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Academic Development and Trends in Professional Sport Club Management: A VOSviewer-Based Bibliometric Analysis

Osman AKILLIOĞLU[1*] Tayfun KARA[2]

Author Informations

Affiliation:
[1*] Dr. Research Assistant, Harran University, School of Physical Education and Sport, Şanlıurfa, Türkiye
ORCID:
0000-0001-8238-5140
Email:
osmanakillioglu@harran.edu.tr

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Abstract

This study examines the academic literature on professional sport club management through a bibliometric approach to reveal its intellectual structure, collaboration patterns, and thematic development. Bibliographic data were obtained from the Web of Science Core Collection and analyzed using the bibliometrix package and Biblioshiny. The analysis includes publication trends, core journals, author productivity, country-level scientific production and collaboration, as well as keyword co-occurrence and thematic mapping. The findings show that the field is increasingly institutionalized, with scientific output concentrated in a limited number of specialized journals, authors, and countries. Research activity and citation impact are largely dominated by Western European and Anglo-Saxon countries, indicating notable global asymmetries. Conceptually, the literature is centered on a managerial–governance core, while market-oriented themes such as commercialization, marketing, digital transformation, and fan engagement emerge as the most developed research areas. Overall, this study provides a concise and systematic overview of professional sport club management research and identifies key trends and research gaps to guide future studies.

Profesyonel Spor Kulüplerinde Yönetim Alanındaki Akademik Gelişim ve Trendlerin VOSviewer Tabanlı Bibliyometrik Analizi

Yazar Bilgileri

Kurum Bilgileri:
[1*] Dr.Araştırma Görevlisi; Harran Üniversitesi Beden Eğitimi Ve Spor Yüksekokulu, Antrenörlük Eğitimi Bölümü, Şanluurfa, Türkiye
ORCID:
0000-0001-8238-5140
Email:
osmanakillioglu@harran.edu.tr

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Özet

Bu çalışma, profesyonel spor kulübü yönetimi alanındaki akademik literatürü bibliyometrik bir yaklaşımla inceleyerek alanın entelektüel yapısını, iş birliği örüntülerini ve tematik gelişimini ortaya koymayı amaçlamaktadır. Bibliyografik veriler Web of Science Core Collection veritabanından elde edilmiş ve bibliometrix paketi ile Biblioshiny arayüzü kullanılarak analiz edilmiştir. Analiz kapsamında yayın eğilimleri, çekirdek dergiler, yazar üretkenliği, ülke düzeyinde bilimsel üretim ve iş birliği yapıları ile anahtar kelime eş-oluşum ağları ve tematik haritalama yer almaktadır. Bulgular, alanın giderek kurumsallaştığını ve bilimsel üretimin sınırlı sayıda uzmanlaşmış dergi, yazar ve ülke etrafında yoğunlaştığını göstermektedir. Araştırma üretimi ve atıf etkisi büyük ölçüde Batı Avrupa ve Anglo-Sakson ülkeleri tarafından domine edilmekte olup, bu durum küresel bilgi üretiminde belirgin asimetrilere işaret etmektedir. Kavramsal açıdan literatür, yönetsel–yönetişim temelli bir çekirdek etrafında şekillenmekte; ticarileşme, pazarlama, dijital dönüşüm ve taraftar katılımı gibi pazar odaklı temalar ise en gelişmiş araştırma alanları olarak öne çıkmaktadır. Bu çalışma, profesyonel spor kulübü yönetimi literatürüne ilişkin kısa ve sistematik bir genel görünüm sunmakta; alandaki temel eğilimleri ve gelecekteki araştırmalara yön verebilecek boşlukları ortaya koymaktadır.

1. INTRODUCTION

Professional sport clubs have evolved beyond organizations solely focused on athletic success and have become multifaceted entities with increasingly complex economic, managerial, and institutional dimensions (Gammelsæter, 2010; Nagel et al., 2015; Hoye et al., 2018). Processes such as increasing commercialization, globalization, media influence, and digital transformation have moved sport clubs beyond the traditional understanding of sport organizations; consequently, issues such as strategic management, corporate governance, financial sustainability, and stakeholder relations have become central to the management of professional sport clubs (Gammelsæter, 2010; Frandsen, 2019). This transformation has made it necessary to examine the managerial structures of sport clubs in a systematic academic manner.

In recent years, academic interest in the management of professional sport clubs has increased significantly (Frandsen, 2019; Feuillet et al., 2020). Studies in the literature, shaped around themes such as club governance, performance management, financial structure, competitive balance, brand management, fan engagement, and corporate social responsibility, indicate that the field has acquired an interdisciplinary character. However, despite the growing volume of literature, studies that comprehensively reveal the intellectual structure of professional sport club management, its dominant research themes, and global collaboration patterns remain limited (Hammerschmidt et al., 2023; Alonso-Dos-Santos et al., 2023).

At this point, bibliometric analyses provide the opportunity to examine the structural characteristics, knowledge production dynamics, and conceptual orientations of a given research field through objective indicators. Mapping the relationships among leading journals, authors, and countries in publication output, as well as research themes, contributes to a clearer understanding of the field's level of maturity and its developmental trajectory. In particular, visual network analyses and thematic mapping techniques enable the identification of core topics in the literature, as well as emerging or relatively neglected research areas (Aria & Cuccurullo, 2017).

This study aims to examine the academic literature on management in professional sport clubs through a bibliometric approach, in order to reveal the intellectual, social, and conceptual structure of the field. In this context, publications indexed in the Web of Science Core Collection database were used as the primary data source; journals, author productivity, patterns of international collaboration, and keyword-based conceptual structures were analyzed. The findings are expected to provide a comprehensive overview of the current state of professional sport club management and to serve as a guiding reference for future research.

2. METHOD

2.1. Study Design

This study is grounded in a descriptive research framework utilizing bibliometric techniques. Bibliometric analysis refers to a systematic and quantitative approach that analyzes scientific publications to uncover the structural, conceptual, and intellectual dimensions of a given research domain (Aria & Cuccurullo, 2017). Through this method, it becomes possible to identify trends in scholarly output, map patterns of knowledge production, and trace the evolution of thematic focuses within the field over time.

2.2. Data Sources and Search Strategy

The bibliographic dataset for this study was retrieved from the Web of Science Core Collection, which is frequently utilized in bibliometric studies due to its stringent indexing criteria and comprehensive coverage of high-quality international publications. To maintain consistency and analytical reliability, all analyses were performed solely on data derived from this database,

ensuring a standardized evaluation of scientific output in the domain of professional sport club management.

The search protocol was structured to identify scholarly works addressing the managerial, governance, and organizational dimensions of professional sport clubs. In this context, a set of relevant keywords, including "professional sport club", "sport club management", "professional sports club", "sport management", "sport governance", and "club governance", was applied across the title, abstract, and author keywords fields. The dataset was limited to original research articles and review studies published from the earliest available records up to February 2026.

The dataset was restricted to peer-reviewed journal articles published in English. Other document types, including conference proceedings, editorials, book chapters, notes, and non–peer-reviewed materials, were excluded from the analysis. This filtering strategy was implemented to improve methodological coherence, ensure comparability across studies, and strengthen the overall scientific rigor of the bibliometric results.

2.3. Data Analysis

The bibliographic dataset was processed using the bibliometrix package within the R environment, together with its web-based interface, Biblioshiny (Aria & Cuccurullo, 2017). The analytical procedure covered multiple dimensions, including the yearly distribution of publications, leading journals, authors, and countries, as well as author productivity patterns based on Lotka's Law and journal dispersion according to Bradford's Law. In addition, keyword frequency analysis, trend topic evaluation, and thematic mapping techniques were employed to explore the structural and conceptual composition of the literature. These analyses enabled the identification of the temporal progression, conceptual structure, and thematic development of research on professional sport club management. Furthermore, VOSviewer software was utilized to visualize keyword co-occurrence networks and patterns of international collaboration among countries

3. FINDINGS

The bibliometric dataset comprises 551 publications indexed in the Web of Science Core Collection, covering the period between 2001 and 2026. These publications were disseminated across 144 distinct sources, reflecting the multidisciplinary nature of research on professional sport club management. A total of 1,209 authors contributed to the dataset, with an average of 2.8 co-authors per document, indicating a moderate level of collaborative research.

The annual scientific production exhibits a steady upward trend, with an average annual growth rate of 9.19%, suggesting a sustained increase in scholarly attention to management-related issues in professional sport clubs. International collaboration accounts for 27.59% of the publications, highlighting the growing cross-national dimension of the field.

In terms of intellectual foundations, the dataset includes 24,109 cited references, while the average document age is 7.26 years, indicating a relatively contemporary knowledge base. The publications received an average of 15.62 citations per document, suggesting a moderate to high level of academic impact.

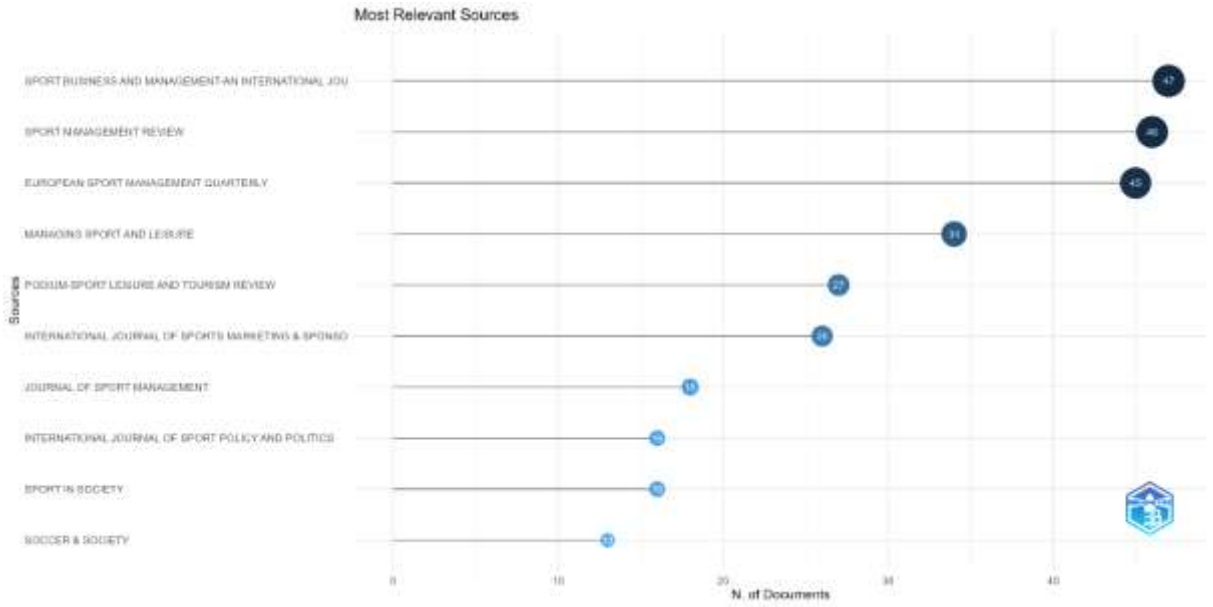

Figure 1. Most relevant journals in professional sport club management literature

Figure 1 illustrates the distribution of the most relevant journals publishing research on professional sport club management. The figure displays the top sources ranked by the number of publications, highlighting a clear concentration of scholarly output within a limited set of specialized sport management and sport business journals.

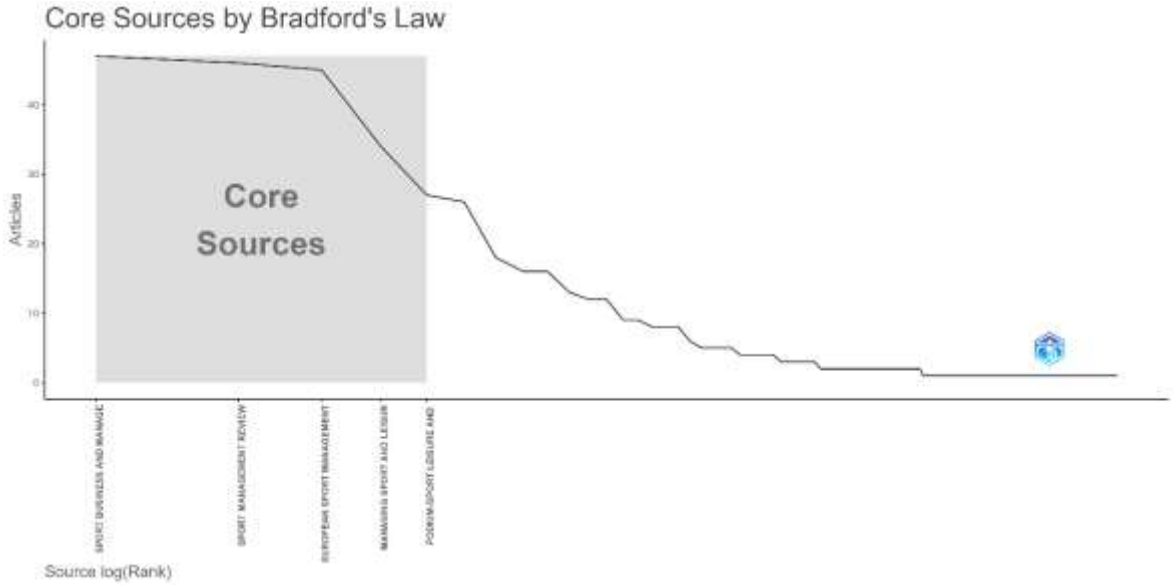

Figure 2. Core journals in professional sport club management literature based on Bradford's Law

Figure 2 presents the identification of core journals in the professional sport club management literature according to Bradford's Law. The shaded area represents the core zone, where a limited number of journals account for a disproportionately large share of the total publications, indicating a strong concentration of scholarly output within a small set of specialized sources

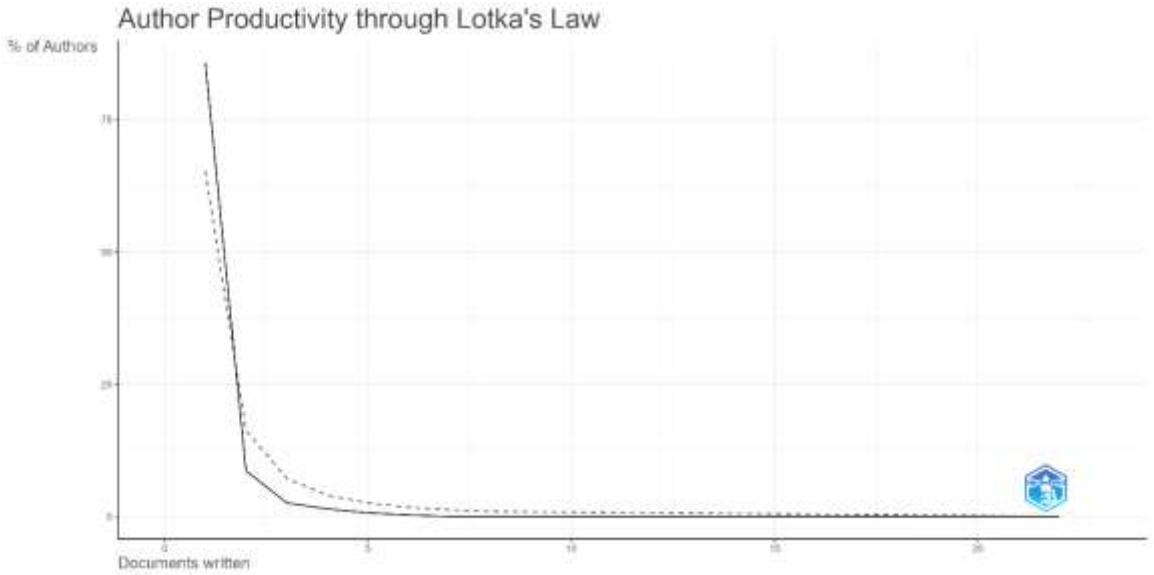

Figure 3. Author productivity distribution in professional sport club management literature according to Lotka's Law

Figure 3 depicts the distribution of author productivity in the professional sport club management literature based on Lotka's Law. The figure illustrates that a large proportion of authors contribute only a limited number of publications, whereas a small group of highly productive authors accounts for a disproportionate share of the total output, reflecting a typical inverse productivity pattern observed in scientific fields.

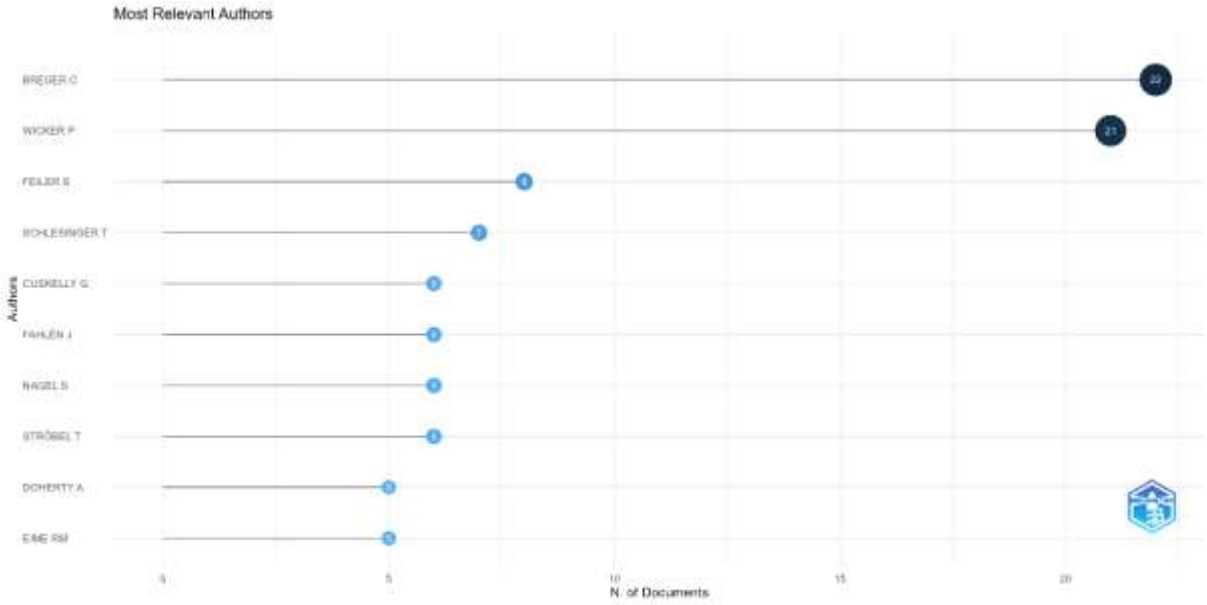

Figure 4. Most productive authors in professional sport club management literature

Figure 4 presents the most productive authors in the professional sport club management literature, ranked according to the number of publications. The figure highlights a limited group

of authors with relatively high publication output, while the majority of contributors exhibit lower levels of productivity, consistent with the author distribution pattern observed in the field.

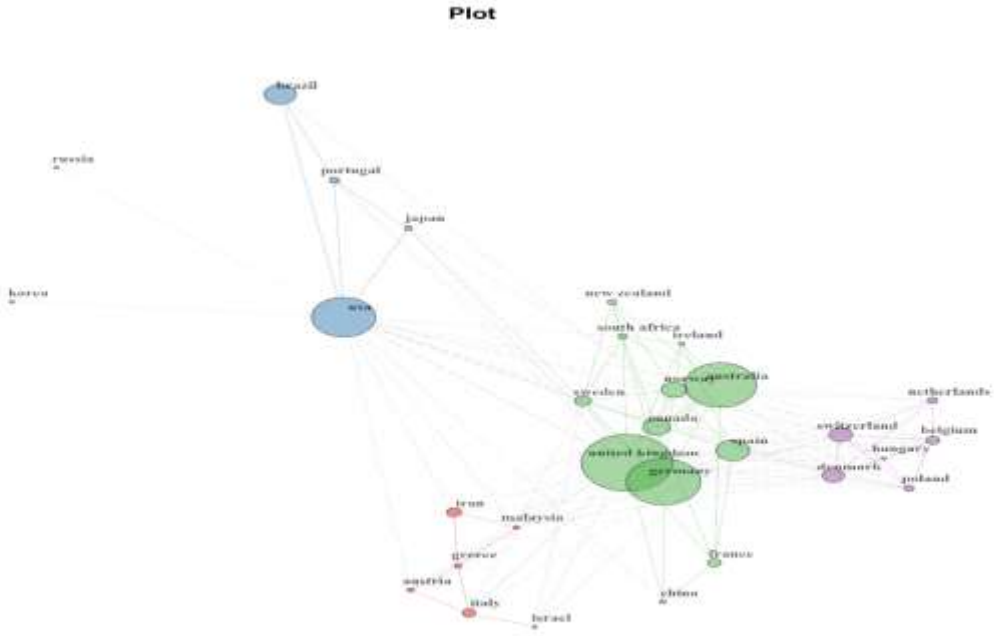

Figure 5. International country-level collaboration network in professional sport club management research

Figure 5 illustrates the country-level co-authorship collaboration network in professional sport club management research. The network reveals a globally connected structure centered around a limited number of core countries, particularly the United States and several European nations, which act as major hubs of international collaboration. Peripheral countries are connected through these central nodes, indicating asymmetrical but integrated patterns of global knowledge production.

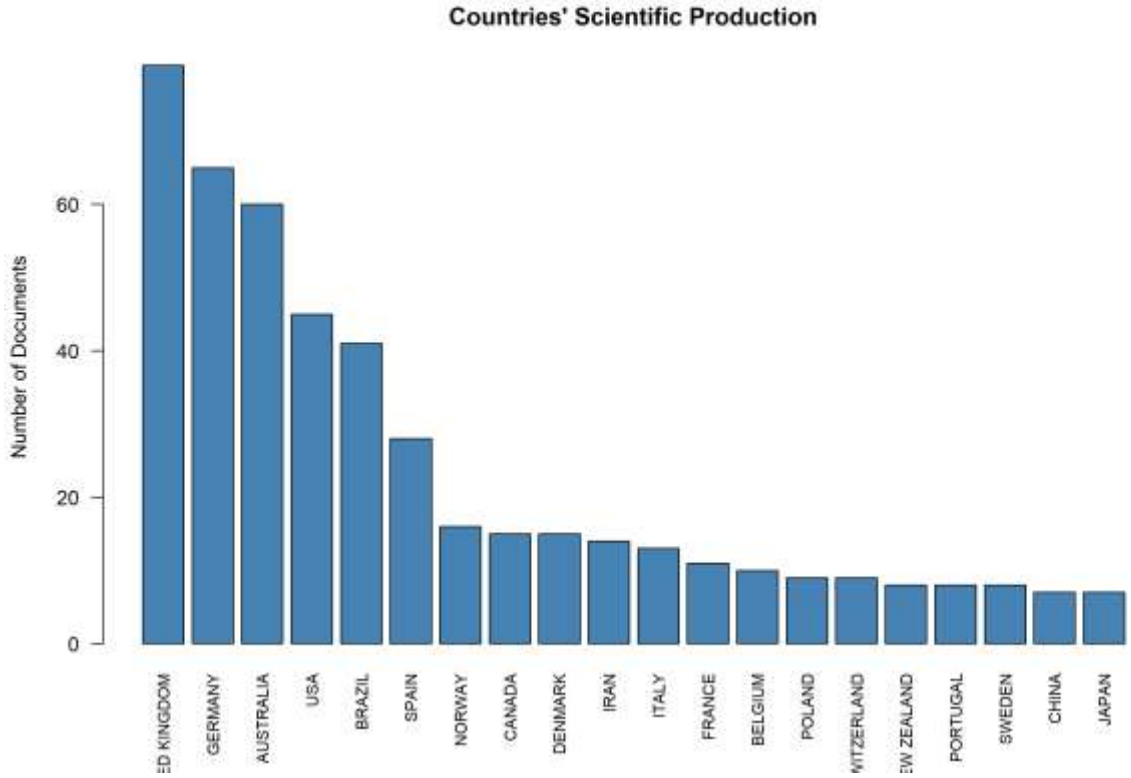

Figure 6. Countries' Scientific Production

Figure 6 presents the distribution of scientific production by country within the analyzed literature. The results indicate that the United Kingdom is the most productive country, followed by Germany and Australia, demonstrating the strong dominance of European countries in this research field. The United States also emerges as a major contributor, reflecting its sustained academic engagement in sport management and governance–related studies.

In contrast, countries such as Spain, Brazil, and Canada show moderate levels of scientific output, while Asian countries, including China and Japan, contribute a comparatively smaller number of publications. Overall, the findings reveal a geographically concentrated knowledge production pattern, with research activity predominantly clustered in Western Europe and Anglo-Saxon countries, suggesting potential regional imbalances in global scientific contributions.

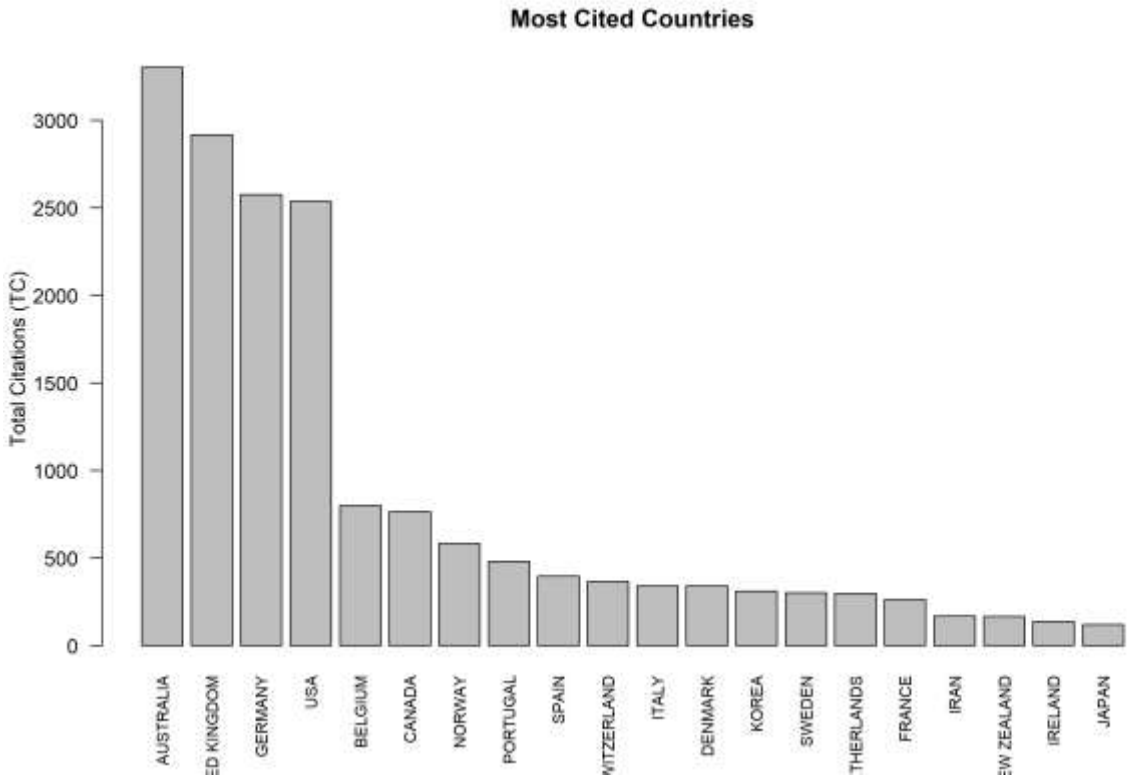

Figure 7. Most Cited Countries

Figure 7 illustrates the distribution of total citations by country within the literature on professional sport club management. The results indicate that Australia exhibits the highest citation impact, followed by the United Kingdom, Germany, and the United States, highlighting their central influence on the intellectual development of the field.

Although some countries display moderate publication output, their high citation counts suggest a strong impact and visibility of their research contributions. Overall, the findings reveal that citation influence is concentrated in a limited number of countries, predominantly located in Anglo-Saxon and Western European regions, underscoring their leading role in shaping theoretical and empirical advancements in professional sport management research.

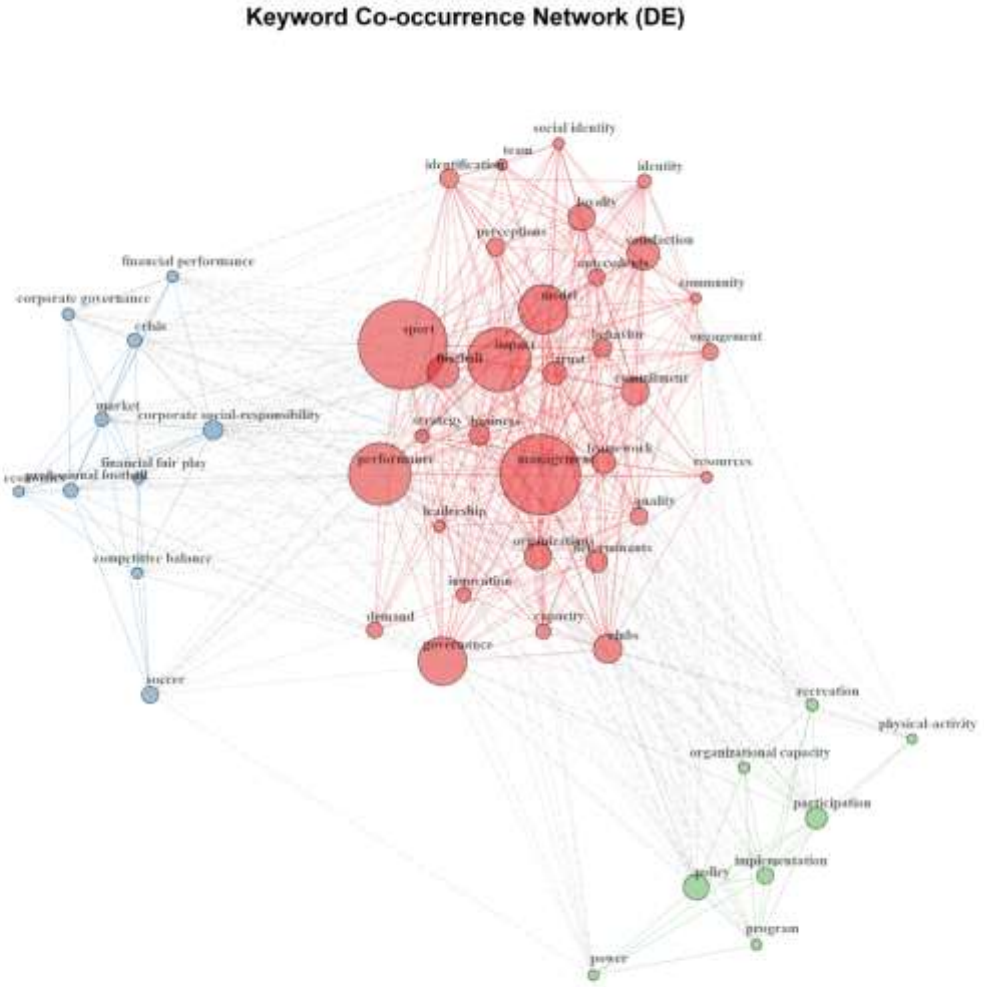

Figure 8. Keyword Co-occurrence Network Based on Author Keywords (DE)

Figure 8 presents the keyword co-occurrence network derived from author-provided keywords (DE) in the literature on professional sport club management. Node size reflects the frequency of keyword occurrence, while the links represent the strength of co-occurrence relationships between keywords.

The network reveals a dominant conceptual cluster centered on management, performance, governance, and strategy, indicating that organizational and managerial issues constitute the core thematic focus of the field. Surrounding this core, secondary clusters emphasize topics such as corporate governance, financial performance, competitive balance, and social responsibility, reflecting the multidimensional nature of professional sport club research.

Overall, the structure highlights a strong interconnection between managerial, economic, and governance-oriented themes, suggesting that research in this domain is conceptually organized around the interaction between organizational performance and institutional governance frameworks

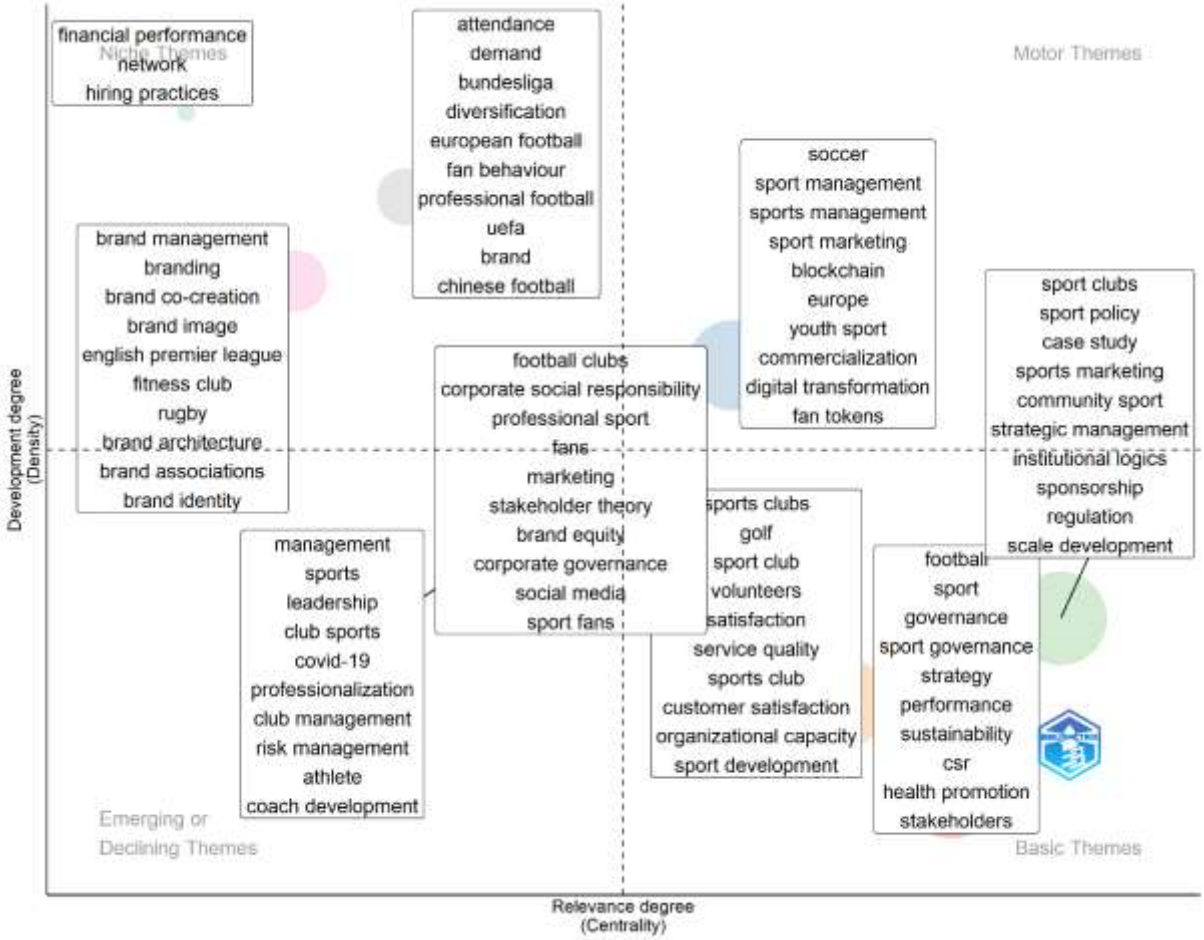

Figure 9. Thematic map of author keywords (DE) in professional sport club management research

Figure 9 presents the thematic map based on author keywords (DE), positioning research themes according to their centrality (relevance degree) and density (development degree) within the literature on professional sport club management. The motor themes (upper-right quadrant) are dominated by concepts such as sport management, sports marketing, digital transformation, commercialization, and fan engagement, indicating that managerial and market-oriented issues constitute the most developed and influential research streams in the field. The basic themes (lower-right quadrant), including sport governance, performance, sustainability, corporate social responsibility, and stakeholders, represent foundational topics that are highly relevant but comparatively less internally developed, forming the conceptual backbone of the literature. Themes related to brand management, branding, and brand identity appear as niche themes (upper-left quadrant), reflecting well-developed but more specialized research areas with limited centrality. In contrast, topics such as club management, leadership, professionalization, and risk management are positioned within the emerging or declining themes (lower-left quadrant),

suggesting evolving or transitional research interests in response to recent structural and organizational changes in professional sport clubs

4. DISCUSSION

The concentration of publications in a small number of specialized sport management and sport business journals indicates that research on professional sport club management is shaped within a clearly bounded and increasingly institutionalized disciplinary core. The identification of a limited set of core journals in line with Bradford's Law further confirms the presence of strong publication gatekeepers that play a central role in defining dominant research agendas and methodological standards (Bradford, 1985). While this structure supports coherence and cumulative knowledge building, it may also constrain interdisciplinary engagement and limit the visibility of alternative perspectives emerging outside the established core.

The author productivity pattern observed in line with Lotka's Law indicates that research on professional sport club management is driven by a small core of highly productive scholars, alongside a broad base of occasional contributors. This structure suggests the presence of an emerging intellectual leadership that plays a central role in shaping theoretical directions and research priorities in the field (Donthu et al. 2021). At the same time, the high proportion of low-productivity authors reflects an open and accessible research domain, potentially encouraging diverse entry points but also leading to fragmented contributions.

The presence of a limited group of highly productive authors further reinforces the notion that professional sport club management research is shaped by a concentrated group of leading contributors. These authors likely play a pivotal role in defining dominant themes, research questions, and methodological approaches within the field. Conversely, the long tail of less productive contributors suggests that while participation is widespread, sustained scholarly influence remains confined to a relatively small intellectual core.

The country-level collaboration structure indicates that professional sport club management research is embedded within a hub-and-spoke model of global knowledge production, dominated by a small number of core countries. The central role of the United States and leading European nations suggests that international research agendas and collaborative opportunities are largely shaped within these academic hubs. Although peripheral countries are integrated into the global network, their reliance on core partners points to asymmetrical collaboration patterns, which may influence the visibility and direction of research emerging from less central regions.

The country-level distribution of scientific production indicates that professional sport club management research is geographically concentrated, with Western European and Anglo-Saxon countries occupying a dominant position. The prominence of the United Kingdom, Germany, Australia, and the United States suggests that institutional capacity, research funding, and established sport management traditions play a decisive role in shaping scholarly output. In contrast, the comparatively limited contribution of Asian and emerging economies points to regional imbalances in global knowledge production, highlighting the need for broader geographic diversification in future research.

The concentration of citation impact in a limited number of countries suggests that research influence in professional sport club management is not solely driven by publication volume, but also by the intellectual visibility and resonance of scholarly contributions. The leading citation performance of Australia, alongside the United Kingdom, Germany, and the United States, indicates that these countries play a disproportionate role in shaping theoretical frameworks and research agendas within the field. This pattern highlights an unequal global distribution of

academic influence, where a small group of countries exerts a dominant impact on the evolution of knowledge despite broader international participation.

The structure of the keyword co-occurrence network indicates that professional sport club management research is conceptually anchored around a core managerial–governance nexus, with management, performance, strategy, and governance forming the central thematic backbone of the field. The presence of interconnected secondary clusters related to financial performance, competitive balance, and social responsibility reflects the multidimensional and hybrid nature of professional sport clubs as both economic and institutional organizations (Zupic & Čater, 2015). Overall, this configuration suggests that scholarly inquiry in this domain is primarily driven by the interaction between organizational effectiveness and governance frameworks, rather than isolated managerial or financial perspectives.

The thematic map highlights a clear stratification of research priorities within professional sport club management. The dominance of motor themes related to sport management, marketing, digital transformation, and fan engagement indicates that the field is currently driven by market-oriented and commercialization-focused agendas, reflecting the increasing businessization of professional sport clubs. In contrast, governance, sustainability, and stakeholder-related issues appear as foundational yet less developed themes, suggesting that while these topics are widely recognized as essential, their theoretical and empirical consolidation remains incomplete. The positioning of leadership, professionalization, and risk management within emerging or declining themes further implies that organizational and structural dimensions of club management are undergoing conceptual transition, potentially opening new avenues for future research as professional sport organizations adapt to evolving economic, technological, and institutional pressures.

Conclusion

This bibliometric analysis provides a comprehensive overview of the intellectual structure, collaborative patterns, and thematic evolution of research on professional sport club management. The findings indicate that the field is characterized by a high degree of institutionalization, with knowledge production concentrated within a limited set of core journals, authors, and countries. At the same time, pronounced asymmetries in global collaboration and citation impact suggest that scholarly influence remains unevenly distributed, favoring Western European and Anglo-Saxon research hubs. Conceptually, the literature is anchored around a managerial–governance core, while market-oriented and commercialization-driven themes currently dominate the research agenda. The relative underdevelopment of governance, sustainability, and organizational leadership themes points to important gaps in the literature. Overall, this study highlights both the consolidation and the ongoing transformation of professional sport club management research, offering a structured foundation for future theoretical and empirical inquiry.

Strengths and Limitations

A key strength of this study lies in its systematic bibliometric approach, which enables a structured examination of the intellectual, social, and conceptual foundations of professional sport club management research. The integration of source, author, country, and keyword-based analyses provides a multidimensional perspective that extends beyond narrative reviews.

However, the study is limited to publications indexed in the Web of Science Core Collection and relies on bibliometric indicators that capture structural patterns rather than the substantive quality of individual studies. In addition, the use of author-provided keywords may affect thematic

representation, suggesting that future research could benefit from multi-database coverage and complementary qualitative approaches.

Conflict of Interest

The author(s) declare that there is no potential conflict of interest with any individual, institution, or organization related to this research.

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Author Biographies and Contributions

Corresponding Author: Osman AKILLIOĞLU[1*] – Ph.D., Research Assistant; Harran University, School of Physical Education and Sports, Department of Coaching Education, Şanlıurfa, Türkiye. ORCID: 0000-0001-8238-5140, osmanakillioglu@harran.edu.tr

Contributions: Literature review, manuscript writing, preparation of figures and tables, organization of references and sources.

Author: Tayfun KARA[2] – Assistant Professor; Kahramanmaraş Sütçü İmam University, Faculty of Sports Sciences, Department of Sports Management, Kahramanmaraş, Türkiye. ORCID: 0000-0001-9987-2930, tayfun-kara@hotmail.com

Contributions: Research concept and design, supervision, editorial and language revisions, data analysis and interpretation, writing of the conclusion section of the manuscript

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5. REFERENCES

Alonso-Dos-Santos, M., et al. (2023). Modelling the structure of the sports management research field using the BERTopic approach.

Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. Journal of informetrics, 11(4), 959-975.

Bradford, S. C. (1985). Sources of information on specific subjects. Journal of information Science, 10(4), 173-180.

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. Journal of business research, 133, 285-296.

Feuillet, A., et al. (2020). Determinants of coopetition and contingency of strategic choices: The case of professional football clubs in France.

Frandsen, K. (2019). Sport and mediatization. Routledge. https://doi.org/10.4324/9780429321429

Gammelsæter, H. (2010). Institutional pluralism and governance in "commercialized" sport clubs. European sport management quarterly, 10(5), 569-594.

Hammerschmidt, J., Calabuig, F., Kraus, S., & Uhrich, S. (2024). Tracing the state of sport management research: a bibliometric analysis. Management Review Quarterly, 74(2), 1185-1208.

Hoye, R., Smith, A. C., Nicholson, M., & Stewart, B. (2015). Sport management: principles and applications. Routledge.

Nagel, S., Schlesinger, T., Bayle, E., & Giauque, D. (2015). Professionalisation of sport federations–a multi-level framework for analysing forms, causes and consequences. European sport management quarterly, 15(4), 407-433.

Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. Organizational research methods, 18(3), 429-472.