A Bibliometric Analysis of IFRS Adoption

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ABSTRACT

This study aims to perform a bibliometric analysis of articles on IFRS adoption publications in the Scopus database. Using a sample of 528 publications, this study found that publications on IFRS adoption have steadily increased since 2006. The authors from the United States were ranked as the most active country publishing in this area. In contrast, the most active institution studying IFRS adoption is Universidad de São Paulo in Brazil. As far as we know, this is the first study to investigate IFRS adoption literature from around the world based on the Scopus database. Hence, this study is the first to allow us to understand the trends in publication and researcher location, subject areas, journals, and author keywords on IFRS adoption studies, which is helpful for collaboration and potential topics for research students. We also highlight the topics that attract the researchers' focus in IFRS adoption, which we believe are most helpful as guidance for future researchers and research funding bodies.

Keywords: Bibliometric analysis; IFRS adoption; VOSviewer; Harzing's Publish or Perish.

INTRODUCTION

The International Financial Reporting Standards (IFRS) have been argued to improve the quality of financial reporting by providing better regulated and comparable accounting standards (Gu et al. 2019). For publicly traded companies, the first introduction of IFRS in 2001 has been one of the most significant regulatory changes in accounting history (Daske et al. 2008). Nevertheless, not all countries adopted IFRS immediately in 2001 and the adoption has been staggered, as the regulators and companies in the jurisdictions need to be prepared. For this reason, the time of adoption of the newly introduced international accounting standards has varied worldwide. For example, IFRS was made mandatory in Europe and Australia in 2005. In China, Chinese Accounting Standards for Business Enterprises substantially converged with IFRS in 2006. Malaysia and Indonesia both converged their local standards with IFRS in 2012. As a result, it is important to note that IFRS adoption at different times has had different effects on countries' reporting, governance, and economies.

Countries adopted IFRS for a variety of reasons. Some countries like Australia and New Zealand adopted the accounting standards for their capital markets earlier than others to ensure they remain internationally competitive with other developed economies (Lee & Fargher 2012). There is also a need for a common set of accounting standards for companies to operate in multiple countries to ensure consistency and comparability in financial reporting (Brown 2013a). In other contexts, adopting IFRS has been required to obtain EU membership or a prerequisite for development assistance from international bodies. For example, the International Monetary Fund (IMF) has recommended that Romania

adopt IFRS to improve the credibility and comparability of financial statements and promote international investment and economic growth (Albu & Albu 2012). Other reasons for adopting IFRS are to remove barriers to cross-border investments, increase the accuracy, integrity, and comparison of financial reporting, enhance market liquidity and the efficiency of stock prices, and reduce the cost of capital (Brown 2013b).

Despite the importance of IFRS implementation, the level of research interest in the IFRS adoption topic has yet to be discovered. Limited efforts have been made to collect data globally, especially regarding current developments in IFRS adoption studies. Other than Ezenwoke and Tion (2020), who did a bibliometric analysis on IFRS adoption in the African region, as far as we know, no other researchers have conducted bibliometric studies on IFRS adoption. Thus, this paper aims to analyse past studies on IFRS adoption using the bibliometric approach to determine the level of interest in the topic. In particular, our study focuses on the following research questions (RQ). RQ1: What is the current status of the publication in the IFRS adoption? RQ2: What are the current trends of IFRS adoption publishing citations? RQ3: Which topics surrounding the introduction of IFRS are the most popular among researchers? RQ4: What is the authorship structure of the IFRS adoption publication?

We use data from the Scopus database to address the above research questions. From 528 titles, our analysis shows reducing trends of publications in the area. Nevertheless, despite the decreasing trend, the number of publications examining IFRS adoption remains continuously high. Articles account for over 90% of all publications compared to other publications in the area. Meanwhile, most publications are written in English and

come from 72 countries. In terms of article citations, a total number of 11,536 citations have been obtained from the Scopus database. The visualization results show six main themes representing the frequency of keywords in the Scopus database's title: IFRS adoption, audit quality and audit fees, accounting standards, earnings management, international financial reporting standards, and accounting quality.

This study contributes to the literature on IFRS adoption studies in three ways. First, our study is the first bibliometric analysis study to investigate IFRS adoption using worldwide literature. A bibliometric analysis is a tool for quantifying researchers' contributions to the progress of knowledge in the existing literature (Yang et al. 2013; Yi & Xi 2008). A bibliometric study on IFRS adoption is essential as it allows us to understand trends in publishing regions, subject areas, journals, and author keywords that were frequently selected (Chen & Ho 2015; Dong et al. 2012). Secondly, this study outlines the primary topics and current dynamics of IFRS adoption research. In particular, we highlight the area that receives attention from researchers. These analyses are useful as the potential direction of future studies. While feeding scholars and practitioners with the most recent progress in the area., this study serves as a systematic tool for assessing the relevance of IFRS literature. Finally, as the papers are expected to be useful for research students and researchers interested in studying this area, policymakers, standard setters, and accountants can also benefit from this study.   In particular, this study can provide valuable information to policymakers, standard setters, and accountants regarding policy-making, research funding, and collaboration.

This paper's remaining sections are organized as follows: The subsequent part contains a literature review of bibliometric analysis and previous research on IFRS adoption, section 3 explains the methodology employed in the study, section 4 reports the study's findings, and sections 5 and 6 contain the discussion and conclusions, respectively.

Literature Review

BIBLIOMETRIC ANALYSIS IN ACCOUNTING

Review papers or literature reviews are essential to scientific investigation. Literature reviews enable researchers to better grasp earlier work in their areas. It also allows them to more quickly discover gaps in the literature and possible future research (Kraus et al. 2022). There are a growing number of literature review publications to identify contributions to the literature. One common method used in literature review studies is a bibliometric analysis. The idea is that the most often cited authors and publications are assumed to benefit academics and researchers most (Garfield 1979).

Many researchers have used bibliometric analyses to study publications from various academic fields. For example, Podsakoff et al. (2008) had identified the most influential authors and institutions in 30 selected management journals between 1981 and 2004. While Wagstaff and Culyer (2012) had conducted a comprehensive bibliometric analysis in health economics for over 40 years. They addressed important themes, such as a list of the 300 most cited papers, the most influential authors, and the highest institutions ranked by the h-index. In finance, Linnenluecke et al. (2020) offers a bibliometric analysis of articles in Accounting and Finance journal. Baker et al. (2020) analysed the articles published in the European Financial Management journal for the past 25 years using the bibliometric technique. Kim et al. (2009) examined the top institutions' magnitude of production spill overs and future trends. Other studies have emphasized the quality and impact of publications in financial studies (Borokhovich et al. 2000; Currie & Pandher 2011; Oltheten et al. 2005).

In accounting, researchers have studied in terms of journal impact (e.g. Brown & Gardner 1985), journal rankings (e.g. Tahai & Rigsby 1998), and the most cited articles, authors, and institutions (e.g. Brown 1996). On the other hand, Chakraborty et al. (2014) have created rankings for the literature based on the themes and methodology in accounting studies using the keywords and full abstract. A more recent study by Najaf et al. (2022) provides a review and analysis of Journal of Accounting in Emerging Economies from 2011 to 2020. Other accounting studies have been conducted to compare accounting literature with other fields such as marketing, finance, management, social and environment, natural resources, and ethics (i.e. Bernardi et al. 2008; Fusco & Ricci 2019; Swanson 2004; Uysal 2010; Zhong et al. 2016). On the other hand, Bonner et al. (2006) and Bonner et al. (2012) have analysed the quality of accounting journals to generate a score that allows the classification of journals from very high quality to low quality. Using a similar methodology, Chan et al. (2009) developed the author affiliation index from the top 100 institutions in the world. Lowe and Locke (2005) designed a web-based survey to assess the quality of articles authored by British accounting scholars.

Another important subject is the geographical classification of accounting studies. Qu et al. (2009) studied the authorship distribution in the premiere Canadian-based Journal Contemporary Accounting Research. On the other hand, Chan et al. (2012) provide an overview of accounting and finance research in Australia and New Zealand from 1991 to 2010. Another strand of studies has been more narrowly focused, examining a particular feature like author analysis (Danielson & Heck 2010), institutions, and publications worldwide (Jones & Roberts 2005). Despite a number of literature reviews in accounting studies, no specific study examines the trend and bibliometric information of IFRS adoption.

Research Method

In this study, we focus on all publications that are related to the adoption of IFRS available in the Scopus database. Scopus is a large multidisciplinary database that contains citations and abstracts from academic journals, industry publications, books, patent archives, and conference proceedings. It assists in the monitoring, analysis, and presentation of search data (Mansour et al. 2022). We select the Scopus database as it is often regarded as the most comprehensive database and the largest single abstract and indexing database ever built (Burnham 2006). Scopus is also regarded as the most extensive searchable citation and abstract literature search list (Ahmi et al. 2019; Falagas et al. 2008). A recent bibliometric paper by Lardo et al. (2022) also uses the Scopus database for a similar reason.
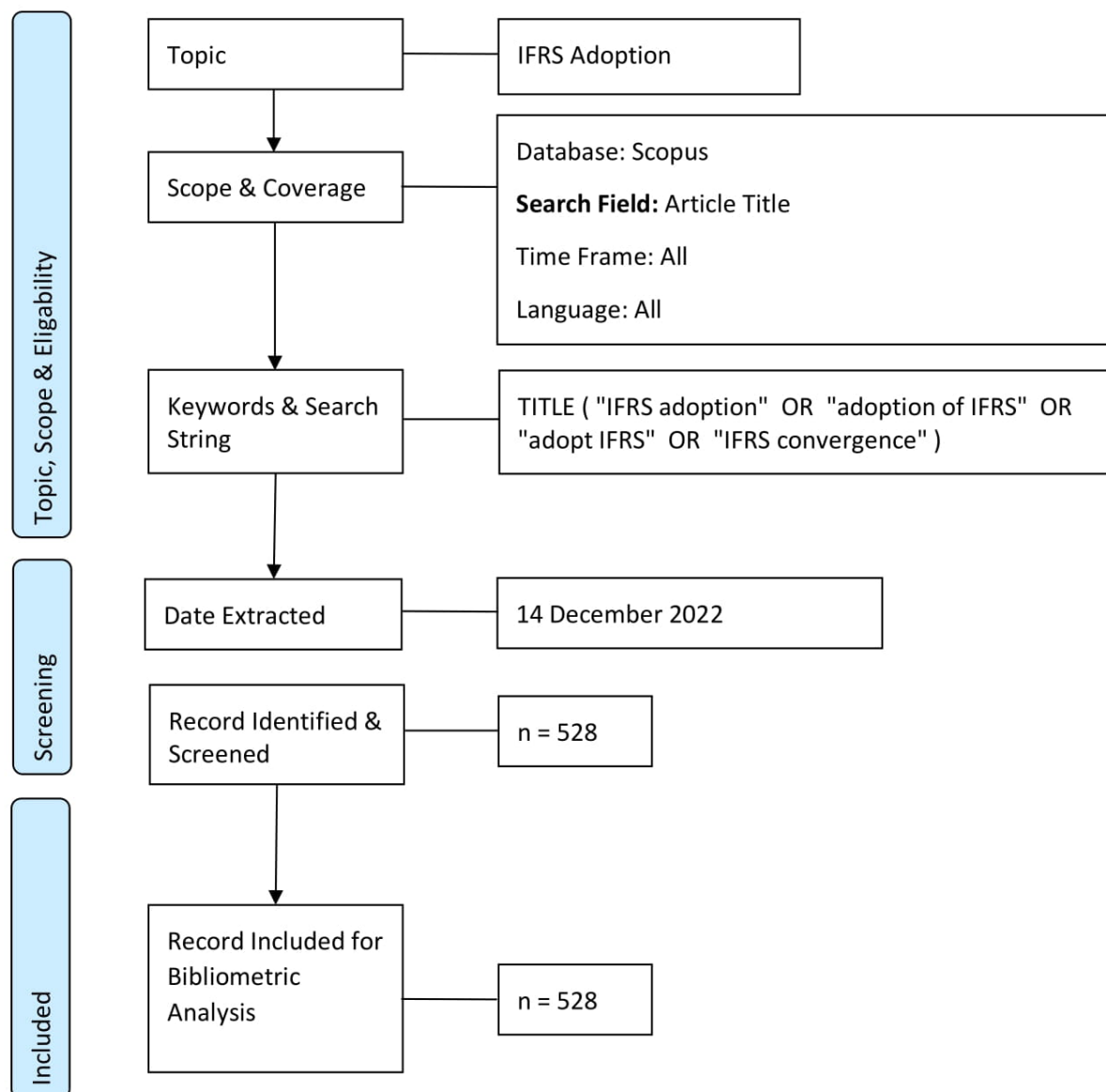

FIGURE 1. Flow diagram of the search strategy.
Source: Modified based on Zakaria et al. (2021)

We downloaded 528 publications data to conduct our bibliometric analyses for this study on 14 December 2022. We used the following search terms i.e. "IFRS adoption" OR "adoption of IFRS" OR "adopt IFRS" OR "IFRS convergence" to find all of the required publications. The number of publications depends on the topic studied and the database used. For example, based on the topic studied, Lardo et al. (2022) and Ratzinger-Sakel (2022) only analysed 189 and 260 sampled papers in their bibliometric research. Following Annesley (2010) and Jamali and Nikzad (2011), we only examined documents with titles containing the search terms we used earlier, as document titles are the first thing readers notice. We found that publications on IFRS adoption started from 2006 onwards, and in our analysis, we covered all time frames, languages, sources, and document types. We used Harzing's Publish and Perish, VOSviewer and Microsoft Excel software to calculate the citation matrics, visualise the data and compute the frequency. Harzing's Publish or Parish software is useful to help researchers and academics assess their research impact and productivity. It provides metrics such as the h-index and g-index to evaluate researchers' performance. While VOSviewer is known for its capability to visualize bibliometric networks. It can create network visualizations of co-authorship, co-citation, and keyword co-occurrence networks, allowing researchers to see the relationships and connections between authors, papers, or keywords. The publication data acquired for this study were chosen using the following search strategy as described in Fig. 1.

RESULTS

This section provides the results of our bibliometric analyses on IFRS adoption publications in response to the research questions posed in the first section. The following aspects of scholarly publications were analysed i.e. document type, source type, languages, subject area, year of publication, top 20 countries that contributed to the publications, most active institutions with at least five publications, most productive authors, most active source title, citation analysis, authorship analysis, and keywords. Discussion of the findings results in relation to each research question will be presented at the end of this section.

DOCUMENT TYPES

The document type represents the type of documents based on its publication forms. It can be divided into several types, for instance: article, review, book chapter and editorial. Table 1 displays the percentage of published documents on IFRS adoption, which are categorised into 9 different types. The results show that more than three-quarters of all documents are articles (89.39%) followed by conference papers (3.22%), reviews (2.46%) and book chapters (2.08%). Other types of publications are less than (2%).

TABLE 1. Document type

Document Type	Total Publications (TP)	Percentage (%)
Article	472	89.39%
Conference Paper	17	3.22%
Review	13	2.46%
Book Chapter	11	2.08%
Note	10	1.89%
Erratum	2	0.38%
Book	1	0.19%
Data Paper	1	0.19%
Editorial	1	0.19%
Total	528	100.00

SOURCE TYPE

The source type is divided into five i.e. journal, conference proceeding, book, book series, and trade journal. It differs from the document type. The document type is determined by the document itself, while the source type is determined by the source title. Table 2 shows that journals are the highest source type with 499 publications (94.51%), followed by conference proceedings 12 (2.27%), books 11 (2.08%), book series, and trade journals (1%) are represented below.

TABLE 2. Source type

Source Type	Total Publications (TP)	Percentage (%)
Journal	499	94.51
Conference Proceeding	12	2.27
Book	11	2.08
Book Series	5	0.95
Trade Journal	1	0.19
Total	528	100.00

LANGUAGE

Next, we look at the language in which the most research has been published. Table 3 shows that English language is the most prominent language used in (97.92%) of the total publications. Furthermore, several publications use different languages, such as Portuguese and French. Other language publications represent the smallest proportion of all published documents (around 1%).

TABLE 3. Languages

Language	Total Publications (TP)*	Percentage (%)
English	519	97.92
Portuguese	4	0.75
French	3	0.57
Spanish	2	0.38
Chinese	1	0.19
Korean	1	0.19
Total	530	100.00

*two documents has been prepared in dual languages.

SUBJECT AREA

Table 4 shows the total publications based on the subject area. In general, the result reveals that literature on IFRS adoption appears mostly in Business, Management and Accounting, Economics, Econometrics and Finance, Social Sciences, and Decision Sciences. As shown in the table, nearly half of the documents examined are in the field of business, management, and accounting (48.31%), followed by Economics, Econometrics and Finance (33.65%), and the rest are around (7%).

TABLE 4. Subject area

Subject Area	Total Publications (TP)	Percentage (%)
Business, Management and Accounting	458	48.31%
Economics, Econometrics and Finance	319	33.65%
Social Sciences	63	6.65%
Decision Sciences	24	2.53%
Engineering	15	1.58%
Arts and Humanities	14	1.48%
Computer Science	14	1.48%
Environmental Science	11	1.16%
Energy	8	0.84%
Mathematics	6	0.63%
Agricultural and Biological Sciences	3	0.32%
Multidisciplinary	3	0.32%
Earth and Planetary Sciences	2	0.21%
Psychology	2	0.21%
Biochemistry, Genetics and Molecular Biology	1	0.11%
Chemical Engineering	1	0.11%
Materials Science	1	0.11%
Medicine	1	0.11%
Pharmacology, Toxicology and Pharmaceutics	1	0.11%
Physics and Astronomy	1	0.11%

Research Trends

YEAR OF PUBLICATION

Table 5 shows the clarified statistics of publications per year on IFRS adoption. The three earliest studies conducted on IFRS adoption according to the Scopus database in 2006 were written by (Bradbury & Zul 2007; Moya & Oliveras 2006; Nobes & Schwencke 2006).

Despite being the pioneer papers in these areas, the total number of citations is only around 50. This is probably because the IFRS adoption was a newly emerged standard in 2006. Documents published in 2013 received the most citations (the total number of citations is 2,093), and the documents published in 2022 are the least cited (the total number of citations is 30). However, from 2010 to 2019, the number of publications increased due to more IFRS adoption activities (Figure 2).

TABLE 5. Year of publication

Year	TP	NCP	TC	C/P	C/CP	h	g
2022	42	15	30	0.71	2.00	3	3
2021	46	31	113	2.46	3.65	7	8
2020	43	31	141	3.28	4.55	8	9
2019	54	51	369	6.83	7.24	11	14
2018	52	49	411	7.90	8.39	12	15
2017	47	42	437	9.30	10.40	12	18
2016	49	45	765	15.61	17.00	15	26
2015	40	36	1123	28.08	31.19	14	33
2014	33	29	706	21.39	24.34	14	26
2013	41	37	2093	51.05	56.57	17	41
2012	39	37	1728	44.31	46.70	18	39
2011	16	16	1381	86.31	86.31	11	16
2010	14	13	1087	77.64	83.62	10	14
2009	2	1	32	16.00	32.00	1	2
2008	4	4	386	96.50	96.50	4	4
2007	3	3	637	212.33	212.33	3	3
2006	3	3	50	16.67	16.67	3	3
Total	528						

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.
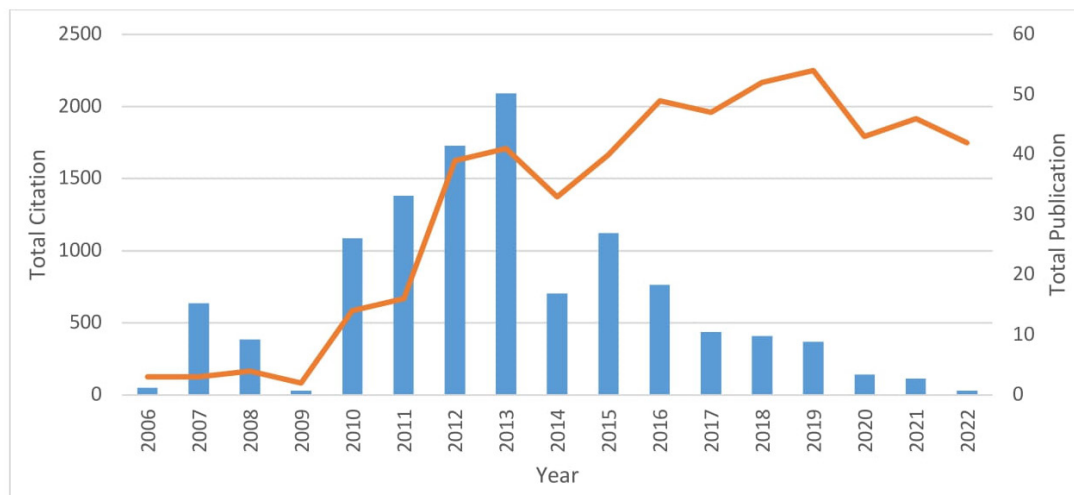

FIGURE 2. Total publications and citations by year

PUBLICATIONS BY COUNTRY

This section examines the total number of IFRS adoption publications based on the countries of its researchers. We found researchers from 72 countries have publications on IFRS adoption in the Scopus database. Table 6 displays the most active countries-based IFRS adoption-related publications. The United States ranked first with a total publications of 117 documents; Australia came second with 59 publications. While the United Kingdom was ranked third with a total of publications 47, South Korea had a fourth place with 35 publications. Whereas in terms of the total number of citations, the United States was rated first with 5,570 citations, the United Kingdom came in second place with 1,707 citations, while Australia at third place with a total citations 1,504 citations and followed by Hong Kong with 1,238 citations.

TABLE 6. Top 20 Countries contributed to the publications

Country	TP	NCP	TC	C/P	C/CP	h	g
United States	117	107	5570	47.61	52.06	30	74
Australia	59	55	1504	25.49	27.35	19	38
United Kingdom	47	43	1707	36.32	39.70	17	41
South Korea	35	28	177	5.06	6.32	9	11
Indonesia	32	24	129	4.03	5.38	7	10
Canada	27	25	948	35.11	37.92	13	25
China	26	22	190	7.31	8.64	8	13
New Zealand	26	26	641	24.65	24.65	12	25
Brazil	24	20	127	5.29	6.35	7	10
Hong Kong	22	19	1238	56.27	65.16	12	19
Malaysia	22	15	170	7.73	11.33	8	12
Tunisia	21	19	257	12.24	13.53	8	15
France	17	17	561	33.00	33.00	9	17
Germany	16	13	907	56.69	69.77	10	13
Nigeria	16	11	62	3.88	5.64	6	7
Italy	15	14	193	12.87	13.79	7	13
Spain	15	13	327	21.80	25.15	8	13
Saudi Arabia	14	9	65	4.64	7.22	6	8
India	13	7	35	2.69	5.00	4	5
Greece	10	9	387	38.70	43.00	6	9

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

MOST ACTIVE INSTITUTIONS

This section identifies the most active IFRS adoption publication by institutions. Table 7 shows that Universidade de São Paulo in Brazil has the most number of publications on IFRS adoption is (18), followed by Victoria University of Wellington in New Zealand (12) publications and the University of Manchester in the UK and Universitas Indonesia by 9 publications each.

TABLE 7. Most active institutions with minimum of five publications

Affiliation	Country	TP	NCP	TC	C/P	C/CP	h	g
Universidade de São Paulo	Brazil	18	16	89	4.94	5.56	6	9
Victoria University of Wellington	New Zealand	12	12	395	32.92	32.92	8	12
The University of Manchester	UK	9	9	258	28.67	28.67	8	9
Universitas Indonesia	Indonesia	9	7	52	5.78	7.43	3	7
Hong Kong University of Science and Technology	Hong Kong	8	8	600	75.00	75.00	6	8
Alliance Manchester Business School	UK	8	7	364	45.50	52.00	7	7
Universiti Utara Malaysia	Malaysia	7	7	47	6.71	6.71	4	6
Prague University of Economics and Business	Czech Republic	7	4	16	2.29	4.00	2	4
University of Sfax	Tunisia	7	6	54	7.71	9.00	4	6
Universitas Diponegoro	Indonesia	7	5	21	3.00	4.20	2	4
Université de la Manouba	Tunisia	7	7	42	6.00	6.00	4	6
Covenant University	Nigeria	7	5	26	3.71	5.20	4	5
Griffith Business School	Australia	7	7	145	20.71	20.71	6	7
University of Houston	USA	6	6	499	83.17	83.17	6	6
La Trobe University	Australia	6	5	146	24.33	29.20	3	5

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

AUTHORSHIP ANALYSIS

Table 8 illustrates the most productive authors. The data was also subjected to a frequency of publishing by a particular author. The table identifies the most popular scholars with at least four articles in the field of IFRS adoption. Houqe, M.N. is the most influential author on IFRS adoption and has published 10 papers on the subject, Lee, E. and Walker, M. have the second and the third ranks with 7 papers. In contrast, when it comes to the total number of citations by authors, Walker, M. was rated first with 347 citations, followed by Lee, E. with 321 citations and Houqe, M.N. with 303 citations.

Figure 3 shows the network visualisation of the author's country/region. The analysis includes countries that have cited at least 4 (TP) publications and 3 (NCP) citations (refer to Table 9). The findings suggest that the United States plays a critical role in international research cooperation. It is shown in Figure 3 that the United States has close ties with Australia, the United Kingdom, South Korea, and Canada.

TABLE 8. Most productive authors

Author's Name	Affiliation	Country	TP	NCP	TC	C/P	C/CP	h	g
Houqe, M.N.	Massey University, School of Accountancy, Palmerston North	New Zealand	10	10	303	30.30	30.30	6	10
Lee, E.	Alliance Manchester Business School, Accounting and Finance Division, Manchester	United Kingdom	7	7	321	45.86	45.86	7	7
Walker, M.	Alliance Manchester Business School, Accounting and Finance Group, Manchester	United Kingdom	7	6	347	49.57	57.83	6	6
van Zijl, T.	Victoria University of Wellington, Wellington	New Zealand	7	7	231	33.00	33.00	4	7
Monem, R.M.	Griffith Business School, Brisbane	Australia	5	5	109	21.80	21.80	4	5
Lin, S.	University of Memphis, Memphis	United States	4	4	33	8.25	8.25	3	4
Procházka, D.	Prague University of Economics And Business, Faculty of Finance & Accounting Prague, Prague	Czech Republic	4	3	15	3.75	5.00	2	3

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.
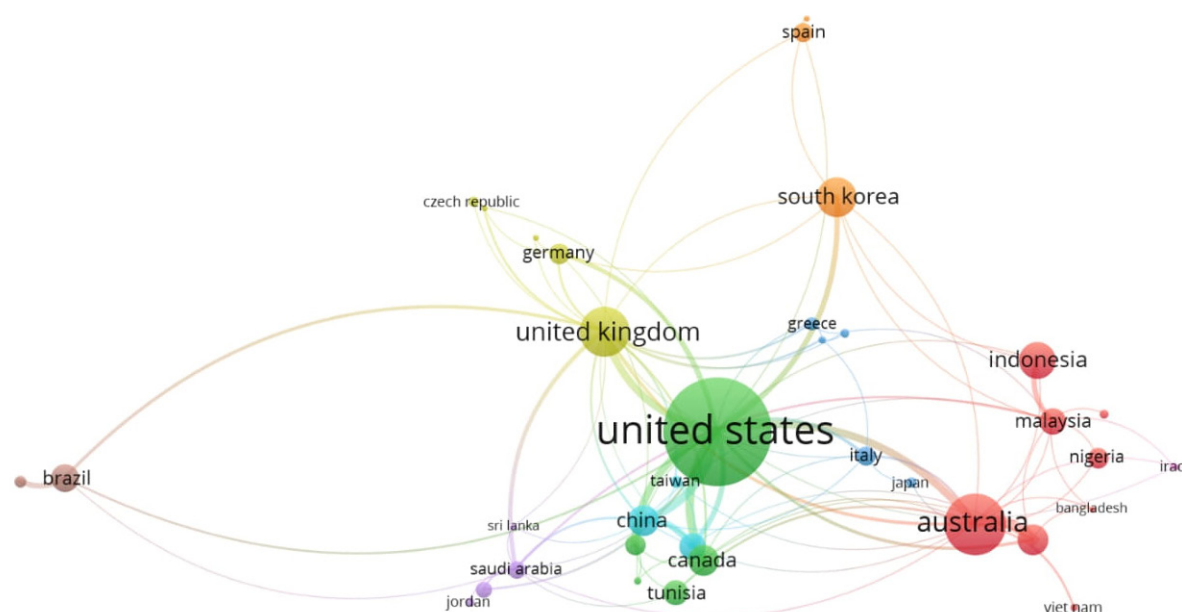
FIGURE 3. Network visualisation map of the citation by countries
Note: Minimum number of papers by an author author = 4 TP; Minimum citations of an author =3 TC

PUBLICATION BY SOURCE TITLES

IFRS adoption studies have also been published in a number of journals, books, and proceedings. Table 9 illustrates the most active source titles that published IFRS adoption articles. As indicated by the table, the International Journal of Accounting represents the highest journal that published articles on IFRS adoption, with 31 publications, followed by the Journal of International Accounting Research, with 26 publications.

TABLE 9. Most active source title

Source Title	TP	TC	Publisher	Cite Score	SJR 2021	SNIP 2021
International Journal of Accounting	31	709	World Scientific	4.0	0.416	1.061
Journal of International Accounting Research	26	426	American Accounting Association	1.8	0.371	0.526
Journal of International Accounting Auditing and Taxation	14	327	Elsevier	4.2	0.712	1.547
Accounting Review	13	1612	American Accounting Association	6.6	4.674	3.662
Journal of Accounting And Public Policy	12	760	Elsevier	4.1	1.095	2.037
Australian Accounting Review	10	133	Wiley-Blackwell	4.6	0.513	1.118
European Accounting Review	10	1018	Taylor & Francis	5.0	1.112	1.833
International Journal of Accounting and Information Management	10	103	Emerald Publishing	4.0	0.522	1.011
Academy of Accounting and Financial Studies Journal	9	31	Allied Business Academies	1.4	0.2[*]	0.529[*]
Accounting Horizons	9	501	American Accounting Association	3.4	1.454	1.7
Contemporary Accounting Research	9	888	Wiley-Blackwell	5.2	3.017	2.621
Corporate Ownership and Control	9	34	Virtus Interpress	0.2[**]	0.148[**]	0.216[**]

Notes: TP=total number of publications; TC=total citations. *The Cite Score and SJR are for 2020 since the coverage is discontinued in Scopus.**The Cite Score for 2015, the SJR and SNIP are for 2019 as the coverage discontinued in Scopus.

Table 10 summarizes the citation metrics for the papers collected as our samples. According to the citation metrics table, a total of 11,536 citations were reported from 528 papers that were published over a 17-years period (2006–2022), with an average of 721 citations per year. In addition, Table 11 displays the most cited papers according to the Scopus database. The paper entitled "Market reaction to the adoption of IFRS in Europe" is rank at the top with a total of 402 citations. This means that the paper was cited at an average of 33.5 citations per year. It is then followed by the paper entitled "IFRS adoption and accounting quality: A review" with a total of 367 citations and an average of 24.47 citations per year.

TABLE 10. Citations metrics

Metrics	Data
Papers	528
Number of Citations	11,536
Years	17
Citations per Year	721
Citations per Paper	21.81
Cites_Author	4649.31
Papers_Author	262.17
Authors_Paper	2.52
h_index	52
g_index	95

TABLE 11. Top 20 highly cited articles

No.	Authors	Title	Year	Cites	Cites per Year
1	Armstrong C.S., Barth M.E., Jagolinzer A.D., Riedl E.J.	Market reaction to the adoption of IFRS in Europe	2010	402	33.5
2	Soderstrom N.S., Sun K.J.	IFRS adoption and accounting quality: A review	2007	367	24.47
3	Ahmed A.S., Neel M., Wang D.	Does mandatory adoption of IFRS improve accounting quality? Preliminary evidence	2013	342	38
4	Daske H., Hail L., Leuz C., Verdi R.	Adopting a label: Heterogeneity in the economic consequences around IAS/IFRS Adoptions	2013	341	37.89
5	Byard D., Li Y., Yu Y.	The effect of mandatory IFRS adoption on financial analysts' information environment	2011	321	29.18
6	DeFond M., Hu X., Hung M., Li S.	The impact of mandatory IFRS adoption on foreign mutual fund ownership: The role of comparability	2011	311	28.27
7	Jeanjean T., Stolowy H.	Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption	2008	308	22
8	Landsman W.R., Maydew E.L., Thornock J.R.	The information content of annual earnings announcements and mandatory adoption of IFRS	2012	278	27.8
9	Horton J., Serafeim G., Serafeim I.	Does mandatory IFRS adoption improve the information environment?	2013	268	29.78
10	Hail L., Leuz C., Wysocki P.	Global accounting convergence and the potential adoption of IFRS by the U.S. (part I): Conceptual underpinnings and economic analysis	2010	232	19.33
11	Brüggemann U., Hitz J.-M., Sellhorn T.	Intended and unintended consequences of mandatory IFRS adoption: A review of extant evidence and suggestions for future research	2013	215	23.89
12	DeFond M.L., Hung M., Li S., Li Y.	Does mandatory IFRS adoption affect crash risk?	2015	199	18.09
13	Tan H., Wang S., Welker M.	Analyst following and forecast accuracy after mandated IFRS adoptions	2011	199	28.43

14	Yip R.W.Y., Young D.	Does mandatory IFRS adoption improve information comparability?	2012	186	18.6
15	De George E.T., Li X., Shivakumar L.	A review of the IFRS adoption literature	2016	177	29.5
16	Callao S., Jarne J.I., Laínez J.A.	Adoption of IFRS in Spain: Effect on the comparability and relevance of financial reporting	2007	171	11.4
17	Christensen H.B., Lee E., Walker M., Zeng C.	Incentives or standards: What determines accounting quality changes around IFRS adoption?	2015	163	23.29
18	Brochet F., Jagolinzer A.D., Riedl E.J.	Mandatory IFRS adoption and financial statement comparability	2013	152	15.2
19	Kim J.-B., Liu X., Zheng L.	The impact of mandatory IFRS adoption on audit fees: Theory and evidence	2012	152	16.89
20	Houqe M.N., van Zijl T., Dunstan K., Karim A.K.M.W.	The effect of IFRS adoption and investor protection on earnings quality around the world	2012	151	15.1

KEYWORDS

The fundamental concept of keyword analysis is that the author's keywords adequately reflect the document's content (Comerio & Strozzi 2019). Wen and Huang (2012) described how author keyword analysis is very beneficial for discovering study subject development. After eliminating duplicates due to spelling variations (e.g. IFRS, IFRSs), the analysis in Table 13 illustrates the keywords used by authors in the publications, which shows that the keyword (IFRS) was used in 196 publications (37.12%), while the keyword (IFRS adoption) was used in 98 publications (18.56%), then the keyword (International Financial Reporting Standards) was used in 40 publications (7.58%) and the other keywords were used in less than 40 publications.

The authors used VOSviewer, a programme for constructing and displaying bibliometric networks, to map the keywords provided with each publication. Figure 4 shows a map representation of authors' keywords provided by VOSviewer, indicating the intensity of the association between keywords based on colour, scale, style, and thickness of connecting lines (Sweileh et al. 2017). Keywords that are related are typically grouped in the same colour. Each colour in this figure indicates a cluster (Kushairi & Ahmi 2021).

In the visualization map, six main clusters will indicate five themes. These clusters can be grouped as IFRS (red colour), IFRS adoption, audit quality and audit fees (purple colour), accounting standards (green colour), earning management (cyan colour), International Financial Reporting Standards (yellow colour), and accounting quality (blue colour). The diagram suggests that IFRS, IFRS adoption, International Financial Reporting Standards, earnings management, accounting quality, and value relevance are closely related and commonly appear together.

TABLE 12. Top keywords

Author Keywords	Total Publications (TP)	Percentage (%)
IFRS	196	37.12%
IFRS Adoption	98	18.56%
International Financial Reporting Standards	40	7.58%
Earnings Management	38	7.20%
Value Relevance	35	6.63%
Accounting Quality	22	4.17%
Earnings Quality	22	4.17%
Accounting Standards	20	3.79%
Financial Reporting	19	3.60%
Mandatory IFRS Adoption	19	3.60%
Convergence	15	2.84%
Corporate Governance	15	2.84%
International Financial Reporting Standards (IFRS)	15	2.84%

... continued

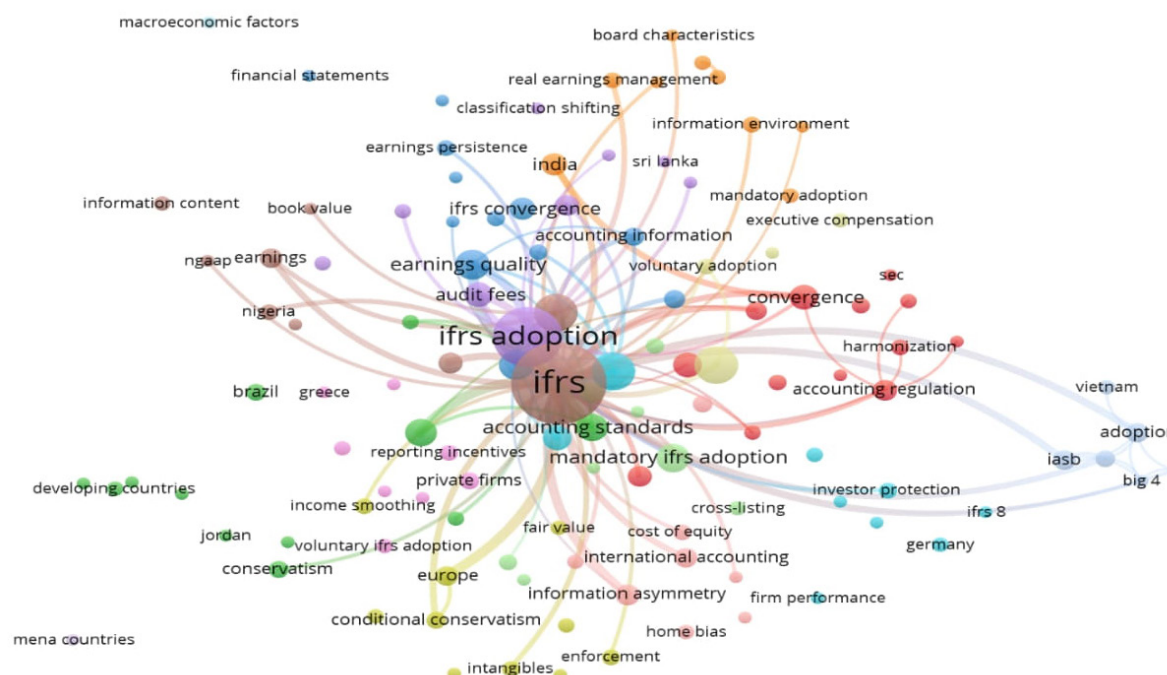|		
Audit Fees	14	2.65%
IFRS Convergence	11	2.08%
India	11	2.08%
Accounting Regulation	10	1.89%
Adoption	10	1.89%
Audit Quality	10	1.89%

FIGURE 4. Network visualisation map of the author keywords

Discussion and Future Research Direction

This section addresses the research questions (RQs) and provides a critical review using the results we obtained earlier.

1. RQ1: What is the current status of the publication in the IFRS adoption?

The selection of the publications is not limited by time frame as mentioned earlier. However, from our analyses, we found that the IFRS adoption studies emerged only after IFRS was introduced by IASB in 2005. This study discovered 528 papers from Scopus using a specified search query in the Scopus database. IFRS adoption study (as documented in the Scopus database) was pioneered by (Bradbury & Zul 2007; Moya & Oliveras 2006; Nobes & Schwencke 2006). The number of publications on IFRS adoption has remained consistently high since 2005 till December 2022. Based on the earlier analysis, it can be concluded that the issue of IFRS adoption in research has attracted a number of researchers and academics, and will continue to be attractive in the future, as shown by the later publications numbers.

Articles contribute about 90% of all publications when comparing the forms of publications. Meanwhile, the majority of publications are written in English and originate from 72 countries. It has been found that the United States, Australia, and the United Kingdom have contributed the most to IFRS adoption publications. Research on IFRS adoption is typically published in journals in the areas of business, management, and accounting economics, as well as econometrics, finance, computer science, arts, and humanities.

2. RQ2: What are the current trends of IFRS adoption publishing citations?

At the data collection date, a total of 11,536 citations were reported, and an increasing pattern has been shown from the Scopus database. This also indicates that, on average, a total of 721 citations were reported yearly, or 21.81 citations per paper. There are 262.17 citations reported per author and 2.52 authors in each publication. At the time this data was analysed, the research on IFRS adoption had also achieved a 52 h-index and 95 g-index. Further, the article by Armstrong et al. (2013) has earned

the most citations in IFRS adoption studies. Hence, the trend of IFRS adoption research seems to continue to receive attention from researchers, as reported by the number of citations.

While the primary document source for the current study is the Scopus database. Future research could utilise additional databases, including Web of Science, Google Scholar, and others. Integrating these databases can result in exciting and valuable results. Generally, keywords & search string is limited to article titles only. Other works may expand the search with title, abstract & keywords, this requires more detail screening and filtering. Moreover, bibliometrics analysis primarily employs the article's external feature information for doing structural analysis. It would be preferable to integrate the meta-analysis method with the particular data findings of IFRS adoption from multiple analytical perspectives.

3. RQ3: Which topics surrounding the introduction of IFRS are the most popular among academics?

The analysis using the visualisation map (Figure 4) has shown that six main clusters have emerged from the frequency of author publications' keywords. These clusters were classified as follows; (1) IFRS, (2) IFRS adoption, audit quality and audit fees, (3) accounting standards, (4) earnings management, (5) international financial reporting standards, and (6) accounting quality. Based on the findings, it is proposed that these themes should become the keywords of future researchers in their IFRS adoption publications.

One of the issues that needs further research is the mandatory versus voluntary adoption of IFRS. It is also worthwhile to study the process of adoption. Specifically, future research can study whether there are differences between countries with full adoption, partial adoption, and convergence with the IFRS. Another area to be studied for the future is IFRS adoption for developed and developing countries, as well as the differences and how it works. It is also worth comparing the adoption processes and issues between regions or territories (e.g. Asia and Africa).

The current external concern that may influence financial reporting is the COVID-19 pandemic. COVID-19 has had an impact on the company's financial accounting and performance reporting in various industries. During the COVID-19 period, the issue related to financial accounting and performance reporting systems was very important. As such, the issues of COVID-19 concerning IFRS implementation and subsequent effects are worth studying.

4. RQ4: What is the authorship structure of the publication about the adoption of IFRS?

As previously stated, the purpose of this study is to examine the authors' production trends. This topic was chosen with the idea that future navigation of IFRS adoption literature will be heavily reliant on the contributions and efforts of current and future authors who are also practitioners or proponents of IFRS adoption. It is important to note that the direction of additional data is heavily reliant on researchers' acceptance to publish future findings. In other words, predicting an author's contribution is critical for determining an author's future affiliation to writing in similar journals. Future scholars may want to study collaboration and publication with these authors and journals.

In the authorship analysis, we found that Houqe, M.N. was the most influential author on IFRS adoption, who made 10 publications, followed by Lee, E. and Walker, M. were published 7 publications. About the total number of citations by authors, Walker, M. was rated first with 347 citations, followed by Lee, E. with 321 citations and Houqe, M.N. with 303 citations.

The network visualisation of the author's country/region showed that the United States plays a critical role in international research cooperation. The United States has close ties with Australia, The United Kingdom, South Korea, and Canada. The analysis included countries that have cited at least 4 (TP) publications and 3 (NCP) citations. Hence, authors could benefit from the above analysis to expand their research network.

Conclusion

This study aims to examine the latest research on IFRS adoption by examining the current state of publications, the trend of citations, presenting the theme involved and providing opportunities for future IFRS adoption research. This article presents a bibliometric method, describing the quantity (number of publications by year, number of articles published by source title, document type, source type, number of publications by institution, number of publications by country, languages, and subject area), quality (number of citations and citation metrics), and systemic map for extracted data from the Scopus database.

We chose to conduct research on this topic to assess the current development of IFRS adoption literature and future opportunities in this area. To the best of our knowledge, this is the first study to do a bibliometric analysis of IFRS adoption. We contribute to the body of knowledge in terms of trends in publication and researcher location, subject areas, journals, and author keywords on IFRS adoption studies of the bibliometric and IFRS adoption literature. In addition, our study also identifies the most influential and recognized papers on IFRS adoption. Thus, researchers will be able to build in-depth knowledge from this paper as a foundation for future research in this area.

Apart from the implication to academic and future researchers, this study's findings could help stakeholders such as accountants, standards setters, and regulators to understand the effects of introducing new IFRS standards. Although this study only focuses on the whole set of IFRS

adoption, this paper can also help practitioners identify critical issues if a newly specific IFRS standard is to be applied. For this reason, this study can reduce the risk of unintended consequences in adopting any particular standard.

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