

ACCOUNTING HARMONIZATION WITH IFRS: A BIBLIOMETRIC ANALYSIS USING VOSVIEWER SOFTWARE

Alexandra-Gabriela MARINA^{1,2}

¹*Babes-Bolyai University, Cluj-Napoca, Romania*

²*Lucian Blaga University, Sibiu, Romania, alexandra.marina@ulbsibiu.ro*

Abstract

Numerous empirical research has been conducted in the area of accounting harmonization with IFRS, but bibliometric studies that systematize the literature in this topic remain insufficient. Thus, the aim of this paper is to conduct a bibliometric analysis of research on accounting harmonization with IFRS, in order to determine the state of the art and trends, by monitoring publications indexed on the Web of Science platform. A sample of 162 publications was gathered, using the VOSviewer software the data was analyzed, and the findings were visually presented. The findings revealed that interest in the study of these topics has been increasing in recent years.

Keywords: *bibliometric analysis, accounting, IFRS, WoS, VOSviewer*

JEL classification: *M40, M41*

1. Introduction

Accounting harmonization, in general, requires the presence of an accounting framework within which national standards that vary by country are systematized to make them comparable. Simultaneously, harmonization may be seen as a way to mitigate the discrepancies between the rules and specific processes to certain accounting systems, therefore reconciling all kinds of accounting cultures. However, it is believed that accounting

¹ *Ph.D. Student, Babes-Bolyai University, Cluj-Napoca, Romania*

² *Teaching Assistant, Lucian Blaga University of Sibiu, Faculty of Economic Sciences, e-mail: alexandra.marina@ulbsibiu.ro*

harmonization will succeed only after the development of a set of common reporting standards and accounting rules, which, when combined with the mobilization of all countries, will improve communication with other users in support of the adoption of common accounting standards

Harmonization would not only ensure a certain level of quality and relevance, which would certify confidence in the ability to use the information presented during the decision-making process, but would also certify comparability, allowing for the assessment of some companies' position and performance relative to others.

Accounting harmonization studies have piqued researchers' attention, particularly in terms of alignment with the international financial reporting standards. As a result, the paper takes a bibliometric approach to accounting harmonization research, establishing the state of the art and, more accurately, detecting trends and other relevant indicators via a survey of Web of Science publications and subsequent treatment using VOSviewer software.

2. Literature review

Accounting harmonization aims to make entities' financial statements similar to those of other countries. The concept is important because entities desire to operate in an environment conducive to trading, raising money, listing securities, and attracting foreign investors. Additionally, investors are looking for fresh investment possibilities across the globe. Harmonization of accounting standards will benefit both businesses and investors, resulting in the effective functioning of capital markets. As a result, numerous significant projects have been started to attempt to harmonize accounting regulations with real reporting procedures of businesses.

Harmonization of accounting standards has a major effect since the rise in the correlation between measurement mistakes should be considerable and obvious as a result of a change in the whole system for producing and presenting information. In principle, if two businesses engaged in the same economic activity report using the same criteria, measurement errors should be fully linked.

International accounting harmonization is an unavoidable tendency, but how it should be treated varies according to economic, political, social, and cultural factors and origins. (Nguyen, 2020).

The transition from national accounting regulations to IFRS standards has not been straightforward, with several characteristics of the phenomenon

including the following: the use of estimates and professional reasoning to substantiate accounting solutions; acceptance of IFRS concepts that were not previously accepted in national practice; introduction of new accounting principles; and application of the cost / benefit ratio in the process of obtaining financial accounting information.

The adoption of IFRS is an important issue because the standards can support the development of new alliances with foreign-owned companies and promote the company's international expansion by improving the comparability of financial information on national and international level (Bartuňková, 2012; Bohusova & Blaskova, 2012; Perera & Chand, 2015). Additionally, entities controlled by multinational organizations that prepare financial statements aligned to IFRS promote the standard's implementation (Bartuňková, 2012). All of this results in an improvement in investor and analyst trust in financial statements (Mahmood et al., 2018).

Another benefit is the help of the contracting environment, specifically the growth in a country's capacity to contract loans locally (Mawutor et al., 2019), but also from international organizations (World Bank, IMF) (Kaya & Koch, 2014), as well as the emergence of new opportunities for investment (Mandilas et al., 2010). As a result, investors may feel that a lack of uniformity in the implementation and enforcement of IFRS might lead to more opportunistic management discretion in the application of the standard. Consistent adoption and enforcement of standards are necessary for successful financial reporting convergence and harmonization (Armstrong et al., 2010).

To ensure the adoption process is successful and effective, all potential issues and hurdles must be handled collaboratively by regulators, accountants, and entities. Since a result, professional accountants play a critical role in the adoption process, as their expertise is required (Mahmood et al., 2018).

3. Methodology

This research is based on a bibliometric analysis of accounting publications relating to IFRS harmonization and follows the three-stage process of systematic reviews of literature, which includes planning, doing the review, and reporting and distributing the findings. The bibliometric review approach is important because it generates a categorical perspective of the documents produced in each study field using objective criteria for examining and categorizing publications. The VOSviewer software, on the other hand,

makes it possible to show the data in a way that looks like a graph, with category maps.

In December 2021, data were obtained from one of the most comprehensive bibliographic databases available: Web of Science. The most widely used and reputable databases are WoS and Scopus. However, WoS compiles the most important scientific articles and serves as the primary criteria for academic decision-making. (Jiménez-García et al., 2020).

The search of publications in this database was carried out using the terms “harmonization” AND “accounting” AND “IFRS” (TS = (harmonization) AND TS = (accounting) AND TS = (IFRS)), obtaining 188 results. To filter the results, the following Boolean operators were used: English language publications; set time period: 2006–2020.

In the WoS categories were selected Business Finance, Economics, Business, Management, International Relations, Public Administration, Law, Regional Urban Planning, Social Science Interdisciplinary, Social Science Mathematical Methods, Education Educational Research, Area Studies, Computer Science Interdisciplinary Applications, Development Studies, Engineering Industrial, Engineering Manufacturing, Engineering Mechanical, Environmental Sciences, Environmental Studies, Forestry, Geography, Green Sustainable Science Technology and Information Science Library Science.

Bibliographic analysis was conducted using bibliometric indicators, which are the methods for analyzing and interpreting obtained data. A total of 162 bibliographic resources were retrieved after the use of the Boolean operators.

The data was then analyzed using a similarity visualization program (VOSviewer) to see some of the possible results visually. The findings established the current level of development and key trends in terms of impact, main journals, publications, topics, authors, institutions, and countries. Analysis and visual representation are important because they may assist academics and professionals in better comprehending what has been investigated in the topic of harmonization, particularly with regards to harmonization with IFRS and the mapping of major trends in the field (Cavalcante et al., 2021).

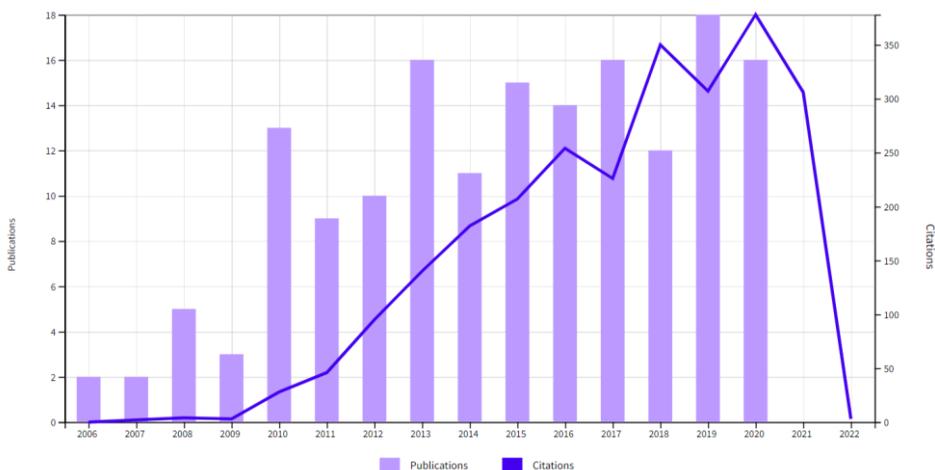
4. Results and Discussion

4.1. Performance Analysis: 2006-2020

The filter produced a sample composed of 166 publications dated between 2006 and 2021, with 2532 citations, an average of 15.25 citations per article, and a h-index of 23 (according to the information provided by the WoS dating report).

Consistent with the study theme's relative youth, as described in the introduction section, the WoS's first articles were published in 2006. Since then, the literature has grown at a breakneck pace, from a single piece published in 2006 to 18 publications published in 2019, totalling 162 during the time. Figure 1 presents the distribution of the 162 papers consulted in this research.

Figure 1: Publication by year (2006-2020)



Source: WoS - Times Cited and Publications Over Time

These articles were published in 125 different publications. Only 28.8% published two articles or more and two, and 71.2% published just one article. This shows that scientific research in the field of accounting harmonization is often published in nonspecialized journals. One possible reason for this is that accounting harmonization has been looked at from

different perspectives, such as cultural factors or management perspectives. These topics can be covered in many different fields of knowledge. As a result, these articles are published in a variety of publications, including the International Journal of Law and Management and the Journal of Management Governance.

The journals that published the most articles on the topic of this research are given in Table 1. According to this data, 25.9 percent of articles published are contained to eight publications.

Table 1: Most productive publications (2006-2020)

Publication Titles	No of Items
<i>Procedia Economics and Finance Proceedings of the International Conference</i>	6
<i>Accounting and Management Information Systems</i>	6
<i>Abacus a Journal of Accounting Finance and Business Studies</i>	5
<i>Journal of Accounting and Public Policy</i>	5
<i>Accounting in Europe</i>	4
<i>Accounting Review</i>	4
<i>AMIS 2010 Proceedings of the 5th International Conference</i>	4
<i>Journal of Financial Reporting and Accounting</i>	4

Source: Prepared by the author based on WoS data

The area of accounting harmonization is characterized by a high level of authorship. The WoS included the names of 358 distinct authors. Furthermore, just 12 authors published more than three publications (Table 2), and more than 88% of authors published a single publication, showing a low concentration in this area of research.

Table 2: Most productive publication (2006-2020)

Author	No of Publications
<i>Nobes C.</i>	6
<i>Nastase P.</i>	4
<i>Strouhal J.</i>	4
<i>Bohusova H.</i>	3
<i>Bonaci CG.</i>	3
<i>Hinke J.</i>	3
<i>Jindrichovska I.</i>	3

<i>Kubickova D.</i>	3
<i>Lee C.</i>	3
<i>Leuz C.</i>	3
<i>Nerudova D.</i>	3
<i>Prochazka D.</i>	3

Source: Prepared by the author based on WoS data

The most productive organizations in this research field are located in the Europe (Czech Republic, Romania, Slovakia and United Kingdom) (Table 3).

Table 3: Most productive organizations (2006-2020)

Affiliations	Location	No of Publications
<i>Prague University Of Economics Business</i>	<i>Czech Republic</i>	8
<i>Babes Bolyai University From Cluj</i>	<i>Romania</i>	6
<i>University Of Economics Bratislava</i>	<i>Slovakia</i>	6
<i>University Of London</i>	<i>United Kingdom</i>	6
<i>Bucharest University Of Economic Studies</i>	<i>Romania</i>	5
<i>Royal Holloway University London</i>	<i>United Kingdom</i>	5

Source: Prepared by the author based on WoS data

The most important publications on accounting harmonization based on IFRS, as measured by the number of citations, are presented in Table 4. There is an unequal distribution, with most publications concentrated towards the lower end of the period, without or with a modest number of citations. There are 26.54% of publications with less than five citations. Over 37% have no citations and little or no visibility. This might be because the study was not considered to be of sufficient academic importance to be cited, or because the publications were published very recently.

Table 4: General citation structure (2006-2020)

No of Citations	No of Publications	% Publications
≥ 200	1	0.62
199-150	3	1.85
149-100	2	1.23

99-50	12	7.41
49-25	4	2.47
24-5	36	22.22
<5	43	26.54
No citation	61	37.66

Source: Prepared by the author based on WoS data

Table 5 contains additional information about the ten most often cited publications (ordered by number of citations in WoS). The results indicates that Accounting Review, one of the journals mentioned in Table 1, seems to have the best output in the research area.

Table 5: Ten most cited publications

Title	Source	Citations in WoS	Citations per Year (WoS)	Citations in GS
Market Reaction to the Adoption of IFRS in Europe (Armstrong et al., 2010)	<i>Accounting Review</i>	341	31	1477
Global Accounting Convergence and the Potential Adoption of IFRS by the US (Part I): Conceptual Underpinnings and Economic Analysis (Hail et al., 2010)	<i>Accounting Horizons</i>	179	16.27	635
Intended and Unintended Consequences of Mandatory IFRS Adoption: A Review of Extant Evidence and Suggestions for Future Research (Brüggemann et al., 2013)	<i>European Accounting Review</i>	162	20.25	553
Analyst Following and Forecast Accuracy After Mandated IFRS Adoptions (Tan et al., 2011)	<i>Journal of Accounting Research</i>	152	15.2	457
National Adoption of International Accounting Standards: An Institutional (Judge et al., 2010)	<i>Corporate Governance- An International Review</i>	131	11.9	332
Incentives or Standards: What Determines Accounting Quality Changes around IFRS Adoption? (Christensen et al., 2015)	<i>European Accounting Review</i>	112	18.66	772

On the global acceptance of IAS/IFRS accounting standards: The logic and implications of the principles-based system (Carmona & Trombetta, 2008)	<i>Journal Of Accounting And Public Policy</i>	95	7.3	418
How Much Does IFRS Cost? IFRS Adoption and Audit Fees (De George et al., 2012)	<i>Accounting Review</i>	94	10.44	278
Assessing the Value Relevance of Accounting Data After the Introduction of IFRS in Europe (Devalle et al., 2010)	<i>Journal Of International Financial Management & Accounting</i>	86	7.81	330
The rise and rise of IFRS: An examination of IFRS diffusion (Chua & Taylor, 2008)	<i>Journal Of Accounting And Public Policy</i>	84	6.46	290

Source: Prepared by the author based on WoS data and Google Scholar (12/5/2021)

4.2. Analysis of Keywords

The author used the VOSviewer program in the second section of the research to evaluate the co-occurrence network of keywords and to find the most commonly used keywords in the analysed publications, indicating the most studied subject. The writers' keywords are considered for this purpose.

Only 163 of the 4013 keywords analyzed were used more than ten times. To determine the most often discussed themes, the author filtered the keywords using a larger number of clustered items (minimum 10 keywords). As a result, four clusters were formed (cluster 1 – 36 items, cluster 2 – 25 items, cluster 3 – 22 items, cluster 4 – 15 items). The most frequently occurring keywords were "accounting" (cluster 1 – 119 occurrences), "statement" (cluster 2 – 144 occurrences), "study" (cluster 3 – 129 occurrences), and "country" (cluster 4 – 220 occurrences), indicating that these terms are fundamental to the network.

Additionally, the following terms are commonly used too: adoption, impact, company, IFRS adoption, quality, and reporting. Each of them had between 63 and 116 occurrences and a connection strength of between 71 and 92. The total link strength of an item represents the number of linkages it has to other items and the overall strength of those links. (Jan van Eck & Waltman, 2019; Jiménez-García et al., 2020).

Systems (each with 4.8% of the sample studied). The Accounting Review, on the other hand, has a bigger influence in terms of citations obtained.

Finally, this study does a bibliometric analysis of the most current and relevant papers, focusing on the research areas and topics that seem to be more popular. This work may provide invaluable information to people who are exploring or want to join this area of study. Following a brief examination of the literature, comparative studies in the subject of accounting harmonization seem to be a trend. Diverse situations, particular countries and attitudes of shareholders seem to be the most attractive subjects in this research.

Despite the contribution of this research, there are several limitations that must be mentioned. On the one hand, only publications that were indexed in the WoS were examined. Comparing these findings with those from other databases such as Scopus or Google Scholar is advised for further study.

6. References

- Armstrong, C. S., Barth, M. E., Jagolinzer, A. D., & Riedl, E. J. (2010). Market reaction to the adoption of IFRS in Europe. *Accounting Review*, 85(1), 31–61. <https://doi.org/10.2308/ACCR.2010.85.1.31>
- Bartuňková, L. (2012). Are companies in the Czech Republic ready to implement ifrs for SMEs? *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 60(7), 39–44. <https://doi.org/10.11118/actaun201260070039>
- Bohusova, H., & Blaskova, V. (2012). In what ways are countries which have already adopted IFRS for SMEs different. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 60(2), 37–44.
- Brüggemann, U., Hitz, J. M., & Sellhorn, T. (2013). Intended and Unintended Consequences of Mandatory IFRS Adoption: A Review of Extant Evidence and Suggestions for Future Research. <https://doi.org/10.1080/09638180.2012.718487>, 22(1), 1–37. <https://doi.org/10.1080/09638180.2012.718487>
- Carmona, S., & Trombetta, M. (2008). On the global acceptance of IAS/IFRS accounting standards: The logic and implications of the principles-based system. *Journal of Accounting and Public Policy*, 27(6), 455–461. <https://doi.org/10.1016/J.JACCPUBPOL.2008.09.003>
- Cavalcante, W. Q. de F., Coelho, A., & Bairaada, C. M. (2021).

Sustainability and tourism marketing: A bibliometric analysis of publications between 1997 and 2020 using vosviewer software. *Sustainability (Switzerland)*, 13(9). <https://doi.org/10.3390/su13094987>

- Christensen, H. B., Lee, E., Walker, M., & Zeng, C. (2015). Incentives or Standards: What Determines Accounting Quality Changes around IFRS Adoption? *Https://Doi.Org/10.1080/09638180.2015.1009144*, 24(1), 31–61. <https://doi.org/10.1080/09638180.2015.1009144>
- Chua, W. F., & Taylor, S. L. (2008). The rise and rise of IFRS: An examination of IFRS diffusion. *Journal of Accounting and Public Policy*, 27(6), 462–473. <https://doi.org/10.1016/J.JACCPUBPOL.2008.09.004>
- De George, E. T., Ross, S. M., Ferguson, C., Spear, N., Iii, H. E., Gallery, G., Lennox, C., Lundholm, R., Miller, G., Minnis, M., Nagar, V., O’keefe, T., Kahn, M., & Oswald, D. (2012). *How much does IFRS cost? IFRS Adoption and Audit Fees We thank Paul Coram, Larelle Chapple How much does IFRS cost? IFRS Adoption and Audit Fees.*
- Devalle, A., Onali, E., & Magarini, R. (2010). Assessing the Value Relevance of Accounting Data After the Introduction of IFRS in Europe. *Journal of International Financial Management & Accounting*, 21(2), 85–119. <https://doi.org/10.1111/J.1467-646X.2010.01037.X>
- Hail, L., Leuz, C., & Wysocki, P. (2010). Global accounting convergence and the potential adoption of IFRS by the U.S. (part I): Conceptual underpinnings and economic analysis. *Accounting Horizons*, 24(3), 355–394. <https://doi.org/10.2308/ACCH.2010.24.3.355>
- Jan van Eck, N., & Waltman, L. (2019). *VOSviewer Manual*.
- Jiménez-García, M., Ruiz-Chico, J., Peña-Sánchez, A. R., & López-Sánchez, J. A. (2020). A bibliometric analysis of sports tourism and sustainability (2002-2019). *Sustainability (Switzerland)*, 12(7), 1–18. <https://doi.org/10.3390/su12072840>
- Judge, W., Li, S., & Pinsker, R. (2010). National Adoption of International Accounting Standards: An Institutional Perspective. *Corporate Governance: An International Review*, 18(3), 161–174.

<https://doi.org/10.1111/J.1467-8683.2010.00798.X>

- Kaya, D., & Koch, M. (2014). Countries adoption of the International Financial Reporting Standard for Small and Medium-sized Entities (IFRS for SMEs) - Early empirical evidence. *Accounting and Business Research*, 45(1), 93–120. <https://doi.org/10.1080/00014788.2014.969188>
- Mahmood, Z., Khan, A. B., Rehman, A. ur, & Atta, S. (2018). Preliminary Insights on the Adoption of International Financial Reporting Standard (IFRS) for Small and Medium Enterprises (SMEs) in Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 4(1), 95–110. <https://doi.org/10.26710/jafee.v4i1.522>
- Mandilas, A., Nikolaidis, M., & Valsamidis, S. (2010). *An Empirical Study on the Adoption of IFRS for SMEs: the Case of Kavala , Greece. February*, 409–432.
- Mawutor, J. K. M., Williams, S., & Oduwaa, M. A. (2019). Assessment of the Adoption and Implementation of IFRS for Small and Medium Scale Entities (SMEs). “A Study of Selected SMEs GA East of Ghana.” *Asian Journal of Finance & Accounting*, 11(1), 241. <https://doi.org/10.5296/ajfa.v11i1.14678>
- Nguyen, D. D. (2020). The Impact of Environmental Factors on the International Harmonization Process of Accounting on SMEs: Evidence in Vietnam. *Journal of Asian Finance, Economics and Business*, 7(10), 641–649. <https://doi.org/10.13106/jafeb.2020.vol7.no10.641>
- Perera, D., & Chand, P. (2015). Issues in the adoption of international financial reporting standards (IFRS) for small and medium-sized enterprises (SMES). *Advances in Accounting*, 31(1), 165–178. <https://doi.org/10.1016/j.adiac.2015.03.012>
- Tan, H., Wang, S., & Welker, M. (2011). Analyst Following and Forecast Accuracy After Mandated IFRS Adoptions. *Journal of Accounting Research*. <http://ssrn.com/abstract=1865369> Electronic copy available at: <http://ssrn.com/abstract=1865369>