

Beyond the Scoreboard: Bibliometric Insights into Accounting and Financial Management in Sports Clubs and Associations

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Abstract: Understanding the evolution of sports accounting and financial management is essential for ensuring the sustainability, competitiveness, and long-term success of sports clubs and organizations. This study analyzes the evolution of accounting and financial management practices within sports clubs and organizations by conducting a bibliometric analysis of 77 Scopus-indexed documents published between 2000 and 2024. The investigation focuses on research topics, key contributors, institutional affiliations, and publication trends to uncover patterns and advancements in the field. Using keywords such as "sports accounting," "sports finance," and "financial management in sports," the study employed a systematic TITLE-ABS-KEY search, limiting results to relevant subject areas, including business, economics, and social sciences. The findings reveal that 67.53% of the documents are research articles, with business, management, and accounting being the predominant subject area, followed by economics, econometrics, and finance. "Sports finance" emerged as the most frequently occurring keyword, highlighting its centrality in the field, particularly in budgeting, financial management, and economic impacts. Additionally, the study identified a consistent rise in publication activity since 2006, peaking in 2020. Key authors and institutions were identified, with contributions from France, the United Kingdom, and the United States leading the field. Citation metrics, including an h-index of 13 and a g-index of 29, emphasize the influence and relevance of the research. This study highlights the growing focus on financial transparency, digital transformation, and sustainability, providing a foundation for future research on advancing sports accounting and finance.

Keywords: *Sports finance, Sports accounting, Bibliometric analysis, VOS Viewer, Harzing's Publish or Perish*

1. Introduction

In the world of sports, where passion meets business, the financial management of sports clubs and organizations is not just about balancing the books; it is about sustaining dreams, nurturing talent, and ensuring the heartbeat of sport continues to thrive. From local clubs to global giants, sports entities navigate a unique financial landscape where every decision can influence both on-field performance and off-field community impact. Effective financial management and accounting practices drive the sustainability and growth of sports clubs and organizations. The intersection of accounting and finance within the sports industry encompasses essential aspects such as financial management, regulatory compliance, and strategic financial planning, which collectively contribute to the long-term viability of sports organizations.

One of the pivotal shifts in recent years has been the increasing scrutiny of financial transparency and sustainability. Plumley, Wilson, and Shibli (2017) discuss how regulations have pushed clubs towards more sustainable financial planning, with findings indicating that financial performance and sporting performance are not separate or opposing variables. Instead, they exist on a continuum, with clubs positioning themselves and shifting along this spectrum to varying degrees over time. Since the 2011/2012 season, the introduction and enforcement of regulations like UEFA's Financial Fair Play (FFP) have set new standards for financial practices in football clubs. Meanwhile, the application and interpretation of these rules continue to evolve, impacting how clubs manage their finances.

The financial health of sports clubs is intricately linked to their performance on the pitch. Winning teams attract more fans, bigger sponsorships, and higher media rights deals, but this can create a cycle where financial strategy becomes as crucial as a sporting strategy. Ramchandani, Plumley, Davis, and Wilson (2023) conclude that FFP plays a role in reinforcing the competitive hierarchy among European clubs, but it is not the sole factor. Other contributing elements include broadcasting revenues, financial flows between leagues, transfer fees, wages, and governance frameworks.

Moreover, digital transformation has revolutionized financial management practices. Clubs are now leveraging big data analytics not just for scouting or performance analysis but also for financial forecasting and risk management. Toma and Campobaso (2023) highlight the importance of data analytics for teams that mainly rely on two primary factors to enhance performance: financial investment and the implementation of an effective game strategy. The ultimate objective for each team is to secure the highest possible position in the league standings by the end of the season. Achieving top-tier results in sports not only boosts earnings but also ensures the club's long-term sustainability. Football, a significant industry, generated €28.4 billion in revenue during the 2017/18 season in the European market, and for football to thrive, it must deliver captivating entertainment to its audience, which requires maintaining a healthy level of competitive balance. (Toma & Campobaso, 2023)

The role of fan ownership and community investment models has also gained traction, influencing how clubs are financially managed. These models, which give fans a say in club decisions, bring unique challenges and opportunities in financial governance. These community-based models can lead to more inclusive financial decisions, though not without complexities in balancing democratic governance with commercial viability. With increasing community involvement, a well-structured policy is essential to effectively manage the expanding range of stakeholder interests. However, concerns about fan involvement in club management often center on fears of disorder. Varmus, Kubina, Mičiak, Boško and Greguška (2023) suggest starting with simple, indirect forms of fan participation, such as decisions on club events or anthems, to build trust. Gradually, clubs can progress to advanced governance roles, like establishing bodies with voting rights. Ratten (2019) offers a fresh perspective on sports policy by emphasizing the benefits of adopting an entrepreneurial approach. This approach highlights the practical link between sports entrepreneurship and public policy, providing valuable insights into their relationship.

Crucially, the human element remains at the core of sports finance. Managing finances in sports is not just about numbers. It is about understanding the people - the players, the fans, the staff, and the community at large. Leadership in sports finance requires a blend of empathy, strategic foresight, and adaptability to navigate the peaks and troughs of sports seasons and economic cycles.

In essence, the accounting and financial management of sports clubs and organizations is a dynamic field where every decision is a play in the broader game of sustaining sports culture, community spirit, and commercial success. As we move forward, the integration of technology, regulatory evolution, and innovative financing models will continue to shape how these entities manage their financial future, keeping the spirit of the game alive and well. Therefore, this study offers a bibliometric analysis that provides a distinct lens on academic discourse concerning accounting and financial management within sports organizations. By systematically examining research trends, citation networks, and influential publications, the bibliometric results shed light on the intellectual structure of the field and highlight key themes and emerging trends in the literature. In the following sections, the literature review is examined in the subsequent section, followed by the research methodology used. The next section contains an analysis of the results. Finally, the study concludes with a summary of the results and an outlook for future research on this study.

2. Literature Review

The financial management of sports clubs and organizations has evolved significantly, influenced by the professionalization of sports, regulatory changes, and the integration of technology in financial practices. This literature review synthesizes findings and key points from various research to explore the current state of accounting and financial management in the sports sector.

Financial Reporting and Regulation

Financial reporting in sports clubs often diverges from traditional corporate models due to unique aspects like player contracts, broadcasting rights, and sponsorship deals. The introduction of UEFA's Financial Fair Play (FFP) regulations has been pivotal in shaping financial practices. Morrow (2013) critically evaluates football club financial reporting, suggesting that while FFP aims to ensure financial sustainability, the focus on economic stakeholders might overlook broader social and community responsibilities of sports clubs. Furthermore, Dimitropoulos and Scafarto (2021) explore the impact of FFP on Italian football clubs, finding

that it influences player expenditure and financial performance but not necessarily sporting success. According to Wilson, Platts, and Plumley (2022), effective financial management strategies are essential for large and small sports clubs. These strategies include budget preparation, cash flow forecasting, and financial audits. Additionally, Galić, Tolušić, and Baban (2019) emphasize the role of financial management in ensuring the sustainable development of non-profit sports organizations. Their study on futsal competitions in Eastern Croatia highlights the importance of budget management and financial transparency. Baxter, Carlsson-Wall, Chua, and Kraus (2019) stated that maintaining male elite teams requires sound market practices like securing sponsorships and generating stable revenue from ticket sales while funding amateur, female, and youth leagues. The increasingly professional financial management of clubs has evolved with a focus on market and community interests, though separating these interests has proven challenging.

Financial Performance Analysis

Accounting practices in sports organizations involve the systematic recording, reporting, and analysis of sports organizations and found that, while beneficial, its success depends on simplicity and practicality. However, as the sports business is getting competitive and complex, involving not only players and clubs financial transactions. Flinkberg and Rönnblom (2009) examine how large elite sports associations use traditional management accounting tools to achieve their goals, highlighting the importance of financial reporting and accountability. García-Unanue, Felipe, and Gallardo (2015) examined the implementation of cost accounting in public, Andon and Free (2019) brought up an interesting issue of valuing playing talent in professional sports as inherently complex and uncertain. Assessing a player's qualities is challenging, often relying heavily on past performance, perceived interest from other clubs, and other subjective factors.

In recent years, performance in sports has been closely tied to financial health, with various studies analyzing this relationship. Alaminos, Esteban, and Fernández-Gámez (2020) utilize neural networks, including novel quantum neural networks, to analyze the financial performance of European football clubs, identifying liquidity, leverage, and sporting performance as key determinants. Similarly, Galariotis, Germain, and Zopounidis (2018) combine methodologies for evaluating business, financial, and sports performance in French football clubs, highlighting the complexity of these interactions.

Corporate Governance and Financial Management

Corporate governance in sports clubs and organizations has unique challenges due to its hybrid nature, blending not-for-profit with commercial aspects. Clune, Boomsma, and Pucci (2019) delve into how accounting practices in amateur sports organizations like the Gaelic Athletic Association navigate these complexities, revealing tensions between maintaining amateur status and financial sustainability. Prior studies have mentioned the discoveries in Forster's (2004) research on the finance, accountability, and governance of global sports' governing bodies, underscoring the challenges these entities face in adhering to commonly accepted accounting standards. This research highlights the need for transparent and auditable financial practices to ensure accountability. As the influx of money into sports has surged dramatically, so too has the potential for corrupting influences. Andon and Free (2019) emphasize that integrity and accountability have become central to sports administration. This focus addresses various critical issues, including the integrity of bidding processes such as the FIFA World Cup, concerns over match-fixing and corruption, and the creation of investigatory units and integrity-focused bodies to oversee participant behavior, including the use of performance-enhancing drugs.

In addition, the role of stakeholders in sports clubs' financial management has been explored, particularly in balancing financial performance with community and fan engagement. Hamil and Chadwick (2010), along with more recent studies, advocate for broader accountability that incorporates non-economic stakeholders, suggesting that financial transparency should extend beyond the boardroom to foster trust and inclusivity.

Risk Management and Financial Control

Andon and Free (2019) discuss the evolution of accounting in the business of sports, emphasizing the need for robust financial reporting standards to ensure accountability and transparency. Feiler, Coates, Wicker, and Breuer (2023) analyze the financial situation of non-profit sports clubs, explaining that clear financial reporting is necessary to understand the financial health of these organizations and make informed decisions. Based on their study in Hungary sports associations accounting reports, Gosi (2019) summarizes that since 2010, sports

associations benefiting from corporate tax subsidies have experienced a tenfold increase in annual revenues, while other associations have seen smaller revenue growth. Subsidies form the largest revenue source for these organizations. Personnel expenditure has risen significantly. Asset growth across associations highlights strong financial assets, passive accruals, and good liquidity. Financial reports reflect the dynamic expansion of the sports economy sector and thus requiring greater risk management and control measures in place.

To mitigate the ongoing economic impacts of the COVID-19 pandemic on football clubs, Sevim (2021) emphasizes the necessity of implementing long-term structural solutions. Clubs should focus on transparency, accountability, and efficient resource management, aligning with UEFA Fair Play criteria to maintain a balanced budget. This approach will minimize risks, enhance financial stability, and contribute to sustainable financial structures. Charumbira (2022) proposed a conceptual framework that provides guidelines for sports managers, policymakers, and regulators to adopt strategies for monitoring expenses, enhancing revenue, and achieving financial self-sustenance. It assesses sports entities' reliance on generated revenue, highlights the risk of financial failure, and emphasizes the importance of sustainable financial models for long-term economic viability. Sports clubs and associations should integrate strategic management and public policy interventions to ensure responsible spending and promote revenue generation. These actions are crucial for reducing the risk of financial failure and achieving 'sports financial self-sustenance' with optimal economic performance within the sports sector.

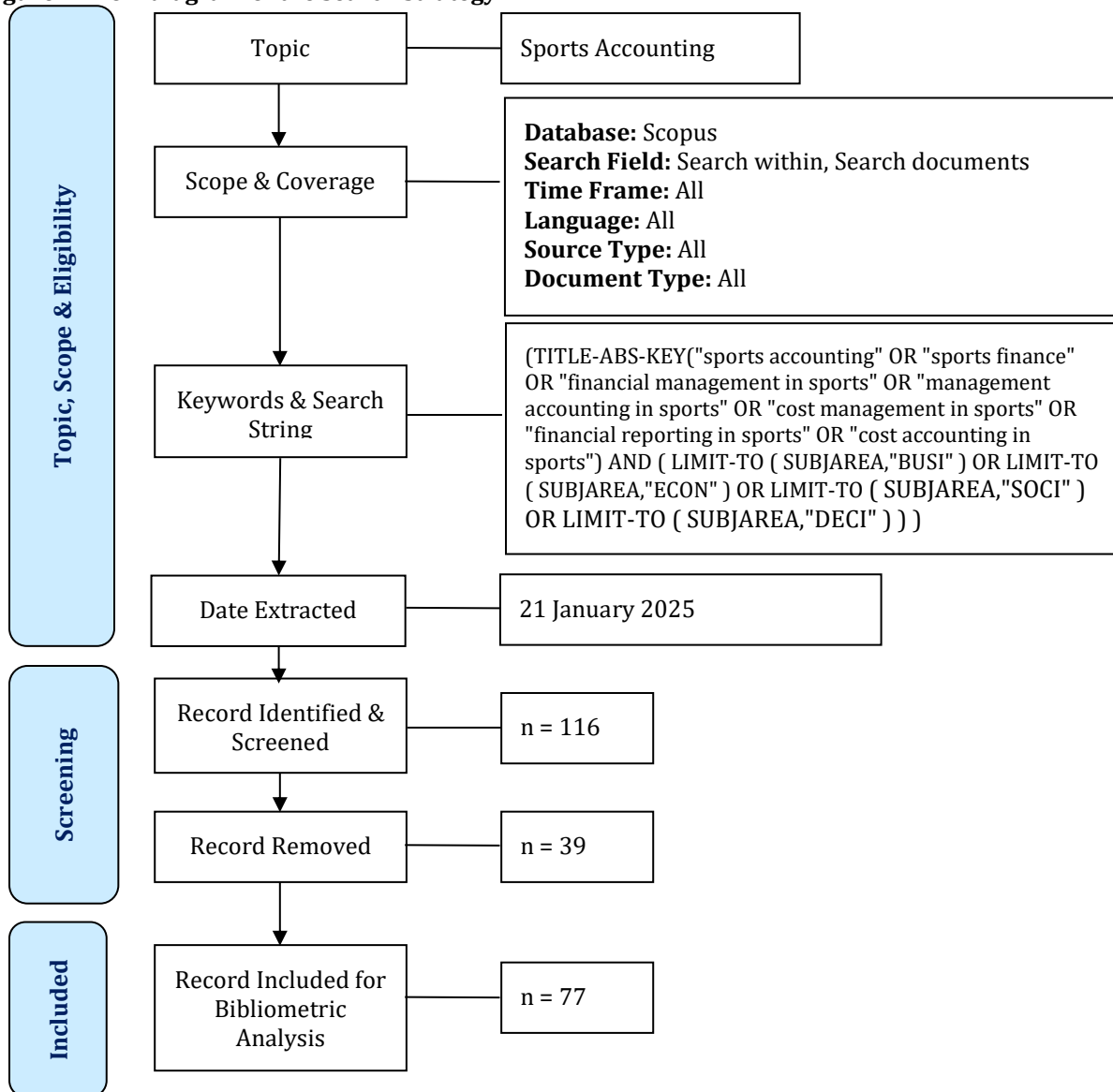
With the rise of big data, there is an increased focus on using technology for risk management in sports finance. Sports clubs and organizations can leverage big data to enhance risk prevention and control mechanisms, proposing strategies like refined cost accounting and improved budget management systems.

3. Methodology

This study utilized a bibliometric approach, as it offers a comprehensive, quantitative, objective, and systematic analysis of the current state of research by identifying research hotspots and anticipating future research trends (Ahmi, 2022). Additionally, bibliometric techniques pinpoint the most significant patterns in publications, citations, authors, keywords, and institutions, thereby providing a clear overview of academic research on a given topic or within a journal (Awang, Nasir, Taib, Shuhidan s Ifada, 2024).

A detailed investigation using the TITLE-ABS-KEY ("sports accounting" OR "sports finance" OR "financial management in sports" OR "management accounting in sports" OR "cost management in sports" OR "financial reporting in sports" OR "cost accounting in sports") AND (LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "ECON") OR LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "DECI"))) search query on 21 January 2025 resulted in the acquisition of 116 documents from the Scopus database, spanning the years 1982 to 2024. However, as this study limits the subject area from Business, Management, Accounting, Economics, Econometrics and Finance, Decision Sciences, and Social Sciences, only 77 documents were taken as the final sample size for the bibliometric analysis. A comprehensive summary of all queries is illustrated in the flow chart in Figure 1.

Figure 1: Flow diagram of the search strategy



Source: Zakaria, Ahmi, Ahmad & Othman (2021), Moher, Liberati, Tetzlaff, & Altman (2009)

For further analysis, the retrieved data were exported into standardized formats, including RIS, CSV, and Microsoft Excel. The data were then summarized based on document type, source language, and publication patterns. A citation analysis was conducted to determine the total number of citations, average citations per publication, and average citations per cited publication, aiming to identify highly cited publications and influential authors in the field. Harzing's Publish or Perish software was used to evaluate the performance of the examined documents. Additionally, VOSviewer software, which generates bibliometric networks, was utilized to create charts and diagrams reflecting the frequency of published materials, analyzed using Microsoft Excel. An analysis of frequently occurring keywords was performed to identify clusters of keywords and emerging areas of study in sports accounting. Based on bibliometric data, this study offers valuable insights into the research area's subject matter, helps identify potential research questions, and tracks the evolution of research topics over time.

4. Results and Findings

Documents Profiles

Document profiles refer to the specific attributes of each publication within a dataset, extending beyond just titles and abstracts (Adnan, Halmi, Nasir & Ahmad, 2024). The research area was explored in detail by analyzing various aspects of document profiles to offer insights into research topics, key authors, and institutions, as well as research trends and collaborations that influence the field's overall development. The detailed information related to the 77 documents retrieved from the Scopus database on sports accounting is presented in Tables 1, 2, and 3. Most documents are articles, making up 67.53% of the total. Book chapters account for 15.58%, books for 11.69% and editorials for 2.60%. The remaining categories, including conference paper and review, each represent 1.30%.

Table 1: Document Type

Document Type	Total Publications (TP)	Percentage (%)
Article	52	67.53
Book Chapter	12	15.58
Book	9	11.69
Editorial	12	2.60
Conference Paper	1	1.30
Review	1	1.30
Total	77	100.00

English is the predominant language used in the publications with 96.03% of the total as it offers standardization, ensuring consistency and ease of understanding. Meanwhile, the Russian accounted for 3.90%.

Table 2: Languages

Language	Total Publications (TP)	Percentage (%)
English	74	96.10
Russian	3	3.90
Total	77	100.00

Scopus categorizes the publications into 14 primary subject areas. Analyzing the distribution of publications across these categories reveals the predominant areas of study within this dataset. The results indicate a concentration of publications in business, management and accounting, which constitutes 66.23% of the total. Meanwhile, economics, econometrics, and finance contribute 57.14% to the subject area. It is followed by social sciences and Decision Sciences at 23.38% and 12.99%, respectively. Meanwhile, the remaining subject areas contributed less than 10% of the publications.

Table 3: Subject Area

Subject Area	Total Publications (TP)	Percentage (%)
Business, Management and Accounting	51	66.23
Economics, Econometrics and Finance	44	57.14
Social Sciences	18	23.38
Decision Sciences	10	12.99
Medicine	6	7.79
Health Professions	5	6.49
Arts and Humanities	4	5.19
Computer Science	3	3.90

Engineering	2	2.60
Environmental Science	2	2.60
Earth and Planetary Sciences	1	1.30
Energy	1	1.30
Mathematics	1	1.30
Psychology	1	1.30

Publication Trends

The analysis indicates that over the past 24 years, there has been a notable increase in publications related to sports accounting and finance; however, the number of publications remains fewer than ten as shown in Figure 2. This type of analysis is essential for observing changes in publication patterns over different periods, visualizing the evolution of research objectives, and identifying future areas of research growth. The publication activity during the first five years was minimal, with only a publication recorded in 2000 and 2005. This observation indicates a nascent interest in sports accounting and finance research. From 2006 onwards, there was a slight uptick in the number of publications, with two publications in 2006 and 2008, and one publication each in 2009 and 2010. A notable increase occurred in 2011, with four publications suggesting growing interest and recognition of the field. The years 2012 to 2018 showed more consistent and steady growth in publications. There was a fluctuation in publication numbers, with significant peaks in 2013 (5 publications), 2016 (6 publications), and 2018 (8 publications). This period reflects a broader acceptance and establishment of sports accounting and finance as a distinct research area. The most recent years, from 2019 to 2024, exhibit a notable rise in publication activity. 2020 stands out with the highest number of publications (9), followed by strong outputs in 2021 (7), 2022 (7), and 2024 (7). This trend suggests that sports accounting and finance have become a well-recognized and active in research fields with increasing contributions from scholars.

Figure 2: Total Publications and Citations by Year

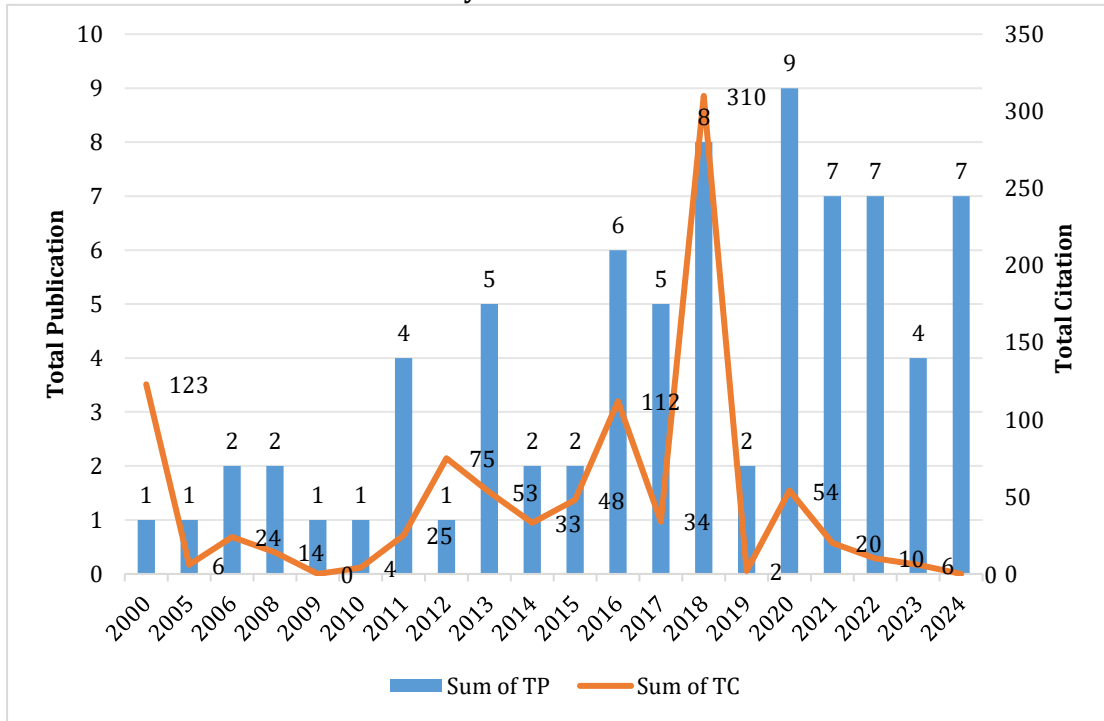


Table 4 presents the analysis of annual publications. Throughout the sample period, the h-index ranged from 1 to 5. This metric is utilized to assess the productivity and citation impact of publications. The observed variation in the h-index from 1 to 5 indicates that the researcher's impact and productivity have increased over time,

suggesting greater recognition and citation of their work within the academic community. As evidenced by the highest h-index, five publications related to sports accounting and finance received at least 52 citations in 2018, and seven citations in 2020. Conversely, the number of published works exceeded the number of cited works in the years 2013 and 2018 to 2024. This result implies the credibility of the publications, as it shows that not all works are being cited within the same year. Additionally, the g-index reflects the total number of accumulated citations. As of 2018, the highest g-index indicates that a minimum of 8 publications have collectively garnered 64 citations.

Table 4: Year of Publication

Year	TP	NCP	TC	C/P	C/CP	h	g
2000	1	1	123	123.00	123.00	1	1
2005	1	1	6	6.00	6.00	1	1
2006	2	2	24	12.00	12.00	2	2
2008	2	2	14	7.00	7.00	1	2
2009	1	0	0	0.00	0.00	0	0
2010	1	1	4	4.00	4.00	1	1
2011	4	4	25	6.25	6.25	3	4
2012	1	1	75	75.00	75.00	1	1
2013	5	3	53	10.60	17.67	2	5
2014	2	2	33	16.50	16.50	2	2
2015	2	2	48	24.00	24.00	2	2
2016	6	6	112	18.67	18.67	4	6
2017	5	5	34	6.80	6.80	4	5
2018	8	6	310	38.75	51.67	5	8
2019	2	1	2	1.00	2.00	1	1
2020	9	8	54	6.00	6.75	5	7
2021	7	5	20	2.86	4.00	3	4
2022	7	5	10	1.43	2.00	2	2
2023	4	3	6	1.50	2.00	1	2
2024	7	0	0	0.00	0.00	0	0
Total	77						

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

Publication by Authors

This section delves deeper into the contributions of leading authors within the domain of sports accounting and finance, highlighting scholars who have significantly advanced the field. Table 5 enumerates the top five most prolific authors specializing in sports accounting and finance. Analyzing the institutional affiliations of these authors offers insight into the specialized research areas of various institutions and countries. Such information is invaluable for identifying key research institutions and potential collaboration partners in this sector. The findings reveal that most publications are attributed to scholars from France, the United Kingdom, the United States, and Germany. Andreff, W., from Université Paris 1 Panthéon-Sorbonne in France, has authored five articles with a cumulative citation count of 152, the highest among the listed authors. Wilson, R., of Sheffield Business School, United Kingdom, has also published five articles, garnering 120 citations. Conversely, Plumley, D., also from Sheffield Business School, United Kingdom, has contributed four articles, accumulating a total of 110 citations. Additionally, Brown, M.T., from the University of South Carolina, United States, and Frick, B., from Paderborn University, Germany, have each authored three publications, with total citation counts of 12 and 9, respectively.

Table 5: Top 5 Most Productive Authors

Author's Name	Affiliation	Country	TP	NCP	TC	C/P	C/CP	<i>h</i>	<i>g</i>
Andreff, W.	Université Paris 1 Panthéon-Sorbonne Paris	France	5	4	152	30.40	38.00	3	5
Wilson, R.	Sheffield Business School	United Kingdom	5	5	120	24.00	24.00	4	5
Plumley, D.	Sheffield Business School	United Kingdom	4	4	110	27.50	27.50	4	4
Brown, M.T.	University of South Carolina	United States	3	2	12	4.00	6.00	2	3
Frick, B.	Paderborn University	Germany	3	1	9	3.00	9.00	1	3

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

Publication by Institutions

Table 6 highlights the most productive institutions with at least four publications in sports accounting and finance. The results indicate that most documents are affiliated with institutions from France, the United Kingdom, Russia, and the United States. Université Paris 1 Panthéon-Sorbonne and Sheffield Hallam University are in the lead with five total publications, accumulating 153 and 120 total citations, respectively. HSE University and Syracuse University, each with four publications, have fewer citations of 26 and 19, respectively. This result suggests potential but with a current lower impact compared to the leading institutions. Despite having only four publications, The University of San Francisco shows a high citation count of 92. Plekhanov Russian University of Economics has four publications with a total of 11 citations. Though the citation count is lower, the institution demonstrates consistent productivity.

Table 6: Most productive institutions with a minimum of four publications

Affiliation	Country	TP	NCP	TC	C/P	C/CP	<i>h</i>	<i>g</i>
Université Paris 1 Panthéon-Sorbonne	France	5	4	153	30.60	38.25	3	5
Sheffield Hallam University	United Kingdom	5	5	120	24.00	24.00	4	5
HSE University	Russia	4	3	26	6.50	8.67	3	4
Syracuse University	United States	4	3	19	4.75	6.33	2	4
Plekhanov Russian University of Economics	Russia	4	4	11	2.75	2.75	3	3
University of San Francisco	United States	4	4	92	23.00	23.00	4	4

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

Publication by Countries

Assessing bibliographic data includes evaluating the publication count per country and pinpointing the most prolific contributors. Table 7 delineates the top ten countries with the highest contributions. The United States emerges as the frontrunner with 31 publications, constituting 40.26% of the total. The Russian Federation and the United Kingdom have nine publications, accounting for 11.69%. Germany follows with eight publications (10.39%), while France contributes five (6.49%). Canada and Poland have four publications (5.19%) and three (3.90%), respectively. New Zealand, South Korea, and Spain each account for 2 publications, representing 2.60%. The United States leads in research outcomes, followed by major European countries and emerging economies. The United States' dominance in research findings likely stems from the substantial financial scale of its sports industry. An important academic contribution is the development of financial management models

for both professional and amateur sports organizations. Although the bibliometric results underscore significant research contributions from Western and European countries, a notable gap is the underrepresentation of Southeast Asia countries in academic research on accounting and financial management in sports clubs and federations. The absence of key Southeast Asia countries such as Malaysia, Indonesia, Thailand, the Philippines, and Vietnam indicates that research in this region remains underdeveloped.

Table 7: Top 10 Publication Countries

Country	TP	%
United States	31	40.26
Russian Federation	9	11.69
United Kingdom	9	11.69
Germany	8	10.39
France	5	6.49
Canada	4	5.19
Poland	3	3.90
New Zealand	2	2.60
South Korea	2	2.60
Spain	2	2.60

Notes: TP=total number of publications

Publication by Source Titles

Evaluating the sources within a given field can illuminate the most significant journals and platforms for disseminating research findings. This process facilitates a comprehensive understanding to identify the leading sources within a particular domain of study. Table 8 presents a summary of the five most active sources. The foremost publisher is Elsevier Ltd, with six publications in the Sport Management Review journal, which has garnered a total of 171 citations. Following this is Fitness Information Technology, with five publications in the International Journal of Sport Finance, which has accumulated 30 citations. Although ranked fourth in total publications, Sport, Business and Management: An International Journal, published by Emerald Group Holdings Ltd., received a higher total citation count of 26 compared to the third leading source's journals, which received only 13 total citations. Additionally, Managerial Finance, a journal published by Emerald Group Holdings Ltd, has accumulated 19 citations.

Table 8: Top 5 Most Active Source Titles

Source Title	TP	Publisher	Cite Score	SJR 2023	SNIP 2023	NCP	TC	C/P	C/CP
Sport Management Review	6	Elsevier Ltd	5.80	1.429	2.76	6	171	28.50	28.50
International Journal of Sport Finance	5	Fitness Information Technology	1.58	0.351	N/A	4	30	6.00	7.50
Financial Management in the Sport Industry	4	Taylor and Francis	2.44	0.9	1.252	3	13	3.25	4.33
Sport, Business and Management: An International Journal	4	Emerald Group Holdings Ltd.	1.94	0.399	1.099	4	26	6.50	6.50
Managerial Finance	3	Emerald Group Holdings Ltd.	2.49	0.439	N/A	3	19	6.33	6.33

Notes: TP= total number of publications; TC= total citations; CiteScore = average citations received per document published in the source title; SJR = SCImago Journal Rank measures weighted citations received by the source title; SNIP = source normalized impact per paper measures actual citations received relative to citations expected for the source title's subject field.

Citation Metrics

Citation metrics are essential in bibliometric analysis. The frequency with which a publication is referenced by other scholarly works determines its impact and influence. The citation metrics shown in Table 9 were generated using Harzing’s Publish or Perish software. There are 953 citations across the 77 identified papers, averaging 12.38 citations per paper. On average, there are two authors per publication. The h-index and g-index demonstrate a strong citation impact, with values of 13 and 29, respectively. An h-index of 13 indicates that 13 documents in forensic accounting have been cited at least 13 times, while a g-index of 29 signifies that at least 49 publications have collectively received 841 citations.

Table 9: Citations metrics

Metrics	Data
Papers	77
Number of Citations	953
Years	25
Citations per Year	38.12
Citations per Paper	12.38
Citations per Author	432.13
Papers per Author	43.77
Authors per Paper	2.19
h-index	13
g-index	29

Highly Cited Documents

Table 10 summarizes the information on highly cited documents. "The Evolving European Model of Professional Sports Finance" is the most cited document, with 123 citations. This is followed by "Europe’s elite football: Financial growth, sporting success, transfer investment, and private majority investors" and "Considering legacy as a multi-dimensional construct: The legacy of the Olympic Games" both are cited 75 times. Meanwhile, A longitudinal and comparative analysis of competitive balance in five European football leagues counted 61 citations.

Table 10: Top 10 highly cited articles

No	Authors	Year	Title	Cites	Cites per Year
1	W. Andreff, P.D. Staudohar	2000	The Evolving European Model of Professional Sports Finance	123	4.92
2	M. Rohde, C. Breuer	2016	Europe’s elite football: Financial growth, sporting success, transfer investment, and private majority investors	75	8.33
3	N. Agha, S. Fairley, H. Gibson	2012	Considering legacy as a multi-dimensional construct: The legacy of the Olympic Games	75	5.77
4	G. Ramchandani, D. Plumley, S. Boyes, R. Wilson	2018	A longitudinal and comparative analysis of competitive balance in five European football leagues	61	8.71
5	C.J. Cordery, D. Sim, R.F. Baskerville	2013	Three models, one goal: Assessing financial vulnerability in New Zealand amateur sports clubs	50	4.17
6	A. Fauve	2015	Global Astana: Nation branding as a legitimization tool for authoritarian regimes	40	4
7	R. Wilson, G. Ramchandani, D. Plumley	2018	Parachute Payments in English Football: Softening the Landing or Distorting the Balance?	37	5.29

8	S.L. Shapiro, J. Drayer	2014	An examination of dynamic ticket pricing and secondary market price determinants in Major League Baseball	30	2.73
9	W. Andreff	2018	Financial and sporting performance in French football Ligue 1: Influence on the players' market	24	3.43
10	B. Stewart	2006	Sports funding and finance	20	1.05

Top Keywords

Authors' keywords provide valuable insights into specific keywords within a broader topic. This analysis underscores the evolution of keywords and trends by examining frequently occurring terms and keyword clusters. Table 11 lists the top three keywords, each appearing in at least four publications, used by authors specializing in sports accounting and finance. The keyword "sports finance" (61.04%) emerges as the most frequently used, highlighting the significance of financial aspects related to sports. This prevalence suggests that funding, budgeting, financial management, and economic impact are central focal points in the research literature. The prominence of "sports finance" indicates a strong emphasis on understanding the economic dimensions of sports, which can have wide-ranging implications for policy, management, and strategic decision-making in the sports industry.

Additionally, "sport" constitutes 29.87% of the primary keywords, respectively. This reflects a broad interest in general sports topics, encompassing various aspects of sports activities, events, and management, indicating that while financial aspects are crucial, there is also substantial research dedicated to understanding the broader context and dynamics of sports. Meanwhile, "sports economics," accounts for 15.58% of the primary keywords. This result suggests a growing focus on the economic analysis of sports, including market dynamics, economic impact studies, and the financial performance of sports organizations. In contrast, competitive balance, and sports management each represent 5.19% of the primary keywords, indicating specific interest areas within the broader field of sports research.

Table 11: Top author's keyword with a minimum of four publications

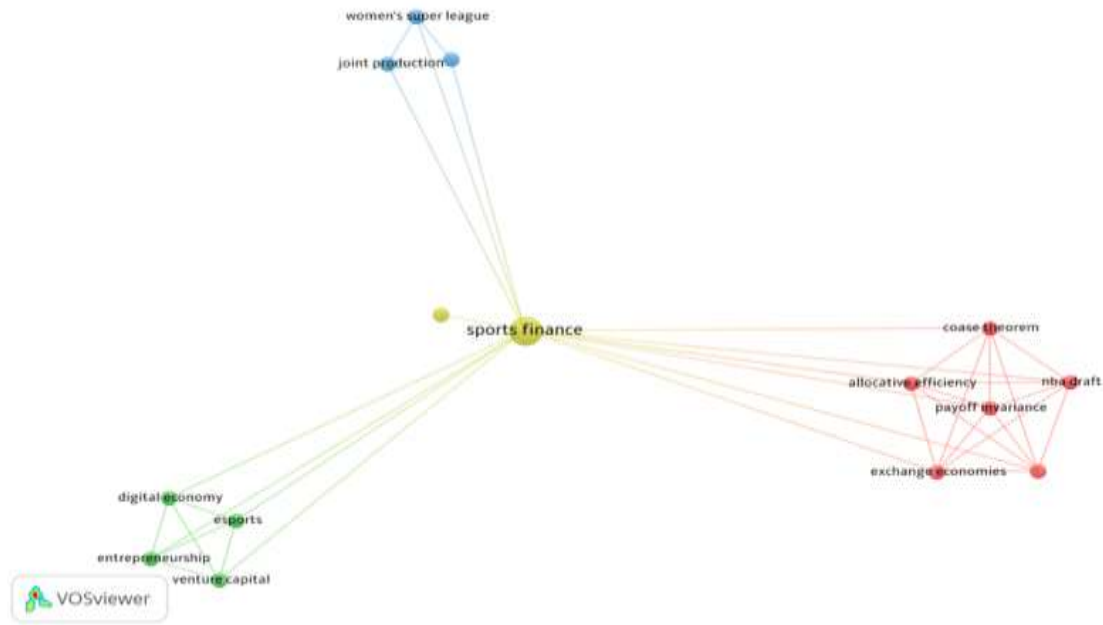
Author Keywords	Total Publications (TP)	Percentage (%)
Sports Finance	47	61.04
Sport	23	29.87
Sports Economics	12	15.58
Competitive Balance	4	5.19
Sport Management	4	5.19

Co-occurrence Analysis of Author's Keywords

Figure 3 shows the network visualization of key terms associated with sports accounting and finance using VOSviewer. This visualization depicts the co-occurrence of potential research topics in sports accounting and finance and the authors' chosen keywords. The dimensions and meanings of the nodes within the network indicate the significance and relationships of specific terms. This observation aids in identifying the most frequently used and critical keywords within the field. Nodes with higher weights represent the most utilized keywords in the dataset. Larger nodes indicate more frequent usage of keywords and can also reflect the frequency of term usage.

Sports finance occupies the most prominent node in the network, signifying its central significance. It intersects with all other nodes within the network. The intersection of sports finance with the digital economy highlights the growing importance of digital platforms in generating revenue for sports organizations. Meanwhile, the intersection with Coase Theorem emphasizes the importance of efficient resource allocation within sports organizations. Furthermore, sports finance also intersects with joint production, underscoring the significance of effective collaborative efforts in sports organizations that contribute to favorable financial outcomes.

Figure 3: Network visualization of the author's keywords



In Table 12, the authors' keywords are organized into four main clusters to visually depict the primary subject areas of studies on a specific topic. The first cluster includes allocative efficiency, Coase Theorem, exchange economies, NBA draft, payoff variance, and property rights. This cluster emphasizes foundational economic theories and principles that underpin financial decisions in sports organizations, with a focus on efficiency and property rights. The second cluster groups the digital economy, entrepreneurship, esports, and venture capital. This cluster suggests innovations, particularly digital technologies, and investments, are transforming the sports industry. The third cluster consists of joint production, women's sport, and the women's super league. This cluster highlights the importance of collaboration and the growing financial significance of women's sports, illustrating how joint efforts contribute to the overall success of sports organizations. The fourth cluster encompasses Premier League clubs and sports finance. This cluster centers around the financial dynamics of top-tier sports organizations, with a particular focus on Premier League clubs and the broader scope of sports finance.

Table 12: Cluster of the co-occurrence analysis of author's keywords

Cluster 1	Cluster 2	Cluster 3	Cluster 4
Allocative efficiency	Digital economy	Joint production	Premier League clubs
Coase theorem	Entrepreneurship	Women's sport	Sports Finance
Exchange economies	Esports	Women's Super League	
NBA draft	Venture capital		
Payoff variance			
Property rights			

5. Conclusion and Recommendations

This study contributes significantly to the current understanding of accounting and financial management in sports clubs and organizations by providing a comprehensive bibliometric analysis of 77 documents from the Scopus database. The findings highlight the field's evolution, focusing on critical aspects such as financial sustainability, governance, and technological integration. By analyzing publication trends, subject areas, and institutional contributions, the study identifies key research contributors, highlighting the dominance of "sports finance" as a primary focus, and emphasizes the global relevance of this research area. Additionally, the

study underscores the increasing importance of digital platforms and data analytics in enhancing financial practices in sports organizations. This study offers valuable insights for academics, practitioners, and policymakers in addressing financial transparency, regulatory compliance, and the challenges of balancing financial performance with stakeholder engagement. It encourages organizations to adopt sustainable financial models and leverage digital tools for risk management and resource optimization.

However, this research has limitations, including its reliance on Scopus-indexed documents and an emphasis on English-language publications, potentially excluding significant studies in other languages or databases. Additionally, the analysis does not extensively cover the financial management practices of smaller or amateur sports organizations, a critical gap in the literature.

Future research should address these limitations by expanding the scope to include diverse datasets and exploring underrepresented areas such as the financial dynamics of smaller clubs and the socio-economic impacts of financial practices. By broadening the academic focus to include Southeast Asia and other underrepresented regions, scholars can provide a more comprehensive understanding of global sports finance management. In addition, future studies should explore how financial models from developed markets can be adapted to Southeast Asia's emerging sports ecosystem, taking into account factors such as government intervention, sponsorship trends, and infrastructure development. There is also a need for further investigation into the long-term effectiveness of financial regulations, such as UEFA's Financial Fair Play, and their influence on competitive balance across leagues is also needed. This study emphasizes the dynamic and multifaceted nature of financial management in sports, paving the way for future research to explore innovative solutions and practical strategies to ensure the sustainability and growth of sports organizations.

Challenges and Future Directions

The literature points to ongoing challenges like financial instability, dependency on state subsidies, and the need for more robust financial education among sports managers. Future research could explore the impact of digital transformation on financial strategies, the adaptation of clubs to new economic models, and the effectiveness of current financial regulations in promoting equitable competition and financial health across different sports levels. One of the significant challenges identified in the literature is the lack of standardized accounting practices across different sports organizations. This inconsistency can lead to difficulties in financial comparisons and benchmarking. Charumbira (2022) stated that while significant research has focused on measuring the financial value of sports entities, comparatively less attention has been given to evaluating how different financial models adopted by these entities expose them to the risk of financial failure. Additionally, there is a need for more research on the impact of financial management practices on the long-term sustainability of sports clubs. Another gap in the existing research is the limited focus on the financial management of small and amateur sports clubs. Most studies concentrate on large, elite organizations, leaving a gap in understanding the financial challenges faced by smaller clubs.

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