Information Accounting System on Small and Medium Enterprises: Bibliometric Analysis

Ginanjar Adi Nugraha[a], Irman Firmansyah[b*] and Aldila Dinanti[c]

[a]*Faculty of Economics and Business, Wijayakusuma University, ginanjar@unwiku.ac.id, Indonesia*
[b]*Faculty of Economics and Business, Siliwangi University, irmanfirmansyah@unsil.ac.id, Indonesia*
[c]*Faculty of Economics and Business, Jenderal Soedirman University, aldiladinanti88@gmail.com, Indonesia*

Abstract. This research aims to investigate publication trends on the topic of accounting information systems in SMEs. This is intended to fill the research gap regarding the absence of previous research that discusses the development of publications on this topic. The method used is bibliometric analysis with the Scopus database in the publication range from 2014 to 2023. The search keywords use Bolean, namely "account* information system*" OR "information system*" AND "SMEs" OR "small and medium enterprise*", so that we get 982 publications. The results of the study found that the most productive publication sources were the Iberian Conference On Information Systems And Technologies Cisti and Advances In Intelligent Systems And Computing, while the publication with the highest impact was Procedia Computer Science. The most productive authors were Kamariotou and Kitsios. Both were also the authors with the highest impact. Bina Nusantara University was determined as the most productive institution, and Indonesia was the most productive country, but the most cited was France. This information can be an important basis for researchers, practitioners, and policy makers in understanding the dynamics and current developments in this field. In addition, it was found that for SMEs, accounting information systems are not only adopted, but also utilized strategically to support the growth and sustainability of SMEs, especially when faced with limited resources and access to technology.

Keywords: Accounting Information System, Small and Medium Enterprises, Bibliometric

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[*]Corresponding author. E-mail: irmanfirmansyah@unsil.ac.id

Introduction

Currently, companies are required to carry out their operational activities effectively and efficiently to maintain their existence. One of them is an accounting information system. However, there are still many SMEs who have not used it. The application of AIS to SMEs is a simple form of implementation when compared to the application of AIS to large companies. This is because the quantity of SME transactions is less than that of companies (Nugroho & Prasetyo, 2018). Apart from that, there are several factors that influence the use of accounting information systems in MSMEs, including convenience, need, experience, training, business scale, level of education, accounting knowledge, business experience, and owner perception (Jannah & Triyanto, 2021; Mustofa & Trisnaningsih, 2021; Zain et al, 2022).

The application of accounting information system (AIS) technology is one application of technology that is quite valuable for SMEs (Fidela et al., 2020; Indrayani et al., 2020; Pratama et al., 2023; Risyad & Priharsari, 2022). Its implementation can provide various benefits to SMEs. These benefits include minimizing costs, minimizing errors, and improving managerial functions (Alshirah et al., 2021; Pramuka & Pinasti, 2020).

The benefit of minimizing costs for SMEs that use AIS lies in the need for the involvement of human resources. Many SMEs are faced with a lack of workforce availability related to the implementation and use of AIS as well as performance and productivity indicators (Grande et al., 2011). Limited human resources in SMEs can be resolved through the implementation of AIS. This cost minimization arises because AIS implementation does not require a high quantity of labor. In addition, SMEs can divert existing human resources to carry out more important functions in the organization (Hoffmann & Walker, 2020; Pramuka & Pinasti, 2020).

On the benefit of minimizing errors, SMEs that use AIS are more likely to achieve higher performance (Hastuty et al., 2023; Mardini et al., 2022; Mauliansyah & Saputra, 2008; Rustiana et al., 2023; Yanto & Muhammad, 2021), as a result of strengthening knowledge management (Ahmad & Al-Shbiel, 2019), thereby helping better organizational management, as well as achieving service effectiveness (Alshirah et al., 2021). In improving managerial functions, the use of AIS will help organizational management become better and more

excellent, and be able to achieve optimal service effectiveness (Alshirah et al., 2021).

The benefits of AIS arise because AIS is a concept of processing accounting data through technology. Apart from that, AIS is also able to distribute the information it produces effectively and efficiently. Therefore, technology-based AIS has advantages that traditional AIS does not have. Technology-based AIS has advantages such as ease of access everywhere, scalability, and integration (Asatiani et al., 2019). Even though SMEs already have a manual accounting information system or not, they still need accounting information that complies with standards (Lipi et al., 2015). The quality of accounting information that does not meet standards is a major challenge for SMEs (Susanto & Meiryani, 2019).

Information that meets standards will be inefficient in supporting decision making, especially in the financial sector. AIS technology can be a solution for SMEs to achieve standards in accounting information. This information will help SMEs in making various decisions. Various decisions are of course on the managerial side and these decisions depend on accounting information system data (Polenova et al., 2019).

Implementing AIS in SMEs will enable management and owners to improve decision making, internal control and financial information, as well as allowing financial reporting to be designed and processed in a standard and timely format (Susanto & Meiryani, 2019). Apart from that, implementing AIS can also improve individual performance so that it can increase income (Dwiranda & Astika, 2020).

The importance of implementing AIS in SMEs has been widely considered by researchers. but it has not been mapped well. Usually bibliometric research can help with this. However, to date there are limitations in bibliometric research that specifically explores information related to this topic. Although accounting information systems and SMEs are two very relevant fields in the business and information technology literature, research that specifically explores the application of AIS to SMEs with a bibliometric approach is still limited. This suggests that there is a knowledge gap that needs to be filled in the academic literature.

Therefore, this bibliometric research is aimed at providing an in-depth understanding of trends, publication patterns and scientific contributions in the context of accounting information systems in SMEs. Through bibliometric analysis, this research aims to identify the most prolific publication sources, influential authors, and institutions that stand out in

the relevant academic literature. Furthermore, this research aims to provide a detailed picture of the impact of publications and changing trends over time, making a significant contribution in providing a comprehensive view of the evolution of knowledge about accounting information systems in SMEs. Through this research, it is hoped that it can provide a strong foundation for researchers, practitioners and other stakeholders to direct their efforts in developing and better understanding the role of accounting information systems in supporting the sustainability and growth of SMEs.

For this reason, this research specifically identifies several important things, namely:
1. Analyze research trends in accounting information systems in SMEs
2. Analyze the most relevant and impactful publication sources
3. Analyze the most relevant and impactful authors
4. Analyze the most productive institutions and countries
5. Analyze the most frequently occurring words
6. Analyze the use of information systems for SMEs.

Research Method

This research uses bibliometric methods with the aim of mapping publications related to accounting information systems in SMEs. Data was taken from the Scopus database using keywords that focused only on searching document titles (see: (Annesley, 2010). The search keywords were: "account* information system*" OR "information system*" AND "SMEs" OR "small and medium enterpris*" in the search engine. Then the subject used was only "Business, Management, and Accounting" so that 982 documents were published from 2014 to 2023. For more details on the data collection steps, see Figure 1.

Next, the collected data is processed using R biblioshiny software and Microsoft Excel to obtain visualizations in the form of images and tables that make it easier for writers and readers to analyze the processed data.
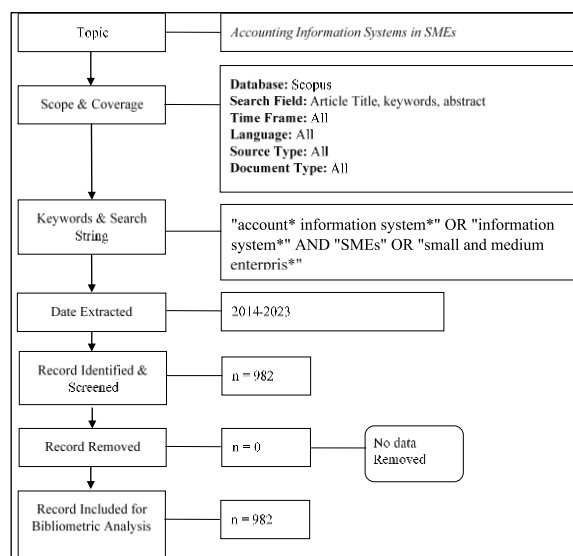

Fig. 1. Data Collection Flow Diagram
Source: Zakaria et al. (2021)

Result and Discussion

Type area

Before looking at the performance of publications regarding accounting information systems for SMEs in the Scopus database, start by looking at the percentage of document types collected in the research period (2014-2023) (see table 1). Based on table 2, it is known that of the 982 data from this research, it consists of conference papers (51.22%), journal articles (33.50%), book series (13.54%), books (1.63%), and trade journals (0.10 %).

Table 1
Details of Research Documents

Documents	Amount	Percentage
Conference Paper	503	51.22%
Article Journal	329	33.50%
Book Series	133	13.54%
Book	16	1.63%
Trade Journal	1	0.10%
Total	**982**	**100,00%**

Next, from the data that has been collected, a graph of the development of publications and the number of citations from 2014 to 2023 is made according to Figure 2. It is known that the number of publications on Scopus has fluctuated and decreased at the end of this year. The peak number of publications occurred in

2020, namely 133 documents, while the lowest publication was in 2023.
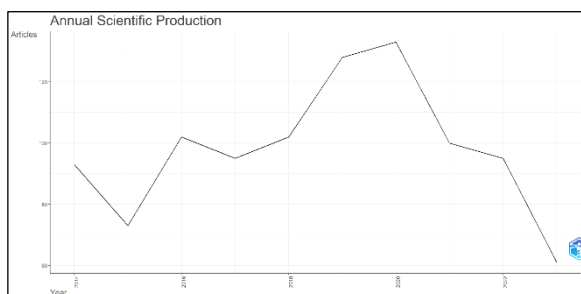

Fig. 2. Publication and Citation Trends

Citation Analysis in Publication Sources

Table 2 details the publication sources most relevant to the theme of accounting information systems in SMEs in the Scopus database. The top ten publication sources were identified based on the number of publications. According to the data collected, the Iberian Conference On Information Systems And Technologies Cisti stands out as the most productive publication source, contributing as many as 42 documents related to accounting information systems in SMEs. Meanwhile, Advances In Intelligent Systems And Computing and Procedia Computer Science followed with 41 and 33 related documents respectively.

These journals appear to be the main platform for research focusing on the integration of accounting information systems in the context of Small and Medium Enterprises (SMEs). Researchers and academics tend to actively contribute to these journals and use them to convey their latest findings, illustrating that these sources play a crucial role in the formation and dissemination of knowledge on the topics being discussed.

Further information about other publication sources can be found in table 2.

Table 2
Most Relevant Publication Sources

Sources	Number of Publications
Iberian Conference On Information Systems And Technologies Cisti	42
Advances In Intelligent Systems And Computing	41
Procedia Computer Science	33
Lecture Notes In Business Information Processing	31

Sources	Number of Publications
ACM International Conference Proceeding Series	15
Journal Of Physics Conference Series	15
Lecture Notes In Computer Science Including Subseries Lecture Notes In Artificial Intelligence And Lecture Notes In Bioinformatics	15
Communications In Computer And Information Science	12
Sustainability Switzerland	12
20th Americas Conference On Information Systems Amcis 2014	10

Analysis of Impact Factors on Publication Sources

Evaluation of publication performance does not only depend on the number and relevance of articles produced. This research also evaluates the impact of each journal that publishes articles on sustainability reports by calculating the h-Index for each journal. The blue diagram in Figure 3 shows the impact produced by these journals. Procedia Computer Science was identified as the publication source with the highest impact, having an h-index score of 12. Followed by Advance in Intelligent Systems and Computing with an h-index score of 8 in second place, and Sustainability was in third place with an h-index score of 7.
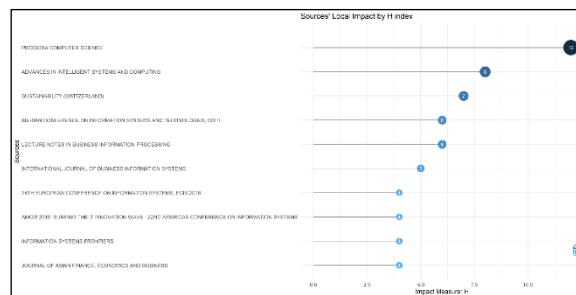

Fig. 3. Impact of Publication Sources based on h-index

Bradford's Law

Articles are presented based on Bradford's law, which groups journals based on their productivity into several categories, such as core journals, mid-level journals, and broader journals. Core journals are marked in gray and labeled "core sources". These journals showed the highest productivity in the field of accounting information systems in SMEs during the research period.

From Figure 4, it can be seen that Iberian Conference on Information Systems And Technologies Cisti and Advances In Intelligent Systems And Computing are the journals with the highest number of publications, exceeding 40 documents, and several other journals are included in the core journal category which discusses accounting information systems in SMEs.
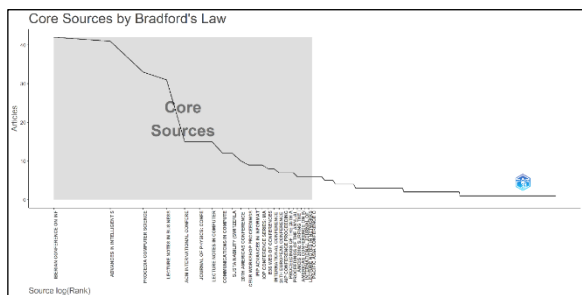

Fig. 4. Bradford's Law

Author Relevance Based on Productivity

The relevance of the author regarding the theme of accounting information systems in SMEs can be mapped based on the number of publications. Figure 4 is a graph of the 10 most productive authors detected on Scopus. Kamariotou and Kitsios were the two most prolific authors and produced 15 documents. Both of them started writing in 2017 and until 2023 they are still consistently productive (see figure 5). In contrast to Raymond, even though he has 9 publications, he started writing much later. It was detected that since 2014, articles have appeared regarding SME accounting information systems.

Therefore, Kamariotou, Kitsios, and Raymond stand out as the most prolific authors on the theme of accounting information systems in SMEs, underscoring their consistent expertise and significant contributions to literature in the field. Their publications make a valuable contribution to our understanding of the implementation and benefits of accounting information systems in the context of SMEs, making them an important reference for research focusing on this aspect. Their success in raising crucial issues in this domain makes a substantial contribution to the development of knowledge and practice in the field of accounting information systems. Other writer productivity can be seen in figures 5 and 6.
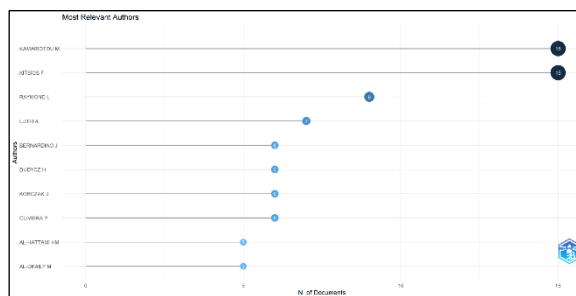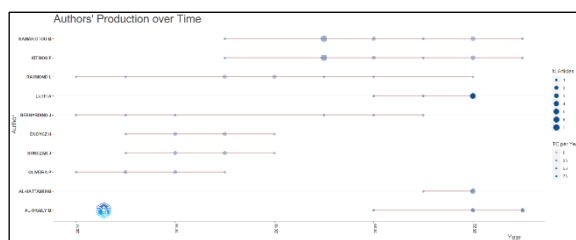

Fig. 5. Top 10 Most Relevant Authors

Fig. 6. Top 10 Authors based on Publication Consistency

Authors Impact

The writer's performance can also be seen in its impact. Usually the author's impact is measured by the h-index. Figure 7 presents the h-index diagram of the top 10 authors on the theme of accounting information systems in SMEs. It was found that Kamariotou, Kitsios, and Lutfi were the authors who had the highest impact on the development of publications related to accounting information systems in SMEs. they have an h-index score of 7. Thus, Kamariotou, Kitsios, and Lutfi are the most productive and most impactful writers according to the Scopus database. Meanwhile, in second place are Al-Hattami and Al-Okaily. both have an h-index score of 5. Even though they only have 5 articles, both are authors who have a significant role in this theme. To see the other most influential authors, you can see them based on Figure 6.
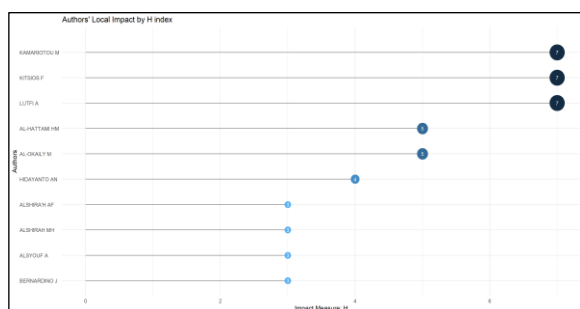
Fig. 7. Author Impact based on h-index

Institutional Productivity Based on Total Publications

Table 3
Institutional Productivity in the Development of Accounting Information System

Institutions	TP	%
Bina Nusantara University	16	2.47%
University of Macedonia	15	2.32%
Université du Québec à Trois-Rivières	12	1.85%
Universidade do Minho	11	1.70%
Instituto Politecnico de Braganca	11	1.70%
Institute for Systems and Computer Engineering, Technology and Science	10	1.55%
RMIT University	9	1.39%
Queensland University of Technology	8	1.24%
Instituto Politcnico de Coimbra	8	1.24%
King Faisal University	8	1.24%
Universitas Indonesia	8	1.24%
Universitas Sebelas Maret	8	1.24%
VSB – Technical University of Ostrava	7	1.08%
Universitas Diponegoro	7	1.08%
University of Johannesburg	6	0.93%
Universiti Utara Malaysia	6	0.93%
Universität Rostock	6	0.93%
King Abdulaziz University	6	0.93%
Turun yliopisto	6	0.93%
Deakin University	6	0.93%

Source: R-Studio

Each author always includes the institution where he works when providing information regarding his identity. Therefore, the direct contribution of these institutions to the development of accounting information system publications in SMEs can be seen. According to data from Scopus, it was detected that 20 institutions played a significant role based on the number of their publications.

Table 3 shows that Bina Nusantara University is the most productive institution, contributing 16 publications or 2.47% of the total publications recorded during the research period. The University of Macedonia is in second place with 15 publications or 2.32%, while the Université du Québec à Trois-

Rivières is in third place with 12 publications or 1.85%. The remainder ranged from 6 to 11 documents.

Country Productivity Based on Total Publications and Citations

To see the productivity of countries in producing publications related to the theme of accounting information systems in SMEs, table 4 provides the 20 most productive countries by country. It can be seen that Indonesia was the most productive and produced 121 publications or 10% of all publications in the research period. Followed by Portugal with 66 publications or 5.45%, and Germany with 63 or 5.21%. The productivity of other countries can be seen in table 4.

Table 4
Top 20 Publication Productivity by Country

Countries	TP	%
Indonesia	121	10.00%
Portugal	66	5.45%
Germany	63	5.21%
United Kingdom	53	4.38%
Malaysia	52	4.30%
Australia	51	4.21%
China	38	3.14%
Italy	34	2.81%
United States	32	2.64%
France	29	2.40%
India	29	2.40%
South Africa	29	2.40%
Spain	27	2.23%
Poland	26	2.15%
Canada	25	2.07%
Saudi Arabia	25	2.07%
Greece	23	1.90%
Colombia	20	1.65%
Ecuador	20	1.65%
South Korea	20	1.65%

Source: R-Studio

Next, based on the result of aur bibliometric analysis, we also mapped the author's correspondence based on country of origin in each article on the topic of accounting information systems in SMEs, and calculated whether the collaboration was an SCP (collaboration in one country) or MCP (collaboration between several countries). Based on this data, there are 20 countries with the number of published documents (see figure 8). Indonesia ranks first with the highest author correspondence and there are more than 60 documents. The next sequence is Portugal, Germany and China with more than 20 documents. Meanwhile, Malaysia and the United Kingdom have 20 documents. The rest can be seen in Figure 8. From this figure it can be seen that international

collaboration (in red) is still small, the majority of research is carried out only in collaboration with their own countries. In fact, there are 2 countries that have never collaborated internationally, namely Poland and the Czech Republic. From this figure it is known that the high number of publications on this topic is not caused by international collaboration but because of the characteristics of the country itself, such as Indonesia which is a developing country and the majority of its people run SME businesses.
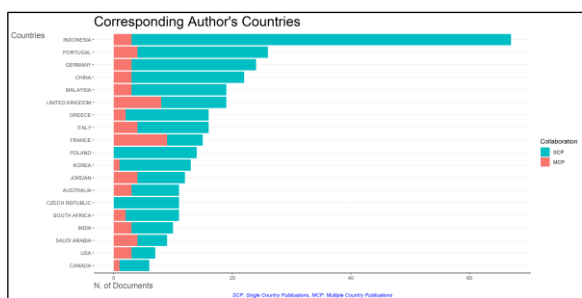

Fig. 8. Author Correspondence Based on Country of Origin

Apart from that, the countries most cited are also sorted based on the author's origin. The aim is to see the country's performance based on the number of citations. Detected from 10 countries in Figure 9. France is the country most frequently cited based on the research period in the Scopus database, namely 874 times, followed by Indonesia 426 times, United Kingdom 373 times, Portugal 325 times, Germany 232 times, USA 229 times, and Malaysia 214 times, Jordan 192 times, Ireland 185 times, and Saudi Arabia 184 times.
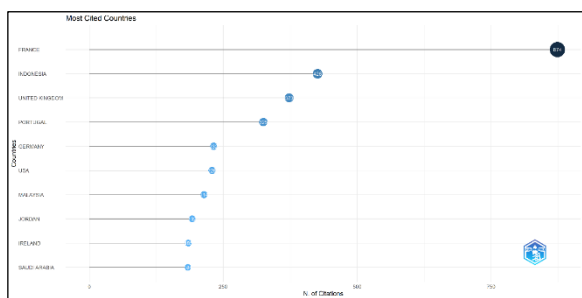

Fig. 9. Top 10 Most Cited Countries

From this data, France shows a high level of recognition for its academic contributions, followed by Indonesia, indicating that its research also receives good attention and acceptance. Other countries on the list, such as the United Kingdom, Portugal, Germany,

USA, Malaysia, Jordan, Ireland, and Saudi Arabia, also have significant citation rates, reflecting the global impact and widespread acceptance of accounting information systems publications on SMEs from these countries. Citation analysis of these countries can provide additional insight into the extent to which their research is recognized and influences the international scientific community.

Word Clouds

To see the words that appear most often in articles related to accounting information systems in SMEs, you can see Figure 10 in word cloud form. A word cloud is a collection of words that appear most frequently in articles that are randomly shaped but have different sizes. The words that appear most frequently are usually presented in the middle in large letters, followed by other words in different sizes and in different colors.
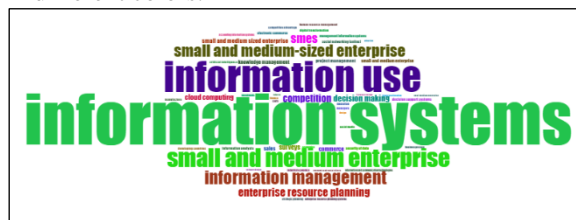

Fig. 10. Word Cloud

Based on the results of the bibliometric analysis shown in Figure 9, the word that appears most frequently in articles on accounting information systems in SMEs is "Information Systems". The appearance of this word in high frequency is very reasonable, considering that research in this field is directly related to the application of information technology in SME accounting. This finding shows that the main focus of the research is how information systems are used to improve the efficiency of financial recording, support more accurate data management, and ensure the integrity of information in the business decision-making process in SMEs. Accounting information systems, in this case, function as a key element in supporting automation and more structured and effective financial management.

In addition, the results of the bibliometric analysis also show that the word "information use" is one of the terms that often appears in the articles analyzed. This indicates that research in this field not only highlights the implementation aspects of accounting information systems, but also how the information produced can be optimally utilized by SMEs. Strategic

utilization of information allows SMEs to increase competitiveness, make data-based decisions, and adapt to changing market dynamics. Furthermore, research on this topic also highlights the importance of financial data security and accuracy, ensuring that information used in decision-making processes is reliable and easily accessible and distributed.

The novelty of this finding lies in the bibliometric approach used to identify research trends related to accounting information systems in SMEs. By analyzing publication patterns, dominant keywords, and relationships between concepts in the literature, this study provides new insights into how accounting information systems are not only adopted, but also strategically utilized to support the growth and sustainability of SMEs. In the context of SMEs that often face limited resources and access to technology, the results of this analysis confirm that effective information utilization is a key factor in improving operational efficiency and business competitiveness.

Conclusion

This research can be concluded that the evaluation of publications related to accounting information systems in SMEs using the Scopus database from 2014 to 2023 provides an in-depth understanding of trends, sources and key contributors in this domain. The dominant publications are mainly conference papers and journals, with fluctuations in trends visible during the research period.

It was found that the most productive publication sources were Iberian Conference On Information Systems And Technologies Cisti and Advances In Intelligent Systems And Computing, while Procedia Computer Science had the highest impact. The most productive writers were Kamariotou and Kitsios, while Kamariotou, Kitsios, and Lutfi were the writers with the highest impact. Bina Nusantara University from Indonesia was identified as the most productive institution, and Indonesia itself is the most productive country in terms of the number of publications. On the other hand, France is the most cited country.

In conclusion, the results of this research provide a comprehensive picture of publication trends, main contributors, and the impact of publications in the field of accounting information systems on SMEs. This information can be an important basis for researchers, practitioners and policy makers in understanding the latest dynamics and developments in this field. In addition, the keyword that appears frequently, namely

"information systems," reflects the main focus in the literature reviewed.

Implication

The implication of these findings is that research on accounting information systems in SMEs has an important role in scientific literature and practice. The findings regarding the focus on certain journals indicate that these journals are the main means for sharing knowledge and the latest findings in this field. Prolific, high-impact publication sources provide insight into significant places in the literature, while the most prolific authors and institutions demonstrate major contributions to the development of knowledge. Regional implications can also be drawn from these findings, with Indonesia and Bina Nusantara University standing out as key contributors to research on accounting information systems in SMEs. These conclusions provide a better understanding of the dynamics and significant contributions to this field and provide directions for future research.

In addition, this study has contributed to SMEs that with the existence of an accounting information system, the financial recording process becomes more structured and efficient. This reduces human error and increases the speed in managing financial transactions. Then the information generated from the accounting information system allows SMEs to make more accurate and strategic business decisions. With well-documented financial data, SMEs can analyze business performance, identify market trends, and plan business growth strategies better.

References

Ahmad, M. A., & Al-Shbiel, S. O. (2019). The Effect of Accounting Information System on Organizational Performance in Jordanian Industrial SMEs: The Mediating Role of Knowledge Management. *International Journal of Business and Social Science*, *10*(3), 99–104. https://doi.org/10.30845/ijbss.v10n3p9

Alshirah, M. H., Lutfi, A., Alshira'h, A. F., Saad, M., Ibrahim, N. M. E. S., & Mohammed, F. M. (2021). Influences of the environmental factors on the intention to adopt cloud based accounting information system among SMEs in Jordan. *Accounting*, *7*(3), 645–654. https://doi.org/10.5267/j.ac.2020.12.013

Annesley, T. M. (2010). The title says it all. *Clinical Chemistry*, *56*(3), 357–360. https://doi.org/10.1373/clinchem.2009.141523

Asatiani, A., Apte, U., Penttinen, E., Rönkkö, M., & Saarinen, T. (2019). Impact of accounting process characteristics on accounting

outsourcing - Comparison of users and non-users of cloud-based accounting information systems. *International Journal of Accounting Information Systems*, *34*. https://doi.org/10.1016/j.accinf.2019.06.002

Dwiranda, A. A. N. B., & Astika, I. B. P. (2020). Impact of Environmental Uncertainty, Trust and Information Technology on User Behavior of Accounting Information Systems. *Journal of Asian Finance, Economics and Business*, *7*(12), 1215–1224. https://doi.org/10.13106/JAFEB.2020.VOL7.NO12.1215

Fidela, A., Pratama, A., & Nursyamsiah, T. (2020). Pengembangan Usaha Mikro Kecil dan Menengah (UMKM) dengan Program Pemasaran Desa Jambu Raya di Desa Jambu , Kabupaten Sumedang. *Jurnal Pusat Inovasi Masyarakat*, *2*(3), 493–498.

Grande, E. U., Estébanez, R. P., & Colomina, C. M. (2011). The impact of accounting information systems (AIS) on performance measures: Empirical evidence in spanish SMEs. *International Journal of Digital Accounting Research*, *11*, 25–43. https://doi.org/10.4192/1577-8517-v11_2

Hastuty HS, W., Agus, Salsabila, M., & Harahap, N. (2023). Penerapan Sistem Informasi Akuntansi. *Jurnal EMT KITA*, *7*(2), 317–324. https://doi.org/10.35870/emt.v7i2.891

Hoffmann, S., & Walker, S. P. (2020). Adapting to crisis: Accounting information systems during the weimar hyperinflation. *Business History Review*, *94*(3), 593–625. https://doi.org/10.1017/S0007680520000550

Indrayani, L., Awopi, F., & Zabir, S. (2020). Sistem Informasi Pemasaran Usaha Kecil Menengah (Ukm) Berbasis Website. *Dinamis*, *17*(1), 111–116. https://doi.org/10.58839/jd.v17i1.703

Jannah, A. N., & Triyanto, E. (2021). Analisis Faktor – Faktor Yang Mempengaruhi Penggunaan Informasi Akuntansi Berbasis E- Commerce Pada Umkm. *Jurnal Akuntansi*, *1*(1), 8–15. https://doi.org/10.37058/jak.v1i1.2800

Lipi, I., Lipi, R. R., & Shehu, X. A. (2015). Implications of accounting information system implementation in SMEs: A study on retail business in vlore region. *Mediterranean Journal of Social Sciences*, *6*(3), 553–563. https://doi.org/10.5901/mjss.2015.v6n3p553

Mardini, R., Lestira Oktaroza, M., & Fadillah, S. (2022). Efektifitas sistem informasi akuntansi: meningkatkan in-role performance dan innovative performance karyawan sektor publik? *Proceeding Of National Conference On Accounting & Finance*, *4*, 158–166. https://doi.org/10.20885/ncaf.vol4.art21

Mauliansyah, I. R., & Saputra, M. (2008). Terhadap Kinerja Perusahaan (Studi Empiris Pada Umkm Di Kota. *Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi (JIMEKA)*, *4*(4), 602–612.

Mustofa, A. W., & Trisnaningsih, S. (2021). Analisis Faktor-Faktor Yang Mempengaruhi Penggunaan Informasi Akuntansi Pelaku UMKM. *Jurnal Akuntansi Profesi*, *12*(1), 30. https://doi.org/10.23887/jap.v12i1.32784

Nugroho, Y., & Prasetyo, A. (2018). Assessing information systems success: A respecification of the DeLone and McLean model to integrating the perceived quality. *Problems and Perspectives in Management*, *16*(1), 348–360. https://doi.org/10.21511/ppm.16(1).2018.34

Polenova, S. N., Mislavskaya, N. A., Sotnikova, L. V, & Ermakova, M. N. (2019). Accounting system in terms of modern information technology. *International Journal of Recent Technology and Engineering*, *8*(2), 3856–3860. https://doi.org/10.35940/ijrte.B3054.078219

Pramuka, B. A., & Pinasti, M. (2020). Does cloud-based accounting information system harmonize the small business needs? *Journal of Information and Organizational Sciences*, *44*(1), 141–156. https://doi.org/10.31341/jios.44.1.6

Pratama, I., Suria, O., Chandra, A. Y., & Prasetyaningrum, P. T. (2023). Pemanfaatan Teknologi Informasi dalam Mendukung Perkembangan UMKM (Nyong Group). *Jurnal Pengabdian Masyarakat Indonesia*, *3*(2), 269–274. https://doi.org/10.52436/1.jpmi.991

Risyad, M. F., & Priharsari, D. (2022). Analisis dan Perancangan Sistem Informasi dalam Membantu UMKM dalam Memasarkan Produk. *Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer*, *6*(5), 2209–2214.

Rustiana, S. H., Delima, P., & Sulhendri, S. (2023). Dapatkah Sistem Informasi Akuntansi Meningkatkan Kinerja Manajerial dimediasi oleh Kepuasan Kerja? *Reviu Akuntansi Dan Bisnis Indonesia*, *7*(2), 516–531. https://doi.org/10.18196/rabin.v7i2.19154

Susanto, A., & Meiryani. (2019). The impact of environmental accounting information system alignment on firm performance and environmental performance: a case of small and medium enterprises s of Indonesia. *International Journal of Energy Economics and Policy*, *9*(2), 229–236. https://doi.org/10.32479/ijeep.7511

Yanto, & Muhammad, G. (2021). Peningkatan Kinerja Sistem Informasi Akuntansi Melalui Manajemen, Teknik Personal, Ukuran Organisasi, dan Pengembangan Sistem Informasi. *Jurnal Riset Akuntansi Dan Auditing*, *8*(2), 24–40. https://doi.org/10.55963/jraa.v8i2.385

Zain,Fadhilatuz; Andhaniwati, E. (2022). Faktor Yang Mempengaruhi Implementasi Sistem Informasi Akuntansi UMKM berbasis Seluler Pada UMKM Surabaya Pusat. *AKUISISI : Jurnal Akuntansi*, *18*(02), 189–202.

Zakaria, R., Ahmi, A., Ahmad, A. H., & Othman, Z. (2021). Worldwide melatonin research: a bibliometric analysis of the published literature between 2015 and 2019. *Chronobiology International*, *38*(1), 27–37. https://doi.org/10.1080/07420528.2020.1838534