

National Seminar on Effect of Ecopreneurship on Environment Protection & Sustainable Development

A Study on Women's Contribution in "Green Entrepreneurship"

Asha Parveen Shaik^{1*}, Prof. Ch. Srinivas²

¹Research Scholar, Department of Management Studies, Sri Y. N. College, Narsapuram, Adikavi Nannaya University, Rajahmundry, Andhra Pradesh, India.

²Research Guide, Sri Y. N. College, Narsapuram, Adikavi Nannaya University, Rajahmundry, Andhra Pradesh, India.

***Corresponding author e-mail:** ashaparveen62@gmail.com.

Abstract

Introduction: This research study seeks to understand the role of women entrepreneurs and their impact in economic growth and sustainable development. The increasing presence of women as entrepreneurs has led to significant business stability and economic growth in the country. Women owned business enterprises generate employment opportunities and inspire the next generation of women founders. The role of Indian women in sustainable development cannot be ignored at any level, and the paper attempts to analyse whether Indian women play an instrumental role in the practice of green entrepreneurship or green business.

Methodology: The methodology employed is based on a systematic literature review, an essential approach in contemporary scientific research, allowing a comprehensive exploration of previous work and the identification of predominant theoretical approaches and existing gaps. The Web of Science platform was selected as the main data source for its ability to index and classify high-impact scientific production and to export metadata for detailed bibliometric analysis. Search terms combined entrepreneurship,

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sustainability and gender constructs. Inclusion criteria covered the period 2010-2024, thematic relevance to the intersection of female entrepreneurship and sustainability, and publications in any language to ensure global representation. The research is analytical in nature and is based on secondary data collected through journals, newspapers, websites, publications and reference books accessed online and offline.

Results & Discussion: Women own about 20% of micro, small and medium enterprises in India, and from 2019 to 2023 the growth of women-owned businesses outpaced the rate of men's. India ranks second after the US in funding women-led tech startups, with Bengaluru having the most women-led startups and the most funds raised to date. Indian women taking the lead in eco-friendly businesses include Kriti Poonia, Rameshwari Talluri Seth, Anamika Sengupta, Ruchi Jain and Gauri Satam. Sustainable businesses run by women include Brown Living India, India's first and only plastic free marketplace, which as of July 2024 prevented the release of 2,78,866 kilograms of plastics into landfills; Saahas Zero Waste, providing collection, segregation and recycling services; and Blue Cat Paper, founded in April 2022, which has saved over 70,000 trees. Rahman et al. identify five main categories of challenges for women entrepreneurs in developing countries: financial, sociocultural, educational and skills, networking and marketing, and political and legal. Only 32% of married Indian women aged 15 to 49 are employed.

Conclusion: Women entrepreneurs, often working in industries significantly affected by climate change, face heightened vulnerability to its impacts. Supporting resilience and encouraging adaptation among women entrepreneurs can help them endure these effects and continue making meaningful contributions to sustainable development. It is crucial to ensure that disaster risk reduction and management initiatives effectively incorporate women entrepreneurs, since disasters disproportionately affect women. The contributions of female entrepreneurs are essential in tackling climate change, and their expertise and experiences can greatly inform the development of efficient and sustainable solutions. By implementing inclusive practices and supporting women entrepreneurs through access to funding, breaking gender norms and fostering resilience, we can create lasting solutions that promote equity and sustainability.

Keywords: Women Entrepreneurs; Green Entrepreneurship; Green Knowledge; Sustainable Development; Ecopreneurship; Climate Change; Gender Barriers; Systematic Literature Review; MSMEs; India.

1. Introduction

Ecopreneurship (short for ecological entrepreneurship) is a term used by Schuyler (1998), Pastakia (1998), and Schaper (2002) to represent initiatives to reduce the environmental impact of business activities. The ecopreneurial agent, or ecopreneur, is an entrepreneur who is not solely driven by profits but is also concerned about the environmental impact of the business.

In this regard, women play essential role in entrepreneurial activities and are likely to bring significant change. With their exceptional capabilities and skills, they contribute to innovation, creativity, productivity, and overall economic growth.

However, scholarly discourse argues that women's entrepreneurial success and promotion of start-ups are influenced by various factors such as green knowledge, innovative capabilities, and green social behaviour. Green knowledge refers to the understanding of services, techniques, or processes that are likely to reduce pollution from business operations.

When women entrepreneurs implement green knowledge, they significantly improve their businesses by reducing pollution, maintaining good will with improved marketing tactics. Therefore, green knowledge plays a critical role in women's entrepreneurial success.

As whole world is facing the problem of climate change and somehow India is also responsible for this big issue so shifting to green products and practice is a positive step. As today most of the consumers are educated and aware so they are shifting their taste and preferences towards green products.

In COGITO talk show event it is said that women entrepreneurs have more potential to mitigate the climate change and to drive the green transition as well. In many reports it is found that women led business always prioritize social well being and follow and

support government rule strictly, not only this they also take participate in green business practices to support the green entrepreneurs.

SDGs provide an integrative framework for analyzing the contribution of female entrepreneurship to sustainable development. The SDG Contribution Framework conceptualizes and measures how companies can align with and contribute to the global goals. In addition, sustainable female entrepreneurship is redefining traditional business leadership paradigms. Women entrepreneurs tend to adopt more collaborative and multi-stakeholder-oriented approaches, which can result in more inclusive and resilient business models. This holistic perspective not only benefits individual businesses, but also contributes to the creation of more sustainable and equitable business ecosystems, fostering social and environmental innovation on a systemic scale. Women are not only come under beneficiaries of SDG but they also actively participate to achieve the goal. This study focuses that how Indian women are taking active participation in raising and growing carbon free foot prints and in generating green business.

Despite growing recognition of the importance of female entrepreneurship in sustainability, significant gaps in understanding of this phenomenon persist. Women entrepreneurs continue to face unique barriers, including limited access to funding, less-developed professional networks, and persistent gender stereotypes. These barriers are particularly pronounced in the context of sustainable ventures, which often require larger upfront investments and face additional challenges in terms of market viability.

Despite these advances, Rahman et al. identify five main categories of challenges faced by women entrepreneurs in developing countries: financial, sociocultural, educational and skills, networking and marketing, and political and legal. These barriers, which vary significantly by regional context, require differentiated approaches to overcome. In

particular, financial constraints and sociocultural norms remain the most persistent obstacles, limiting the potential of women entrepreneurs to fully contribute to national economies and sustainable development.

The integration of women's entrepreneurship and sustainability not only represents an opportunity for women's economic empowerment but also offers innovative solutions to global challenges. Women entrepreneurs often bring unique perspectives and collaborative approaches that are critical to addressing complex sustainability problems. In addition, recent studies suggest that women-led businesses tend to prioritize more ethical and sustainable business practices, which can lead to more resilient and adaptive business models in a world facing increasing environmental and social pressures.

2. Materials and Methods of Study

The methodology employed is based on a systematic literature review, an essential approach in contemporary scientific research. This method allows for a comprehensive exploration of previous work, facilitating the identification of predominant theoretical approaches and revealing existing gaps in current knowledge.

For this study, the Web of Science (WoS) platform was selected as the main data source. WoS stands out for its ability to efficiently index and classify scientific production especially that with a high impact factor, such as the publications included in the Journal Citation Report, a crucial reference in the field of academic research.

A significant advantage of WoS is its functionality to export metadata, which facilitates detailed bibliometric analyses in specific fields of study. This feature allows for an in-depth, multi-dimensional assessment of trends and patterns in the relevant scientific literature. Regarding the search terms to achieve the research objectives, the following search terms were used:

((entrepreneur OR entrepreneurship OR startup OR "new venture" OR "business creation" OR "business venturing" OR "small business") AND (sustainability OR sustainable OR "sustainable development" OR ecological OR "environmentally friendly" OR "green business" OR "eco-friendly" OR "corporate social responsibility" OR CSR) AND (woman OR women OR female OR feminine OR gender OR "gender perspective" OR "gender equality" OR feminism OR "women empowerment"))

To ensure the accuracy and relevance of the results, as well as to capture a global perspective of the phenomenon studied, specific criteria were established for document selection. The inclusion criteria considered the time period (2010-2024), excluding documents published before 2010 to analyze recent developments in the field. Another inclusion criterion was thematic relevance, selecting only documents that addressed the intersection of female entrepreneurship and sustainability, as well as the inclusion of publications in any language to ensure a global representation of the research.

3. Purpose of the Study and Data Collection

Plenty of research has been done on women entrepreneurs and their sustainable practices. The purpose of this study is to analyze the contribution of women in green entrepreneurship and their role in green business. This research will show the path of new perception for further research in this area. The nature of this research is analytical and is based on the secondary data which is collected through various journals, newspaper, websites, publications, reference books accessed from online and offline.

4. Growth of Women Entrepreneurship

- Women own about 20% of micro, small and medium enterprises (MSMEs) in India.
- From 2019 to 2023, the growth of women-owned businesses outpaced the rate of men's.
- India ranks second after the US in funding women-led tech startups.

- Bengaluru has the most women-led startups and the most funds raised to date.

Indian women are increasingly taking the lead in eco-friendly businesses, with entrepreneurs like Kriti Poonia, Rameshwari Talluri Seth, Anamika Sengupta, Ruchi Jain and Gauri Satam.

4.1 Sustainable Businesses Run by Women in India

Indian women are truly killing it in the start-up field. Here are a few women owned sustainable businesses that we can support today.

Brown Living India: BLI is India's first and only plastic free marketplace. As of July 2024 they prevented the release of 2,78,866 kilograms of plastics into landfills, making a real mark against plastic pollution. Chaitisi Ahuja is the CEO of Brown Living India.

Saahas Zero Waste: This startup provides waste management services such as the collection, segregation, and recycling of waste of various industries. Wilma Rodrigo's is the CEO of Saahas Zero waste.

Blue Cat Paper: From eco-friendly paper to notebooks made from agricultural waste, Blue Cat paper is making a real mark against the waste problem. It was found in April 2022, Blue Cat paper has saved over 70000 trees from being cut for paper. Mrs Kavya Madappa is the CEO of Blue Cat paper.

5. Challenges Faced by Women Entrepreneurs

Female entrepreneurs face various challenges in India that are unique to their gender. These are the most common challenges faced by women entrepreneurs while setting up and running a business in India:

5.1 Gender Barriers

Even though Indian society has evolved, and everyone claims that men and women are equal, gender barriers still exist heavily. Despite the government's efforts to encourage

women's leadership and empowerment, it is still challenging for females to prove their skills and gain recognition for their endeavours.

Gender inequality and pay gaps are the most common problems women entrepreneurs face in India. They still need their husband, brother or father's 'permission' to go for a job or start a business. Such blockades prevent female entrepreneurs from scaling the heights they are capable of.

5.2 Economic Challenges

Although it might sound unfair, the Indian finance scene has massive gender gaps. Female business owners in India commonly face economic challenges due to investors' prejudice and other factors. Of all companies receiving business funding, only a small percentage comprises female founders. Many angel investors and VC firms are reluctant to invest their money in women-led companies for various unspecified reasons. Moreover, most women don't have assets or properties in their name, or they don't have the authority to mortgage or sell them. Therefore, economic challenges come up as a major problem when applying for private financing or collateral loans.

5.3 Legal and Regulatory Hurdles

Women business owners often face challenges dealing with laws related to marriage or divorce, property distribution, inheritance, and business permissions. Also, there are not many representatives for them in legal space. The legal procedures and costs also create obstacles.

5.4 Work-Life Integration

According to a recent National Family Health Survey (NFHS) report, only 32% of married Indian women aged between 15 and 49 are employed. In most Indian homes, women are responsible for cooking, cleaning, and caring for their children and other family members. Society expects these roles as a woman's obligations that they must play

adequately. Successful business owners need good work-life integration to control their social and professional lives, including family responsibilities.

When a woman starts a business, their priorities and schedules change. Household responsibilities and family commitments may disturb women entrepreneurs' work-life balance, making it challenging to run a business.

5.5 Networking and Mentorship

Limited access to networking is one of the basic problems of women entrepreneurs. Due to less integration with informal and formal networks, female SME owners suffer from insufficient network development avenues. Many women feel unsafe travelling alone or staying at hotels while touring for business purposes. Most Indian hotels still do not accept single women as guests unless a man accompanies them.

5.6 Access to Resources and Technology

Entrepreneurship is a lengthy journey involving a lot of learning, training and up-skilling. Access to the required resources and technology is crucial to a strong spirit that deserves to become a successful business owner. However, many female entrepreneurs suffer from the lack of funds to establish a productive environment. For instance, if a woman wants to start manufacturing something, she might not have enough money to purchase the required machinery or equipment. That is when business loans for women provide the required support to strengthen their businesses.

5.7 Overcoming Mental Barriers

India is a patriarchal society where men and women have different roles. Women are expected to cook food, raise kids, handle domestic chores, care for older adults, etc. Juggling between professional and family responsibilities is a significant challenge, especially when a woman sets out to build a brand.

6. Government Initiatives and Support

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While female entrepreneurship has gained around, the numbers are expected to rise in the next few years. The Indian government has introduced several support programmes to assist women entrepreneurs in overcoming the difficulties they face. These include the Mudra Loan, Stand-Up India Scheme, Mahila Coir Yojana, CGTMSE, Udyam Shakti Portal, TREAD, etc. Aspiring women entrepreneurs can take advantage of these schemes to overcome the challenges they face.

Women business owners encounter numerous obstacles that hinder their ability to contribute effectively to climate change mitigation. These challenges are often rooted in societal norms that restrict their access to resources and opportunities, along with gender-based discrimination. Limited access to funding and networks, as well as difficulties in connecting with marketplaces, poses significant hurdles for women entrepreneurs. Additionally, balancing care giving responsibilities with business obligations can further limit their investment of time and money into their ventures.

7. Women Contributions to Sustainability

Despite the barriers they face, female entrepreneurs worldwide are demonstrating remarkable resilience and creativity in addressing climate change. Let's explore some inspiring examples.

Akira Sakano: In the Japanese municipality of Kamikatsu, Akira Sakano, a female entrepreneur, is leading efforts to achieve zero waste by 2030. Through her social venture, she organizes and repurposes waste from homes and businesses, fostering the production of new goods while reducing trash.

Bilikiss Adebisi-Abiola: In Lagos, Nigeria, Bilikiss Adebisi-Abiola founded business that collects and recycles garbage, effectively reducing the risk of flooding in the city.

Sahaja Samrudha: Indian women entrepreneurs are actively developing creative solutions to mitigate the impact of climate change on agriculture. The "Sahaja

Samrudha” project supports organic farming methods, helping farmers adapt to the effects of climate change.

8. Top 10 Women Entrepreneurs in India

Here are ten outstanding women entrepreneurs in India who have made a big impact in the business world:

1. **Kiran Mazumdar-Shaw:** Founder of Biocon, India's largest biopharmaceutical company. She has led the company to global recognition with her innovations in medicine.
2. **Indra Nooyi:** Former CEO of PepsiCo, she played a key role in transforming the company and expanding its global reach. Now, she's a leading voice in business and leadership.
3. **Falguni Nayar:** The Founder of Nykaa, a popular beauty and wellness e-commerce platform. She turned Nykaa into a major player in the beauty industry.
4. **Richa Kar:** Co-founder of Zivame, an online lingerie store. She has revolutionized how women shop for lingerie in India with her innovative approach.
5. **Vineeta Singh:** Co-founder and CEO of SUGAR Cosmetics, a successful beauty brand known for its trendy and high-quality products. Her company has grown rapidly in the Indian market.
6. **Smita Agarwal:** Co-founder of Chumbak, a company known for its unique and quirky home décor and lifestyle products. She has helped build a strong brand with a distinct style.
7. **Upasana Taku:** Co-founder of MobiKwik, a leading digital wallet and payments company. She has been a key player in the growth of India's digital payments ecosystem.

8. **Naina Lal Kidwai:** Former Country Head of HSBC India, she is a prominent business leader and advocate for women in business. Her contributions to finance and leadership are widely recognized.
 9. **Ritu Kumar:** Founder of Ritu Kumar, a well-known fashion and textile brand. She has played a significant role in promoting traditional Indian fashion and design.
 10. **Neelam Dhawan:** Former Managing Director of Hewlett Packard Enterprise India. She has been a significant figure in the tech industry, driving growth and innovation.
- These women have made incredible contributions to their industries and continue to inspire others with their achievements.

9. Overcoming the Challenges Faced by Women Entrepreneurs

Addressing climate change and empowering female entrepreneurs are interlinked goals that rely on inclusive disaster risk reduction and management (DRRM). Gender-responsive DRRM policies ensure that women and other vulnerable groups are included in disaster preparation and response, accounting for their unique needs and experiences. Inclusive DRRM can provide women entrepreneurs with access to funding and tools to develop groundbreaking climate change solutions.

Furthermore, it strengthens their resilience in the face of climate change impacts, enabling them to thrive despite new challenges. Inclusive DRRM practices also acknowledge and incorporate the care giving obligations of women, ensuring they are not excluded from decision-making processes.

To fully harness the potential of female entrepreneurs in combating climate change, it is essential to dismantle institutional constraints that limit their access to resources and opportunities. This requires a comprehensive strategy that recognizes the distinct requirements and experiences of women entrepreneurs.

Research shows that female entrepreneurs face significant challenges in securing funding for their ventures. Addressing gender-based prejudice and discrimination in the investment industry, as well as providing targeted initiatives for women entrepreneurs, can improve their access to financial support and assistance.

Overcoming the prejudices and gendered norms that hinder women from working in male-dominated fields is crucial. Education and awareness-raising initiatives play a vital role in dispelling myths and promoting gender parity across all sectors. By removing these obstacles, we can foster a diverse and sustainable business environment, empowering women entrepreneurs to contribute fully to the fight against climate change.

10. Conclusion

Women entrepreneurs, often working in industries significantly affected by climate change, face heightened vulnerability to its impacts. Supporting resilience and encouraging adaptation among women entrepreneurs can help them endure the effects of climate change and continue making meaningful contributions to sustainable development. By providing resources and support to enhance their resilience, we enable women entrepreneurs to navigate the challenges posed by climate change and drive positive change in their industries.

It is crucial to ensure that disaster risk reduction and management initiatives effectively incorporate women entrepreneurs. Disasters disproportionately affect women, who often struggle to access resources, information, and services during and after such events. By including women entrepreneurs in disaster preparation and response efforts, their unique needs and experiences can be taken into account. This ensures that they are not left behind in decision-making processes and receive the necessary support to recover and rebuild their businesses.

The contributions of female entrepreneurs are essential in tackling climate change. Women often serve as primary caregivers in their families and communities, and their deep connection with nature positions them as valuable contributors to climate solutions. Their expertise and experiences can greatly inform the development of efficient and sustainable solutions that promote fairness, resilience, and sustainability.

Businesses worldwide must embrace creative solutions to address the challenges posed by climate change. Female entrepreneurs, in particular, face unique obstacles that require a gender-responsive approach. By implementing inclusive disaster risk reduction and management practices and supporting women entrepreneurs through access to funding, breaking gender norms, and fostering resilience, we can create lasting solutions that promote equity, sustainability, and a brighter future for all.

This article has highlighted the challenges faced by female entrepreneurs in the face of climate change and showcased inspiring examples of their innovative solutions. By recognizing and addressing the barriers they encounter, we can create an inclusive entrepreneurial environment that enables women to fully contribute to the fight against climate change. We can build a resilient and sustainable future for everyone through collective efforts and strategic initiatives.

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