

A comprehensive bibliometric analysis of research on micro small and medium industries literature published from 1980 to 2022.

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Abstract

This article provides a bibliometric analysis and, using relational techniques, investigates the connections between the documents on MSME. The findings emphasize publication patterns, including the most often referenced articles, top authors that contributed, nations and institutions with the highest output, and the journals that contributed the most to the research area. As a developing area of study that is linked to entrepreneurship, MSME is a promising research topic. This analysis is based on the contributions made to this field of study between 1980 and 2022. The study is an attempt to aid in network research coordination between nations, authors, and affiliated universities. The findings highlight publication trends, including the most frequently referenced articles, the most productive nations and institutions, and the journals that contribute the most to the field of study. The most significant connections between authors, documents, co-cited references, sources, and nations are shown by the network analysis of co-authorship, co-citation, keyword co-occurrence, and bibliographic coupling for the available papers on the research subject.

Keywords

MSME, micro small and medium enterprises, entrepreneurship, bibliometric analysis, research output.

Introduction

The term MSME stands for micro small and medium enterprises. There is no proper definition of the term MSME as different countries have defined MSME according to their convenience. But commonly MSMEs can be defined by the size of their capital investment.

Micro small and medium enterprises play a crucial role in the industrialization and development of most developing economies. Most of the developing countries have started to focus on MSMEs as they are easy to establish and require low capital intensity and because of the narrow market of developing countries (yadav et al 2021a). Setting up MSMEs is a means of stimulating local initiatives, providing local employment, utilizing indigenous resources, mobilizing domestic capital, and ultimately contributing to the GDP, production, and per capita income of the country (yadav et al 2020).

With rapid development in developing economies, it is seen that large gaps exist in productivity levels of all three sectors, and major supply chain of production in industries. The major development of a developing economy depends on the basic industry or the local industry or MSMEs that are the backbone of production in the economy. MSMEs contribute more than 40% to the production of the country. They also play a major role in exports of the country. With this, they play a major role in the overall development of the economy. However, MSMEs are majorly hit back by weak institutional framework and weakness at a basic level in procuring capital

and managing workflow which results in lower productivity levels of MSMEs in developing countries (yadav et al 2022a).

Literature Review

A literature review is an important work that is to be done before starting a research project. (Khurana. Et al, 2019). It helps us to find relevant literature on our specific area to map the process and find research gaps to help in further research (Sufiyan et. Al, 2019).

In the area of MSME major articles have explored them from the side of different industries like their stakeholders in manufacturing industries like textile industries (SS Panigrahi 2018, D Gambhir 2015, B Hutahayam 2021, JR Zaruma 2017, A Gutierrez 2022) and service industries (WAA Amri 2021), V Mittal 2021), P Sharma 2013). Several studies also appeared from gender perspectives such as women's entrepreneurship (M Danabakyam 2012, J M Sugaraj 2014 P Kumar 2014, AD singh2013). Recently published articles on MSME have focussed on how people and government play important role in the development of MSME and how to make more and more MSMEs modern to increase their output and increase their social value (Y Herljansyah 2020, S Das 2012, PE Prasetyo 2020, D Novita sari 2021).

(K. Das 2012) discussed in his paper the factors that influence MSME to adopt new technology. In this, he stated that there is a positive relationship between environmental factors and ICT adoption. As the information requirement increases the adoption of ICT increases. (SS Panigrahi 2018) stated that most textile industries are aware of environmental issues and want to satisfy their customers by improving environmental performance and adopting SSCP.

M Danabakyam 2012) stated that women's entrepreneurship played a vital role in fulfilling the socio-economic objectives of the nation. It widens the base of industrial entrepreneurship in the country. (Ashish et al 2022) stated in his paper that motivation, achievement, and human relations are the main factors for women becoming entrepreneurs.

J Raghuvanshi 2012 shows that institutional support and idea management MSMEs important enablers for innovation in msmes. Gupta & Barua 2019) suggested the same that a lot of minor factors are responsible for innovation in MSME but institutional support and idea management play the most important role in it yadav (Ashish et al 2022u).

Research Methodology

The primary focus of this research is on the use of bibliometric analysis to assess and categorise the body of literature published in Micro Small and Medium Enterprises. The bibliometric study's goal is to statistically analyze an MSME research area to gain meaningful insights into how they work. This field has evolved as a result of network maps (Apriliyanti and Alon, 2017). The breadth of any research topic can be understood using bibliometric analysis and is used to handle most of the existing studies in the specific area efficiently (yadav et al 2022c). The bibliometric analysis follows a specific structure that is used for analysis and this study also follows a similar structure for bibliometric analysis (Mishra et al., 2017).

Bibliometric analysis

Bibliometric analysis is a quantitative method to identify the growth and amount of literature published over the years for a particular area. It gives a broad perspective of the published literature in the focussed area. This particular study used two effective techniques performance analysis and science mapping (yadav et al 2022d). The performance analysis evaluates the performance of publications in terms of authors, output by countries, and growth trends over the years (yadav et al 2022e). The other effective way is by doing a science mapping analysis to identify relationships among publications by doing co-authorship analysis, co-citation analysis, co-word analysis, and thematic evolution analysis Co-citation analysis helps us to find the dominant publications and authors of a research area with the help of citations (yadav et al 2022f).

Data source

The data source which is considered for the study is a core collection of Web of Science and Scopus database. Web of Science and Scopus are the most famous social science citation index databases in the world. The

research of term MSME extends to other fields like micro industry, small industries, micro enterprises. For our research we searched MSME and its related keywords in the search field of both the databases. The publications first appeared in the year 1980 which can be called the starting phase of this research field. A figure of different stages of article publication over the year is given in image 1 (yadav et al 2022g).

In the first stage of data analysis total of 687 documents from both Scopus and web of science databases were selected using keywords MSME, Micro small and medium enterprises. Among these after final refining total of 583 documents were available which consisted of 449 articles, 4 early access articles, 2 book, 32 book chapters, 78 conference papers and other such as editorial reviews. The records exported for all 583 documents contained complete information about authors, address, publications year, source, journal title, subject area and reference. it also includes abstract and cited references (yadav et al 2022h). For the second stage, R a widely used software for bibliometric analysis is used to analyse and visualize the relationships among the authors, countries, journals, co-citations and terms. Bibliometric for RStudio has an inbuilt utility Biblioshiny with a graphical interface for non-coders resulting in comprehensive analysis with improvised plot representation (yadav et al 2022i). It combines bibliometric techniques such as co-word analysis, co-citation network analysis, generating collaboration networks and generating Sankey plot to analyse a research field's evolution. R studio is used to develop plots and charts for the study.

Results

After refining documents from both Web of Science and Scopus databases and merging them into a single file and removing duplicate files we found a total of 583 documents that were available for study by performing the biblioshiny command into R software. After completing data preparation steps following results were found (mano ashish et al 2022a)-

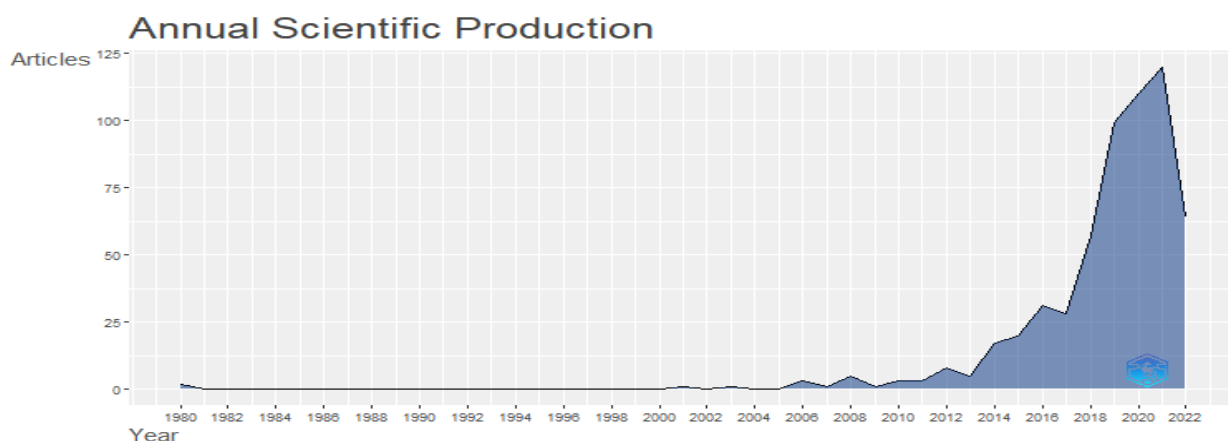


Fig.1 shows the average scientific production in research field over the years

Publication output of countries-

The annual publications in Figure 1 revealed the development in the research field. Since the inception of the concept in 1980, we see exponential growth in the publications on the topic per year, with most in 2020. Also, to understand the trend, it was essential to see the most contributing sources, countries, affiliations and keywords for the entire 583 documents considered for this analysis. The figure 2 discuss the top 20 countries most documents were recorded from India followed by Indonesia (mano ashish et al 2022b).

Country Scientific Production

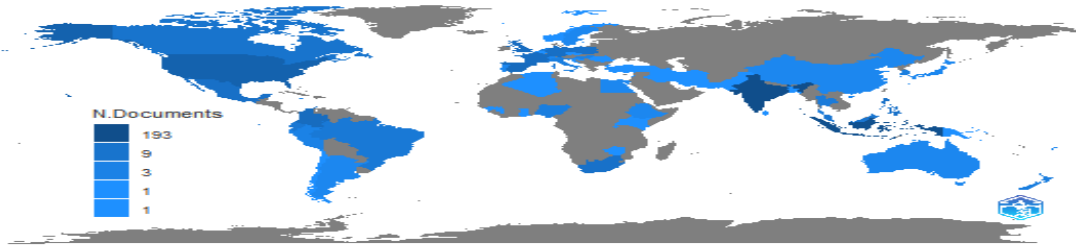
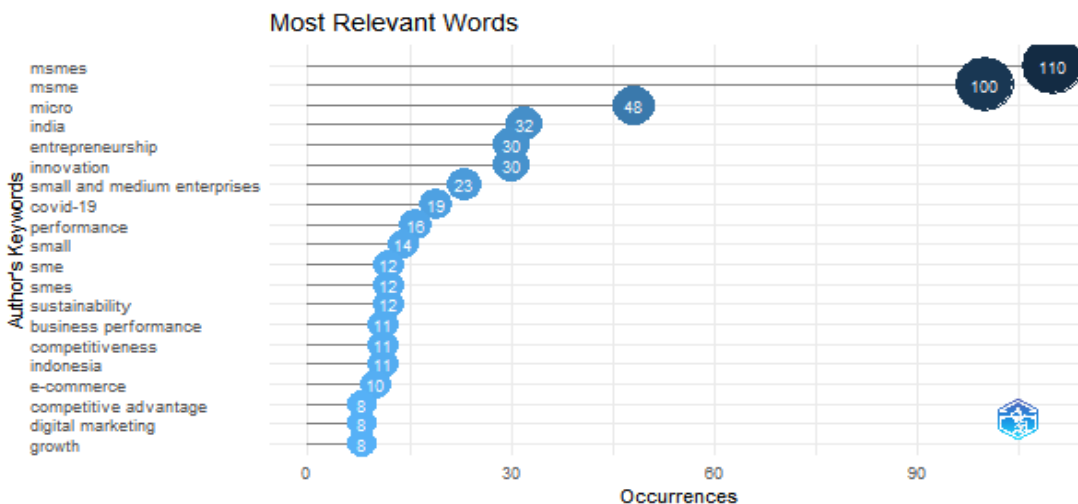


Fig.2 showing the total number of publications from each country during the study period.

Most relevant words-

Out of the total authors keyword the most frequently used keywords and phrases were MSMEs which was used 110 times followed by MSME used 100 times, micro 48 times, India 32 times and entrepreneurship used 30 times. The words growth digital marketing competitive advantage are equally used 8 times each with growth being used as keyword the least time i.e. 8 times. Figure 3 shows the 20 most used author’s keywords over the years in this study.



figure

Figure. 3 showing 20 most used authors keywords according to ranking.

Most relevant authors-

Figure 4 shows the most relevant authors for the study and the authors with most contribution in the field of MSME. Out of the total 1522 authors for the study the top contributing authors include Singh S with 7 articles followed by Kharub M and Sharma R with 6 publications each. Over the time Kumar N, Jyotishi A, Joseph S, Idris I, Hermawati A, Hendiarto R, Haleem A, Gupta H, Garg S, Das S and Bishu R are one of most relevant authors with 3 documents each(yadav et al 2022r). Fig.5 shows the authors production over time with Singh S being on top with 3 papers in 2018 and over a time span of 2016 to 2022 for his research. The top second contributor is Kharub m with 6 papers in this time span ranging from 2015 to 2020 (yadav et al 2022q).

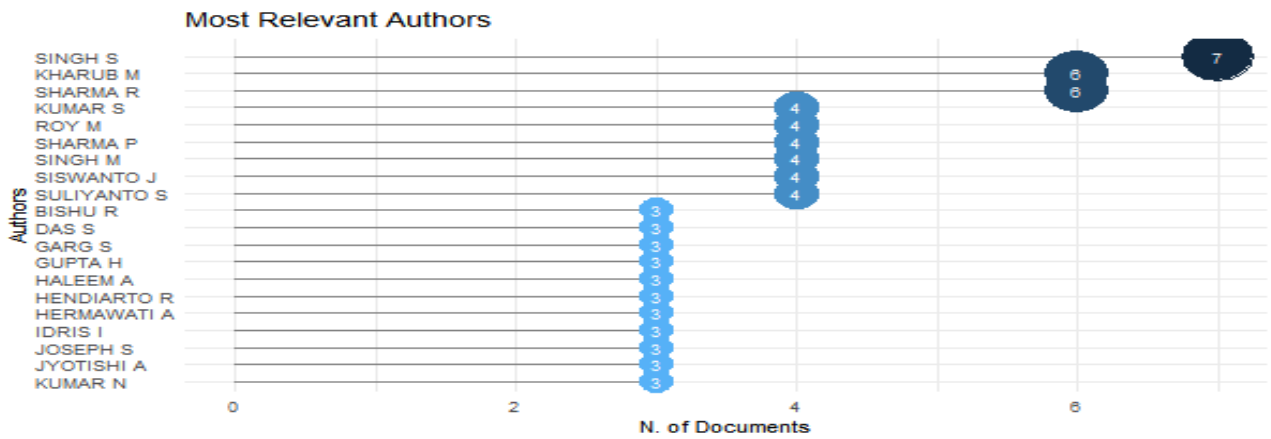


Fig.4 showing the most relevant authors with most number of publications over the years

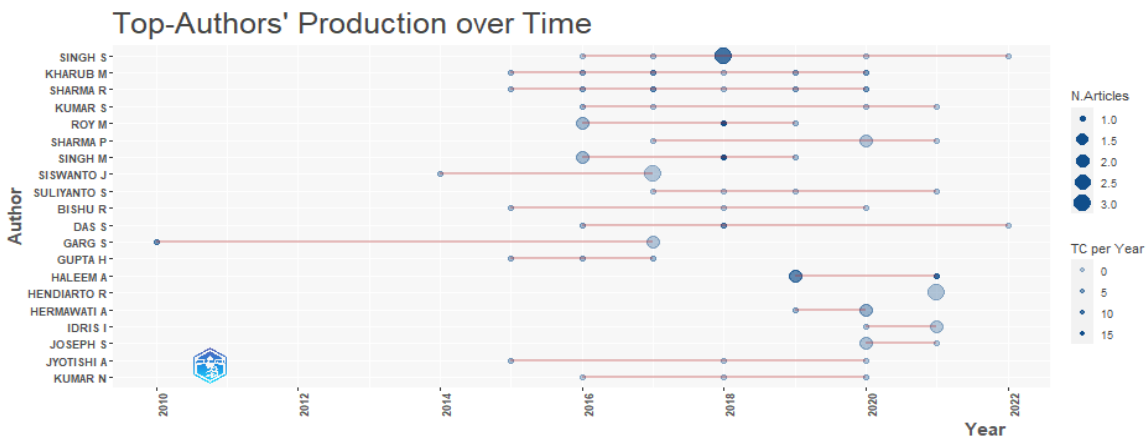


Fig. 5 shows the top authors production over the time.

Most relevant affiliations-

University of Indonesia and University of Delhi are the most affiliated universities in the field of MSME with 13 affiliations each followed by university of Jember with 8 affiliations and universitas of Islam Indonesia and Widayatama university with 7 affiliations each (yadav et al 2022t). Respectively Amity University, Amrita school of business, Andalas University, Anna university of technology and Bharathiar University are at bottom of table with 4 affiliations each. Fig.6 shows the list of 20 universities with their affiliations (yadav et al 2022s).

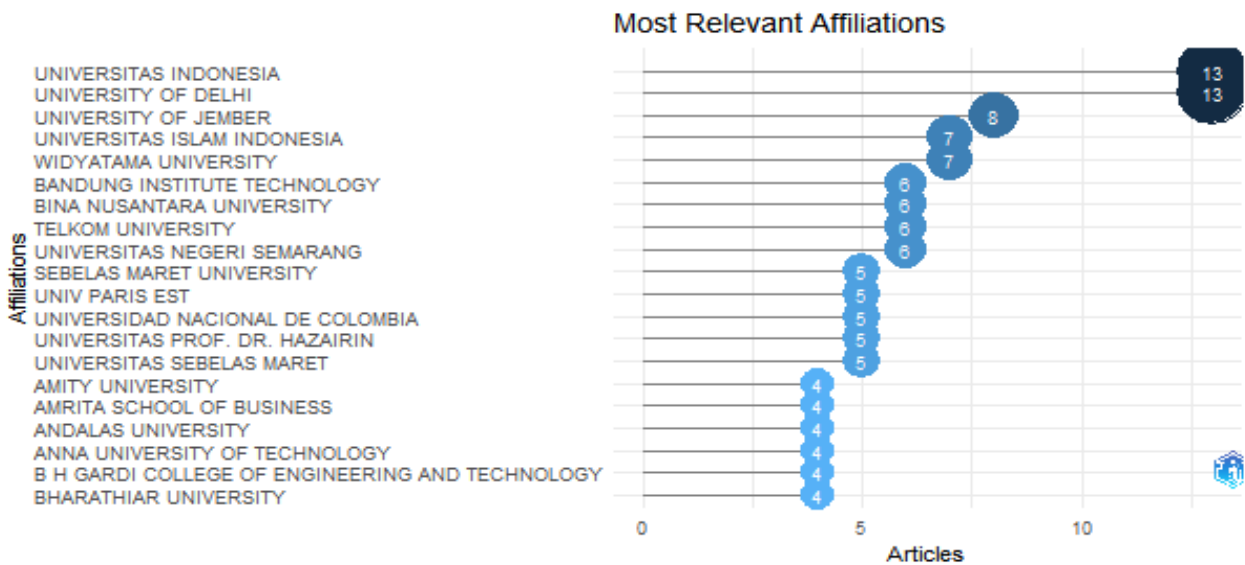


Fig.6 Showing universities with most affiliations.

Source impact-

Source impact shows the total citation of the journal’s papers over the years. There are different ways to calculate source impact namely h- index or total citation index. In our study Research Policy stands on top with more than 152 total citations followed by journal of small business and enterprise development with 105 citations(yadav et al 2022j). Later in this list international journal of management science and engineering management with 97 citations and resources, conservation and recycling with 75 citations are there. Fig.7 shows the top 20 authors and journals with their total citations (yadav et al 2022i).

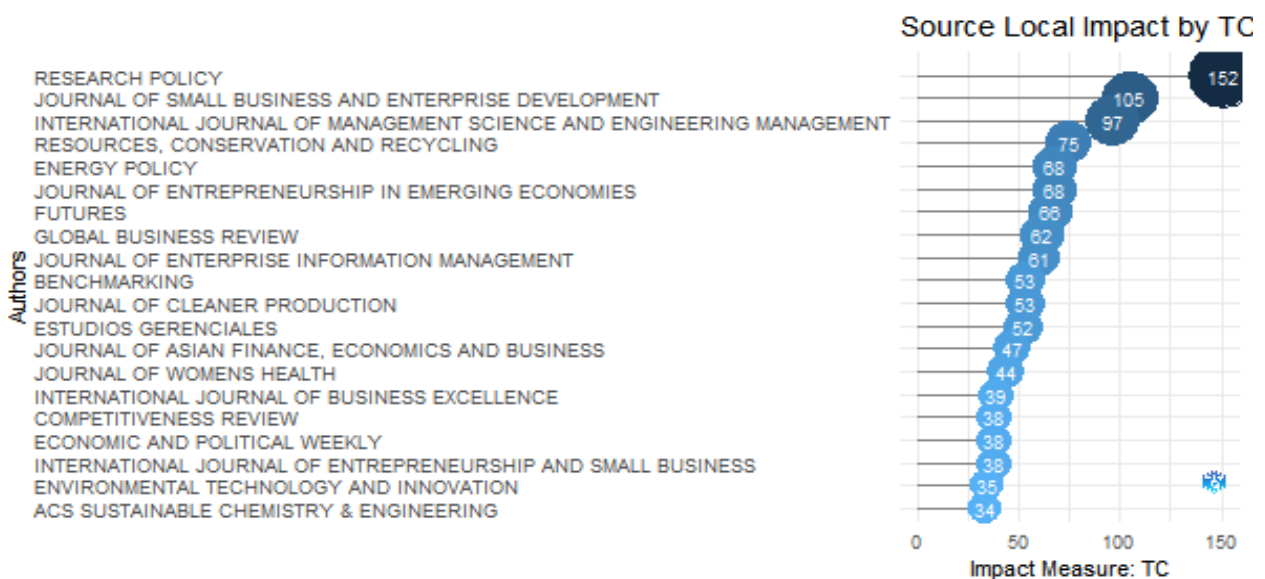


Fig.7 shows the total citations over the years and their journals.

Co-occurrence network-

Co- occurrence network shows the naming of similar words in different research. In our research the most repeated words with their relations to others are “small and medium enterprise and small and medium sized enterprise” these words are repeating most of the time and are inter connected with most of the other words in most of the studies. Fig.8 shows us the map of co-occurrence in our studies (yadav et al 2022k).

of small business and enterprise with 34 documents, which has total citations of 152. The most prolific MSME author Singh S with 7 articles (yadav et al 2022n).

Implication

The purpose of this research is to examine the research trends on MSME over the past 20 years from various perspectives. Bibliometric analysis shows a visual output of worldwide scientific studies on MSME in terms of country, authorship, language, year, subject area, and journal. The findings are going to provide important insights to both practitioners and academicians (yadav et al 2022q). The current study will provide deficiencies in the approach of the MSME study. This will help both learning persons and academicians in formulating important policies to publish such research for better impact. This can also help in providing suggestions to public policymakers in addressing deficiencies concerning policies in MSME schemes. Moreover, it helps research scholars in following the trending research on MSMEs with different aspects and pursue them based on their interest and implications. In addition, researchers can also look at possibilities of further advancing their research area by understanding the current trends in research on MSME (yadav et al 2022n).

Future research

The study on bibliometric analysis gives a wide snapshot of research publications across the globe on MSMEs (yadav et al 2022p). But results cannot be generalized from analysis as it covers only 2 major databases i.e., Web of Science and Scopus thus further other databases can be considered for future research publications. Moreover, it takes a broad keyword i.e., “MSME” for study thus there is a further need to include articles from specific keywords to get better insights on subtopics (yadav et al 2022o).

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