TEXT-BASED SCIENCE MAPPING OF SELF-HELP GROUPS IN ENTREPRENEURSHIP DEVELOPMENT: EVIDENCE FROM TITLE AND ABSTRACT FIELDS

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ABSTRACT

This study explores the contribution of Self-Help Groups (SHGs) to entrepreneurship development by employing a term co-occurrence mapping approach to identify dominant research themes and linkages. Using text data extracted from the titles and abstracts of published studies and analyzed through VOSviewer, the research highlights the most frequently occurring terms—such as self-help group, entrepreneurship development, economic development, training, skills, and microfinance. Their close interconnections indicate that SHGs play a significant role in fostering entrepreneurial capabilities, enhancing livelihoods, and supporting broader economic growth. Additionally, related terms such as women entrepreneurs, technology, knowledge, and overall development reveal that recent studies increasingly emphasize gender empowerment and innovation. The color-coded timeline within the map further indicates a shift in research focus from 2015 to 2018 toward women's entrepreneurship, financial inclusion, and skill development. Overall, the analysis provides valuable insights into the evolution of research on SHGs and entrepreneurship, offering direction for policymakers, researchers, and development practitioners seeking to strengthen grassroots entrepreneurship and promote community empowerment.

Keywords: *Self-Help Groups (SHGs); Entrepreneurship Development; Microfinance; Women Entrepreneurship; Bibliometric Analysis.*

1. INTRODUCTION

Entrepreneurship drives economic progress, job creation, and innovation—particularly in emerging economies like India. In recent decades, Self-Help Groups (SHGs) have grown into powerful community-based institutions that empower individuals, especially women, by improving access to credit, training, and social networks. Through collective action, SHGs help members gain the confidence, skills, and resources needed to start and sustain small enterprises. Their impact goes well beyond income generation, fostering leadership, social inclusion, and overall community development.

Given their growing relevance, a considerable body of literature has examined the relationship between SHGs and entrepreneurship. However, much of the existing research remains fragmented, often focusing on specific regions or programs rather than capturing the broader intellectual landscape. To address this gap, the present study uses a term co-occurrence analysis based on bibliometric data from published literature. This method helps identify frequently used terms and their connections, offering a visual picture of key themes and emerging trends.

Using VOSviewer, the analysis maps how research on SHGs and entrepreneurship has evolved over time. It identifies core areas such as economic development, women's empowerment, training, microfinance, and poverty alleviation, while also highlighting emerging areas like technology adoption and innovation-driven entrepreneurship. By visualizing these connections, this study deepens our understanding of how the role of SHGs in entrepreneurship development is changing. It also provides useful insights for future research and policymaking aimed at strengthening community-based economic growth.

1.1 Objectives of the Study

This study aims to examine the structure of research on Self-Help Groups (SHGs) and entrepreneurship development through term co-occurrence analysis. The specific objectives are:

1. To identify the most frequent terms in the titles

and abstracts of research articles related to SHGs and entrepreneurship development.
2. To map the relationships among key research themes and visualize how these themes are interconnected.
3. To examine the evolution of research focus over time, identifying emerging trends and shifts in thematic emphasis.
4. To provide insights for researchers to identify future research directions and strengthen SHG-based entrepreneurship initiatives.

2. REVIEW OF LITERATURE

Self-Help Groups (SHGs) have emerged as one of the most effective community-based mechanisms for poverty reduction and the promotion of entrepreneurship, particularly among rural women. Scholars consistently recognize SHGs as vital platforms for financial inclusion, capacity building, and collective empowerment. Several studies emphasize that SHGs not only facilitate access to microcredit but also cultivate social capital—enabling members to establish small enterprises and generate sustainable livelihoods.

Kumar (2023), in his study titled "Examining the Relationship Between Rural Development and Financial Inclusion: The Role of Self-Help Groups," concludes that SHGs have been instrumental in advancing financial inclusion and empowering rural communities. Through the Self-Help Group–Bank Linkage Programme (SHG-BLP), banks have reduced transaction costs while helping low-income households improve their earnings. Women's active participation in these groups has strengthened household financial stability and contributed to broader community welfare.

Desai and Joshi (2014), in their research conducted across some of India's poorest districts, examined the impact of introducing women's SHGs in randomly selected villages. After two years, women in SHG villages demonstrated higher participation in savings schemes, non-agricultural work, household decision-making, and civic activities compared to those in control villages. However, the study found no significant increase in income levels or overall socio-economic status. These findings provide critical policy insights for initiatives such as India's National Rural Livelihood Mission (NRLM), which aims to strengthen SHG initiatives.

Rajasekaran and Sindhu (2013) emphasized the need for continuous efforts to inspire, motivate, and support women entrepreneurs through all available avenues. They recommended that SHGs be granted greater access to government loans and financial assistance at reduced interest rates. Additionally, the government should introduce more entrepreneurship development programs, enhance educational facilities for women, and organize exposure visits and training sessions through extension agencies. Such measures can help SHG members understand business operations, build confidence, and actively engage in entrepreneurship.

Similarly, Sharma and Dua (2013) evaluated a skill development program for SHGs in Nithari Village, revealing that microfinance significantly improved women's socio-economic conditions and livelihoods. It also enabled banks to reach previously underserved populations. To ensure the long-term success of SHGs, the authors recommend that policies prioritize sustainability by fostering member motivation, encouraging innovation, and ensuring continuous skill development.

Overall, the reviewed literature underscores that SHGs play a critical role not only in promoting entrepreneurship but also in driving rural development and financial inclusion. Collectively, these studies highlight that empowerment through SHGs extends beyond economic gains—it nurtures confidence, decision-making power, and a stronger sense of social identity among women.

2.1 How Self-Help Groups (SHGs) Foster Entrepreneurship

Self-Help Groups (SHGs) play a pivotal role in nurturing entrepreneurship, particularly among marginalized communities such as rural women, by addressing critical barriers to business initiation and growth. By operating as collective platforms for savings and internal lending, SHGs provide members with access to microcredit without the stringent requirements of traditional banks. This enables women to start or expand small-scale enterprises—such as tailoring, food processing, or livestock rearing—with minimal financial risk. Beyond capital, SHGs facilitate skill development through regular training sessions on business management, bookkeeping, and marketing, equipping members with practical tools to run sustainable ventures. Equally important, SHGs cultivate social capital and peer support networks, which boost confidence, foster innovation, and encourage collaborative problem-solving. For instance, group discussions often reveal market opportunities or cost-effective solutions that individuals might overlook. Additionally, linkages with government programs like the Self-Help Group–Bank Linkage Programme (SHG-BLP) allow SHGs to secure external funding at lower interest rates, while initiatives such as India's National Rural Livelihood Mission (NRLM) integrate SHGs into broader entrepreneurship development schemes. Over time, this holistic support system not only empowers women economically but also transforms them into active contributors to local

economies, driving grassroots entrepreneurship and sustainable community development.

(Borbora & Mahanta, 2001)., in his article-Micro Finance Through Self Help Groups and Its Impact: A Case of Rashtriya Gramin Vikas Nidhi – Credit and Saving Programme in Assam. Found that self-help groups (SHGs) have significant potential to promote micro-enterprise development, thereby contributing to economic growth and overall development. In Assam, SHGs have played an important role in establishing various income-generating micro-enterprises. The success of credit and savings programmes implemented through the Rashtriya Gramin Vikas Nidhi in the state has been largely attributed to their focused approach toward the rural poor, supported by trained personnel and enabling policies, with minimal political interference. These findings highlight the importance of capacity-building and training, not only for SHG members but also for officials and agency personnel working closely with SHGs. (Usmani&Anees2024) in their article self-help Groups and Entrepreneurship: An Insight from Literature - concluded that Entrepreneurship promotion through SHGs can be achieved by ensuring that the groups are able to provide its members key elements necessary for success of entrepreneurial efforts like, knowledge, skills and competencies relating to conduct of business activities.

3. RESEARCH METHODOLOGY

3.1 Research Design

This study adopts a descriptive and bibliometric research design to analyze how Self-Help Groups (SHGs) contribute to entrepreneurship development. Bibliometric analysis helps trace research patterns, trends, and thematic connections across published studies. By focusing on the titles and abstracts of academic articles, the study identifies recurring concepts and themes within this field.

3.2 Data Collection

Secondary data for this study were obtained from the Lens database (LENS.org), an open-access platform created to broaden and democratize access to scientific knowledge. The Lens brings together information from scholarly publications and patent records, offering a cross-domain perspective on research and innovation.

The database was selected as the primary source for text-based keyword analysis because of its open, transparent, and integrated structure, which is well suited for large-scale bibliometric and textual studies. By combining academic literature with patent documents in a single platform, the Lens enables the inclusion of a broader range of research outputs than traditional bibliographic databases. This comprehensive coverage supports a deeper and more interdisciplinary understanding of research themes, as well as their development and transformation over time.

An initial search of the Lens database resulted in 1,001 records during the screening process; duplicate records were removed. The remaining documents were screened based on their titles and abstracts to assess relevance to the study objectives. Records were excluded if they were not aligned with the research focus, lacked sufficient textual information, or were unrelated to the study theme.

Further eligibility assessment was carried out using predefined inclusion and exclusion criteria. Only English-language publications were included to ensure consistency and clarity in text-based keyword analysis. Documents were excluded if they were published in languages other than English, did not provide complete title and abstract information, or were not relevant to the scope of the study.

After applying these criteria, a total of 194 records were found to be suitable and were finally included in the study. These records formed the final dataset used for text-based keyword and bibliometric analysis.

3.2.1 Inclusion Criteria

The study included scholarly publications indexed in the Lens database to ensure the credibility and quality of the source material. Only documents published in the English language were considered to maintain consistency in analysis and interpretation. Additionally, publications were selected based on their direct relevance to the objectives and thematic focus of the study.

3.2.2 Exclusion Criteria

Documents published in languages other than English were excluded from the analysis. Duplicate records identified during the data extraction process were removed to avoid redundancy. Furthermore, publications that did not align with the study's objectives or thematic scope were excluded to ensure analytical rigor and relevance.

4. DATA ANALYSIS

To uncover thematic structures and relationships among concepts, a term co-occurrence analysis was conducted using VOSviewer.

- Frequently used keywords were identified, and their co-occurrence patterns were mapped to reveal conceptual linkages.
- In the generated maps, the size of each term reflects its frequency of occurrence, while the connecting lines represent the strength of the relationship between terms.

4.1 Steps Followed

1. Extraction of data from selected research articles.
2. Cleaning of data
3. Development of a matrix showing the frequency and co-occurrence of terms.
4. Generation of visual maps to display thematic clusters.
5. Interpretation of the maps to identify research trends, dominant themes, and knowledge gaps.

4.2 Ethical Considerations

Since this study relies exclusively on published secondary data, ethical concerns are minimal. All original sources are duly acknowledged to ensure proper academic integrity and avoid plagiarism.

4.3 Expected Outcome

This approach provides a clear picture of the research landscape on SHGs and entrepreneurship. The visual map helps in identify key themes, research trends, and gaps offering useful insight for researcher interested in this field.

4.4 Thematic Mapping of Research on Self-Help Groups

Figure 1 presents a bibliometric thematic map generated using VOSviewer to visualize the co-occurrence of key terms in the literature on Self-Help Groups (SHGs) and entrepreneurship. The analysis is based on keywords extracted from titles, abstracts, and author-provided keywords, with a minimum occurrence threshold of ten. This approach helps in identifying dominant themes, emerging trends, and the structural relationships among concepts within the research domain.

Figure 1: Thematic Mapping of Research on Self-Help Groups

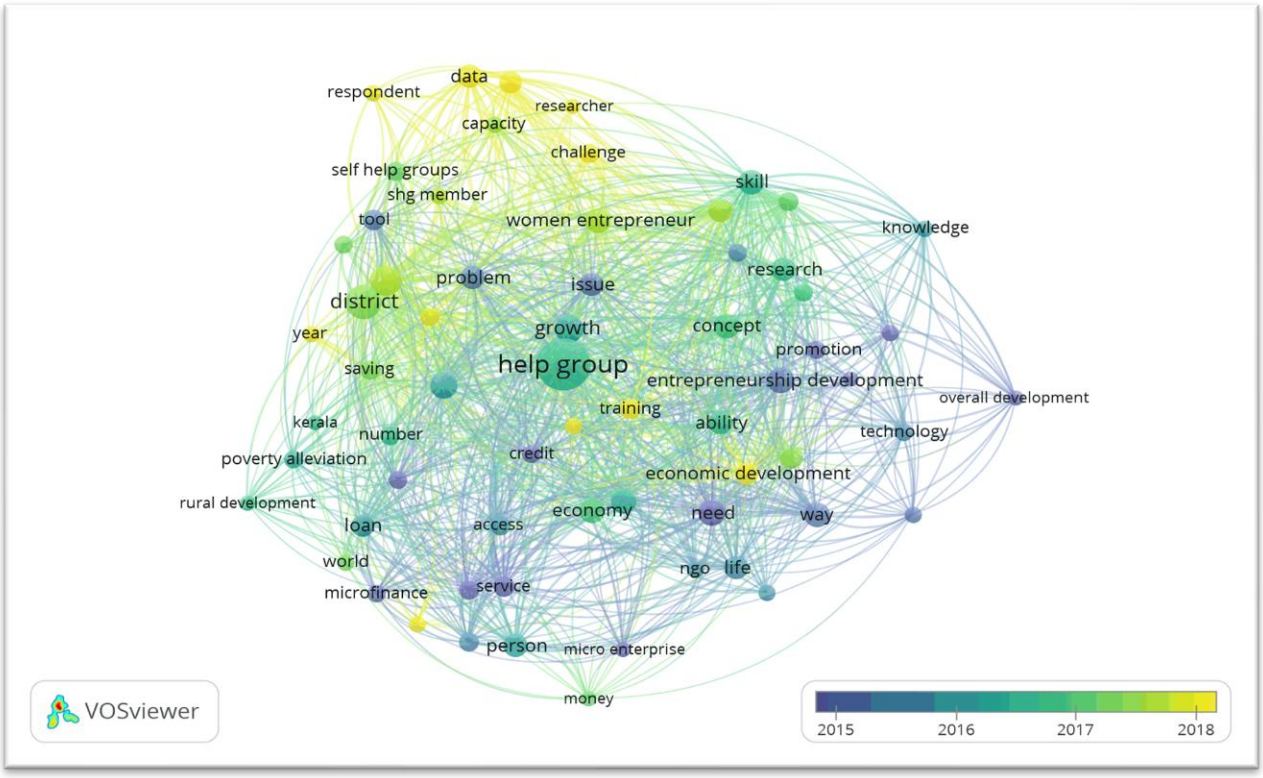

Table 1 reports the frequency and relevance scores of the key terms identified in the dataset. As expected, the term "help group" emerges as the most frequently occurring keyword, with 122 occurrences, reflecting its centrality to the body of literature under review. Other high-frequency terms include growth, impact, district, entrepreneurship development, government, and economy, indicating a strong focus on the developmental and institutional dimensions of SHGs.

Table 1: Frequency and Relevance Scores of Key Terms

ID	Term	Occurrences	Relevance Score
1	ability	25	0.4813
2	access	17	0.6982
3	analysis	23	1.3605
4	attempt	14	0.6339
5	awareness	17	0.6342
6	bank	17	0.9108
7	capacity	12	0.9022
8	case study	13	1.1825
9	challenge	17	1.093
10	concept	28	0.4973
11	credit	16	0.4339
12	data	24	1.6277
13	district	53	0.6925
14	economic development	22	0.7166

15	economic independence	12	2.2782
16	economy	29	0.5529
17	entrepreneurial activity	22	0.6827
18	entrepreneurship development	31	0.758
19	government	30	0.6317
20	growth	35	0.4394
21	help group	122	0.1335
22	impact	40	0.6517
23	issue	25	0.363
24	kerala	10	1.2936
25	knowledge	13	2.5436
26	life	24	0.449
27	loan	23	1.0325
28	micro credit	13	1.672
29	micro enterprise	11	1.2644
30	micro finance	15	0.9309
31	microfinance	16	1.3047
32	money	11	1.6101
33	nation	15	0.618
34	need	32	0.5594
35	NGO	13	0.4815
36	number	17	0.7415
37	overall development	10	3.9388
38	part	18	0.5276
39	participation	25	0.6155
40	person	25	0.9699
41	poverty alleviation	16	1.2221
42	power	14	0.694
43	present study	15	1.4434
44	problem	26	0.6534
45	promotion	14	1.0753
46	research	26	0.7413
47	researcher	11	1.3393
48	respondent	13	3.0998
49	rural area	28	0.5734
50	rural development	11	1.3124
51	saving	17	0.5457
52	self-employment	12	1.0487
53	self-help groups	17	1.4779
54	service	21	0.623
55	SHG member	13	1.1827
56	skill	27	0.8494
57	special reference	12	0.8458
58	sphere	10	1.0671
59	technology	14	1.5611
60	tool	21	0.8066
61	training	20	0.3684
62	way	28	0.8608
63	Women entrepreneur	27	0.5477
64	world	12	1.212
65	year	12	0.94

The relevance scores provide additional insight beyond mere frequency. Terms such *as* overall development, knowledge, respondent, and economic independence exhibit particularly high relevance values, suggesting that while these concepts may appear less frequently, they play a critical and distinctive role in shaping scholarly discourse on SHGs.

In Figure 1, each node represents a keyword, with node size corresponding to the frequency of occurrence. The links between nodes indicate co-occurrence relationships, and the thickness of these links reflects the strength of association between terms. The colour gradient, ranging from blue to yellow, denotes the average publication year, thereby capturing the temporal evolution of research themes. Newer themes tend to appear in warmer colours, while older, well-established topics are represented in cooler tones.

4.5 Key Observations

4.5.1 Central Concepts

The thematic map reveals that self-help groups, women, entrepreneurship, microfinance, empowerment, and development occupy central positions in the network. Their prominence and high connectivity suggest that these concepts form the intellectual core of SHG-related research. The central placement of women entrepreneurship highlights the gendered nature of SHG interventions and their strong linkage with empowerment and livelihood generation.

4.5.2 Thematic Clusters

Distinct thematic clusters emerge from the co-occurrence analysis, reflecting both traditional and evolving research priorities:

Blue Cluster (Top-right): This cluster includes terms such as technology, innovation, knowledge, and overall development. The colour intensity indicates that these topics are relatively recent, pointing towards a growing scholarly interest in digital inclusion, technological adoption, and innovation-driven development within SHGs.

- **Green Cluster:** Comprising terms like training, skill, women entrepreneur, SHG member, and self-help groups, this cluster emphasizes capacity building and human capital development. It reflects a strong focus on skill enhancement and entrepreneurial capabilities as pathways to empowerment.
- **Yellow Cluster:** This cluster highlights concepts such as promotion, technology, and knowledge, suggesting an increasing emphasis on awareness generation, information dissemination, and technology-enabled development outcomes.
- **Green–Yellow Cluster (Bottom-left):** Terms related to capacity building, training, skill development, and financial literacy dominate this

cluster. This indicates sustained academic attention to strengthening individual and collective capabilities as a foundation for sustainable SHG performance.

- **Purple–Blue Cluster (Top-left):** Representing more traditional themes, this cluster includes microfinance, credit, loan, and poverty alleviation. These terms reflect the foundational role of SHGs in providing financial access and reducing poverty, which has historically dominated the literature.

4.5.3 Connectivity and Interrelationships

A notable feature of the thematic map is the high degree of connectivity among nodes, underscoring the interdisciplinary and interconnected nature of SHG research. Concepts such as women empowerment and entrepreneurship act as bridging nodes, linking financial inclusion themes with skill development and economic growth. This interlinkage suggests that SHGs are increasingly studied not merely as financial mechanisms but as comprehensive development institutions influencing social, economic, and entrepreneurial outcomes.

The findings of this study indicate a clear evolution in the research focus on Self-Help Groups (SHGs), moving from a predominantly financial inclusion–oriented perspective towards broader entrepreneurial and digital development agendas. The colour gradient in the thematic map captures this temporal shift in the literature between 2015 and 2018. Earlier studies are largely represented by cooler colours and concentrate on themes such as microfinance, poverty alleviation, rural development, savings, and credit access. These themes reflect the foundational role of SHGs as mechanisms for financial inclusion and socio-economic support in rural contexts.

In contrast, publications from more recent years, indicated by green and yellow hues, increasingly emphasize concepts such as skill development, knowledge enhancement, training, technology adoption, enterprise promotion, and entrepreneurship development. This transition suggests that the research agenda has progressively moved beyond a narrow focus on credit delivery towards a more comprehensive understanding of SHGs as enablers of capacity building and economic empowerment. The growing prominence of technology- and skill-related themes further highlights the expanding role of SHGs in supporting innovation-driven and digitally enabled entrepreneurial activities.

Overall, the observed shift underscores the gradual broadening of the functional role of SHGs—from institutions primarily concerned with providing financial access to dynamic platforms fostering human capital development, digital inclusion, and sustainable entrepreneurship. This evolution reflects changing policy priorities as well as the adaptive nature of SHGs in responding to emerging socio-economic challenges.

4.6 Implications

The thematic patterns revealed by this analysis suggest that SHG research is inherently multidimensional. It continues to address traditional concerns related to financial inclusion and poverty reduction while increasingly incorporating emerging dimensions such as entrepreneurship development, digital literacy, innovation, and resilience building. For researchers, these thematic clusters provide valuable guidance for identifying research gaps and future directions. In particular, limited attention to the intersection of technology adoption and rural or women-led entrepreneurship presents a promising area for further investigation. Additionally, the growing emphasis on digital empowerment and capacity enhancement signals important emerging trends that warrant deeper empirical exploration.

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