

A Systematic Literature Review on Evolution and Future Trends of Microinsurance Research

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Abstract: The concept of microinsurance is becoming more popular in developing countries and the requirement for financial services for the poor has become universally acknowledged. This study examines the microinsurance research landscape by conducting a bibliometric analysis of the field by examining 305 publications between 1999 and 2022 in Scopus. The significant contribution of this study includes a detailed analysis of the most influential authors, journals, countries, and institutions in microinsurance. Also, this study contributes by explaining the conceptual structure of the microinsurance literature using keyword co-occurrence analysis and the thematic map of microinsurance research. The article also identifies the gap in the existing literature by offering new ideas for further study.

Keywords: Microinsurance, Bibliometric analysis, Biblioshiny, R-package, Scopus,

1. INTRODUCTION

Risks are an inherent part of our lives. All individuals, households, businesses, and communities are facing various kinds of risks and use multiple strategies to manage risks. Low-income households are extremely vulnerable to a variety of risks than the rest of the population. Coping with risks such as health problems, death of a family member, loss of assets and income, crop failure and loss of livestock, and unemployment is much more difficult for poor and low-income groups than for others. Hence the provision and selection of appropriate protection mechanisms against risks are important to reduce insecurity, and vulnerability and provide a means out of poverty.

Insurance is recognized as one of the most important risk management strategies for some of these risks. Insurance providers offer different products to individuals and businesses to protect against risks and ensure financial security. Microinsurance is an aspect of insurance for managing risks among low-income households. It can assist low-

income households to manage risk and maintain a sense of financial confidence. Today, the concept of microinsurance is becoming more popular in developing countries and the need for financial services for the poor has become universally acknowledged.

The aim of this article is to present a consolidated picture of the microinsurance literature since 1999. This study makes a substantial contribution by thoroughly examining the most relevant journals, authors, countries, and institutions in microinsurance. Further, this study contributes by explaining the conceptual structure of the microinsurance literature using keyword co-occurrence analysis, and the thematic map of microinsurance research. The article also identifies the gap in the existing literature by offering new ideas for further study.

There are multiple sections to this article. The introduction, which is the first section, describes what should be expected from the study. The study's background is provided in the second section. The research methodology is discussed in the third section. Results and a commentary based on a bibliometric analysis of publications published in Scopus between 1999 and 2022 are presented in the next section. The article's conclusion, limitations, and suggestions for further study are included in the last section.

2. BACKGROUND OF THE STUDY

Insurance is an effective instrument to increase resilience, foster economic growth, and combat poverty and inequality. Low- and even middle-income families may fall into poverty in the case of a big disaster without these kind of protection tools. Insurance can help in the reduction of inequality by shifting individuals' financial risks and enhancing their resilience (Aizpun, *et al.*, 2022). Therefore, it is important to implement a strategy that increases insurance penetration (Inyang & Okonkwo, 2022).

In developing countries, a significant proportion of the population belongs to the low-income class and they are highly exposed to a variety of risks and face greater poverty (Inyang & Okonkwo, 2022). Many of them push into income insecurity or make them vulnerable to poverty due to a lack of access to appropriate risk management instruments (OECD and International Labour Organization, 2019). Well-designed financial products can help them to prepare for risk, reduce risk, increase business investment despite the risk, and bounce back from shocks when they occur (Aizpun, *et al.*, 2022).

The term microinsurance was introduced as a new term into the vocabulary of development and social protection through the publication of an article in 1999 (Dror & Jacquier, 1999). Microinsurance generally targets the low-income segment of the overall population. It is regarded as one component of a broader risk management approach that aims to increase welfare and reduce poverty by giving low-income people

the risk management tools they need to properly manage their financial risks (Varshini & Suresh, 2013; The MicroInsurance Centre at Milliman, 2021). Hence it is considering not only as a financial service but also as social protection system (Churchill, 2006). Although microinsurance is a better risk management tool for low-income households and a social protection system, in the world hundreds of millions of people are still left without appropriate risk management tools (Munich Re Foundation, 2021). According to the report published by Micro Insurance Network (Merry, 2021), in 30 countries in Africa, Asia, Latin America, and the Caribbean, between 6% and 14% of the target population are covered by microinsurance. Therefore, microinsurance is a veritable strategy to increase insurance penetration (Inyang & Okonkwo, 2022) and finally, this financial inclusion becomes a key lever for building resilience, reducing poverty, and stimulating economic growth (Aizpun, *et al.*, 2022).

In the initial phase, there were no more publications on microinsurance. In 2005, the International Microinsurance Conference (IMC) launched and became an annual event to promote microinsurance and engage academics and practitioners in IMC content. In addition, since 2014, a leading insurance journal has published a special issue on microinsurance every two years, which has made a significant contribution to the publications on this topic. Due to its increasing importance, the number of published articles on microinsurance has recently increased (Dror, 2019).

There is minimal information on how scholarly research on microinsurance practice and theory has changed over time and added to the microinsurance literature (Dror, 2019). Analysis of which journals, countries, and authors are contributing more to the topic of microinsurance is likewise yet in its infancy. There are very few comprehensive literature reviews on microinsurance (Dror & Eling, 2021). Such a study of the literature has been performed by earlier academics on microfinance (Ali, *et al.*, 2022) but not specifically on microinsurance.

This analysis of all significant scholarly publications in the Scopus database will open the door for future researchers interested in studying microinsurance. Therefore, the two objectives listed below were the driving forces behind this research study.

- (a) to use bibliometric analysis to determine how the microinsurance literature has changed over time; and
- (b) to evaluate and summarize 300 Scopus papers published between 1999 and 2022 and provide suggestions for future study in the area of microinsurance.

3. METHODOLOGY

In accordance with the objective of the present study, the method of bibliometrics was used to analyze scientific publications on microinsurance. This study's methodology was broken up into two sections, which are each discussed in more depth below.

3.1. Data Collection and Preparation

This was a literature-based descriptive study involving a bibliometric analysis. Study based on the original data collected during the period from the years 1999 to 2022 by using the Scopus database. The research data was retrieved from the Scopus database using the search string “Micro insurance” or “Microinsurance” or “Micro-insurance” on December 2022. The language was restricted to English and all types of publications were selected. The search strategy yielded 305 records and searched documents (articles, books, book chapters, conference papers, reviews, short surveys, notes and editorials) are stored in the Excel spreadsheet with complete records and cited references. These data were exported for analysis.

3.2. Bibliometric Analysis Strategies

The shiny app for bibliometrics from R Statistical Package was used to carry out the present bibliometric analysis and in addition, used MS Excel for the analysis of this study.

Using the Bibliometrix R-package (Aria & Cuccurullo, 2017), fundamental analytical findings on the microinsurance study were calculated and reported in 5 categories during the performance analysis phase. These include Growth and Trends (Annual Scientific Production), Most Relevant Sources, Most Productive Authors, Most Productive Countries, and Most Productive Institutions. Further, three-field plot in Biblioshiny is utilized to visually assess the relationship between sources, countries, keywords, authors, and affiliations.

In the network analysis segment, the collaborative network of the authors and the institutions were plotted by way of using the social structure factor of the bibliometric R-package (Aria & Cuccurullo, 2017) provided in the biblioshiny user interface.

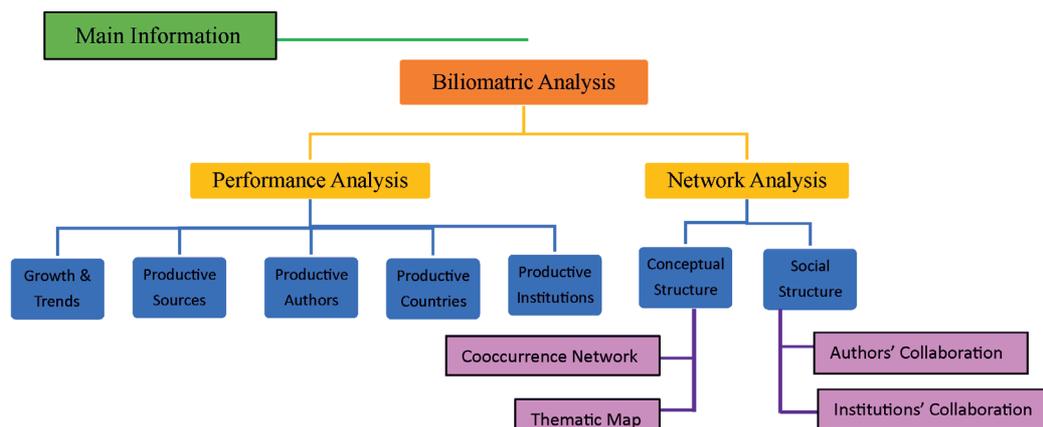


Figure 1: Bibliometric Analysis Strategies

Further, co-occurrence network and thematic map analysis executed through using the conceptual structure component of the bibliometric R-package in order to express research themes and trending topics in the area of microinsurance.

4. RESULTS AND DISCUSSION

In this section, results and discussions of findings are presented to show (i) growth and trends in the field of microinsurance research in terms of annual scientific production and citations; (ii) prolific sources, authors, countries, and institutions (iii) relationship between sources, countries, keywords, affiliations and authors (iv) social networks and co-occurrence network (v) thematic map of the field of microinsurance.

4.1. Data Analysis

This literature review study included 305 documents related to microinsurance published between 1999 and 2022. Figure 2 shows the summary of document types which included 229 articles, 26 book chapters, 16 conference papers, 16 reviews, and 7 books from 191 sources, and the annual growth rate of the publications relating to this area is shown as 12.81%. A total of 12130 references from different countries were made to the documents published in the Scopus database during this time, with an average of 11.22 citations per publication. As shown in Table 1, there were a total of 567 authors used for the bibliographic analysis, and there were 717 author keywords.

Table 1: Description of the Papers Used in Bibliographic Analysis

<i>Timespan</i>	1999:2022
Sources (Journals, Books, etc)	191
Documents	305
Annual Growth Rate %	12.81
Average citations per doc	11.22
References	12130
Author's Keywords	717
Authors	567

4.2. Growth and Trends of Microinsurance Research

Figure 3 shows the trend of published work on microinsurance over the period 1999 - 2022. Research on microinsurance appears to have begun in 1999, as seen in Figure 3, with the work of Dror and Jacquier (1999) being the first and only article included that year. According to the bibliometric R package's analysis from 1999 to 2022, the field of microinsurance has an annual growth rate of scientific output of 12.81%. According to the findings, compared to the early years, the trend in publications has greatly increased. Most publications related to microinsurance were published in 2014 (N=

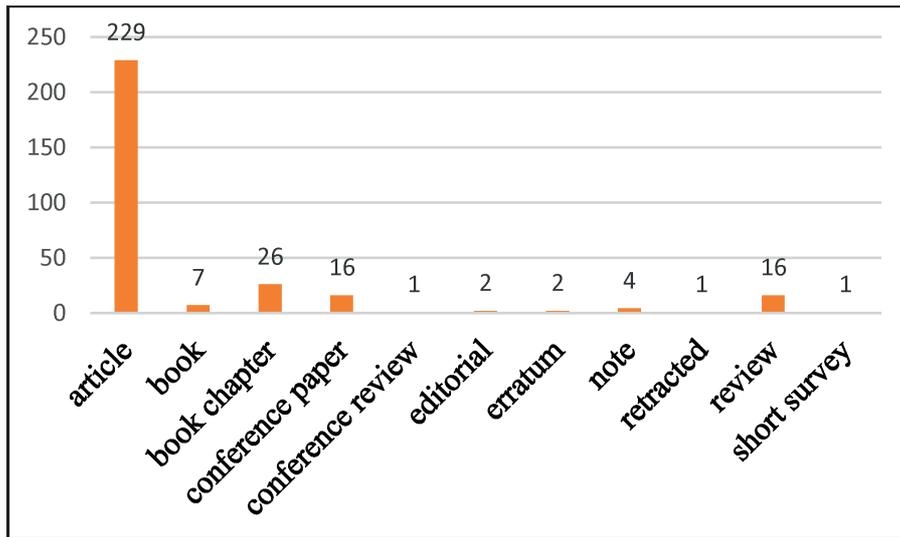


Figure 2: Document Type

30), the leading insurance journal that published a special issue on microinsurance. The number of publications per year was less than 10 in the first 10 years after 1999 and in 2000 no article on microinsurance was searched in Scopus. However, the number of publications produced up to 2022 generally increased while recording peaks in 2016, 2019 and 2021, in which the leading insurance journal published special issues on microinsurance.

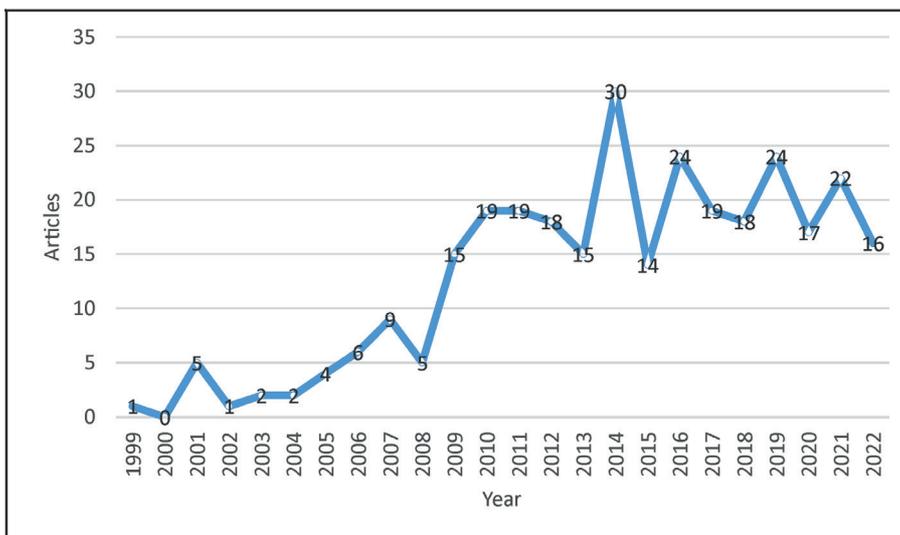


Figure 3: Annual Scientific Production

Figure 4 displays the typical number of citations made to articles on microinsurance every year. This outcome demonstrates the annual impact of publishing on the field. The final analysis reveals that, with an average of 3.67 citations, the lone article from 1999, which marks the field's inception, has received the most citations to date. This suggests that the authors' (Dror & Jacquier, 1999) study had a significant influence on the microinsurance industry. However, this variety dropped sharply to zero in 2000 and the cause of this decrease in citation may be in 2000 there has been no article searched in Scopus related to microinsurance. Besides, in line with figure 4, it may be seen, after 1999 average citations per year did not upward thrust a lot, apart from the year 2017 which recorded 3.19 average citations per year.

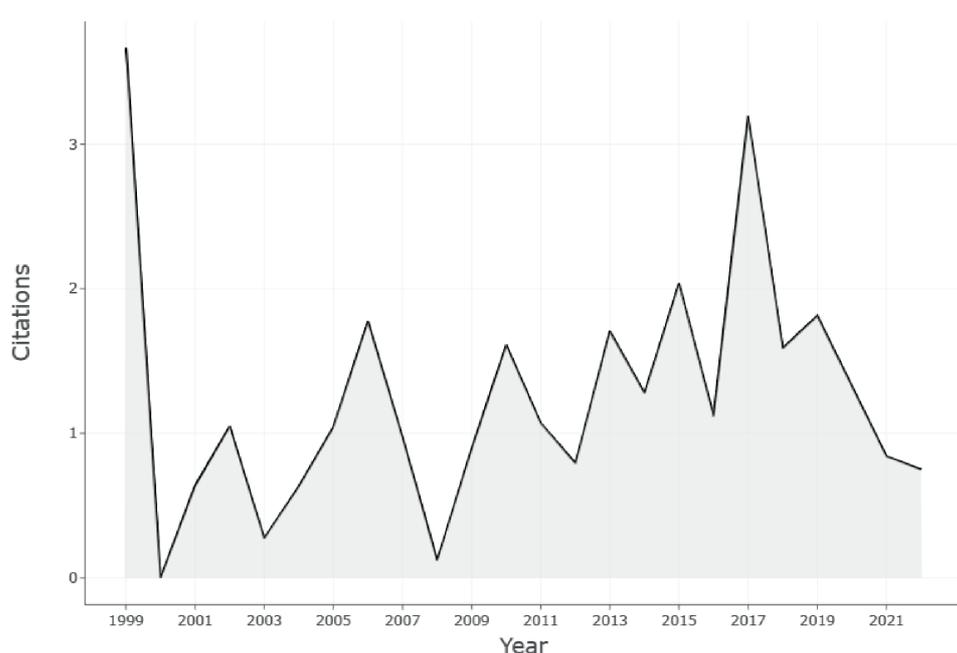


Figure 4: Average Citations per Year

4.3. Most Productive Sources of Microinsurance

According to Figure 5, “Geneva Papers on Risk and Insurance: Issues and Practice”, had the highest contribution in this domain. This journal alone published 29 research papers within the specified period, which is almost 9.5% of the total publications.

However, as Figure 6 shows, the number of articles produced grows very slowly until 2013 and then increases significantly from 2014, with peaks in 2016, 2019 and 2021, which were the years published special issues on microinsurance. “The Journal of Enterprise Development and Microfinance” has published 13 articles and “The Journal

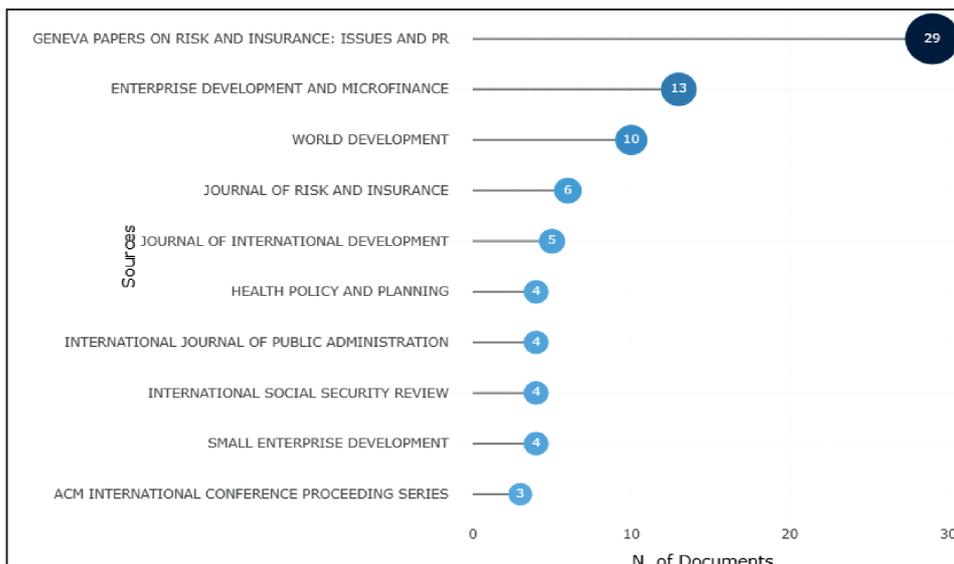


Figure 5: Most Relevant Sources

of World Development” has contributed 10 articles in this area. However, the Journal of Enterprise Development and Microfinance last published articles in 2016 and will not be published until then.

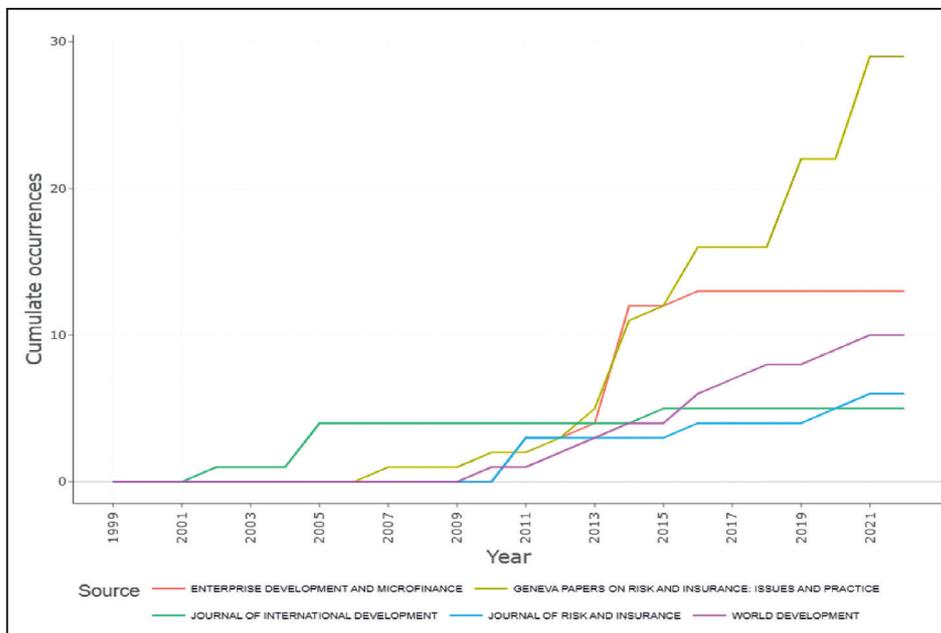


Figure 6: Source Dynamics

When we analyze the productivity of publication sources by using Bradford's Law in figure 7, the output is diversified, with 17 sources out of 191. But the important factor to be aware here is that only three journals have established themselves as the most important publishers in this field, with fewer than 10 articles published by other journals.

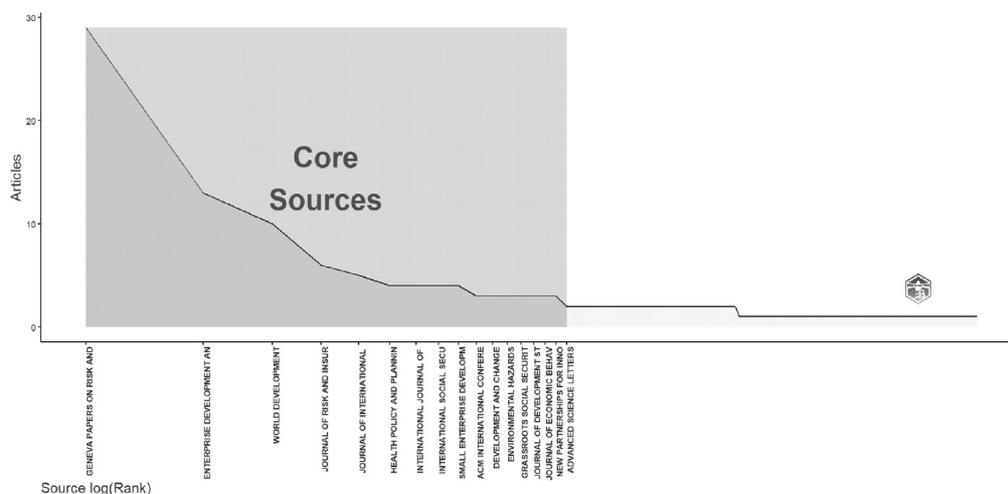


Figure 7: Source clustering through Bradford's Law

To further comprehend the influence of these journals' articles, we show the top 10 most cited journals in Table 2 together with their total number of publications (NP), total citations (TC), and related h-index values. Accordingly, the ranking changes when we look at the TC and h-index. Geneva papers on Risk and Insurance: Issues and practice is the most abundant in terms of publications as well as the most influential journal, receiving a total of 256 citations with a 10 h-index. Although the Journal of Enterprise Development and Microfinance ranked second on the publication list, it fails to place itself in the top ten influential journals. The other five journals, Journal of Risk and Insurance, Journal of International Development, International Journal of Public Administration, Small Enterprise Development, and ACM International Conference Proceeding Series, also dropped from the top 10 when it consider the impact of publications.

4.4. Most Productive Authors in Microinsurance

It is feasible to determine whether or not the field under analysis is one in which the majority of the output is concentrated on a small number of authors according to Lotka's law (Figure 8). In our situation, production is diverse because 84% of the total

Table 2: Most Relevant Sources

Source	No. of Publications	Total Citations	<i>h</i> _index
Geneva papers on risk and insurance: issues and practice	29	256	10
World development	10	224	6
Third world quarterly	2	156	2
Handbook of development economics	1	146	1
Health policy and planning	4	112	4
Global environmental change	2	108	2
International social security review	4	107	2
Journal of economic behavior and organization	3	92	3
Agricultural economics (united kingdom)	1	87	1
Environmental hazards	3	86	3

number of contributing authors (476 out of 567) had only one publication. In essence, the distribution shows that scientific publications' contributions are not evenly split among their authors, but rather vary with the number of authors.

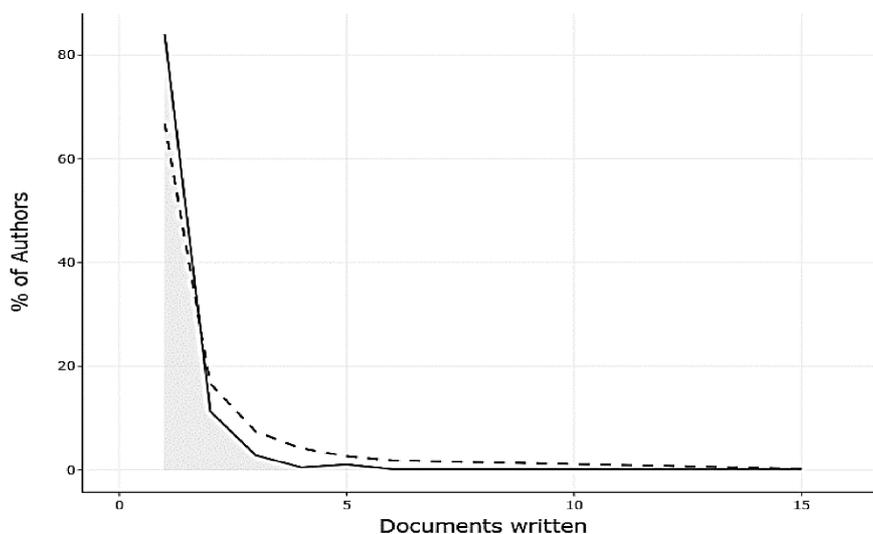


Figure 8: Author Productivity through Lotka's Law

We can better comprehend how each researcher has made a substantial contribution to the subject of microinsurance by looking at the most prolific authors in the field. To understand the productivity and influence of these publications, Table 3 displays the top 10 most cited authors together with the total number of publications (NP), the total number of citations (TC), and corresponding values of the *h*-index. David Mark Dror tops the list as a result with 15 articles. His publication impact ranking in terms of total

citations (TC) and h-index places him as the top author. He garnered 246 citations, giving him a 9 h-index.

Table 3: Most Productive Authors

Authors	No. of Publications	Total Citations	<i>h</i> -index	Publication Year Started
DM Dror	15	246	9	1999
P Panda	5	89	5	2011
MR Carter	5	206	4	2013
M Eling	5	126	4	2011
MJ Mccord	5	56	4	2001
C Biener	4	102	4	2011
R Radermacher	4	57	4	2009
J Bauchet	4	13	3	2017
S Akter	3	70	3	2010
T Arun	3	40	3	2009

Further, he has published scientific documents consistently in the area of microinsurance since 1999 to date (figure 8), which is significantly higher than all other authors that have five or less than five publications on the related topics. P Panda, MR Carter, M Eling, and MJ Mccord published five each. However, MR Carter received 206 citations and an h-index of 4, followed by M Eling, who received a total of 126 citations with an h-index of 4. P Panda and C Biener are next among the other influential contributors to research areas in terms of received citations for their scientific publications and corresponding h-index scores.

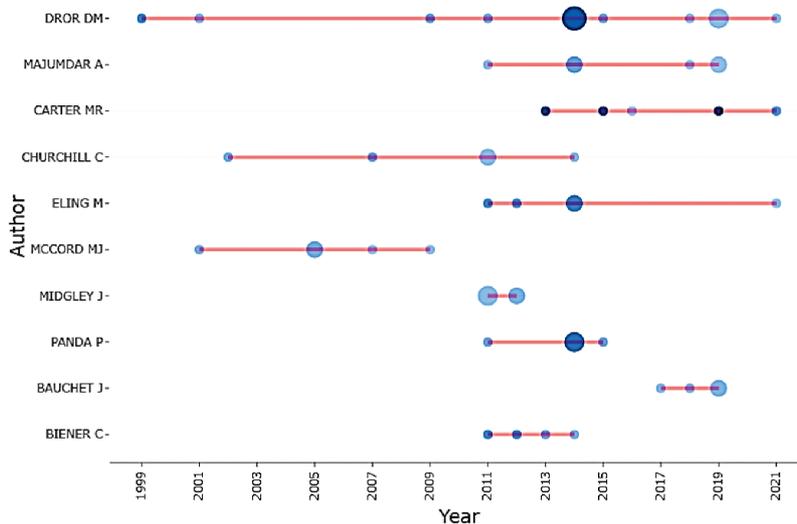


Figure 9: Authors' Production over Time

4.4.1. Relationship between keywords, authors and sources

The three-field plot in Biblioshiny is utilized to visually assess the relationship between sources, countries, keywords, authors, cited sources, affiliations, etc.

Figure 10 included three field analyses that illustrated the connections between authors, sources, and keywords. The left column in Figure 10 featured the name of the journal, the middle column contained keywords, and the right column contained the authors. With the use of this research, we can locate authors who have written about microinsurance and determine the kind of journals that have published their work. The analysis established that most of the authors have considered microinsurance as their keyword and most of their research on microinsurance has been published in sources such as Geneva Papers on Risk and Insurance, Enterprise Development and Microfinance, and World Development. As well as 'microfinance', 'health insurance', 'index insurance', 'insurance', 'poverty', 'microcredits', and 'risk' are closely related keywords with microinsurance that are used by different authors. Additionally, David M. Dror and M.R. Carter focused on many of these topics.

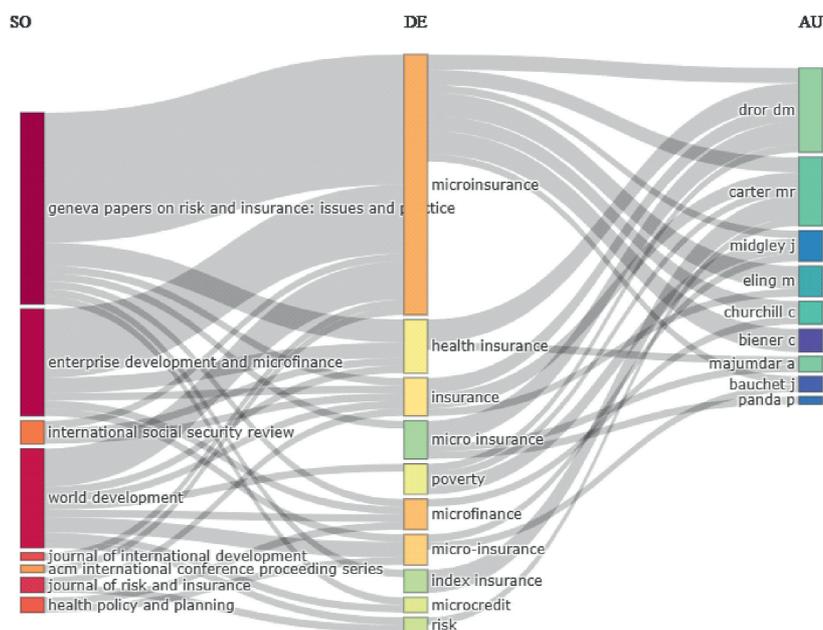


Figure 10: Three Field Analyses (keywords, authors, sources)

4.5. Most Productive Countries

58 different countries have publications in the field of microinsurance. For the overall number of documents per country, the study adopts a cutoff of 20. Accordingly,

Accordingly, based on the overall number of publications, Table 4 rank the top 10 countries out of 58 as the most productive countries. The United States of America is the most productive country in this research area with 136 published documents and 697 citations. According to table 4, India, Malaysia, and the United Kingdom have microinsurance related publications of 64, 47, and 40, respectively. Other countries such as Germany, Netherlands, Switzerland, Australia, China, and South Africa have less than 40 publications in this field. However, Germany and Switzerland received 240 and 139 citations respectively.

Table 4: Most Productive Countries

<i>Country</i>	<i>Total Publications</i>	<i>Total Citations</i>
USA	136	697
India	64	123
Malaysia	47	10
UK	40	161
Germany	37	240
Netherlands	31	97
Switzerland	29	139
Australia	23	33
China	22	12
South Africa	22	6

Figure 11 illustrates the country's scientific output. On the map in Figure 11, the blue color denotes the presence of publications for a specific countries on the themes under consideration, while the gray color denotes the absence of a publication. More publishing countries are represented by the countries with darker blue color.

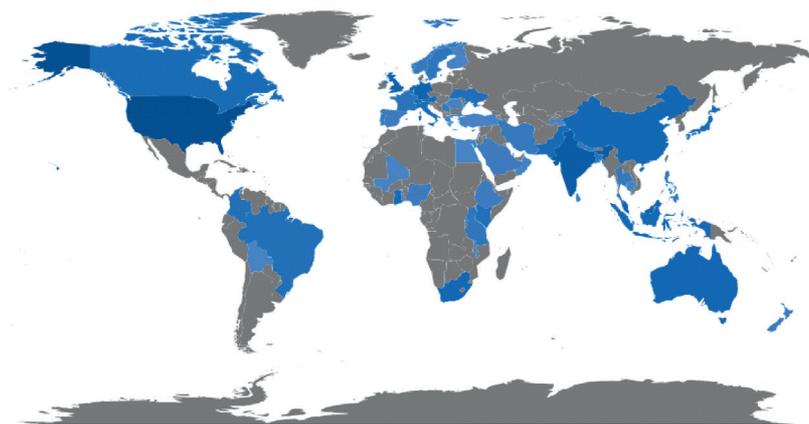


Figure 11: Country Scientific Production

Analyzing the geographic distribution of publications, considering the countries of the corresponding authors, Table 5 shows the most prolific countries in terms of total number of publications and represents the collaborative nature of the leading countries' scholarly output through multi-country publications (MCP) and multi-country Publication Ratio (MCPR). When considering the number of publications, researchers from the United States of America have attained the first place in this field of research with 40 published documents. According to table 5, India, the United Kingdom, Germany, and Switzerland have microinsurance related publications of 19, 14, 13, and 10, respectively. Other countries such as South Africa, Australia, China, Malaysia, Canada, and the Netherlands have less than 10 publications in this field. Surprisingly, however, in the case of MCP or author collaborations with authors from other countries, the US has not secured at least one spot in the top five positions in this area, and India has superior collaborative publishing performance weighed against the other major publishing countries on the list with an MCPR of 0.684. In addition, the collaborative research trend is higher for the Netherlands, Australia, and China, having MCPR values of 0.6, 0.571, and 0.429 respectively. Other countries have average contributions.

Table 5: Most Productive Countries (corresponding authors' countries)

<i>Rank</i>	<i>Country</i>	<i>Number of Publications</i>	<i>Single Country Publications</i>	<i>Multiple Country Publications</i>	<i>Multiple Country Publications Ratio</i>
1	USA	40	31	9	0.225
2	India	19	6	13	0.684
3	United Kingdom	14	11	3	0.214
4	Germany	13	10	3	0.231
5	Switzerland	10	7	3	0.3
6	South Africa	8	7	1	0.125
7	Australia	7	3	4	0.571
8	China	7	4	3	0.429
9	Malaysia	7	6	1	0.143
10	Canada	5	4	1	0.2
11	Netherlands	5	2	3	0.6

The top 40 country collaboration networks from our collected bibliographic data are displayed in Figure 12, which can be a reflection of the degree of international communication as well as the countries that are influential in this field. The network contains three main communities, each with a unique color for its nodes. The size of the nodes indicates how much a country has influenced research on microinsurance. (based on the number of publications). The strength of international cooperation is indicated by the edges between the nodes.

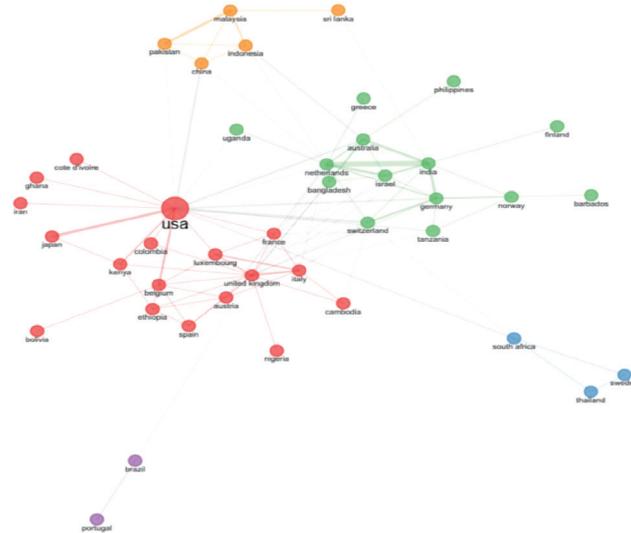


Figure 12: Country Collaboration Network

4.5.1. Relationship between keywords, countries and authors

Figure 13 featured three field analyses illustrating the link between keywords, countries, and authors. Authors listed in the left column, the countries listed in the middle column, and the keywords listed in the right column. The height of the rectangles indicates the number of studies carried out by the authors, countries, and study areas; as more studies are undertaken by each of these entities, the rectangles grow in both width and height.

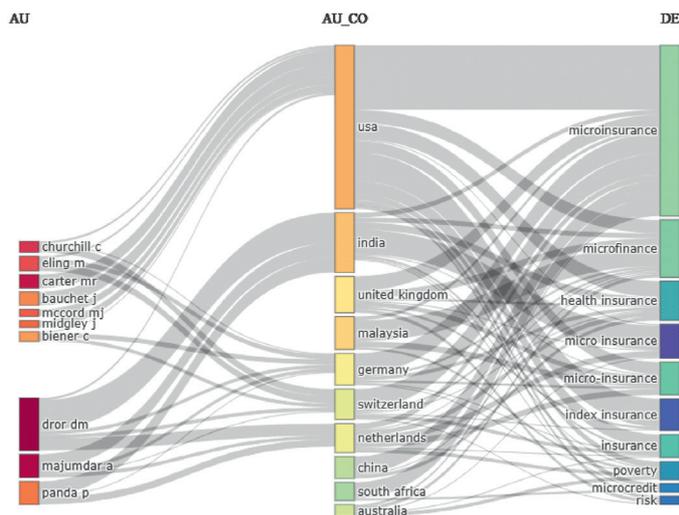


Figure 13: Three Field Analyses (keywords, countries and authors)

The analysis revealed that the countries with the most research on microinsurance were the USA, India, United Kingdom (UK), Switzerland, Netherlands, and Germany, as indicated by the height of the countries' rectangles. Furthermore this analysis confirms that most of the countries have considered microinsurance as their keyword. However, in some articles the term microinsurance is used differently as 'micro insurance' and 'micro-insurance'. Especially in India highly used the term micro insurance and most of Malaysia's research has focused on the topic of microfinance. Furthermore most of the Indian studies were led by David M. Dror. As well as, David M. Dror has conducted very few studies for the USA, Switzerland and Germany and none for the United Kingdom (UK).

4.6. Relationship between sources, countries and authors

The three field analyses in figure 14 illustrate the link between the sources, the countries, and the authors. The left column in Figure 14 contains the sources, the center column the countries, and the right column the authors. The number of studies conducted by countries, authors and the number of studies published by sources denoted by the height of the rectangles. The size and height of the rectangles will be increase when the number of studies from each of these entities increases. Lines of communication also reflect the connections made between authors and countries, as the more research by authors and countries published in the source, the thickness of the connections will be greater.

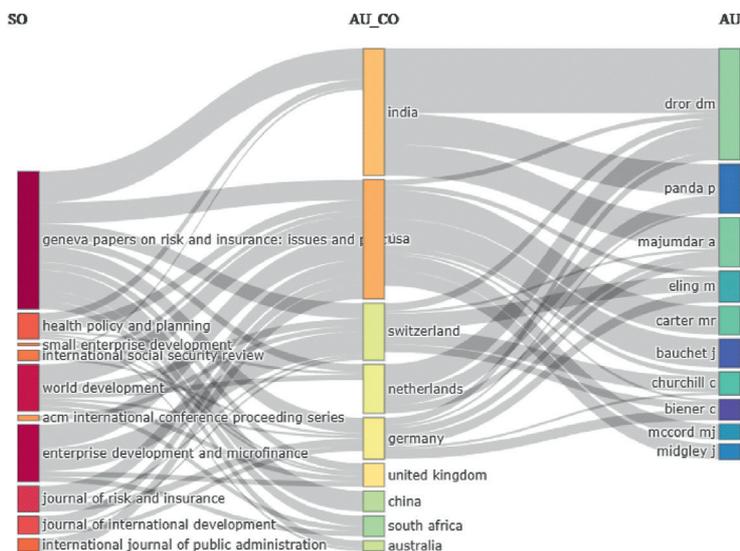


Figure 14: Three Field Analyses (sources, countries and authors)

The larger size of the rectangle signifies that India performed well with significant contributions of DM Dror, P Panda and A Majumdar and mainly published these studies in Geneva papers on Risk and Insurance: Issues and Practice, Health policy and planning and International social security review. On the other hand, the rectangle size indicates that the USA also performed well with the support of seven authors and diversify the sources by publishing their research on different top publishing journals. Switzerland has main authors such as DM Dror, A Majumdar, M Eling, C Churchill and C Biener, who published mainly in Geneva papers on Risk and Insurance: Issues and practice and Journal of Enterprise Development and Microfinance. Similarly, Germany gets contributions from all the main authors used by Switzerland in addition to P Panda while publishing their research work in five journals. From a publication sources perspective, the most published journal, Geneva Papers on Risk and Insurance: Issues and Practice, is primarily contributed by authors from India, USA and China, as well as Switzerland, Germany, Netherlands, UK, South Africa and Australia. Publications in other sources are dispersed at random to several top publishing countries.

4.7. Most Productive Academic Institutions

According to the results presented in Figure 15, the Micro Insurance Academy possessed the greatest backing for the publication of scientific research on microinsurance with 13 studies. Multimedia University and the University of California are in the next level with 11 studies. The Purdue university has made a notable contribution and published 8 documents, followed by the University of Utara Malaysia. Further in this field, notable contributions are made by International Labour Organization with 7 scientific publications.

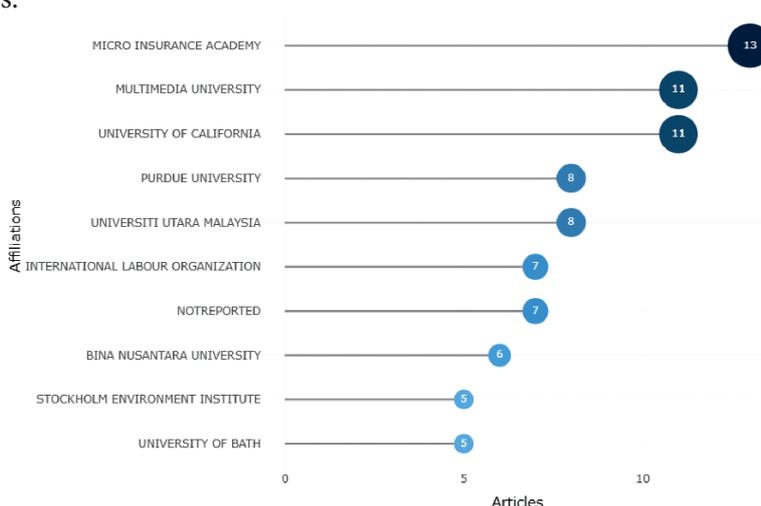


Figure 15: Most Relevant Affiliations

4.8. Co-authorship and Social Collaboration Analysis

The study looked at the social structure section of the bibliometric R-package offered in the biblioshiny user interface with regard to social collaboration and co-authoring analyses (Aria & Cuccurullo, 2017). According to scholars, the collaboration between two or more individuals, institutions, or countries is described by the social network of participants in a domain (Song, *et al.*, 2019). In a network, the links connecting the nodes stand in for the relationships, while the nodes themselves represent the participants in the network. Figures 16 and 17 depict the collaboration network of authors and the collaborative network of institutions, respectively, in this study. As a result, big name already mentioned as the most published and impactful scholar in the field, DM Dror has a well-established collaborative network, and other scholars have been shown to have a little collaborative network.



Figure 16: Authors' collaboration network

Likewise, organizations such as the Microinsurance Academy and the University of California have forged an extensive network of partnerships with others. For example, the Microinsurance Academy has Erasmus University, the University of Cologne, and Erasmus University Rotterdam in its partnership network. However, several other organizations are shown to have a small network of partnerships. Although

these organizations contribute to the field of microinsurance research, they have not collaborated with other organizations to broaden their social networks in the domain.

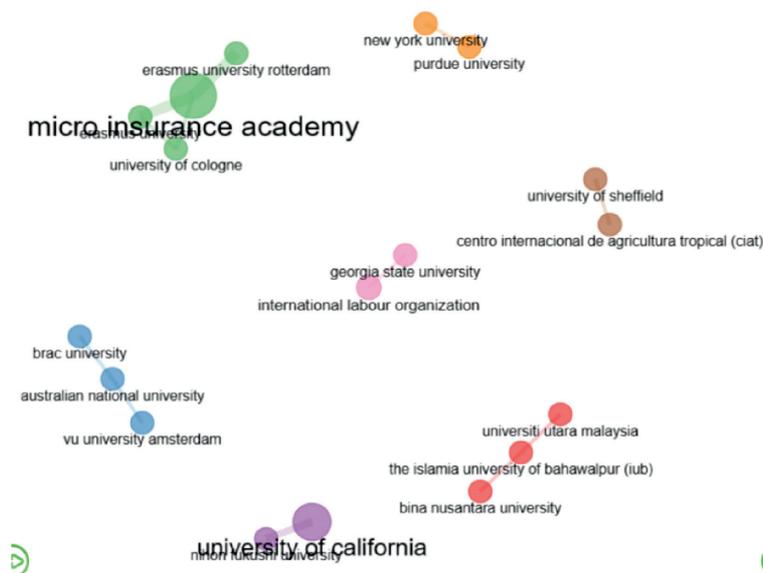


Figure 17: Institutions' collaboration network

4.9. Trending Topics on Microinsurance

4.9.1. Word cloud map analysis

Examine the keywords writers employ in their works is one of the analytical tools that researching trending topics and academics focusing in the field (Song, *et al.*, 2019). This analysis was done because a publication's keywords can be used to easily pinpoint its subject and focus of that article.

The word cloud in Figure 18 demonstrates the microinsurance researchers' primary areas of study. Cloud tags are a visual representation of how much attention researchers give to particular topics; larger tags indicate higher keyword usage frequency, while smaller tags indicate lower keyword usage frequency. Accordingly, topics, such as microfinance, micro-insurance, insurance, health insurance, microcredit, health microinsurance and index insurance are frequently used keywords in microinsurance publications.

4.9.2. Keywords Co-occurrence Analysis

In addition, the study examined keyword co-occurrence networks (KCN) to gain further insight into microinsurance trends. According to the Esfahani, et al (2019) KCN analysis



Figure 18: Word cloud

represents relationships between keywords in the literature and provides insight into the subject’s knowledge structure. Our results thus show that KCN not only identified common keywords like a word cloud (Figure 18), but also revealed relationships between them (see Figure 19). Some terms appear to affect the network more than

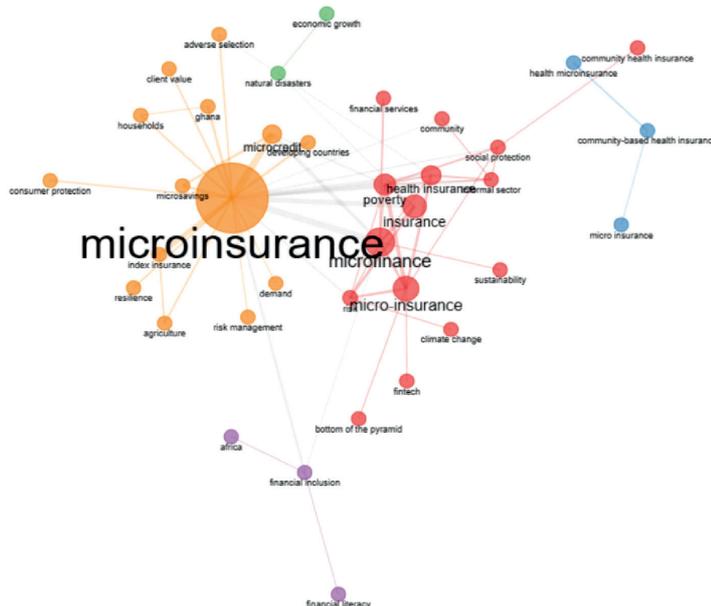


Figure 19: Keywords Co-occurrence Network

others. For instance, if you look closely at these keywords by color code, you'll see that large keywords denoted by width are connected to other smaller keywords in a network. For example, microinsurance is related to microcredit, microsavings, risk management, agriculture, resilience and consumer protection. The keyword microfinance is also closely related to microinsurance, poverty, insurance and sustainability.

4.9.3. The Thematic Map: Co-word Analysis

The thematic map of microinsurance is another analysis carried out in this research. An analysis of the field's current state and potential sustainability is the goal of a thematic map. The potential for future research growth of subject areas within a domain is the knowledge that researchers and stakeholders can gain from this analysis. Clusters of the authors' keywords and their associations are used in thematic analysis to derive themes. The centrality and density rank values along two axes are used to split the thematic map into four quadrants (clusters of keywords). The X-axis, which represents centrality, displays how closely a network cluster is connected to other networks. In the evolution of the entire research field under study, it is viewed as "a measure of the importance of a theme." The Y-axis displays the cluster network's internal strength and density, as well as the degree of development of each issue. Accordingly, the first quadrant identifies

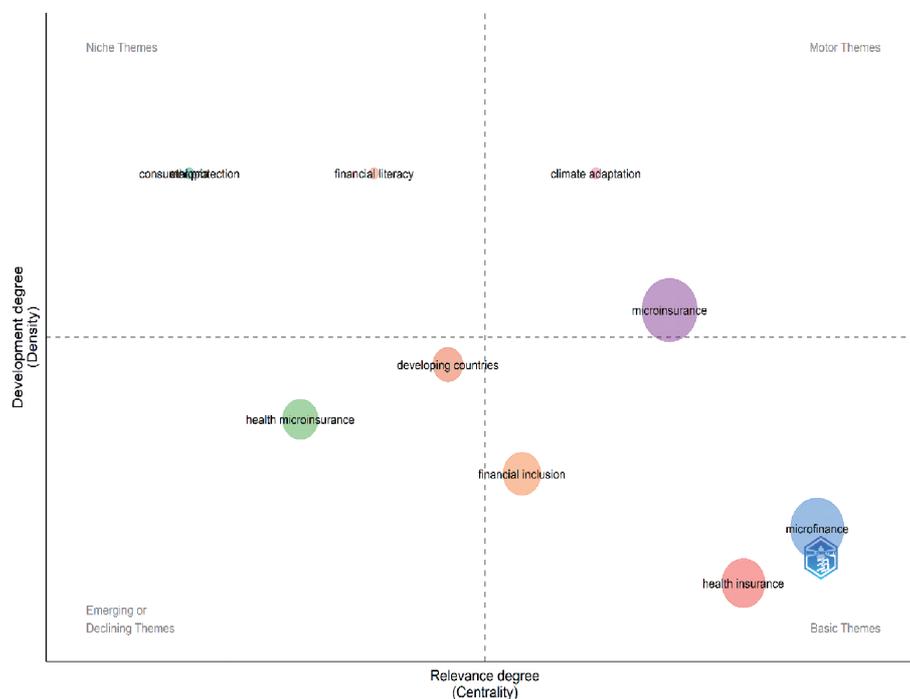


Figure 20: Thematic Map

motor themes (mature and significant themes for structuring a research domain); the second quadrant represents advanced and isolated topics (topics of limited relevance to the field); the third quadrant contains emerging or declining themes (underdeveloped and marginal themes); in the fourth quadrant fall fundamental and transversal themes (they concern general themes that are transversal to different research areas of the field).

Figure 20 depicts the microinsurance industry's theme map. As a result, a theme like microinsurance, which lies in between Q 1 and Q 4, is strong and competent of organizing the research area. In another word, microinsurance continues to be the area's dominant theme. Themes like "microfinance" and "financial inclusion" from Q4 are the bases and extremely crucial for the growth of the field. The themes from Q2 have been interconnected but still only marginally contribute to microinsurance development. Therefore, issues in Q2 such as financial literacy and consumer protection are potential topics that need to be more closely associated with microinsurance, and more effort is needed to develop these themes to make more connections to microinsurance. This work must be done because financial literacy, an recognized field, can contribute significantly to the structure, future and sustainable development of microinsurance.

5. CONCLUSION

Using a bibliometric analysis, this work has sought to present a thorough overview of all scientific works on the subject of microinsurance over time. For this study, 305 documents in total were taken from the Scopus database. Reporting on significant elements of study in the subject, such as the most influential authors, publications, institutional affiliations, and geographic diversity, this study makes several of notable improvements to the body of knowledge. To understand the from historical evolution to the recent development, we further examined the most significant keywords in this research area, their conceptual structure, and research dynamics.

By examining the bibliometric data of the relevant literature, we discover that, out of 567 writers, DM Dror is the most published author, having written 15 scientific papers. In addition, DM Dror was identified as the most influential author with the highest h-index and the total number of citations. With a total of 256 citations and a 10 h-index, Geneva Papers on Risk and Insurance: Issues and Practice is recognized as the publication source with the highest production rate and the greatest influence. Regarding the number of publications and the countries of corresponding authors, the USA is the most productive country. The Micro Insurance Academy was recognized as the organization that contributed the most to the microinsurance industry.

Further, we evaluate, rank, and display the extent and type of cooperation given the significance of knowledge diffusion. With higher levels of collaboration with nations like Japan, Kenya, and Belgium, the USA is found to have the most collaborative publications.

However, compared to the other top generating countries on the list, this collaboration's proportion of total publications is significantly lower. India essentially has a greater rate of collaboration, more extensive publications, and significant collaborations with countries like the Netherlands, Germany, and Australia.

Word cloud map analysis and the co-occurrence analysis are used in order to express research themes and trending topics in the area of microinsurance. In addition, a thematic map analysis was carried out to inform academics and stakeholders about the potential for future research growth of a given field's theme areas.

Finally, this investigation has produced a number of theoretical ramifications. To the best of our knowledge, this is the first study to analyze the older literature from 1999 to 2022 using a bibliometric analysis in order to examine the origins of the microinsurance literature. The survey also looked at the most popular journals, countries, keywords, and authors, as well as future research on the topic of microinsurance.

6. LIMITATIONS OF THE STUDY AND FUTURE RESEARCH DIRECTIONS

The primary limitation of this study is that significant works that are indexed in other important databases (like the Web of Science) are not included. Additionally, just the keyword "microinsurance" was used to search for papers; other pertinent keywords were not taken into account. To simplify the analysis and make it simpler for the authors to interpret, only one keyword was chosen. As a result, an additional study can be done to obtain a more comprehensive perspective by taking into account other terms that are closely connected, such as inclusive insurance, insurance for the informal sector, index insurance, and microfinance.

This study integrated existing studies from all the previous literature available in the Scopus database on microinsurance and provided comprehensive knowledge and current research trends in the microinsurance literature to stimulate future research. Accordingly, future research may focus on the role of microinsurance in sustainable development, the impact of financial literacy and consumer protection on microinsurance development. In addition, it may be important to develop broader research collaborations between academics and institutions in order to have a more global impact on microinsurance.

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