resource for women to

venture into entrepreneurship that embeds social ties (Nahapiet & Ghoshal, 1998). It is found to significantly influence enterprise outcomes (Stam *et al.*, 2014). Social capital is crucial in building a theoretical foundation in the entrepreneurial ecosystem underlying social stratification (Neumeyer *et al.*, 2019). Such a foundation is evident in the high-growth venture context, in which women face eminent barriers to advisors and mentors as network resources (Carter *et al.*, 2015). Evidence demonstrates that women acquire selective resources from family members while being restricted from accessing social capital outside their families (Lindvert *et al.*, 2017). Among the three social capital domains (cognitive, structural, and relational), structural is deemed the most critical in developing women entrepreneurs' values and norms (Muniady *et al.*, 2015). It can be enhanced and developed by creating a better communication system that can provide better access to resources and knowledge. Other forms of social capital in the form of marital status and *wasta* were found to be significant predictors of Muslim women entrepreneurs in the Middle East and North Africa (Baranik *et al.*, 2018).

Table 5. Co-word analysis of women's entrepreneurship in developing countries

Cluster number and colour	Cluster label	Number of keywords	Representative keywords
1 (red)	Innovation in women's entrepreneurship	18	Business, emerging economies, innovation, technology
2 (green)	Self-efficacy and performance	14	Performance, female entrepreneurship, growth, motivations
3 (blue)	Empowerment of women entrepreneurs	12	Gender, women entrepreneurs, women empowerment, empowerment
4 (yellow)	Self-employment and assistance to women entrepreneurs	11	Entrepreneurship, impact, credit. Microfinance, self-employment

Source: own elaboration.

Many scholars have conceptualized the 'masculinization' of entrepreneurship based on the self-image of entrepreneurs (Kuschel *et al.*, 2020). Such discriminatory terminology is against the well-rounded promotion of merit, based on one ability and success, instead of bias mindset. To combat such stereotypes and achieve social equality, the broader entrepreneurship background needs to adopt social feminism to elevate the stature of women in entrepreneurship (Asravor & Acheampong, 2021). Through such a notion, women's role would be expanded beyond home-based chores and more towards radically changing society. Women's entrepreneurship in developing countries is well-rounded from the institutional-theory perspective, providing a profound view of the constraints of women's entrepreneurship in developing countries. The theory suggests that women lie in a conservative and patriarchal society, viewing women as conventional mothers and wives (Panda, 2018). The institutional theory suggests that the society's institutional framework comprises a holistic involvement of politics, social and legal grounds to establish the production and support of women entrepreneurs (Orobia *et al.*, 2020). The theory describes that institutions in such a way could help or diminish women venturing into entrepreneurship. Levie and Autio (2008) delineate nine entrepreneurship conditions that support an institution's entrepreneurship (finance, government policy, government entrepreneurship programs education, R&D transfer, commercial and legal infrastructure, entry regulation, physical infrastructure, cultural and social norms). All these entrepreneurship conditions stand as formal pillars within the institutionalization of women entrepreneurs. Actionable and drastic changes should be strategized within a country's institution. Thus, opportunities can be created for potential women entrepreneurs by determining and reshaping the prospects of entrepreneurial activities and removing significant barriers to market entry (Yousaffzai *et al.*, 2015). Apart from the formal institution, challenges faced by women entrepreneurs mainly originated from the informal institution, coming from society's failure to recognize and acknowledge their contribution (Shastri *et al.*, 2019). Based on Brush *et al.*'s (2009) gender-aware framework for women's entrepreneurship around "3Ms" (market, money, and management), the institutional environment can be rejuvenated by incorporating social capital theory that would strengthen the fundamentals of women networking in the form of trust, network ties, and shared vision.

Women's entrepreneurship is primarily linked to the sustainable development goal (SDGs). Specific attention has been envisioned to foster women's empowerment while at the same time vying for the SDGs (Karki & Xheneti, 2018; Chakraborty & Biswal, 2021). Strengthening women entrepreneurs in achieving the SDG would result in gender parity, social equilibrium, and poverty alleviation. Women's participation in the economy would enable a clear pathway towards achieving the SDGs (Strawser *et al.*, 2021). Specifically, the promotion of women's participation in entrepreneurship is vital for achieving SDG 1, which aims to end poverty in all its forms everywhere, so many have called for the promotion of women entrepreneurship (Quagrainie *et al.*, 2020; Okolie *et al.*, 2021). Developing countries have received greater attention and face more challenges in achieving the SDGs, especially due to the prominent gender gap. Furthermore, there is a lack of opportunities for women in the labour market, including self-employment (Karki & Xheneti, 2018). A key argument in support of women lies in 'empowerment formalization,' which encompasses business training, access to finance and networks, and supportive mechanisms (Karki & Xheneti, 2018). Such informal and formal empowerment integration would be a more accessible pathway towards achieving the SDGs. The opportunities to involve women entrepreneurs would lead to impactful growth for the developing nations, which – along with the developed counterparts – pledge to achieve the SDGs. The UN's SDGs are by far the best frameworks to achieve social equality (Strawser *et al.*, 2021). The fulfilment of the SDGs relies on the active involvement of women in the economy, particularly in entrepreneurship, as it can foster and amplify value creation among people.

CONCLUSIONS

This review proposes three practical implications for strengthening women entrepreneurs in developing countries. Firstly, employability and empowerment are vital components in moulding women entrepreneurs to set new goals and push boundaries for tremendous success. Empowering women has been a global topic, leading to the implementation of many initiatives and programs. Direct aid to women entrepreneurs should be provided through microfinance programs to empower them (Hussain *et al.*, 2018). It has been hailed as means to alleviate poverty among women, providing financial inclusion of women's involvement, and empowering them in society (Naser & Crowther, 2016). Microfinance or microcredit ensures that poor and deprived women can access essential financial services through a collateral scheme. Furthermore, it is believed to be an effective measure to address the 'feminization of poverty' (Tariq *et al.*, 2020).

An example of a microcredit program that was implemented in such a way to uplift individuals at the 'bottom of the pyramid' was implemented in India known under the name Pradhan Mantri Mudra Yojana (Sahu *et al.*, 2021). The study confirmed that microcredit schemes have enormous potential to empower women and generate employment. Rather than implementing a debt collection concept, the microfinance concept and structure can be constructed in gender collaboration within the entire microfinance industry instead of aiming only at the poor and vulnerable women. Microfinance institutions should introduce proper staff performance indicators rather than pressure collection, an incentive scheme that would help to develop social development among women entrepreneurs (Naser & Crowther, 2016). Stakeholders and policymakers should introduce a special program or initiative with a comprehensive policy to transform and elevate women's entrepreneurship status. Institutionalizing microcredit programs through a policy of inclusion has been shown to lead to a high rate of repayment among women entrepreneurs (Drori *et al.*, 2018). These microfinance initiatives would help elevate local women's quality of life and the country's economic development (Yousfani *et al.*, 2019).

Women entrepreneurs need to be more resilient than before in today's competitive environment. Before providing women with specific courses or programs to develop their entrepreneurship skills and values, it is essential to develop a comprehensive protective measure to strengthen their mental health and resilience (Badzaban *et al.*, 2021). Resilience enables individuals to confront adverse and hostile challenges, navigate through destabilizing circumstances, and ultimately emerge as stronger individuals. Within entrepreneurship, the ability to bounce back from hardship and adversity is referred to as entrepreneurial resilience (Quagrainie, 2020). Policymakers and stakeholders

are advised to consider the development of women-focused psychology programs to help build resilience and enable women to grow individually by recognizing and realizing their talent and capabilities. Resilient entrepreneurs can overcome abrupt changes, take advantage of new environments and learn from mistakes quickly (Welsh *et al.*, 2018b).

Finally, the current entrepreneurship curriculum is inadequate to produce successful entrepreneurs, including men. Most entrepreneurs were developed through informal instead of formal education (Mohamad *et al.*, 2015). Empirical studies show that there is no correlation between entrepreneurship education and business performance or the practical way of doing business (Orobia *et al.*, 2020; Cho & Lee, 2018). The current entrepreneurship education at the higher education level does not directly influence individual engagement in business sustainability activities (Orobia *et al.*, 2020). Informal entrepreneurship education was more effective in influencing graduates to participate in entrepreneurship activities (Mohamad *et al.*, 2015). As such, attentive measures should be constructed to integrate a specific campus-wide application to encourage young women in higher education. A significant initiative must be addressed through practical in-campus experience to empower female students to imbue the mentality of becoming entrepreneurs. The Malaysian University education system showed an example through its 'women in social entrepreneurship program' (Sengupta & Sahay, 2017). Such formal and informal integrated programs would build a basic understanding of specific entrepreneurship while building up the resilience of future women entrepreneurs. This task should be embraced by relevant parties, including academics, industry practitioners and policymakers, that can contribute towards elevating women entrepreneurs within a complex and sophisticated modern society.

Limitations and Future Studies

This study possesses several limitations. Firstly, the bibliometric analysis may suffer from biases, such as language biases, self-citation and institutional bias (Bullock *et al.*, 2018). Older articles may have received more citations in comparing publications of influence as they have been long in the public domain compared to recent articles. New articles require several years to accrue citations, and thus their influence may only be seen in later stages. Secondly, the inclusion of the first author in the cited-based analysis (citation and co-citation) is also a limitation, because multiple first authors may have co-authored other influential articles that are not adequately represented in the analysis. To overcome such issues, future studies could perform a systematic literature review and meta-analysis approach that can provide different perspectives based on the current topic. These two analyses would cater for the limitation in bibliometric analysis and present a holistic knowledge of women's entrepreneurship in developing countries.

Future research should look into women's leadership perspectives within the entrepreneurship landscape. The topic of leadership in entrepreneurship and women leadership in developing countries is an intriguing subject in the twenty-first century as both would either support or diminish society's potential pursuant to opportunities and talent (Maheshwari & Nayak, 2020). The interface of these two intellectual areas serves as an untapped area for future research (Reid *et al.*, 2018; Pollack *et al.*, 2020). In the same vein, society's expectation of women's potential limits their progress to top managerial and ownership levels despite being successful on merit and possessing equal education and career progression (Azeem *et al.*, 2021). Scholars should look into how women can become leaders in their entrepreneurial pursuit, especially in medium size to big corporations that would mend the stereotype and scepticism on the potential and capabilities of women, diminishing gender discrimination in developing and emerging countries.

This review captures the knowledge structure from the bibliometric approach by providing a state-of-the-art analysis based on the structure of the past, current, and future trends in women's entrepreneurship in developing countries. The study identified the most significant publications that provide a fundamental reference in the subject. The co-citation analysis produced four clusters 1) differences between men and women entrepreneurs, 2) development of women's entrepreneurship, 3) challenges among women entrepreneurs in developing countries and 4) progress in women's entrepreneurship studies that specify the current fundamental knowledge structure in women entrepreneurs. Finally, the co-word analysis helps foresee potential works in women's entrepreneurship in the future. The four

clusters include 1) innovation in women's entrepreneurship, 2) self-efficacy and performance, 3) empowerment of women entrepreneurs and 4) self-employment and assistance to women entrepreneurs. Specifically, policymakers can do little to address the constraints in women's entrepreneurship, contributing to complex social structures. Nevertheless, vocal support for women's rights and the fight for equality should be progressively attended. Through continuous efforts within the government and corporations towards women, they can contribute even more to the country's economic development.

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Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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