



Social and Economic Impact of Sahaja Samrudha on Sustainable Agriculture in Karnataka

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Abstract

This study investigates the role of Sahaja Samrudha, a social enterprise based in Karnataka, in encouraging sustainable agriculture and community development through a mixed-methods approach involving a survey of 62 custodian farmers. While demographic data such as age, gender, and education were collected, the primary focus was on assessing the broader social and economic impacts of the enterprise. The outcomes highlight Sahaja Samrudha's significant contributions to environmental sustainability, income enhancement, and the empowerment of marginalised groups, particularly women, through training and capacity-building initiatives. Despite these positive outcomes, the study identifies areas for development, notably in access to social services and education. Although the regional scope may limit broader applicability, the research provides valuable insights into the transformative potential of eco-social enterprises in advancing inclusive growth and sustainable development, emphasising the importance of supportive policies and resource allocation to amplify their impact across diverse contexts.

Keywords: *Social enterprises; Sahaja Samrudha; sustainable agriculture*

INTRODUCTION

According to the World Bank, the global agri-food system is responsible for emitting one-third of all greenhouse gas emissions. This sector, which includes farming, food processing, transportation, and waste management, plays an important role in the global carbon footprint, emphasising the need for further sustainable practices (Magdalena et al., 2020; Crippa et al., 2021). Global food demand is anticipated to increase significantly as the world prepares to feed a projected population of 9.7 billion people by 2050 (James & Marketa, 2020; Walter et al., 2022). This increase in demand will require significant advancements in agricultural productivity, sustainable practices, and food distribution systems to ensure that the growing population is adequately nourished (Pratap et al., 2016; Rachid, 2023). The agri-food system must not only feed the growing population but also adapt to environmental changes and significantly reduce its greenhouse gas emissions by adopting sustainable practices and improving resource efficiency (Akila & Ranjith, 2022; Rakshit et al., 2024). Consequently, climate-smart agriculture has emerged as a holistic strategy to handle the challenges in the agri-food sector (Rusha, 2023; Junfang et al., 2023; Alvin et al., 2018). It aims to boost productivity and resilience while minimising greenhouse gas emissions, integrating sustainable practices, optimising resource use, and adapting to climate change to confirm environmental sustainability and food security (Chandra et al., 2018; Tamás, 2021).

India, with a population of approximately 144 crores, is the most populous country in the world, and the growth of the agricultural sector becomes crucial (Vasant, 2021). Moreover, climate change, food, and nutrition insecurity are among the most significant developmental challenges (Muhammad et al., 2022). Climate change interrupts weather patterns and crop yields, while food and nutrition insecurity undermines health and economic stability. Tackling these interconnected issues is essential for sustainable development and ensuring a stable, healthy future (Alvin et al.,

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2018; Mahendra & Alakh, 2010). Consequently, sustainable agricultural practices are essential for environmental restoration and food security. They enhance soil health, conserve water, reduce emissions, and safeguard biodiversity, helping to mitigate farming's environmental impact while ensuring a reliable and resilient food supply for the increasing population (Rockström et al., 2017; Raj et al., 2021). In India, the farmers are referred to as 'Annadatas' and are closely connected to the overall prosperity of the country (Cdt et al., 2023).

In a rapidly progressing economy like India, nurturing the agricultural segment holds equal significance alongside the transformation of industries and digital infrastructure. The Government of India has taken on numerous initiatives to uplift this crucial segment, including policy reforms, subsidies for inputs, farmer training programs, and strategies aimed at climate resilience. These initiatives reflect a broader commitment to confirming sustainable agricultural growth in the face of developing economic and environmental challenges. Agriculture plays a crucial role in the Indian economy, utilising 11.24% of the world's arable land and 4% of its renewable water resources. India is capable of producing enough food, feed, and fibre to support approximately 18% of the global population, which amounts to 1.38 billion people as of 2020 (Ashok & Ritika, 2022). The agricultural sector, which is estimated to constitute 18 % of India's gross value added in the financial year 2024, is the foundation of the nation's economy (Foundation, 2024). Despite challenges posed by the global health crisis and variability in climate conditions, the agricultural sector has been contributing significantly to India's economic recovery and development (Vinod, 2021).

This study addresses the limited empirical research on the contributions of grassroots social enterprises to sustainable agriculture and rural development in India. Focusing on Sahaja Samrudha, a Karnataka-based initiative working with custodian farmers, the study explores how community-driven models can effectively integrate ecological sustainability with social inclusion. In doing so, the research contributes to existing theory by highlighting the unique role of eco-social enterprises in fostering place-based, farmer-led sustainability transitions. It also offers practical insights for policymakers, development practitioners, and rural entrepreneurs on how to support and scale such models to enhance livelihood resilience, promote agrobiodiversity, and empower marginalised communities through capacity building and inclusive value chains.

LITERATURE REVIEW

According to Jenny (2015), community-supported agriculture by social enterprises is the focal point of the study. It is suggested that social enterprises engage in agricultural initiatives that prioritize ethical concerns about the environment and livelihood. These enterprises offer insights into how community economies are formed. In academic discourse, it is more common to refer to social enterprises in terms of their socio-economic benefits to humanity rather than their natural communities. Even when environmental benefits are mentioned, they are often considered subsidiary to social benefits. It is noted that social enterprise typologies rarely include enterprises such as organic farms, community-supported agriculture schemes, or green energy projects. However, there is now a global discussion about social and solidarity economies. It encompasses enterprises, organizations and other entities that are engaged in economic, social, and environmental activities to serve the collective and/or general interest, which are based on the principles of voluntary cooperation and mutual aid, democratic and/or participatory governance, autonomy and independence, and the primacy of people and social purpose over capital in the distribution and use of surpluses and/or profits as well as assets (Marie & David, 2022). According to national circumstances, the social and solidarity economies include cooperatives, associations, mutual societies, foundations, social enterprises, self-help groups and other entities operating by the values and principles of the social and solidarity economies.

Social enterprise in Korea is used as an umbrella term akin to the English word 'social and solidarity economy' (Lee, 2020). There are various types of organisations in the social enterprise sector: social enterprises, rehabilitation enterprises, cooperatives, and community enterprises (Lee, 2020). Some projects initially started to provide recreational opportunities for disabled people to get together with non-disabled people; now, each teaches more than 400 disabled people annually about how to farm food in more than 20 gardens (Shin, 2017). Connecting the economic dimension with the social and environmental ones, urban agriculture truly advocates an integrated and balanced approach to sustainable development and realises the ambition of making cities 'affordable, inclusive, and sustainable' (Lee, 2020). Moreover, new eco-social enterprises (often with a cooperative organizational structure) can include: village transport systems; local food markets and community supported agriculture schemes; local currency systems and barter networks; communal organic farms and ecosystem regeneration initiatives; community radios, schools, gardens and cafés; work-integration social enterprises; producer, consumer, credit and renewable energy cooperatives; trading branches of non-profits; community land trusts; left-wing political squatters' communities; social banks, and many others (Nadia & Eva, 2017).

The five dimensions of eco-social enterprises, as identified through existing definitions and research, include: (i) pursuing goals beyond profit, (ii) using profits to replenish nature and support the community, (iii) implementing democratic and localized ownership and governance structures, (iv) being deeply rooted in their local context and historical setting, and (v) adopting non-market production, exchange, or provisioning patterns. These dimensions underscore the distinct nature of eco-social enterprises, which aim to balance social and environmental benefits with economic sustainability. They emphasise building positive impacts by reinvesting profits into environmental and community initiatives, fostering inclusive decision-making, maintaining strong local connections, and employing alternative approaches to traditional market-driven models (Nadia & Eva, 2017). The focal point of discussion in this study is eco-social farming practices, which encompass several important elements: empowering deprived communities, applying sustainable agricultural techniques, safeguarding natural resources, and supporting the farming community. These practices aim to create a holistic approach to farming that not only addresses immediate agricultural needs but also contributes to broader sustainability goals. Eco-social enterprises engaged in eco-social farming play a crucial role in advancing sustainable development by integrating these practices into their operations. By doing so, they help attain sustainable development goals such as poverty alleviation, food security, environmental protection, and social equity. Their efforts prove how sustainable agricultural practices can drive advancement towards a more resilient and equitable future.

The literature is thematically organised around key concepts such as eco-social enterprise models, organic farming networks, and seed sovereignty initiatives, with Sahaja Samrudha serving as a representative case. Karnataka, located on the western coast of India, is recognised for hosting several impactful social enterprises (Revendranath & Anjula, 2021; Panduranga, 2021). Among them, Sahaja Samrudha, founded in 2001 in the Mysore district, stands out as a grassroots movement that evolved into a structured platform promoting sustainable agriculture and agro-biodiversity (Lukas & Cahn, 2008). The organisation was established in 2001 as an organic farmers group, and has grown into an active group with a better network, especially sharing innovative ideas, experiences, and developing region-specific programs focusing on the pressing needs of the farmers.

The company has conserved 800 traditional varieties of paddy (Rajanna et al., 2014). It has networked 8000 farmers, cultivated 1500 acres of paddy varieties, conserved 68 millet varieties, and networked 300 farmers, cultivating 250 acres of millet varieties (Ashwini & Mithun, 2022). It operates a producer company called 'Sahaja Organics,' which sources grains directly from farmers

and distributes them through a network of organic outlets. The company has established an efficient supply chain for its products, with outlets and farmer markets across Karnataka, including organic bazaars at Western India Palm Refined Oils Limited (WIPRO) and the Indian Institute of Science in Bangalore (Ashwini & Mithun, 2022). As part of its broader eco-social mission, the organisation launched Sahaja Seeds Ltd., India's first farmer-owned organic seed company, to promote seed sovereignty and ecological farming (Seeds, 2023). In addition to seed production and distribution, it engages in advocacy through seed festivals, food fairs, and farmer workshops, thereby raising public awareness and reinforcing cultural ties to traditional agriculture. The initiative's economic model, which includes certification support and royalty arrangements with farmers' groups, seeks to build an ecosystem that aligns ecological goals with tangible economic incentives for rural communities (Samdrudha, 2024). The organisation's aims of Sahaja Samrudha are as follows (Samdrudha, 2024):

- To promote sustainable agriculture and create awareness of the need to conserve natural resources and traditional knowledge systems
- To conduct on-farm research and standardise sustainable agriculture practices
- To capacitate Farmers, Panchayat representatives, Non-government organizations, Government Officials and Policy planners on sustainable agriculture and natural resource management
- To assist in the implementation of sustainable farming techniques to farmers and grassroots organisations, in the process of converting their land into organic farms,
- To disseminate information, research outcomes, knowledge and thought on sustainable agriculture and natural resource management through publications and audio/visual materials
- To facilitate the procurement, marketing and sales of organically produced products

To provide a conceptual foundation for this study, the eco-social enterprise model is implemented as the fundamental theoretical framework. This model is mainly relevant in the context of grassroots enterprises like Sahaja Samrudha, which aim to balance ecological sustainability with social and economic empowerment. In this study, empowerment is understood through Kabeer's (1999) framework, which conceptualises empowerment as the process by which those who have been denied the ability to make strategic life choices acquire such an ability. It includes three dimensions: resources (as conditions), agency (as process), and achievements (as outcomes). Applying this lens, the study assesses empowerment in terms of farmers' access to resources such as seeds, training, and networks; their agency in making informed and independent agricultural decisions; and the tangible outcomes reflected in better livelihoods, autonomy, and social inclusion. The eco-social enterprise framework, when observed alongside the empowerment lens, offers a complete understanding of how enterprises like Sahaja Samrudha integrate environmental objectives such as seed conservation and organic farming with broader goals of community development, farmer welfare, and gender inclusion. This combined framework supports a structured understanding of the literature and delivers a coherent analytical viewpoint for assessing the impact of eco-social initiatives in rural India.

The Green Revolution and high-yielding varieties in India have faced criticism for their environmental and community impact. They demand significant investment in hybrid seeds, fertilisers, and pesticides, with no assurance of success due to their low resistance to weather changes (Emil, 2022). Many farmers who borrowed money for these investments fell into debt and were unable to repay loans due to poor returns, leading to a rise in farmer suicides (Balamuralidhar, 2009; Sanchita, 2009). Additionally, farmers shifted from growing food grains to commercial crops, impacting rural food security. This increased demand for organic farming. During its journey, Sahaja Samrudha met and was inspired by many local seed savers (Shambu et al., 2023). These are

seeds, passed down through generations, known for their exceptional flavour, nutritional benefits, and pest resistance. Recognising the urgent need for food security and the farmers' socio-economic conditions, Mr. Krishna Prasad, an engineering graduate with a post-graduate degree in environmental engineering, founded Desi Seed Company Pvt Ltd and introduced the brand 'Sahaja Seeds.' As the founder of Sahaja Samrudha and an Ashoka Fellow, Krishna Prasad comes from a family of farmers and is a prominent social entrepreneur. Desi Seed Producer Company Limited, founded in 2011, is India's first farmer-owned organic seed company. Seed savers produce over 150 high-quality, flavour- and nutrition-rich varieties suitable for urban and rural growth (Seeds, 2023). Marketed under 'Sahaja Seeds,' these seeds are organic (Lammerts et al., 2003), open-pollinated (Brian, 2012), and open-sourced (Martin, 2021) from farming communities across India. The company aims to conserve agro-biodiversity and build seed-saving communities (Tara & Hareesh, 2023).

The changeover to sustainable agriculture in India needs addressing both ecological and socio-economic challenges, particularly in seed sovereignty and access. In this context, initiatives like Desi Seeds Pvt Ltd play a vital role. They believe that seeds belong to communities rather than individuals or corporations, and their vision is to empower farmers to become self-contained by implementing sustainable agricultural practices, starting from the seed. They explicitly reject the use of genetic modification, irradiation, sewage sludge, and synthetic agrochemicals that are permitted in conventional systems, which have had harmful effects on people, the planet, and the economy. Despite India ranking eighth in terms of total land under organic agriculture, it ranks eighty-eighth in the proportion of organic crops relative to the entire agricultural land (Chopra et al., 2013; Helga & Julia, 2017). Nonetheless, significant growth in the organic sector has been observed in recent decades (Helga & Julia, 2017; Madhab et al., 2021). This development has led to increasing interest in organic farming among Indian farmers. However, the availability of quality organic seeds remains a primary constraint. Farmers are often left with two choices: saving seeds themselves, which is laborious, or relying on community-run seed banks that often suffer from insufficient infrastructure and staffing. Moreover, these seed banks rarely collaborate. Commercial seed companies, on the other hand, tend to avoid organic seed production due to lower profit margins compared to hybrid seeds. Intellectual property rights further complicate the landscape, restricting corporations from using traditional varieties without engaging with farmer groups, which are often fragmented and lack formal organisation. Desi Seeds Pvt Ltd seeks to handle these challenges by bridging the gap between the increasing demand for organic seeds and their inadequate supply in India (Seeds, 2023).

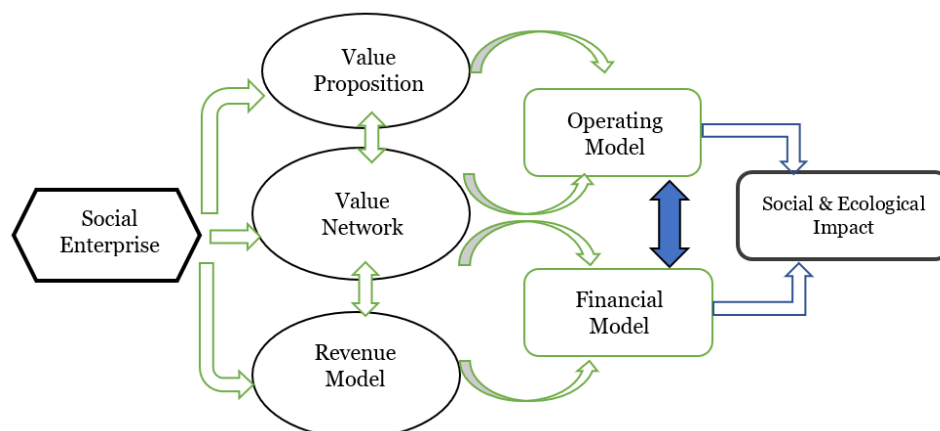


Figure 1. Business Models of Social Enterprises: Sahaja Samrudha
Source: Roshni (2021)

The business model of Sahaja Samrudha integrates several key components, including the value proposition, value network, revenue model, operating model, and financial model, all working together to create social and ecological impact (Figure 1).

The model promotes organic farming in India by utilising farmers' expertise to revive and commercialise traditional seed varieties, with Sahaja Samrudha supporting over 2,500 farmers growing local varieties, reducing dependence on commercial seed companies. The value network includes collaborations with over 250 NGOs and research institutions, empowering communities and strengthening local seed systems. The financial model of Sahaja Samrudha and Sahaja Seeds ensures sustainability and scalability, generating income through eco-friendly products, services, and stakeholder investments. Sahaja Organics, the larger entity, reported a business volume of Rs 88.5 million in 2019-20, while Sahaja Seeds maintains financial sustainability with an annual turnover of Rs 1.5 million. Both organisations reinvest profits into their activities to support their social missions (Tara & Hareesh, 2023).

While available literature offers valuable insights into sustainable agriculture, community-based enterprises, and rural enablement, much of it tends to examine environmental or socio-economic outcomes in isolation. There is limited research that discovers how grassroots social enterprises address both ecological sustainability and social inclusion in an integrated manner. To link this gap, this study examines the case of Sahaja Samrudha, a grassroots initiative in Karnataka, as a representative eco-social enterprise model that responds to the intertwined challenges facing Indian agriculture currently. Eco-social enterprises like Sahaja Samrudha offer context-specific resolutions to national concerns such as declining agrobiodiversity, farmer marginalisation, and rural livelihood uncertainty. This study is grounded in the eco-social enterprise framework, which is taken from literature on social innovation, ecological economics, and grassroots development. By critically engaging with previous work, the study positions itself within this theoretical lens and contributes to the broader discourse on eco-social innovation. The framework offers a conceptual basis for analysing how enterprises like Sahaja Samrudha incorporate environmental objectives such as seed conservation and organic farming with broader social aims comprising community empowerment, farmer welfare, and gender inclusion. Anchoring the study in this framework allows a more coherent interpretation of the literature. It provides a strong analytical foundation for evaluating the transformative role of eco-social enterprises in rural India.

RESEARCH METHOD

This study employs an investigative mixed-methods research design that incorporates both qualitative and quantitative approaches to examine the role of Sahaja Samrudha, a social enterprise in Karnataka, in promoting sustainable agriculture and inclusive rural improvement. The methodological framework is grounded in a complete review of existing literature on social enterprises and environmentally friendly practices, which informed the conceptual underpinnings of the study and guided the identification of research gaps. The qualitative section involved semi-structured interviews with the director of the organisation and ten recipient farmers selected based on their active participation in seed preservation, environmentally friendly practices, and community engagement. These recipients were purposively sampled to confirm diversity in age, gender, landholding size, and years of association with Sahaja Samrudha. All ten interviewed farmers also participated in the structured survey component of the study. The semi-structured interview format allowed for flexibility in discovering individual experiences while maintaining uniformity across key themes.

The quantitative component involved administering structured questionnaires to all 62 custodian farmers associated with Sahaja Samrudha, thereby ensuring complete coverage of the enterprise's active beneficiary base. In this context, custodian farmers are defined as individuals

who preserve, cultivate, and promote indigenous seed varieties and traditional farming methods, acting as stewards of agrobiodiversity within their communities. The survey captured data on income levels, agricultural practices, gender roles, food security, and access to social services. To ensure the reliability of the survey instrument, a pilot test was conducted with a smaller group of non-sample farmers, and modifications were made based on their feedback. While the study did not employ inferential statistical techniques, it emphasised conceptual alignment and internal coherence to ensure meaningful interpretation of the findings. Secondary sources, including organisational reports, government documents, and policy literature, were reviewed to provide contextual background and support triangulation of data.

To evaluate the enterprise's contribution to the social empowerment of its recipients, a structured survey using a five-point Likert scale was employed, where five signifies "Strongly agree" and one signifies "Strongly disagree" (Ankur et al., 2015). This scale allowed the quantification of beneficiaries' perceptions regarding the enterprise's effectiveness in promoting social empowerment. The specific survey questions are presented in Table 1. This integrated approach allowed for a comprehensive and contextually grounded assessment of Sahaja Samrudha's contributions to eco-social innovation, farmer livelihoods, and sustainable rural transformation.

Table 1. Survey Question on The Contribution of The Social Enterprise Towards social Empowerment

Sl. no	Survey question
1	The enterprise follow capacity building of the less privileged
2	It directs the resources towards less privileged persons
3	It expands and extends the spectrum of services and activities
4	Better visibility and representation (in government bodies) of the social problems
5	Improvement in social status & social wellbeing
6	Empowerment of women
7	Personality development
8	Training is provided
9	Assistance for education
10	Skill development
11	Community development programmes are practiced
12	Entrepreneurial development
13	Enhanced knowledge and awareness
14	Enhanced social and cultural interaction
15	Contributes to the physical and mental wellbeing
16	Access to social services

Similarly, the enterprise's contribution to the economic empowerment of beneficiaries was evaluated through a dedicated survey. This survey was designed to gather detailed information on the economic benefits experienced by the beneficiaries as a result of their involvement with the enterprise. The questions focused on various aspects of economic empowerment, such as changes in income levels, financial stability, and access to economic resources. By analysing the responses, we aim to assess the impact of the enterprise on the economic well-being of the beneficiaries. The specific questions related to economic benefits are outlined in Table 2.

Table 2. Survey Question on The Contribution of The Social Enterprise Towards The Economic Empowerment

Sl. no	Survey question
1	It has facilitated the generate of income
2	It has facilitated to increase the household income

Sl. no	Survey question
3	It has facilitated to increase the personal income
4	It has helped in asset formation
5	It has helped in food security
6	It has promoted savings habits
7	It has helped in the increase of disposable income
8	It has helped in employment generation
9	It has enhanced the standard of living
10	It has helped in poverty alleviation

FINDINGS AND DISCUSSION

This section presents the important findings on the influence of Sahaja Samrudha on sustainable agriculture and socio-economic development in Karnataka. According to Table 3, the majority of the 62 survey participants are above 50 years old (33 individuals), followed by those aged 40–49 (18 individuals), 30–39 (9 individuals), and only two participants in the 19–29 range. This age scattering highlights the most experienced individuals in the farming community. Qualitative insights from interviews and participant observations, along with quantitative data from structured questionnaires, offer a profound understanding of the enterprise's influence. For instance,

"The community seed bank has aided us in preserving our traditional varieties and passing them on to the following generation." – R.S., Senior Farmer, practising rainfed cultivation for over 30 years.

Such insights disclose that older participants often prioritise capacity building, immediate skill development, and the improvement of traditional agricultural practices due to their long-term involvement.

In contrast, younger participants, though fewer in number, tend to emphasise innovation and progressive approaches, seeking transformative agricultural solutions.

One noted,

"We need more training on digital platforms and climate-resilient practices." – M.K., Young Organic Farmer, using mobile-based advisory tools.

This generational disparity reflects differing inspirations and expectations, signifying that Sahaja Samrudha must plan initiatives that bridge traditional knowledge with modern practices. Catering to both perspectives can enhance resilience and adaptability in the farming community (Para & Kerstin, 2021). Inclusive strategies that identify demographic diversity are critical to promoting sustainable agriculture and long-term socio-economic development (Ana et al., 2021). Demographic and general participant details are provided in Table 3.

Table 3. Demographic and General Details of Participants

Category	Survey question	Options	Count
Demographic details	Age (years)	19 - 29	2
		30 - 39	9
		40 - 49	18
		> 50	33
	Gender	Male	50
		Female	12
	Educational Qualifications	Primary	16
		High school	15

Category	Survey question	Options	Count
	Marital Status	PUC	11
		ITI courses or any other professional courses	2
		Graduation/ Diploma	18
		Married	58
		Single	4

The gender distribution among the 62 survey participants, with 50 males and 12 females, indicates a substantial male majority. This difference likely affects the survey results, as the predominantly male perspective may shape the feedback, especially in areas like empowerment and community development. Women, underrepresented in research according to survey data, may have distinct priorities and needs, including gender-specific support and balancing agricultural responsibilities. These aspects might be inadequately captured in the study results, hypothetically leading to an incomplete understanding of their experiences and challenges in the agricultural sector (Sucheta et al., 2020; Tripathy et al., 2022). Accordingly, the results may reflect more traditional views and experiences, potentially skewing the assessment of how well the enterprise addresses gender-related issues and supports diverse groups.

The educational qualifications of the 62 survey participants reveal a varied range of backgrounds, which may influence their perceptions of Sahaja Samrudha's impact. Notably, none of the participants has a formal education; instead, most have completed some level of schooling. Specifically, 16 participants have completed primary education, 15 have finished higher primary education, 11 have completed a Pre-University Course, and 18 hold graduation or diploma qualifications. Only 2 participants have pursued ITI or other professional courses, and no one has a post-graduate degree. This distribution shows that while the majority possess foundational and intermediate educational qualifications, higher educational levels are less common. This educational diversity is likely to shape how participants perceive and evaluate the enterprise's contributions. Those with higher education, such as graduation and above, may provide more critical assessments of complex aspects, such as market knowledge and entrepreneurial development, as noted by Mohd et al. (2020).

In contrast, participants with primary and high school education may emphasise more on practical benefits like training and skill development. Consequently, the survey results disclose varied perspectives based on educational background, with higher-educated individuals potentially valuing advanced training and strategic initiatives. At the same time, those with less education might prioritise immediate, practical support. This variation underscores the importance of tailoring the enterprise's offerings to address the diverse needs and expectations of participants with different educational backgrounds.

The difference in age and educational backgrounds between participants suggests differing perspectives on Sahaja Samrudha's impact. Older individuals with basic education tend to prioritise immediate, practical benefits like hands-on training. At the same time, the few highly educated respondents focus on strategic aspects such as market access and entrepreneurial development. This blend of viewpoints highlights the need to address diverse expectations to fully assess the enterprise's overall impact (Kirti & Phanindra, 2018). The survey shows that 58 out of 62 participants are married, indicating that the majority of feedback comes from individuals with family responsibilities. This likely influences their emphasis on stability, financial security, and family-focused support (Christian & Johanna, 2005). In contrast, fewer single participants may prioritise personal development. The absence of other marital statuses suggests that the needs and experiences of married individuals largely shape the perspectives.

The survey responses from 62 participants highlight Sahaja Samrudha's substantial positive

impact on various aspects of social development and well-being (Figure 2). Participants rated the enterprise highly for capacity building (4.1), targeted resource delivery (4.0), adaptability (4.1), and advocacy efforts (4.3), indicating well-structured and responsive programs. Notable strengths include women's empowerment (4.3), community development (4.3), and skill enhancement (4.1). While training initiatives were well-received (4.2), slightly lower ratings in personality development (3.9), educational assistance (3.7), and entrepreneurial development (3.9) suggest areas for improvement. The enterprise's contributions to awareness building (4.2), social interaction (4.1), and access to services (4.1) further underscore its pivotal role in inclusive and sustainable community upliftment.



Figure 2. Survey Results On Sahaja Samrudha's Contribution To Social Empowerment

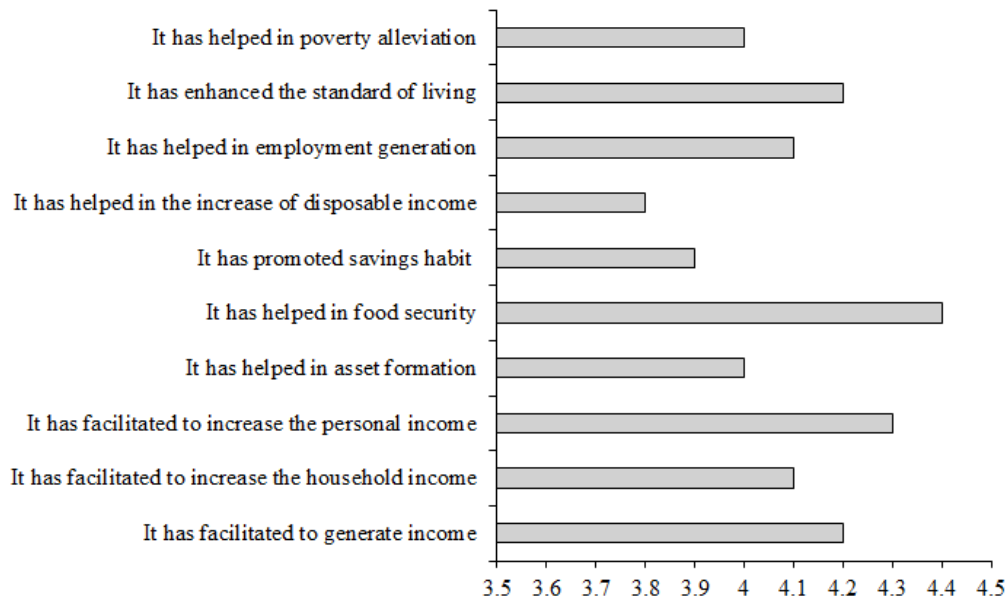


Figure 3. Survey results on Sahaja Samrudha's Contribution to Economic Empowerment

The survey findings (Figure 3) highlight Sahaja Samrudha's significant contributions to economic empowerment. High ratings were recorded for income generation (4.2), personal income (4.3), and household income (4.1), indicating enhanced financial stability among beneficiaries. Food security received the highest rating (4.4), emphasising the enterprise's critical role in ensuring

access to safe and nutritious food. Additionally, participants reported positive impacts on asset formation (4.0), employment generation (4.1), and overall living standards (4.2). However, relatively lower ratings in savings promotion (3.9) and disposable income (3.8) reveal areas where financial resilience could be further strengthened. These findings propose that while income has increased, structural constraints such as household expenditure patterns and limited access to formal financial services may hinder long-term savings.

Furthermore, although the study acknowledges gender-based challenges, these are not uniformly reflected in the economic indicators. Informal discussions and observations suggest that, although women participate actively, they have limited decision-making power in financial matters and restricted access to land or other assets. These disparities need further attention, highlighting the need for gender-sensitive programming and greater support for women's economic agency. Overall, while the enterprise displays strong economic influence, the findings point to the importance of addressing hidden discrimination and reinforcing inclusive development strategies.

The social enterprise is highly regarded for its positive impact on social status and well-being, demonstrating noteworthy achievements in several important areas. By focusing on improving market knowledge, the social enterprise has enhanced the capacity of individuals to make informed decisions and engage efficiently within economic markets (Mathew et al., 2006). This knowledge not only empowers beneficiaries to navigate market challenges but also opens up new opportunities for economic participation and growth (Diana et al., 2020). Additionally, the social enterprise is recognised for its strategic allocation of resources towards less privileged individuals, ensuring that those in most need receive targeted support and assistance (Peter, 2017). This resource-directed approach helps bridge gaps in access to essential services and opportunities, promoting greater equity and inclusion within the community. The social enterprises' efforts in these areas contribute to uplifting social status and overall well-being, as they address critical requirements and foster a more supportive and equitable environment for marginalised groups (Jane et al., 2016; Susan, 2002). By improving market knowledge and directing resources strategically, the social enterprise plays a vital role in improving both the economic and social aspects of life for its beneficiaries, ultimately contributing to their sustained empowerment and development (María-Teresa et al., 2021). The data shows that the enterprise has made significant progress in its core mission areas, with substantial impacts in economic empowerment, social development, and resource allocation. While these efforts are well-appreciated, the survey highlights areas for improvement, mainly in educational assistance and access to social services. Strengthening these aspects could provide more comprehensive support and better equip beneficiaries for long-term success. Overall, the findings affirm the enterprise's positive impact while pointing to opportunities for further growth and refinement.

Sahaja Samrudha has developed a vast network of nearly 10,000 custodian farmers engaged in the conservation, multiplication, and distribution of traditional seeds, reflecting its strong commitment to sustainable agriculture (Tara & Hareesh, 2023). This network encourages biodiversity, supports food security, and enables the broad adoption of eco-friendly farming practices, showcasing the organisation's grassroots approach to agricultural resilience. To sustain and scale these initiatives, further institutionalisation is essential. Establishing a formal body for custodian farmers would improve coordination, allow knowledge sharing, and strengthen advocacy. It would also support capacity-building and standardise practices, ensuring long-term sustainability and a more self-reliant farming community. The current political landscape presents significant challenges for supporting large-scale conservation efforts, as it often relies heavily on the individual passion and commitment of those involved rather than on structured, systemic support. This reliance on personal dedication alone may fall short of achieving the extensive and enduring impact needed for substantial change. To address this gap, it is crucial to strengthen

economic incentives that can sustain and enhance farmers' enthusiasm and commitment over the long term.

Economic incentives such as subsidies, grants, or financial rewards for conservation practices can provide tangible benefits to farmers, encouraging their ongoing participation and investment in sustainable agriculture. Sahaja Samrudha serves as a prime example of how effective economic incentives and institutional support are vital for driving and maintaining impactful initiatives in this field. The organisation's efforts highlight the need for a supportive framework that includes both financial incentives and institutional backing to ensure the scalability and sustainability of conservation practices. By integrating robust economic incentives with comprehensive institutional support, it is possible to foster a more resilient and motivated network of farmers, ultimately leading to greater and more lasting success in advancing sustainable agricultural practices (Ashwini & Mithun, 2022). By empowering farmers and fostering community-led initiatives, the organisation significantly improves livelihoods and cultivates resilience against environmental and economic shocks. Empowering farmers includes providing them with vital knowledge, skills, and resources to implement sustainable agricultural practices effectively, which increases their productivity and economic stability (Miguel et al., 2012). This empowerment not only supports immediate financial gains but also fortifies their ability to adapt to changing environmental conditions and market fluctuations. Community-led initiatives further strengthen this impact by promoting local ownership and participation in decision-making, leading to more relevant and sustainable solutions tailored to specific community needs (Ana et al., 2021). These initiatives, which may include forming local cooperatives and collaborative projects, ensure that solutions are both practical and embraced by the community. As a result, communities become more adept at handling environmental threats like climate change and economic pressures such as market volatility. Overall, the organisation's focus on empowering farmers and supporting community-driven projects enhances both individual livelihoods and community resilience, ensuring enduring stability and sustainability in the face of various challenges (Mert-Cakal & Miele, 2022).

CONCLUSIONS

This study explored the role of Sahaja Samrudha in advancing sustainable agriculture and inclusive rural development through a thematic analysis of its contributions to income generation, community empowerment, and environmental sustainability. Adopting a mixed-methods approach, the research demonstrated how eco-social enterprises can help as effective vehicles for fostering socio-economic transformation in rural contexts. Findings related to income enhancement revealed measurable enhancements in farmers' earnings, food security, and access to markets. A generational divergence was observed, with older farmers valuing traditional practices and younger cohorts embracing innovation and technology, indicating a complementary dynamic that supports agricultural resilience.

Community empowerment emerged as a central outcome, as the enterprise facilitated participatory governance, strengthened collective action, and expanded access to knowledge-sharing platforms. While the study noted encouraging progress in gender inclusion, structural challenges persist, particularly regarding women's access to land, financial services, and decision-making roles, highlighting the need for sustained and targeted interventions. In terms of environmental sustainability, Sahaja Samrudha contributed considerably to agroecological health by promoting organic farming, conserving indigenous seed varieties, and reducing the use of chemical inputs. These practices enhanced ecological resilience while aligning with broader sustainable development imperatives.

Despite these positive outcomes, gaps remain in access to education, healthcare, and

essential public services, especially among marginalised groups. Addressing these deficits is important to sustaining the long-term impact of such initiatives. The findings highlight that eco-social enterprises like Sahaja Samrudha are crucial actors in attaining the Sustainable Development Goals, particularly in rural settings. To maximise their impact and replicability, policymakers and development institutions need to extend sustained policy support tailored to local needs. In addition, designing localised capacity-building programs, expanding financial inclusion through accessible credit and savings mechanisms, and instituting gender-sensitive reforms that promote equitable access to resources and leadership opportunities for women are necessary steps. Finally, strategic investment in rural education and healthcare infrastructure will further improve the enabling environment in which such community-led enterprises operate. These integrated measures will support the replication of successful models and accelerate inclusive and sustainable rural transformation.

LIMITATION & FURTHER RESEARCH

This study's regional focus on Sahaja Samrudha in Karnataka presents a limitation in terms of generalizability, as the findings may not fully represent the diversity of eco-social enterprises operating in other parts of India or beyond. Although the sample of 62 custodian farmers offers valuable insights, it may not capture the complete range of experiences and impacts across similar initiatives. Furthermore, while demographic data were collected, the primary emphasis was on social and economic outcomes, with limited attention given to intersecting factors such as caste, gender roles, or access disparities.

Future research should consider conducting comparative studies across different regions or types of eco-social enterprises to strengthen the external validity of findings. Longitudinal research designs would be valuable in assessing the sustainability and long-term effects of such models on communities. Methodological enhancements such as the use of formal qualitative coding techniques, application of inferential statistical tools, and expansion of sample size and diversity would enhance analytical rigour and depth. In addition, further exploration of barriers to education, healthcare, and social services could inform more inclusive and targeted policy interventions. Future studies could also contribute to the refinement of the eco-social enterprise theoretical framework by integrating context-specific variables, including institutional structures, community dynamics, and socio-cultural influences. This would improve the framework's adaptability and relevance across diverse settings in the field of sustainable rural development.

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