

# A Bibliometric Analysis on National Rural Livelihoods Mission and Financial Well-Being

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## Abstract

Achieving financial well-being is essential for individuals as it leads to life satisfaction and happiness. This study identifies and synthesizes the prominent key areas of livelihood mission and financial well-being. This article offers a bibliometric analysis and explores the relationship among the documents on National Rural Livelihoods Mission and Financial Well-being by using relational technique with aim on delivering a detailed analysis of the status of the topic. The documents were retrieved from the Web of Science Core Collection database. The VOSviewer were used for co-word analysis, co-citation analysis and co-authorship analysis to examine the gradual development of a research field. The network analysis of co-authorship, co-citation, keyword co-occurrence reveals most prominent relationships between authors, documents, co-cited references, sources and countries for the available documents on the research field.

The results highlight the publication trends, most cited documents, top contributing authors, countries and most contributions journals to the research field. This study helps in coordinating research network across authors, countries and organizations.

**Keywords:** Rural Livelihoods, Web of Science, Bibliometric Analysis, VOSviewer, Financial Well-being.

## 1. Introduction

National Rural Livelihoods Mission, as a mission mode programme, envisaged in its mission document of 2011 to enforce necessary shift by design from top-down poverty alleviation approach to community-managed livelihoods based approach of interventions. The whole approach of looking at development strategies through as sustainable livelihoods framework was also considered important. The design of NRLM is unique because it has been built upon the learning and experiences from earlier efforts made towards poverty alleviation like the Integrated Rural Development Program, Swarnjayanti Gramin Swarozgar Yojana and NABARD's SHG-Bank Linkage Model.

Integrated Rural Development Programme was the first major self-employment programme sponsored and funded by the Government of India that commenced in 1978–1979 and was under implementation till 31st March, 1999. The programme aimed at providing assistance to the beneficiaries under the Below Poverty Line category, in the form of bank credit and subsidy so as to help them take up sustainable self-employment activities.

Based on the recommendations of the Planning Commission, the various scheme merged into a single self-employment programme namely Swarnjayanti Gram Swarozgar Yojana (SGSY), to be implemented by the states, with effect from April, 1999. The implementation of SGSY during 1999 to 2009 brought up a mixed bag of learning. Accordingly, SGSY was restructured, based largely on the recommendations of the

Radhakrishna Committee. The years 2011-2012 and 2012–2013 were the transition years as both SGSY and DAY-NRLM were implemented, complete transition of SGSY to DAY-NRLM took place with effect from 1st April, 2013. The framework for implementation for DAY-NRLM was approved by the Ministry on 9<sup>th</sup> December, 2010.

The ministry of rural development launched National Rural Livelihoods Mission (NRLM) replacing SGSY scheme with effect from April 1, 2013. NRLM happens to be the flagship program of the government of India for eradication of poverty. The primary block of NRLM is forming women SHGs on the basis of mutual affinity. NRLM has taken a saturation approach and will ensure that at least one woman from a poor family is motivated to join the SHG. In November 2015, the program was renamed Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM).

Financial well-being as a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future and is able to make choices that allow them to enjoy life. According to Consumer Financial Protection Bureau (Measuring Financial Well-Being, 2015) financial well-being constitutes of four elements: control over one's finances, capacity to absorb a financial shock, capacity to meet financial shock and choice that allow one to enjoy life. Financial wellness is the knowledge and having control about personal finances that makes one feel satisfied in the existing situation and also means, ones ability to mobilize finances in a foreseeable future situation (Rehman et al., 2014). Financial well-being at the macro level considered a function of a greater number of elements, namely, objective determinants, satisfaction with one's financial situation, financial behaviour, subjective perception, individual characteristics, financial stressor events, financial knowledge, having control over personal finances, and ability to mobilize finances. At macro level, financial well-being is defined in which only one specific element is considered that is focused on the material dimension of financial well-being. According to (Sorgente & Lanz, 2017) financial well-being is positively associated with financial wellness and it is positively related to the overall success of an individual. It is not important for individual live only, it is equally vital for the overall efficiency of the person, the society and promotes the overall efficiency of the person, which in turn helps the development of a healthy economy.

The main aim of the study is to help the researchers and academicians in understanding the available knowledge base of the research field and its present linkages across the globe. This study would also help in coordinating research networks across countries and authors by using a relational technique or bibliometric studies. The relational technique identifies relationships among the research field articles by using different analyses, majorly co-citation analysis, co authorship analysis and co-word analysis. These studies were analyzed using visualization of similarities (VOS) viewer software and the study used 1644 research papers published between 2015 and early 2024. The following research objective are framed for the study:

- To obtain an overview of currently available literature on the topic.
- To analyze contributions based on authorship, citations and geographical area.
- To identify influential authors in terms of their citation scores and their collaborations with other authors.

## 2. Literature review

Research on NRLM has gained platform in the last decade, after the transition of SGSY to DAY-NRLM. The livelihood program DAY-NRLM was officially launched in the year 2011. However, it is a renamed and extended version of earlier rural livelihoods programme functioning over four decades in the country

(Deshpande et al., 2024) . (United nations 2022,) National Rural Livelihoods Mission initiated by central government of India became the largest poverty alleviation programme in the world. (Dasgupta & Roy, 2018) enumerate the literature on poverty and livelihood promotion scheme, National Rural Livelihoods Mission and their roles in promoting towards sustainable livelihood promotion for the marginalised poor with a socio-economic backward area. (Maity, 2024) the microfinance program is well-known for the upliftment of well-being among marginalised and vulnerable people. (Cude et al., 2016) financial well-being is a feeling of financial security both now and future. (Sorgente & Lanz, 2017) financial well-being was synonymous with income, as it was considered as an adequate financial factor to make people happy and financial well-being includes both objective (material resources) and the subjective (financial satisfaction and positive and negative feelings) financial well-being side. (Sorgente & Lanz, 2017) agree that financial well-being can be categorized into personal and contextual factors and argue that subjective financial well-being is more important than objective financial well-being

The bibliometric study of NRLM and Financial Well-being is to provide a view of the field of study to the best of our knowledge and discuss the themes on topic emerged over the last Ten years (2015-2024).

### 3. Research methodology

#### 3.1 Bibliometric analysis

This study adopts a bibliometric analysis to answer the research objectives. Bibliometric analysis is a quantitative methodology to identify the volume and growth pattern of literature for a particular emerging area. It gives a retrospective view of the published literature that evaluates academic contributions in a particular field. The study adopted two effective techniques- performance analysis and science mapping. The performance analysis evaluated the publications' performance in terms of publication output by countries, authors, affiliating institutions and growth trends over the years. The other relational technique of bibliometric or science mapping analysis identified relationships among publications and explored the research field's structure and evolution. For this, co-citation analysis, co-authorship analysis, co-word analysis were performed. Co-citation analysis helps understand the predominant publications and authors of a research area with the help of citations.

#### 3.2 Data Source

The data source considered for the study was the core collection of Web of Science (WoS). WoS is one of the most famous scientific citation index databases in the world. First, we identified the keywords related to NRLM and financial well-being. The search was conducted on August 04, 2024, using a boolean logic. The logic was "National Rural Livelihoods Mission" OR "National Rural Livelihoods Scheme" OR "National Livelihoods Mission" OR "Rural Livelihoods Scheme" OR "Deendayal Antyodaya Scheme" OR "Rural Livelihoods" AND "Financial Well-Being. The search yielded 2525 initial results, which were refined later using the time filter of Publication Year >2015 And Publication Year <2024, which yielded 1691 documents. In the second stage, language (English) filter was used, resulting in 1644 documents. Among the total publications, the three main document type were article (n=1533, 90.65%), review (n=97, 5.73%) and early access (n=32, 1.8%), and other like book chapters, proceeding papers were less than 7. The records exported for all 1644 documents contained complete information (authors, addresses, publication year, source journal, title, subject categories and references), including abstract and cited references. This comprehensive data was effectively used to carry out the bibliometric analysis. The internationally widely used free bibliometric analysis software VOS viewer was applied to analyze and visualize the relationships among the authors, countries, journals, co-citations and terms.

## 4. Findings

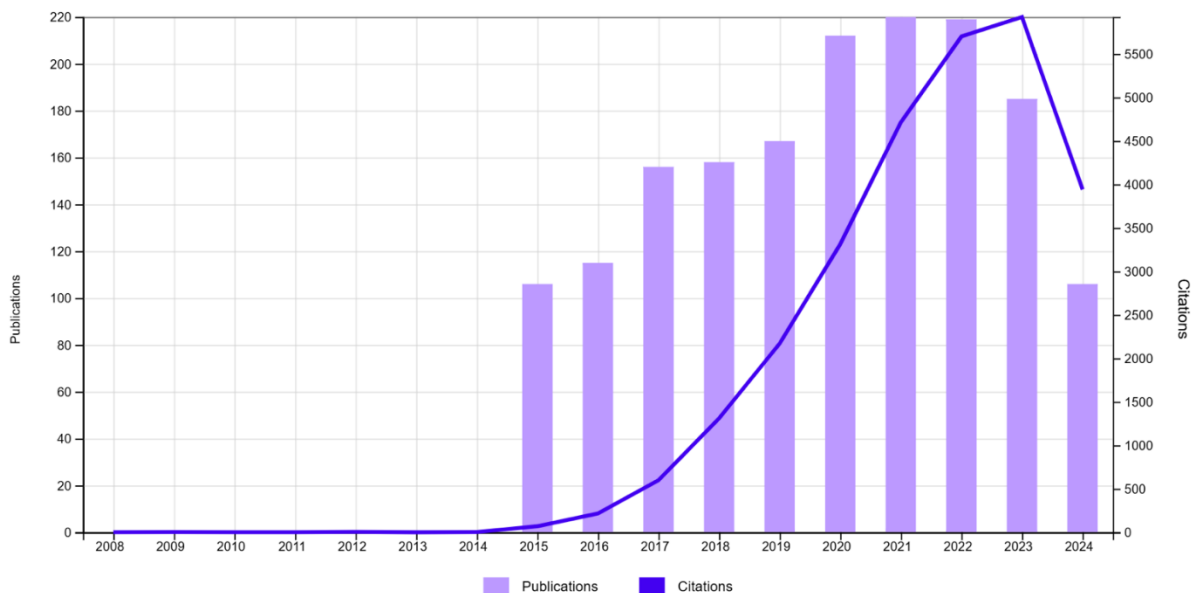
### 4.1 Main information about the data

The data extracted from the Web of Science database for the last 10 years (2015-2024) contains 1644 research papers. A total of 5851 authors have contributed to the 1644 articles used in this analysis, of which single author has published 19. The average citations per document are 17.02, author keywords are 1,039 and the collaboration index is 2.62.

### 4.2 Publication output and growth trend.

Figure 1 shows the progress of publications on NRLM and financial well-being in the last 10 years. Since the inception of concept, we see exponential growth in the publications and the citations on the topic per year, with most publication in 2021 and 2022 and citations in 2023.

**Figure 1 Publication trend**



To understand the trend, it was essential to see the most contributing countries, sources, authors and keywords for the 1644 documents used for this analysis. Most documents were recorded from the USA (376) and England (208). Out of a total of 120 publishers, Elsevier published 554 documents, Springer Nature with 224 publications, Mdpi and Taylor & Francis published 192 and 162 documents. Out of 5851 authors for 1644 documents considered for the study, the top contributing authors included Shackleton CM and Johansen MV, according to the selected fields' total number of documents. Out of a total of 648 author's keywords, the most frequently used keywords and phrases were rural livelihood mission. The focus on environment and green sustainable science technology is a visible research interest of developed economies, and well-known publication setups understand its future implications and readily participate in the expansion of this research field.

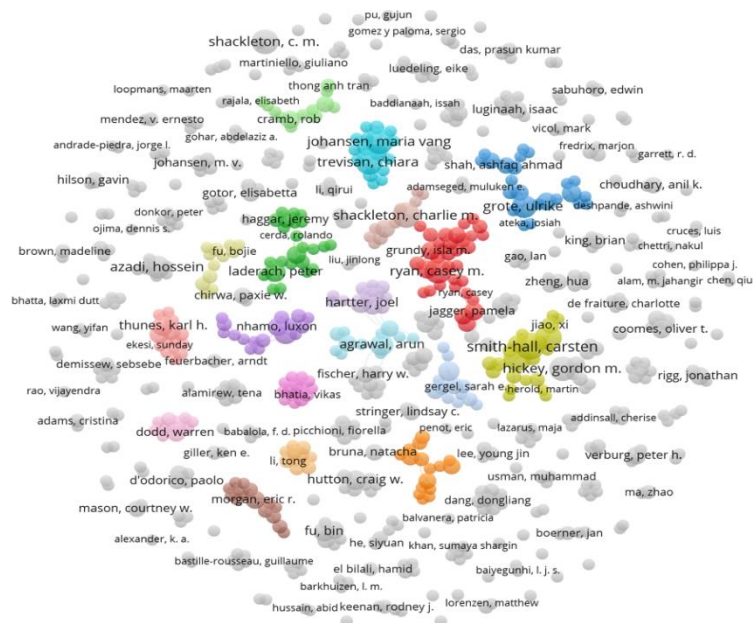
### 4.3 Mapping analysis on publication and authorship

#### 4.3.1 Co-authorship analysis.

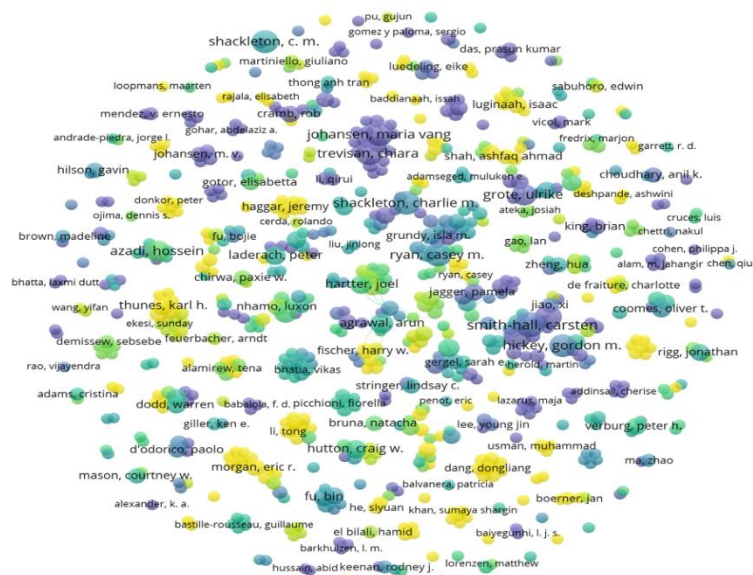
The unit of analysis is author. The unit of analysis was a minimum of two authors using the fractional method of counting, which fractionally divided the credit among authors. Out of 5960 authors for 1644 articles taken from the Web of Science Core Collection from 2015-2024, a minimum number of documents of an author was two as a threshold, qualifying 744 authors to meet the threshold, a total of 196 clusters linked

together, 1494 links representing a collaboration with a total strength of 782.00 for all clusters. These clusters reveal leading academic relations and researchers based on the average publication year in the network. The prominent researcher in the network were “Johansen, Maria Vang”, “Trevisan, Chiara”, “Ryan, Casey M.”, “Smith-hall, Carsten”, “Poulit, and Marieve”.

**Figure 2 (a) Network visualization based on document weights**

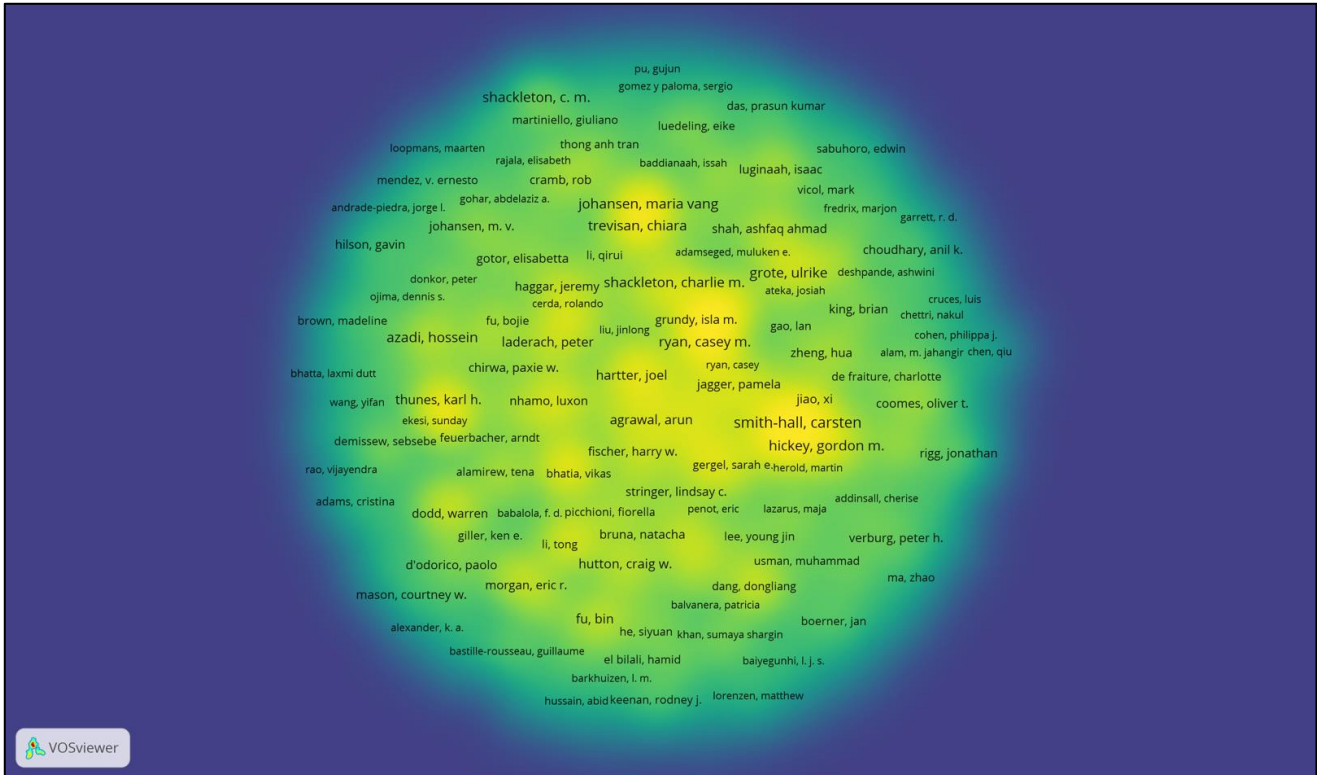


**Figure 2 (b) Overlay visualization based on document-weights and average publishing year with minimum score year 2018 and maximum 2022**



In figure 2 (a) the circles' size represents the author link-weights, and the gradient color from blue to yellow demonstrates the average publication year from 2018 to 2022. It is visible from Figure 2 (b) that some documents published in recent years have strong author link-weights like “Smith Hall, Carsten”, “Choudhary, Anil K” and “Shackleton, Charlie M”. In figure 2 (c) the density of yellow circles represents the most strongly linked clusters for the same authors represented in network analysis. These visualizations also indicate that suggested research fields are rigorously growing.

**Figure 2 (c) Density visualization of 196 clusters, 1494 links and a total strength of 782.00**

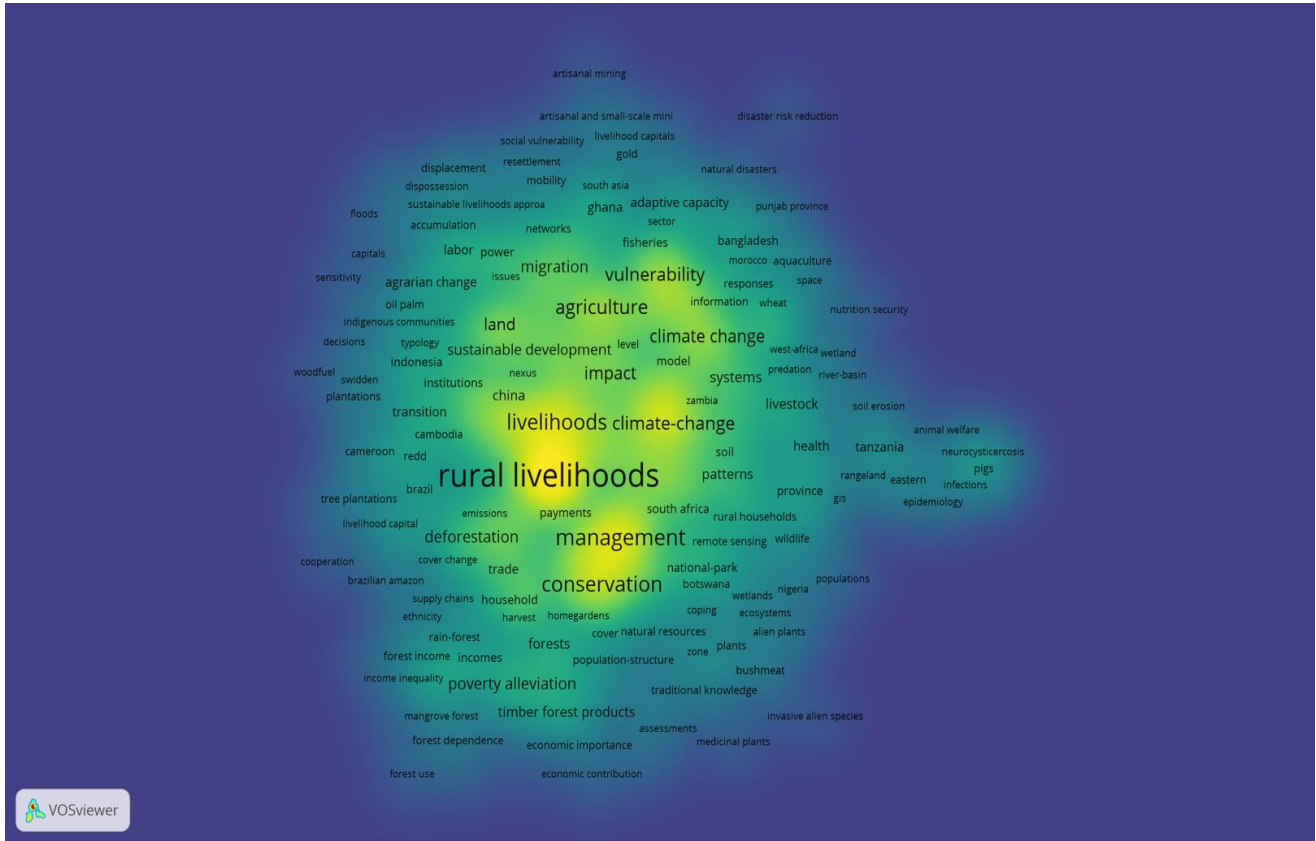


When the unit of analysis is country. Out of the 140 countries, for 1644 articles taken from Web of Science Core Collection from 2015 to 2024, a minimum number of a country's documents was five as a threshold, qualifying 78 countries to meet the threshold with 8 clusters linked together, 1010 links representing a collaboration with a total strength of 1224.50 for all clusters. These clusters help in revealing author's country collaboration based on document-weights and average publishing year with a minimum score. For instance, the strong-link countries are “USA,” “England,” “Australia,” and “Netherlands” as represented in figure 3 (a). The other contributing countries were “Peoples R China,” “Germany,” “South Africa” and “India”. In figure 3 (b) the circles' size represents the document's contribution from the countries in the form of document weights, and the gradient color from blue to yellow demonstrates the average publication year from 2019 to 2021. It is visible from Figure 3 (b) that documents published in previous years have strong country links, like “USA” and “England”. In figure 3 (c) the density of yellow circles represents the most strongly linked clusters for countries represented in network analysis. Thus, the visualizations represent strongly linked country collaboration in past years, like “USA” “England,” “Australia,” and “South Africa”. This augmentation helps to extend the potential for research contributions and author collaborations in the future for the considered research fields.





**Figure 4 (b) Density visualization of 12 clusters, 28414 links and a total link strength of 49433**



In table 2, a link means a co-occurrence connection between two keywords. According to the VOS viewer manual, each link has a strength, represented by a positive numerical value. The higher this value, the stronger is the link. The total link strength indicates the number of publications in which two keywords occur together. In looking at the table 2, it can be seen that the research mainly concentrated on the “rural livelihoods”, “management”, “conservation”, “poverty”, “agriculture”, “adaptation”, “food security” and others.

**Table 2. The link and total link strength of the top 10 occurrence keywords**

Keywords	Occurrences	Total link strength
Rural livelihoods	617	4937
Management	241	1966
Conservation	211	1811
Livelihoods	206	1790
Poverty	171	1455
Agriculture	161	1313
Food security	146	1194
Adaptation	140	1227
Ecosystem services	136	1154
Climate-change	134	1132

#### 4.5 Analysis of citations and references

##### 4.5.1 Citation analysis.

A citation link is a link between two items, where one item cites the other. Citation links are treated as undirected by VOSviewer. To analyze the citations of 1644 documents, the minimum threshold set to at least one citation resulted in 1472 documents that met the criteria. Out of 1472 documents, 681 documents were connected, while 791 documents were not connected. Thus, 681 items have been analyzed. In figure the closer they are placed, the stronger relationship they share. In figure 5 (a) the different colored circles represent different documents, and their size is proportional to the citations of the respective documents. From the documents, “Rockstrom (2017)” with 585 citations represented in light green color and “Meyfroid (2018)” represented in light blue color with 332 citations have most number of cited documents. The overlay visualization in Figure 5 (b), based on citation weights and average citation score, represents lower average citation scores (in blue) to higher average scores (in yellow). The yellow representations for “Rockstrom (2017),” “Meyfroid (2018),” “Verbeke (2015),” and “Burke (2017),” have the highest number of average documents cited. The blue representations for “Adranyi (2023),” and “Baig (2021)” with less number of average citations. In figure 5 (c) the documents with most cited and strongly co-related are highlighted with most links “Shackleton (2024)” and “Jiao (2017)”.

Figure 5 (a) Network visualization based on citations weight with most 585 citations.

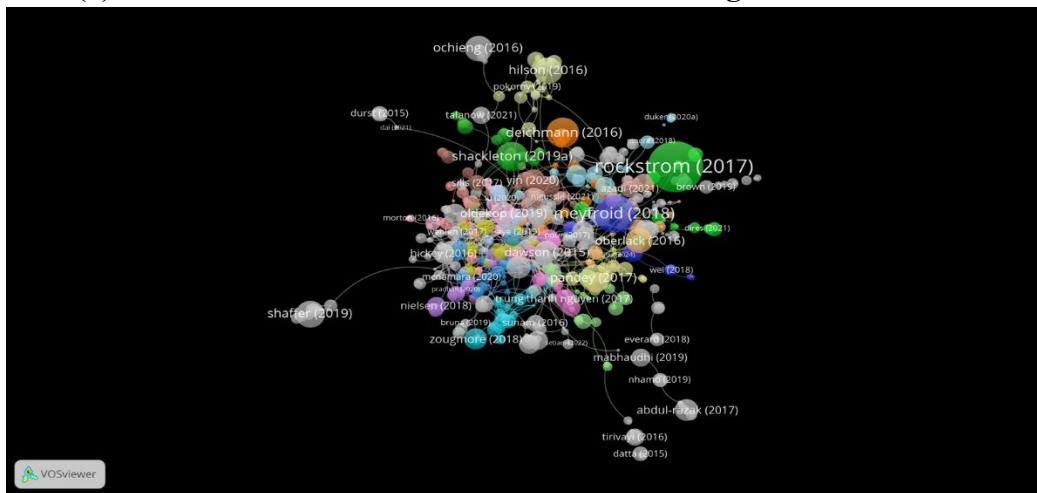
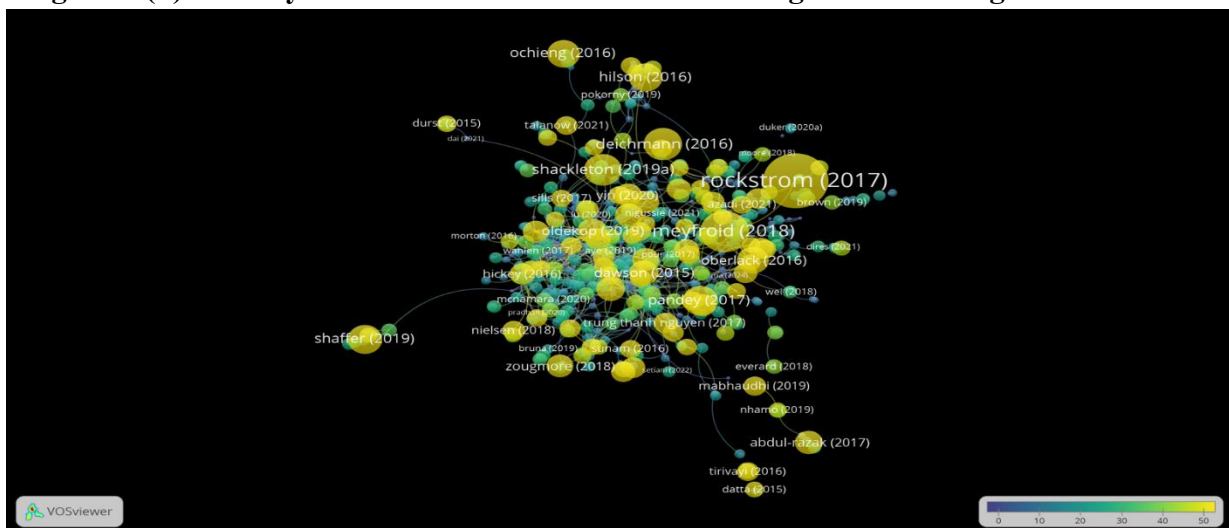


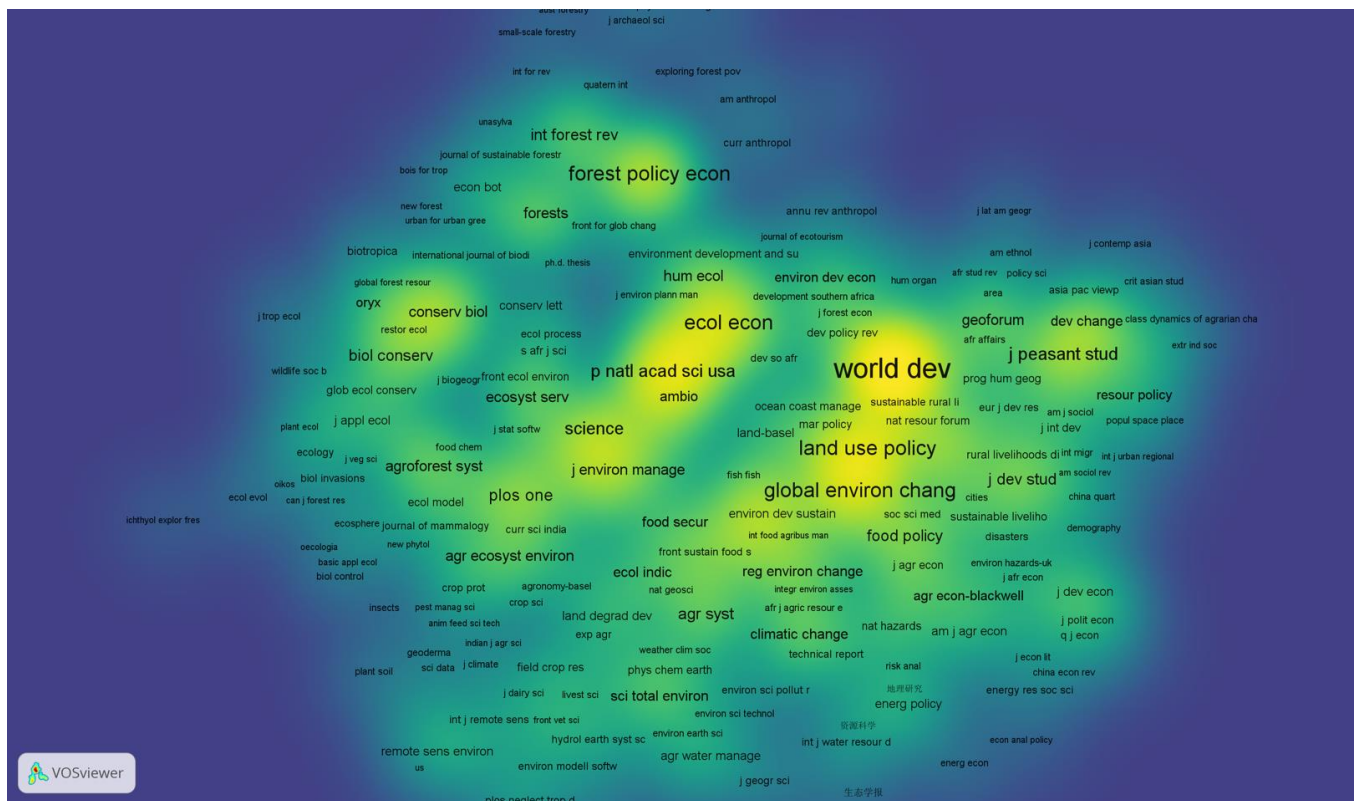
Figure 5 (b) Overlay visualization based on citations weights and average citation score.





analysis. At the same time, the size of the circle represents the citation weight. Network visualization in figure 6 (a), “Journal of World Development” in blue, has most citations and forms a blue cluster with co-cited sources like “Land Use Policy” and “Agro Econ Blackwell”. In red, “Journal of Peasant Studie” forms linkage with “Journal of Development Studies” and “Journal of Rural Studies”. In comparison, other sources in orange comparatively fewer citations and weak interlinkages. Thus, density visualization in Figure 6 (b), clearly highlights most cited sources, that is, “Journal of World Development,” “Forest Policy Econ,” “Ecol Econ” “Global Environ Chang” and “Land Use Policy”.

**Figure 6 (b) Density visualization of based on citations weight for 20 sources forming eight clusters with 89107 links.**



## 5. Conclusion

The aim of this paper is to present the most knowledge on the amount, growth trajectory, citation, publications outlets and geographic distribution of national rural livelihoods mission and financial well-being, highlighting emerging key areas in the research domain using the bibliometric method. These methods were conducted on 1644 documents taken from the Web of Science Core Collection database since 2015. In author’s co-authorship analysis, Johansen Maria Vang, Trevisan Chiara, Ryan Casey M., Smith-hall Carsten, Poulit Marieve, Grote Ulrike, Harter Joel and Hutton, Crag W were the major contributors. There are difference in the national and regional distribution of literature, based on the number of publications and citations. The United States led both the publications list and the citation list, followed by England, South Africa and Peoples R China.

The keyword co-occurrence analysis indicates the occurrence of keyword in the documents, rural livelihood, management, livelihoods and conservations had the strongest strength out of all items, linked

exclusively with rural livelihoods, food security, income, poverty alleviations, perceptions, dynamics accordingly as their related topics, helping in analyzing the co-occurrence of keywords. The citation analysis where one document cites another helped in identifying Rockstrom (2017), Meyfroid (2018), Verbeke (2015), and Burke (2017), have the highest number of average documents cited. In affiliation analysis, Journal of World Development is the top publications. The most frequently cited source of co-citations are Land Use Policy, Forest Policy, and Agro Econ Blackwell.

The evolution analysis shows the dynamic evolution and future development of themes. The findings intend to guide and encourage research scholars toward the field of rural livelihoods, management, livelihoods and poverty and provide a baseline for future research development and research coordination across countries, authors and sources. A brief representation of the contributions and the relationships among them will highlight the further need for its expansion as a research field.

Although the study has covered studies from the last 10 years through specific criteria, a few studies might be missing because of filters and the absence of related keywords. A more comprehensive study can be conducted by including more databases like the Scopus. The paper's findings will help extend the research on the topic.

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