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Publication trends in Financial Inclusion: A Scientometric Assessment and Visualization

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Publication trends in Financial Inclusion: A Scientometric Assessment and Visualization

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Abstract

The purpose of this study is to explore publication trends in financial inclusion for the period 2006-2020. Financial inclusion is an effort to provide financial services to the backward and low-income people of society. It is a dynamic area of research in which the majority of research work is being done. The data has been extracted from the Scopus database, the world's largest abstract and citation database of peer-reviewed literature. Various indicators are used year-wise growth trends, degree of collaboration, collaborative coefficient, highly productive and influential authors, most productive and meaningful institutes, most productive countries, most supportive funding agencies, most preferred sources, and so on. A total of 1550 documents were published with 7773 citations. Munene J. C. was a highly productive author who has contributed 16 papers with 89 citations and 14 h-index. The highly cited author was Klapper L, whose contribution was six documents with 319 citations. The highly cited article was Financial Inclusion and development, by Sarma M. & Pais J., has a maximum number of citations (i.e., 154) published in the source 'Journal of international development. The most productive and influential Institute was Makerere University, Uganda, with its contributions of 25 documents. The most productive country was India, with a list of 417 documents. The most preferred source is 'Economic and Political Weekly' with 49 documents. Bill and Melinda Gates Foundation's funding has produced the highest number of publications (i.e., 27 papers). The most Preferred Subjects were economics; Econometrics, and Finance, i.e., 756 papers. In 1550,the published majority of publications were articles (i.e., 1156). The quality of the source is assessed by SJR, SNIP, H-index, and Quartiles. The VOS viewer 1.6.16 was used for keyword co-occurrence and authorship network visualization.

Keywords: *Scientometrics, financial inclusion, financial development, financial service, financial system, VOS viewer*

Introduction

Financial inclusion is the essential aspect for inclusive growth and development of economies in the present scenario. The term 'Financial Inclusion'was first used by the British lexicon (Garg & Agarwal, 2014). Financial inclusion guarantees access to adequate financial products and services, necessary for all sectors of society (Chakrabarty, 2011; Sharma & Pais, 2011). It is one of the yardsticks to measure an economy's growth and human welfare (Sethy, 2018). Financial inclusion can be defined as the provision of banking services that can be approached by the weakest and low-income groups (Dev, 2006). This ensures that individuals and companies refer to the process of obtaining affordable and timely financial products and services (World Bank, 2013; Sankar, 2013; Nanda and Kaur, 2016).

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According to the World Bank, “acceptance or access to a wide range of financial services does not mean or has no bearing on the use of financial services” (Sharma & Kukreya, 2013). The term “financial inclusion” has become increasingly important since the early 2000s and stems from financial performance and its direct link to poverty (Joseph, 2014). It plays a crucial role in removing poverty from the country (Garg & Agarwal, 2014). This can help the person to have access to financial services such as official savings, loans, payments, insurance, remittances, and more. (Bagli & Dutta, 2012). It provides a path for inclusive growth (Garg & Agarwal, 2014; M & Raghunath, 2018).

Today, financial inclusion has become a policy priority in many countries (Sarma & Pais, 2011). It affects central bank policies intended to maintain monetary and financial stability (Mehrotra & Yetman, 2015). Several countries, such as India (Govt. of India 2008) and United Kingdom (2006), as well as international organizations such as the United Nations (2006) and the World Bank (2008, 2009), have prepared groups understanding inclusion and understanding work/committees and to increase its coverage (Dixit & Ghosh, 2013). In many countries around the world, financial inclusion is a tool for broader growth, where all citizens can use income as an economic source to work to improve their financial situation in the future, contributing to the nation's progress (Hameedu, 2014). The importance of an inclusive financial system has been widely recognized in political circles, and financial inclusion has recently become a political priority in many countries (Sharma & Pais, 2011).

Scientometric is an important technique to study the research output of any person, documents, or group of documents and institutions (Bapte&Kherde, 2020). It is one of the most significant measures for assessing scientific production (Chitra &Jeyshankar, 2012). The term “Scientometrics” has been first used as a translation of the Russian term“naukometriya” (a measurement of science) coined by Nalimov and Mulchenko in 1969 (Zhao & Zhao, 2014). Scientometrics developed from the work of leading researchers, including Robert King Merton, Derek J. de Solla Price, and Eugene Garfield (Price, 1963; Garfield, 1972; Merton, 1973, 1976; Garfield, 1979; Serenko et al., 2020).

It provides an overview and maps the scientific knowledge in a specific area by identifying the trends over a particular period by tracing the research findings carried out using mathematical formulae and visualization approaches (Ahmad &Thaheem, 2017; Olawumi& Chan, 2018; Kim & Chen, 2015; Zandi et al., 2019).

In recent years, many researchers have conducted scientific evaluations in various fields. Like, Patil &Surwade (2020) studied the “Corona” as replicated in Scopus during the period from 2010-2019 and indicates significant research activity in the word Corona during the study period, and there is an increase in the documents year by year. Gupta & Dhawan (2020) examined global research in the domain of Quantum Neural Networks (QNN) on metrics from 1990-2019 and concluded that the quantum neural network as a research subject is still in the nascent stage of its

development. Varma et al. (2020) conducted a scientometric review of global research on information literacy and the visually impaired. This study found that visually impaired people need to receive specialized services and tools to enhance their information literacy skills. Gupta et al. (2018) reviewed 3966 global publications on yoga research, as covered in the Scopus database during 2007-16. This study indicated that the scientific literature related to yoga research registered a growth of 7.79% per annum, averaged to mere 10.44 citations per paper in 10 years. Zhao (2017) conducted a scientometric review of BIM research in 2005-2016, and trends of BIM research were identified and visualized. Visakhi et al. (2017) performed a scientometric assessment of global publications output on health tourism research during 2007-16. They revealed that the USA is the top productive country globally in health tourism research. Olijnyk (2014) analyzed a comprehensive view of the information security specialty from different perspectives. This study concluded that among all the countries involved in information security research, the United States and China had atremendous impact. Karpagam (2014) conducted a scientometric analysis based on the Scopus database to evaluate nanobiotechnology research from a different perspective for 2003-2012 and presented a summary of scientometric research in nanobiotechnology. Thus, in this Scientometric study, we have analyzed some quantitative indicators to derive patterns of the research growth and interpret that growth with other factors in the financial inclusion domain.

Scope & Limitation of the Study

The present study was confined to research articles, conference papers, book chapters, reviews, and books published during 2006-2020. This study focused on the scholarly literature directly related to the term'financial inclusion', indexed in the Scopus database. Also, this study was based on a sample of 1550 documents.

Objectives

The present study's primary focus is to examine publication trends in financial inclusion during 15 years from 2006-2020. The following objectives are:

- To study the publication trends with the citation in financial inclusion during 2006-2020;
- To determine out the degree of collaboration (DC) and collaborative coefficient (CC);
- To identify the most productive and influential authors and highly cited publications;
- To study the top most collaborative institutions and productive countries;
- To explore the top ten highly preferred sources for communication of research;
- To examine the top most preferred subject areas working on financial inclusion research;
- To identify the top ten leading funding agencies;
- To study the types of documents.

Methods

Data Source

The purpose of this study is to conduct a scientometric analysis of the publication trends in financial inclusion for the period 2006-2020. The data was selected from the Scopus database for the present study. Scopus is one of the largest abstracting and indexing databases of peer-reviewed literature produced by Elsevier.

Search Strategy

Financial inclusion research data of the world covering the 15 years 2006-2020 was sourced from the Scopus database (http://www.scopus.com). The search keyword used "Financial inclusion." The search string used was "TITLE-ABS-KEY (financial AND inclusion) AND (LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2006)) AND (LIMIT-TO (PUBSTAGE, "final"))." A total of 1550 records were retrieved on October 30, 2020, from global research publications on financial inclusion.

Data Analysis

The data was analyzed to assess the amount of research in different groups, such as year-wise publication trends, degree of collaboration, collaborative coefficient, highly productive and influential authors, most productive and meaningful institutes, most productive countries, most supportive funding agencies, most preferred sources, and so on. The quality of the source is assessed by SJR, SNIP, H-index, and Quartiles. The VOS viewer 1.6.16 was used for keyword co-occurrence and authorship network visualization.

(a) Degree of collaboration (DC)

The degree of collaboration (DC) shows the number of collaborative research articles related to the total number of research papers in the discipline in a given period (Rai et al., 2019). The following formula suggested by Subramanyam (1983) has been used in this study.

$$DC = \frac{Nm}{Nm+Ns}$$

where DC = degree of collaboration

Nm = number of multi-authored research papers published during the year

Ns = number of single-authored papers published during the same year

(b) Collaboration coefficient (CC)

The collaboration coefficient (CC) measures the strength of collaboration among the authors. The following formula suggested by Ajiferuke, Burell, & Tague (1988) has been used.

$$CC = 1 - \{\sum_{j=1}^{k} \left(\frac{1}{\mathrm{j}}\right) \times (\mathrm{Fj})\}/\mathrm{N}$$

Where CC= collaboration coefficient

Fj = the number of j authored research papers

N = total number of research papers published in a year

k = the greatest most significant number of authors per document

Further, the authors have also used graphical mapping software, which is VOS viewer. It is a tool for the visualization of bibliographic networks. It can construct scientific journals, researchers, research organizations, countries, keywords, or terms. In this study, VOS viewer (version 1.6.16) is used for keyword co-occurrence network visualization.

Results and discussion

1. Year-wise growth trends of documents with citations

Table 1 shows a total number of 1550 papers published during 2006-2020 with 7773 citations. From the table, we can say that about 75.75% of the complete publications are contributed in the last five years only because the concept of financial inclusion is more prevalent in the World economy science 2016. There were only three documents in 2006, 14 papers in 2007, 9 papers in 2008, 18 papers in 2009, and 13 papers in 2010, continuous growth of publications is observed during 2011-2020. Since 2010, the G-20 and the World Bank have taken the initiative to increase financial participation in developing countries to reduce poverty in developing and developing countries (GPFI, 2010; Ozili, 2017).

Table 1. Year-wise growth trends of documents with citations

Year	TD	%	TC	ACPD	Year	TD	%	TC	ACPD
2006	3	0.19355	28	9.3333	2014	87	5.61	682	7.84
2007	14	0.90323	143	10.214	2015	94	6.06	633	6.73
2008	9	0.58065	112	12.444	2016	155	10	1048	6.76
2009	18	1.16129	223	12.389	2017	193	12.45	1106	5.73
2010	13	0.83871	110	8.4615	2018	236	15.23	1116	4.73
2011	36	2.32258	424	11.778	2019	318	20.52	593	1.86
2012	37	2.3871	512	13.838	2020	272	17.55	201	0.74
2013	65	4.19355	842	12.954	Total	1550	100	7773	5.01

Note* TD=Total Document, TC=Total Citations, ACPD=Average Citations Per Document

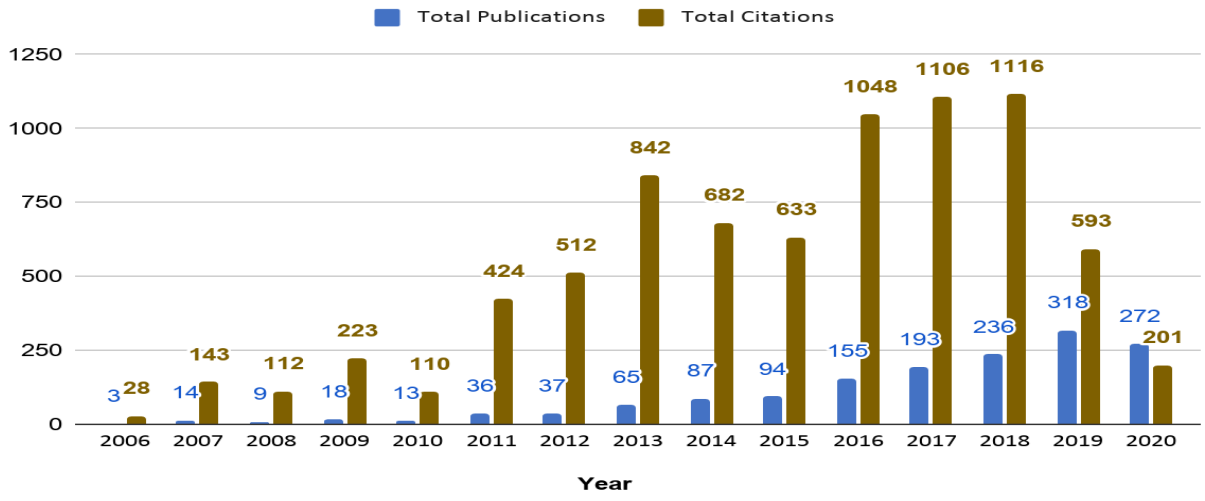

Figure 1. The year-wise growth pattern of financial inclusion research during 2006-2020

2. Degree of Collaboration & Collaborative coefficient

Table 2 shows the degree of collaboration (DC) and collaboration coefficient (CC), which measures collaboration strength. Savanur and Srikanth (2010) highlighted that Collaborative Coefficient (CC) is the measure of collaboration in research that indicates both the mean number of authors per paper and the proportion of multi-authored articles. Table 2 also shows the variation of DC over the years. It is observed that DC has been above 0.5 since 2010, only a dip appears in the year 2011. Table 2 also shows the year wise values of the collaboration coefficient. The importance of the collaboration coefficient lies between 0 and 1, with 0 correspondings to single-authored papers. It can observe from Table 2 that since 2013 joint authorship consisting of 5 and the above number of authors have increased in the number of publications. The collaboration

coefficient was a maximum with a value of 0.49 in the year 2020.The value of the average degree of collaboration and average collaboration coefficient was 0.58 and 0.35, respectively.

Table 2. Degree of collaboration vs. collaborative coefficient

Year	N1	N2	N3	N4	N≥5	DC	CC	Year	N1	N2	N3	N4	N≥5	DC	CC
2006	1	0	0	1	0	0.5	0.38	2014	36	28	17	2	4	0.59	0.35
2007	10	1	2	1	0	0.29	0.18	2015	35	38	12	4	5	0.63	0.36
2008	6	2	1	0	0	0.33	0.19	2016	48	62	29	8	8	0.69	0.40
2009	11	2	3	2	0	0.39	0.25	2017	52	81	36	16	8	0.73	0.43
2010	4	4	2	3	0	0.69	0.43	2018	79	80	41	21	15	0.67	0.40
2011	19	10	4	0	3	0.47	0.28	2019	78	108	72	43	17	0.75	0.46
2012	16	12	9	0	0	0.57	0.32	2020	59	82	73	37	21	0.78	0.49
2013	25	25	12	3	3	0.63	0.37	Total	479	535	313	141	84	**0.58**	**0.35**

Note* N=Number of Authors, DC=Degree of Collaboration, CC=Collaborative Coefficient

3. Most Productive and Influential Authors

In the below-given table 3, the total publications (TD), total citations (TC), and total link strength (TLS) are displayed for highly productive authors vs. highly-cited authors. According to the image of the table, all five highly productive authors are not highly cited authors. Highly productive authors have strong collaboration networks. As a result, they have higher link strengths. Highly productive authors are Munene, JC (16), Makina, D, Ntayi, JM (13) each, and Ghosh S and Okello Candiyabongomin G (11) each. Whatever, highly cited authors are Klapper L (319 citations), Sarma M (172 citations), Demirguc-kunt A, Soederberg S (167 citations) each, and Allen F (166 citations).

Table 3: Most Productive and Influential Authors

Highly Productive Authors					**Vs**	**Highly Cited Authors**				
Authors	**TD**	**TC**	**H-Index**	**TLS**		**Authors**	**TD**	**TC**	**H-index**	**TLS**
Munene J C	16	89	14	38		Klapper L	6	319	26	12
Makina D	13	54	9	31		Sarma M	2	172	6	1
Ntayi J M	13	95	12	2		Demirguc-kunt A	4	167	59	7
Ghosh S	11	96	14	2		Soederberg S	4	167	19	1
Okello Candiyabongomin G	11	70	4	20		Allen F	2	166	43	8

Note* TD=Total Document, TC=Total Citations, TLS=Total Link Strength

3.1 Co-authorship Network Visualizations

To visualize the author's name across publications, a logical strategy was used. Out of the total 2803 authors, while identifying the authors who had a minimum of 3 number of publications, it was found that 139 authors were at the threshold. To visualize the author-graph, only the top authors have been selected. In figure 2, the collaboration network is shown by several clusters represented by different colors. For example, red-colored cluster 1 consists of 14 authors, including Ansong D, Sarma S, Chowa G, etc.; green-colored cluster 2 consists of 12 authors including Anderson R, Razaq L, Ibtisam S, etc.; blue-colored cluster 3 consists of 11 authors, including Guerin I, Kumar S, Servet J M, etc.; yellow-colored cluster 4 consists of 10 authors including Klapper L, Demirguc-Kunt A, Allen F, etc.; purple colored cluster 5 consists of 10 authors including O'Neill J, Satija S, Mehra A, etc. and others colored clusters having less than ten authors.

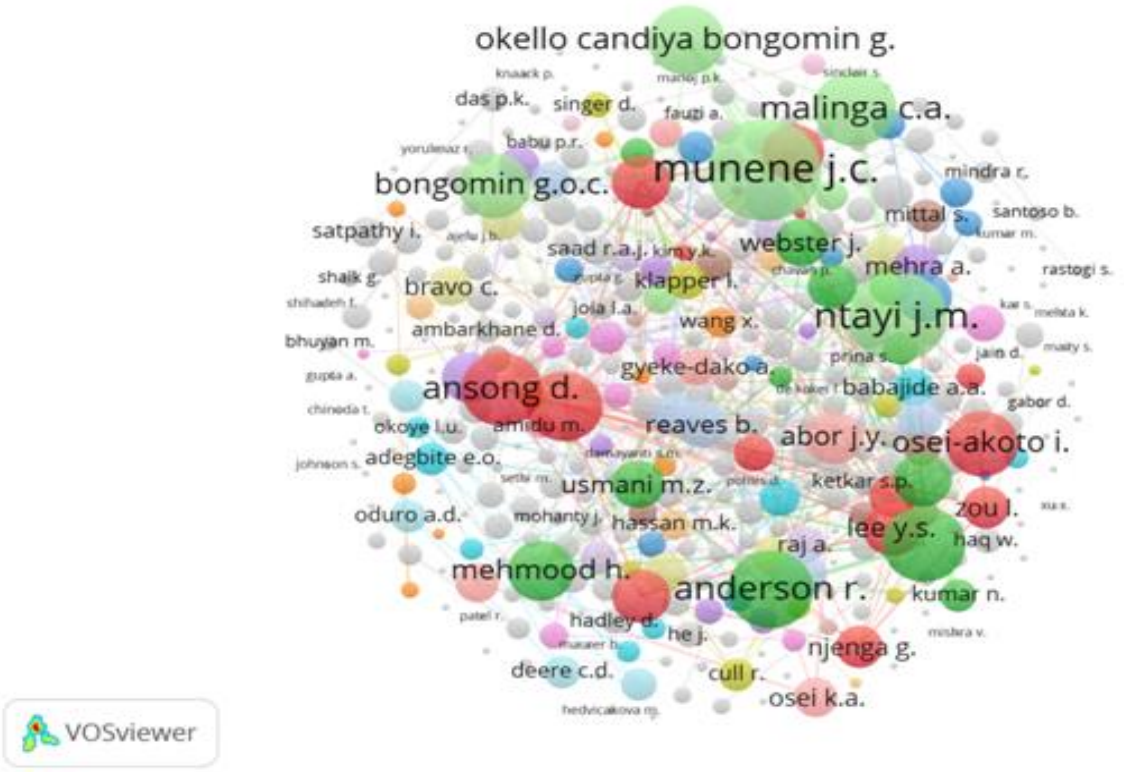

Figure 2. Co-authorship analysis of authors

4. Highly cited documents

Table 4 shows the highly cited papers. From the table, we can say that document "Financial inclusion and development" by Sarma M. & Pais J. has a maximum number of citation (i.e., 154)

which are published in source 'Journal of International Development,' followed by the document "Debtfarestates and the poverty industry: Money, discipline and the surplus population" by Soederberg S. has 127 citations. The table also shows the paper"Financial Inclusion, Gender Dimension, and Economic Impact on Poor Households" by Swamy V. has the minimum number of citations (i.e., 70) in the top ten highly cited documents.

Table 4: Highly cited documents

Authors	Title	Year	Source title	Citations
Sarma M., Pais J.	Financial inclusion and development	2011	Journal of International Development	154
Soederberg S.	Debtfare states and the poverty industry: Money, discipline and the surplus population	2014	Debtfare States and the Poverty Industry: Money, Discipline and the Surplus Population	127
Allen F., Demirguc-Kunt A., Klapper L., Martinez Peria M.S.	The foundations of financial inclusion: Understanding ownership and use of formal accounts	2016	Journal of Financial Intermediation	116
Demirgüç-Kunt A., Klapper L.	Measuring financial inclusion: Explaining variation in the use of financial services across and within countries	2013	Brookings Papers on Economic Activity	105
Maurer B.	Mobile Money: Communication, Consumption, and Change in the Payments Space	2012	Journal of Development Studies	101
Chibba M.	Financial inclusion, poverty reduction, and the millennium development goals	2009	European Journal of Development Research	89
Klapper L., Lusardi A., Panos G.A.	Financial literacy and its consequences: Evidence from Russia during the financial crisis	2013	Journal of Banking and Finance	84
Gabor D., Brooks S.	The digital revolution in financial inclusion: international development in the fintech era	2017	New Political Economy	80
Zins A., Weill L.	The determinants of financial inclusion in Africa	2016	Review of Development Finance	72
Swamy V.	Financial Inclusion, Gender Dimension, and Economic Impact on Poor Households	2014	World Development	70

5. Most Productive and Influential Institutes

Table 5 shows the most productive and influential institutes. In institutes wise distribution of documents out of 1550 papers, 171 papers (i.e., 11.03%) published in the top 10 institutes. Makerere University has published the maximum number of documents, i.e., 25 papers, followed by the University of South Africa, which published 22 papers. The World Bank, USA, has published 20 papers, and Covenant University has published 18 papers. Washington University in St. Louis and the Bank of India has issued a minimum number of documents, i.e., 12 articles in the top ten productive and influential institutes.

Table 5: Most Productive and Influential Institutes

Institute	Document	Country
Makerere University	25	Uganda
University of South Africa	22	South Africa
The World Bank, USA	20	United States
Covenant University	18	Nigeria
Symbiosis International Deemed University	18	India
University of Ghana	17	Ghana
Indian Institute of Management Bangalore	14	India
FundaçãoGetulio Vargas	13	Brazil
Washington University in St. Louis	12	United States
Bank of India	12	India

6. Most Productive Countries

In-country wise distribution of documents out of 1550 papers, 1186 papers (i.e., 76.52%) were published in the top 10 countries. India secured the top place with the list of 417 papers, followed by the United States, which has 229 articles to its credit, the United Kingdom has 163 papers, South Africa has 71 papers, Nigeria has 61 papers in its credit, Australia has 59 papers, China has 51 papers, France has 46 papers, Indonesia has 45 papers. In contrast, Malaysia has 44 papers in its credit, which are in the last position in the top 10 highly productive countries. In the UK, the government established a “Fundraising Task Force” in 2005 to monitor financial adjustment (Sarma & Pais, 2011). Through VOSviewer software version 1.6.16, network visualizations of most collaborative countries with their publications left side by the bar graph shown in the figure.

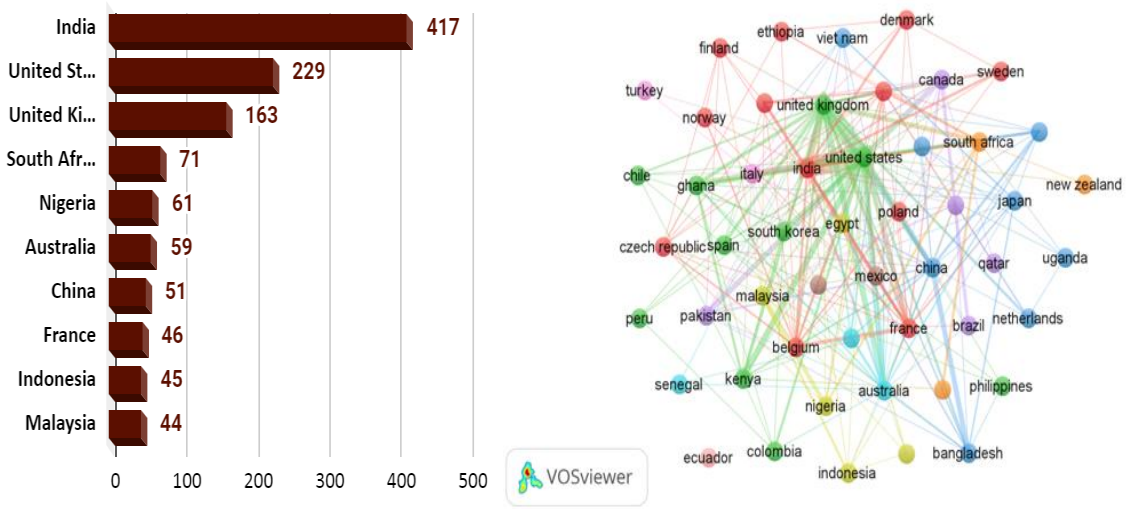

Figure 3. Most Productive Countries

7. Most Preferred Source

Table 7 shows the most preferred sources publishing documents directly related to Financial Inclusion. The most Contributory source is 'Economic and Political Weekly' with 49 documents followed by 'Enterprise Development and Microfinance' and 'International Journal of Social Economics' with 23 papers. The table also shows that Source 'ACM International Conference Proceeding Series' with 13 documents has the last position in the top 10 highly preferred sources. Apart from total publications, the table also mentions other indicators such as CiteScore, SJR, SNIP, H-index, and Quartile.

Table 7: Most Preferred Source

Source	TP	CiteScore	SJR	SNIP	H-index	Q
Economic and Political Weekly	49	0.6	0.298	0.644	48	2
Enterprise Development and Microfinance	23	1	0.402	0.604	15	2
International Journal of Social Economics	23	1.2	0.278	0.64	37	2
International Journal of Applied Business and Economic Research	22	0.1	0.143	0.367	18	4
Indian Journal of Finance	18	1.2	0.2	0.831	8	4
International Journal of Scientific and Technology Research	17	0.2	0.123	0.091	15	3
Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics	16	1.9	0.427	0.776	356	2

Sustainability Switzerland	16	3.2	0.581	1.165	68	2
World Development	16	7.1	2.223	2.88	164	1
ACM International Conference Proceeding Series	13	0.8	0.2	0.333	109	-

Note* CiteScore, SJR, and SNIP were calculated as per 2019, H-index and Q=Quartile (Scimago, January18, 2021)

8. Most Supportive Funding Agencies

Figure 4 shows the most supportive funding agencies acknowledged by the published documents funded for Financial Inclusion Research. The table also indicates that the Bill and Melinda Gates Foundation's funding has produced the highest number of publications (i.e., 27 documents), followed by the World Bank Group and the Economic and Social Research Council. The Bill and Melinda Gates Foundation has focused on financial inclusion to advance women's economic empowerment and drive progress on gender equality (Hendriks, 2019).

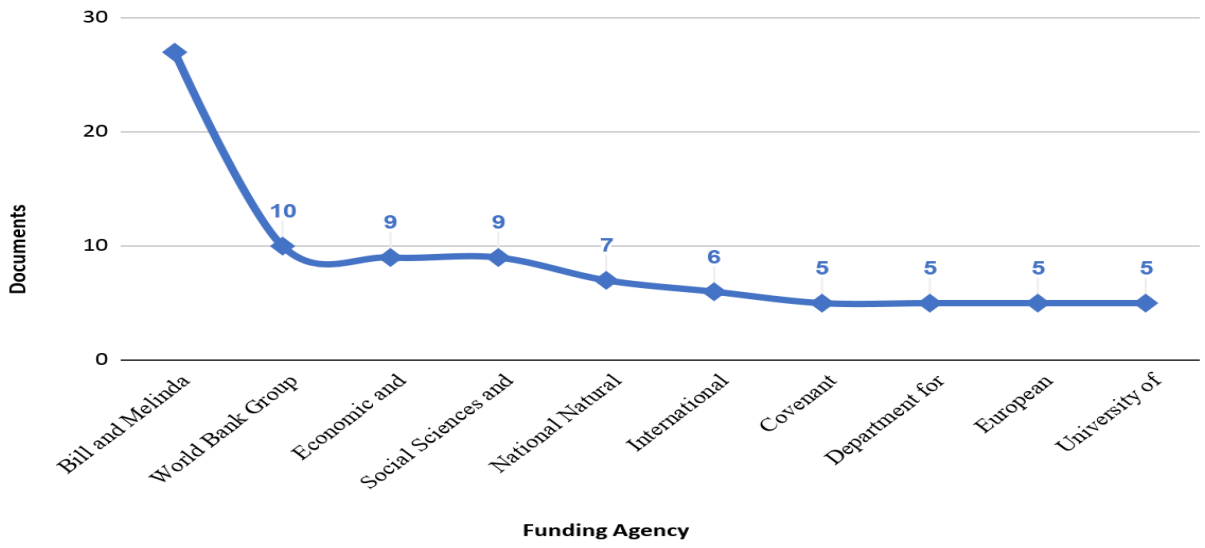

Figure 4. Most Supportive Funding Agencies

9. Most Preferred Subjects

Figure 5 shows the subject-wise categorization of the documents retrieved. Subject-wise analysis indicates that a maximum number of contributions were in economics, Econometrics and Finance, i.e., 756 documents, followed by Social Science with 695 papers, Business, Management and Accounting With 549 papers, Computer Science with 213 articles. The Document contributions in Energy and Mathematics are significantly less, i.e., 40 documents.

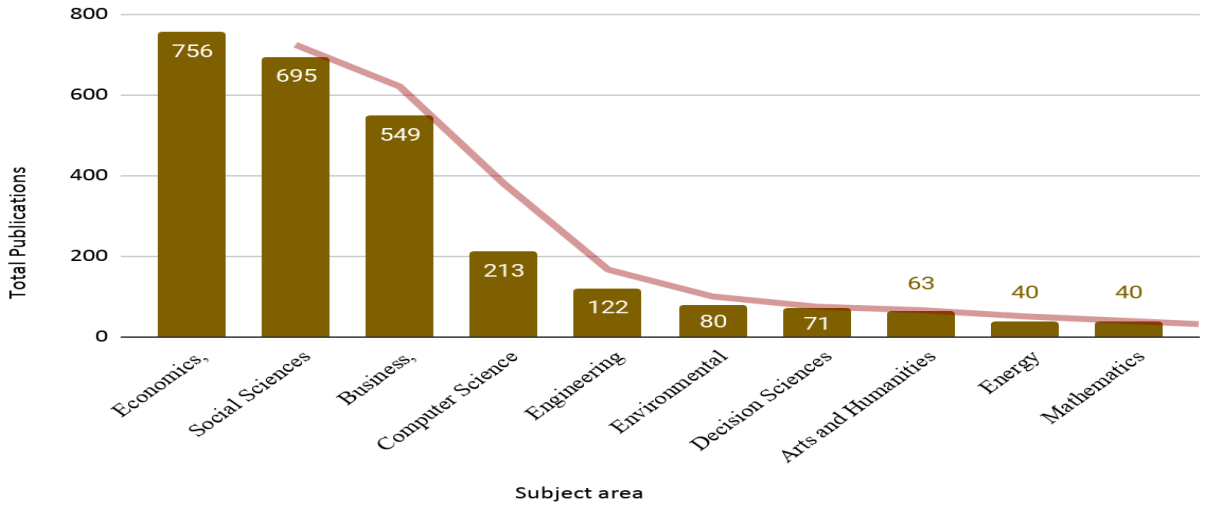

Figure 5. Most Preferred Subjects

10. Types of Documents

Figure 6 shows that document type-wise distribution, majority of documents i.e.1156 documents (i.e., 74.58%) are published under the category of article, 139 papers are published under the category of Conference Paper, 137 papers have published under the category of Book Chapter, 59 papers are published under the category of Review, 28 papers are published under the category of Book, and significantly fewer documents are published under the category of Data Paper has single occurrence.

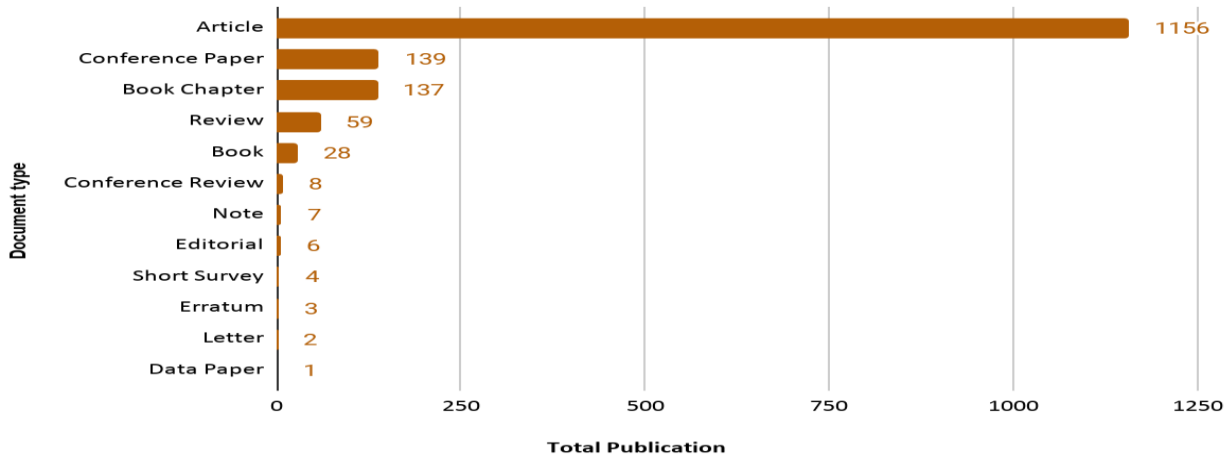

Figure 6. Types of Documents

11. Keyword co-occurrence network visualization

Keywords present the core idea of the academic article (Mukherjee, 2020). Keywords summarize literature and describe the focus of a study (Hong et al., 2019). The authors have used VOS viewer software for keyword co-occurrence network visualization. In VOSviewer, Link is a connection between two documents. A positive numerical value represents it. A higher value of link means a more robust link. Total link strength attributes indicate the number of connections of a document with other documents. There are a total of 4168 keywords available in the data. The co-occurrence threshold of keywords was set to 5, which led to getting 327 keywords in VOS viewer. In Figure 7, all the keywords are divided into the following eight clusters, indicated in red, green, blue, yellow, purple, pink, orange, and brown, to represent the subdomains of the concept' financial inclusion'. Cluster 1 contains 67 keywords. It is characterized by the red color that deals with ideas like economic development (146 links, 340 total link strength), economic growth (125 links, 298 total link strength), financial development (83 links, 173 total link strength). Cluster 2 contains 51 keywords. It is represented by a green color that deals with concepts like financial inclusions (158 links, 779 total link strength), financial service (93 links, 266 total link strength), finance (232 links, 914 total link strength). Cluster 3 contains 50 keywords. It is represented by a blue color that deals with concepts like financial services (200 links, 701 total link strength), financial system (178 links, 569 total link strength), microfinance (206 links, 667 total link strength). Cluster 4 contains 48 keywords. It is represented by a yellow color that deals with concepts like mobile money (132 links, 332 total link strength), financial inclusion (321 links, 2706 total link strength), electronic money (90 links, 242 total link strength). Cluster 5 contains 42 keywords. It is represented by a purple color that deals with concepts like economics (104 links, 273 total link strength), financial literacy (90 links, 204 total link strength), poverty (149 links, 363 total link strength). Cluster 6 contains 35 keywords. Pink color represents it that deals with concepts like institutional framework (72 links, 125 total link strength), rural finance (79 links, 155 total link strength), Africa (108 links, 211 total link strength). Cluster 7 contains 28 keywords. Orange color represents it that deals with concepts like developing the world (144 links, 353 total link strength), fintech (75 links, 157 total link strength), mobile phone (61 links, 102 total link strength). Cluster 8 contains only six keywords. It is represented by a brown color that deals with concepts like Kenya (71 links, 137 total link strength), mobile communication (45 links, 91 total link strength), mobile financial services (30 links, 39 total link strength).

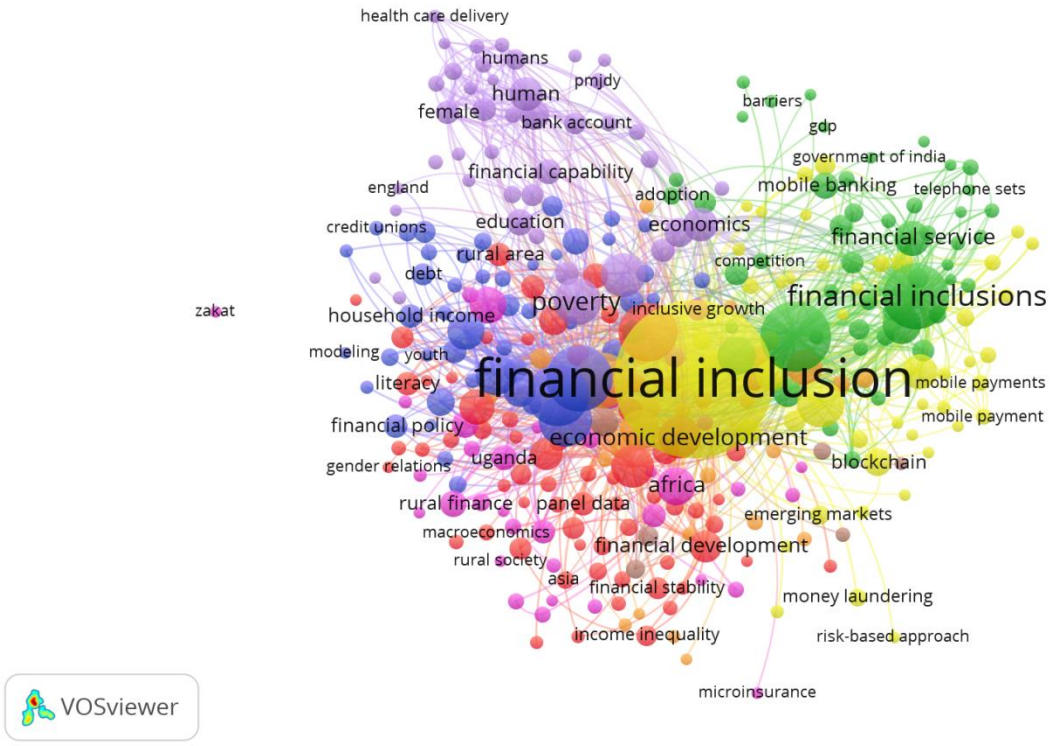

Figure 7. Keyword co-occurrence network visualization

Major Findings

The essential findings are as follows:

- The highest 20.52% of documents were published in 2019, and the lowest 0.19% of papers were published in the year 2006. But the highest average citations per paper (i.e., 13.84) were in the year 2012, and the lowest average citations per document (i.e., 0.74) were in the year 2020.
- In 2020 CC is found to be 0.49. It indicates that financial inclusion documents have more jointly authored publications than single-authored compared to the previous year.
- In Author wise analysis, the Highest no. of documents, i.e.,16, published by Munene, J.C. and the paper"Financial inclusion and development" by Sarma M. & Pais J., has the maximum number of citations, i.e.,154.
- The institution-wise distribution indicates that Makerere University contributed 25 documents, which are the highest. In comparison, Washington University in St. Louis and the Bank of India has published a minimum number of documents, i.e., 12 papers in the top ten productive and influential institutes.
- Country-wise analysis indicates that India tops the list with 417 (i.e., 26.90%), whereas Malaysia has 44 documents to its credit in the last position in the top 10 highly productive countries.

- Study shows that the most preferred source is 'Economic and Political Weekly.'
- Subject-wise analysis indicates that the maximum number of contributions was in economics, econometrics, and finance. And the minimum number of contributions was in the area of Energy and Mathematics in the top ten preferred subjects.
- The study also shows that Bill and Melinda Gates Foundation has funded the highest number of research publications.
- Document type-wise distribution indicates that the maximum number of documents (i.e.,74.58%) are published under the category of article, and only 1 document is published under the category of data paper.

Conclusion

This study aimed to perform a scientometric analysis of research productivity in financial inclusion from 2006-2020. It indicates an increase in trends in the documents year by year and found that the maximum number of documents were published in 2019. It is also observed that single authors mostly researched in the starting years, but later joint authorship has taken over in terms of the number of publications. It was noticed that most of the researchers preferred publishing as journal articles (74.58%), which are the premier medium of information dissemination. Further, it is observed that most of the financial inclusion research produced by India. India's government has set up a committee on financial inclusion under C Rangarajan's chairmanship to suggest ways and means to extend the financial sector's reach to cover excluded groups by minimizing the barriers to access financial services (Dev, 2006). It is identified that Bill and Melinda Gates Foundation has funded the highest number of research publications. These findings reveal the importance of scientometric methods to understand global research trends of research on financial inclusion.

Financial inclusion plays a crucial role in building a strong foundation of a country's financial infrastructure, facilitating its economic growth and development (Sharma, 2016). It protects the poor from the spurious money lenders (Garg & Agarwal, 2014). Financial inclusion is an effort to provide financial services to low-income people and disadvantaged sections of society, including payment, savings, credit, etc., at an affordable cost. Thus, this study will be helpful for the researchers, policy decision-makers, and academics. A promising publication trend is shown in the study period. This study provided practical information to researchers who look for reviews with potentially high citations. It would also help researchers conduct better research that eventually could lead to more publications in this field.

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