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Mapping the Knowledge Landscape of Mineral Funds: A Bibliometric Analysis Utilizing R and VOSviewer

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Abstract
Mineral sectors have magnifying effects on a country's economic activities, and there is no doubt about their negligence over the extracted regions regarding socio-economic development(as suggested by the resource curse hypothesis), which contributes significantly to fulfilling the financial purse for its developmental goals and aspirations. A country striving to become a 'viswagurus' (a significant player in the global arena) and a developed country by 2047, as stated by the head of state of India, cannot be accomplished without focusing on the backwards regions where inequalities exist. Mining areas are being neglected as a result of the skewed distribution of mining earnings towards the development of non-mining regions, and hence the concept of the District Mineral Foundation (DMF) Fund, based on the Mineral fund, is the outcome of the product of imbalanced regional growth and its programmed to mitigate the imbalance in development in terms of socioeconomic and other disparities. This article discusses the findings, which relate to the most productive sources, authors, and journals belonging to the developed world, and there is an uptick in the developing world in this area of study. The Recent surge in annual scientific production shows us that interest in this field has been on the rise, and the introduction of DMF funds in India makes society curious to know about its achievements. The study discusses the future scope of mineral-related revenue/royalties.

Keywords: Mineral Fund, District Mineral Foundation Fund (DMF Fund), Mining and Financing.

Introduction
A country's mineral resources are vital for its growth and self-sufficiency, and we cannot deny that when a country strives to pursue the vision of becoming a developed country by 2047(Zhou et al., 2023). On many occasions, it is noticed that the growth of mineral-rich areas or provinces is often ranked lower in the Socio-Economic indicators, (*India's Mining Reforms Ignore Mining-Affected Communities*, n.d.) . To address that issue, the Ministry of Mines of GoI the Government of India (GoI) developed the DMF (District Mineral Foundation) Fund to cater to the needs of and augment the growth trajectory of these resource-prone areas in India. The DMF

Fund is the outcome of India's legislative amendment to the Mines and Minerals (Development and Regulation) Act (MMDR) 2015. The amendments introduced section 9(B) of the MMDR Act, which incorporates provisions that outline the creation of the District Mineral Foundation (DMF) as a non-profit entity. The primary purpose behind establishing the DMF Fund is to channel mineral-related activities' benefits to the welfare of affected communities and areas (Revised PMKKKY Guidelines Ministry of Mines, n.d.).The concept of an MF in India is like an old wine in a new bottle, as a similar funding pattern already exists all over the world, and the introduction of this to Indian prospects does not make us unique. Some of the few examples are the Western Australian Community Development Fund and Community Development Agreements (CDAs) in Australia, (O'Faircheallaigh, 2013) and the Social Development Fund (SDF) in Peru, the Alberta Community Partnership Program in Canada (Parlee, 2015), resource funds or sovereign wealth funds (Wills et al., 2016) However, what makes a difference is the creation of extra-budgetary support for the mineral-affected regions through the specialised MF.
After the introduction of the PMKKKY (Pradhan Mantri Khanij Kshetra Kalyan Yojana) in 2015, which takes the route for the allocation of MF accrued funds in the mining-affected districts to cater to the backwardness of these marginally downtrodden and vulnerable regions, (Revised PMKKKY Guidelines Ministry of Mines, n.d.), As a result of the authority granted by section 20A of the MMDR Act, 1957, the Federal Government acted in the best interests of the nation and instructed the respective provincial Governments to include the PMKKKY within the regulations they established for the District Mineral Foundation (DMF), with the obligation to execute the Scheme (PMKKKY) accordingly. The collected funds under the given regulation will be spent according to the ratio that the Ministry of Mines decided for the areas of Priority (11 different concerned areas) and other priorities (4 different regions) (Sahoo & Biswal, 2024). Currently, PMKKKY mandates allocating a minimum of 70% of the funds towards high-priority sectors such as drinking water supply, environmental preservation, pollution control, healthcare, education, women and children's welfare, elderly and disabled welfare, skill development, sanitation, housing, agriculture, and animal husbandry. The remaining 30% of the fund will be allocated to several other priority sectors, including physical infrastructure, irrigation, electricity, watershed development, and environmental quality enhancement in mining districts (*National DMF Portal*, n.d.; Revised PMKKKY Guidelines Ministry of Mines, n.d.) . The following diagram summarises whole.

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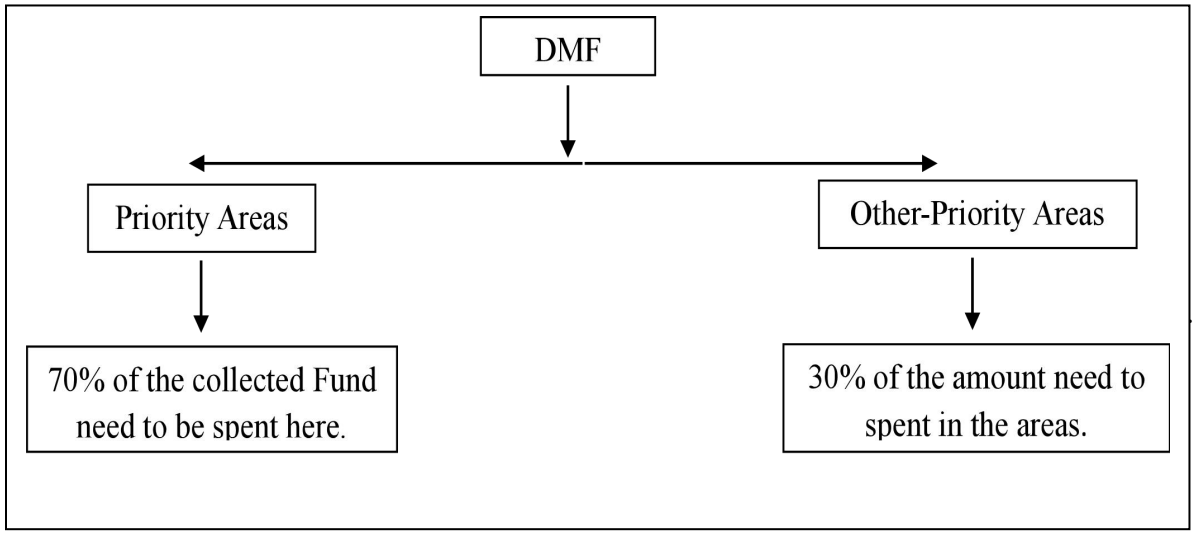


. Of India (https://dmfindia.mines.gov.in)

The article is segmented into five sections, with the first section addressing the literature pertinent to the examination of the Resource Curse and its advantages. The second section delineates the process for selecting data pertinent to the bibliometric analysis, thereafter addressing worldwide practices related to the PRISMA Model (Moher et al., 2010; S. Sahoo et al., 2024).The third section delineates the descriptive data, pertinent sources, annual scientific output, theme results pertaining to the field of research, contributions of leading authors, and notable papers, among other aspects. The penultimate section addresses the principal contributions and prospective developments for the Mineral Fund. The final section of the article succinctly addressed all pertinent questions.

We want to explore the following Research questions

RQ.1: What is the current publication trend in the field of Mineral Fund across the Globe?
RQ.2: Which countries and institutions are most active in this research field?
RQ.3: Which are the most influential journals in this field?
RQ.4: Who are the most influential authors, and what is the authorship pattern of worldwide research output?
RQ.5: Which areas of the research topic require more attention from researchers?

Literature Review

Mining activities are vital for the country's growth story, and no developing country is an exception to this. The heavy dependence on the extraction industries truly signifies the above statements, (Association, 2021).Although the mining industry helps create opportunities for local communities, it comes at the cost of various negative externalities, and the resource curse hypothesis supports this (Badeeb et al., 2017; Ploeg, 2011; J. Sachs & Warner, 1995). It is not uncommon that the influence of natural resources on governance is significantly contingent upon the type of resource and the quality of institutions.For instance, Renewable resources constitute a boon for governance, whereas non-renewable resources constitute a governance plague, serving

as a double-edged sword (Cai et al., 2024) . This is also stated by the poor governance and transparency concerns in the mining-affected regions (Lujala & Narh, 2020) . Dutch Disease is a specific instance of the more extensive resource curse idea (Asiamah et al., 2022) . A resource boom (e.g., oil, gas, minerals) induces a reallocation of labour and capital towards the burgeoning sector, resulting in real exchange rate appreciation, contraction of traditional export sectors (such as manufacturing)(Nülle & Davis, 2018).

Resource-abundant nations in Africa initially possessed more earnings than their non-resource-abundant counterparts in the 1960s; but, by 2011, their economic statuses had converged at a similarly impoverished level (Lundstøl, 2022) .Revenues from natural resources have inadequately facilitated local economic diversification due to the centralised budgetary system and insufficient institutional coherence, hindering regions from developing post-extractive economies(Oneț & Alexandru, 2023).

However, the resource is not always a curse, as it comes with blessings if the resource-rich countries manage their factors affecting them within a good arena (Stevens, 2003) . Abundance fortifies institutions. When correlating reliance with resource abundance, they are unique and must be addressed independently; dependence is not external, it is endogenous and influenced by policy and institutions and lastly, resource-abundant nations can achieve accelerated growth if their institutions are robust(Brunnschweiler, 2008). The resource blessing hypothesis works well in the long term for top resource-abundant countries rather than in the short term, where effects are weak and heterogeneous(Ben-Salha et al., 2021)

The resource curse is not an absolute principle, and its outcomes are significantly influenced by Institutional quality, policy environment, resource governance, and investment management. Countries with effective governance can transform resource richness into an advantage (Daw, 2025; Havranek et al., 2016) . According to (Davis, 1995) A selected indicator, such as a proportion of mineral income to GDP, is more likely to benefit economic growth than its curse. Furthermore, A study utilising 95 prefecture-level cities as a sample examined the resource curse, employing the ratio of extractive industry employees to local employment as a metric for resource dependence. Experimental evidence revealed no substantial negative correlation between resource abundance and economic growth (Fang et al., 2011) .The research presents compelling evidence that large-scale mining can enhance local welfare via market mechanisms, particularly when there is a concerted effort to promote local sourcing and employment. It contests the deterministic perspective of the resource curse by emphasizing the significance of backward linkages in fostering local prosperity, even in historically impoverished areas (Aragón & Rud, 2011).

From the environmental aspects, it establishes that natural resource rents, financial development, and urbanisation are significant determinants of CO_2 emissions in certain countries. Their effects are non-linear and asymmetric, exhibiting greater consequences at specific quantile levels(Huang et al., 2021).

To reduce the burden of negative externalities, the Union Government of India developed the basic idea of the DMF (District Mineral Foundation) Fund in 2015. The DMF Fund is not a new concept to the world, but it is being used under different names in different parts of the world, such as Foundation, Trust, and Fund (Wall & Pelon, 2011) .Whether we talk about Community development Funds, such as the Mining Community Development Scheme / Royalties for Regions (R4R) (Argent et al., 2023) and the Alberta Community Partnership Program in Canada (Parlee, 2015) or Social and Environmental Responsibility Initiatives by the Rio Tinto Community Investment Fund (Harvey & Brereton, 2005) and the Newmont Community Investment Fund or others, these are nothing but some of the few names of a similar concept of DMF Fund found worldwide.

Mineral Funding is a mechanism created in India by the Mines and Minerals (Development and Regulation) Amendment Act of 2015 (*Annexure_I_PMKKKY_Guidelines_2015*, n.d.) which is DMF. This fund aims to support individuals and regions impacted by mining activity and its main objective of the DMF is to tackle the socioeconomic issues encountered by individuals residing in the mining-affected areas(*About DMF*, n.d.). This involves enhancing their quality of life through healthcare, education, infrastructure development, and sustainable livelihood options. Payments from miners or mining firms finance the Specialised MF (*About DMF/PMKKKY*, n.d.). Part of the royalty paid by miners to the state government for extracting minerals is designated for the DMF. Every district where mining activities take place has its own District Mineral Foundation. The governance structure typically comprises representatives from the government, mining firms, and local communities to ensure the transparent and efficient use of funds (Revised PMKKKY Guidelines, Ministry of Mines, n.d.).

Although the introduction of mineral-related royalties dedicated for the local community is not devoid of mismanagement, corruption, and opacity, it hinders the utilisation of local revenue. Chiefs frequently misappropriate cash for personal gain, devoid of legal accountability. District Assemblies encounter political patronage and inadequate budget administration, resulting in resource wastage(Standing, 2014).

Research Methodology and Data Collection

3.1 Research Method

Our study utilised the Scopus database, which is recognised as the most extensive database globally (Burnham, 2006) . This database was chosen due to its all-around coverage and ease of access. The concept of mineral funds is searched to broaden the scope of research in the ongoing field of District Mineral Foundation Funds and the low-level literature available in the field concerned. Hence, we narrowed down our study **to Mineral Fund instead of DMF Fund** to see the ongoing developments in the related fields. To analyse the data related to our area of interest, we employed R Studio. R Studio was selected for its powerful data analysis capabilities, which allowed us to effectively process and interpret the vast amount of information in the Scopus database. (Büyükkidik, 2022) . The analysis part was carried out using the R-Studio, a new package that enables a comprehensive bibliometric analysis by utilising specific bibliometric and scientometric quantitative research methods. R is a highly potent and adaptable statistical software environment offering an open-source involvement pathway. It is a comprehensive

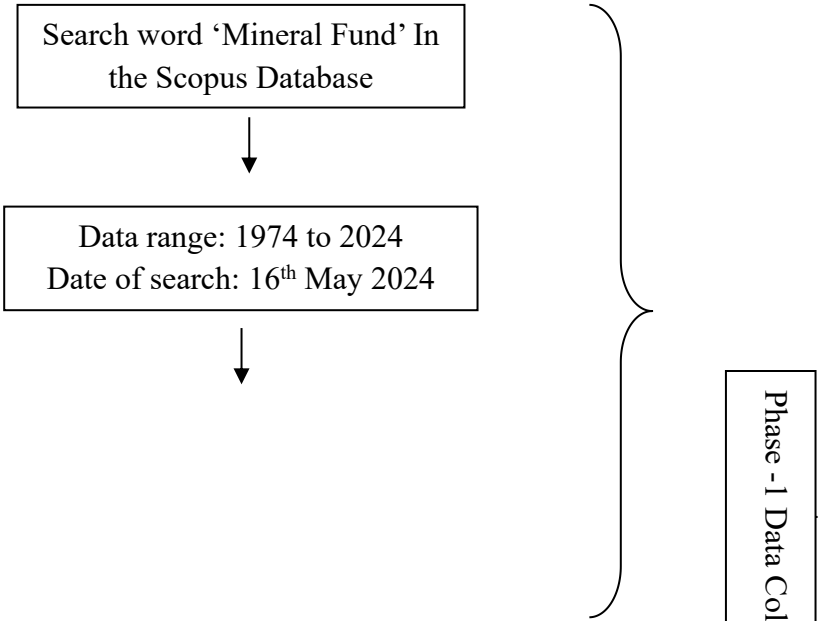
software program set for data processing, computation, and visual representation. Specifically, bibliometrics can be integrated with other pertinent software products.

A bibliometric analysis, a quantitative method for evaluating academic literature by examining bibliographies to describe, assess, and track published research, (Donthu et al., 2021)was utilised to study trends in the Mineral fund field. The analytical goal was to analyse publications, citations, sources of information, and other relevant factors. Each bibliometric method serves distinct research inquiries, with science mapping being prevalent. The procedure for executing the bibliometric analysis encompassed data gathering, succeeded by descriptive and bibliometric analysis at various stages.

3.2 Data Collection

The methodology aspect of the study is bifurcated into two parts. In the preliminary stage, the necessary data for the research is collected, and the search strategy is formulated. The project entails performing bibliometric research utilising the Scopus Core Collection on May 16, 2024. The phrase Mineral fund (without Bullion mark to broaden the search perview) is employed to query the database's search title, and the resultant papers constitute the dataset (as to avoid low data for analysis as we employ the word restriction to Mineral Funds). A total of 758 documents are identified across all publication categories. When the survey is confined to the domains of Business, Economics, and Social Science, 214 documents are identified. The study intends to analyse 214 publications released from 1974 until 2024. The last fifty years were selected due to the predominance of records from these times. Scopus data encompasses comprehensive information for each article, including author, document type, category, keywords, publication year, publishers, affiliated institutions, countries/regions, and indexes.

In the second part of the study, all texts designated as "Record Content: Full Record and Cited References" were downloaded in Bibtex format by utilizing the "Export Records to Bibtex File" option from the 214 documents found in the survey. Three distinct software applications are employed to generate, visualize, and analyze bibliometric networks from this metadata set. The referenced programs are VOSviewer (version 1.6.18) and Bibliometrics (version R. 4.2.2). The R Studio software is employed to analyze the extracted data for the Co-occurrence Network and Co-authorship Network, concentrating on Trend Topics, Collaboration World Map, and Thematic Map.



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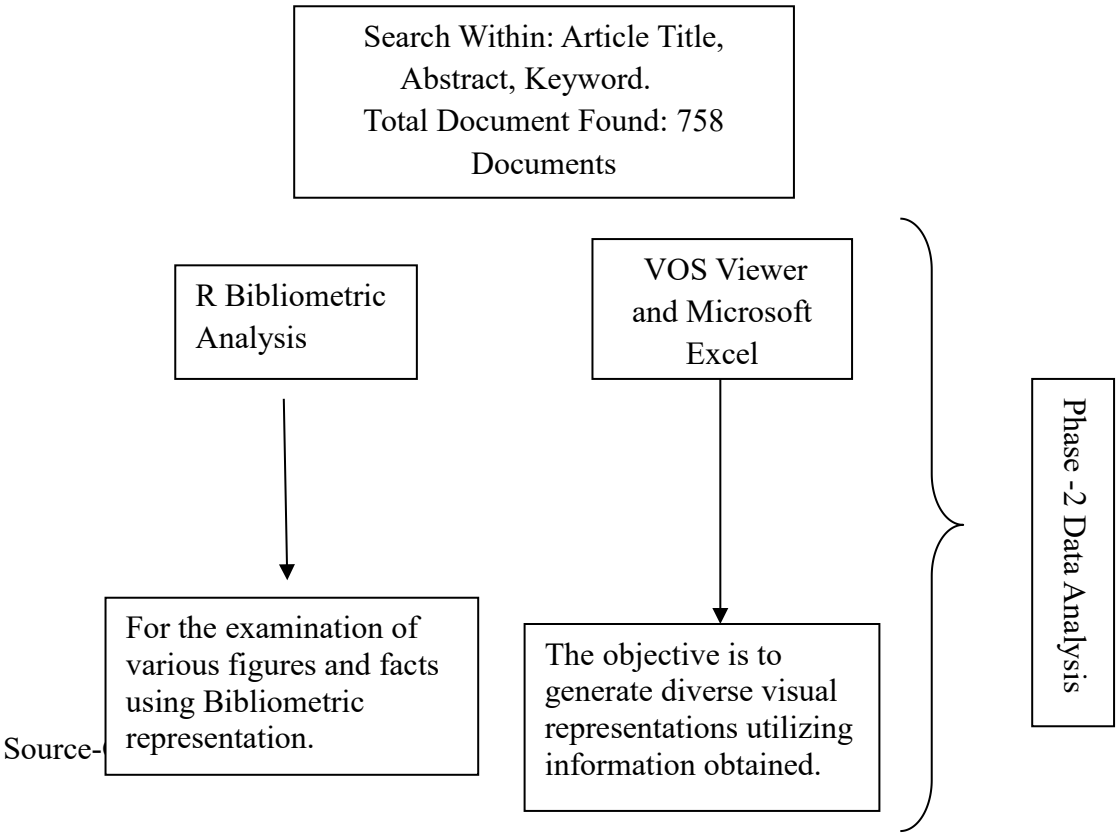

Findings

This segment of the research analyzes and elucidates the strength of connections, co-occurrence, temporal evolution, centrality, density levels of keywords, and the periods during which they garnered the most citations. Countries exhibiting the highest rates of academic collaboration and publication are assessed according to diverse criteria. The essay examines authors with the highest number of publications and the relationships among them. Mineral Fund papers are evaluated according to citation counts, whereas the most prolific journals are scored based on publication volume.

4.1 Main Information about the DATA

A Brief Information

Table-1

tion	**Results**
Timespan	1974:2024
Sources (Journals, Books, etc)	157
Documents	214
Document Average Age	10.5
Average citations per doc	8.618
Authors	439

Single-authored docs	101
Keywords Plus (ID)	938
Author's Keywords (DE)	621

In our search for the term "Mineral Fund" in the Scopus database for the 'TITLE-ABS-KEY' section, we identified 758 documents. From 1974 to May 2024, these documents provide significant insights into the Mineral Fund, and 738 of these documents, which account for approximately 98.93 per cent of the total, were published within the last 50 years. These findings underscore the extensive research and discussion surrounding the Mineral Fund, highlighting its importance in the field of mineral resources. Although the significant contributions in this field are related to earth and planetary science, when we restrict the subject's area of study to Social science, Economics, Econometrics, Finance, Business, Management, and Accounting, We have identified approximately 214 documents that are relevant to these fields. This represents more than 20% of the search documents in the database, which is a substantial quantity for analysis purposes. The sources in our search results encompass a variety of mediums such as journals, books, articles, and more, specifically focusing on number 157. According to Table 1, a total of 214 papers were published in 157 publications by 439 authors during the years 1974 and 2024. The mean number of publications each year is 10.5, whereas the average number of citations received per document is 8.618. There are 101 documents with only one author, 938 papers with additional keywords, and 621 documents with author-specific keywords.

Most Relevant Sources

Academic journals are the primary means of sharing scientific knowledge and are valuable resources in all scientific fields, (Wuni et al., 2019) . During the analysis of the data collected after limiting our study to TITLE-ABS-KEY (mineral AND fund) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (SUBJAREA, "SOCI") OR (LIMIT-TO (SUBJAREA, "BUSI")) OR (LIMIT-TO (SUBJAREA, "ECON")) AND INCLUDE ((PUBYEAR "yearFrom=1974&yearTo=2024")) one can notice that Top 10 Most Relevant Sources(MRS) are Resources Policy, Mineral economics, Minerals and energy raw material report, Australian journal of agriculture and resource economics, Extractive industry and society International political economic series, Marine policy, Australian journal of public administration, Development and Change and Economic papers.

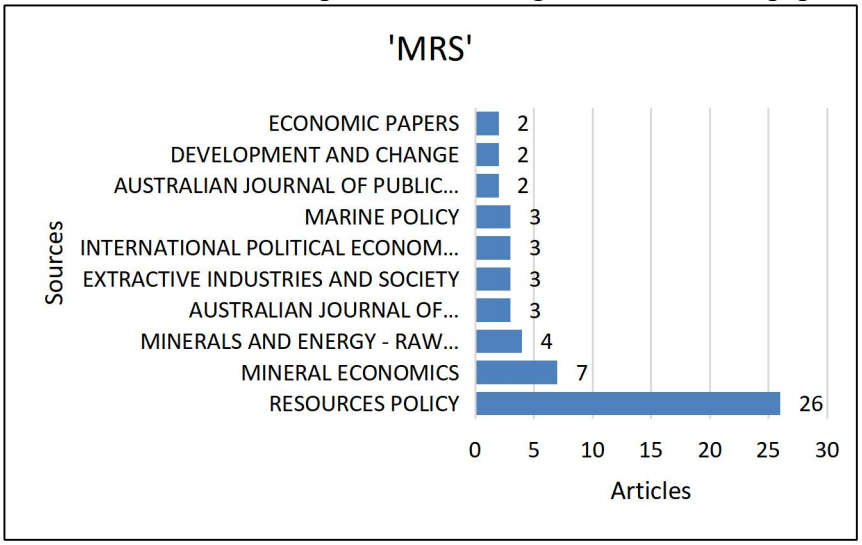

Figure-1 Most Sources

The h-index is

advantageous since it is easy to calculate and considers both the number and significance of a researcher's publications. These favourable characteristics attracted the attention of some of the most significant journals. While certain variations are already in use, the h-index nonetheless [illegible] substantial in the field of study.(Alonso et al., 2009)The journal Resources Policy, which has the highest number of contributions—26 articles given in the Mineral Fund (MF)—is published by Elsevier Ltd. It has the second highest H index of 114 and is also the SSCI journal for the ECON field if we search it in WOS (Web of Science) in the top 10 journals for MF. Mineral Economics from the Springer Verlag publication contributes around -7 articles in the MF field and stands out as the second highest for the searched criteria, and it lies with Tri-annual publications. Marine Policy from Elsevier Ltd has the highest H index of 123 and is also the SSCI journal for international relations and environment with 12 annual publications. Development and Change is another frequently published journal with a high H index of more than 100.

Table-2

Significant sources for MF and their indexation

Scopus Quarter	SSCI/SCI/ ESCI/ESI	H-Index	Country	Issues/Year
Q1	SSCI/ESI	114	England	4
Q2	ESCI	23	Germany	3
Q3	-	15	UK	-
Q2	SSCI	90	Australia	4
Q2	SSCI/ESI	52	England	4
Q3	-	-	England	-
Q1	SSCI/ESI	123	England	12
Q1	SSCI/ESI	53	Australia	4
Q1	SSCI	106	England	6
Q2	ESCI	25	Australia	4

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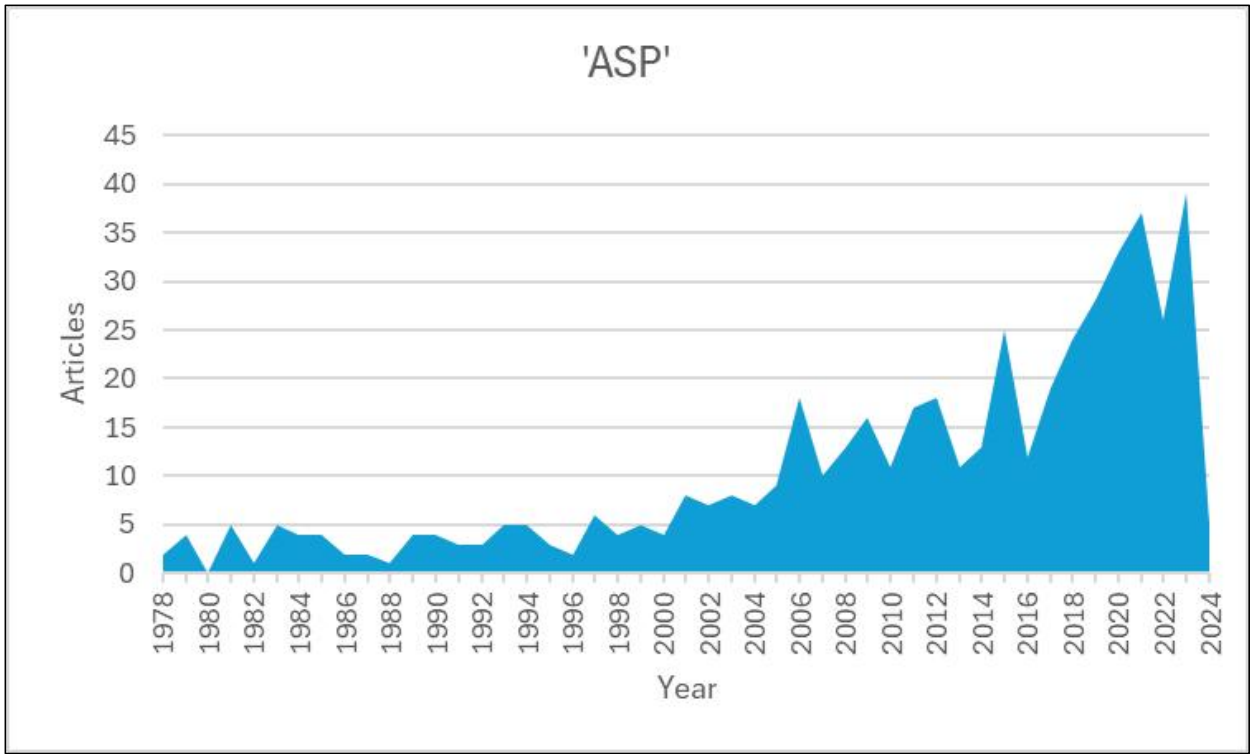
Sources
RESOURCES POLICY
MINERAL ECONOMICS
MINERALS AND ENERGY - RAW MATERIALS REPORT
AUSTRALIAN JOURNAL OF AGRICULTURAL AND RESOURCE ECONOMICS
EXTRACTIVE INDUSTRIES AND SOCIETY
INTERNATIONAL POLITICAL ECONOMY SERIES
MARINE POLICY
AUSTRALIAN JOURNAL OF PUBLIC ADMINISTRATION
DEVELOPMENT AND CHANGE
ECONOMIC PAPERS

If we describe Quartile 1 (Q1), then it states a journal's impact factor, which lies within the top 25 % of the JIF distribution, (Liu et al., 2016) Moreover, the other quartiles follow the same. The Q1 journals are Resources Policy, Marine Policy, Australian Journal of Public Administration, and Development and Change.

4.3 Annual scientific production

From Figure 2, we can see that from 1978 to 2024, the number of productions of various documents in this field of 'mineral fund' increased continuously. It can be noticed that the last two decades have added more than the papers that have been added previously in this field. The year 2023 has produced a maximum number of documents in this field from which the current



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development and emerging trends can be seen, after all restricting our study to social science, economics, and business studies.

Figure-2 Annual scientific production

4.4 Thematic view of the Mineral fund

Making thematic maps that depict the conceptual framework of a particular research field is a key component of scientific mapping techniques. The thematic map is a network analysis of word occurrences that clarifies the scientific discourse on a specific issue, emphasising key themes and trends (Jain et al., 2022) . Density quantifies the coherence among nodes, while centrality gauges the level of correlation between various issues (Jelvehgaran Esfahani et al., 2019).

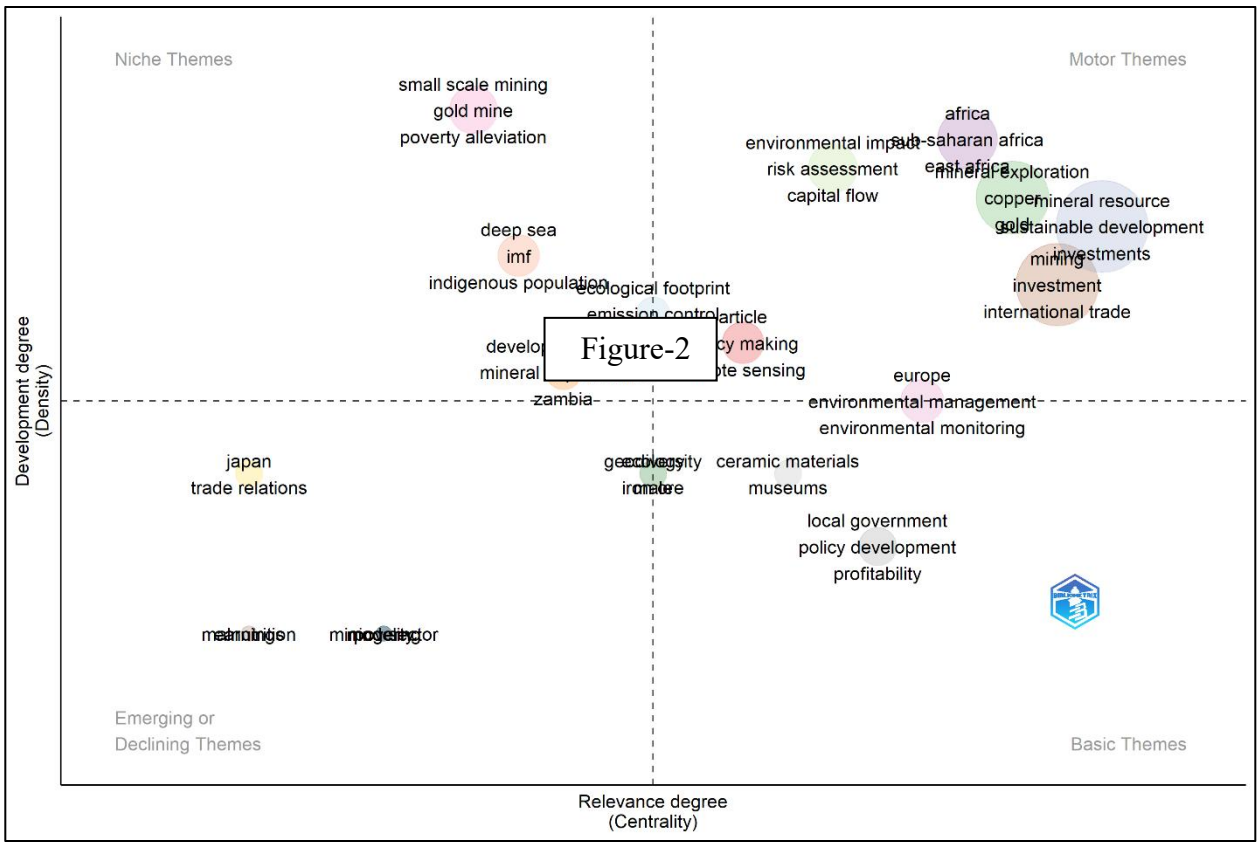

Figure-3 Thematic View through R Studio

The thematic review shows us that the 21 clusters focus on different quadrants. Most of the studies based on mineral funding belong to the motor theme, suggesting that many mature studies have been developed in this field. This includes Mineral resources, mining, Mineral exploration, and Africa. The Basic themes cover local government, policy development,

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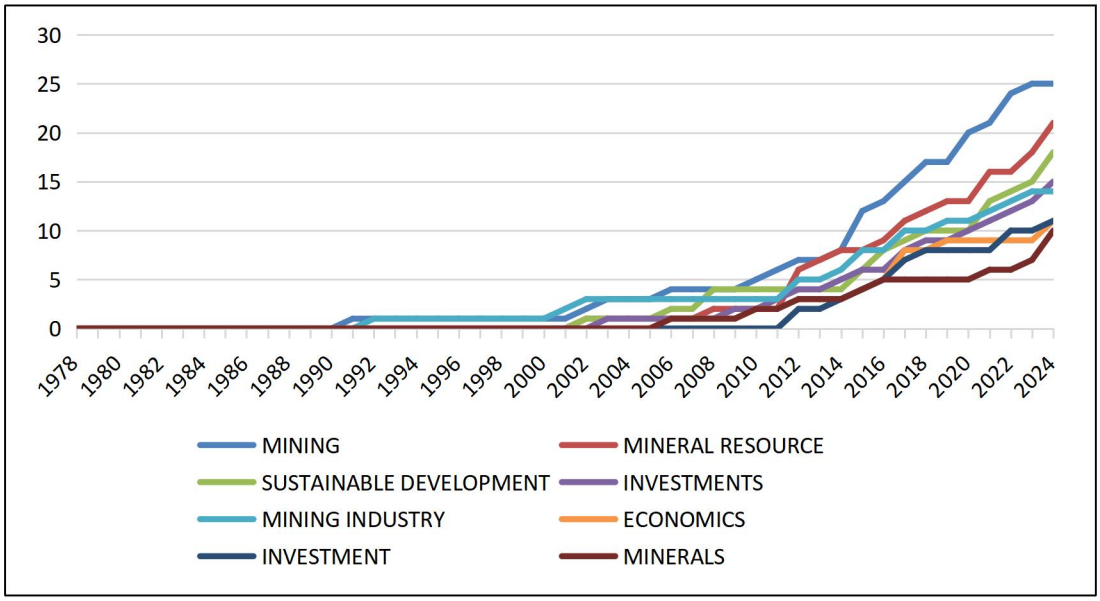
and profitability in one cluster and ceramic materials and museums in another cluster, totalling two. Niche is represented by 3 clusters of nodes consisting of Small-scale mining, gold mines, and poverty alleviation in one of the clusters; the second consists of deep sea, IMF, and Indigenous population; lastly, the third cluster in this quadrant consists of developing countries and mineral dependence. The emerging quadrant shows three clusters included in it, and the areas it covers are Japan and international trade, the mining sector, and earnings.

Words' Frequency Overtime

We searched the word 'Mineral Fund' in the Scopus database and, after limiting our study period from 1978 to 2024, found that in our R analysis, the frequency of words used for this inquiry is mining, mineral resources, sustainable development, investments, mining industry economics, and investment. Minerals hold essential significance in their use. The highest use of the word 'mining' is noticeable in the figure. The third highest word in our search can be seen as sustainable development. It can be noticed that its development has continued since 2001 and is in line with the Millennium Development Goal. From 2015 onwards, its foot growth can be seen from the given figure, which can be attributed to the inclusion of sustainable development goals, (J. D. Sachs, 2012) and its seriousness after the Paris Climate Agreement (Brandi et al., 2017) . One can quickly notice from the finding that these words erupted after the 1990s, and since then, these words have developed coherence with the mineral fund search. However, we can divide 2012 as the year of distinctions between the previous search and the coherence ward with the mineral fund. Since 2012, we have noticed that the critical keywords have proliferated. This examination of word frequency over time elucidates the shifting trends and priorities within the domain of 'mineral and fund,' highlighting the evolving dynamics and rising concerns in this research area.

Figure-4 Word frequency over the years



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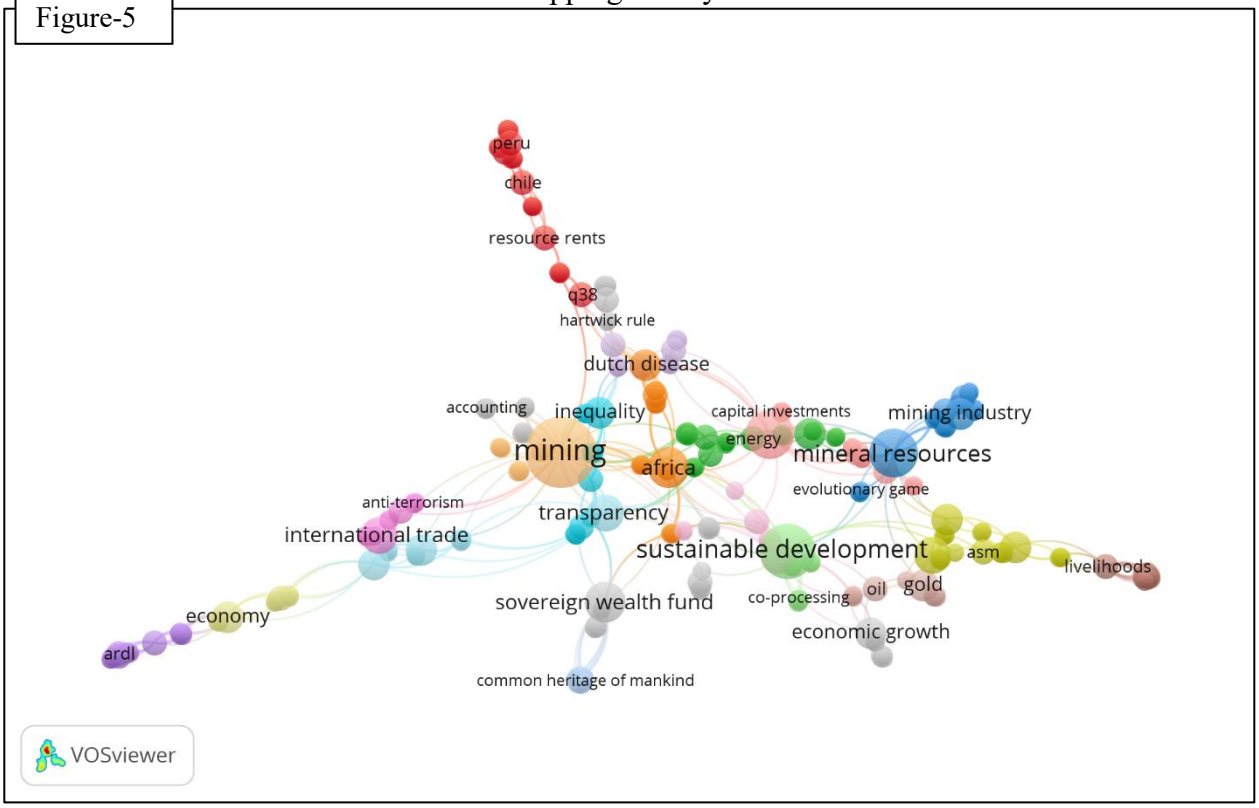
4.6 Keywords Plus Co-occurrence Network

In network visualization maps, each label is represented by a colored node. The node size correlates with the frequency of item usage; higher usage frequency leads to a larger item label. The thickness of the internode and connecting line signifies the frequency of label co-occurrence. Nodes of identical color exhibit stronger connectivity. The keyword + co-occurrence network analysis successfully elucidates scientific trends and emerging challenges via succinct visual representations. Co-occurrence analysis seeks to delineate the conceptual framework inside a bibliographic collection by employing a co-occurrence network to map and cluster concepts extracted from keywords(Aria & Cuccurullo, 2017).

Figure -5 describes the co-occurrence of different keywords plus terms for the Mineral Fund (MF) of clustering. The analysis gave us around 24 clusters of word occurrence while we considered each word for our searched term of mineral fund having the number of 342 items in VOS Viewer, and the top words that dominate the significant clusters (in the given figure) are Mining, Mineral Resources, Sustainable Development, and others.

VOS viewer's Co-occurrence Network mapping of Keywords

Figure-5



4.7 Country Collaboration Network

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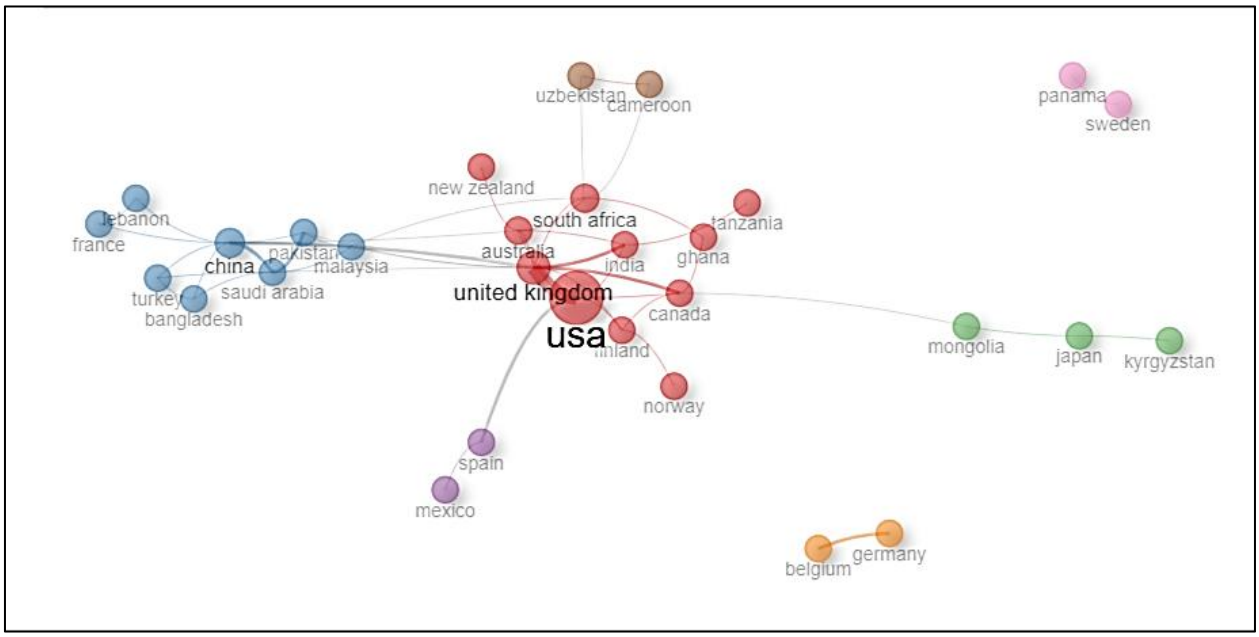
According to the country collaboration network in Figure 6, in 7 Clusters for the Mineral Fund. The country collaboration cluster having significant contributions includes the USA, UK, South

Affiliation/Institution	Articles	Authors	TP#	Words	Frequency

Africa, Canada, Australia, and India. The case of linkages between India and other countries in the same cluster can be said in the phase of emerging situations. If we look at the second significant node, then it is dominated by China and Saudi Arabia, and Malaysia contributed a specific part of the node. The emerging collaborative countries' network nodes are Panama and



Sweden; Uzbekistan and Cameroon; Mongolia, Japan, and Kyrgyzstan; Spain and Mexico.

Collaboration Mapping among countries

4.8 Top 10 authors, organisations, and Words by publication count

From Table 3, we can trace out the top 10 affiliated institutions, authors, and words that are frequently used for the search for mineral funds. UNIV. ILLINOIS AT URBANA-CHAMPAIGN, along with the UNIVERSITY OF LIMERICK and the UNIVERSITY OF THE WITWATERSRAND, stands as the most contributed article in this data analysis. Similarly, if we talk about the TP (Total Production) by the Author, then MOLES R and O'REGAN B are at the top spot, followed by FREEBAIRN J, BLEISCHWITZ R, BOND P, HARADA Y, LEI Y, ROBINSON Z, and Others. The most frequently used words are mining, mineral resources, sustainable development, investments, mineral resources, Mining industry, and others. The frequency is around 10 in terms of keywords, such as economics, investment, international trade, and minerals. This has been corroborated by the Keyword plus Analysis done previously in Figure 5

Table-3

. Top Institutions, authors and Words

Figure-6

UNIV. ILLINOIS AT URBANA-CHAMPAIGN	4	MOLES R	4	Mining	25
UNIVERSITY OF LIMERICK	4	O'REGAN B	4	Mineral resource	21
UNIVERSITY OF THE WITWATERSRAND	4	FREEBAIRN J	3	Sustainable development	18
CHINA UNIVERSITY OF GEOSCIENCES	3	BLEISCHWITZ R	2	Investments	15
FINANCIAL UNIVERSITY	3	BOND P	2	Mineral resources	14
MCGILL UNIVERSITY	3	HARADA Y	2	Mining industry	14
MURDOCH UNIVERSITY	3	LEI Y	2	Economics	11
UNIVERSITY OF MELBOURNE	3	ROBINSON Z	2	Investment	11
UNIVERSITY OF WESTERN AUSTRALIA	3	ABBAS A	1	International trade	10
ACADEMY OF MACROECONOMIC RESEARCH	2	ACHEAMPONG T	1	Minerals	10

Total Production

4.9 Trend Topics

Figure 7 shows the trended topics for the word MF over the last two decades. Word mining's trend frequency exceeded 25 times during 2016, whereas the other frequently used words, Economics and Economic Development, were 16 and 8 times, respectively. Mineral resources and investment in 2017 spearheaded the debate for the MF trend frequency. Nevertheless, one can notice the change in the usage of the word Sustainable development after the debate intensified towards Climate change, SDG, and, more pronouncedly, the Paris Climate Agreement (Icsu, 2015).

Africa regions were the most frequent words based on any area, with nine times the frequency. Their development started from 2010 to 2015, with 2012 having the highest frequency. The recent trend of the area can be traced to China, which is five times used in frequency terms.

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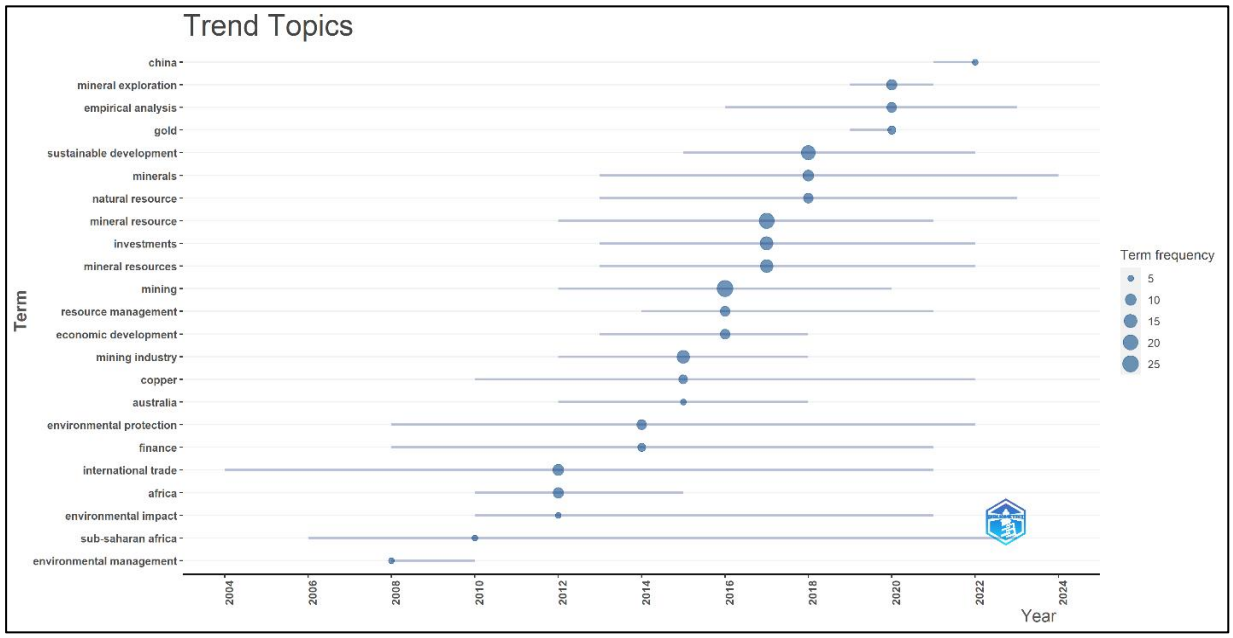

Figure-7 Frequencies of Topics

5. Discussions

In the discussion, we have included two aspects of the research article for a review of the literature, and these included the recognition of critical contributions and prestigious articles. The second one is the scope of future research.

5.1 Recognizes key contributors and prestigious articles

We utilised bibliometrics to address inquiries regarding the most prominent contributors and esteemed works in the field of Mineral fund research, with the objective of identifying the top contributors. Table 3 indicates that MOLES R, O'REGAN B, FREEBAIRN J, and BLEISCHWITZ R are notable authors in the field of Mineral fund research. The top contributors in terms of organisations are the University of Illinois at Urbana-Champaign, the University of Limerick, and the University of the Witwatersrand. The co-authorship network reveals that authors exhibit a limited degree of collaboration in mineral fund research. The absence of cross-institutional research collaboration signifies a restricted level of inter-institutional interaction among researchers. Table 2 contains the items with the highest prestige in our sample. The majority of these articles have been published post-2000, reflecting recent and innovative research during the past two decades.

5.2 Future research scope

Our objective is to identify and propose potential research areas for DMF researchers. Firstly, we suggested that academics should persist in their efforts to investigate the established topics in

research related to mining funding. Additionally, it is imperative for them to prioritise the exploration of unexplored issues and offer innovative approaches to secure the financing of research in areas impacted by mining. Furthermore, the study emphasises the need to conduct research that involves multiple disciplines, i.e., multidisciplinary, and encourages collaboration between different fields of study. The researchers should facilitate the exchange of knowledge between different areas. To ensure the coordinated, fair, and sustainable development of the mining industry, it is essential to establish a connection between the study areas of sustainable mining, environmental management, and mining regions that are impacted socioeconomically. This connection should be established through the DMF fund. Examining the financing criteria of DMF using citizen science will provide valuable insights into mining behaviour. The integration of sustainable aims may foster economic expansion in underprivileged and Indigenous areas of the economy. This study will aid researchers in comprehending the essential elements of extraction resource finance research and augment the significance of their findings.

6. Conclusion

This study does a comprehensive analysis of mineral fund research. We performed a comprehensive bibliometric analysis employing a robust methodology to extract pertinent data from the Scopus database. Our objective was to figure out the primary contributors, most prolific authors, highly cited papers, and institutes engaged in Mineral fund research.

The developed nations, comprising the United States, the United Kingdom, the Netherlands, Germany, and Australia, have the most prominent volume of publications and citations. Conversely, the developing world exhibits the least contribution regarding publications and citations. Again, the five most productive authors hail from the industrialised world. The research focus in developing nations is on sustainable mining and social elements of mining, while high-income countries prioritise the study of climate action. Therefore, it is evident that the objectives of the Sustainable Development Goals (SDGs) are not unified in mining activities but rather create divisions. This may be due to the practical difficulties involved in implementing different programs, plans, and projects in regions affected by mining. Again, keyword analysis emphasised the core research areas, which are mining, mineral resources, sustainable development, investments, mineral resources, and the mining industry. An equal look at the trend analysis reveals that the word ‘mining’ has the highest number of frequently occurring words, and if we look at any country having the highest frequency in trend analysis, then it is China.

If we look at the thematic arterial view, then Small-scale mining, gold mines, and poverty alleviation are in one of the clusters; the second consists of deep sea, IMF, and Indigenous population; lastly, the third cluster in this quadrant consists of Developing countries and mineral dependence.

The current study is subject to constraints that are intrinsic to the bibliometric approach. The conclusions and conversations are derived from the examined sample. Subsequent research endeavours could involve incorporating material from various databases in order to augment the sample size. Studies can also concentrate on publications published exclusively in journals that specialise in mineral fund research, as this would offer them a more current understanding of

finance research in mining-driven regions. Our sample may have excluded other studies due to the limitations of our search string. This is due to the possibility of various funding methods being implemented in different regions. As we specifically searched for 'mineral fund' in our search query, research that utilises different funding systems may have been excluded from our sample. Hence, future research endeavours could encompass investigations that delve deeper into a particular variant of DMF perspective pertaining to South Asian nations, thereby expanding upon the conclusions drawn from the current study. Although there are limitations, we are confident that this study will help future researchers incorporate new and innovative research subjects and methodologies. It will also provide a fresh perspective on advancing research on mineral funds and places affected by mining.

References

1. *About DMF*. (n.d.). Retrieved July 1, 2025, from https://mines.rajasthan.gov.in/DMFT/about-dmft.jsp?utm_source=chatgpt.com
2. *About DMF/PMKKKY*. (n.d.). Retrieved May 16, 2024, from https://mines.gov.in/webportal/content/about-dmfpmkkky
3. Alonso, S., Cabrerizo, F. J., Herrera-Viedma, E., & Herrera, F. (2009). h-Index: A review focused in its variants, computation and standardization for different scientific fields. *Journal of Informetrics*, *3*(4), 273–289. https://doi.org/10.1016/j.joi.2009.04.001
4. *Annexure_I_PMKKKY_Guidelines_2015*. (n.d.).
5. Aragón, F. M., & Rud, J. P. (2011). *Natural Resources and Local Communities: Evidence from a Peruvian Gold Mine*.
6. Argent, N., Markey, S., Halseth, G., Ryser, L., & Haslam-McKenzie, F. (2023). The socio-spatial politics of royalties and their distribution: A case study of the Surat Basin, Queensland. *Environment and Planning A: Economy and Space*, *55*(5), 1171–1189. https://doi.org/10.1177/0308518X211026656
7. Aria, M., & Cuccurullo, C. (2017). bibliometrix : An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, *11*(4), 959–975. https://doi.org/10.1016/j.joi.2017.08.007
8. Asiamah, O., Agyei, S. K., Ahmed, B., & Agyei, E. A. (2022). Natural resource dependence and the Dutch disease: Evidence from Sub-Saharan Africa. *Resources Policy*, *79*, 103042. https://doi.org/10.1016/j.resourpol.2022.103042
9. Association, W. W. N. (2021). *Mineral Requirements for Electricity Generation*.
10. Badeeb, R. A., Lean, H. H., & Clark, J. (2017). The evolution of the natural resource curse thesis: A critical literature survey. *Resources Policy*, *51*, 123–134. https://doi.org/10.1016/j.resourpol.2016.10.015
11. Ben-Salha, O., Dachraoui, H., & Sebri, M. (2021). Natural resource rents and economic growth in the top resource-abundant countries: A PMG estimation. *Resources Policy*, *74*, 101229. https://doi.org/10.1016/j.resourpol.2018.07.005
12. Brandi, C., Dzebo, A., & Janetschek, H. (2017). *The case for connecting the implementation of the Paris Climate Agreement and the 2030 Agenda for Sustainable Development*. Briefing Paper.

13. Brunnschweiler, C. N. (2008). Cursing the Blessings? Natural Resource Abundance, Institutions, and Economic Growth. *World Development*, *36*(3), 399–419. https://doi.org/10.1016/j.worlddev.2007.03.004
14. Burnham, J. F. (2006). Scopus database: a review. *Biomedical Digital Libraries*, *3*(1), 1. https://doi.org/10.1186/1742-5581-3-1
15. Büyükkidik, S. (2022). A Bibliometric Analysis: A Tutorial for the Bibliometrix Package in R Using IRT Literature. *Journal of Measurement and Evaluation in Education and Psychology*, *13*(3), 164–193. https://doi.org/10.21031/EPOD.1069307
16. Cai, H. H., Lee, H.-F., Khan, N. U., & Yuan, Q. (2024). Are natural resources a curse, a blessing, or a double-edged sword? Implications for environmental sustainability. *Journal of Environmental Management*, *367*, 122008. https://doi.org/10.1016/j.jenvman.2024.122008
17. Davis, G. A. (1995). Learning to love the Dutch disease: Evidence from the mineral economies. *World Development*, *23*(10), 1765–1779. https://doi.org/10.1016/0305-750X(95)00071-J
18. Daw, G. (2025). Natural resources and development: new insights from strong curse to strong blessing. *Agricultural and Resource Economics Review*, *54*(1), 288–341. https://doi.org/10.1017/age.2025.13
19. Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070
20. Fang, Y., Ji, K., & Zhao, Y. (2011). Is there the "resource curse" in China? *J World Econ*, *4*, 144–160.
21. Harvey, B., & Brereton, D. (2005). Emerging models of community engagement in the Australian minerals industry. *International Conference on Engaging Communities, Brisbane*, *1*.
22. Havranek, T., Horvath, R., & Zeynalov, A. (2016). Natural Resources and Economic Growth: A Meta-Analysis. *World Development*, *88*, 134–151. https://doi.org/10.1016/j.worlddev.2016.07.016
23. Huang, S.-Z., Sadiq, M., & Chien, F. (2021). The impact of natural resource rent, financial development, and urbanization on carbon emission. *Environmental Science and Pollution Research*, *30*(15), 42753–42765. https://doi.org/10.1007/s11356-021-16818-7
24. Icsu, I. (2015). Review of the sustainable development goals: The science perspective. *Paris: International Council for Science (ICSU)*.
25. *India's mining reforms ignore mining-affected communities*. (n.d.). Retrieved April 22, 2024, from https://india.mongabay.com/2021/01/indias-mining-reforms-ignore-mining-affected-communities/
26. Jain, J., Walia, N., Singh, S., & Jain, E. (2022). Mapping the field of behavioural biases: a literature review using bibliometric analysis. *Management Review Quarterly*, *72*(3), 823–855. https://doi.org/10.1007/s11301-021-00215-y
27. Jelvehgaran Esfahani, H., Tavasoli, K., & Jabbarzadeh, A. (2019). Big data and social media: A scientometrics analysis. *International Journal of Data and Network Science*, 145–164. https://doi.org/10.5267/j.ijdns.2019.2.007
28. Liu, W., Hu, G., & Gu, M. (2016). The probability of publishing in first-quartile journals. *Scientometrics*, *106*(3), 1273–1276. https://doi.org/10.1007/s11192-015-1821-1

29. Lujala, P., & Narh, J. (2020). Ghana's Minerals Development Fund Act: addressing the needs of mining communities. *Journal of Energy & Natural Resources Law*, *38*(2), 183–200. https://doi.org/10.1080/02646811.2019.1686250
30. Lundstøl, O. (2022). Taxing the extractives: Revenue sharing between the state and mining companies in Tanzania and Zambia. *The Extractive Industries and Society*, *11*, 101126. https://doi.org/10.1016/j.exis.2022.101126
31. *National DMF Portal*. (n.d.). Retrieved July 1, 2025, from https://dmfindia.mines.gov.in/login
32. Nülle, G. M., & Davis, G. A. (2018). Neither Dutch nor disease?—natural resource booms in theory and empirics. *Mineral Economics*, *31*(1–2), 35–59. https://doi.org/10.1007/s13563-018-0153-z
33. O'Faircheallaigh, C. (2013). Community development agreements in the mining industry: an emerging global phenomenon. *Community Development*, *44*(2), 222–238.
34. Oneț, C., & Alexandru, D. G. (2023). Revenues Sharing in Mineral Exploration: Local Authorities' Incentives towards Economic Diversification in Romania. *Sustainability*, *15*(4), 3684. https://doi.org/10.3390/su15043684
35. Parlee, B. L. (2015). Avoiding the Resource Curse: Indigenous Communities and Canada's Oil Sands. *World Development*, *74*, 425–436. https://doi.org/10.1016/j.worlddev.2015.03.004
36. Ploeg, F. van der. (2011). Natural Resources: Curse or Blessing? *Journal of Economic Literature*, *49*(2), 366–420. https://doi.org/10.1257/jel.49.2.366
37. Revised PMKKKY Guidelines Ministry of Mines. Retrieved April 20, 2024, from https://mines.gov.in/admin/storage/ckeditor/Revised_Guidelines_PMKKKY_1712904597.pdf
38. Sachs, J. D. (2012). From millennium development goals to sustainable development goals. *The Lancet*, *379*(9832), 2206–2211.
39. Sachs, J., & Warner, A. (1995). *Natural Resource Abundance and Economic Growth*. https://doi.org/10.3386/w5398
40. Sahoo, J., & Biswal, B. (2024). *Mining for progress: A study of district mineral foundation funds in India*.
41. Standing, A. (2014). Ghana′s extractive industries and community benefit sharing: The case for cash transfers. *Resources Policy*, *40*, 74–82. https://doi.org/10.1016/j.resourpol.2014.03.003
42. Stevens, P. (2003). *RESOURCE IMPACT-CURSE OR BLESSING? A LITERATURE SURVEY*.
43. Wall, E., & Pelon, R. (2011). *Extractive Industries for Development Series #21 Sharing Mining Benefits in Developing Countries The Experience with Foundations, Trusts, and Funds*. www.worldbank.org/ogmc
44. Wills, S. E., Senbet, L. W., & Simbanegavi, W. (2016). Sovereign Wealth Funds and Natural Resource Management in Africa: Table A1: *Journal of African Economies*, *25*(suppl 2), ii3–ii19. https://doi.org/10.1093/jae/ejw018
45. Wuni, I. Y., Shen, G. Q. P., & Osei-Kyei, R. (2019). Scientometric review of global research trends on green buildings in construction journals from 1992 to 2018. *Energy and Buildings*, *190*, 69–85. https://doi.org/10.1016/j.enbuild.2019.02.010

46. Zhou, Z., Liu, J., & Zhang, H. (2023). Does the reform of China's mineral royalty policies exert economic pressure on mining companies? *The Extractive Industries and Society*, *15*, 101325. https://doi.org/10.1016/j.exis.2023.101325