



Bibliometric Analysis: Agency Theory in Accounting

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Abstract

Purpose: This paper conducts a general bibliometric analysis review of agency theory in accounting (financial and management). The bibliometric analysis offers historical information on-trend and performance research.

Methodology: The study investigated the related literature in the agency theory and accounting (financial and management) from 1999-2019, obtained from the Scopus database. The literature-based documents are on the study of the scientific output and distribution of subject categories and journals. Keywords of the authors also have focused on determining the study hotspots.

Findings: The findings of this study show that annual production has increased over the period under investigation. The Critical Perspective on Account is the leading prolific journal and Accounting, Auditing and Accountability is a most influential journal. The result also shows that many top institutions are from the United Kingdom. Simultaneously, the United States of America leads the highest production and cited documents of related scientific articles.

Originality /Value: This study contributes on the awareness of using bibliometric analysis study to explore development in the scientific field, that is, the use of keywords to extract information for research growth in terms of the number of production and citations.

1.0 Introduction

Agency theory has gained its prominence in international organisations, academics, professional practices, and corporate bodies over the years now. The approach is based upon the principal-agent framework. Jensen and Meckling (1976) described agency relationship as a contract under which one or more persons (principal) engage another person (agent) to perform some services on their behalf, which involves delegating some decision-making authority to the agent. An agency relationship arises when a provider of funds appoints another to manage his interest. Proponents of agency theory believe that there is a tendency for agents, when left unmonitored, to engage in self-interest activities to the principal's detriment. The agency theory has also related to how the information is for external users (stakeholders), especially shareholders in an organisation, and internal users of information (management) of financial data like financial reports on a firm's performance, budget, and performance evaluation.

Over the years, several writers have provided a broader array of accounting overviews. Some used bibliometric measures to determine the general condition of the research field (Brown, 1996). Several others have also researched various essential aspects, like journal rankings (Qu et al., 2009). Moreover, others have concentrated on comparing accounting with other related disciplines. Nevertheless, none of them gave a full view of the current state of the art, taking into account all the modern instruments available to reflect a field with bibliometric indicators (Podsakoff et al., 2009). Considering the relevance and expansion of agency theory research and following the trend of researchers' concentration, which of interest to the masses on the study of the scientific production.

This paper aims to present a general bibliometric analysis of agency theory integrating into accounting (financial and managerial) research over a period from 1999-2019 with a new approach that combines several tools for representing the importance of bibliographic material found in Scopus database. This database is usually regarded as the most influential in academic research because it includes journals, articles, authors, years, and recognised the highest citation counts. The

number of publications, citation count analysis, and the *h*-index is currently a measure for representing the quality of a set of papers (Hirsch, 2005). It assumed that the number of documents indicates total production (TP), and the number of total citation (TC) count is the most influential research area. The *h*-index consider the two. Most of the results follow the general understanding of the direction of the scientific field analysed from Scopus. This article novelty is to use extant accounting literature and bibliometric analysis indicators to present the new trend of academic research.

The study analyses agency theory in accounting from Scopus. Some review papers have also focused on financial accounting and management accounting. Still, there is little research that analyses agency theory in financial and management accounting using bibliometric analysis. Bibliometric analysis is a useful tool evaluating countries, institutions, authors, journal authors (Tang et al., 2018). This study aims to achieve the following objectives by using bibliometric indicators:

1. Identify the top 10 trend players in terms of leading journals(production and citation), years(production), highly impactful articles, influential authors (production and citation), authors in a leading journal(production and citation), impactful institutions, country (production and citation) on the scientific field in the period under review.
2. Determine keywords that have drawn the attention of scholars subject area in the past, present, future direction.

According to Curty and Boccato (2005), keywords represent the words of the paper's subject under review. The choosing of the keywords used in this research is agency theory, financial, management, and accounting from Scopus.

The significant contributions of the research are the highlights as follows:

1. The bibliometric study explored recent 10 top development in the scientific field, using the bibliometric indicators. It will serve as the starting point for academia to research in unexplored areas yet potentially significant.
2. From this study, researchers can understand the inner structure of conducting research using bibliometric indicators to get a broad picture of this area.

3. The study will cover bibliometric analysis research growth regarding number production and total citation received over the years.

The study uses a bibliography analysis to answer the research questions set out above: reviewing existing literature to recognise main trends and problems, and proposing the justification for single-source reference for scholars and organisation management interested in bibliometric methods. The idea suggests workflow guidelines to carry out bibliometric studies in the future. This study provides a statistical survey of published papers and citations for calculating the effect on the field.

Note that the review is not limited to any language; however, English speaking countries dominated most on the publications.

The organisation of this work is as follows: We provide a literature review of agency theory and integrating financial accounting, and management; the methodology of the study; bibliometric analysis results; and conclusion.

2. 0 Literature Overview

2.1 Integrating agency theory in accounting

The Agency theory arose from various authors', but the first author Adams Smith was the belief brain behind it in 1776 after which other authors took the inspiration from till now. Smith views that an organisation managed by a group of people or an individual who is not the real owners of the business, their chance of the business not being managed well will surface at the owner's expense. The argument is that the manager being an agent might use the company's property for his gain, which may bring a problem. Berle and Means (1932) found the research on agency theory, that, agent appointed by owners, and the agent might use the firm's property for his ends, which will create conflict between the principal and agent. Jensen and Meckling (1976), an agency relationship is also a contract between the principal and agent. Both parties work for their self-interest that leads to the agency conflict. They consider the agreement as a legal binding document between the principal and the agent principle uses a monitoring tool to curb the agent's activities with the view to

control cost. Ross (1973) identify the agency problem resulting from the decision on the compensation from the contract emanated from the firm and society.

The agency theory is to justify accounting research since the idea of approach provides a framework for explaining contractual relationships between a principal and an agent (Chi, 1989). In agency theory, an individual is motivated by self-interest, which could lead to the agency problem. It is useful to provide an overview of how agency theory should integrate into the financial and management accounting, and understanding how agency relationships work and the accounting information system.

An Agency theory argued that in a modern company, the distinction between the owners and management has led to disputes, where the agent (management) acquires more knowledge and thus appears to behave to their advantage, rather than to meet the desires of the principal (shareholders) (Berle and Means, 1932). Accounting information provides information to interested parties about the financial situation and results through a sound accounting system, which produces financial accounting reports and firms performance. Therefore, there is the need to share information about the company's financial position and performance that might be relevant and useful for their decision making through sound accounting information system (Brown et al., 2011). Schoenfeld (2020) examined large-scale data set of contracts using block investments from 1996 to 2018 on how the theory predict bilateral agreements. Specific contracts which include financial reporting and access to information resulted that contract arrangements relating to accounting information are significantly associated with information asymmetry measures between managers and shareholders. Cunha et al. (2016) investigate the accounting information's effect on the Portuguese mayor's re-election. The study considers agency theory as a starting point; the result shows that specific accounting information influences the re-election of mayors in Portugal, namely the financial accounting components. Similarly, Hiebl (2015) explores the various pay attitudes of Chief Financial Officers (CFOs) an (agents) which may align with the theory of agency. The result shows that CFOs who reports financial accounting to owners

expected more power in the owners' hands. This indicates that company owners' actions will affect and change the attitude of a company managers.

Management accounting is part of the accounting system that concerns measurement and information within an organisation, seeking to evaluate past decisions and improve future decision. Agency theory has been one of the approaches which integration has been inclusive in management accounting to incorporate conflict of interest, incentives problems and mechanism for adopting incentive package to control the agency problems. Such managerial accounting on individual interaction within a firm is essential to mitigate the underline agency problem by absorbing it into the employment contract. Brink et al. (2017) examine the effect of financial incentive to managers believing that such incentives will cause managers to engage on excessive risk-taking that effect the managers pay and another participant, the agent. The result indicates that the managers' incentives package is aligned with the organisation's interest to reduce the agency problem. Baiman et al. (2010) examine the effect of management accounting potential effects on firm performance on the informativeness and incentive performance evaluation. Finding suggests agent is paid based on the output of his contract workstation.

3.0 Methods

The study used bibliometric analysis as a combination of statistical methods and literature (Pritchard, 1969). Bibliometric analysis entails various steps; performance analysis (including data extraction, processing, analysis) and science mapping (networking and visualisation) (Cobo et al., 2011). The performance analysis seeks to assess individual and institution research and publication, whereas science mapping intends to show the structure and dynamic forces of science field. Bibliometric methods introduce quantitative evenness into the subjective evaluation of literature. The process provides evidence of theoretically developed classifications in a review paper. The implementation determines the effect frequency of the influence of research; the relationship indicators measure the connection between researchers and their different fields. The result is an overview of the research effort development, evolution, and quality (Ramos-Rodriguez and Ruiz-Navarro, 2004).

3.1 Data Extraction

Data were extracted from the Scopus database as is considered to be one of the largest databases, extracting 348 articles in the related scientific field or business-related field. The team of words 'agency theory', 'finance', 'management', and 'accounting' formed to recover the related documents, even though scholars may have used different texts to retrieve the records from search repository from 2010 to 2019 as at 27/02/2020.

3.2 Data Analysis

The current study employs a combination of process among a lot, such as the total number of publications, the total number of citation counts and the h-index. Merigo et al. (2015) believe three most practical papers that define a group's value are the number of publications, citations count and h-index. The publication count has received colossal consideration as is classified as a measure that establishes the author, institutions and country (Borokhovich *et al.* 1995). Furthermore, cited articles have received more attention than less mentioned articles due to the influencing impact on the documents (Culnan, 1986). Again, h-index is modern techniques that combine both publications and citation counts under one framework (Hirsch, 2005). The bibliometric analysis uses various indicators in related identified scientific fields, which considered the database's pattern, such as most frequently cited articles, journals, production and cited (authors, institution and countries), and keywords through tables.

4 Findings and Results

4.1 Publication trends

The study is base on 348 articles written on agency theory relating to financial and management accounting published between 1999-2019. **Figure 1** shows years of publications over the period. The graph shows that the selected sample of publication activities around the scientific field started in 2010 with 17 papers, and have increased substantially from 2015 onwards. The possible reason for constant growth for this fact might be that accounting information may serve as a source of mediation between shareholders and managers in communicating a company's

position and performance. Managers provide a company's accounting situation to shareholders might be relevant and useful for decision-making through a sound accounting information system, which has become one significant aspect of today's agency contract relationship and today's research activities.

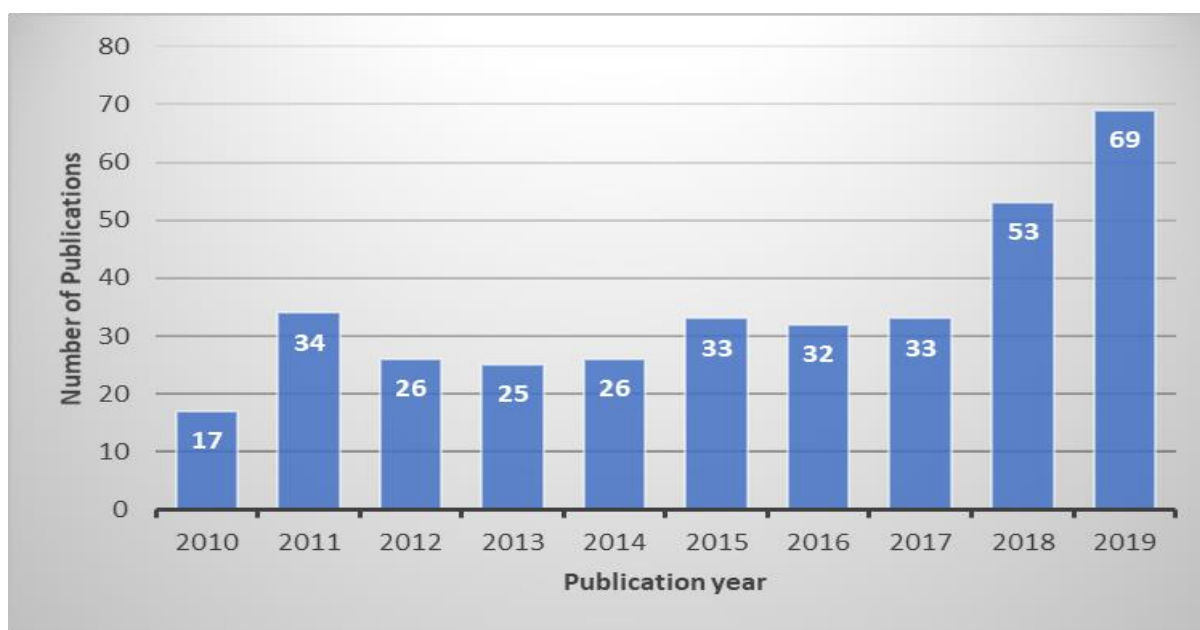


Figure 1 No. Annual Publications in Agency Theory in Accounting

4.2 Leading journals

To identify which academic journal most frequently and impactful is essential in advancing scientific discipline in a related topic, as to reflect priority areas for scholars discussion and researchers, and to help other practitioners selecting which journal is appropriate for contributions to their manuscript. The 10 chosen journals including Critical Perspective on Accounting(CPA), Accounting Auditing and Accountability(AAA), Academy of Accounting and Finance Studies (AAFS), Australian Accounting Business and Finance(AABF), Corporate Ownership and Control(COC), European Accounting Review (EAR), Auditing (A), Accounting and Business Review(ABR), Accounting Organisation and Society (EAR), Accounting Research(AR), as presented in

Table 1. The top 10 selected sample articles are CPA and AAA are the most published journal with 10 and 9, respectively. At the same time, AAFS, AABF and COC journals

with eight publications each, are ranked 3rd. The rest of the journals, all but ABR, AOS and AR, are rank 5 the least of the sample.

On the citation, AAA journal, with 9 papers, has the highest citation count of 1001 with h-index of 4.37. Subsequently, AR, AOS, CPA, A, have a substantial citation count of 671, 503, 472, 320 respectively from the sample. Furthermore, other journals EAR, ABR, AAFS and AABF also have notable citation counts. The journal of Auditing review among the least production is the flagship journal which has the highest h-index. It means that researchers consider 4 publications as influential in the scientific field.

Table 1. 10 Leading Journals in Agency Theory in Accounting

Name	Abbreviations	Total Production	Total Citation	H-Index
Critical Perspective on Accounting	CPA	10	472	4.10
Accounting, Auditing And Accountability Journal	AAA	9	1001	4.37
Academy of Accounting And Financial Studies Journal	AAFS	8	177	0.79
Australasian Accounting Business And Finance Journal	AABF	8	113	1.10
Corporate Ownership And Control	COC	8	61	0.11
European Accounting Review	EAR	7	294	2.83
Auditing	A	5	320	2.86
Accounting And Business Research	ABR	4	274	2.54
Accounting Organisation and Society	AOS	4	503	4.26
Accounting Research	AR	4	671	6.71

4.3 Cited articles

Table 1 the most 10 cited articles on the scientific topic, group of authors, title, year, journal and citation. The most highly cited paper was published in 2012 by Cho, Freeman and Patten. The article has received 92 citations and disseminated from the leading journal's AAA in

Table 1. The authors see AAA journal as influential in posting a scientific paper. In the same publication year, three are other documents received a considerable influence with 28, 27 and 20 as identified. The 2012 articles have dominated about 33.33%.

Similarly of the top 10 cited articles, 4 publications are in the year 2011 with citation 52, 46, 43 and 12 from respective journals, take a share of 33.3%. For all the 10 top-

cited articles, in the years of 2014, the citation is 38, and 2015 is 34, then, the percentage received is 8.33% each.

Table 2 10 cited articles

Author/s	Title	Year	Journal	Citation
Cho C.H., Freedman M., Patten D.M.	Corporate disclosure of environmental capital expenditures: A test of alternative theories	2012	Accounting, Auditing and Accountability Journal	92
Whittington R.	The Practice Turn in organisation research: Towards a disciplined transdisciplinarity	2011	Accounting, Organisations and Society	52
Kilfoyle, E., Richardson A.J.	Agency and structure in budgeting: Thesis, antithesis and synthesis	2011	Critical Perspectives on Accounting	46
Østergren K., Stensaker I.	Management control without budgets: A field study of 'Beyond Budgeting' in practice	2011	European Accounting Review	43
Vosselman E	The performativity thesis and its critics: Towards a relational ontology of management accounting	2014	Accounting and Business Research	38
Trotman A.J., Trotman K.T.	Internal audit's role in GHG emissions and energy reporting: Evidence from audit committees, senior accountants, and internal auditors	2015	Auditing	34
Niemi L., Kinnunen J., Ojala H., Yroberg P	Drivers of voluntary audit in Finland: To be or not to be audited?	2012	Accounting and Business Research	28
Quagli A., Avallone F.	Fair value or cost model? Drivers of choice for IAS 40 in the real estate industry	2012	European Accounting Review	27
Hyvönen T., Järvinen J., Oulasvirta L., Pellinen J.	Contracting out municipal accounting: The role of institutional entrepreneurship	2012	Accounting, Auditing & Accountability Journal	20
Moore D.R.J.	Structuration theory: The contribution of Norman Macintosh and its application to emissions trading	2011	Critical Perspectives on Accounting	12

4.4 Productive and cite authors

Table 3, presents the 10 most global productive and cited authors of the scientific field statistics, and a considerable h-index over the period. It has also included the country and the institution of origin. Considering the total number of papers publication, Modell has the highest publications of articles in the related area. Craig

and Jack follow the result have 3 publications each on the field. Further observation revealed that the remaining authors have 2 publications each over the period.

On the issue Of citation, it is surprising that Craig with 3 publications is the highest cited author and highly indexed factor of 28. Modell with 1827 citation count follows this. Not far behind him are Hussainey and Freeman with citation counts of 1393 and 1283 respectively. Moreover, Dhliwayo with 2 papers from South Africa had no citation and h-index among the top 10 influential authors.

Out of 10 most productive authors, 4 are from United Kingdom institutions, Modell, Craig, Jack and Hussainey. Furthermore, three influential authors affiliated with United Kingdom institutions. The top remaining authors are from other institutions and countries in the USA, Canada, Malaysia and South Africa. This result is exciting because an author from South Africa with 2 papers did not receive either citation or h-index.

Table 3 10 Most Productive and Influential Authors

Authors	Total Productions	Total Citation	H-Index	Country	Institution
Modell, S	4	1827	23	United Kingdom	Alliance Manchester Business School
Craig, R	3	2093	28	United Kingdom	Durham University of Business School
Jack, L	3	312	9	United Kingdom	University of Portsmouth
Brivot, M	2	204	8	Canada	Universite Laval
Bussin, M.H. R	2	46	4	South Africa	University of Johannesburg
Dhliwayo, D. V	2	0	0	South Africa	University of Pretoria
Freeman, M	2	1283	15	United State of America	Townson University
Himick, D	2	86	5	Canada	University of Ottawa
Hussainey, K	2	1392	21	United Kingdom	University of Portsmouth
Kallamu, B. S	2	10	1	Malaysia	University of Putra Malaysia

4.5 Authors cited journals.

Table 4 shows lists of 10 most productive and influential authors who have contributed papers in the top selected journals on procedure agency theory integrating into accounting. The 24 articles from the 10 journals have publications

and citations in the related scientific field. The highest productive author has 4 papers from AAA, EAR, AOS journals and ranked the second-highest cited author. However, the highest cited author Craig with 2093 (3papers), did not have an article among the top listed journals. Besides this, Bussin and Dhliwayo also have no publications from any of the leading journals. It means that it could be acceptable among other journals. The remaining authors have quite a few published papers in the journals and citations, which is quite impressive.

Concerning authors contributed to the top journals, AAA journal contains the highest publications of 4 and most cited

Table 1, followed by EAR and AOS journals with 3 papers each from the top authors. The next relevant journals (COC and A R) have 1 article each with their authors included in 10 top productive and cited authors. Nevertheless, remaining five journals (CPA, AAFS, AABF, A, ABR) have no article from leading authors, meanwhile are included in the top sampled journals in

Table 1.

Table 4 Productive Authors in the 10 Journals of Agency theory in Accounting

	TP	TC	CPA	AAA	AAFS	AABF	COC	EAR	A	ABR	AOS	AR
Modell, S	4	1827		1		-		1			1	
Craig, R	3	2093	-	-	-	-	-	-	-	-	-	-
Jack, L	3	312	-	2	-	-	-	-	-	-	-	-
Brivot, M	2	204	-	-	-	-	-	1	-	-	1	-
Bussin, M.H.R	2	46	-	-	-	-	-	-	-	-	-	-
DhliwayO, D.V	2	0	-	-	-	-	-	-	-	-	-	-
Freeman, M	2	1283	-	1	-	-	-	-	-	-	-	-
Himick, D	2	86	-	-	-	-	-	1	-	-	1	-
Hussainey, K	2	1392	-	-	-	-	-	-	-	-	-	1
Kallamu, B.S	2	10	-	--	-	-	1	-	-	-	-	-

4.6 Productive and influential institutions

Another distinct feature of the bibliometric analysis is the institutions that are interested in the publications of the scientific field of research. **Table 5** presents a list of the institution contributions in the number of publications, citations, and highly index. The study shows that the University of Manchester is the most productive institution. It has 10 publications, ranked second highest cited institution with 97, and with the highest h-index of 6. After this, Alliance Manchester Business School is

the second most productive institution in terms of papers on the scientific field, of his 9 publications ranked third cited institution with 93 counts, at the same time with 6 h-index among the top. The University of Texas, the only institution from the USA, has 6 publications. Of these publications, it has received 109 citations, the highest among the top 10. It means the impacting factor from the articles is higher. The rest of the institutions next to it are the University of Utara, Victoria University of Melbourne, University de Minho and the University of Portsmouth have 5 papers each with corresponding citation and h-index. Tampereen University is among the least published institutions with no citation count, and it is probably new in Scopus. All the institutions are from the United Kingdom and have 4 out of the 10 top institutions.

Table 5 The Most Productive and Influential Institutions

Institution	Country	Total Production	Total Count	H-Index
University of Manchester	United Kingdom	10	97	6
Alliance Manchester Business School	United Kingdom	9	93	6
University of Texas Austin	United State of America	6	109	3
University of Utara Malaysia	Malaysia	5	6	2
Victoria University of Melbourne	Australia	5	52	5
Universidade do Minho	Portugal	5	16	2
University of Portsmouth	United Kingdom	5	24	2
University of Sains Malaysia	Malaysia	4	9	2
University of Essex	United Kingdom	4	47	3
Tampereen Yliopisto	Finland	4	0	3

4.7 Country analysis

Table 6 presents a total of 10 countries of origin where the publications are studied. The objective is to see the volume of production and the most influential country because this reflects the importance of a country's contribution to the subjective matter. The United States of America(USA), a country with the most product, with 98 publications, ranked highly impactful state with 1422 citation counts and indexed 19 in the scientific field, far above the United Kingdom(U K) about 46% in terms of

publications, 106% in citations and 46.15% in h-index. Australia (38), China(25) and Malaysia(21) ranked chronological as the next in productivity. Other top countries among the list Canada and Germany, have 12 papers from each country, representing sixth in the line of publication. Same as in the case of France and Indonesia with 11 articles found as countries with substantial publications. Italy ranked the least publisher on the scientific field and is among the rest countries with most impactful in the area of study.

Table 6 The 10 Most Productive Country

Country	Total Production	Total Citation	H-Index
United State of America	98	1422	19
United Kingdom	67	689	13
Australia	38	343	11
China	25	111	6
Malaysia	21	53	4
Canada	12	97	5
Germany	12	69	6
France	11	212	6
Indonesia	11	6	2
Italy	10	145	6

4.8 Keywords used in agency theory in accounting

Keywords are part of the choice of the authors to represent the content of the article, be as general and ordinary as possible (Curty and Boccato, 2005; Comerio and Strozzi, 2019). They provide additional steps to assess the information flow and trace any scientific study(Madani and Weber, 2016). The top keywords found from Scopus, which have frequently used in 348 articles in accounting agency theory, are represented. It shows the number of occurrences authors have utilised in the reference. The Agency theory has significant influence in accounting as many have frequently related to the scientific field. Accounting also is trendy among the top keywords used comparing with the other keywords, except corporate governance. Agency theory and accounting have impactful influence over a decision as they ranked among the top three in the table. Besides, they have become a novel focus with the rising becoming famous for researchers as impressive is increasing in the publication from 2015-2019.

Table 7 10 Keywords Used

Keywords	Frequency	Ranking
Agency Theory	67	1
Corporate Governance	49	2
Accounting	19	3
Agency	17	4
Earning Management	15	5
Firm Performance	15	5
Accountability	11	6
Human	11	6
Institutionary Theory	11	6
Ownership Structure	9	7

5.0 Conclusion

In conclusions, the bibliometric analysis shows various kind of academic research that has gone on viral in the subject area of agency theory in accounting. The study outcomes were from the Scopus database as it considered as the most productive repository. The development from authors, countries, institutions, and publications from articles received more attention. It anticipated that future research should continue to bring more uncovered areas and conducted research in other disciplines to get more empirical evidence for academic development. The study contributes to academics and practitioners about the newer method for researching using bibliometric analysis tools.

The growth of the scientific field is receiving consideration substantially. The selected sample period started at 17 articles in 2010, and after that, it has consistently maintained publication moved to an average of 35 per year during the period 2010-2019. The result implies that researchers paid attention to the agency theory's impact in accounting though there were ups and downs(Figure 1).

The development sees that out of 10 most top journals that published an article on the scientific field, CPA is the highest production of 10 publications. Besides, AAA is the leading influential journal among the top 10 in terms of citation count of 1001. It has interdisciplinary combinations, and AR gets the best h-index of 6.71 in the research field. These attributes further strengthen each journal's point to receive global recognition from academia (see

Table 1). Other journals received lower than 5 publications, even though receive substantial citation counts above 270-671.

Focusing on the highly cited article, the highest received 92 citations for the most part referenced paper compare with others from AAA journal in 2012. The next leading articles that received high cited count happen in 2011 range from 43-52. Others received related citations, as shown in (

Table 2).

In terms of the most productive and influential author, the analysis highlighted Modell with 4 papers as the most productive author, followed by 2 authors Craig and Jack with 3 articles each of the scientific field and 7 least authors with 2 papers each. Besides, Craig is the highest cited and highly indexed author among them,

Table 3. Furthermore, 4 of the top authors are from the United Kingdom and have published most highly cited papers in the field.

Another contributory to the research is top authors in the top identify journals. Modell has 3 publications, one each in the following journals AAA, EAR and AOS. Craig, highly cited and h-index author and other 3 authors, do not have any publications in the top journal in

Table 4.

The United Kingdom institutions have shown majority position in the production in the field understanding, the agency theory in accounting. The institutions apart from Texas Austin 109 cited counts is the second most influential ones shown in Table 5. They have 28 publications out of 57 papers in the top 10 institutions. Furthermore, it has many of the leading authors.

The United States is the most dominant country in the scientific field in terms of article publication, highly influential nation, and very well indexed on the list. The position followed by the United Kingdom with 67 papers ranked second highest cited. Its impacting factor is remarkable compared to other countries whose contributions in the scientific field are not near them (Table 6).

Furthermore, another feature contribution to the scientific field is keywords. It emerges that 69 agency theory has been frequently cited and 19 times from accounting. It means that the subject is directly related to the subject area (.

Table 7).

This paper's main results are useful for obtaining, based on bibliometric data, a general overview of the state -of- the -art research regarding agency theory relation in accounting. It also directs future research efforts on innovation adoption by offering a broad understanding of using extant literature review and bibliometric analysis tools on the current trend of research in different contexts and disciplines. However, there are limitations which can offer for future directions. One of the study's obstacles was choosing the database. First of all, relevant and quality agency theory in accounting research performed beyond indexed journals that not included in the study. Second, the sample selection is limited to unique search keywords, and entries, although attempts to ensure that all related publications are selected. Thirdly, the citations represent the influence level of a paper, author or journal at a particular time. The citation count can increase considerably over time, representing different numbers and ranks. Finally, this study contains a general overview that can help clarify the scientific field of agency theory in accounting. Still, several other topics need to be taken into account to get a full picture of the art state.

Future research into areas using visualisation of co-authorship network of countries and institutions, co-citation networks of publications and journals on the scientific field proposed. Moreover, studies can expand the scope by considering other types of review papers and documents to incorporate more detailed information for the study field. Besides, similar studies at future stages should continue to reveal the literature review trend on agency theory in accounting and track its continuing credibility and development.

References

- Anthony, R. N. (1965). *Planning and control systems: A framework for analysis* (p. 17). Harvard Graduate School of Business.
- Baiman, S., Netessine, S., & Saouma, R. (2010). Informativeness, incentive compensation, and the choice of inventory buffer. *Accounting Review*, 85(6), 1839–1860.
- Beest, F., Braam, G., & Boelens, S. (2009). *Quality of Financial Reporting: Measuring qualitative characteristics*. NICE. (No. 09–108).
- Berger, A. N., & Udell, G. . (1988). "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle." *Journal of Banking and Finance*, 22, 613–673.
- Berger, A. N., & Udell, G. . (2006). "A More Complete Conceptual Framework for SME Finance." *Journal of Banking and Finance*, 30(11), 2945–2966.
- Berle, A., & Means, G. (1932). *The modern corporation and property*. Macmillan.
- Borokhovich, K. A., Bricker, R. J., Brunarski, K. R., Simkins, & B.J. (1995). Finance Research Productivity and Influence. *Journal of Finance*, 50(5), 1691–717.
- Bouckova, M. (2015). Management Accounting and Agency Theory. In D. Prochazka (Ed.), *16th Annual Conference on Finance and Accounting (ACFA)* (pp. 5–13).
- Brink, A. G., Hobson, J. L., & Stevens, D. E. (2017). The effect of high power financial incentives on excessive risk-taking behavior: An experimental examination. *Journal of Management Accounting Research*, 29(1), 13–29.
- Brown, L. D. (1996). "Influential accounting articles, individuals, Ph.D. granting institutions and faculties: A citational analysis." *Accounting, Organisations & Society*, 21(7/8), 723–754.
- Brown, P., Beekes, W., & Verhoeven, P. (2011). Corporate governance, accounting, and finance: A review. *Accounting and Finance*, 51, 96–173.
- Cavélius, F. (2011). Opening the –black box||: How internal reporting systems contribute to the quality of Abstract financial disclosure. *Journal of Applied Accounting*, 12(3), 187–211.
- Chi, S.-K. (1989). *Ethics and Agency Theory*. An Arbor, MI.

- Cobo, M. J., Lopez-Herrera, A. G., Herrera-Viedma, E., & Herrera, F. (2011). Science mapping software tools: Review, analysis, and cooperative study among tools. *Journal of the American Society for Information Science and Technology*, 62(7), 1382–1402.
- Comerio, N., & Strozzi, F. (2019). Tourism and its economic impact: A literature review using bibliometric tools. *Tourism Economic*, 25(1), 109–131.
- Culnan, M. J. (1986). "The Intellectual Development of Management Informations Systems, 1972-1982: A Co-citation Analysis." *Management Science*, 32(2), 156–172.
- Cunha, P. ., Toigo, L., & Picoli, M. . (2016). Scientific production on the Audit Committee: A Bioblimtric and Sociometric Analysis of International Journals. *DIGITAL LIBRARY OF JOURNALS*, 8(1), 26–46.
<https://doi.org/http://dx.doi.org/10.5380/rcc.v8i1.35902>
- Curty, M. G., & Boccato, V. R. C. (2005). O artigo científico como forma de comunicação do conhecimento na área de Ciência da Informação. *Perspectivas Em Ciência Da Informação (Impresso)*, 10(1), 94–107.
- Duan, W. (2014). Research on the budgetary slack behavior to the construction machinery and equipment manufacturing enterprise in China. *Advanced Materials Research*, 915–916, 1504–1508.
- Eisenhardt, K. M. (1989a). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57–74.
- Eisenhardt, K. M. (1989b). Agency theory: An assessment and review. *Review, Academy of Management*, 14(1), 57–74.
- Harris, M., & Raviv, A. (1978). Some results on incentive contracts with applications to education and employment, health insurance, and law enforcement. *American Economic Review*, 68(1), 20–30.
- Hiebl, M. R. . (2015). Agency and stewardship attitudes of chief financial officers in private companies. *Qualitative Research in Financial Markets*, 7(1–2), 4–23.
- Hirsch, J. . (2005). An Index to quantify an Individual's scientific research output. *Proceedings of the National Academy of Sciences of the United States of America*, 102(46), 16569–16572.

- Huang, R., Marquardt, C. A., & Zhang, B. (2014). Why do managers avoid EPS dilution? Evidence from debt-equity choice. *Review of Accounting Studies*, 19(2), 877–912.
- Ijiri, Y., Levy, F. K., & Lyon, R. . (1963). A linear programming model for budgeting and financial planning. *Journal of Accounting Research*, 1(2), 198–212.
- Jeggers, M. (2008). *Managerial economics of non-profit organisations (Routledge studies in the management of voluntary and non-profit organisations)*. Routledge.
- Jensen, M. C., & Meckling, W. . (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kluvers, R., & Tippett, J. (2011). An exploration of stewardship theory in a Not-for-Profit organisation. *Accounting Forum*, 35(4), 275–284.
- Lambert, A. R. (2007). Agency theory and Management Accounting. *Handbook of Management Accounting Research*, 1, 247–267.
- Madani, F., & Weber, C. (2016). The evolution of patent mining: Applying bibliometrics analysis and keyword network analysis. *World Patent Information*, 46, 32–48.
- Maksimov, V., Wang, S. L., & Luo, Y. (2017). Institutional imprinting, entrepreneurial agency, and private firm innovation in transition economies. *Journal of World Business*, 52(6), 854–865.
- Martin, G. ., Thomas, W. ., & Wieland, M. . (2016). S&P 500 Membership and Managers' Supply of Conservative Financial Reports. *Journal of Business Finance and Accounting*, 43(5–6), 543–571.
- Merigo, J. M., Gil-Lafuente, A. M., & Yager, R. R. (2015). An Overview of Fuzzy Research with Bibliometric Indicators. *Applied Soft Computing*, 27, 420–433.
- Mitnick, B. (1975). The theory of agency: The policing, "paradox" and regulatory behaviour. *Public Choice*, 24(1), 27–42.
- Podsakoff, P. ., MacKenzie, S. ., Podsakoff, N. ., & Bachrach, D. . (2009). 'Scholarly Influence in the Field of Management: A Bibliometric Analysis of the Determinants of University and Author Impact in the Management Literature in the Past Quarter Century.' *Journal of Management*, 34(4), 641–720.
- Pritchard, A. (1969). Statistical bibliography or bibliometrics? *Journal of Documentation*, 25(4), 348–349.

- Qu, S. ., Ding, S., & Lukasewich, S. . (2009). 'Research the American Way: The Role of US Elites in Disseminating and Legitimising Canadian Academic Accounting Research',. *European Accounting Review*, 18(3), 515–69.
- Ramos-Rodriguez, A. R., & Ruiz-Navarro, J. (2004). Changes in the intellectual structure of strategic management research: A bibliometric study of the Strategic Management Journal, 1980–2000. *Strategic Management Journal*, 25(10), 981–1004.
- Ross, S. (1973). The economic theory of agency: The principal's problem. *American Economic Review*, 63(2), 134–139.
- Schoenfeld, J. (2020). Contracts Between Firms and Shareholders. *Journal of Accounting Research*, 58(2), 383–427.
- Schroeck, G. (2002). *Risk Management and Value Creation in Financial Institutions* (G. Schroeck (ed.)). Wiley.
- Scott, W. R. (2015). *Financial Accounting Theory* (7th ed.). Ontario Pearson Canada.
- Steinberg, R. (2010). *Principal-agent theory and nonprofit accountability*. Cambridge University Press.
- Stiglitz, J. E., & Weiss, A. (1981). "Credit Rationing in Markets with Imperfect Information." *The American Economic Review*, 71(3), 393–410.
- Tang, M., Liao, H., & Su, S. . (2018). A Bibliometric overview and visualisation of international Journal of Fuzzy Systems between 2007-2017. *International Journal of Fuzzy System*, 20(5), 1403–1422.
- Zulkarnaen, W., Bagianto, A., Sabarb, & Heriansyah, D. (2020). Management accounting as an instrument of financial fraud mitigation. *Nternational Journal of Psychosocial Rehabilitation*, 24(3), 2471–2491.