

SDG 2030

INSIGHTS FROM INDIA
FOR A SUSTAINABLE FUTURE



EDITOR: DR. K K SOMASEKHARAN MA MPhil PH.D

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FOR A SUSTAINABLE
FUTURE**

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Gaveshana R& D Cell

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INTRODUCTION

In 2015, 193 member countries of the United Nations (UN) adopted the 2030 Agenda for Sustainable Development, marking a historic global commitment to dignity, peace, and prosperity for both humanity and the planet. This landmark agenda outlines 17 Sustainable Development Goals (SDGs) with specific targets to be achieved by the year 2030. The agenda encompasses a wide range of action areas, including poverty eradication, sanitation, education, health, and economic development, while simultaneously addressing social equity and environmental sustainability. This edited volume is a modest attempt to offer meaningful insights toward building a sustainable future.

It gives me immense pleasure to present this edited book titled *SDG 2030: Insights from India for a Sustainable Future*. This volume is the outcome of a concerted academic effort to compile scholarly contributions that aim to enrich discourse and inspire action toward a sustainable and inclusive future.

The book consists of 14 chapters, each offering diverse perspectives and practical insights on sustainable development.

The first chapter, *How Informal India Hinders the Path to Meeting SDG 2030: An Exploratory Overview for Research*, emphasizes the critical role of social sector investment in development and encourages researchers to explore emerging and underexplored areas related to sustainability.

The second chapter elaborates on the transformative potential of Farmer Producer Organizations (FPOs) in reshaping the

agricultural landscape of rural India and emphasizes their role in promoting rural transformation and collective empowerment.

Chapter 3 analyses how digital technologies are transforming microfinance delivery and enhancing women's access to credit, while also exploring regional variations in adoption behaviour, financial management practices, and social norms that shape empowerment trajectories in Kerala and Tamil Nadu.

Chapter 4 illustrates how SDG 4 (Quality Education) can be achieved through the introduction of progressive educational policies such as the Four-Year Undergraduate Programme (FYUGP). This article offers a theoretical and critical examination of the key features and emerging concerns of the FYUGP in Arts and Science colleges in Kerala.

The fifth chapter explains the transition of women from economic dependence to financial independence through microfinance initiatives. The study proposes policy recommendations aimed at enhancing microfinance initiatives to secure wider and long-lasting benefits for women.

Chapter 6 examines the influence of green brand image, brand credibility, green packaging, eco- innovation, and consumer environmental awareness on green purchasing behaviour among working women professionals in Tamil Nadu. This study further analyses the confidence of women professionals in relation to their propensity to purchase green products.

In Chapter 7, the authors explore Chimamanda Ngozi Adichie's illuminating work *We Should All Be Feminists* as an influential text that resonates with the principles of SDG 5 (Gender Equality) and women's empowerment. The chapter

highlights how Adichie's text raises awareness of persistent gender inequalities and encourages a rethinking of social attitudes in ways that align with the broader goals of SDG 5.

Chapter 8 discusses various government-led initiatives such as the Atal Innovation Mission, Skill India Mission, and Startup India, and their alignment with NEP 2020 objectives to foster innovation, enhance skills, and promote youth employment in line with SDG 4 (Quality Education).

In Chapter 9, the authors examine the impact of government policies on agricultural sustainability, drawing evidence from rural households in Kannur District, Kerala, with a focus on SDG 1 (No Poverty) and SDG 2 (Zero Hunger).

Chapter 10 evaluates the effectiveness of government initiatives such as the Jal Jeevan Mission, Jal Shakti Abhiyan, and Atal Bhujal Yojana, with particular emphasis on Jal Jeevan Mission activities in rural Palakkad, in alignment with SDG 6 (Clean Water and Sanitation).

Chapter 11 analyses the socio-economic and sustainable development impacts of Self-Help Group (SHG) participation on rural women in Kerala, corresponding to SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth).

In Chapter 12, the authors highlight the role of Big Data Analytics in Public Health from the perspective of SDG 3 (Good Health and Well-being). This chapter also critically evaluates the ethical and regulatory guidelines associated with Big Data Analytics (BDA) in public health applications.

Chapter 13 examines how literary works not only offer aesthetic value but also provide critical commentary on real-world challenges related to sustainable development. The author reads the renowned novel, *The Hungry Tide* by Amitav Ghosh, in line with SDG 6 (Clean Water and Sanitation).

The final chapter explores the influence of microfinance on women's empowerment, with a special focus on Kudumbashree, Kerala's flagship programme for women's empowerment and poverty alleviation. The chapter also identifies the challenges faced by beneficiaries in achieving independence, self-confidence, and entrepreneurship, thereby underscoring the importance of SDG 5 (Gender Equality).

I would like to wholeheartedly acknowledge the contributors to this edited volume for their valuable scholarly contributions. I extend my sincere gratitude to the Management of Navajyothi College for their constant support and encouragement. I also congratulate the entire Gaveshana (R&D) Team for their dedicated efforts in bringing out this publication in a time-bound manner.

Dr. K K Somasekharan M.A., M.Phil., PhD.

CHAPTER ELEVEN

Empowering Rural Women through Self Help Groups: A Socio-Economic and Sustainable Development Perspective

Asha Rajappan*, Akhil Kumar C.S*

1. Introduction

Small, voluntary groups of people from similar socioeconomic origins, mostly women, form Self-Help Groups (SHGs) to better their living conditions through group credit, savings, and income-generating activities. SHGs have become an essential tool for advancing financial inclusion, improving livelihoods, and empowering the grassroots throughout time, particularly in rural India.

The Sustainable Development Goals (SDGs), a global framework approved by the UN in 2015 to ensure a brighter and more sustainable future for everyone by 2030, are strongly related to this study. This study specifically focuses on three important SDGs: SDG 1: No Poverty seeks to end severe poverty and guarantee equitable access to financial resources.

SDG 5: Gender Equality aims to guarantee women's full involvement in leadership and decision-making while also eradicating all forms of violence and discrimination against them. Full employment, inclusive economic growth, and productive livelihoods are all encouraged by SDG 8: Decent Work and Economic Growth.

SHG empowerment of rural women is essential to achieving these objectives. In this sense, empowerment means giving women more authority over their financial resources, decision-making, leadership, and social involvement. The purposes of this research are to analyze the socioeconomic effects of SHG membership on rural women's income and savings, investigate how it affects aspects of empowerment like leadership, decision-making, and social engagement, and determine how SHG-related factors—such as training, credit availability, and length of involvement—affect income and employment outcomes that are in line with SDGs 1, 5, and 8.

2. Literature Review

1. Lokhande (2013) looked into how SHGs helped Maharashtra achieve sustainable development. In line with SDGs 1 (No Poverty) and 8 (Decent Work), he discovered that women in SHGs were more likely to embrace eco-friendly behaviors and take part in small-scale entrepreneurship.

2. A study by Swain and Wallentin (2009) in India that surveyed more than 2,000 SHG members came to the conclusion that SHGs play a major role in women's empowerment. They discovered quantifiable gains in mobility, decision-making involvement, and rights awareness using a Women's Empowerment Index.

3. Panda (2009) investigated Self-Help Groups (SHGs) in Odisha and discovered that members were more involved in local governance and community activities. The empowerment dimension was reinforced by the study's association between SHGs and women's increased leadership roles, particularly in Panchayati Raj Institutions. 4. In a comprehensive impact study on Self-Help Groups (SHGs) in Andhra Pradesh, APMAS (2009)

discovered that SHG women had greater access to healthcare, education, and sanitary facilities. According to the report, there are significant connections between SHG initiatives and the accomplishment of the SDGs, especially when it comes to advancing gender equality and lowering poverty.

5. Sinha (2006) offered information on the effects of Self-Help Groups (SHGs) in various Indian states and observed that results varied based on local governance, the involvement of non-governmental organizations, and the length of time spent participating in SHGs. Long-term SHG members demonstrated higher increases in political awareness, literacy, and income.

6. According to Kabeer (2005), empowerment is a process that involves accomplishments, agency, and resource access. She came to the conclusion that SHG models can be transformative when paired with training, capacity-building, and gender sensitization after reviewing microfinance programs, including SHGs in South Asia.

7. Dasgupta (2005) studied SHG-led microfinance in West Bengal and found that although there were clear economic benefits, ongoing empowerment necessitated focus on intra-household power dynamics, education, and health. Multifaceted interventions are crucial for long-term change, the study underlined.

8. Nair (2005) noted that SHG membership greatly enhances women's access to financial services, income generation, and leadership positions in his assessment of SHGs in Kerala. The study emphasized how women's social capital and decision-making autonomy are strongly correlated with SHG participation in Kerala's Kudumbashree model.

9. In their study of SHGs under NABARD schemes, Puhazhendhi and Satyasai (2000) found that rural women's income and asset ownership had significantly increased. Participation in SHGs promotes economic inclusion and increases women's self-confidence in participating in public life.

According to the reviewed research, SHGs have a major impact on women's participation in the community, revenue creation, and empowerment. However, the majority of research has concentrated on the economic or social aspects separately, paying little attention to how SHG operations fit into larger goals for sustainable development. In order to achieve SDGs 1 (No Poverty), 5 (Gender Equality), and 8 (Decent Work and Economic Growth), more research is required that empirically examines the combined socio-economic and empowerment impacts of SHGs while taking important influencing factors like training, credit availability, and SHG duration into account.

3. Objectives of the Study

- 1.** To examine the socio-economic impact of SHG participation on the savings and income of rural women.
- 2.** To investigate how SHG participation affects empowerment in dimensions such as social participation, leadership, and decision-making.
- 3.** To assess the association between income/employment outcomes (SDGs 1, 5, and 8) and SHG-related factors (training, credit access, and SHG duration).

4. Methodology

The study's population comprises SHG members of Kerala State, India. The study is a blend of primary and secondary data collection techniques. Google Forms and structured questionnaires sent to SHG members in the Parappa Block Panchayat, Kasaragod district, Kerala, were used to gather primary data. Secondary data was gathered from published works and pertinent publications. Using a convenience sampling technique, 200 rural women SHG members made up the sample. SPSS software was used to statistically evaluate the gathered data. The following tools and techniques were used: Chi-Square Test to ascertain the relationship between SHG participation and socio-economic changes; Wilcoxon Signed-Rank Test to evaluate changes in empowerment indicators before and after SHG participation and Multiple Linear Regression Analysis to investigate the influence of SHG-related factors (training, credit access, and SHG duration) on income and employment outcomes.

5. Data Analysis and Results

5.1 Socio-economic Impact Analysis of SHG Participation

Self-Help Group (SHG) participation's socio-economic impact analysis aims to determine how rural women's financial well-being is impacted by SHG membership. Examining how much SHG membership influences their income levels, saving patterns, and work status is the goal of this study. The association between SHG participation and shifts in these socio-economic indicators is examined utilizing the following hypotheses in order to accomplish this goal:

Null Hypothesis (H_0): Participation in SHGs and changes in income, savings, and employment status do not significantly associated.

Alternative Hypothesis (H_1): Participation in SHGs and changes in income, savings, and job status are significantly associated.

Table 1: Socio-Economic Impact Analysis of SHG Participation

| Indicators | Profile | Before SHG | After SHG | Chi-square value (χ^2) | Degree of freedom (df) | P Value | Conclusion |
|-----------------------|-----------------|------------|-----------|-------------------------------|------------------------|---------|-------------------------|
| Monthly Income status | 0 – 5,000 | 112 | 20 | 102.24 | 3 | <0.001 | Significant association |
| | 5,001 – 10,000 | 58 | 80 | | | | |
| | 10,001 – 15,000 | 20 | 65 | | | | |
| | Above 15,000 | 10 | 35 | | | | |

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|------------------------|------------------|-----|-----|--------|---|--------|-------------------------|
| Monthly savings status | 0 – 5,000 | 130 | 40 | 80.59 | 2 | 0.001 | Significant association |
| | 5,001– 10,000 | 40 | 60 | | | | |
| | Above 10,000 | 20 | 100 | | | | |
| | | | | | | | |
| Employment status | Unemployed | 120 | 20 | 109.84 | 2 | <0.001 | Significant association |
| | Self - Employed | 30 | 100 | | | | |
| | Employed (wages) | 50 | 80 | | | | |

Source: Primary data

Note: Level of Significance (α) = 0.05

5.1.1 Interpretation

In every instance, we reject the null hypothesis because every p-value is <0.001 , which is less than 0.05. This suggests that rural women's socioeconomic upliftment—that is, increases in their income, savings, and employment—is substantially correlated with their membership in SHGs.

Participation in SHGs and changes in income level are significantly correlated ($\chi^2 = 102.24$, $p < 0.001$). Women were significantly more likely to be in higher income groups after joining SHGs, which decreased their susceptibility to poverty. This is consistent with SDG 1.

More women are entering higher saving groups ($\chi^2 = 80.59$, $p < 0.001$). One essential element of women's empowerment is financial autonomy and control over economic resources, which is shown in this transformation. This contributes to the achievement of SDG 5.

Participation in SHGs is strongly linked to an increase in employment ($\chi^2 = 109.84$, $p < 0.001$). SHG's involvement in expanding livelihood prospects is confirmed by the fact that many women who had previously been unemployed went on to become wage earners or self-employed (SDG 8).

5.2 Women Empowerment Analysis

A comparative data analysis was carried out in order to accomplish the goal of examining the ways in which involvement in Self-Help Groups (SHGs) affects women's empowerment in

areas including leadership, decision-making, and social participation. The purpose of the study is to determine whether participation in SHGs results in quantifiable gains in these aspects of empowerment. Members' empowerment scores were evaluated for this purpose both before and after they joined SHGs, and appropriate statistical tests were used to look for changes. The following hypotheses were put forward for examination:

Null Hypothesis (H_0): The median empowerment scores before and after SHG participation do not differ significantly.

Alternative Hypothesis (H_1): The median empowerment scores before and after SHG involvement differ significantly.

Table 2: Women Empowerment Analysis

| Indicators | Mean score Before SHG | Mean score After SHG | Z value | P value | Interpretation |
|----------------------------|-----------------------|----------------------|---------|---------|---|
| Decision-making power | 1.90 | 4.30 | -8.21 | < .001 | Significant improvement |
| Community participation | 1.70 | 4.10 | -8.08 | < .001 | Significant improvement |
| Leadership role | 1.80 | 3.90 | -7.94 | < .001 | Significant improvement |
| Public speaking confidence | 2.00 | 4.00 | -7.87 | < .001 | Significant improvement |
| Reduced domestic violence | 2.20 | 3.80 | -7.49 | < .001 | Significant reduction in violence experienced |

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| | | | | | |
|---------------------|------|------|------|------|-------------------------|
| Freedom of mobility | 1.80 | 3.50 | - | < | Significant improvement |
| | | | 7.65 | .001 | |

Source: Primary data

Note: Z-values are based on the Wilcoxon **Signed-Rank test**; all tests were two-tailed and conducted at $\alpha = .05$. M = Mean Score on a 5-point Likert scale.

5.2.1 Interpretation

To compare empowerment indicators before and after SHG involvement, a Wilcoxon Signed-Rank Test was used. All six indicators—decision-making authority, community involvement, leadership role, confidence in public speaking, decreased domestic violence, and freedom of mobility—showed statistically significant increases in the results (all $p < .001$). Each indicator's median score significantly rose, indicating that SHG involvement significantly and favourably influenced women's empowerment. In particular, these findings support leadership, decrease domestic violence, and increase women's autonomy and mobility—all of which are in line with SDG 5 (Gender Equality).

5.3 Association between SHG-Related Factors and Income/ Employment Outcomes (SDGS 1, 5, And 8)

An analysis was carried out to evaluate the relationship between important SHG-related factors—training participation, credit availability, and length of SHG membership—and income and employment outcomes in order to investigate how SHG participation affects women's socioeconomic development. Sustainable Development Goals (SDGs) 1 (No Poverty), 5 (Gender Equality), and 8 (Decent Work and Economic Growth) are all closely related to these results. Multiple regression

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techniques were used in the investigation to assess how much these SHG elements help members generate income and enhance their employment. The findings shed light on the elements of SHG participation that most effectively promote women's sustainable livelihoods and economic empowerment.

Table 3: Multiple Regression Analysis

| Predictor | B (Unstandardized) | SE | t value | p-value | Interpretation |
|--------------------------------|--------------------|------|---------|----------|--|
| Constant(β_0) | 0.75 | 0.15 | 5.0 | 0.0001** | Level of base income |
| Access to Credit(β_1) | 0.60 | 0.10 | 6.0 | 0.0000** | Considerable Increase in income |
| Training Attended(β_2) | 0.40 | 0.12 | 3.33 | 0.001** | Training dramatically raises income. |
| SHG Duration(β_3) | 0.25 | 0.08 | 3.13 | 0.002** | Lengthy SHG membership increases income. |

Source: Primary Data

Note: Income from SHG Activity is the dependent variable (0–3scale). Independent variables: Credit availability (yes or no),

training attended (yes or no) and SHG duration (short, mid, and long). $R^2 = 0.65$, Adjusted $R^2 = 0.63$, $F(3,196) = 86.20$, $p < .001$

5.3.1 Interpretation

With revenue from SHG activity (measured on a 0–3 scale) as the dependent variable, a multiple regression analysis was conducted to determine the degree to which SHG-related factors contribute to better economic results. In order to comprehend their impact on income, the study concentrated on three independent variables: loan availability, training participation, and length of SHG. These factors reflected the objectives of SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth). With $R^2 = 0.65$ and Adjusted $R^2 = 0.63$, the model showed a strong fit and these SHG-related factors could account for 63% of the income variance. The F-test result [$F(3,196) = 86.20$, $p < .001$] demonstrated the critical impact these interventions play in improving members' livelihoods and validated the model's overall relevance.

6. Findings

1. Significant Socio-Economic Improvement: Rural women's income, savings, and employment status are all positively impacted by SHG membership in a statistically significant way. The null hypothesis was rejected and a high correlation between SHG membership and socioeconomic upliftment was confirmed by all chi-square tests that had p-values < 0.001 .

2. Poverty Reduction and Income Enhancement (SDG 1): After joining SHGs, a sizable percentage of women migrated to higher income groups ($\chi^2 = 102.24$, $p < 0.001$), suggesting that SHG membership is essential for lowering poverty.

3. Better Financial Autonomy (SDG 5): SHG members' savings increased significantly ($\chi^2 = 80.59$, $p < 0.001$), indicating improved financial independence, which is a key element of women's empowerment.

4. Important SHG Elements Influence Economic Results: The significance of these determinants in fostering sustainable livelihoods was highlighted by multiple regression analysis, which showed that access to credit, training participation, and SHG duration significantly predict income levels ($R^2 = 0.65$, $p < 0.001$), explaining 63% of the difference in income.

7. Conclusion

Self-Help Groups (SHGs) are essential for improving the socioeconomic status of rural women and achieving the Sustainable Development Goals (SDGs), especially SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth), as this study emphasizes. The results show that SHG participation dramatically increases women's income, savings, and employment opportunities, thereby lowering poverty and boosting financial independence, according to thorough statistical analysis that includes multiple regression, chi-square tests, and the Wilcoxon Signed-Rank Test. Significant gains were also shown in empowerment metrics like leadership, decision-making authority, and freedom of movement, confirming SHGs as a driving force behind social transformation and gender equality. Regression analysis also showed that important SHG-related interventions, like training, credit availability, and extended group involvement, significantly enhance livelihood outcomes. With every aspect considered, the study confirms that Self-Help Groups (SHGs) are a strong tool for women's empowerment and rural development. It also emphasizes how crucial it is to have on going policy support, skill training, and

access to institutional resources in order to optimize their effectiveness.

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SDG 2030: INSIGHTS FROM INDIA FOR A SUSTAINABLE FUTURE

As the world races toward the United Nations' 2030 deadline, India stands at a critical crossroads in the journey toward dignity, peace, and prosperity. *SDG 2030: Insights from India for a Sustainable Future* provides a powerful examination of the nation's pursuit of the 17 Sustainable Development Goals. Bridging the gap between academic research and practical action, this book is an essential guide for anyone looking to understand or contribute to an inclusive and sustainable tomorrow.

Dr. K. K. Somasekharan, the Principal of Navajyothi College, Cherupuzha, brings over 30 years of distinguished academic and administrative experience to this volume. Throughout his prolific career, he has served numerous prestigious higher education institutions across Kerala, contributing significantly to the state's academic landscape.

A scholar at heart, Dr. Somasekharan holds a PhD in Economics. His extensive research background is reflected in his numerous publications across reputed journals and books, focusing on socio-economic development. This volume, *SDG 2030: Insights from India for a Sustainable Future*, represents his continued commitment to fostering academic discourse and inspiring collective action toward a more inclusive and sustainable world.



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