Capacity building through National Rural Livelihoods Mission: A Bibliometric Analysis

Bibhu Prasad Behura[1], Dr. Deepak Kumar Sahoo[2], Dr. Karunakar Patra[3]

[1]*Research Scholar Biju Patnaik University of Technology, Odisha*
[2]*Professor College of IT and Management Education Bhubaneswar-751 010*
[3]*Professor Rourkela Institute of Management Studies Chhend, Rourkela-769 015*

Abstract

This study offers a comprehensive bibliometric analysis of academic literature on the National Rural Livelihoods Mission (NRLM), with a focus on capacity development and economic empowerment of beneficiaries. Launched in 2011 by the Ministry of Rural Development, NRLM aims to reduce rural poverty through institutional support, financial inclusion, and the empowerment of women-led Self-Help Groups (SHGs). Despite growing research in this area, systematic mapping of the knowledge landscape remains limited. To address this, the study analyzes 45 publications (2011–2025) sourced from Scopus, Web of Science, and Google Scholar using tools like VOSviewer and Biblioshiny. It examines publication trends, citation behavior, keyword co-occurrence, and collaboration networks. Findings reveal a 16.01% annual growth rate, with India as the predominant contributor. Core themes include women's empowerment, financial inclusion, sustainable livelihoods, and capacity building. While international and interdisciplinary collaborations are emerging, Indian scholars remain central. Key research gaps include the lack of longitudinal studies, limited regional impact assessments, and insufficient focus on digital and climate-resilient livelihoods. The review provides insights to guide future academic inquiry and inform evidence-based policymaking.

1. Introduction

Poverty alleviation and livelihood enhancement in rural areas have long been central to India's development agenda. The National Rural Livelihoods Mission (NRLM), launched in 2011 by the Ministry of Rural Development, represents a significant policy shift aimed at promoting sustainable livelihoods through capacity building, institutional development, and financial inclusion of the rural poor-particularly women. Rooted in the philosophy of participatory development, NRLM seeks to mobilize rural households into self-reliant Self-Help Groups (SHGs), scale these institutions across various levels, and support them in their journey toward socioeconomic transformation.

In the context of rural development, capacity development extends beyond mere skill enhancement; it is a holistic empowerment process that strengthens the abilities of individuals, institutions, and communities to act effectively, make informed decisions, and drive transformative changes. Through collective action and the nurturing of local institutions, NRLM fosters leadership, financial literacy, entrepreneurial skills, and decision-making capabilities-laying a strong foundation for sustained and inclusive economic growth.

A growing body of empirical studies, field reports, and policy assessments has evaluated NRLM's performance across various dimensions, including income enhancement, women's empowerment, credit accessibility, and entrepreneurship development. However, the systematic synthesis and visualization of this expanding literature remains absent. In this context, bibliometric analysis serves as a powerful tool to explore the intellectual landscape, track publishing trends, identify topical developments, highlight leading contributors, and map collaborative networks within the academic discourse on NRLM.

Increasingly adopted in social science research, bibliometric analysis applies statistical and quantitative techniques to published literature, revealing patterns and insights that traditional reviews often overlook. For an evidence-based initiative like NRLM, such analysis can offer valuable guidance to researchers, practitioners, and policymakers by highlighting key areas of focus, identifying research gaps, and illustrating how the knowledge ecosystem is evolving both globally and within India.

Scholarship and policy imperatives jointly motivate a bibliometric analysis of "Capacity Building and Economic Development of Beneficiaries under NRLM." While extensive research exists on the implementation and impact of NRLM and Self-Help Groups (SHGs), a comprehensive mapping of the research landscape remains lacking. Specifically, there has been little examination of how this body of work is organized, which journals and institutions are leading contributors, what methodologies are most prevalent, and how thematic focus has evolved over time. Understanding these trends is crucial for shaping future research directions and informing evidence-based policymaking. This research seeks to bridge the existing gap by conducting a bibliometric review of the literature on the National Rural Livelihoods Mission (NRLM), with a specific focus on capacity development and the economic empowerment of its beneficiaries. Relevant documents were sourced from major academic databases, including Scopus, Web of Science, and Google Scholar. Analytical tools such as VOSviewer, the bibliometrix package in R, and its web-based interface Biblioshiny were employed for network visualization and thematic mapping. The primary objectives of the study are to uncover key publication trends, analyze authorship and institutional collaborations, examine citation patterns, explore keyword co-occurrence networks, and identify thematic clusters that have emerged over the past decade.

This bibliometric inquiry aligns with the broader discourse on rural transformation and inclusive development in India (Mohanty et al., 2019). As one of the world's largest poverty alleviation initiatives, NRLM targets over 600 million people across more than 600 districts. Its long-term success relies not only on effective implementation but also on continuous knowledge generation, monitoring, and adaptive learning—processes significantly driven by academic research. Systematically mapping the research landscape around NRLM contributes to strengthening program delivery, scaling successful interventions, and shaping evidence-informed policy frameworks.

Building on this context, the study undertakes a comprehensive bibliometric investigation at the intersection of capacity building, economic development, and rural livelihoods under

NRLM. The following sections detail the research methodology, data sources, analytical tools, and interpret key findings based on various bibliometric indicators.

2.   Literature review

The National Rural Livelihoods Mission (NRLM) has emerged as a cornerstone of India's rural development strategy, aiming to enhance the livelihoods of the rural poor through institutional strengthening and capacity building. Over the past decade, a growing body of academic research has examined NRLM's impact on financial inclusion, women's empowerment, income generation, and skill development. This literature review synthesizes key themes and research findings related to capacity building and economic advancement under NRLM, drawing on bibliometric insights to highlight prevailing trends and identify critical research gaps.

2.1   Capacity Building under NRLM:

In the context of NRLM, capacity building encompasses the enhancement of knowledge, skills, and institutional capabilities of rural communities. Sahu and Raj (2016) highlight that NRLM's structured training modules, the involvement of community resource persons (CRPs), and participatory learning methods have played a key role in empowering rural women. Core components of this capacity building include the formation of Self-Help Groups (SHGs), livelihood planning training, and leadership development (Nair & Tankha, 2015). Additionally, research underscores the importance of social capital fostered through SHGs. Deininger and Liu (2013) demonstrated that group-based models boost women's confidence, bargaining power, and entrepreneurial aspirations. Similarly, Panda (2015) observed that a strong collective identity within SHGs cultivates resilience, enabling members to engage in riskier economic activities.

2.2   Economic Development Outcomes:

The economic development impacts of NRLM include increased household income, improved access to credit, reduced dependence on informal lenders, and growth in microenterprises. Khandker and Samad (2014) established a strong link between SHG membership and asset accumulation among poor women. Chakrabarti and Biswas (2020) further observed that members of mature SHGs diversify their income sources, enhancing economic stability. Skill development initiatives under NRLM, such as the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), have contributed to employability and income generation, aligning with the mission's goal of fostering sustainable livelihoods (Desai et al., 2019). However, challenges remain regarding market access, the quality of training, and the scalability of these programs (Mitra & Singh, 2019).

2.3   Women's Empowerment and Social Inclusion:

Women's empowerment lies at the heart of NRLM's framework. Swain and Varghese (2016) found that participation in Self-Help Groups (SHGs) significantly enhances women's decision-making power within households and communities. This empowerment also extends to increased political participation and leadership roles in local governance (Pattnaik & Panda, 2020). However, the inclusion of marginalized groups such as Scheduled Castes (SC), Scheduled Tribes (ST), and minorities remains a persistent challenge. Although NRLM's policies emphasize

inclusiveness, implementation gaps often limit their reach among these communities (Kumar & Jha, 2017). To address these issues, researchers advocate for community-led planning and peer learning models as effective strategies to improve participation and outcomes (Bora & Bordoloi, 2021; Mohanty et al., 2021).

2.4   Bibliometric Insights on NRLM
While numerous studies have examined NRLM's impact, few have systematically mapped the research ecosystem. Bibliometric analysis offers a valuable approach to visualize the development, trends, and collaboration networks within NRLM research. Tools such as VOSviewer and R's *Bibliometrix* enable identification of central themes, prolific authors, and leading institutions. For instance, Jain and Sharma (2022) found a significant rise in NRLM-related publications after 2015, indicating growing scholarly interest. Co-authorship networks reveal collaborations among universities, NGOs, and government agencies. The most frequently cited keywords in NRLM literature include "capacity building," "financial inclusion," "SHGs," and "livelihood promotion" (Shukla & Bhardwaj, 2021).

3.   Research gaps and future directions
Although the literature on NRLM is extensive, it remains scattered across disciplines such as economics, development studies, sociology, and public policy. There is an urgent need for interdisciplinary, data-driven research that assesses the long-term impacts and scalability of NRLM interventions. Notably, few studies employ comparative or longitudinal methods to track changes over time (Rao et al., 2020).
Bibliometric reviews can help identify underexplored areas, including the integration of digital tools in SHG operations, climate-resilient livelihoods, and the role of youth in rural development. Future research must also address regional disparities and evaluate the effectiveness of capacity-building models across diverse socio-economic contexts (Mishra & Behera, 2023).

4.   Research methodology
This study employs a bibliometric approach to systematically analyze scholarly articles on the National Rural Livelihoods Mission (NRLM), with a focus on economic development and capacity building. Data was collected from authoritative academic databases including Scopus, Web of Science, and Google Scholar, covering publications from 2011 to 2025. Bibliometric software tools such as the *Bibliometrix* R package and Biblioshiny were used to assess publication performance, track citation patterns, map keyword co-occurrence, and visualize collaboration networks. This methodology facilitated the identification of publication trends, key authors, thematic clusters, and research gaps within the NRLM-related academic literature. (ALL("National Rural Livelihood Mission") OR ALL("NRLM") OR ALL("Aajeevika"), AND (ALL("capacity building") OR ALL("skill development") OR ALL("training"); AND (ALL("economic development") OR ALL("livelihood") OR ALL("income generation"), AND (ALL("beneficiaries") OR ALL("SHG") OR ALL("self-help group") OR ALL("women").

5.   Analysis
The bibliometric analysis of NRLM-related research from 2011 to 2025 reveals a steadily expanding body of work focused on capacity development and economic growth in rural

livelihoods. The dataset includes 45 documents published across 43 journals, books, and other sources, reflecting moderate diversity in publication outlets. With an annual growth rate of 16.01%, academic interest in this area is clearly on the rise. The average document age of 3.4 years indicates that much of the literature is recent, underscoring the topic's current relevance. Each document has received an average of 8.13 citations, suggesting moderate but meaningful scholarly impact. Collectively, the papers reference 3,222 sources, demonstrating broad engagement with the wider academic literature. The keyword analysis identified 170 Keywords Plus and 147 author-assigned keywords, indicating both a broad thematic range and focused research topics. The field includes 148 individual authors, with only 8 single-authored papers, highlighting a strong preference for collaboration. On average, each paper has 3.6 co-authors, further emphasizing this collaborative trend. Notably, international co-authorship accounts for 28.89% of the total contributions, reflecting significant global scholarly interest and engagement.

Table 1: Main Information about the Data

Main Information About Data		Document Contents	
Description	**Results**	**Description**	**Results**
Timespan	2011:2025	Keywords Plus (ID)	170
Sources (Journals, Books, etc)	43	Author's Keywords (DE)	147
Documents	45		
Annual Growth Rate %	16.01		
Document Average Age	3.4		
Average citations per doc	8.133		
References	3222		
Authors		**Document Types**	
Description	**Results**	**Description**	**Results**
Authors	148	Article	29
Authors of single-authored docs	008	Book	04
		Book chapter	10
Authors Collaboration		Review	02
Single-authored docs	9		
Co-Authors per Doc	3.6		
International co-authorships %	28.89		

Figure 1: Word Cloud

The word cloud visually highlights the most frequently occurring keywords in the NRLM bibliometric database, underscoring the research's core focus areas. Prominent terms such as India, empowerment, self-help groups, female, and adult emphasize the central theme of rural empowerment in India, particularly through the active participation of adult women in Self-Help Groups (SHGs). Key phrases like women empowerment, decision making, capacity building, and sustainable development reveal a thematic concentration on enhancing women's roles in household and community decisions, improving livelihoods, and promoting long-term development goals.

In addition to empowerment, the word cloud highlights indicators of development such as quality of life, food security, and nutrition status, reflecting how many studies evaluate NRLM's impact through these outcomes. Terms like village, community development, local participation, and social capital emphasize the grassroots, participatory nature of the mission and the community's role in driving rural transformation. The presence of methodological terms like human experiment, controlled study, and cross-sectional studies indicates a reliance on empirical research to assess program effectiveness.
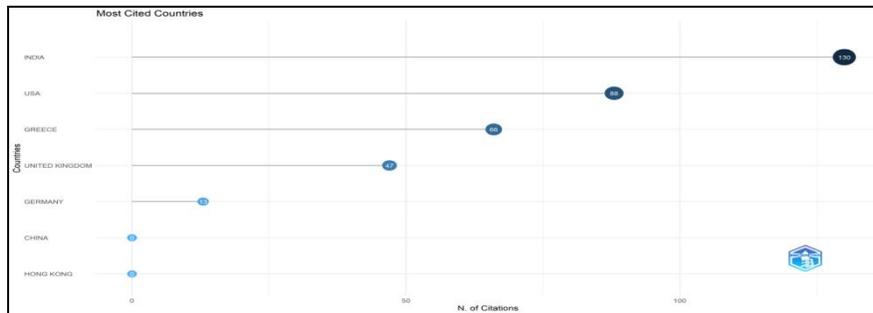

Figure 2: Most cited Countries

The citation analysis highlights the countries with the highest scholarly impact in NRLM-related research. India leads significantly with 130 citations, reflecting its central role given the study's focus on Indian rural development programs like NRLM. This high citation count underscores both the volume and influence of Indian research in the field. The United States follows with 88 citations, indicating strong international interest and potential collaborative linkages in development and empowerment studies. Greece, with 66 citations, also shows notable scholarly engagement, likely due to its expertise in social and economic development research.

The United Kingdom (47 citations) and Germany (18 citations) represent moderate contributions, particularly within global development, social policy, and sustainability domains. In contrast, China and Hong Kong show no citations, suggesting limited involvement or international visibility regarding NRLM-focused research. Overall, the citation pattern demonstrates that while Indian scholars dominate the discourse, growing international attention—especially from Western countries—reflects the broader global relevance of rural empowerment and livelihood programs.
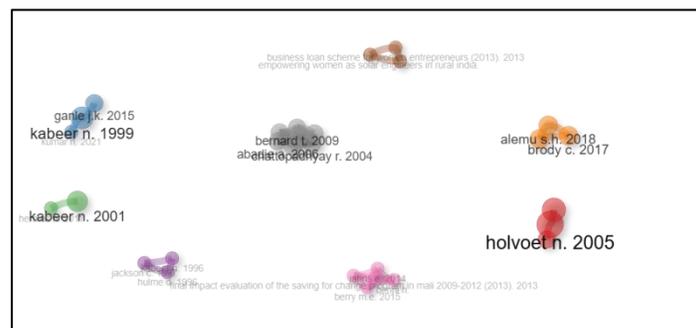
Figure 3: Collaboration Network

The co-citation network map visualizes the most frequently co-cited authors within research on rural development, capacity building, and the National Rural Livelihoods Mission (NRLM). Each node represents an author, sized by their citation frequency, while edges indicate how often two authors are cited together in the same papers. Distinct color-coded clusters reveal groups of authors working on related topics within the field.

For example, the red and orange clusters likely represent key contributors in rural livelihoods and women's empowerment, whereas the blue and green clusters correspond to research in health, nutrition, and community development. Central figures such as Bernard T., Bush S., and Chambers R. emerge as influential thought leaders, acting as hubs in the network. The close association of clusters underscores the interdisciplinary nature of the field, with economics, gender studies, public health, and rural sociology scholars frequently cited together. Overall, this network illustrates the intellectual structure and collaborative dynamics shaping NRLM-related research, highlighting how knowledge is generated and shared across disciplines.

Table 2: Average citation per year

Year	MeanTCperArt	N	MeanTCperYear	CitableYears
2011	7.00	1	0.47	15
2012	0.00	1	0.00	14
2014	42.00	2	3.50	12
2016	13.00	1	1.30	10
2018	14.67	3	1.83	8
2019	8.00	2	1.14	7
2020	33.00	2	5.50	6
2021	9.67	3	1.93	5
2022	3.33	6	0.83	4
2023	6.67	6	2.22	3

The table presents a year-wise analysis of citation metrics for research articles published between 2011 and 2023, based on four indicators: mean total citations per article (MeanTCperArt), number of publications (N), mean citations per year (MeanTCperYear), and citable years since publication. The data reveals notable fluctuations in both publication volume and citation impact over time.

For instance, 2014, with only two publications, recorded the highest average total citations per article (42.00) and a strong annual citation rate (3.50), indicating enduring scholarly influence. Similarly, 2020's two articles achieved a high average total citation count (33.00) and the peak annual citation rate (5.50), reflecting the significance of recent, high-quality research.

The years 2022 and 2023 show the highest publication counts (six articles each), signaling growing research output; however, their average citations per article (3.33 and 6.67) remain relatively low, likely due to limited time for citations to accumulate. Earlier publications, such as

those from 2011 and 2016, exhibit moderate citation rates, benefiting from longer exposure, while 2012's publications notably received no citations.

Overall, the table illustrates a rising trend in research productivity with intermittent spikes in high-impact work. It also reflects the common citation lag effect, where older workers accumulate citations over time, whereas newer publications require more years to fully establish their academic influence.

6.   Conclusion

This bibliometric analysis sheds light on the growing academic literature surrounding capacity development and economic empowerment under the National Rural Livelihoods Mission (NRLM). Since 2015, there has been a steady increase in publications, diversified research outcomes, and expanding global collaborations. India naturally leads in contributions, given NRLM's national focus, with significant input from countries like the USA, Greece, and the UK. Key themes include women's empowerment, financial inclusion, Self-Help Groups (SHGs), and livelihood enhancement, reflecting the mission's impact on both individual and collective progress. Co-authorship and citation networks reveal an interdisciplinary and collaborative research culture spanning development studies, gender, public health, and economics. Despite these advances, critical gaps remain-particularly the lack of longitudinal studies, regional impact comparisons, digital innovation, and minority inclusion in evaluations. Future research should explore underdeveloped areas such as youth participation, climate-resilient livelihoods, and technology-driven SHG management. Overall, this analysis maps the intellectual landscape of NRLM research and offers strategic guidance for academics, practitioners, and policymakers committed to advancing rural transformation and inclusive development in India.

References

1. Bora, M., & Bordoloi, R. (2021). Community-led development under NRLM: A case study from Assam. *Journal of Rural Development*, 40(2), pp. 159-175.
2. Chakrabarti, S., & Biswas, S. (2020). Economic empowerment of women through SHGs: Evidence from NRLM in West Bengal. *International Journal of Rural Management*, 16(1), pp. 25-40.
3. Deininger, K., & Liu, Y. (2013). Economic and social impacts of an SHG intervention: Evidence from India. *World Bank Economic Review*, 27(2), pp. 263-286.
4. Desai, R. M., Joshi, S., & Sharma, S. (2019). Enhancing skill development under NRLM: Role of DDU-GKY. *Indian Journal of Labour Economics*, 62(3), pp. 427-441.
5. Jain, A., & Sharma, K. (2022). Bibliometric mapping of rural livelihoods research in India. *Information and Knowledge Management*, 12(4), pp. 10-21.
6. Khandker, S. R., & Samad, H. A. (2014). Dynamic effects of microcredit in Bangladesh. *World Bank Policy Research Working Paper No. 6821*.
7. Kumar, R., & Jha, M. K. (2017). Challenges in implementing NRLM in tribal-dominated districts: A critical review. *Social Action*, 67(1), pp. 13-20.
8. Mishra, A., & Behera, D. (2023). Capacity building under NRLM: A systematic review. *Indian Journal of Social Work*, 84(1), pp. 99-117.
9. Mitra, A., & Singh, P. (2019). Microenterprises and market access under NRLM: A study of Odisha. *Development and Change*, 50(5), pp. 1256-1278.

10. Mohanty, D., Khan, J. S., Das, S., & Mohapatra, S. R. (2021). Dynamic relationship between Indian stock index and commodity derivatives: with special reference to metals. *International Journal of Economics and Accounting*, *10*(4), pp. 394-409.

11. Mohanty, D., Satpathy, M., & Mohaptra, S. (2019). Impact of Sectoral Indices' Fluctuation on SENSEX. *International Journal of Recent Technology and Engineering*, *8*(4), pp. 2603-2608.

12. Nair, T., & Tankha, A. (2015). Microfinance India: State of the sector report. *Sage Publications*.

13. Panda, D. K. (2015). SHG participation and women's empowerment: Evidence from Odisha. *Journal of International Development*, 27(4), pp. 487-510.

14. Pattnaik, B. K., & Panda, D. (2020). SHGs and rural governance: Evidence from Odisha. *Journal of Rural Studies*, 78, pp. 287-295.

15. Rao, M., Iyer, S., & George, S. (2020). Women's empowerment and livelihood outcomes: A longitudinal analysis of NRLM interventions. *Gender and Development*, 28(1), pp. 75-92.

16. Sahu, P., & Raj, R. (2016). Capacity building and livelihood security through SHGs. *Indian Journal of Human Development*, 10(2), pp. 253-269.

17. Shukla, R., & Bhardwaj, V. (2021). Mapping research trends in SHG literature: A bibliometric approach. *Library Philosophy and Practice*, Article 5831.

18. Swain, R. B., & Varghese, A. (2016). Delivering social protection through SHGs: Evidence from NRLM. *World Development*, 84, pp. 164-179.