



***Financial Inclusion and Corporate social Responsibility:
Bibliometric analyses review over the period (2004-2023)***

Bouchouk Nadjla ^{1*} , Pr. Chenikhar Abdelwahab ²

¹ University of Oum El Bouaghi, COFIFAS Laboratory, (Algeria),
bouchouk.nadjla@univ-oeb.dz

² University of Oum El Bouaghi, COFIFAS Laboratory, (Algeria),
achenikhar@yahoo.fr

Received: 20/10/2023

Accepted: 28/12/2023

Published: 31/12/2023

Abstract:

This study aims to analyze the scientific literature review within the research field related to financial inclusion and corporate social responsibility, by conducting a bibliometric analysis review that covered all the research papers over the period from 2004 to 2023 using Vosviewer software. The results of this study was discussed according to set of indicators: Keywords, Journals, Authors, countries and institutions. The finding shows that there is a few studies have examined the relationship between financial inclusion and corporate social responsibility, it have considered as a new subject area that attractive the attention of research's in the recent years in view of the importance of corporate social responsibility in promoting financial inclusion.

Keywords: Financial Inclusion; Corporate Social Responsibility; Bibliometric analysis; Scopus database; Vosviewer.

Jel Classification Codes: G21, M14.

* **Corresponding author:** Bouchouk Nadjla

1. Introduction

In recent years, financial inclusion has become the most attractive topic in the scientific research filed of macroeconomic, finance and banking sector and has received much more attention of researches especially after being highlighted by the G20 as an important key to achieve sustainable development goals by 2030 (Global partnership for financial inclusion GFPI, 2020). The World Bank defined financial inclusion as the accessibility and the usage of appropriate and well-regulated financial services from adults to meet their needs and improving their live. (World Bank, 2021). According to (Sarma, 2012) financial inclusion is to ensure the access, availability and usage of formal financial services for all the economic segments. Financial inclusion also means that formal financial services must be available for all the groups of society, including bank accounts, transactions, payments, credit and insurance (Arab Monetary Fund, 2021). Similarly, (Alliance for financial inclusion, 2010) defined financial inclusion as a state in which all peoples including disabled, poor, rural and excluded can use and access to quality financial services at a convenient way and affordable costs. By definition, financial inclusion focus on three principle dimensions, access and usage of financial services and quality of products and services. The access of financial services, can be measured by the number of bank accounts number of transaction and electronic payments (World Bank, 2012).The usage dimension, of formal financial services measured by the physical geographic points such as commercial bank branches, automated teller machines (Bank For International Settlements, 2017), the quality dimension, means that formal financial services meet consumer needs measured by safety, convenience, financial literacy, consumer protection (World Bank, 2012). (Caamara & Tuesta, 2014) Added barriers dimension concerning the obstacles that prevent unbanked or excluded individuals from using formal financial services.

The research field of corporate social responsibility have been studied for more than 30 years (Nan, Tung-Boon, Lisong, Yongxin, & Hang, 2020). The European Commission define CSR as the responsibility of enterprises for their influence on society (European Commission, 2011), it aims to provide business ethics (Khan & Tariq, 2017) and leading nations to improving corporate governance, transparency and accountability to bank stakeholders (MD. khurshid & Mohamed Nazrul, 2021). According to The World Business, council for sustainable development CSR means that business must contributed to economic development and ameliorating the standard of living of the workforce and their families (Gautam & Singh, 2010).

Consequently, CSR consisted of three aspects economic responsibility, ethical-legal and charitable, economic responsibility refers to attain maximum profitability from any entrepreneurship business then legal responsibility refers to the set of laws and regulations representing in a legal framework that help firms achieving their economic goals. Ethical responsibility related to the principles of the members of the society where business operated and the last aspect consist of charitable activities (Duc Hong, Loan Thi-Hong, Luong, & Chi, 2020). The different dimensions of CSR enable firms to be more profitability, productivity, lower risks and better financial performance also promote the sustainable development for the society that increase public trust in financial system (Zheng, Harun Ur Rashid, Abu Bakkar, Wei, & Syed Zahid, 2022).

A few research papers have examined the relationship between financial inclusion and corporate social responsibility. According to (Kuldeep, Madhvendra, & Jitendra, 2021) there is a significant and positive correlation between FI and CSR, the study concluded that corporate social responsibility practices has an effective impact on improving financial inclusion, by providing education, clean environment and social welfare for rural and low income segments .Another article was attempted the association between FI and CSR (MD. khurshid & Mohamed Nazrul, 2021) this study found

that CSR activities improve financial inclusion because it have a significant positive impact on increasing number of branches and agent outlets . (Bhattacharyya & Khan, 2020) Research paper showed that there is a negatively moderate impact of the financial inclusion on CSR also indicated a positive association between the CSR and firm performance. Moreover the research of (Ambawani, Dwi Mimpi, & Leon, 2021) have studied the impact of CSR on financial performance, financial inclusion and financial stability in 31 banks of Indonesia, the results showed that CSR have a significant positive impact on FI in the banking sector of Indonesia by increasing accessibility, penetration and use of financial services.

This research paper aims to analyze quantitatively the publications that associate financial inclusion with corporate social responsibility over the period (2004-2023) through Scopus database by using Vosviewer software to examine a bibliometric analysis and mapping. By answering the following:

- What is the Number of publication related to financial inclusion and corporate social responsibility by year?
- What are the most relevant Journals and authors in financial inclusion and CSR research?
- What are the most productive countries in financial inclusion and CSR research area?
- What are the research Keywords related to financial inclusion and CSR?

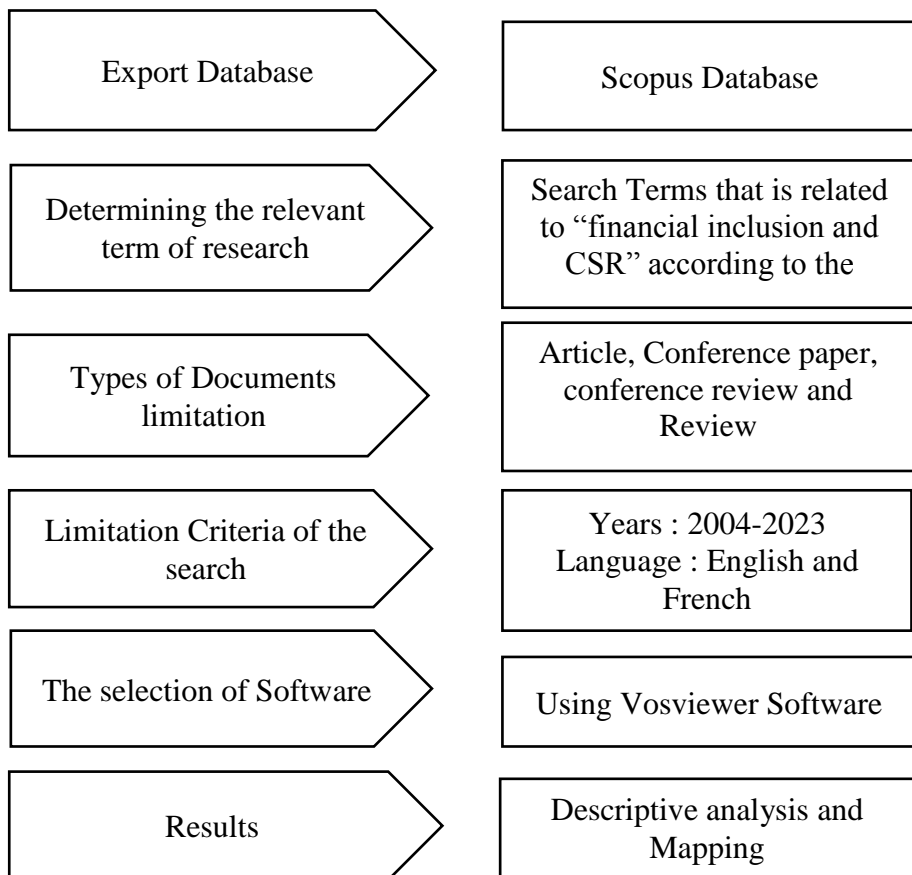
2. Methodology and Materials

This study based on bibliometric analysis methodology, that enable researches to cover all the publications related to a given topic or field through a detailed analysis, qualitative and quantitative results (Vargas, Espinoza-Mina, Lopez Alvarez, & Navarro Espinosa, 2022).

This methodology used to identify and analyzing the most advanced research papers, key trends and area related to the terms of

financial inclusion And Corporate Social Responsibility (CSR). Scopus database was selected because it include the fast range of publications and the most comprehensive database. The study sample was composed of 257 documents covering the period from 2004 to 2023. A process was established to achieve the study purpose, by selecting an appropriate database, determining the relevant term of research, limitation criteria of the research, selecting software for the bibliometric analysis and mapping and analyzing the results of the study, as it is in the following detailed figure.

Fig.1. Methodology Framework for the bibliometric analysis



Source: Author’s creation.

Concerning the determining of the relevant term of research, search string were structured for the Scopus database, which is: TITLE-ABS-KEY (("Financial Inclusion" OR "Banking Sector") AND ("corporate social responsibility")). For the type of documents was limited to Article; Conference paper; Review and Review paper using the following string: (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE , "cr")). For the author limitation criteria years and language was limited to (LIMIT-TO (LANGUAGE, "English"), the selected years was from 2004 to 2023. The results was discussed in two parts: descriptive analysis refers to the analysis of Scopus database output through: Documents by year; Documents type ; the top institutions; subject area; the most productive authors; the most productive journals and mapping according to: Keywords by co-occurrence; most cited source; co-authorship by countries; citation countries.

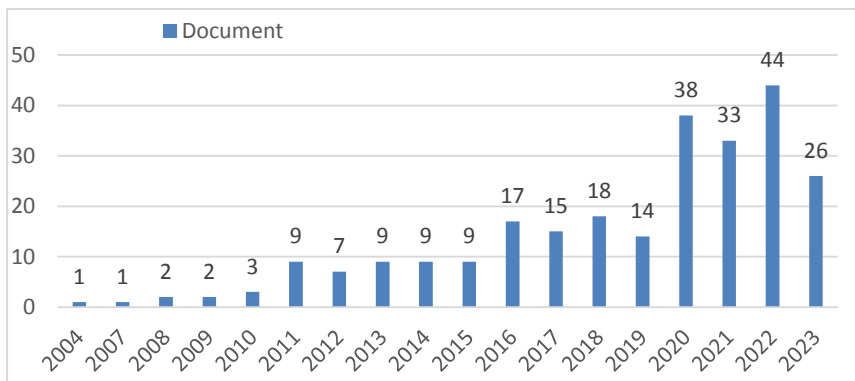
3. Results and discussion

The results of this study was discussed according to the research questions.

3.1 Descriptive analysis

The study aims to analyze the scientific literature review within the research field related to financial inclusion and corporate social responsibility. To address the first research question: What is the distribution of publications related to financial inclusion and corporate social responsibility by year? .Figures (02) represent a graph of literature based on database exported from Scopus that shows the increasing number from 2004 to 2023. The higher number of documents was contributed in 2022 with 44 documents were published, 33 publications in 2021 and currently the database indicated 26 research papers in this field was published in last months.

Fig.2. Number of Documents by year during the period spanning 2004 to 2023



Source: Based on Scopus bibliometric data base.

The following table summarizes the type of published documents consisting of journal articles, conference paper, reviews and conference review. Journal articles represent the most of type documents (90%) of the total documents published, followed by conference paper (5%), Review (4%) and conference review (1%).

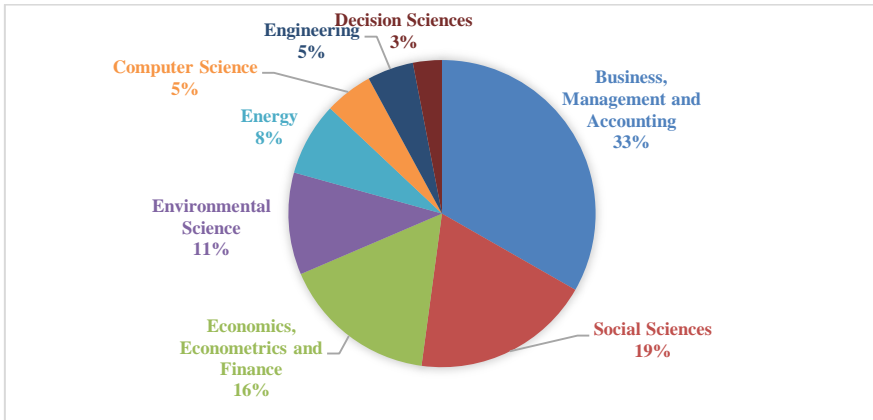
Table 1. Types of documents published over the period (2004-2023)

Documents type	Total publication	Percentage (%)
Article	232	90
Conference paper	13	5
Review	10	4
Conference Review	2	1
Total	257	100

Source: Based on Scopus bibliometric database.

The most research documents was attached in 4 principle field area: the majority of papers based on Business, management and accounting with 164 research papers (33%) from the total publication, followed by Social science 93 (19%), Economics, Econometrics and Finance 81 (16%).

Fig.3.The most research field based publications

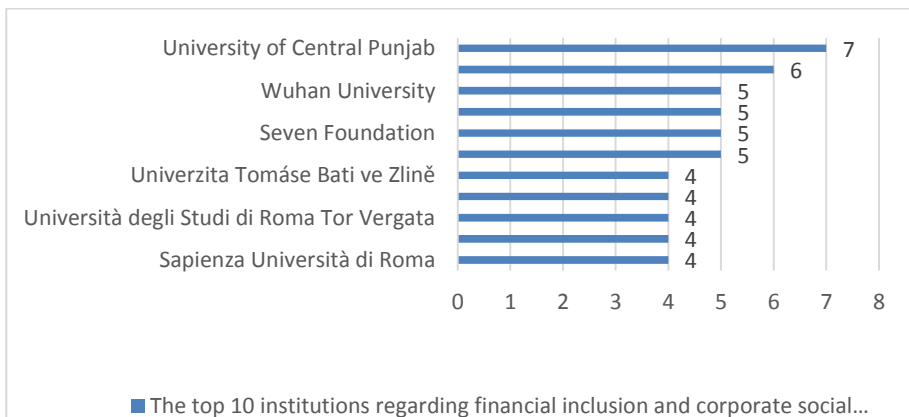


Source: Based on Scopus bibliometric database.

3.2 Productivity of institutions

This sections analyze the most 10 productive institutions through the number of publications related to the field of research during the period (2004-2023), according the Scopus database.

Fig.4.The top 10 institutions regarding financial inclusion and corporate social responsibility



Source: Based on Scopus Bibliometric database.

The most productivity institutions in the research field is the University of Central Punjab of India with seven number of published research paper followed by the COMSATS University Islamabad 6 publications.

3.3. Evaluation of the most productive Journal and authors:

As it was mentioned, there is 257 research papers listed in this analysis published in various journals. To evaluate the most productive journals in the research field, related to the second question: What are the most relevant Journals and authors in financial inclusion and CSR research? The selected analysis criteria was total publication, Total citation, cited score of the journal, the most cited journal, times cited and the SJR index.

Elsevier built two indexes to evaluate and test citation, cite core citation and SJR. Cite score citation used to test many scholarly publications through available a set of simple and reproducible journal metrics that cover all the Scopus database journals. This value was created for articles published in three earlier calendar years according to citation counts in a specified year, divided by the number of papers in the Scopus database in those three previous years. SJR index (SCImago Journal Rank Indicator) used to measure the academic impact of academic journals, it represent both the number of quotes a newspapers provides and the significant or popularity of the newspapers where such quotations occur. (Alnohoud, Saat, Ramakrishnan, & Al Hanandeh, 2021).

The table (02) shows that the most productive journal in the period (2004-2023), was Sustainability Switzerland with a total number of publication 46272, and 237475 citation and had the higher number of times cited 36 with 5.1 cite score and SJR index 0.664(2022). Followed by International Journal of Bank Marketing with total 239 publications and 1178 citations, with 7.4 cited core and 1.088 SJR index. While Social Responsibility journal have 288 total

number of publications and 1545 citations with cite score 5.4 and 0.817 SJR index. In addition to Corporate

Social Responsibility and Environmental Management with a total publication 576 and a total citation 7908, and had the higher cited score 13.7 with 2.134 SJR index.

Table 2. The 10 highly productive journal in financial inclusion and corporate social responsibility in the period (2004-2023)

Journal	TC	TP	Cite Score	The most cited Article	Times cited	SJR(2022)
Sustainability	237475	46272	5.1	Level of Activity Changes Increases the Fatigue Life of the Porous Magnesium Scaffold, as Observed in Dynamic Immersion Tests, over Time	36	0.664
International Journal of Bank Marketing	1778	239	7.4	Advances in mobile financial services: a review of the literature and future research directions	5	1.088
Social Responsibility Journal	1545	288	5.4	Women board members' impact on ESG disclosure with environment and social dimensions: evidence from the European banking sector	9	0.817
Corporate Social Responsibility and Environmental Management	7908	576	13.7	CSR and organizational performance: The role of pro-environmental behavior and personal values	13	2.134
Journal of Business Ethics	10115	1107	9.1	CEO Foreign Experience and Green Innovation: Evidence from China	33	2.590
Corporate Ownership and Control	139 (2015)	818 (2015)	0.2 (2015)	Corporate governance and risk disclosure: Evidence from Saudi Arabia	37	0.148
International Journal of Disclosure and Governance	299	86	3.5	Do women on boards enhance firm performance? Evidence from top Indian companies	2	0.486
Management Decision	3117	505	6.2	A single-valued neutrosophic decision framework for the assessment of sustainable transport investment projects based on discrimination measure	10	1.345
Banks and Bank Systems	429	227	1.9	Perspectives by green financial instruments – a case study in the Hungarian banking sector during COVID-19	1	0.226
Corporate Governance (Bingley)	2280	268	8.5	Environmental, social and governance impact on financial performance: evidence from the Levant countries	8	1.349

Note: TC: Total citation TP: Total publication

Source: Based on Scopus Bibliometric database.

Concerning the most productive authors, the table below indicated the most productive author according to: Number of articles published, total citation, institution, country and the H index. Scholz Miklas is the most productive author with the higher number of citation 8432, from Lunds University in Sweden with the highest H index (43), whose first article was in 1997. Followed by Ahmad Naveed with total citations 1043, from the University of Central Punjab in Pakistan, and Naheem Mohammed Ahmad from the Mayfair Compliance in Germany with 392 citation. In addition to Sial Muhammad Safdar from COMSATS University Islamabad, he is the most recent author whose first publication was in 2018 with 1351 citations.

Table 3. The most productive authors

AU	A	TC	Institution	C	1 st A	Last A	H Index
Scholz, Miklas	327	8432	Lunds Universitet	Sweden	1997	2023	43
Ahmad, Naveed	45	1,043	University of Central Punjab	Pakistan	2014	2023	22
Naheem, Mohammed Ahmad	29	392	Mayfair Compliance	Germany	2015	2023	15
Sial, Muhammad Safdar	80	1,351	COMSATS University Islamabad	Pakistan	2018	2023	22
Fatma, Mobin	39	1,096	Prince Sultan University	Saudi Arabia	2014	2023	19
Bolaños, Edmundo Lizarzaburu	36	142	Universidad ESAN	Peru	2011	2023	7
Calabrese, Armando	48	1,606	Università degli Studi di Roma "Tor Vergata"	Italy	2004	2023	24
Lentner, Csaba	40	229	University of Public Service	Hungary	2007	2023	10
Liapis, Konstantinos J.	28	213	Panteion University of Social and	Greece	2010	2023	7

			Political Sciences				
Ullah, Zia	27	486	University of Lahore	Pakistan	2018	2023	12

Note: Au: Author; A: Number of Article published; TC: Total citation; C: Country; 1st A: The year of first publication, Last A: Last year of last publication; H index: Hirst index score in the research area.

Source: Based on Scopus bibliometric database.

3.3. Evaluation of the most productive countries

Table (04) shows the most productive journal according to total publication and total citation based on Vosviewer bibliometric analysis output (the fourth question). Pakistan is the most productive country with total publications 26 and 629 citations, followed by China with total publication also 26 and 611 citations. While India ranked the third one with 23 publications and 262 citations. The United Kingdom have the highest citations with total 1234 and 20 publications.

Table 4. The most productive Countries

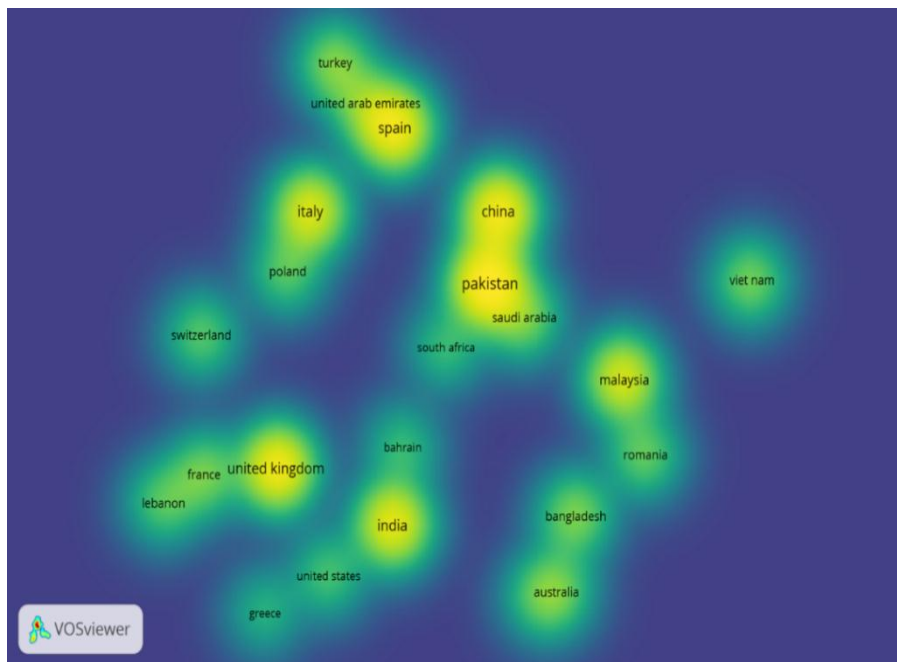
Countries	TP	TC
Pakistan	26	629
China	26	611
India	23	262
United Kingdom	20	1234
Malaysia	10	186
Saudi Arabia	6	157
South Africa	9	111
United Arab Emirates	9	125
Romania	9	176
Italy	21	736
Spain	25	521
France	10	164

Source: Vosviewer Bibliometric analysis output.

As The following Visualization shows the most productive countries in the topic area,where the more concentrated yellow color

spaces, represent the most countries conducting research related to financial inclusion and corporate social responsibility. These countries are: Pakistan, china, India, United Kingdom, Spain, United Arab Emirate, Malaysia and Italy.

Fig.5. Co-authorship by countries



Source: Vosviewer Output.

3.3. Analysis of Keywords co-occurrence

The research papers published over the period 2004-2023 contains 49 keywords with total 423links. A co-occurrence analysis was selected from the Vosviewer software to manipulate a network map of the most keywords used based on Scopus bibliometric database (the last question of the study). In the following table, the most 20 keywords was selected based on the total link strength, occurrences and links. The “Corporate social responsibility “was the most frequently keyword utilized with 123 link strength and 147 occurrences and 47 links. The second was “Banking” with 57 total link strength and 59 occurrences and 35 links, followed by: “Banking

Sector” with 115 strength, 44 occurrences and 35 links. Sustainability with 21 strength, 23 occurrences, 29 links and Corporate Government with 20 strength, 23 occurrences and 26 links. Financial performance with 17 strength, 17 occurrence and 24 links, Financial Inclusion with 12 total link strength and 14 occurrences and 13 links.

Table 5. The top 20 keywords related to financial inclusion and CSR

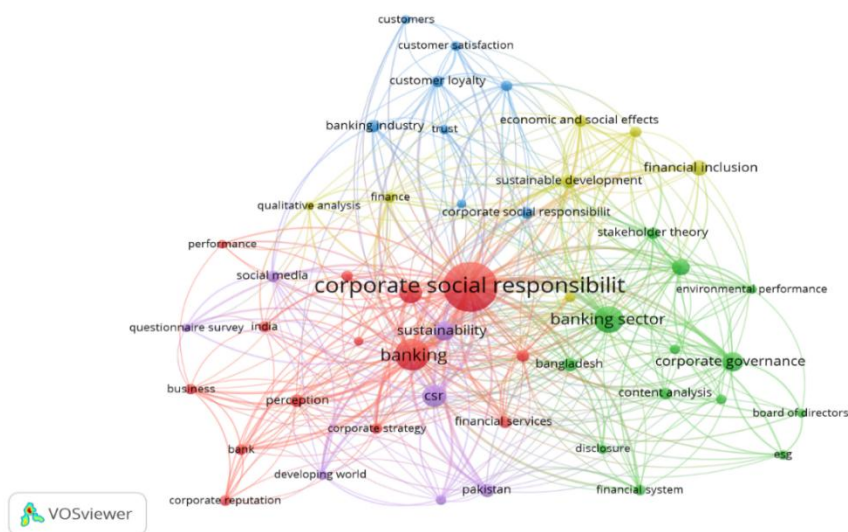
Keywords	Occurrence	Total link strength	Clusters	Links
Corporate social responsibility	147	123.00	1	47
Banking				
Banking sector	59	115.00	1	45
CSR	44	40.00	2	35
Banks	30	26.00	5	33
Sustainability	26	23.00	1	14
Corporate governance	23	21.00	5	29
Financial performance	23	20.00	3	26
Financial Inclusion	17	17.00	2	24
Sustainable Development	14	12.00	4	13
Economic and social effects	12	11.00	4	24
Social responsibility	9	9.00	4	22
Banking industry	9	9.00	1	23
Stakeholders	10	9.00	3	11
Business	6	7.00	5	16
Financial system	7	7.00	1	15
India	7	7.00	2	15
Commercial banks	7	7.00	1	13
Islamic Banks	6	6.00	2	10
	5	5.00	3	11

Source: Vosviewer Output.

The Visualization map indicate five principle clusters (Fig 06). The largest cluster was the red one, refers to “Corporate Social responsibility” with 47 keywords as it mentioned above in the table (05), followed by second cluster the green one represent “banking

sector”, and the third cluster was “corporate governance”. The fourth cluster refers the small yellow one “financial inclusion”, in this cluster the items appearing is the most frequently related to the research field consist of “Corporate social responsibility; economic and social effects; sustainable development; customer loyalty; financial performance; banking; financial services and corporate governance”. The last cluster purple one that represent sustainability.

Fig.6. Network visualization of all keywords by co-occurrence



Source: Vosviewer Output.

4. Conclusion

The aim of this research is to analyze the evolution of the research filed and reviewed all the research papers related to financial inclusion and corporate social responsibility (CSR). Through a bibliometric analysis of 257 research papers collected from the Scopus database during the period (2004-2023), and using Vosviewer software for the visualization map of the terms related to the topic. This being the first bibliometric analysis that linked financial inclusion and CSR.

This analysis focused on the number of documents published, the document type, the subject area, the most productive journal and author, the most productive countries and the keywords co-occurrence. The results showed an increasing number of documents published recently related the research field especially in 2022 with 44 documents and 26 in 2023. The majority of published papers was a journal article (90%) based on Business, management and accounting with 164 research papers (33%) from the total publications.

The most productive journal was Sustainable Switzerland with a total number of publication 46272, and 237475 citation and had the higher number of times cited 36 with 5.1 cite score and SJR index 0.664(2022). While the most productive author was Scholz Miklas is the most productive author with the higher number of citation 8432, from Lunds University in Sweden with the highest H index (43), whose first article was in 1997.

The countries evolution analysis showed that Pakistan generated the highest number of research papers on financial inclusion and corporate social responsibility with 26 articles and 629 citations.

The most significant limitation of this study was that the results limited only to the Scopus database that does not contains all the research papers related to financial inclusion and CSR, because there is others databases that probably included more research papers such as google scholar, dimensions and web of science. Which thus help future researchers to expand further on this research field and focus on current trends of the topic.

5. Bibliography List:

Alliance for financial inclusion. (2010). Financial inclusion measurement for regulators.

Alnohoud, I., Saat, M., Ramakrishnan, S., & Al Hanandeh, A. (2021). Corporate Social Responsibility and Profitability Research in the 2000s: A Bibliometric Analysis. International Journal of Innovation, Creativity and Change, 15(03).

Ambawani, R., Dwi Mimpri, R., & Leon, F. (2021). Influence of corporate social responsibility (CSR) on Financial performance, Financial

- Inclusion, and Financial Stability Banking in Indonesia. Latest Research in Humanities and Social Science, 04(10), pp. 80-88.*
- Arab Monetary Fund. (2021). Introduction of financial inclusion for the Arab region initiative (FIARI).*
- Bank For International Settlements. (2017). Measuring Financial Inclusion: a Multidimensional Index.*
- Bhattacharyya, A., & Khan, M. (2020). Financial Inclusion, corporate social responsibility and firm performance-analysis of interactive relationship-. Meditari Accountancy Re, 31(2), pp. 417-440. doi:<https://doi.org/10.1108/MEDAR-12-2020-1121>*
- Caamara, N., & Tuesta, D. (2014). Measuring Financial inclusion: A Multidimensional index, 9. BBVA Research Workin Paper.*
- Duc Hong, V., Loan Thi-Hong, V., Luong, T.-H., & Chi, M. (2020). Financial Inclusion, corporate social responsibility and customer loyalty in the banking sector in Vietnam. Journal of International Studies, 13(04), p. 4. doi:10.14254/2071-8330.2020/13-4/1*
- European Commission. (2011). Corporate Social Responsibility: a new definition, a new agenda for action.*
- Gautam, R., & Singh, A. (2010). Corporate Social Responsibility Practices in India: A Study of Top 500 Companies. Global Business and Management Research: An International Journal, 2(1), pp. 41-56.*
- Global partnership for financial inclusion GFPI. (2020). G20 Financial Inclusion Action Plan.*
- Khan, B., & Tariq, R. (2017). Corporate Social responsibility Impact on Financial performance of Islamic and Conventional Banks: Evidence from Asian Countries. Finance and Accounting, 08(07).*
- Kuldeep, s., Madhvendra, M., & Jitendra, Y. (2021). Corporate Social Responsibility and Financial inclusion: Evaluating the moderating effect of income. Managerial and Decision Economics, 42(5). doi:<https://doi.org/10.1002/mde.3306>*
- MD. khurshid, A., & Mohamed Nazrul, I. (2021). How does corporate social responsibility impact the financial inclusion? An econometric study on Banking Sector in Bangladesh. Economics and Finance, 13(1). doi:<https://doi.org/10.1016/j.ribaf.2020.101314>*
- Nan, Y., Tung-Boon, K., Lisong, H., Yongxin, L., & Hang, Y. (2020). A bibliometric analysis of corporate responsibility in sustainable development. ELSEVIER: Journal of cleaner production, 272. doi:<https://doi.org/10.1016/j.jclepro.2020.122679>*

Sarma, M. (2012, July). *Index of financial inclusion: a measure of financial sector inclusiveness*. *Money, Trade, Finance and development*, p. 5.

Vargas, A., Espinoza-Mina, M., Lopez Alvarez, D., & Navarro Espinosa, J. (2022). *Bibliometroc Software: The most Commonly Used in Research*. *CEUR WS*, pp. 47-65.

World Bank. (2012). *Financial Inclusion Stratgies Reference Framework*.

World Bank. (2021). *Financial inclusion, Women, and building Back Better*.

Zheng, Y., Harun Ur Rashid, M., Abu Bakkar, S., Wei, W., & Syed Zahid, H. (2022). *Corporate social responsibility Disclosure and Firm's Productivity: Evidence from the Banking Industry in Bangladesh*. *Sustainability*, 14(10). doi:<https://doi.org/10.3390/su14106237>