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2017

Online at <https://mpra.ub.uni-muenchen.de/92008/>  
MPRA Paper No. 92008, posted 21 Mar 2019 14:24 UTC

## **Disclosure of Information in Company's Annual Reports: A Bibliometric Analysis**

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### **Abstract**

*This study evaluated the development of research publications towards the disclosure of information in companies' annual reports. The aim of this study is to provide a preliminary source of references for related scholars interested in research mapping in this field. By using several bibliometric indicators, all research publications related to the disclosure of information in the companies' annual reports in the online Web of Science (ISI Thomson Reuters) database were analysed. The authorship, number of citations, journal sources, publishers, institutions, and countries, year of publication, categories, and author keywords were examined. The results of these analyses were underlined and discussed.*

**Keywords:** disclosure, information, bibliometric, annual reports, citations

### **1.0 INTRODUCTION**

Information disclosures in the companies' annual reports are important to provide users including investors, researchers, creditors, financial analysts, debtors, government and security consultants with information that is useful when making investment and regulatory decisions (see Cooke 1989; Marston & Shrives, 1991; Ahmed & Courtis, 1999; Nalika, 2012). It can be observed that many researchers have contributed significantly towards the development of information disclosure in the companies' annual reports. However, limited studies have identified the scientific progress of the publications development or historical perspectives. Currently, all historical and development studies in this area can only be found in the form of narrative literature reviews instead of the application of quantitative analysis and statistics of the publications. Hence, as narrative literature reviews are subjected to bias (see Tranfield, Denyer, & Smart, 2003) and the number of research papers are growing in this area, this paper closed this gap by using *bibliometric analysis* in analysing several scientific preferences (i.e., authorship, number of citations, journal sources, publishers, institutions, and countries, year of

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publication, categories, and author keywords) related to research publications of disclosures of information in the companies' annual reports. This study would provide valuable references for research scholars especially in the mapping of related research publications on the disclosures of information of the companies' annual reports. Besides, it would also indirectly provide some insight for universities, policymakers, research directors and administrators, information specialists and librarians on the performance of research publications in this area. The remainder of this paper was organised as follows: Section 2 provided brief review on bibliometric analysis. Section 3 discussed the methods employed in this study. Section 4 reported and discussed the results. Section 5 provides limitation of this study. Lastly, Section 6 concluded the paper.

## **2.0 BIBLIOMETRIC ANALYSIS**

Bibliometric analysis is not a new method used for the evaluation of the research publications and it is currently being used in almost all nations around the globe by universities and government labs, and also by policymakers, research directors and administrators, information specialists, librarians, and researchers. Bibliometric analysis is the application of quantitative analysis and statistics on publications such as journal articles and it is normally accompanied by citation counts (Okubo, 1997). According to Zupic & Čater (2015), the key concept of bibliometric analysis is basically the output measurement of the research publications (i.e., citation data and research impact) through data derived from online publication databases (e.g., Thomson Reuters Web of Science). In this context, researchers will evaluate research papers by measuring scientific preferences of bibliometric data (e.g. the amount of papers attributed to countries, institutions and authors; number of citations, impact of published work on scientific communities, the number of co-citations, annual publication outputs, language, and categories).

Studies have found that bibliometric analysis has evolved over time and many techniques have been used and combined to give more detailed, but varied and effective measurements (see Baltussen & Kindler, 2004; Bayley, Brooks, Tong, & Hariharan, 2014). Although bibliometric analysis has evolved, a study by Cobo, López-Herrera, Herrera-Viedma, and Herrera (2011), claimed that bibliometric analysis has two main uses namely performance analysis, and science mapping. Performance analysis seeks to evaluate the research and publication performance of individuals and institutions while science mapping aims to reveal the structure and dynamics of scientific fields. Although bibliometric analysis offers a quantitative approach on the

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evaluation of published research, some studies have criticized and highlighted its limitations (see Wallin, 2005; Zupic, & Čater, 2015). One of the limitations is the reliability of databases. This is because different database covers different articles and citations. On any given subject area, the quantity of articles (or other units of measurement) will vary, depending on the database used. Besides, the quality (e.g. exact breakdowns based on scientific discipline) will also differ according to the journals from which the data are drawn. For the same study, these diversities can yield different results, making it imperative to seek coherent data. When results differ based on the sources used, there is no objective means in distinguishing the more accurate reality of scientific output. Therefore, the researcher that use bibliometric analysis must choose the databases that best suited their particular needs. In doing so, the strengths, weaknesses and limitations of various databases must first be analysed. This is because there are no clear guidelines for conducting structured reviews with bibliometric methods. With regard to the development of publications related to the disclosures of information in companies' annual reports, this study found that there are lack of studies revealing research publication development using bibliometric method. Most of the existing studies were found specifically addressing on the narrative literature reviews. Since narrative literature reviews are subjected to bias by the researcher and lack of rigorous (see Tranfield, Denyer, & Smart 2003), this study used bibliometric approach to provide a preliminary source of references by mapping the research publications on the disclosure of information in the companies' annual reports. This study perceived that bibliometric approach can help other researchers before reading the narrative literature review as well as guiding them to the most influential works and without subjective biasness. Indeed, it will supplement subjective evaluation of narrative literature review and establish the impact of current research to the scholarly communities (see Okubo, 1997; Rakhshandehroo, Yusof, Ebrahim, Sharghi, & Arabi, 2015).

### **3.0 METHODOLOGY**

This study utilised the data from the online Web of Science-Thomson Reuters (formerly known as ISI web of science) on August 8, 2016. In order to analyse the research publication outputs, firstly the keyword of '*disclosure*' is used to extract paper from Web of Science core collection in terms of topic which includes four sections (i.e., title, abstract, author keywords, and keyword plus) within the publication year limited to the period from 1999 to 2016. Based on this keyword, a total of 25,696 publications have been found. However, these publications also contained not closely related documents. Hence, this result was refined again by using several

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keywords which are ‘information’, and ‘annual reports’. Next, these results were further refined by Web of Science Categories: Business Finance, Management, Business and Economics. In this respect, this study managed to determine a total of 307 research documents that have been published related to disclosure of information in the companies’ annual reports.

#### 4.0 FINDINGS AND DISCUSSION

##### Number of Papers and Author Citations

Based on 307 document publications related to the disclosure of information in the companies’ annual reports between the periods 1999 to 2016, this study firstly analysed the number of paper publications and authors with the minimum record of count (threshold) of 2 papers. The results of analysis indicated that only 72 authors have published more than 2 papers. Table 1 exhibits the list of 50 top authors based on 72 authors that published more than 2 papers. It can be observed that, four top authors have published five articles related to the disclosure of information in the companies’ annual reports. As shown in the Table 1, Hussainey, De Villier, Darus and Aerts were the highest ranked authors with five publications. The nearest competitors were Yusoff and Majdalany which contributed 4 papers respectively. 9 authors who have published 3 papers and 57 authors have are published 2 papers respectively.

**Table 1:** Top 50 authors that publish paper related to disclosure of information in the companies’ annual reports.

No.	Authors	No. of Papers	No.	Authors	No. of Papers
1	HUSSAINEY K	5	26	TOWER G	2
2	DE VILLIERS C	5	27	TAYLOR G	2
3	DARUS F	5	28	SUTTON SG	2
4	AERTS W	5	29	STOLOWY H	2
5	YUSOFF H	4	30	SOLIMENE S	2
6	MAJDALANY G	4	31	SLACK R	2
7	TARCA A	3	32	SKANTZ TR	2
8	SOOBAROYEN T	3	33	RAHMAN RA	2
9	LIF	3	34	PLENBORG T	2
10	HOPE OK	3	35	PENG J	2
11	ELSHANDIDY T	3	36	PATTEN DM	2
12	DONIF	3	37	OMAR N	2
13	D'AMICO E	3	38	MORARIU MC	2
14	CHATTERJEE B	3	39	MIR MZ	2
15	ARSHAD R	3	40	MILLS LF	2
16	ZHOU L	2	41	MATIS D	2
17	ZHANG SY	2	42	MANASSIAN A	2
18	ZHANG C	2	43	MAHADEO JD	2
19	ZEGHAL D	2	44	LEUNG P	2
20	ZDOLSEK D	2	45	KOLAR I	2
21	WEE J	2	46	KAYA D	2
22	VERGAUWEN P	2	47	KAMARDIN H	2
23	VAN STADEN CJ	2	48	JEANJEAN T	2
24	VAN STADEN C	2	49	IENCIU NM	2
25	UYAR A	2	50	IENCIU IA	2

Table 2 exhibits the first top ten authors based on 100 most cited papers and the title of the articles for each authors (see the list of 100 most cited paper in Appendix 1). Study by Botosan and Plumlee, entitled “A re-examination of disclosure level and the expected cost of equity capital” in 2002 with 230 citations was placed first, followed by Hope (2003), entitled “Disclosure practices, enforcement of accounting standards, and analysts' forecast accuracy: An international study” with 166 citations and Gray (2003), obtained 158 citations with the publication title of “The social accounting project and accounting organizations and society - Privileging engagement, imaginings, new accountings and pragmatism over critique?”. With respect to this results, this study also recognised that most of the papers that received the highest citation were journal papers. This was consistent to studies conducted by Baltussen, and Kindler (2004), and Dubin, Häfner, and Arndt (1993) who claimed that the publication of the articles in journal (i.e., reviewed papers) would have higher tendency to be cited and receive higher number of citations.

**Table 2:** The first Top 10 authors with the highest citations and research

No	Authors	Title	Total Citations	Publication Year
1	Botosan, CA; Plumlee, MA	<i>A re-examination of disclosure level and the expected cost of equity capital</i>	230	2002
2	Hope, OK	<i>Disclosure practices, enforcement of accounting standards, and analysts' forecast accuracy: An international study</i>	166	2003
3	Gray, R	<i>The social accounting project and Accounting Organizations and Society - Privileging engagement, imaginings, new accountings and pragmatism over critique?</i>	158	2002
4	Li, Feng	<i>Annual report readability, current earnings, and earnings persistence</i>	148	2008
5	Francis, Jennifer; Nanda, Dhanajay; Olsson, Per	<i>Voluntary disclosure, earnings quality, and cost of capital</i>	121	2008
6	Aerts, Walter; Cormier, Denis	<i>Media legitimacy and corporate environmental communication</i>	88	2009
7	Dhaliwal, DS; Gleason, CA; Mills, LF	<i>Last-chance earnings management: Using the tax expense to meet analysts' forecasts</i>	80	2004
8	DeFond, Mark; Hung, Mingyi; Trezevant, Robert	<i>Investor protection and the information content of annual earnings announcements: International evidence</i>	67	2007
9	De Villiers, Charl; van Staden, Chris J.	<i>Can less environmental disclosure have a legitimising effect? Evidence from Africa</i>	66	2006
10	Brown, Stephen; Hillegeist, Stephen A.	<i>How disclosure quality affects the level of information asymmetry</i>	58	2007

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Furthermore, it can also be noticed that the highest cited paper in this area logically depended on its publication year. For example, study by Botosan & Plumlee received 230 citations of the publication in the year 2002 and study by Hope was cited 166 times in 2003. In this regard, one can perceive that papers in this area are usually not cited until 1 or 2 years after their publication and generally it will take between 4–10 years to be cited. However, this result should be interpreted with caution because some of the papers in this area were a half-life of a publication (decline of the citation rate as the time when the citation rate has dropped to half of the maximum). According to Slyder et al. (2011) the number of citations may increase or decrease as the citation counts can reach its peaks. This normal life span of a publication will limit the evaluation rank and the significance of recent publications.

### Sources of Articles and Publishers

Table 3 depicts the results of the top ten sources of articles based on the number of article publications. The most popular source of articles was from *European Accounting Review* with a total of 13 papers. However, this journal was ranked at 41 by Web of science Business and Finance category and only received 146 total citations. Eleven papers were brought out in the *Corporate Governance-An International Review* and nine papers were in the *Journals of Business ethics* and *Accounting Research* respectively. Moreover, it can also be observed that 8 papers in this area were contributed from conference proceeding (i.e., *Procedia Social and Behavioural Sciences*).

Although these 8 papers were among the top ten sources of articles, their citation rates were very low with only 4 citations in total. In addition, it can be observed that the *Journal of Accounting in Emerging Economies* has distributed 8 papers. However, it was found that this journal was merged with the *Research in Accounting in Emerging Economies* (RAEE) book series in the year 2016. It also can be observed in Table 3 that most of the top 10 papers were published in five different publishers, namely Routledge Journals Taylor & Francis Ltd, Springer, Elsevier and Emerald Group. The first top ten paper publisher in this area was Routledge Journals Taylor & Francis Ltd, while the second top publisher were Willey-Blackwell and Springer.

**Table 3:** Top 10 source of articles and publishers based on the number of article publications

No.	Source Titles	Rank	No. of Papers	No. of Citations	Impact factor
1.	European Accounting Review	41 <sup>a</sup>	13	146	1.098

<b>Publisher: ROUTLEDGE JOURNALS, TAYLOR &amp; FRANCIS LTD</b>					
2.	Corporate Governance: An International Review	11 <sup>a</sup> , 37 <sup>b</sup> , 55 <sup>d</sup>	11	157	2.169
<b>Publisher: WILEY-BLACKWELL</b>					
3.	Journal Of Business Ethics	3 <sup>c</sup> , 47 <sup>b</sup>	9	201	1.837
<b>Publisher: SPRINGER</b>					
4.	Journal Of Accounting Research	10 <sup>a</sup>	9	582	2.243
<b>Publisher: ELSEVIER SCIENCE INC</b>					
5.	Research In Accounting In Emerging Economies	*	8	5	*
<b>Publisher: EMERALD GROUP PUBLISHING LTD</b>					
6.	Procedia Social And Behavioral Sciences	NA	8	4	NA
<b>Publisher: ELSEVIER SCIENCE INC</b>					
7.	Journal Of Accounting And Public Policy	34 <sup>a</sup>	8	59	1.317
<b>Publisher: ELSEVIER SCIENCE INC</b>					
8.	Accounting Auditing Accountability Journal	16 <sup>a</sup>	8	53	1.911
<b>Publisher: EMERALD GROUP PUBLISHING LTD</b>					
9.	Accounting And Business Research	32 <sup>a</sup>	8	25	1.347
<b>Publisher: ROUTLEDGE JOURNALS, TAYLOR &amp; FRANCIS LTD</b>					
10.	Australian Accounting Review	57 <sup>a</sup>	6	8	0.825
<b>Publisher: WILEY-BLACKWELL</b>					

**Notes:** 1) Web of Science categories; <sup>a</sup>Business Finance, <sup>b</sup>Business, <sup>c</sup>Ethic, <sup>d</sup>Management,  
 2) \* Journal of Accounting in Emerging Economies merged with the Research in Accounting in Emerging Economies (RAEE) book series in 2016  
 3) NA = The Procedia - Social and Behavioural Sciences does not have, and is not eligible for an Impact Factor as it does not publish primary research, full length, peer reviewed articles. Each volume is submitted for assessment on its own merit for inclusion in the Thomson Reuter Conference Proceedings Citation Index

Furthermore, Table 3 also presents the impact factor of each journal extracted from the website of the Journal Citation Report (JCR) on August 10, 2016. It can be observed that the average impact factor was 1.593 indicating that the majority of these papers were published in the high impact factor journals. Therefore, this showed that, in order to achieve a higher number of citations, there was a need for authors to consider and choose high impact factor journals to publish their articles. This was consistent to Garfield (2006) which claimed the journal impact factor was one of the most important measures that indicated the journal's significance within the related fields to publish papers. In addition, it was found that most of these papers published and appeared in high impact factor journals in English language. (See Bayley, Brooks, Tong, & Hariharan, 2014).

### Institutions and Countries

Table 4 presents the result of top twenty institutions that contributed papers related to disclosure of information in the companies' annual reports. In general, analysis has show 98 different universities and institutions have contributed research papers in this area. Based on the number of paper publications, Table 4 shows that the *Bucharest University of Economies Studies* in Romania contributed 11 papers making it the highest number of papers related to disclosure of information in the company's annual reports. This was followed by one Malaysian University that is *Universiti Teknologi MARA (UiTM)*, which have contributed 8 papers. *University of Western Australia* and *University of London* were the closest challengers with 6 papers followed by *University of Plymouth*, *University of Auckland*, *University of Antwerp*, *Massey University*, *Curtin University* and *Babes Bolyai University* with five papers respectively. It also can be observed that the remaining top twenty universities only contribute 3 and 4 papers respectively. One of the explanations for the variation of research publications among these institution/universities was the differential spending and support of research by institution/universities. Study of Man, Weinkauf, Tsang, and Sin (2004) can be a basis to support this notion as they reported that different institutions/universities would have different reward systems to account the publication outputs. Thus, this reward system has contributed to a higher number of research publications in high impact journal. Therefore, a university that has more research publications in general can be assumed to be better in terms of providing financial support, research assistance or best practice system to encourage more research publications.

Table 5 shows the top 20 countries that have published at least 4 papers and more publications. However, based on the overall analysis, it was found that all the papers related to the disclosure of information in companies' annual reports originated from 40 countries. It can be observed that the vast majority of paper publications was dominated by the United States of America (USA) with 58 papers, followed by Australia with 39 papers and England with 31 papers.

**Table 4:** Tops 20 institutions that contribute publications related to information disclosure in companies annual reports

No.	Institutions/Organisation	No. of Publications
-----	---------------------------	---------------------

1	BUCHAREST UNIVERSITY OF ECONOMIC STUDIES	11
2	UNIVERSITI TEKNOLOGI MARA	8
3	UNIVERSITY OF WESTERN AUSTRALIA	7
4	UNIVERSITY OF LONDON	6
5	FLORIDA STATE UNIVERSITY SYSTEM	6
6	UNIVERSITY OF PLYMOUTH	5
7	UNIVERSITY OF AUCKLAND	5
8	UNIVERSITY OF ANTWERP	5
9	MASSEY UNIVERSITY	5
10	CURTIN UNIVERSITY	5
11	BABES BOLYAI UNIVERSITY FROM CLUJ	5
12	UNIVERSITY OF OTTAWA	4
13	UNIVERSITY OF BRISTOL	4
14	UNIVERSITI UTARA MALAYSIA	4
15	MAASTRICHT UNIVERSITY	4
16	DUKE UNIVERSITY	4
17	DEAKIN UNIVERSITY	4
18	UNIVERSITY OF WAIKATO	3
19	UNIVERSITY OF TORONTO	3
20	UNIVERSITY OF SOUTHAMPTON	3

This result showed that the USA was more influential in research publication related to disclosure of information in companies' annual reports. According to Man et al. (2004), USA scored a higher number of research publications due to its large population and financial resources available for the scientific communities. Besides, they also claimed that the differential spending on research among countries was also accounted for all the variations in publication output across the world. This notion also was consistent with Rahman and Fukui (2003), who claimed that the number of research publications of each country was largely dependent on its per capita gross national product and the expenditure allotted for research and development. Hence, this result was the answer to the domination of USA. In this sense, it is believed that when financial support of research is strong, the level of research productivity will increase. Compared to other nations, which spent less. Malaysia for example, was among the top five countries that productively contributed papers in this area when the Malaysian government started to offer a variety of research grants to academia (such as Fundamental Research Grant Scheme under the Ministry of Higher Education).

**Table 5:** Top 20 countries which have four or more publications related to the information disclosure in companies' annual reports.

No.	Countries	No. of Papers
1	USA	58

2	AUSTRALIA	39
3	ENGLAND	31
4	PEOPLES R CHINA	29
5	MALAYSIA	24
6	ROMANIA	19
7	ITALY	17
8	NEW ZEALAND	12
9	CANADA	10
10	FRANCE	9
11	BELGIUM	9
12	SCOTLAND	8
13	NETHERLANDS	8
14	PORTUGAL	7
15	SPAIN	6
16	SOUTH AFRICA	6
17	SINGAPORE	6
18	GERMANY	6
19	EGYPT	5
20	U ARAB EMIRATES	4

### Document Types and Categories

This study also analysed the distribution of document types depicted in Figure 1. It was found that, there were five different types of documents related to the disclosure of information in the companies' annual reports publications. Based on Figure 1, 'articles' in journal were the leading types of document with 217 documents. This was followed by *Proceedings* papers with 90 papers and book chapter with 19 documents. *Review Articles* and *Editorial Materials* contributed 7 and 3 papers respectively. Figure 2 shows the results regarding Web of Science categories. It can be observed that all papers were categorized under Business Finance, Management, Business and Economic because of the refinement during data collection. Environmental studies with 17 papers and Ethics with 9 papers respectively were in the fifth and six categories. It was also found that, some of these papers were also categorised under two or more categories (see Table 3 for an example). On the other hand, this study also analysed the distribution related to the language of the articles. It found that that 98 percent (303 papers) of these papers were published in English.



Figure 2: Categories Web of Science

### Author keywords

Table 6 presents the lists of top ten most frequent keywords used by the authors in their publications documents and other related disclosure keywords used. It can be observed in panel A that the most frequent keywords used by the authors view in this area was ‘Disclosure’. This keyword was used not more than 52 times. Furthermore, it can also be noticed that, three other frequently applied author keywords were annual reports (39 times), corporate governance (35 times) and voluntary disclosure (25 times). Since some of these keywords were collocations of two or three words, this study also analysed the separated keywords. It can be observed from Panel A, the frequency of the first keyword remained as ‘disclosure’ for 178 times in the first place, followed by ‘corporate’ keyword 71 times and ‘reporting’ keyword for 58 times. The ‘information’ keywords scored 55 times.

**Table 6:** The keywords used by authors

<b>Panel A: Top 10 frequency of keywords used by authors</b>				
No.	Keywords	Frequency	Separated keywords	Frequency
1.	Disclosure	52	Disclosure	178
2.	Annual reports	39	Corporate	71
3.	Corporate governance	35	Reporting	58
4.	Voluntary disclosure	25	Information	55
5.	Intellectual capital	24	Annual	53
6.	Content analysis	18	Capital	50
7.	Malaysia	11	Governance	49
8.	IFRS	10	financial	46
9.	Corporate social responsibility	9	Management	36
10.	Financial reporting	9	Reports	36

**Panel B: other disclosure keywords used by authors**

No.	Keywords	Frequency
1.	Disclosure quality	6
2.	Environmental disclosure	6
3.	Information disclosure	6
4.	Corporate responsibility disclosure	3
5.	Mandatory disclosure	3
6.	Narrative disclosure	3
7.	Climate change disclosure	2
8.	Corporate social disclosure	2
9.	Financial disclosure	2
10.	Intellectual capital disclosure	2
11.	Risk disclosure	2
12.	Social disclosure	2
13.	Sustainability disclosure	2
14.	Transparency and disclosure	2

Furthermore, Panel B in Table 6 exhibits other disclosure keyword used by the authors in their publication documents. Fourteen different disclosure keywords were viewed in the authors' publication documents. '*Disclosure quality*' was among frequent keywords used for 6 times, followed by '*Environmental Disclosure*' and '*Information Disclosure*'. Looking into these keywords, it can be perceived that the trend of research papers in this area have involved several range of research focuses and diverse literature. Indeed, this also indicated that research in disclosure of information in companies' annual reports still offer some avenue to be explored. This notion can be supported by Fu and Ho, (2012), who claimed that research trends can be viewed by quantitative analysing the frequency of author keywords that can provide a reasonably sophisticated picture of the papers' subjects.

**5.0 LIMITATION OF STUDY**

This study has several methodological limitations. Firstly, this study only used the online Web of Science (ISI Web of Knowledge) database that excluded the research papers that were not indexed in this database (i.e, Non-ISI research papers). Secondly, analysis only covered a period between 1999-2016 due to the subscription of Web of Science database and this limited the overall analysis of articles found in this area. Thirdly, this study encountered a limitation arising from the citation count. This was because there was a tendency for authors' preference for self-citation, or cite free full access articles, review papers, well known authors, papers by colleagues as well as cited papers from the journal they were going to submit their work to. Lastly, another limitation of this study was due to the research papers publication year of the

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research papers that created biasness against older research papers. The publication year influenced citation indexes and the number of citations for each paper and therefore, the new papers would not have sufficient time to reach a high citation rate compared to older papers.

## 6.0 CONCLUSION

This study evaluated the development of research publications related to the disclosure of information in companies' annual reports based on several bibliometric indicators. The research publications related to the disclosure of information in companies' annual reports were extracted from Web of Science Core Collection using several keywords. Based on the "Disclosure" keywords, this study managed to identify 25,696 research paper publications in total. Since there were some research publications that not related to this topic, this result was refined by using two more keywords were namely 'information', and 'annual reports' and Web of science categories (i.e., Business Finance, Management, Business and Economics). In this respect, this study managed to determine a total of 307 related research documents in this area. In order to analyse these research papers, the priority was arranged based on 1) Number of paper & citation, 2) Sources of articles & publishers, 3) Institution/Universities & countries, 4) Documents types & categories, and 5) Author's keywords. This study found that the most top cited articles related to disclosure of information in the company's annual reports was "A re-examination of disclosure level and the expected cost of equity capital" produced by Botosan and Plumlee, in 2002 which received 230 citations (see Table 2). Moreover, this study observed that many of these articles were published in the lower rank journal (based on Web of Science Categories). It was also found that the highest number of research publications among authors in this area was five. They were contributed by Hussainey, De Villier, Darus and Aerts. This study also observed that *European Accounting Review* published by Routledge Journals Taylor & Francis Ltd. was the top journal preferred by authors to publish their research in this area with the total of 13 papers. Although USA has been the top countries that produce many paper in this area, this study found there is growing number of research papers in Asia countries, particularly Malaysia. Among Universities, this study found that *Bucharest University of Economics Studies* was the top institutions/universities that produce the most number of papers in this area. The most frequent keyword used by the authors was "Disclosure" and fourteen different keywords were used related for disclosure. This led to the perception that the trend of research papers in this area has involved several range of research focuses. The results of this analysis may reflect the importance of articles in the literature reviews (i.e., quantitative confirmation of subjective categories) and provide some insights on the research landscape in

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this area. Besides, it is also expected that this findings will also influence them to bring more attention to research publication in this area.

## REFERENCES

- Ahmed, K., & Courtis, J. K. (1999). Associations between corporate characteristics and disclosure levels in annual reports: a meta-analysis. *The British Accounting Review*, 31(1), 35-61.
- Baltussen, A., & Kindler, C. H. (2004). Citation classics in critical care medicine. *Intensive care medicine*, 30(5), 902-910.
- Bayley, M., Brooks, F., Tong, A., & Hariharan, K. (2014). The 100 most cited papers in foot and ankle surgery. *The Foot*, 24(1), 11-16.
- Cooke, T. E. (1989). Disclosure in the corporate annual reports of Swedish companies. *Accounting and business research*, 19(74), 113-124.
- Dubin, D., Häfner, A. W., & Arndt, K. A. (1993). Citation classics in clinical dermatologic journals: citation analysis, biomedical journals, and landmark articles, 1945-1990. *Archives of Dermatology*, 129(9), 1121-1129.
- Fu, H. Z., & Ho, Y. S. (2012). Bibliometric analysis of thermodynamic research: A Science Citation Index Expanded-based analysis. *INTECH Open Access Publisher*.
- Garfield, E. (2006). The history and meaning of the journal impact factor. *Jama*, 295(1), 90-93.
- Koskinen, J., Isohanni, M., Paajala, H., Jääskeläinen, E., Nieminen, P., Koponen, H., & Miettunen, J. (2008). How to use bibliometric methods in evaluation of scientific research? An example from Finnish schizophrenia research. *Nordic Journal of Psychiatry*, 62(2), 136-143.
- Larsen, K., & Bong, C. H. A tool for addressing construct identity in literature reviews and meta analyses. *MIS Quarterly*, (2016), forthcoming
- Man, J. P., Weinkauff, J. G., Tsang, M., & Sin, J. H. D. D. (2004). Why do some countries publish more than others? An international comparison of research funding, English proficiency and publication output in highly ranked general medical journals. *European journal of epidemiology*, 19(8), 811-817.
- Marston, C. L., & Shrives, P. J. (1991). The use of disclosure indices in accounting research: a review article. *The British Accounting Review*, 23(3), 195-210.

Please cite: Abdullah, A., Waemustafa, W. & Mat Isa, H. (2017). Disclosure of Information in the Company Annual Reports: A Bibliometric Analysis. Paper presented at 2nd International Research Conference On Economics Business And Social Sciences. Conference proceedings (Vol. 2, Iss. 2, p.66). Park Royal, Penang: CSRC Publishing. Retrieved from <http://www.globalcsrc.org/irc2017-my/2ndIRCMalaysiaProceedings.pdf>

Nalikka, A (2012). Essays on information disclosure in company annual reports. *Acta Wasaensia*, (269), 1-147. Retrieved from [http://www.uva.fi/materiaali/pdf/isbn\\_978-952-476-415-5.pdf](http://www.uva.fi/materiaali/pdf/isbn_978-952-476-415-5.pdf)

Okubo, Y. (1997). *Bibliometric Indicators and Analysis of Research Systems: Methods and Examples* (No. 1997/1). OECD Publishing.

Rahman, M., & Fukui, T. (2003). Biomedical research productivity. *International journal of technology assessment in health care*, 19(1), 249-252.

Rakhshandehroo, M., Yusof, M. J. M., Ebrahim, N. A., Sharghi, A., & Arabi, R. (2015). 100 Most Cited Articles in Urban Green and Open Spaces: A Bibliometric Analysis. *Current World Environment*, 10(2), 445.

Slyder, J. B., Stein, B. R., Sams, B. S., Walker, D. M., Beale, B. J., Feldhaus, J. J., & Copenheaver, C. A. (2011). Citation pattern and lifespan: a comparison of discipline, institution, and individual. *Scientometrics*, 89(3), 955-966.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207–222. doi:10.1111/1467-8551.00375

Wallin, J. A. (2005). Bibliometric methods: pitfalls and possibilities. *Basic & clinical pharmacology & toxicology*, 97(5), 261-275.

Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational Research Methods*, 18(3), 429-47