IJIE International Journal of Innovation and Entrepreneurship

Entrepreneurial Ecosystem of Micro and Small Enterprises: A Bibliometric Analysis

Mulugeta Chane * and Heena Atwal

University School of Applied Management, Punjabi University, Patiala 147002, India
* Corresponding author: mulechane2003@gmail.com; Tel.: +919041658346

Submitted: 10 January 2023, accepted: 24 January 2023, published: 15 February 2023

Abstract: Although bibliometric analysis is not a new issue in management and business sectors, it ought to be a common and rigorous method in contemporary literature on entrepreneurship and small business management. The current analysis demonstrates the patterns in the literature for the last ten years in the MSEs' entrepreneurial ecosystem. Based on material published from 2013 to 2022, a bibliometric analysis was performed using the Dimensions database. The number of publications and citations, as well as the nations and organizations that have made a significant contribution to the production of publications in the field during the specified period, have all been determined through the analysis using the VOS Viewer software. The examination of 266 publications in the field revealed that the United States, the United Kingdom, and India are the top three contributors in terms of publications and citations. The analysis suggests that the subject is understudied and that there is insufficient literature. The analysis is considered crucial since it demonstrates the patterns in publications and citations in the field. Therefore, to close the gaps in the literature, it is advised that experts in the field conduct studies on the entrepreneurial ecosystem of MSEs.

Keywords: bibliometric analysis; entrepreneurial ecosystem; MSEs; entrepreneurship; VOS Viewer

How to cite: Mulugeta, C.; Heena, A. Entrepreneurial Ecosystem of Micro and Small Enterprises: A Bibliometric Analysis. *Int. J. Innov. Entrep.*, 2023, 2(1): 1; doi:10.56502/IJIE2010001.

1. Introduction

The contribution that micro and small enterprises (MSEs) make in the employment creation, income generation, import substation, and overall development of a country makes it an issue of the century (Ullah, 2019). The facts show that MSEs play a significant role in both developed and developing countries. It is forecasted that MSEs are expected to create economic opportunities worth 12 trillion USD and create 380 million jobs by 2030, with more than 50 percent being located in developing countries (DESA, 2019). Furthermore, their role in achieving the Millennium Development Goals (MDGs) is also significant (Vandenberg, 2009). Because they are more

labor-intensive than big sectors and require fewer technical skills, micro and small companies are a rising source of productive employment, particularly for low-income people (Ullah, 2019; Vandenberg, 2009).

However, benefiting from MSEs requires creating a conducive environment under which these enterprises start, operate, run and sustain their business. In other words, there should be a favorable entrepreneurial ecosystem suitable for the success of MSEs. By entrepreneurial ecosystem, we mean the support provided to entrepreneurs for the smooth operation of their businesses. Similarly, Stam and others explained that the entrepreneurship ecosystem consists of a set of elements to sustain entrepreneurship in a given area (Stam and van de Ven, 2021).

Studies are showing that though the issue of MSEs and an ecosystem are not new to the literature, the entrepreneurial ecosystem is relatively a recent phenomenon of business studies that has only very recently received the attention of researchers (Schwarzkopf, 2016; Fredin and Lidén, 2020). Because the concept is so new, it lacks standardized definitions in the fields of business and entrepreneurship. The fact that the agenda is new makes the entrepreneurial ecosystem undeveloped from a theoretical perspective as well (Fubah and Moos, 2021).

It is not common to see bibliometric studies that show the trends in literature in the areas of entrepreneurship. The need for performing this analysis is to add knowledge in the areas of the entrepreneurial ecosystem of MSEs based on the different kinds of literature written in the last ten years. By doing so, the trends in the research about publications, citations, co-authorship, and countries' collaboration in the areas of the entrepreneurial ecosystem of MSEs are addressed. This will be significantly important for academicians, policymakers and other stakeholders to know the area very well and point out implications for future research.

Some studies identify the most prolific institutions, countries, authors, papers, and journals in terms of research production. Journal editors, journal publishers, conference organizers, government research policy agencies, pioneers and leading scholars, research centers, and graduate programs may benefit from such bibliometric analyses, which may assist them to alter their operations if necessary. The recognition of scientific excellence enables notable researchers to share their achievements both within and outside their field of expertise, and it motivates them to contribute more. It also aids junior researchers in their search for academic mentors (Ali et al., 2018).

2. Background Literature

A common and thorough method for discovering and analyzing vast volumes of scientific data is bibliometric analysis. It allows us to unpack the evolutionary subtleties of a particular discipline while also offering insight into the field's burgeoning regions (Donthu et al., 2021). It is defined as the use of published scientific literature (articles, books, conference proceedings, etc.) to assess research activities, such as output volume, science quality, interdisciplinarity, and networking (Grant, 2015). Bibliometric analysis means the measurement of the qualities of various documents, such as journal articles, conference proceedings, books, etc. These characteristics can be easily found in academic databases such as Scopus (Ahmi et al., 2020).

Unlike previous studies that focused primarily on the behavioral and personal/individual characteristics of entrepreneurs, the entrepreneurial ecosystem is receiving attention in recent entrepreneurship research (Lai and Vonortas, 2019). Of course, studies have been conducted about MSEs and the entrepreneurial ecosystem. A simple search using title-abstract-keywords on the Dimensions database on the business and management fields on the titles "Micro and Small Enterprises" and "Entrepreneurial Ecosystem" on March 22, 2022, 4:00 AM shows 626,891 publications on MSEs and 114,570 publications on the entrepreneurial ecosystem. However, a similar search on the database on the same date with the title: "Entrepreneurial ecosystem AND "Micro and Small Enterprises" reveals only 440 publications. This leads to the question that is an ecosystem of MSEs not an issue of researchers in the 21st century?" To find an answer to this question, this bibliometric analysis is conducted and attempted to answer the following basic questions.

1. What do the publications and citations in the areas of the entrepreneurial ecosystem of MSEs look like over the past 10 years?
2. Which countries contribute most to the literature on the entrepreneurial ecosystem of MSEs?
3. What are the most cited journals in the area?
4. What is the intellectual structure of knowledge on the entrepreneurial ecosystem of MSEs?

Although the use of bibliometric analysis in business research is still relatively new, it is gaining a lot of traction in the field attributed to the development of different software such as VOS Viewer and different databases such as Dimensions, Scopus, Web of Science and PubMed (Singleton, 2010). Dimensions is currently becoming a popular database that attracts the attention of most scholars, as it accounted for having more than 1.7 billion citations (www.dimensions.ai).

3. Method

Bibliometric analysis is used in this study. In making the analysis, VOS Viewer software and Microsoft Excel applications were commonly used. Keywords were used in searching documents from the Dimensions database. The keywords "Entrepreneurial ecosystem" AND "Micro and Small Enterprises" are used in searching the required documents since the objective of the analysis was to know the bibliometric trends in that area. An "*AND*" Boolean was used, as the intention was to review the trends in the entrepreneurial ecosystem in the context of MSEs. The search was made on March 23, 2022, at 6:30 PM. To narrow the search on the issue under study, the keywords used were in quotation marks and made on the full body of the manuscript. The search results revealed that there are 440 documents in the database. Since the objective of the study was to know the trends over the past 10 years, the search was limited to the years 2013 to 2022. The search results show that 434 documents have been published in the area. To be more specific to the study area, the search was limited to the areas of business, mainly commerce and management, business and management, economics, applied economics, policy and administration and banking, finance and investment. The search results showed that there are 299 documents in the database. Finally, the publication types were limited to articles, edited books, proceedings and book chapters to widen the scope of the search. The results show that there are 266 documents. After the data had been searched from the Dimensions database, it was exported in a CSV format to allow the application of the VOS Viewer software and different Excel formulas. Then, after, the data analysis was made by using the VOW Viewer software, Excel formulas and graphs.

4. Findings

Based on the analysis made using the VOS Viewer software and Excel applications, the following results were found about several documents and citations, countries and organizations' collaboration, and the structure of intellectual knowledge in those areas.

4.1. Number of Documents and Citation

In bibliometric analysis, one of the issues that can be addressed is the number of documents and citations in the areas under study. From the search results, it was possible to find the following number of publications and citations in the last ten years in the areas of the entrepreneurial ecosystem of MSEs. Table 1 below summarizes the number of publications and citations.

The table clearly shows that 2019, 2022 and 2020 are the years in which the largest numbers of publications have been recorded. Regarding citations, 2019, 2017 and 2018 are the years in which the maximum numbers of citations have been cited. Figure 1 below clearly shows the trends in several publications and citations.

Table 1: Number of publications and citations from 2012 to 2022.

Year	Number of Publications	Number of Citations
2013	5	59
2014	1	18
2015	8	74
2016	12	77
2017	16	206
2018	26	119
2019	90	328
2020	42	106
2021	46	28
2022	20	1

Source: Compiled from Dimensions database March 23, 2022, 6:30 PM.

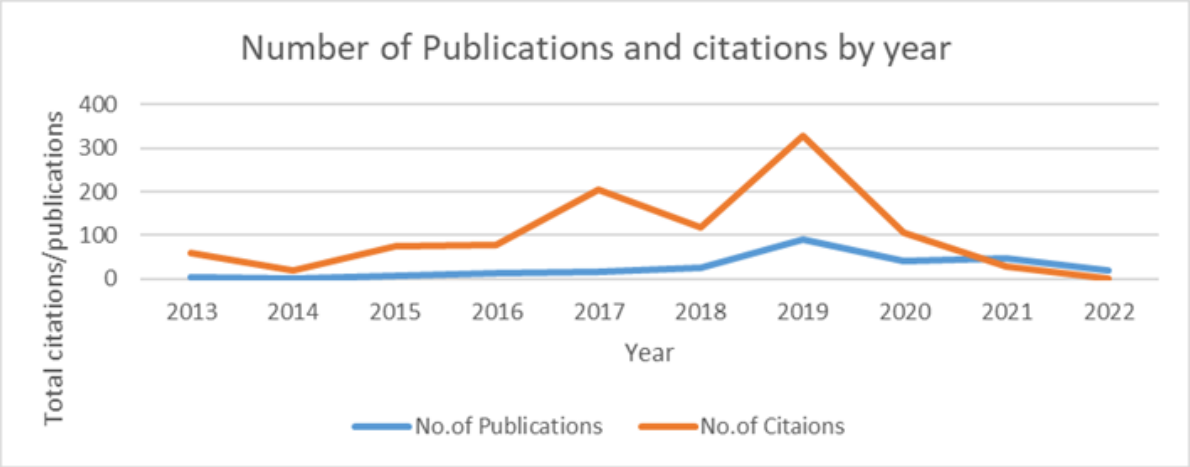

Figure 1: Number of publications and citations by year. Source: Compiled from Dimensions database March 23, 2022, 6:30 PM.

4.2. Countries Contributed to the Documents

Regarding the collaboration of different countries, in the areas under consideration, the United Kingdom, India and Brazil are the largest contributors of publications in the area. In addition, the greatest number of citations has been recorded by the United States, China and the United Kingdom, respectively. Table 2 and Figure 2 below clearly show this fact.

4.3. Most Cited Journals and Articles in the Area

Studies on entrepreneurship, structural change and industrial dynamics, contexts and FGF studies in small business and entrepreneurship are the three most-cited journals in the area. The top ten cited journals together with the total publications and average citation per publication in the areas of the entrepreneurial ecosystem of MSEs are presented in Table 3 below.

Table 2: Documents and citations by country.

Country	Documents	Citations
United Kingdom	14	117
India	8	27
Brazil	6	22
South Africa	6	3
United States	6	167
Australia	5	29
Italy	5	88
Netherlands	5	19
China	4	159
Canada	3	8

Source: Compiled from Dimensions database March 23, 2022, 6:30 PM.

Figure 2: Country's collaboration in producing publications. Source: Compiled from Dimensions database March 23, 2022, 6:30 PM.

Table 3: Most cited journals in the entrepreneurial ecosystem of MSEs.

Name of The Journal	TP	TC	CPP
Studies on Entrepreneurship, Structural Change and Industrial Dynamics	5	158	32
Contextus :Revista Contemporânea de Economia e Gestão	1	46	46
FGF Studies in Small Business and Entrepreneurship	1	44	44
Journal of Creativity, Invention, Innovation and Entrepreneurship	2	43	22
Journal of Entrepreneurial Finance in Emerging Markets	7	33	5
International Journal of Entrepreneurship and Small Business	4	31	8
Journal of Financing SMEs and Entrepreneurs	2	30	15
Journal of the Knowledge-Economy	2	26	13
Entrepreneurship in BRICS	2	26	13
The Journal of Entrepreneurship	2	18	9

Note: TP = Total publications, TC = Total Citations, CPP = Average Citation per Publication. Compiled from Dimensions database March 23, 2022, 6:30 PM.

4.4. Intellectual Structure of Knowledge in the Entrepreneurial Ecosystem of MSEs

Using VOS Viewer and taking co-citation types of analysis and applying cited authors as a unit of analysis, the following cluster of authors contributed to the intellectual structure of knowledge in the areas of the entrepreneurial ecosystem of MSEs. The minimum number of citations of an author was taken as 5 and based on that, of 8811 authors, 14 meet the threshold. The maximum number of citations (44) with a total link strength of 381 is recorded by Wright Mike. Figure 3 below clearly shows the intellectual structure of knowledge among the authors.

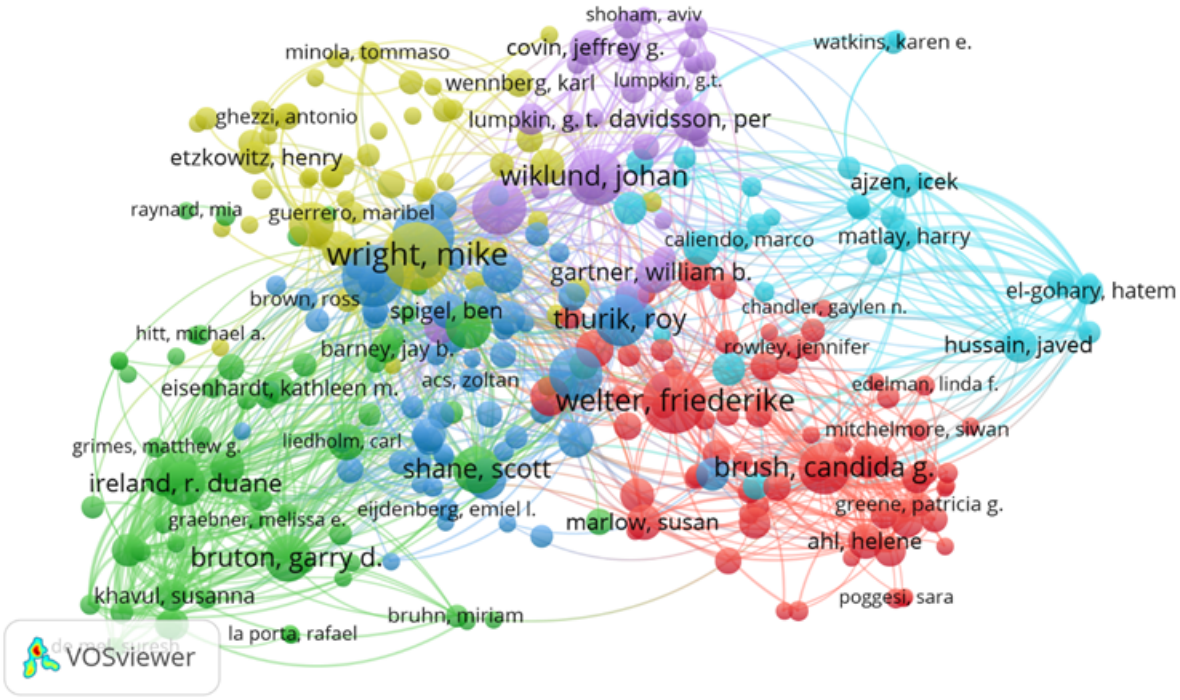

Figure 3: Co-citation by authors. Source: Authors compilation using VOS Viewer.

4.5. Nature of Collaboration

The nature of the collaboration of authors using VOS Viewer has been seen on co-authorship, country or organizational levels. The following (Figure 4) shows the collaborations by co-authorship.

In addition to authorship, collaborations were examined at the country level. The United Kingdom, India and the United States take the leading positions. The following (Figure 5) shows the collaborations by country.

The collaborations at an organizational level are presented in Figure 6 below. The figure clearly shows the most collaborative organization in the areas of the entrepreneurial ecosystem of MSEs.

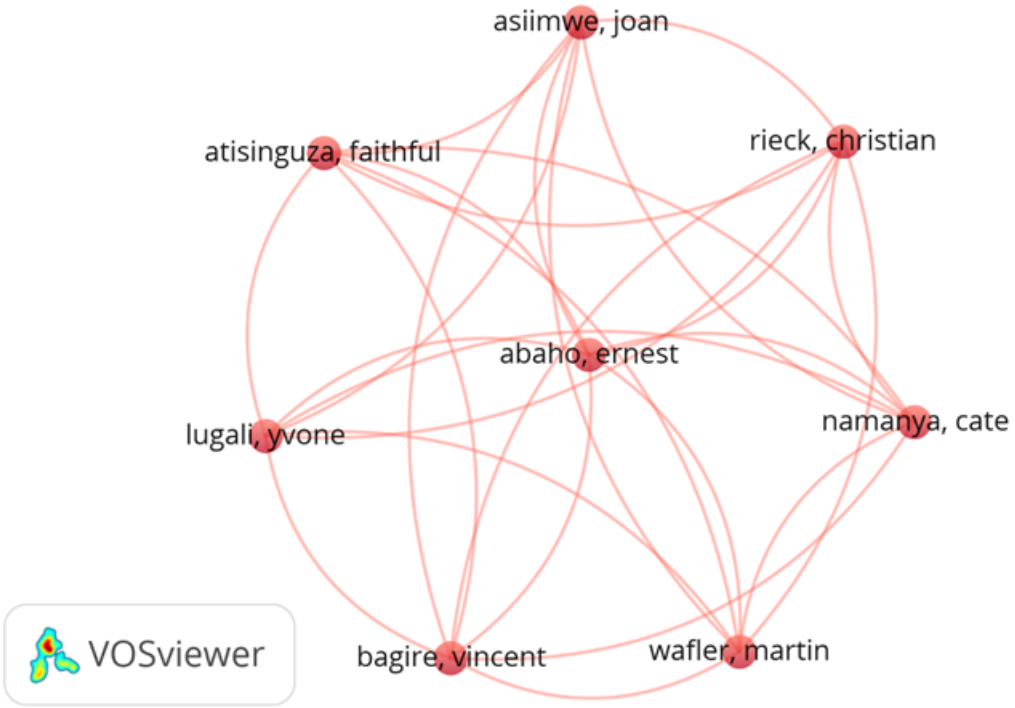

Figure 4: Collaborations by co-authorship. Source: Authors compilation using VOS Viewer.

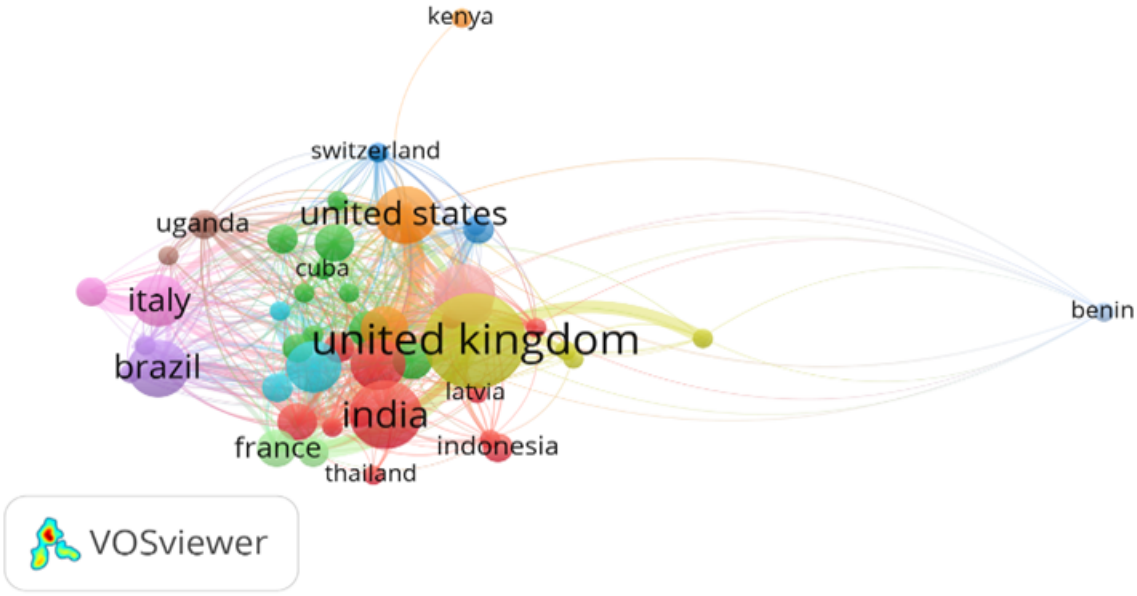

Figure 5: Collaborations by country. Source: Authors compilation using VOS Viewer.

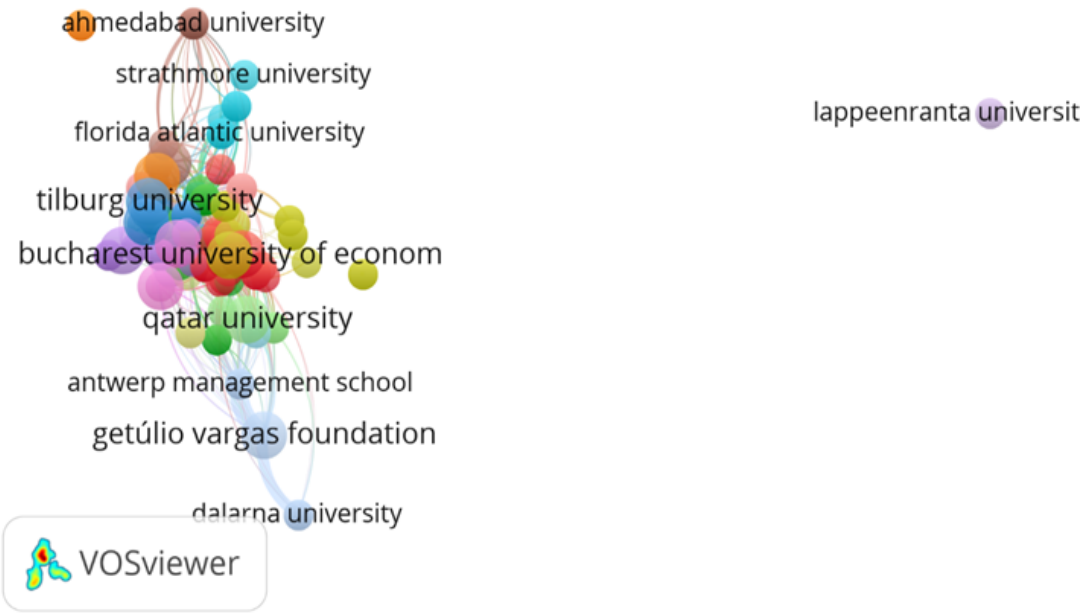

Figure 6: Collaborations by organization. Source: Authors compilation using VOS Viewer.

5. Conclusions and Future Directions

MSEs are attracting the attention of researchers, policymakers, and government and non-government organizations attributed to their contribution to the employment creation, income generation, innovation and overall growth and development of a nation. Though a significant amount of literature and publications are available worldwide in different databases about MSEs, the agenda of the entrepreneurial ecosystem of MSEs is not as well developed. Theories in the areas are not well formulated, and the issues are not as well theorized (Fubah and Moos, 2021; Schwarzkopf, 2016; Fredin and Lidén, 2020). The bibliometric analysis made based on the last ten years justifies this fact. The total number of publications, citations, and cooperation among countries and organizations is not as adequate as compared to the time coverage addressed in this analysis.

It is implied that much should be done in the area. Since ecosystem development is a prerequisite for the development of MSEs, efforts should be performed in developing a conducive environment under which MSEs can start, operate, run and sustain their business. This is possible if scholars in the area identify research findings and show policy directions in developing the ecosystem of MSEs. Hence, the entrepreneurial ecosystem of MSEs should be a research agenda of the 21st century. The contribution of micro and small enterprises is beyond their names, "micro" and "small". The world's greater employment opportunities are created by MSEs, and their role in the GDP growth of a country is significant and addresses a large group of individuals, including the marginalized and the poor.

The fact that literature in the areas of the entrepreneurial ecosystem of MSEs is not well-developed shows that significant literature gaps exist in these areas. Making bibliometric analyses such as this will be very important in identifying the gaps in publications, citations, countries' contributions and collaborations. Moreover, organizations and universities' participation in supporting the areas through the provision of policy directions and other supports contribute a lot if much is researched in the areas. Hence, bibliometric analysis such as this will not only clearly show the trends in the literature, but also initiate researchers to participate in the area to fill gaps in the literature. Researchers, universities and other stakeholders are recommended to explore the area and play their role in identifying literature gaps in the areas of the entrepreneurial ecosystem of MSEs. It is also suggested that, as the area is not well theorized, scholars in the area be advised to formulate foundation theories and play their role in the development of literature in the entrepreneurial ecosystem of MSEs.

Author Contributions: Both the authors contributed, read and approved the final subscript.

Funding: The study was solely performed by the authors. There was no funding for the study.

Conflicts of Interest: The authors declare that they have no competing interests.

List of Abbreviations

BRICS	Brazil, Russia, China and South Africa
CSV	Comma Separated Value
DESA	Department of Economic and Social Affairs
GDP	Gross Domestic Production
MDG	Millennium Development Goals
MSEs	Micro and Small Enterprises
VOS	Visualization of Similarities

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