

MAPPING THE LANDSCAPE OF MANAGEMENT ACCOUNTING INFORMATION: A BIBLIOMETRIC REVIEW

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Abstract

Management accounting information serves as a pivotal input for organizational control mechanisms, providing the fundamental basis for strategic policymaking and departmental performance evaluation. The efficacy of managerial decision-making is inherently linked to the reliability of the management accounting data provided, underscoring its profound significance to leadership. This study aims to deliver a comprehensive synthesis of prior scholarship concerning management accounting information. Utilizing bibliometric analysis, the research systematically examined 194 articles retrieved from the Scopus database spanning the period 1976–2024. The findings demonstrate a robust scholarly interest in this field, characterized by consistent publication volumes and cross-border co-authorship networks. This trend aligns with the increasing demands of business administrators for high-quality information to navigate a globally competitive landscape and an increasingly volatile market environment.

Keywords: Management Accounting Information, Bibliometrics, VOSviewer Software.

JEL Code: O16, M14, M40.

1. INTRODUCTION

In the production and business activities of an enterprise, the information provided to managers to perform management functions is very diverse and is collected from many different information sources. In which, accounting information in general and management accounting information (MAI) in particular are assessed by researchers to play an important role, at that time, MAI is identified as an indispensable source of information to help managers perform their management functions. Specifically, financial and non-financial information provided by the management accounting system is always useful information to help managers make business decisions, plan, use resources, check and evaluate the performance of departments, thereby providing appropriate reward mechanisms (Atkinson, Kaplan, Matsumura, & Young, 2012; Kaplan, 1998; R. S. Kaplan & A. Atkinson, 1998). Furthermore, the strong development of information technology as it is today contributes to making MAI more diverse, rich and effective. Many previous studies have shown that MAI plays an important role in providing information to managers so that they can perform well management functions such as planning, controlling and decision making (Agbejule, 2005; Chenhall, 2003; Chenhall & Morris, 1986b). In fact, since the mid-19th century there have been many studies in many different countries on management accounting information. In this study, readers can grasp the development, information quality and research trends of published articles indexed by Scopus with keywords or abstracts or titles about “management accounting information” through the frequency of keyword usage, number of citations, number of authors, co-authors and countries with articles. This study examines a corpus of 194 articles indexed in Scopus

from 1976 to 2024 to address three primary research objectives. First, it seeks to delineate the trajectory of publication volume and identify the prevailing research trends regarding management accounting information. Second, the analysis investigates how primary keywords are thematically clustered and explores the evolution of scholarly focus on these topics over time. Finally, the research identifies the most influential authors and countries, evaluating their publication productivity and overall contribution to this academic domain. The paper is divided into the following sections: introduction to the study, identification of relevant conceptual background, research methodology and data processing methods, conclusion of findings and recommendations for future research directions.

2. THEORETICAL BASIS

Many researchers believe that the original role of MAI was to provide information to evaluate performance (Back-Hock, 1992; Nanni Jr, Dixon, & Vollmann, 1992). Management accounting provides information to assist business managers in planning, implementing and controlling business activities (Kaplan, 1998). MAI can simplify monitoring by generating reports and creating practical actions to assess the performance of each department and division within the organization (Chia, 1995). This role arises from the need for information to evaluate the performance of managers. In the later stage, many modern management accounting techniques such as activity-based costing, balanced scorecard, strategic management accounting, etc. are used to provide information to improve performance evaluation measures to support business administrators. These techniques focus on linking operational processes to the business strategy of the enterprise such as using decentralization combined with balanced scorecard to measure performance (R. S. Kaplan & A. A. Atkinson, 1998; Nanni Jr et al., 1992). MAI then is the creation of outputs by using inputs and various processes required to accomplish certain management objectives. MAI systems can assist managers to control activities, thereby assisting businesses in achieving their goals. MAI is to help predict the possible outcomes of a number of alternative actions taken in various activities such as planning, controlling and decision making (Mowen, Hansen, & Guan, 2006).

As global competition intensifies, information technology advances, and product life cycles shorten, innovation is increasingly becoming an important quality in the pursuit of business excellence and a key competitive strategy. Product innovation is often an uncertain process. At this point, the main role of MAI in the product development and innovation process is to provide the necessary information to reduce uncertainty (Tsai, Chang, Lin, & Cheng, 2020). In the process of innovation, the increasing use of advanced manufacturing technologies, such as computer-aided design, computer-integrated manufacturing and just-in-time systems, has led to the increasing use of advanced management accounting techniques, such as activity-based management, life-cycle costing and target costing, to ensure continuous improvement of manufacturing processes (Langfield-Smith & Smith, 2003). Furthermore, with product life cycles becoming increasingly shorter, the timeliness of MAI provides managers with timely information regarding changes in consumer tastes, market developments, and competitor

activities (Tsai et al., 2020). According to Sari et al. (2022), management accounting system is an organizational control mechanism that can be an effective tool to provide information and is useful in predicting the possible consequences that may arise from various operational choices and actions (Sari & Noviana, 2022). MAI is used in organizational control, as a basis for policy making and evaluation. The more reliable the MAI provided, the more effective the manager's decision making. Therefore, the characteristics/quality of MAI are important to the manager.

From the research results of Chenhall and Morris (1986a), found empirical evidence that the characteristics/qualities of MAI include: (1) broadscope, (2) aggregation, (3) integration, (4) timeliness. The broadscope of MAI is expressed in terms of quantity and time, including focus, information volume and time scope of information. For focus scope, it is expressed through information about internal factors of the enterprise or information about external factors of the enterprise. For volume scope, it is expressed through including both financial and non-financial information. For time scope, it is expressed through estimates of the time of activities or events that will occur in the future (Chenhall & Morris, 1986a). Financial information has an external scope such as total industry sales, total national product value, market share of the enterprise... Non-financial information has an external scope such as demographics, competitor activities, customer needs, scientific and technological advances... The broad scope of MAI will support managers in making business decisions and improve decision response time. Therefore, broad scope is considered as one of the aspects to evaluate the quality of MAI.

The aggregation of MAI is expressed in terms of information collection. MAI is collected in many different forms, some are raw data, some are aggregated at different time periods according to responsibility centers or functional departments (Chenhall & Morris, 1986b). Properly synthesized information will provide input for decision making because the time required to evaluate the information is relatively shorter than information that is still raw and not well structured (Chia, 1995). A properly aggregated MAI will provide useful input data for managers to make appropriate business decisions. Therefore, aggregation is considered as one of the aspects to evaluate the quality of MAI. The integrative of MAI is expressed in terms of integrated information that plays a role in coordinating different decisions within the organization. Through the integration of MAI, it can help managers connect units and departments in the enterprise, especially in cases where the enterprise has decentralized authority. When managers in a department make decisions in their department that affect the operations of other departments in the business, integrated information is always of interest to managers. At that time, integrated information will be more useful in coordinating between departments and divisions in the process of implementing executive decisions, such as information related to managers' decisions that have relationships between affiliated units (Chenhall & Morris, 1986b). Integrated information is also an ethical generator for business unit managers and indicates that the information provided will improve operational efficiency (Chia, 1995). The complexity and interdependence between sub-units will be reflected in the integrated information of MAI (Chenhall & Morris, 1986b). The existence of MAI's integration will help managers consider factors comprehensively in evaluating performance. Therefore, integration is

considered as one of the aspects to evaluate the quality of MAI. The timeliness of MAI is reflected in the frequency of reporting and the speed of reporting. Frequency refers to the frequency with which information is provided to managers. Meanwhile, speed is related to the time between the need to provide information and the availability of information at the request of the user (Chia, 1995). Timeliness of information means that information must be available to users at the time they need it, because after that point, the information provided will no longer be relevant for decision making. According to Sari and Noviana (2022), managers need timely information to react quickly to unusual events and take corrective measures. Therefore, timeliness is considered as one of the aspects to evaluate the quality of MAI.

3. RESEARCH METHODS

The study was conducted through bibliometric analysis, which is an analytical method that is considered to have made a great contribution to the scientific research community. The sample selection for the study was based on PRISMA as suggested by Liberati et al. (2009) and Page et al. (2021). The results obtained from the PRISMA method are entered into VOSViewer software to analyze keywords and co-citations. The results of bibliometric analysis are presented in tables and charts.

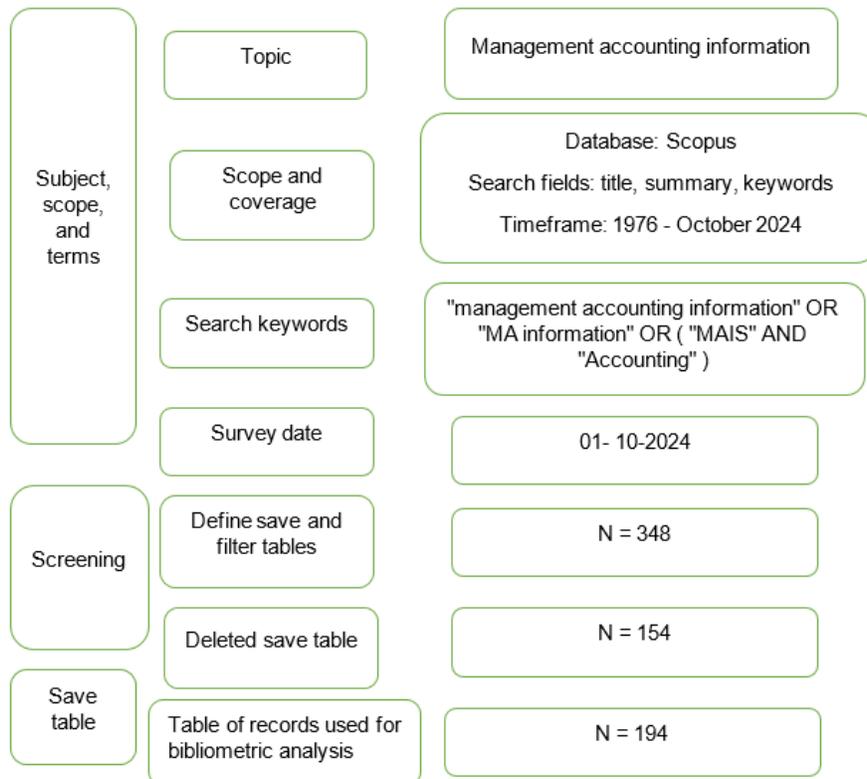


Figure 1: Search diagram

Source: Author's synthesis of research results

Bibliometric analysis was performed using the Scopus database. Data was collected on October 1, 2024, using the search terms "management accounting information" OR "MA information" OR ("MAIS" AND "Accounting"). In the data filtering field, the author selected keywords to filter by "Title", "Keywords", and "Abstract". The results showed 348 documents that met the search terms from 1976-2024. Next, the author screened to eliminate irrelevant documents. For technical screening, the author selected documents from journal articles, documents written in English, and documents on the topics of "Business, Management and Accounting" and "Economics, Econometrics and Finance". For content screening, the documents were preliminarily read to eliminate documents with irrelevant content even though they contained the search keywords. The results after filtering showed that all 194 results met the filtering conditions to be included in the study.

4. RESEARCH RESULTS

Statistics of number of articles and number of citations

From 1976 to 2024, there were a total of 194 articles with content on management accounting information in the title or in the keywords or in the abstract of the article indexed in Scopus.

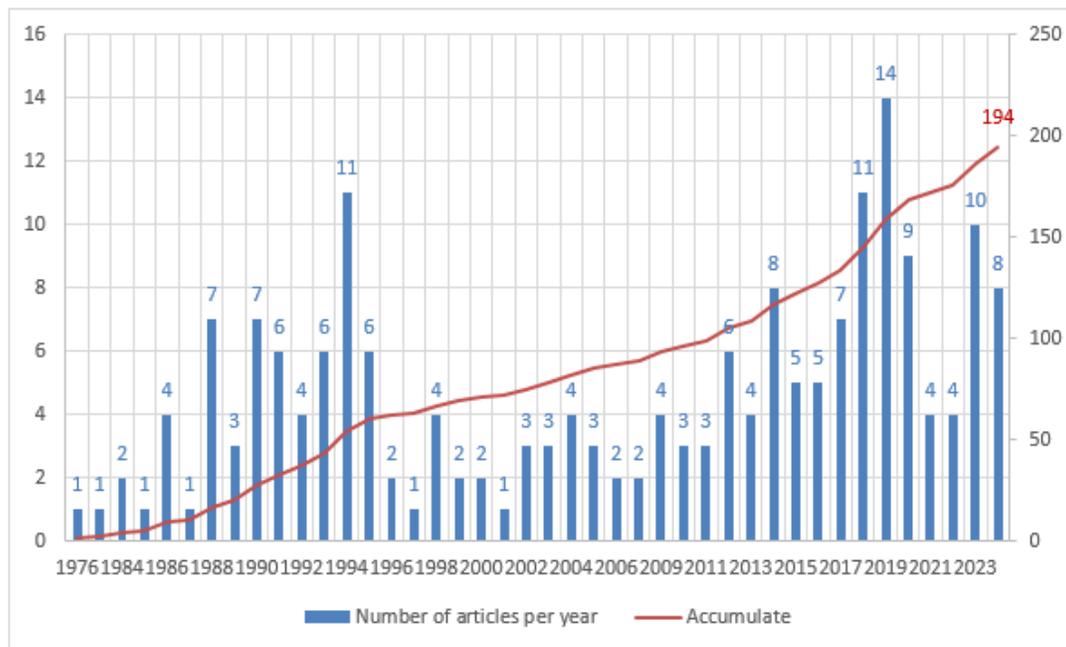


Figure 2: Chart of number of publications by year

Source: Author's synthesis of research results

The statistical results in Figure 2 show that there are two periods of content on management accounting information that researchers are interested in, which are the period from 1986 to 1996 and the period from 2012 to present.

The period from 1986 to 1996 was the period when businesses operated in an uncertain environment with many changes, at which time managers needed a lot of information in a wide range, comprehensive information, timely information and integrated information to make effective decisions. This was also the period when many modern management accounting techniques were implemented in businesses.

From 2012 to present, the level of global competition has increased sharply, along with the development of modern technology, leading to an increasing demand for information from managers. From the statistical results of the frequency of publication each year, it shows that management accounting information is still a popular research content and is of interest to many researchers around the world.

The statistics of the most cited articles are shown in Figure 3. The article “Valuation and Clean Surplus Accounting for Operating and Financial Activities” by FELTHAM G.A.; OHLSON J.A., published in 1995, is the most cited article with 1064 citations.

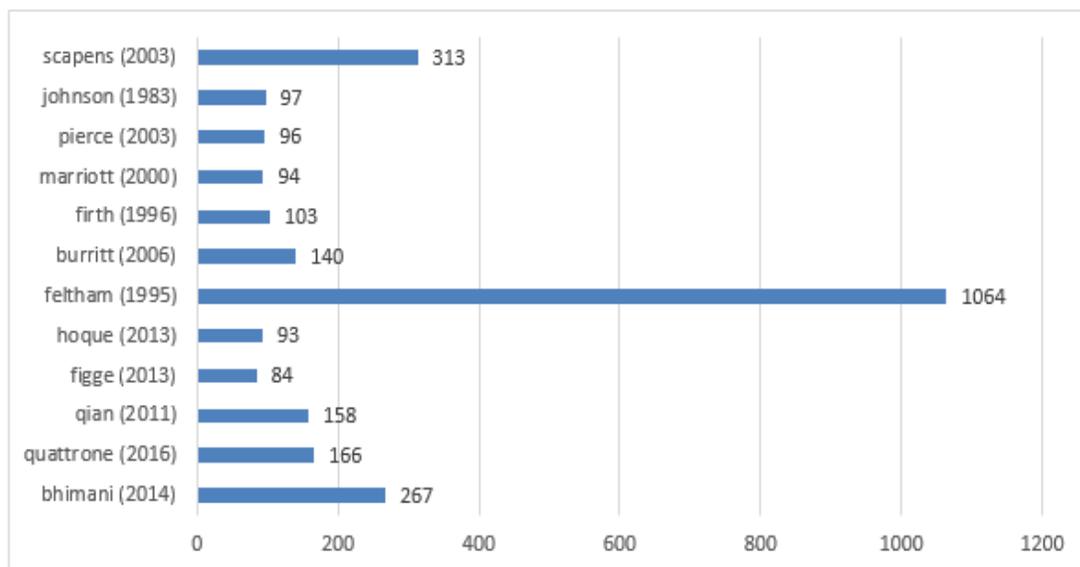


Figure 3: Statistics of articles with the most citations

Source: Author's synthesis of research results

Analysis of main themes

To answer the question, on the topic of management accounting information, what content has been of interest to researchers in recent years, this study used the author's keywords and the frequency of appearance in published articles. Among the 500 keywords used by researchers, there are 9 keywords with a frequency of appearance of 05 times or more (Table 1).

Analysis of trends in cooperation between authors, organizations and countries

This section identifies the most active authors in research on management accounting information, in terms of the number of publications and the number of citations received from other articles. Of the 359 authors participating in this content research, 6 authors participated in 03 or more articles (Table 2). Among them, the author group "Napitupulu, Ilham Hidayah" participated in the most articles with 7 articles, but the author group with the most citations was "Feltham, Gerald A." with 1119 citations.

Table 2: Author analysis results

No.	Author	Documents	Citations
1	"Astuty, U'idia"	3	29
2	"Choe, Jong-Min"	5	200
3	"Feltham, Gerald A."	3	1119
4	"Mulyani, Sri"	3	20
5	"Napitupulu, Ilham Hidayah"	7	64
6	"Suomala, Petri"	3	36

Source: Author's synthesis of research results

To explore the collaborative trends in research on management accounting information, this study analyzed co-authorship relationships between individual authors, between organizations, and between countries. For the trend of collaboration among researchers, it shows that there are two groups of researchers with collaborative relationships as shown in Figure 5. The first group includes the authors "Astuty, Widia", "Basir, Indra", "Harahap, Junita Putri Rajana" and "Pratama, Ikbar". The second group includes the authors "Habibie, Azwansyah", "Pasaribu, Fajar" and "Rahayu, Sri".

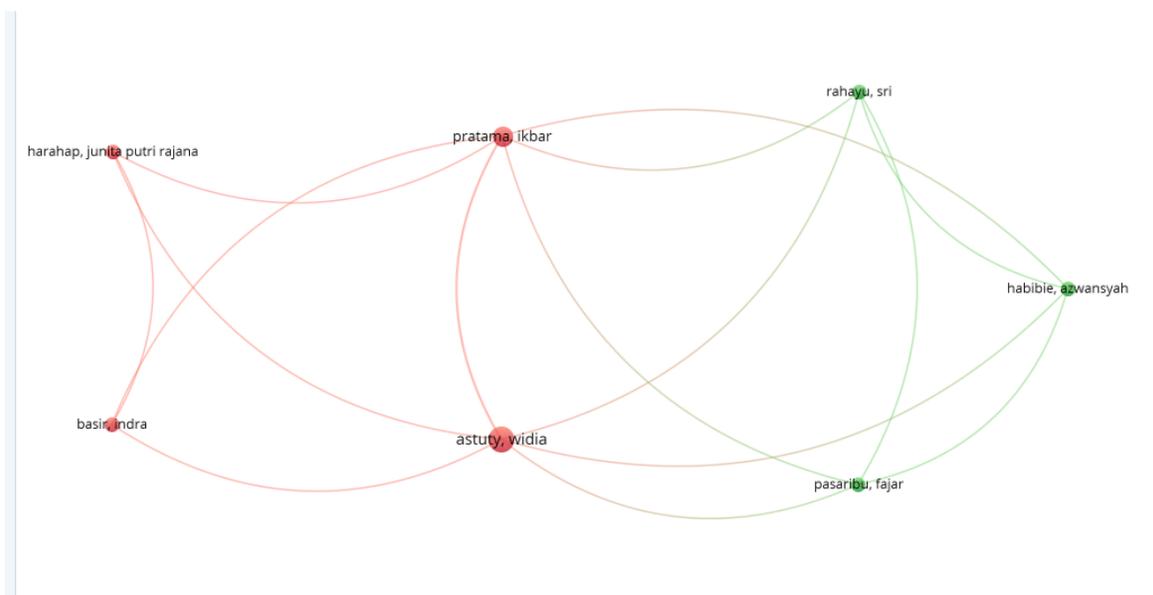


Figure 5: Visualization of network map by linked author

Source: Author's synthesis of research results

The author also conducted a study of the countries with the most articles on this topic. There are a total of 44 countries interested in this topic, of which 10 countries have 5 or more articles. The United States is the country with the most interest in the topic of management accounting information with 46 articles, followed by Canada with 26 articles, and the United Kingdom with 24 articles. Among the 10 countries interested in this topic, there are emerging economies such as Indonesia, Malaysia and Vietnam. This shows that management accounting information is of interest in many countries around the world, including countries with developed economies and countries with developing economies.

Table 3: Results of national analysis

No.	Country	Documents	Citations	Total links strength
1	Australia	15	694	4
2	Canada	26	1279	6
3	Finland	8	95	2
4	Indonesia	22	235	0
5	Malaysia	5	43	0
6	Netherlands	6	414	3
7	South Korea	6	220	0
8	United Kingdom	24	1168	4
9	United States	46	2206	9
10	Viet Nam	5	48	0

Source: Author's synthesis of research results



Figure 6: Network map visualization of connected countries

Source: Author's synthesis of research results

A visualization of the network map of connected countries is shown in Figure 6. Exploring the network of collaborations of countries shows the collaborations of authors in different

countries, and also shows the combination of countries in continents such as America, Europe, Asia, Australia. The UK is the country with the most connections with other countries.

There are 288 organizations whose authors are involved in writing about management accounting information. Table 4 shows the organizations (universities) with the most publications on this topic during the period 1976 - 2024.

Table 4: Results of organizational analysis

No.	Organization	Documents	Citations	Total links strength
1	"Cost management center, Tampere university of technology, Tampere, Finland"	3	36	0
2	"School of accounting, University of economics Ho Chi Minh city, Ho Chi Minh city, Viet Nam"	3	26	0
3	"Simon Fraser University, Canada"	3	14	1
4	"University of British Columbia, Canada"	5	11124	1
5	"University of Colorado at boulder, United States"	3	44	2
6	"University of Florida, United States"	3	129	0
7	"University of illinois at urbana-champaign, United States"	3	42	1
8	"University of Minnesota, Minneapolis, Minnesota, United States"	3	61	1
9	"university of waterloo, canada"	4	32	2

Source: Author's synthesis of research results

The results of the analysis of the cooperation trends between organizations are shown in Figure 7. There are two groups of organizations that have close cooperation relationships with each other. The first group consists of 5 organizations shown in red links. The second group consists of 3 organizations shown in green links.

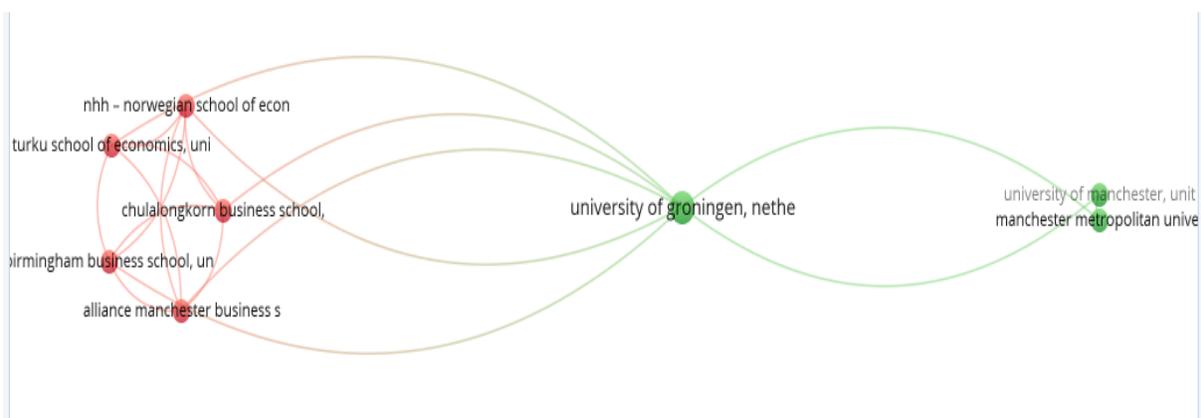


Figure 7: Network map visualization by linked organization

Source: Author's synthesis of research results

5. CONCLUSION

By using bibliometrics method with the help of some tools and applications to obtain statistical results and visualize data, thereby aiming to discover research trends.

In this study, the author evaluated global publications on management accounting information in enterprises indexed in the Scopus database published from 1976 to September 2024, to provide detailed information on publication counts, journals published, keyword networks, and co-author networks.

The research results show that there were a total of 194 articles on management accounting information indexed in Scopus from 1976 to 2024. In terms of frequently mentioned content, the keywords “management accounting” and “management accounting information” are the topics that researchers are most interested in. There were 359 authors from 44 countries writing about management accounting information. The countries interested in this topic span the world, on all continents and include both developed and emerging economies. Thus, researchers also have strong interest through the number of articles increasing over time and there is cooperation between many countries. This shows that management accounting information is always a topic of interest and study of researchers.

Although this study has contributed to the general theoretical basis, serving as a basis for reference studies on the role and application of management accounting information in enterprises. However, this study has some limitations, with only 194 articles in the Scopus database, it may not be enough to comprehensively summarize previous studies. Therefore, data collected from other rich sources such as Web of Science or OpenAlex are suggestions for broader overview studies on management accounting information.

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