

TRIBAL WOMEN IN MILLET-BASED ENTREPRENEURSHIP: A GLIMPSE OF ODISHA

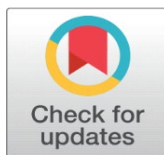
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ABSTRACT

This research text studies the dynamics of millet-based entrepreneurship among tribal women in Odisha, India, with a key focus on possibilities, barriers, and policy effectiveness. The study adopts a descriptive empirical technique that relies on secondary data analysis and policy assessment. The findings state, whereas tribal women account for almost most of the total millet-growing farmers, they face major challenges to turning their agricultural engagement into successful business endeavours. The study assesses different policy instruments, including the Odisha Millets Mission, which offers targeted assistance through initiatives. It has open up potential entrepreneurship opportunities across the millet value chain, implementation gaps still remain, with only limited number of eligible women receiving benefits owing to barriers. The study indicates that, despite the expanding market potential for millet-based businesses, institutional and societal restrictions continue to impede indigenous women's economic growth. The recommendations emphasise the need for enhanced policy implementation mechanisms and comprehensive support systems to ensure an ascending quality engagement of women in the millet value chain.

Keywords: Tribal Women, Entrepreneurship, Millets, Empowerment, Policy

1. INTRODUCTION

Millets, categorised as nutri-cereals, were domesticated and cultivated around 10,000 years ago, coinciding with the transition from nomadic to agricultural societies (Veerabadhran et al., 2023). The Veda, Purana, and Samhita, ancient Indian literature, extensively discuss these grains. This illustrates their significance to Indian culture and its health benefits. Millets have always been regarded as a resilient and unassuming crop due to its ability to thrive in challenging environments. Kautilya's Arthashastra also acknowledged millets as a significant crop cultivated across the Mauryan Empire. This illustrates their significance to agriculture at that period (Sharma, 1919). Indian millets are nutrient-rich, drought-resistant grains predominantly cultivated in India's arid and semi-arid tropics, where other food crops struggle due to insufficient rainfall and subpar soil quality. They are a significant food source for both humans and animals. Millets are diminutive-seeded grasses classified under the Poaceae family. These grains are crucial for ensuring food security and sustaining millions of resource-limited farmers in India. They contribute to the stability of the nation's economy and ecology. Indian millet contains higher levels of protein, vitamins, and minerals compared to wheat and rice (Nautiyal et al., 2023). Approximately 65% of India's rural population is engaged in agriculture. In India, 62.9% of women are

employed, with a significant proportion originating from rural areas. Women in rural India have always played a crucial role in the agricultural sector; nevertheless, their roles have predominantly been characterised as workers on family-owned farms rather than as autonomous producers. This disparity in classification illustrates the complexity of the interplay between gender, labour, and land ownership within India's agricultural economy. Women have a significant role in the millet value chain, participating at every stage of the process, from cultivation to consumption. Researchers at the Indian Institute of Agricultural Sciences project that by December 2023, almost 80% of millet cultivators in India will be women. Women farmers are essential for cultivating millets in the harsh and desert regions of the country. Women in rural regions engage in many agricultural activities, including crop cultivation, processing, marketing, livestock rearing, post-harvest operations, and social forestry management. Women hold significant roles that extend beyond agriculture. They must also store and manage food, a crucial aspect of household responsibilities and annual planning to ensure the family has sufficient sustenance and maintains good health. In tribal regions, women from rural and indigenous communities predominantly oversee millet cultivation. Millet is referred to as a "women's crop" due to the predominant role women play in decision-making and labour throughout the cultivation process, including selecting the appropriate variety, preparing the land, managing seeds, planting, weeding, harvesting, and processing the yield post-harvest.

It is essential to recognise that women's participation in agriculture differs by region, sub-zone, caste, and socioeconomic class. Notwithstanding these disparities, women perform nearly all farm labour, excluding ploughing (Das, 2015). Despite women's substantial contributions to agricultural labour, most of it is not recognised as "economically active employment" or is deliberately undervalued (Rana & Sahoo, 2023).

2. RESEARCH QUESTIONS

This research article extensively examines the opportunities and challenges associated with female entrepreneurship development in the tribal regions of Odisha. The study poses several critical research questions: (1) How does millet-based entrepreneurship in Odisha's tribal areas provide economic advancement opportunities to women? (2) What are the primary challenges encountered in this context? (3) To what extent do existing policies facilitate the promotion of tribal women's entrepreneurship?

3. METHODOLOGY

To address these inquiries, the study employs a descriptive empirical methodology based on secondary data analysis, complemented by policy analysis techniques. Additionally, a comprehensive re-evaluation of entrepreneurship's scope has been conducted across various policy documents.

India is the largest producer of millet globally. In 2020, India accounted for 40.51% of global millet production, while sorghum represented 8.09%. The Indian states of Rajasthan, Karnataka, Maharashtra, Uttar Pradesh, Haryana, Gujarat, Madhya Pradesh, Tamil Nadu, Andhra Pradesh, and Uttarakhand are the leading producers of millet. During the period of 2020–21 in India, these 10 states accounted for almost 98% of total millet output. Rajasthan, Karnataka, Maharashtra, Uttar Pradesh, Haryana, and Gujarat collectively account for almost 83% of the total millet production. Rajasthan produces 28.61% of India's total millet. Millets are classified into three groups according to their size: major, minor, and pseudo. The three principal varieties of millet are sorghum, finger millet, and pearl millet. Little millet, foxtail millet, proso millet, barnyard millet, kodo millet, and browntop millet are classifications of minor millet. Amaranth millet and buckwheat millet are two varieties of pseudomillets.

Millet farming is crucial for tribal tribes, serving not only as a source of sustenance and income but also as a foundation for their social and cultural traditions (Behera, 2017). Millets have played a significant role in tribal agriculture, farming, and several aspects of tribal existence. Tribal women generally choose millet cultivation above their husbands' preferences to honour traditional norms and ensure their families have adequate food and nutrition (Das, 2021). Embracing millet cultivation methods presents prospects for social and economic liberation. Cultivating local grains such as millet might enhance women's involvement in decision-making, income generation, savings management, and entrepreneurship. While current literature has examined women's empowerment from several viewpoints, the aspect of financial empowerment has received less scholarly attention. This research primarily investigates the financial empowerment of women. Prior studies have delineated financial empowerment as consisting of three primary dimensions: financial well-being, financial attitude, and financial literacy (Joo & Grable, 2004; Strom et al., 2014). The study aims to examine millet as a crucial element in promoting the empowerment and entrepreneurship of indigenous women.

4. TRIBAL WOMEN IN MILLETS-BASED ECONOMIC TRANSACTION AND ENTREPRENEURSHIP

Tribal women frequently favour millet farming above their husbands' preferences, so reinforcing tribal customs and providing their families with food and nutritional security (Das, 2021). Women have a vital role in the millet value chain, participating at every stage of the process, from cultivation to consumption. According to experts at the Indian Institute of Agricultural Sciences, by December 2023, women are projected to constitute about 80% of millet cultivators in India. The global focus on millet offers an opportunity to reevaluate the key stakeholders in the process. Research indicates that the lady who exerted the most effort in cultivating millet is a pivotal participant in the participatory process, since she continues to cultivate it and sustain the practice. However, regarding the selection of seeds, cultivation, and commercialisation of millets, their perspectives are not consistently considered. The primary issue is that the revenue generated from millet cultivation does not directly deposit into their bank accounts. This prevents them from addressing concerns such as ensuring equitable opportunities for millet production. Women predominantly engage in millet cultivation activities, including field preparation, seed management, planting, weeding, harvesting, and post-harvest processing.

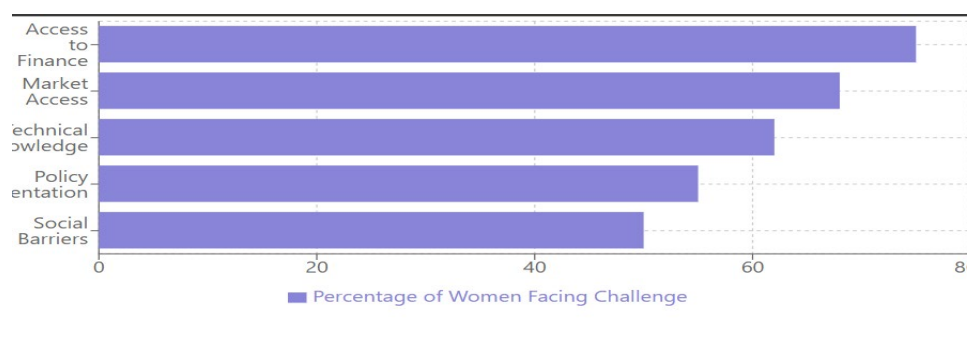
Millets were formerly a predominant crop in Odisha's tribal regions; however, production has declined due to many factors, including the prioritisation of rice and wheat during India's Green Revolution (Pradhan et al., 2019). In 2017, the Odisha government initiated the Odisha Millets Mission (OMM) to encourage the cultivation and consumption of millets. They undertook this action due to their awareness of the health and environmental benefits of millets. The OMM has significantly contributed to the resurgence of millet cultivation, emphasising the collaboration between female farmers and entrepreneurs. By 2021, the initiative expanded to 84 blocks across 15 districts, benefiting over 150,000 farmers, a significant number of them were women (Odisha Millets Mission, 2021).

5. CHALLENGES FOR TRIBAL WOMEN

The emergence of millet entrepreneurship among tribal women in Odisha highlights a complex interplay of gender, societal, and cultural obstacles that profoundly influence their capacity to create and manage successful businesses. The historical participation of tribal women in millet production and processing has not led to economic prosperity due to several structural and systemic barriers (Pradhan et al., 2019). Women entrepreneurs within tribes have several challenges, including difficulties in obtaining loans from banks and other credit institutions. Studies reveal that 78% of tribal women in Odisha are deprived of institutional financial access, forcing them to rely on high-interest informal lending sources (Mohapatra & Das, 2022). Their absence of collateral and understanding of standard banking operations exacerbates their financial predicament. A significant issue is that individuals lack sufficient understanding of contemporary corporate operations and market dynamics. Tribal women exhibit traditional proficiency in millet farming and processing; nevertheless, studies reveal that more than 85% lack formal education in business management, marketing tactics, and contemporary processing procedures (Kumar & Pattnaik, 2023). This deficit hinders their business development and competitiveness in the current market. Infrastructure challenges impede corporate operations. Research in the tribal areas of Odisha reveals that 67% of women entrepreneurs have difficulty in securing enough storage facilities, while 73% experience difficulties with inadequate processing equipment (Singh & Mishra, 2021). The absence of dependable transport infrastructure exacerbates these issues, restricting access to markets and distribution alternatives. Gender discrimination and cultural limitations continue to profoundly affect women's business pursuits. Studies reveal that tribal women entrepreneurs face opposition from their communities and other entities, with 62% reporting gender discrimination in commercial dealings (Naik et al., 2023). Traditional gender norms and familial obligations can hinder their mobility and availability for commercial endeavours. In the contemporary corporate landscape, digital literacy and technological utilisation are increasingly essential. A recent survey revealed that just 12% of tribal women entrepreneurs in Odisha felt at ease utilising internet platforms for commercial activities. This significantly restricts their capacity to engage clients and operate their operations efficiently (Behera & Rout, 2024). The digital gap is particularly evident in isolated tribal regions where internet access is inconsistent. Enterprises that market millet are more vulnerable due to climate change and environmental issues. Research indicates that erratic precipitation patterns and extreme weather phenomena have hindered millet cultivation in 56% of Odisha's tribal districts. This has impeded women entrepreneurs' access to essential raw materials (Das & Mohapatra, 2023). The necessity for climate-resilient activities exacerbates their business

issues. The issues exacerbate when policies are not adhered to. Research reveals that just 34% of eligible tribal women entrepreneurs effectively utilise government initiatives intended to assist them, hindered by bureaucratic barriers, lack of awareness, and intricate documentation demands (Panda et al., 2024).

A survey conducted by the Odisha Livelihoods Mission in 2023 identified the following as the most significant challenges faced by women entrepreneurs in the millet sector:



The data revealed above depicts the different problems that women encounter, expressed in percentages. Access to finance appears to be the most major barrier, with almost 70% of women facing this problem. Market Access is the second most prevalent issue, affecting around 65% of women. Technical knowledge is the third big issue, with over 60% of women struggling in this area. Policy implementation affects around 55% of women, demonstrating structural impediments in institutional structures. Social barriers affect around 45% of women, the lowest number of the obstacles identified, yet they nevertheless affect a significant section of the female population.

The figure accurately depicts how structural and institutional barriers disproportionately affect women's involvement and performance in a variety of industries. The prevalence of financial and market-related restrictions indicates that economic constraints play a significant role in restricting women's chances. The data also demonstrates the varied nature of the problems that women confront, which range from practical concerns such as technical skills to larger societal ones. The relatively high percentages across all categories show overlapping obstacles, implying that many women confront many problems at the same time. The visualisation aids in identifying priority areas where actions may be most needed to assist women grow and participate in various sectors.

6. POLICY INSTRUMENTS IN PROMOTING WOMEN ENTREPRENEURSHIP

There are notably several central pushed and State-specific policies that directly and indirectly cater to the needs of women entrepreneurship **that have been discussed below:**

Van Dhan Vikas Karyakram is an effort that aims to provide livelihoods for tribal people by leveraging the riches of the forest, known as Van Dhan. The initiative attempts to tap into tribal people's traditional knowledge and skill sets by using technology and information technology to improve production at each level and turn tribal wisdom into a profitable commercial activity. Van Dhan Vikas Karyakram aims to develop and use tribal people's collective strength to attain a sustainable size¹.

The National Rural Livelihood Mission (NRLM) supports tribal women's Self Help Groups (SHGs) in millet planting and processing. The NRLM focusses on increasing the skills of local leadership and SHGs. It also provides orientation and capacity training to enhance the competence of local human resources. The NRLM focusses on disadvantaged groups, such as scheduled tribes, single women, crippled, landless, migrant labour, and remote villages².

The Tribal Cooperative Marketing Development Federation of India (TRIFED) is a Multi-State Cooperative Society under the Ministry of Tribal Affairs, whose primary goals are to promote the marketing of tribal produce / products by strengthening the supply chain and providing market linkages for their procurement and sale³, therefore strengthening the supply chain.

¹ PIB <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1580257>

² NRLM. <https://odishabank.in/NRLM#:~:text=Under%20NRLM/OLM%20there%20is,based%20credit%20to%20the%20SHGs.>

³ PIB, <https://pib.gov.in/PressReleasePage.aspx?PRID=1987794>

The National Food Security Mission (NFSM) created particular measures to promote nutri-cereals like millets, with focused support for tribal women farmers in Odisha through input subsidies and technical training⁴. NFSM-Nutri-Cereals: Includes all states that produce jowar, bajra, ragi, and tiny millets.

Tribal women's assistance programs include the National Overseas Scholarship Scheme, Institutional assistance for the Development and Marketing of Tribal Products, Vocational Training Centres in Tribal Areas, and more⁵.

The Mahila Kisan Sashaktikaran Pariyojana (MKSP), a sub-component of NRLM, aims to improve the skills of tribal women farmers in sustainable millet growing methods⁶.

The Skills India Mission has launched training programs for tribal women in Odisha, focussing on millet processing, packaging, and business development⁷.

Livelihoods, Skill Development & Market Linkages, One of Mission Shakti's goals has been to give livelihood assistance to women's SHGs and associated federations through a variety of revenue-generating initiatives. Women SHGs in Odisha have taken up numerous Income Generating Activities such as Agriculture (Rice, Sugarcane, Onion, Ground Nut etc.), Vegetable cultivation, Organic farming (all kinds of Millets, rice, Turmeric, Rajma etc.), Apiculture, Badi and Pampad making, Bamboo crafts, Candle Making, Chhatua Making, Civil Construction, Door Mat Making, Flour Mill, Flouriculture, Fly Ash Brick Business, Goatery, Horticulture, Handloom, Incense Stick Making, Livestock rearing many other activities⁸.

The National Bank for Agriculture and Rural Development (NABARD) has launched special lending packages with lower interest rates for tribal women involved in millet farming and processing businesses⁹.

The PM-WANI (Prime Minister's Women Advancement and Nurturing Initiative) contains special components to help tribal women entrepreneurs in the millet value chain with financial and technical assistance¹⁰.

7. ODISHA MILLET MISSION

The Odisha Millets Mission (OMM)¹¹ demonstrates a robust dedication to assisting women in establishing their own enterprises via various customised programs and support mechanisms. The strategy explicitly prioritises women's Self Help Groups (SHGs) by granting them first access to various business possibilities inside the millet value chain (p.73). The "Millet Shakti Kiosk" initiative serves as a significant avenue for women's self-help groups to establish their own enterprises. It provides a one-time award of Rs. 50,000 to establish millet-based food enterprises like as tiffin centres and evening snack kiosks (p.73-74). The policy provides women with substantial assistance, including equipment, working capital, and infrastructure, to facilitate the effective initiation of these firms.

The mission actively promotes women's participation in seed production and processing enterprises by integrating Community Resource Persons (CRPs) into women's campaign teams for marketing and awareness initiatives (p.30-31). These women are acquiring skills in millet preparation, nutrition, and business management. The policy establishes specific mechanisms for women-led projects to secure funding through the "Start-up Capital for the establishment/management of Kiosks" component, targeting women entrepreneurs (p.73). In selecting these firms, Mission Shakti's Women Self-Help Groups take precedence. This ensures that the funds are allocated to female beneficiaries. The initiative enhances women's technical and managerial skills through residential training sessions priced at Rs. 8,000 each batch, focussing on millet processing, value addition, and company management (pp. 31-32). This investment in skill development enables women to efficiently manage and expand millet-based enterprises. The Odisha Millets Mission assists women in establishing their own enterprises while enhancing food security and traditional food systems through structured support, including financial aid, skill development, and market connections.

⁴ <https://www.nfsm.gov.in/#:~:text=About%20Us,of%2012th%20Five%20Year%20Plan.>

⁵ <https://dbtbharat.gov.in/central-scheme/list>

⁶ <https://pib.gov.in/PressReleasePage.aspx?PRID=1705506#:~:text=The%20Department%20of%20Rural%20Development,Singh%20Tomar%20in%20Lok%20Sabha.>

⁷ <https://msde.gov.in/sites/default/files/2019-09/Women%20get%20a%20special%20focus%20under%20Skill%20India%20Mission.pdf#:~:text=Increase%20of%20women%20participati on%20in%20workforce%20can,to%20a%20path%20of%20self%20sufficiency%20through%20entrepreneurship.>

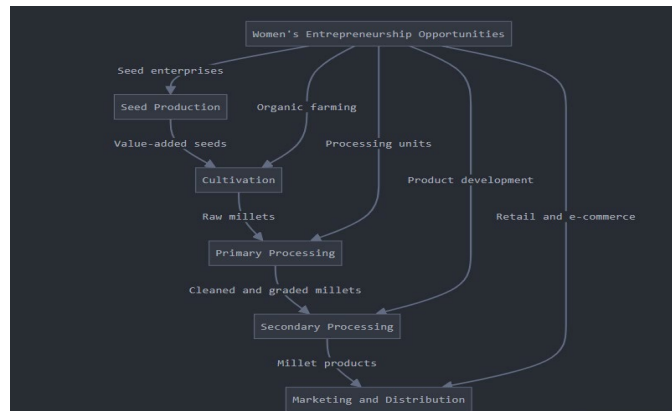
⁸ <https://missionshakti.odisha.gov.in/programme/livelihoods-skill-development-market-linkages>

⁹ <https://www.nabard.org/content1.aspx?id=23&catid=23&mid=530>

¹⁰ <https://pib.gov.in/PressReleasePage.aspx?PRID=2039876>

¹¹ Odisha Millets Mission. Accessed from https://milletsodisha.com/uploads/files/guidelinedocument/Approved%20OMM%20Guideline_Final.pdf

Women employed in the millet sector may leverage the aforementioned techniques to establish their own enterprises. The picture below illustrates potential locations for women to initiate companies inside the millet value chain:



This image illustrates many segments of the millet value chain where women might initiate their own enterprises, ranging from seed cultivation to the sale of completed products. The process starts with the production chain, followed by primary processing, which incorporates contributions from both the cultivation phase and distinct processing units. During the initial phase of processing, raw millets are transformed into cleaned and graded millets. The processed millets undergo secondary processing, guided by product development activities. The secondary processing technique produces several millet products, which are then marketed and distributed. Retail and e-commerce systems facilitate the last stage, ensuring that items are delivered to the appropriate recipients. The initiative aims to provide women entrepreneurs at all levels of the value chain several opportunities for engagement.

The framework illustrates a vertical integration technique that women may employ at several levels, from seed cultivation to managing intricate retail enterprises. Various phases of entrepreneurship have distinct possibilities, skill requirements, and levels of investment. The interrelation of processes illustrates how women entrepreneurs may expand their businesses at all stages of the value chain, resulting in more successful and enduring corporations. The millet industry offers a combination of conventional and contemporary economic options. This is seen in the integration of traditional agricultural practices with contemporary retail techniques.

8. THE FUNCTION OF FPOS IN TRIBAL WOMEN'S MILLET ENTREPRENEURSHIP

Farmer Producer Organisations (FPOs) have emerged as significant avenues for tribal women entrepreneurs in the millet sector to expand their enterprises, particularly in states like as Odisha. The Odisha Millets Mission has effectively engaged tribal women in organised millet production and marketing via FPOs (Kumar & Rath, 2023). Recent research indicate that around 22% of tribal women cultivating millet in India are now affiliated with FPOs. The specific figures differ per region (Singh et al., 2024). In Odisha, FPOs process millets at a rate of Rs. 31.5 per quintal and get 1% of the MSP, therefore providing tribal women farmers with sustainable economic prospects. Despite these challenges, FPOs have demonstrated their capacity to collaborate effectively in addressing these issues. They provide indigenous women entrepreneurs marketing, training, and enhanced negotiation leverage (Patel, 2023), however they still encounter difficulties accessing, understanding, and enrolling in the FPOs.

9. ECONOMIC ADVANCEMENT OPPORTUNITIES FOR WOMEN

Millet-based entrepreneurship has significantly contributed to women's economic liberation in the tribal areas of Odisha (Padhi & Panigrahi, 2019). Studies suggest that women entrepreneurs might create sustainable businesses by focussing on the production and distribution of superior millet seeds, leveraging extensive traditional expertise in seed selection and preservation techniques (Rao et al., 2017). Mishra et al. (2020) contend that the expanding organic food market has provided women farmers the chance to cultivate organic millet, allowing them to achieve higher prices in both local and foreign markets. The millet-based enterprise has significantly contributed to the financial independence of women in the tribal communities of Odisha (Padhi & Panigrahi, 2019). Studies suggest that women entrepreneurs might create sustainable businesses focused on the production and sale of premium millet seeds, leveraging significant traditional knowledge in seed selection and preservation methods (Rao et al., 2017). Mishra et al. (2020) indicate that the expanding

organic food market has provided women farmers with opportunities to plant organic millet, enabling them to get higher prices in both domestic and international markets. The National Institute of Rural Development asserts that women-led cooperatives and self-help organisations have significantly facilitated women's entry into the millet value chain and enhanced their bargaining power (Singh & Kumar, 2022). These collaborating enterprises have successfully dismantled outdated market obstacles and established enduring distribution networks.

10. DISCUSSION

Women entrepreneurs in Odisha's tribal regions face several difficulties on their path to financial independence. The primary obstacle is their inability to access banks and credit unions, significantly hindering their capacity to initiate and develop millet-selling enterprises. These industrious women encounter difficulties accessing larger, more lucrative marketplaces beyond their local area due to infrastructural problems and insufficient market connections. Their entrepreneurial potential is constrained by insufficient technical skills in contemporary processing methods and product development, hindering innovation and competitive success in the market.

The millet-based enterprise in the tribal regions of Odisha both significant opportunities and substantial challenges for women seeking to enhance their economic circumstances. The survey indicates that women constitute more than 80% of millet growers in India. This signifies their importance to the value chain. The Odisha Millets Mission (OMM) and analogous groups have assisted tribal women in the production, preparation, and sale of seeds. The expanding organic food business has enabled female farmers to sell their produce for higher prices in both local and international markets. Women-led cooperatives and self-help groups have significantly facilitated people's market entry and enhanced their negotiating power.

However, according to our current understanding, indigenous women who own businesses face several challenges. The primary problem remains securing funding, as 78% of individuals are unable to obtain institutional credit. The task is somewhat challenging due to constraints in technological proficiency and limited access to marketplaces. Over 60% of women encounter difficulties with the technical aspects of business operations. Infrastructure issues, such as insufficient storage and processing equipment, are hindering their growth. Sixty-two percent of women reported experiencing gender bias in professional contacts. Social obstacles and gender discrimination continue to impact women's enterprises. Although regulations exist to support women in establishing their own businesses, a significant disparity remains between formulating these regulations and implementing them throughout the community. This disparity may occasionally hinder Native women entrepreneurs from securing the assistance and benefits they seek. Moreover, stringent social and cultural norms remain significant issues. Conventional gender norms and cultural expectations sometimes restrict women's mobility and their ability to make independent economic choices. Cultural limitations can hinder individuals' engagement in business and decision-making about their enterprises, hence impeding their economic independence and success.

Certain existing policies have been more effective than others in facilitating the establishment of firms by indigenous women. Examples of organised support systems are Van Dhan Vikas Karyakram, NRLM, and TRIFED. The "Millet Shakti Kiosk" initiative of the OMM allocates Rs. 50,000 to women's self-help groups, exemplifying a targeted policy action. However, execution remains problematic, with just 34% of qualified women receiving payouts due to bureaucratic obstacles and convoluted documentation.

11. CONCLUSION

The millet-based enterprise has significant opportunities for the economic advancement of tribal women in Odisha. With the increasing cultivation of millets and the expanding market for nutritious meals, it presents an opportune moment for women-led enterprises within the millet value chain. Nonetheless, targeted policy reforms and effective implementation are essential to address issues such as limited access to money, markets, and technical expertise. The millet-based enterprise has significant potential for the economic liberation of tribal women in Odisha, particularly in light of the aforementioned increasing consumer demand for organic and nutritious foods. Existing policies provide a supporting framework; nevertheless, issues with implementation and structural constraints diminish their efficacy. To effectively promote entrepreneurship among tribal women, it is crucial to address core difficulties while concurrently negotiating social and cultural obstacles. The results suggest that improving policy implementation mechanisms and prioritising comprehensive support systems, such as upgraded infrastructure and increased access to benefits, might substantially boost the success of women entrepreneurs in the millet industry.

CONFLICTS OF INTEREST

None.

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