Cost Accounting: Insights and Possible Future Directions

Maliyet Muhasebesi: İçgörüler ve Gelecekteki Muhtemel Yönelimler

Hamide ÖZYÜREK

Ostim Technical University, Faculty of Economic Administrative Sciences, Department of Business Administration, Ankara, Turkey

ABSTRACT

The objective of this study is to analyze the types of studies, keywords, authors, author collaborations, citations, and countries associated with articles published in the field of cost accounting in the Web of Science (WoS) database between 1980 and 2023. The research employs the bibliometric analysis method, a statistical approach designed to unveil publication trends in articles. Out of the 2,555 articles identified in the WoS database, 1,538 articles were scrutinized following specific limitations. The findings indicate a notable increase in studies conducted in the field of cost accounting over the last decade.

JEL Codes: M40, M49

Keywords: Cost Accounting, Bibliometric Analysis, Vosviewer, Mapping and Clustering, Web of Science (Wos)

ÖZ

Bu çalışmanın amacı, 1980-2023 yılları arasında Web of Science (WoS) veri tabanında maliyet muhasebesi alanında yayımlanan makalelerle ilgili çalışma türlerini, anahtar kelimeleri, yazarları, yazar iş birliklerini, alıntıları, ülkeleri analiz etmektir. Araştırmada makalelerin yayınlanma eğilimlerini ortaya çıkarmak için kullanılan istatistiksel bir yöntem olan bibliyometrik analiz yöntemi uygulanmıştır. WoS veri tabanında bulunan 2.555 makaleden belirli sınırlamalar yapılması sonucunda 1.538 makale değerlendirilmiş olup, maliyet muhasebesi alanında son on yılda yapılan çalışmaların arttığı gözlemlenmiştir.

JEL Kodları: M40, M49

Anahtar Kelimeler: Maliyet Muhasebesi, Bibliyometrik Analiz, VOSviewer, Haritalama ve Kümeleme, Web of Science (WoS)

Introduction

The price of a product plays a crucial role in a company's ability to compete in the market. Managers have the flexibility to adjust their pricing strategy by considering the cost of their products. In the current business landscape, cost accounting has gained increasing significance for companies in determining product costs. It is closely associated with managerial accounting, a discipline that aids managers in making informed decisions for the future of their companies.

The Activity-Based Costing (ABC) method stands out as a modern costing technique employed in cost management. This method encompasses two key processes: firstly, identifying and understanding the activities within a company, and secondly, assigning the costs of each activity to all products manufactured by the company. This approach relies on activities and offers several advantages, including enhanced activity management and the facilitation of master budget creation within a company (Zhang & Li, 2021). Consequently, it empowers managers to formulate pricing strategies with greater precision.

Due to its significance and advantages, cost accounting, particularly activity-based costing, has become a compelling subject of interest among academicians. The rising number of research studies in this field over the past decade has necessitated the implementation of bibliometric analysis. This analytical method is employed to scrutinize the progression of articles and guide academicians in the field. Bibliometric analysis is widely utilized to identify the most cited references among numerous articles in a specific subject area in the literature (Koçyiğit et al., 2023. P. 246).

The objective of this study is to investigate the publication trend of articles within the field of "cost accounting" as documented in the Web of Science (WoS) database from 1980 to 2023. The examination will be conducted through the application of the bibliometric analysis method.

The study is organized into five sections. The first two sections provide an introduction to the research topic and a comprehensive review of the literature in the field of cost accounting. The study is organized into five sections. The first two sections provide an introduction to the research topic and a comprehensive review of the literature in the field of cost accounting. The third section outlines the scope of the study, including its limitations, details about data selection and collection, search criteria, and the methodology applied. A notable observation is the absence of studies in the subject area of cost accounting that employ bibliometric analysis in the existing literature. This study aims to bridge this gap and contribute significantly by helping academicians identify gaps in the field. The final two sections of the study present the findings and conclusions, offering a summary of the outcomes and implications derived from the applied bibliometric analysis.

Literature Review

Upon reviewing the literature, it becomes apparent that studies have delved into the applications of modern cost systems. Notably, the activity-based cost system has found application in specific departments of hospitals within the health sector (O'Neill et al., 2017). Additionally, noteworthy research has explored the intricate relationships between cost accounting, performance measurement, and financial reporting, emphasizing the integration of cost and financial accounting (Ramasubramanian et al., 2023). In a study by Guo (2023), an existing supply chain network model utilizing cost accounting information is proposed to enhance supply chain management. The research suggests that a mathematical model designed to optimize companies' cost accounting proves beneficial in addressing optimization challenges within the supply chain network. Companies are increasingly utilizing cost accounting as a management tool to assist decision-making among company managers (Morais et al., 2023). Recent discussions in the literature have focused on the advantages and disadvantages of the standard cost system. It is underscored that further exploration of a mathematical accounting model based on standard cost calculation is necessary to support manufacturing firms and refine cost accounting methods (Wu et al., 2023).

In the literature, particularly within the field of management accounting, bibliometric studies have been conducted. Hülle et al. (2011) emphasize that decision support is one of the most crucial functions of management accounting and control (MAC). As decision environments become more complex, the importance of suitable multi-criteria methods for MAC is on the rise. Thus, the study delves into the extent to which specific multi-criteria decision-making (MCDM) methods are utilized in the context of MAC. Over the past three decades, a comprehensive bibliometric analysis has been undertaken in the field of management accounting. The findings indicate a growing significance of MCDM. Notably, the majority of publications in this domain address areas such as strategic management, budgeting, and performance management. Recent research activities are categorized based on different decision-making areas within MAC. Specifically, the applications of MCDM are most prominently observed in strategy and performance evaluation, strategic planning, and the selection of alternatives. The analysis brings to light that the Analytic Hierarchy Process (AHP) stands out as the most popular analytical tool for supporting management in complex decision-making situations. The study underscores that the technical literature in MAC does not cover a desirable range of MCDM applications. It further reveals that AHP, along with the Analytic Network Process (ANP), is gaining increasing importance for the international coverage of MAC. Consequently, the field of MCDM continues to be an active and integral part of both management science research and practice, particularly within the realm of MAC (Hülle et al., 2011).

Organizations face the imperative of maintaining competitiveness and exploring sustainable alternatives. A prevalent objective in today's business environment is to enhance efficiency and restructure organizations for greater effectiveness. In this dynamic landscape, information on costs has gained heightened importance, serving as a crucial support for decision-making processes and their justifications. In alignment with these goals, Stefano and Filho (2013) have pioneered the creation of a comprehensive bibliography portfolio. This portfolio is designed to address the application of the Activity-Based Costing (ABC) method in the service sector, contributing substantively to ongoing discussions within the scientific community. Their initiative seeks to provide valuable insights and contribute to the ongoing discourse on optimizing organizational efficiency through the application of advanced cost accounting methods like ABC.

The methodologies employed in Accounting Information Systems (AIS) journals play a significant role in advancing academic knowledge within the realms of accounting and the scientific examination of new technologies. In a comprehensive study, Chiu et al. (2019) undertook a review encompassing 681 accounting articles published across six prominent accounting journals: the Journal of Information Systems (JIS), International Journal of Accounting Information Systems (IJAIS), Journal of Emerging Technologies in Accounting (JETA), International Journal of Digital Accounting Research (IJDAR), Accounting Information Systems Educator Journal (AISEJ), and Intelligent Systems in Accounting, Finance, and Management (ISAFM). Their study involved a thorough bibliometric and comparative analysis of articles published between 2004 and 2016. The primary motivation for this study was rooted in the mandatory measurement of research productivity under AACSB accreditation standards, along with the recognition of the increasing importance of emerging technology research in the field of accounting. The study's results revealed that the journals under scrutiny do not have a singular focus; instead, they cover a broad spectrum of topics within the field of accounting (Chiu et al., 2019).

Balstad and Berg (2010) explored the landscape of managerial accounting research by investigating the journals publishing such research and identifying the most frequently cited sources within these journals. Utilizing bibliometric methods based on citation data from Web of Science and Scopus, the study quantitatively examined the boundaries of management accounting. Analyzing 506,753 and 1,075,838 citations from Web of Science and Scopus, respectively, over the periods 1945-2018 and 1960-2018, the study found that the top five most cited journals represented 6.5% and 4.7% of the total citations. AOS emerged as the most cited journal in both Web of Science and Scopus, closely followed by MAR. the findings, highlighting the diversity in managerial accounting research, suggest that the boundaries of this field are not unduly constrained. The study acknowledges challenges in using citation data and databases, having initially considered Web of Science, Scopus, and Google Scholar. However, Google Scholar posed difficulties in providing comparable citation data, leading to a more focused analysis using Web of Science and Scopus. The paper delves into the complexities associated with utilizing citation data and databases, offering anuanced perspective on the boundaries of management accounting research (Balstad & Berg, 2020).

The field of accounting research has witnessed exponential growth in recent years, with researchers globally focusing on both well-established and emerging topics in management accounting (MA). Initially, MA primarily concentrated on terms related to operational cost management but has since evolved into an integral part of the strategic management process. This transformation, initiated by consultants drawing on academic research, has become a valuable framework in contemporary decision-making processes within companies. While not mandated normatively, MA holds significant importance as a tool within the accounting information systems of companies. Current research is often accessible through digital libraries, facilitating the integration of new findings with existing literature. A study conducted by Lucas (2020) analyzed scientific research from 1951 to 2015, aiming to understand the evolution of MA literature, identify frequently published terms, and discern current research trends. Lucas's analysis focused on 34 main terms within the global MA system, examining databases such as Google Scholar, B-On, and Science Direct. The results highlighted that early-stage research terms such as 'costs,' 'budgets,' and 'performance evaluations' were among the most frequently returned items. However, the most recent terms varied across libraries, with "global MA principles" appearing as the newest term in Google Scholar and Science Direct, while "accounting analytic systems" emerged as the newest term in B-On (Lucas, 2020). This underscores the dynamic nature of

research trends in the evolving landscape of management accounting.

Nain et al. (2022) conducted a comprehensive bibliometric analysis of scientific literature within the realm of management accounting practices. Their study aimed to identify the journals publishing research in management accounting and to ascertain the most cited sources in these journals. The Scopus database served as the primary source for collecting literature on management accounting practices. Employing tools such as SPSS and Microsoft Excel for data analysis, the researchers also utilized the Publish or Perish software to integrate data and conduct preliminary analyses. Subsequently, VOSviewer was employed to visualize the data. The standard bibliometric analysis encompassed reporting on publication growth, research productivity, and citation analysis. Through their analysis, a total of 321 documents were retrieved based on keyword search results. The majority of these articles were written in English and published in journals and conference papers. The bibliometric analysis not only provided insights into the evolution of scientific literature on management accounting practices but also highlighted areas of interest for future researchers to explore. This study contributes to the ongoing understanding of the scholarly landscape within the field of management accounting practices (Nain et al., 2022).

Silva (2022) conducted a systematic review of articles related to Traditional Chinese Medicine (TCM) by examining data from the Web of Science and Scopus databases. The analysis focused on the last five years of available data and applied two bibliometric analyses. Mapping analysis and bibliographic aggregation were performed using VOSviewer and R Bibliometrix software. In total, 39 articles on Traditional Chinese Medicine were analyzed within the time frame of 1994-2020. The bibliometric analyses allowed for a structured and quantitative examination of the literature, offering insights into the trends, patterns, and connections within the field of TCM research. This systematic approach contributes to a better understanding of the scholarly landscape and can guide future research in Traditional Chinese Medicine (Silva, 2022).

It is seen that there are 4 bibliometric studies on research in the field of cost accounting. In their study, Umar et al. (2022) analyzed 145 articles published between 1993 and 2022 in the Scopus database using VOSview software in terms of Italian accounting history. Rappazzo et al. (2023) analyzed 145 articles published between 1993 and 2022 in terms of Italian accounting history using VOSviewer software. Ismayilov (2020) analyzed 714 articles in the Scopus database with VOSviewer to analyze the trend of accounting and auditing the book value of assets in scientific literature to determine future research directions. It analyzed the publications in the Journal of Accounting Universe between 2005 and 2012. Riberiro (2014), in his study, made use of descriptive statistics in 245 articles identified by bibliometric analysis techniques.

This research will make an important contribution to the field by analyzing 1538 articles published in the Web of Science (WoS) database between 1980-2023 in the field of cost accounting. At the same time, it is important in terms of providing a road map for future studies by examining the trend of research in the 43 year period.

The study also illuminates crucial considerations that researchers should bear in mind when utilizing databases as a foundation for citation analysis and research evaluation.

Methods

Bibliometrics is a statistical method employed to unveil publication trends in articles. Specifically, bibliometric analysis is a statistical approach applied to bibliographic data, encompassing publications and citation counts. This method serves to discern the annual distribution and volume of studies on a particular subject, as well as to illuminate the impact of these studies on subsequent

research. Bibliometric analysis encompasses word frequency analysis, citation analysis, performance analysis that includes the examination of the number of publications by country and author, and mapping processes based on relational indicators. To comprehend the information structure of a specific field, mapping and clustering techniques must be employed. Cluster analysis aids in identifying subsets for focused examination. Commonly used software programs for bibliometric analysis include VOSviewer, CiteSpace, RStudio's bibliometrics package, BibExcel, Gephi, and Histcite.

Several software packages are commonly employed for bibliometric analysis, such as RStudio's bibliometrics suite, CiteSpace, VOSviewer, BibExcel, Histcite, and Gephi (Ampah, 2021). Bibliometrics, a statistical method, offers a transparent perspective to enhance the understanding of publication trends in research studies (Rashmi & Kataria, 2021).

The literature currently lacks studies applying bibliometric analysis in the field of cost accounting. To address this gap, our study analyzes the types of studies, keywords, author collaborations, countries, citations, and authors within the realm of cost accounting using the bibliometric analysis method. Utilizing the Web of Science (WoS) database, we assessed studies conducted between 1980 and 2023 with the keyword 'cost accounting.' The VOSviewer program facilitated bibliometric analysis and visual mapping, providing insights into subjects, research areas, development, and their interrelations. This software was chosen to create visual clusters and interdisciplinary maps, enhancing accessibility for researchers across different disciplines to comprehend the findings easily.

In The research, conducted with the keywords 'cost accounting,' involved an evaluation of studies within the field from 1980 to 2023 (limited to April 15, 2023) using the Web of Science (WoS) database. The VOSviewer (1.6.19) program was employed for bibliometric analysis and visual mapping of topics, research areas, development, and relationships. VOSviewer (Eck and Waltman, 2010) aids in illustrating clusters and interdisciplinary mapping, enhancing comprehension for readers across various fields. The mapping and clustering techniques employed aim to provide insight into the information structure of the field (Eck & Waltman, 2019; Purnomo et al., 2020a; Purnomo et al., 2020). Cluster analysis facilitates the identification and characterization of smaller sample batches for direct analysis (Caruso et al., 2021).

Research Findings

Data Selection and Data Collection

In this study, we utilized the Web of Science (WoS) database, renowned for its comprehensive coverage across multidisciplinary fields. We performed a keyword search for 'cost accounting' in WoS, identifying 2555 studies as of April 15, 2023. Further evaluation was conducted on 1538 articles, with specific limitations applied.

Search Criteria

Initially, a search was conducted across all fields in the Web of Science (WoS) database for articles with the keyword 'accounting' in their titles and/or abstracts. This yielded a total of 322,951 studies published in WoS-indexed journals.

In the second stage, the search was refined by adding the keyword 'cost accounting,' resulting in 2,555 studies. In the third stage, the scope was further narrowed to journals indexed in SSCI, SCI (SCI-E), and ESCI—the most prestigious indexes—yielding 1,960 studies. The fourth stage included only English-language studies, resulting in 1,735 articles, excluding 81 in German, 51 in Portuguese, 42 in Spanish, and 22 in Russian. Finally, other research types, such as book chapters, were excluded, leaving 1,538 articles for analysis.

These articles were selected based on the keywords 'accounting' and 'cost accounting' in the titles and/or abstracts, spanning the period from 1980 to 2023 (as of April 15, 2023).

Number of Publications for the Years

The search in the Web of Science (WoS) database using the keywords 'accounting' and 'cost accounting' yielded a total of 1,538 studies, as detailed in Table 1. Notably, the earliest recorded study dates back to 1980, and the data indicate a consistent increase in studies since 2010.

Table 1. *Numbers of Years and Publications*

Year	F	Year	F	Year	F	Year	F	Year	F
1980	5	1990	4	2000	21	2010	49	2020	107
1981	5	1991	14	2001	17	2011	46	2021	120
1982	6	1992	14	2002	14	2012	54	2022	109
1983	3	1993	22	2003	31	2013	52	2023	21
1984	5	1994	20	2004	19	2014	49		
1985	4	1995	20	2005	34	2015	78		
1986	7	1996	23	2006	37	2016	64		
1987	5	1997	23	2007	41	2017	81		
1988	16	1998	29	2008	48	2018	78		
1989	4	1999	27	2009	46	2019	66		
	60		196		308		617		357

Table 2. *Distribution of Cost Accounting Articles by Years*

Years	F	%
1980-1989 (10-year period)	60	3.9
1990-1999 (10-year period)	196	12.74
2000-2009 (10-year period)	308	20.03
2010-2019 (10-year period)	617	40.12
2020-2023 (3-year period)	357	23.21
Total	**1538**	**100**

Analysis of the data presented in Table 1 and Table 2 reveals a notable trend in the field of cost accounting. Specifically, there was a 7.28% increase in the number of articles published in the 2000-2009 period (20.03%) compared to the previous decade (1990-1999, 12.74%). Furthermore, there was a significant 20.09% surge in articles on cost accounting in the 2010-2019 period (40.12%) compared to the preceding decade (2000-2009). This trend suggests a growing interest in cost accounting over the four decades from 1980 to 2020.
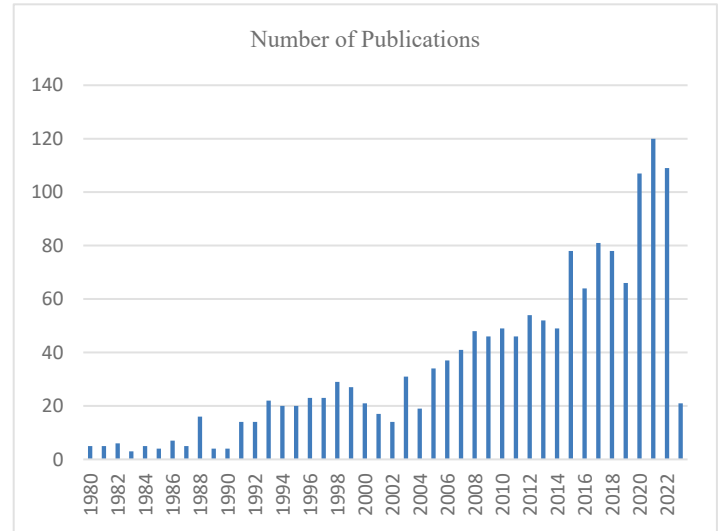

Figure 1. *Cost Accounting Distribution of Publications by Years*

Keywords Analysis

Figure 2 displays the findings from the bibliometric analysis conducted across all subject areas using keywords related to cost accounting. The analysis, performed with VOSviewer, encompasses three distinct mapping visualizations: network visualization (Figure 2), layered visualization (Figure 3), and density visualization (Figure 4).

An analysis was conducted on keywords that appeared twice or more within the 1,538 articles scanned in the Web of Science (WoS) database. Out of a total of 4,077 keywords, 634 were identified based on these criteria. The analysis revealed 23 clusters with 2,878 links, and the total link strength was evaluated at 3,742.
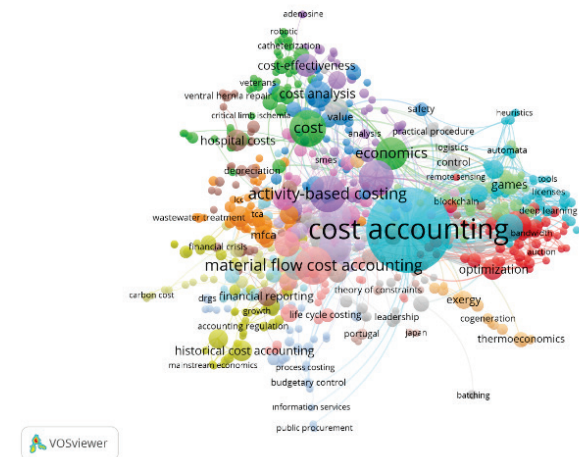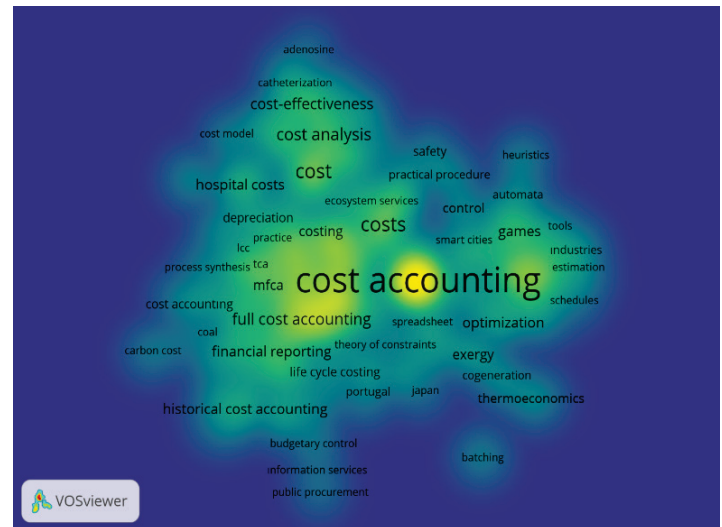

Figure 2. *Network Visualization Map of Keywords*

The most frequently used keywords among the keywords in 23 clusters are shown in Table 3.

Table 3. *Frequently Used Keywords in Cost Accounting Articles*

No	Keywords	Frequency	Total Link Strength
1	Cost Accounting	220	694
2	Material Flow Cost Accounting	44	90
3	Activity-Based Costing	42	90
4	Cost	41	88
5	Costs	39	99
6	Economics	33	103
7	Management Accounting	32	95
8	Accounting	30	62
9	Pricing	24	120
10	Cost Analysis	23	38
11	Resource Management	23	119
12	Cost Management	20	40
13	Full Cost Accounting	20	36
14	Life Cycle Assessment	19	42
15	Cost-Effectiveness	16	26
16	Time-Driven Activity-Based Costing	16	28
17	Environmental Cost Accounting	15	34
18	Hospital Costs	14	23
19	Environmental Management Accounting	13	33
20	Games	13	73
21	Historical Cost Accounting	13	24
22	Material Flow Cost Accounting (MFCA)	13	28
23	Optimization	13	58
24	Sustainability	13	32
25	Fair Value Accounting	12	25
26	Financial Reporting	12	28

Figure 3. *Layered Visualization of Cost Accounting Subject Areas*

Among the keywords, those with the highest connection strength were listed as cost accounting (294), activity-based costing (60), material flow cost accounting (58).

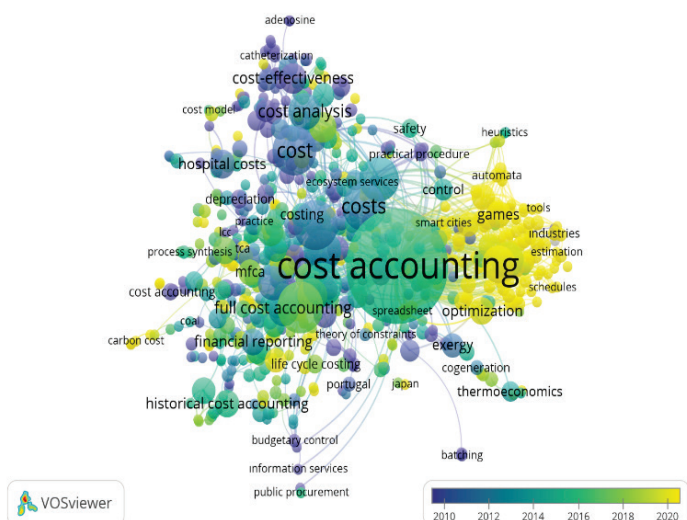**Figure 4.** *Cost Accounting Subject Areas Density Visualization Map*

Connected clusters establish relationships between them, with the closeness of items indicating the strength of their connection. Conversely, greater distance suggests a weaker relationship or similarity. Notably, the absence of connections between items, as represented by link strength, implies a lack of relationship or similarity among the keywords (Doğan et al., 2021. p. 167).

Co-Author Analysis

In the co-author analysis, 4,194 out of 4,809 authors were assessed, each with at least one article and one citation (see Figure 5). Table 4 presents the co-authors ranked according to total connection strength.

Table 4. *Co-Authors, Number of Articles and Citations in the Field of Cost Accounting*

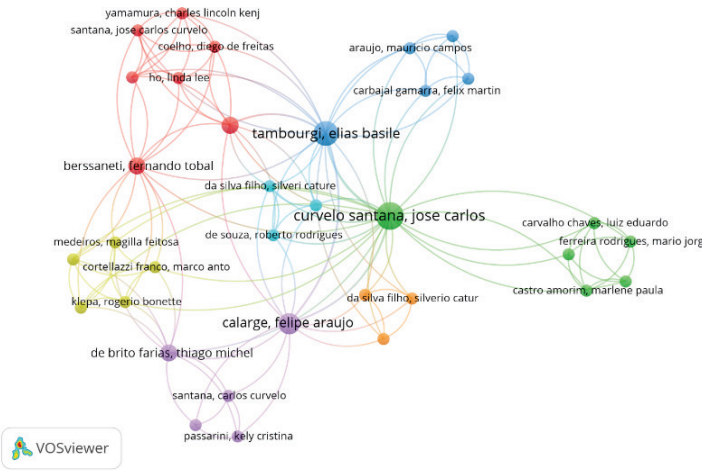| No	Authors	Article	Citation	Total Connection Strength
1	Taheri, Pa	7	1070	23
2	Eisenberg, Mj	7	199	36
3	Filion, Kb	7	199	36
4	Zhou, Zhifang	7	75	21
5	Davenport, Daniel L.	7	70	35
6	Butz, Da	6	421	18
7	Kent, Kc	6	229	23
8	Patel, St	6	229	23
9	Haider, S	6	171	31
10	Pilote, L	6	171	31

Figure 5. *Co-Author Analysis*

Author Citation Analysis

In the author citation analysis, conducted with a minimum of one study and at least two citations, 3,841 out of 4,809 authors were evaluated. Table 5 presents the top 10 most influential authors based on the total number of citations.

Table 5. *Most Cited Authors in Cost Accounting Research Area*

No	Authors	Article	Citation	Total Connection Strength
1	Unutzer, J	3	1223	38
2	Taheri, Pa	7	1070	91
3	Katon, W	3	1030	42
4	Rutter, C	2	872	27
5	Campbell, Da	2	796	73
6	Dimick, Jb	2	796	73
7	Vonkorff, M	2	793	34
8	Foglia, Ta	1	790	0
9	Haas, Mj	1	790	0
10	Mcaloon, Aj	1	790	0

Figure 6. *Author Citation Analysis*

Reference Citation Analysis

Regarding source citation analysis, 232 of 821 references were evaluated when limited to at least 2 studies and at least 2 citations.

Table 6. *Journals in which Cost Accounting Studies are Published Most, Number of Articles Published in These Journals*

No	Journal	Article
1	Journal of Cleaner Production	59
2	Sustainability	22
3	International Journal of Production Economics	17
4	Journal of Accounting Research	14
5	Accounting Review	14
6	Issues in Accounting Education	14
7	IEEE Access	14
8	Energy	12
9	Journal of Vascular Surgery	11
10	BMC Health Services Research	11
11	Accounting History	11
12	IEEE Transactions on Engineering Management	11
13	IEEE Transactions on Mobile Computing	10
14	Metalurgia International	10
15	Health Policy	9
16	Journal of the American College of Surgeons	8
17	Accounting Organizations and Society	8
18	Review of Accounting Studies	8
19	Energies	8
20	Journal of Accounting and Organizational Change	8

Reference citation analysis is shown in Figure 7.

Figure 7. *Reference Citation Analysis*

Table 7. *Citation Numbers of Journals Published in Cost Accounting Studies*

No	Journal	Citation
1	Journal of Cleaner Production	1715
2	Jama-Journal of the American Medical Association	1184
3	Journal of the American College of Surgeons	1150
4	Critical Care Medicine	1074
5	Journal of Accounting Research	981
6	Accounting Organizations and Society	937
7	Archives of General Psychiatry	844
8	International Journal of Production Economics	587
9	Archives of Internal Medicine	536
10	Accounting Review	463

Country Citation Analysis

In the analysis of country studies and citations, considering a minimum of one study and at least one citation, 96 out of 99 eligible countries were evaluated. The United States emerged as the leader in both country studies and citation numbers.

Table 8. *Number of Studies and Citations by Country*

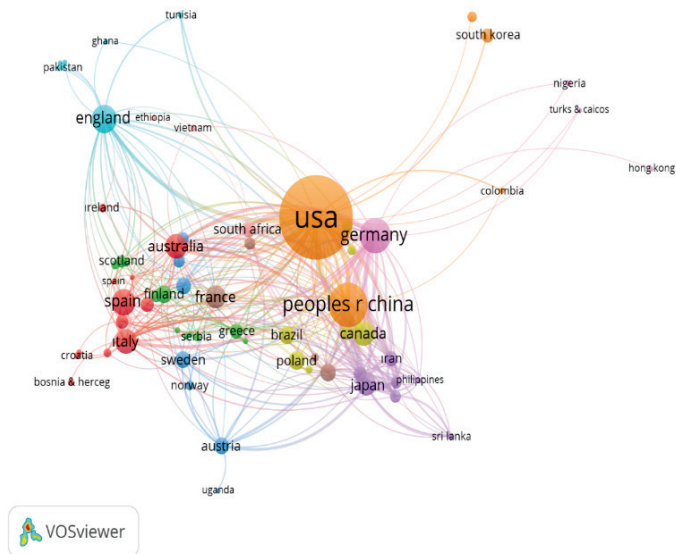| No	Country	Article	Citation	Total Connection Strength
1	USA	540	18408	326
2	China	151	1979	175
3	Germany	98	2100	358
4	England	62	1297	88
5	Spain	57	1020	41
6	Italy	49	704	91
7	Canada	47	1249	70
8	Australia	47	792	87
9	France	41	715	34
10	Japan	39	460	276

Figure 8. *Visualization of Studies by Country*

Institution Citation Analysis

When the institution was limited to at least 2 studies and at least 2 citations, 412 out of 1869 organizations were evaluated. The top 10 institutions are shown in Table 9.

Table 9. *Number of Articles, Citations and Link Strength by Institutions*

No	Institution	Article	Citation	Total Link Strength
1	University of Michigan	26	1714	53
6	University Washington	11	1165	7
2	Harvard University	19	950	31
5	McGill University	12	419	27
8	University Zaragoza	10	373	17
9	Cornell University	10	347	21
4	Stanford University	13	333	20
7	Duke University	11	224	4
10	University Utah	10	217	21
11	Brigham & Women's Hosp	9	217	23
12	Northwestern University	9	217	21

Table 9 Cont. *Number of Articles, Citations and Link Strength by Institutions*

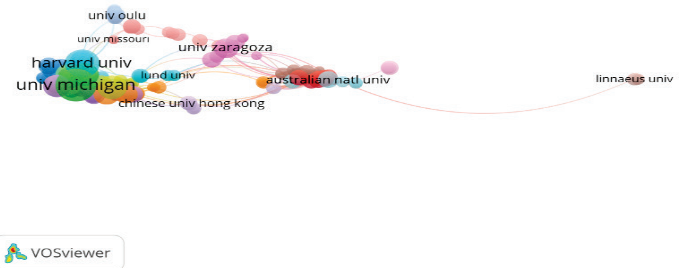| 13	University Illinois	9	217	10
14	Baylor Coll Med	9	217	18
15	University Calif Berkeley	9	217	4
16	Columbia University	9	217	12
17	Boston University	8	217	7
18	University Calif San Francisco	8	217	17
19	University Minnesota	8	217	24
20	University Lowa	8	217	14
21	University Kentucky	8	217	0
22	Washington University	7	217	8
23	University Calif Los Angeles	7	217	16

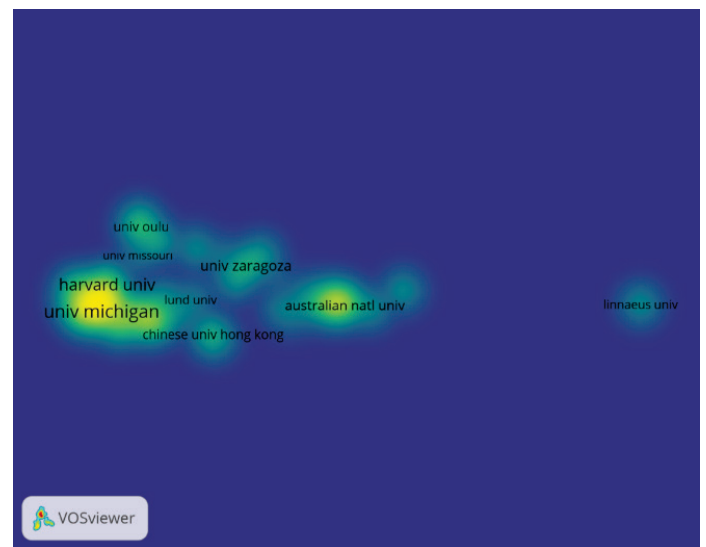**Figure 9.** *Institution Citation Analysis*

Figure 10. *Institutional Citation Density Analysis*

Conclusion and Recommendations

This study aims to examine research in cost accounting literature by analyzing the number of publications per year, country, influential journal, citations, and keywords. The analysis encompasses the current structure and developments of 1,538 articles published between 1980 and 2023. The study employs the bibliometric analysis method for these evaluations.

Based on the analysis results, 2021 stands out as the year with the highest number of articles on cost accounting. On a global scale, the USA leads with 540 publications, emphasizing the need for increased attention to this topic in studies from other regions and countries, such as Turkey, which had a comparatively low number of publications (25). Examining the ranking of influential journals in this field, the 'Journal of Cleaner Production' holds the top position.

Given its placement in Q1, it is recommended that researchers interested in the subject explore this journal for relevant studies.

Among the United Nations' Sustainable Development Goals, certain goals are more frequently associated with research. These include 03 Good Health and Well Being (523), 09 Industry Innovation and Infrastructure (362), 12 Responsible Consumption and Production (206), 13 Climate Action (122), 11 Sustainable Cities and Communities (106), 04 Quality Education (93), and 07 Affordable and Clean Energy (93). Emphasizing these areas is crucial for future research, enabling the development of new roadmaps and policies. In this context, cost accounting functions as a strategic tool for both private sector companies and public institutions in achieving these specific sustainable development goals. Effective cost management practices not only enhance economic sustainability by ensuring efficient resource utilization and minimizing waste, but they also support environmental sustainability. Thus, cost accounting is directly linked to these prioritized SDGs, contributing not only to the improvement of financial performance but also to the reduction of environmental impacts and the increase of social benefits. Therefore, it plays a critical role in the successful attainment of these sustainability objectives.

In cost accounting studies, there is a predominant focus on 'activity-based costing,' with examinations of 'cost analysis' and 'resource management.' Notably, since 2020, emerging topics such as 'carbon footprint,' 'machine learning,' 'game theory,' and 'smart cities' have gained attention. It is recommended that future studies delve into these areas for further exploration and analysis. The "carbon footprint" is a metric that measures the environmental impact of an organization. Cost accounting can aid in the calculation and monitoring of carbon emissions, thereby helping to identify environmental costs. This facilitates organizations in achieving their sustainability goals and reducing their environmental impact. Additionally, cost analysis and budgeting related to strategies for reducing the carbon footprint are integral components of cost accounting. "Machine learning" enables the development of more accurate and predictive models by extracting meaningful patterns from large datasets in cost forecasting and analysis. In cost accounting, machine learning techniques can be employed to better predict costs, improve cost control, and enhance operational efficiency. "Game theory" is a method used for analysis and modeling in strategic decision-making processes. Within the realm of cost accounting, game theory can be utilized to optimize cost strategies in competitive markets and evaluate various scenarios in decision-making processes. This is particularly relevant for multinational corporations and complex supply chains. "Smart cities" aim to enhance urban efficiency and sustainability through the use of data and technology. Cost accounting plays a critical role in analyzing and managing costs associated with smart city projects. Techniques in cost accounting can be applied to assess the costs of technology and infrastructure used in these projects, support budgeting processes, and calculate long-term investment returns. The relationship between these areas and cost accounting can contribute to improvements in sustainability, efficiency, and strategic decision-making processes.

This study exclusively scanned cost accounting data from the Web of Science (WOS) database, limiting the analysis to articles. Recognizing that this represents a limitation, future studies are encouraged to broaden their scope by exploring the relevant subject in multiple databases with indexes such as Scopus, TRDIZIN, ULAKBIM, ProQuest, and Google Scholar, allowing for the evaluation of various types of documents.

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Genişletilmiş Özet

Amaç ve Motivasyon

Bu araştırmanın amacı, maliyet muhasebesi alanında 1980-2023 yılları arasında Web of Science (WoS) veri tabanında yayınlanmış 1538 makaleyi analiz ederek değişim ve dönüşümü tespit ederek alana önemli bir katkı sağlamaktır. Araştırmaların 43 yıllık süreçteki eğiliminin incelenerek gelecek çalışmalara yol haritası sağlaması hedeflenmiştir.

Araştırma Stratejisi ve Yöntemi

"Maliyet muhasebesi" anahtar kelimesiyle gerçekleştirilen araştırmada, VOSviewer (1.6.19) programı ile Web of Science (WoS) veri tabanında 1980-2023 (15 Nisan 2023 ile sınırlı) yılları arasında maliyet muhasebesi alanında yapılan çalışmalar yer almaktadır. Bibliyometrik analiz ve görsel haritalama için konuların, araştırma alanlarının, gelişimlerinin ve birbirleriyle ilişkileri değerlendirildi. VOSviewer (Eck ve Waltman, 2010), farklı alanlardaki okuyucuların bulguları daha kolay anlayabilmelerini sağlamak amacıyla alanın kümelerini ve disiplinler arası haritalanmasını göstermek için kullanılmıştır. Haritalama ve kümeleme tekniklerinin amacı bir alana ait bilginin yapısı hakkında fikir edinmektir. (Eck ve Waltman, 2019; Purnomo vd., 2020a; Purnomo vd., 2020). Küme analizi, doğrudan analiz için numunelerin daha küçük gruplar halinde tanımlanmasını ve karakterizasyonunu kolaylaştırır (Caruso vd., 2021).

Çalışmada multidisipliner alanları içeren kapsamlı ve büyük veri tabanlarından biri olan Web of Science (WoS) veri tabanı kullanılmıştır. "Muhasebe" ve "Maliyet muhasebesi" anahtar kelimeleri WoS'ta taranmış ve 15 Nisan 2023 itibarıyla 1538 makale belirli sınırlamalarla değerlendirilmiştir. WoS indeksli dergilerde yayınlanan, başlığında ve/veya özetinde "muhasebe" anahtar kelimesi geçen makaleler tüm alanlarda taranmış ve 322.951 çalışmaya ulaşılmıştır. İkinci aşamada "maliyet muhasebesi" anahtar kelimesi eklenerek alan daraltılmış ve 2.555 çalışmaya ulaşılmıştır. Üçüncü aşamada en prestijli indeksler olarak kabul edilen SSCI, SCI (SCI-E) ve ESCI'ye göre daraltma yapılmış ve 1960 adet çalışma belirlenmiştir. Dördüncü aşamada, 81'i Almanca, 51'i Portekizce, 42'si İspanyolca, 22'si Rusça olmak üzere diğer dillerdeki çalışmalar hariç tutularak yalnızca İngilizce 1.735 çalışma analize dahil edilmiştir. Son olarak, diğer araştırma türleri (Kitap bölümleri vb.) hariç tutularak, 1980 yılından 2023 yılına (15 Nisan, 2023) kadar yayımlanan makalelerin başlık ve/veya özetlerinde "muhasebe" ve "maliyet muhasebesi" anahtar kelimeleri kullanılarak 1538 makale analiz için kayıt altına alınmıştır.

Bulgular ve Tartışma

Araştırma bulgularına göre maliyet muhasebesi alanında yayınlanan makaleler, 1990-1999 yılları arasındaki önceki 10 yıla (%12,74) kıyasla 2000-2009 döneminde %7,28 (%20,03) artış göstermiştir. Ayrıca maliyet muhasebesi üzerine yayımlanan makalelerin sayısı 2010-2019 döneminde bir önceki 10 yıllık 2000-2009 döneme göre %20,09 (%40,12) arttı. Dolayısıyla 1980-2020 arasındaki 40 yıllık süreçte maliyet muhasebesine olan ilginin son on yıldan bu yana arttığı söylenebilir.

Anahtar kelimeler arasında bağlantı gücü en yüksek olanlar maliyet muhasebesi (294), faaliyet bazlı maliyetleme (60), malzeme akış maliyet muhasebesi (58) olarak sıralanmıştır. Bunları sırasıyla; maliyet analizi, kaynak yönetimi, maliyet yönetimi, tam zamanında maliyetleme, yaşam dönemi maliyetleme, maliyet etkinliği, sürdürülebilirlik, optimizasyon ve zamana dayalı faaliyet tabanlı maliyetleme takip etmiştir.

Araştırma bulguları maliyet muhasebesi alanında en fazla araştırma yapan üniversitelerin sırasıyla Michigan, Washington ve Harvard Üniversiteleri olduğunu göstermektedir. Maliyet muhasebesi yazınında yer alan araştırmaların incelenmesinin hedeflendiği araştırmada yıllara göre yayın sayıları, atıf, ülke, anahtar kelimeler, etkili gibi parametreler bağlamında analiz yapılmıştır. Araştırmada, 1980-2023 döneminde yayınlanan 1538 makalenin mevcut yapısı ve gelişimleri irdelenmiştir. Araştırma hedeflerine ulaşmak için istatistiksel yöntemler arasında yer alan bibliyometrik analiz yöntemi kullanılmıştır. Araştırma sonuçlarına göre 2021 yılı maliyet muhasebesi konusuna ilişkin en çok makalenin yayınlandığı yıl olmuştur. Uuslararası alan yazında en fazla çalışmanın 540 araştırma ile Amerika Birleşik Devletleri'nde yapıldığı görülmektedir. Türkiye 25. Sırada yer almıştır. Türkiye'de araştırmacıların bu konuya daha fazla önem vermesi gerekmektedir.

Sonuç ve Öneriler

Maliyet muhasebesi alanına ilişkin araştırmaların yer aldığı en etkili dergi sıralamasında Q1 de yer alan "journal of cleaner productıon" dergisi ilk sırada yer almaktadır. Alanla ilgili araştırma yapacak olan araştırmacıların ilgili dergiyi incelemesi önerilmektedir.

Birleşmiş Milletlerin yayınladığı Sürdürülebilir Kalkınma Hedefleri içerisinde en fazla 03 Sağlık ve Kaliteli Yaşam (523), 09 Sanayi, Yenilikçilik ve Altyapı (362), 12 Sorumlu Üretim ve Tüketim (206), 13 İklim Eylemi (122), 11 Sürdürülebilir Şehirler ve Topluluklar (106), 04 Kaliteli Eğitim (93), 07 Erişilebilir ve Temiz Enerji (93) hedefleri ile ilişkilendirilmiştir. Gelecekte araştırmacılar sadece bu alanlardaki araştırmaları derinlemesine inceleyerek yeni yol haritaları ve politikaları geliştirebilirler.

Maliyet muhasebesi konusuna ilişkin çalışmalarda, çoğunlukla "activity-based costing" konusunun ele alındığı, "cost analysis", "resource management" "cost-effectiveness" konularının araştırıldığı, 2020 yılından itibaren ise carbon footprint, machine learning, game theory, smart cities konularının incelendiği görülmektedir. Gelecek çalışmalarda bu konuların araştırılması öneri niteliği taşımaktadır.

Araştırmada maliyet muhasebesine ilişkin veriler WOS veri tabanından taranarak analiz kapsamına dahil edilmiştir. Sadece makalelerin analize dahil edilmesi ve tek bir veri tabanının kullanılması araştırmanın kısıtını oluşturmaktadır. WoS dışında Scopus, ProQuest gibi indekslerin yer aldığı veri tabanında ilgili konuya ilişkin araştırmaların yapılabilmesi, farklı araştırmalarında değerlendirilmeye alınması gelecek araştırmacılar için öneri özelliği taşımaktadır.