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Research Article

Bibliometric Analysis of MSME Accounting and Finance Research in Indonesia

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Abstract.

To support MSME in various ways, a deep understanding of it is necessary to recover from the post-pandemic period. Research is a good starting point to resolve the issue, as it has a huge impact on society. This research was conducted using bibliometric analysis. The stages carried out in this research included data collection, data reduction, and data mapping. Data collection were started with the keywords: "UMKM Akuntansi Keuangan" in the crossref dataset. This result also showed that the limited generalizability of the results to the research on these topics. There has been a change in trend in the topic of discussion, research methods, and research subjects with regards to the topic of discussion in research in the field of accounting and financing MSMEs over time. In the past, research mostly discussed financial performance, using secondary data provided by the entity and financial statements. Meanwhile, recent research often discusses the conformity of MSMEs financial reporting.

Keywords: bibliometric analysis, MSME, accounting, finance, research

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1. Introduction

There is no denying that Micro, Small, and Medium Enterprises (MSME) have a significant and irrefutable role in Indonesia's economy. It has the highest employment, contributes more than 50% of GDP [1], etc. Unfortunately, during the pandemic years, MSMEs have suffered the hardest hit. If during the 1998 and 2008 crises, MSMEs became the most powerful retainer who brought about the rise of the Indonesian economy, then during the 2020-2021 pandemic Covid-19 crises, BPS recorded that more than 67.77% of MSMEs experienced a very significant decline in sales and development [2]. Therefore, the support of all groups for MSMEs, including academics, is very important during this post-pandemic.

Even before the pandemic, MSME has a very complex problem, from a management, marketing, and finance point of view. Several problems are faced by MSMEs such as

financial inclusion [3], meanwhile, one of the internal problems that MSMEs often faced is the issue of accountability [4]. This accountability problem occurs because MSMEs do not yet have good management and financial administration system. One of the reasons for the poor accountability of MSMEs is the absence of separation of ownership between MSME owners and MSME

entities or in accounting referred to as agency theory. As a result of this error, MSMEs are not able to measure their performance regularly.

This accountability problem is like a rolling snowball, the lack of accountability in Indonesia could lead to distrust and asymmetric information about the MSME. For example, this problem can cause financial intermediaries or investors to be reluctant to provide financial capital assistance.

A deep understanding of MSME research is very needed to support MSME in various ways to recover in this post-pandemic period. Research is a good starting point to resolve the issue. Since the main purpose of the research is how research has an impact on society. That is also a reason why numerous quantitative indicators are developed to measure the productivity of research [5].

Understanding the extent to which research on MSMEs has been carried out in the past, will give researchers and academics an understanding what are the topics of study in research related to MSMEs that have been discussed so far and give an idea of what topics should be accelerated in the future. Therefore, this research aim was conducted to present the state of research associated with MSME Accounting and Finance for over 2 decades and to evaluate the impact of various research on MSMEs that have been carried out so far.

2. Literature Review

2.1. Bibliometric Analysis

To look back and describe published publications and assess academic works on a certain topic, researchers could use bibliometric analysis with a quantitative approach to analysis. According to Donthu et al., there are 3 types of major review methods, which are bibliometric analysis, meta-analysis, and systematic literature review. The differences between these 3 types of techniques lie in their goals, when to use, scope, the dataset used, and its analysis[6]. Bibliometric analysis is used to summarize a lot of bibliometric information to show the current intellectual state and new developments in a field or area of study. It could be used when the research scope is too wide, and the

dataset is too large for manual review. And for this research quantitative and qualitative analyses are used. The bibliometric analysis itself is a part of a systematic literature review.

This approach enables the researcher to review data with a broad perspective and analyze a large dataset. Both qualitative and quantitative methods could be used to analyze the outcome. Quantitative analysis involves evaluation and interpretation, meanwhile, qualitative analysis is used when the analysis only involves interpretation. Bibliometric analysis techniques manifest across two categories: (1) performance analysis and (2) science

mapping. In essence, performance analysis accounts for the contributions of research constituents, whereas science mapping focuses on the relationships between research constituents. Moreover, there are significant number of research using literature review in this recent years [6]. This perhaps happen because there are a lot more tools available such VOSviewer, CiteSpace, Histcite, etc in the recent days. For this research, the researcher use VOSviewer as a tool to do the analysis.
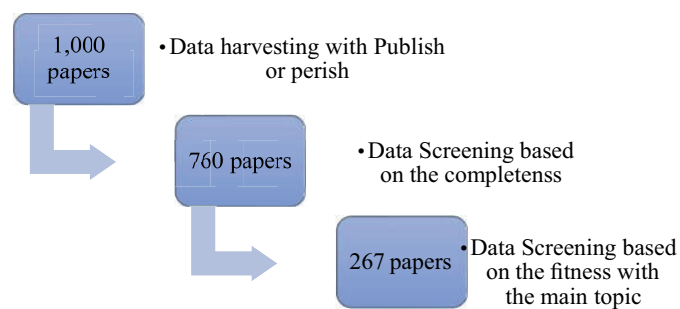
2.2. MSME

The definition of Micro Small Medium Enterprise (MSME) is different in every country. It depends on the condition of each region and type of business. The definition of MSME which generally used is the definition by world bank. According to the world bank [7] the definition of Small and Medium Enterprises is different according to the number of employees, total assets and total annual sales. Meanwhile, in Indonesia, the definition of MSME is mentioned in the government regulation of the Republic of Indonesia Number 7 of 2021 [8], Article 35, where the definition of MSME distinguished by 2 categories, which are business capital and its annual sales.

3. Research Methodology

This research was conducted using bibliometric analysis. The stages carried out in this research was including data collecting, data reduction, and data mapping. The data was collected using publish or perish application. Data Collection was started with the keywords: "*UMKM Akuntansi Keuangan"* in the crossref dataset. Crossref data set was chosen because this dataset provides journals with clear identities or often called Digital Object Identifier (DOI). In this first step, 1.000 papers were collected from publish and perish. After data collection was done then the data-reducing process began, this was

needed because several journals were double-written the dataset, and several journals were not complete with either the title or the author. This process also ensures that every journal was fit to the central theme, which is MSME Accounting and finance research, by reading the title and abstract. In the first step of data collection, 1,000 papers were collected. The second step is data cleaning based on the completeness of the journal and the author, in this process 760 papers were selected. The second stage of data cleaning was carried out to eliminate double papers and match the suitability of the content based on the title and abstract with the main theme of this paper, namely MSME finance and accounting. In this process, 267 papers remained (chart 1).

After ensuring that the dataset fit the theme and there are no double papers in it, the researchers could start mapping the dataset. Data mapping in this research was using the Vos viewer application created by Nees Jan van Eck and Ludo Waltman. To analyze further, the researcher needs to create maps of publications, authors, or journals based on citation, co-citation, or to create maps of keywords based on a co- occurrence network using VOSviewer [9]. In this research, Vos viewer was used to visualizing the trend in MSME Accounting and finance in the past 2 decades after the reformation era.

1,000 papers	• Data harvesting with Publish or perish
760 papers	• Data Screening based on the completenss
267 papers	• Data Screening based on the fitness with the main topic

Source: Processed data, 2022

Figure 1: Data Collection Process.

4. Data Analysis

4.1. Descriptive Statistics of the Database

Through searching and screening process, the researchers obtained 267 articles from 539 authors which written in Bahasa Indonesia. These 267 articles were published by 173 journals from 155 institutions (table 1).

4.2. Performance Analysis

Table 1: Descriptive statistics of the data.

Criteria	Quantity
Publications	267 articles
Authors	539 authors
Source	173 journals
Institutions	155 institutions
Cited	0

Source: Processed data, 2022
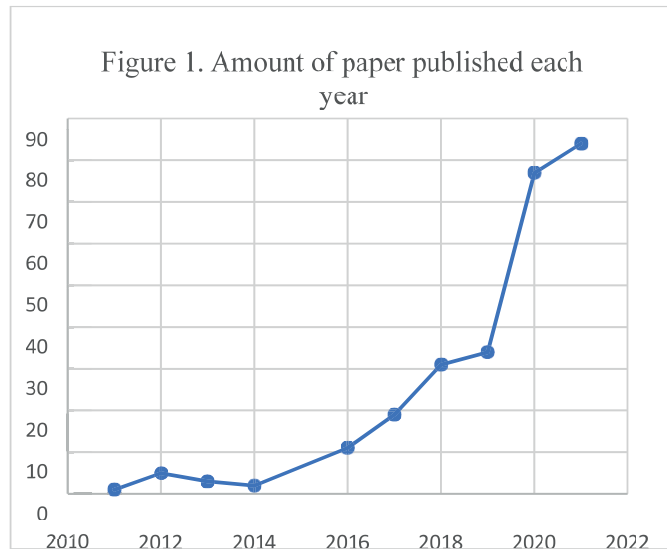
4.2.1. Total Publications

The data was taken from the year 2000 -2021. The table below shows that only from the year 2011, a paper with MSME accounting and finance was recorded in crossref. Based on the results of the analysis of the appropriate papers, there is indeed an increase in the number of publications on this topic. While there is no sharp increase in journal publications in 2011-2016, there is a tremendous increase in the number of publications in 2020-2021.

Table 2: Number of publications by year.

Publication year	Amount of papers published
2011	1
2012	5
2013	3
2014	2
2016	11
2017	19
2018	31
2019	34
2020	77
2021	84
Total	**267**

Source: Processed data, 2022

Figure 1, shows that there is an increase in the number of a paper published each year. At the beginning of 2011, only 1 paper was published on MSME accounting and finance topics, and it increase gradually every year, except for the years 2013 and 2014. In the early stage, only less than 10 papers are published every year. In the subsequent stage, the number increased to tens per year which are from 2016- 2019. And in the last 2 years, the number of published papers increase significantly to above 70 papers each year.

Figure 1. Amount of paper published each year

Source: Processed data, 2022

Figure 2: Amount of paper published each year.

4.2.2. Total Publications from academia and industry

This data unravel about the paper publisher in this research topic. Based on the affiliation of the published journal it shows that in Indonesia, majority of the paper published by academia which are 257 papers and industry only published 10 journals in the period of 21 years (table 3).

TABLE 3: Number of Publications from academia and industry.

Publisher category	Amount of paper published
Industry	10
academia	257

Source: Processed data, 2022

4.2.3. Citation index

This information is about how often the paper took as a reference or we can assume this as an achievement for a scholarly work. Based on the information collected, there were no cited papers on this topic, which also means that these papers are never taken as references. This phenomenon could indicate that all of the papers on this topic have no impact according

to the common measurement. So why this could happen? This could happen because most of the paper's title on this topic was very specific and the conclusion cannot be

generalized. In most of the research, the data taken are very regional. It shows from the paper which uses regional words such as village "*desa"*, districts such as "*kecamatan"* or "*kabupaten"*, and province amount to more than 22%. For example research by Lestari [10], Hakim et al. [11], Haptari [12], Sri Hastuti et al.[13], Lidia et al. [14].

TABLE 4: Paper with spesific words.

Research Which Title Use Words:	Total
Village	13
Sub-Districts	14
Districts	29
Province	3
	59

Source: Processed data, 2022

## 4.3. Science Mapping

4.3.1. Co-Word Analysis

This data shows about the words that appear frequently in research over the last 21 years. As the main keywords, UMKM has the highest occurrence, next are the words effect, financial reporting standards and Indonesia (table 4, Figure 2). These 20 terms often appear in the papers, the discussion was carried out between the year 2019-2020 (table 4). In the recent research on this topic, the term that often appears is financial reporting standards for MSME, form, positive effect, data analysis technique, and financial literacy (Figure 3). Meanwhile in past research, terms such as finance, government, secondary data, role, and financial performance are more commonly used.

In past research, the frequently used words were finance, government, secondary data, role, financial performance, development, term, and company (table 5).

4.4. Network Analysis

4.4.1. Clustering

The analysis result showed that from 267 papers, which have 37 keywords based on its occurence, VOSviewer divided it into 3 clusters, which are red, blue and green cluster. The most frequent words used in red cluster are effect, influence, respondent, use and population which describe about the relationship of the MSME. The green cluster most frequent words are UMKM, Indonesia, *laporan keuangan*, sak etap, which describe the
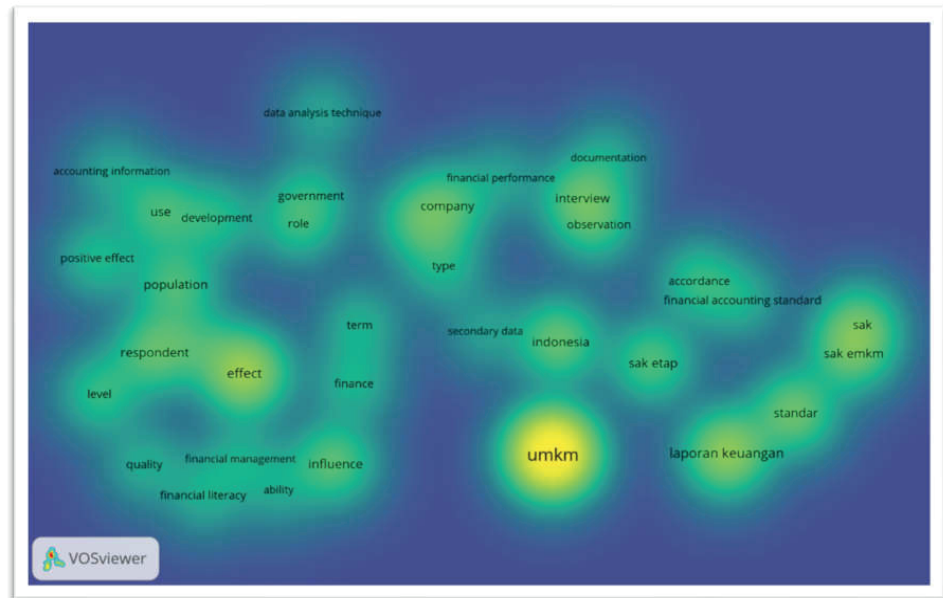
Source: Processed data with VOSviewer

Figure 3: Density Visualization.
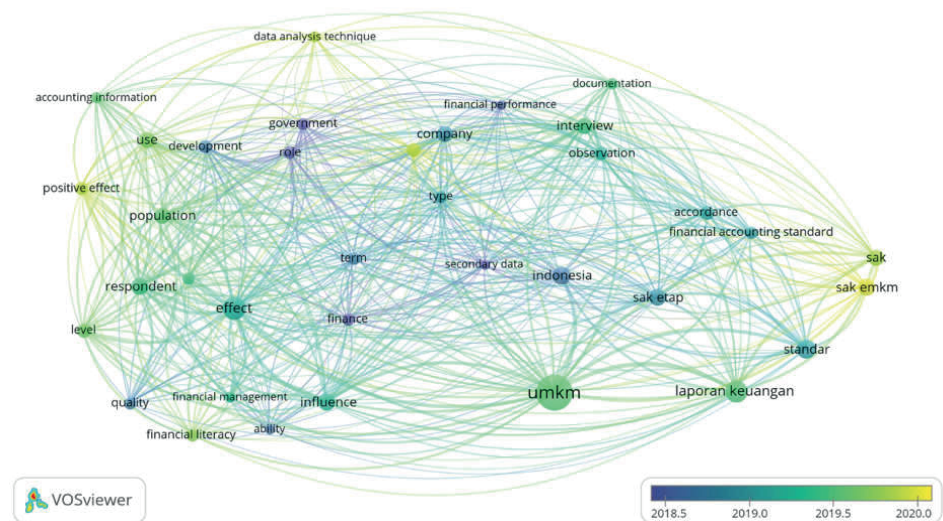
Source: Processed data with VOSviewer

Figure 4: Overlay Visualization.

research object. And Blue cluster most frequent occurrence words are company, form, type, interview, secondary data which describe how to conduct the research or research methods.

In the past, research mostly discuss about financial performance, using secondary data provided by the entity, and about financial statements, such as research by Siswanto [15], Kumalaningrum [16], Lestari et al. [17], etc. Meanwhile for the recent

TABLE 5: Co-Occurrence Words.

| Keywords	Frequency	Average publication year	Keywords	Frequency	Average publication year
MSME	121	2,019.529	Financial statements standards	25	2,019.760
Effect	50	2,019.160	population	24	2,019.542
financial statements	46	2,019.500	company	23	2,018.870
standard	33	2,019.000	Use	23	2,019.652
Indonesia	31	2,018.742	form	20	2,019.850
influence	28	2,019.429	keywords	20	2,019.600
respondent	28	2,019.250	level	20	2,019.150
financial reporting standards for MSME	27	2,019.926	accordance	19	2,019.053
financial reporting standards for entities without public accountability	26	2,018.885	development	17	2,018.529
interview	25	2,019.440	observation	17	2,018.765

Source: Processed data

TABLE 6: Past Research Terms.

Keywords	Frequency	Average publication year
finance	15	2.017,80
government	13	2.018,000
secondary data	10	2.018,40
role	17	2.018,529
financial performance	10	2.018,60
development	17	2.018,765
term	14	2.018,786
company	23	2.018,870

Source: Processed data

research are often discuss about the conformity of MSME's financial reporting with SAK EMKM, such as research by Simanjuntak et al. [18], Amani T [19], Susulowati et al. [20], Suwondo [21], Sutapa [22], etc.

4.4.2. Network metrics

The word effect is a word which frequently linked with other words in papers on this topic (table 6). Meanwhile for the word UMKM has the highest total link strength compared
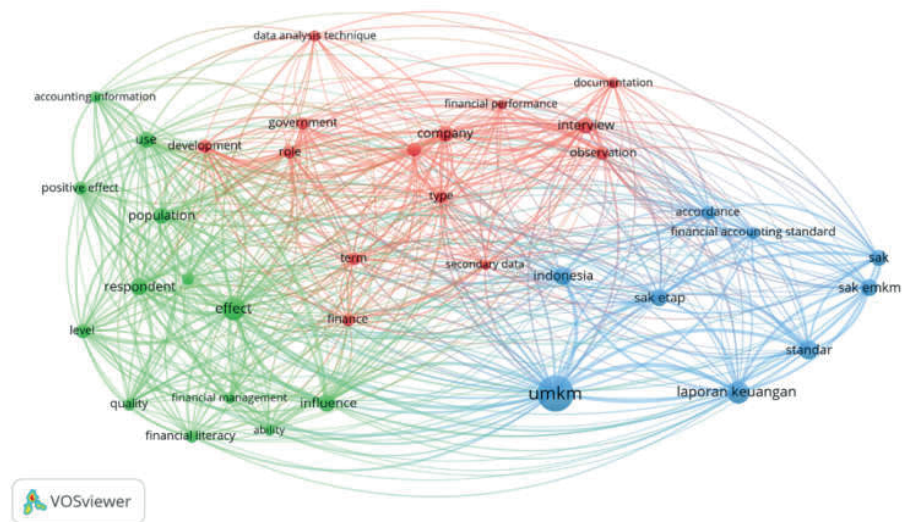
Source: Processed data, 2022

Figure 5: Network Visualization.

with the other. Total link in VOSviewer shows the number of links of an item with other items, and total link strength shows the amount of power of the links of a word item with other items [9].

Source: Processed data From these results, it was also found that the word MSME in previous studies was more often associated with government, role, finance, secondary data and financial performance, while in the latest research the word MSME was more often associated with the word SAK E MKM, form, positive, accounting standard, financial literacy.

5. Conclusions

Talking about the impact of research related to MSMEs in accounting and finance is still lacking, judging from the citations to papers on this topic. but that does not mean that these researches have no social impact at all, maybe because the title is very specific on this research topic, it can be a direct recommendation to the object of research regarding improvements that must be made. This result also showed that the limited generalizability of the results to the research on these topics. Results that cannot be generalized usually occur because of the limited data that can be taken and the data are very regional in nature since more than 22% of the paper use regional words such as *desa, kecamatan, kabupaten,* and *provinsi*. Then, if we look further related to the

TABLE 7: Clustering of the words.

Red Cluster	Average publication year	Green Cluster	Average publication year	Blue Cluster	Average publication year
Finance	2.017,80	ability	2.018,70	Indonesia	2.018,742
government	2.018,000	quality	2.018,769	financial reporting standards for entities without public accountability	2.018,885
secondary data	2.018,40	effect	2.019,16	financial accounting standard	2.019,000
Role	2.018,529	influence	2.019,25	Standard	2.019,000
financial performance	2.018,60	financial management	2.019,333	accordance	2.019,053
development	2.018,765	person	2.019,429	Financial statements	2.019,50
Term	2.018,786	respondent	2.019,429	MSME	2.019,529
company	2.018,870	population	2.019,542	Financial Accounting standard	2.019,76
Type	2.019,000	accounting information	2.019,546	financial reporting standards for MSME	2.019,926
observation	2.019,177	level	2.019,60		
interview	2.019,44	use	2.019,652		
documentation	2.019,455	financial literacy	2.019,692		
data analysis technique	2.019,818	positive effect	2.019,824		
form	2.019,85				

Source: Processed data, 2022

topic of discussion in research in the field of accounting and finance MSMEs across time, there is a change in trend in the topic of discussion, research methods and research subjects. In the past, research mostly discussed financial performance, using secondary data provided by the entity, and financial statements. Meanwhile, recent studies often discuss the conformity of MSME's financial reporting with SAK EMKM. Therefore, this research encourages more comprehensive data collection with a broader scope related to MSME.

TABLE 8: Keywords Networking.

| Keywords	Total link	Total Link Strength	Keywords	Total link	Total Link Strength
effect	35	215	use	31	108
umkm	34	265	population	30	120
type	33	83	sak etap	30	103
form	33	105	laporan keuangan	30	121
indonesia	33	124	secondary data	29	52
company	32	115	development	29	87
influence	32	114	observation	29	86
term	31	71	role	28	97
interview	31	114	person	28	72
respondent	31	136	level	28	101
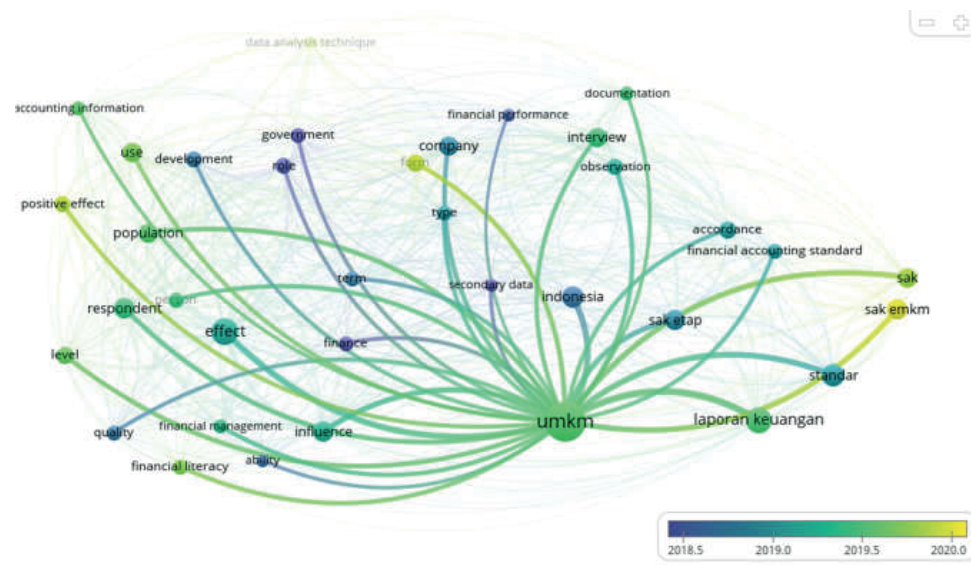
Figure 6

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