

The football industry. A literature review and future research avenues in the risk management perspective

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Abstract

The transformation of the professional football industry into a multi-billion-dollar industry has attracted increasing attention from regulators, investors and academics in recent years. Such interest has also been reflected in the exponential growth of economic-managerial scientific production on the subject. However, there is still no comprehensive overview of the literature. The objective of this paper is to achieve a systematisation of the scientific research conducted in the period between 1977 and 2023, identifying the current state of production, emerging research areas, and future research trajectories in the risk management perspective of football clubs. To this end, a bibliometric and systematic review were developed on 1.081 and 18 papers published during this period, respectively. Statistical processes useful for developing the analysis were conducted using Bibliometrix on data retrieved from the Scopus database. The results revealed the need to further investigate the declination of endogenous and exogenous determinants of risk drivers and their relationship with volatility of sports performance for professional football clubs.

Keywords: football industry, bibliometric analysis, systematic review, bibliometrix, scopus, risk management.

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Sommario

La trasformazione dell'industria del calcio professionistico in un settore multi-miliardario ha attirato negli ultimi anni una crescente attenzione da parte di regolatori, investitori e accademici. Tale interesse si è riflesso anche nella crescita esponenziale della produzione scientifica economico-manageriale sull'argomento. Tuttavia, non esiste ancora una panoramica completa della letteratura. L'obiettivo del presente studio è quello di realizzare una sistematizzazione della ricerca scientifica condotta nel periodo compreso tra il 1977 e il 2023, individuando lo stato attuale della produzione, le aree di ricerca emergenti e le traiettorie di ricerca future nella prospettiva della gestione del rischio delle società calcistiche. A tal fine, sono state sviluppate una *review* bibliometrica e sistematica rispettivamente su 1.081 e 18 articoli pubblicati nel periodo considerato. I processi statistici utili allo sviluppo dell'analisi sono stati condotti utilizzando Bibliometrix sui dati ottenuti dal database Scopus. I risultati hanno evidenziato la necessità di approfondire la declinazione delle determinanti endogene ed esogene dei *driver* del rischio e la loro relazione con la volatilità delle performance sportive per le società di calcio professionistiche.

Parole chiave: industria del calcio, analisi bibliometrica, review sistematica, bibliometrix, scopus, risk management.

1. Introduction

Professional football or soccer is more than just a sport, but a cultural, social, political and economic phenomenon that attracts millions of fans worldwide. The football industry has undergone numerous changes in recent decades, becoming the driving force behind the entertainment industry and drawing the attention of regulators, investors and academics.

Football's transformation into a multi-billion-dollar industry has its first origins in the Bosman ruling in 1995. Prior to the Bosman ruling, out-of-contract players could only be transferred between two clubs in different European countries if there was a transfer agreement with a fee in favour of the transferring club (Simmons, 1997). The new ruling triggered a structural change in the players' transfer market, ultimately leading to an increase in the salaries of professional footballers and the loosening of boundaries between European leagues (Galariotis *et al.*, 2018; Dobson & Gerrard, 1999).

The so-called "Big Five" are the most popular and capital-intensive European football leagues, namely the English Premier League, the German Bundesliga, the Spanish La Liga, the Italian Serie A, and the French Ligue 1 (Wagner *et al.*, 2021). According to the Annual Review of Football Finance 2023 (Deloitte, 2022), during the 2021-2022 season, these leagues generated aggregate revenues of approximately €17,2 billion, exceeding the maximum

threshold set by pre-pandemic revenues. The revenues of the “Big Five” clubs mainly relate to three streams: i) matchday revenues, primarily associated with ticket sales; ii) commercial revenues, derived from advertising and sponsorships; iii) broadcasting revenues, from the sale of TV rights.

The increase in revenues, especially those associated with TV rights, is paradoxically the main cause of the financial crises of many European clubs. The competition for a greater market share leads clubs to “gamble” corporate assets for future success, making the football industry financially unstable (Lago *et al.*, 2006). As the line between the football industry and money becomes increasingly blurred, it is ever more common to witness highly indebted clubs, pharaonic player contracts, billion-euro TV rights deals, and prices of football franchises unrelated to their intrinsic value. Added to this are threats from non-European leagues, especially, from the Saudi Pro League (SPL). The SPL, officially known as the Roshn Saudi League, represents the top professional level of the Saudi football league. The SPL includes four clubs 75% owned by the Saudi Public Investment Fund (PIF), one of the leading sovereign wealth funds in the world. It was precisely the PIF-owned SPL club Al-Hilal that presented a record €300 million bid for French national team and Paris Saint-Germain (PSG) star Kylian Mbappé, and a contract offer of €700 million for one year (Forbes, 2023).

With the increasing financial instability of the football industry, part of the literature highlights the importance of quality governance practices in the context of professional football clubs. Dimitropoulos (2011) suggests that clubs with independent board members, increased ownership of managers, officers and institutions achieve greater alignment of interests between managers and stakeholders that ultimately translates into better quality of published accounting information. Quality of corporate governance also results in higher levels of profitability and viability (Dimitropoulos & Tsagkanos, 2012) and reduced levels of financial instability (Dimitropoulos, 2014). In general, the need for good governance practices as an essential prerequisite for clubs to be effectively managed and to survive the difficult economic conditions surrounding the football world is an argument supported by several studies (Michie, 2020; Michie & Oughton, 2005; Dimitropoulos, 2010; Scafarto & Dimitropoulos, 2018).

Other studies highlight governance as the main cause of financial instability in the football industry and specifically in European clubs. Considering the case of Italy as an example, Hamil *et al.* (2013) argue that many clubs are controlled directly by individuals or families or indirectly through corporate groupings. Such structures often present little evidence of separation between ownership and control. In this context, the decision-making process is influenced by less pressure for external monitoring and the maximisation of

owners' utilities. The owners are in fact ultimately those who control their own decisions and bear the associated financial impacts. As a result, owners may either favour better performance or profitability, in the former case leading to the emergence of unsustainable business models inspired by poor managerial and financial rationality.

In response to emerging trends, UEFA has intervened with the Financial Fair Play (FFP) regulation to improve the financial health of European clubs. This creates a balance between the investments of clubs participating in UEFA competitions and their revenues, preventing the accumulation of debt. Among the top European leagues, Italy figures as the most financially unstable and characterized by the highest mismanagement (Dimitropoulos & Scarfato, 2021). For the fifth consecutive season, Serie A records the second highest wages/revenues ratio among the "Big Five" leagues, with 14 clubs having a ratio higher than 80% in the 2021/2022 season. For the fourth consecutive year, Lega Serie A also presents operating losses with a record negative €0,4 billion in 2021/2022 (Deloitte, 2022).

The purpose of this paper is to achieve a systematisation of the literature on the professional football industry through the main techniques of the literature review in order to identify literature gaps in the field of risk analysis of professional football clubs. The paper is structured as follows.

Section 2 presents the methodology adopted to conduct the reviews, i.e. the bibliometric techniques, the systematic literature review and the software employed. Section 3 presents and discusses the results of the bibliometric analysis conducted on a sample of 1.081 papers dealing from an economic-managerial perspective with topics related to the football industry, published between 1977 and 2023. Furthermore, moving from the aforementioned relevance of the topic of the financial performance of professional football clubs, the results of a systematic review of documents specifically focused on the topic are presented. In this regard, the paper highlights, with reference to professional football clubs, the need to investigate the decomposition of internal (e.g., operating leverage and financial leverage) and external (e.g., intrinsic business risk) risk drivers. In Section 4, conclusions to the present study and the future research trajectories identified are presented.

2. Methodology

The present paper is based on a bibliometric analysis. Bibliometrics can be defined as a branch of computer science that aims to measure the impact of scientific publications and the relative level of knowledge dissemination through statistical techniques (Broadus, 1987; Cuccurullo *et al.*, 2016;

Merigó *et al.*, 2015). This type of analysis allows researchers to examine a greater amount of data than systematic literature reviews, while maintaining a high level of rigor, scientific soundness, transparency and replicability (Dada, 2018; Rey-Martí *et al.*, 2016).

The use of bibliometric techniques in this paper is aimed at analysing publications, citations and information sources in academia to identify the main trends with reference to the field of the professional football industry. To characterise the bibliographic data, number of publications, citations, citations per country, authors, this paper uses bibliometric indicators. In addition, the article examines intellectual structures that show the impact of papers in the scientific community, as well as social networks that highlight collaboration between authors and countries.

In the present study, a systematic review was also conducted on a sub-set of papers. According to Keele (2007), a systematic review is used to “identify, analyse and interpret all available evidence related to a specific research question in a way that is unbiased and (to a degree) repeatable” (p. 6). The literature review thus serves to map and evaluate the current intellectual territory (Tranfield *et al.*, 2003) with the aim of providing a complete source for scholars to work within the analysed field (Fan *et al.*, 2022). Statistical processes were performed using Bibliometrix, a RStudio bibliometric package developed by Aria and Cuccurullo (2017), to obtain a scientific mapping of the literature under investigation, primarily from a conceptual perspective.

The analysis process follows three steps:

1. Data collection;
2. Bibliometric analysis by levels;
3. In-depth systematic review on selected papers.

2.1. Data collection

The primary data source employed for the present paper is Elsevier’s Scopus database, usually included among the most complete in the business and management discipline (Zupic & Čater, 2015). The time period considered ranges from 1977 to 2023. The choice responds to the need to consider the widest possible interval to give a global and comprehensive perspective to the research. In fact, 1977 is the date of the first economic-managerial publication indexed in Scopus on the professional football industry. The search query adopted, involving title, abstract and keywords fields, to identify pertinent corpus of research (Crossan & Apaydin, 2010; Pisani *et al.*, 2017) is presented in Table 1.

Table 1. Search query in Scopus. Source: our own elaboration

Search Terms in Scopus		
Field Tag	Title, Abstract and Keywords	TITLE-ABS-KEY (“football*” OR “soccer*”)
Boolean		AND
Field Tag	Title, Abstract and Keywords	TITLE-ABS-KEY (management OR value* or governance*)
Boolean		AND NOT
Field Tag	Title, Abstract and Keywords	TITLE-ABS-KEY (“American football*” OR “NFL”)
Boolean		AND
Subject Area	Business, Management and Accounting, Decision Sciences, Economics, Econometrics and Finance	LIMIT-TO (SUBJAREA, “BUSI”) OR LIMIT-TO (SUBJAREA, “DECI”) OR LIMIT-TO (SUBJAREA, “ECON”)
Boolean		AND
Language		LANGUAGE(ENGLISH)
Boolean		AND
Document Type	Article, Review	LIMIT-TO (DOCTYPE, “ar”) OR LIMIT-TO (DOCTYPE, “re”)

Keywords’ selection was informed by (García & Welford, 2015; Rodríguez *et al.*, 2022). Three sets of keywords were searched in various combinations using the “advanced search” function. Whenever relevant and appropriate, words were taken in both singular and plural forms, and contracted and extended forms, by the usage of asterisks.

Such a wide range of keywords was deemed useful to ensure that the collection of literature was as broad and inclusive as possible. Conversely, subject areas were limited to those most covered by scholarly works in business and management.

To identify articles for inclusion in our review, we conducted a comprehensive multi-stage search (Haddaway *et al.*, 2022). The overall process is illustrated in Figure 1. The preliminary selection phase involved screening the titles and abstracts of the papers obtained, and only those deemed relevant were assessed for eligibility with bibliometric analysis. Specifically, only papers in the fields of business and management and written in English were included. Regarding exclusion criteria, only research papers published in regular journals were considered. Furthermore, the initial number of papers was changed at each sub-stage, starting from an initial number of 1.438 papers obtained from Elsevier’s Scopus Database and arriving at a final number of papers eligible for bibliometric analysis of 1.081. To arrive at this cluster

of results, a further twofold screening effort was conducted.

Firstly, it was deemed appropriate to address the issue of linguistic ambiguity. For instance, the word “football” is often also referred to American football. Although this variable was included in the search query, it was nevertheless necessary to conduct a systematic analysis of the abstracts of each paper to exclude those that did not refer by linguistic ambiguity to football as intended in the present study. As a result of this revision process, 175 papers initially selected for linguistic ambiguity and mainly referring to American football (professional and collegiate) and Australian football were excluded.

Secondly, 182 papers were excluded for lack of relevance. In this case, still following a systematic abstract analysis approach, those papers deemed unrelated to the economic-managerial debate were excluded. As a result, a total number of 357 papers were exempted from the bibliometric analysis.

In addition, a screening was conducted to identify papers to be included in the systematic review. These papers deal with topics related to decisions on the financial structure and risk of football clubs. The complete process followed four stages.

Firstly, the 1.081 papers used for the bibliometric analysis were clustered by subject area.

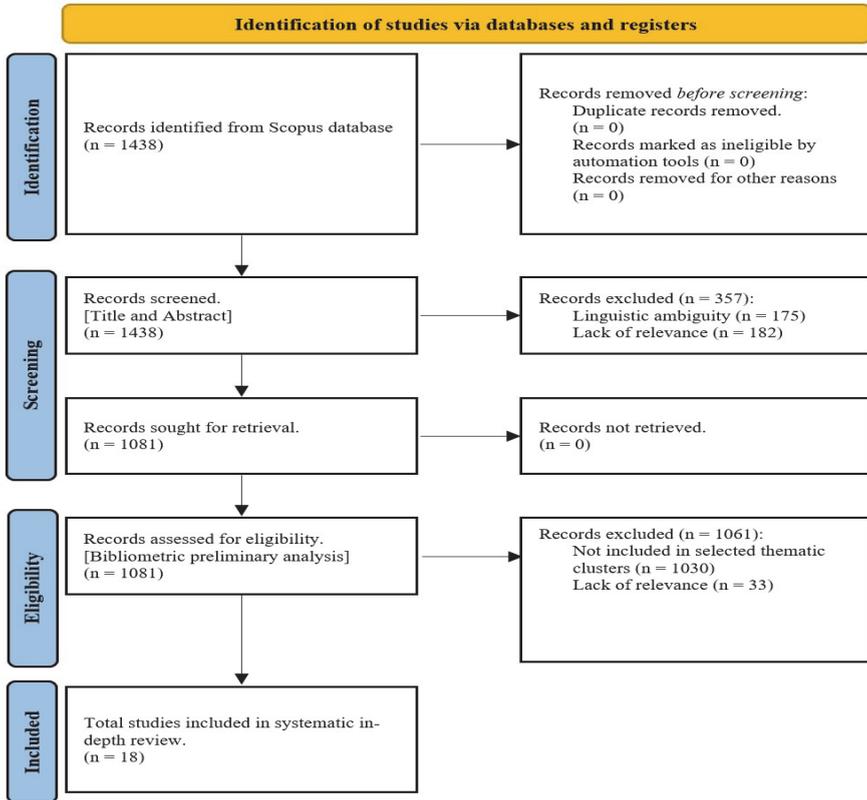
Secondly, the clusters of interest were identified, namely those denoted as “risk management”, “financial performance”, “financial crisis”, “financial management”, “financial value”, “financial sustainability”, “financial distress”, “capital structure” and “accounting”.

Thirdly, all papers with relevance within the identified clusters were selected.

Finally, as a result of this screening, which led to a total of 51 results, the systematic analysis of the abstracts identified the papers on the topics of risk, financial performance, and capital structure decisions in football clubs, leading to a final result of 18 papers. A systematic review was conducted on these papers to identify existing gaps in the literature on football club risk drivers’ decomposition and to elaborate possible future research trajectories in the field.

The bibliometric and systematic reviews, considered as a whole, highlight the lack in the current state of production of a theoretical systematisation of managerial issues in the professional football industry. Specifically, with the exception of the marketing area, for all management topics there is room for new research projects.

Figure 1. PRISMA flowchart. Source: own elaboration



2.2. Analysis

Descriptive analyses were conducted at each level on the sample of papers eligible for bibliometric analyses. Subsequently, bibliometric techniques were implemented using conceptual, intellectual or social structures at each level of analysis. Co-citation indicates the existence of direct citation links and corresponds to an intellectual connection in a specific research field (Small, 1973). A co-citation relationship is formed when two or more papers are simultaneously cited by subsequent papers. Therefore, co-citation is established by the citing authors and the strength of the network is determined by the frequency with which two papers are cited by a third party. Often, when two papers have strong co-citation strength, then they are also frequently cited individually (Rodríguez-Soler *et al.*, 2020).

Co-author analysis defines collaboration between authors and can identify links on both an intellectual and social level. Furthermore, it can serve to identify research groups in universities or organisations not previously known to the researchers (Peters & Van Raan, 1991). Adopting a cross-national perspective, the same analysis can be replicated by identifying collaboration relationships between different countries (Glänzel & Schubert, 2004). In collaboration networks, nodes represent authors or countries and linkages the co-authorship. Keyword Co-occurrence Analysis (KCA) and Science mapping were used to extract a clustering of topics based on the keyword coupling of the papers. For these purposes, Bibliometrix package offers a variety of techniques, including the Latent Dirichlet Allocation (LDA) method for topic modelling (Jelodar *et al.*, 2018).

The aim of KCA is to construct a Keyword Co-occurrence Network (KCN), which is a network of keywords that co-occur in a collection of publications, and to employ it as a means for examining the associations between research topics in various fields. KCA is suitable for preliminary research work that endeavours to offer “a knowledge map and insights prior to conducting a rigorous traditional systematic review” (Radhakrishnan *et al.*, 2017, p. 1). This is achieved by assessing the co-occurrence of keywords (both author and index keywords were selected) with a full counting method. Furthermore, since the distance of two keywords in a KCN is approximately inversely proportional to their co-occurrence similarity, the clustering function categorizes keywords that frequently co-occur in the publications sample. This facilitates a visual representation of the relationships between keywords and the comprehension of how they are connected. In other words, the clustering is based on the similarity (relatedness) of the keywords, with keywords that have a higher co-occurrence rate being positioned closer to each other (Waltman *et al.*, 2010; Bornmann *et al.*, 2018).

Science mapping is aimed at representing the dynamic and structural aspects of a research field (Börner *et al.*, 2003; Noyons *et al.*, 1999). The main themes emerged in the literature can be represented in a Strategic Diagram, i.e. a two-dimensional space that classifies themes according to their centrality (plotted on the X-axis) and density (plotted on the Y-axis; Cobo *et al.*, 2011). Centrality measures the degree of interaction of one network with another, ultimately representing the importance of a theme in the development of a certain field of research. Conversely, density measures the strength with which words within a network are related to each other and thus measures the degree to which a topic is developed in the literature. The matrix shown defines four types of themes:

1. *Motor themes*, which present high centrality and high density, are both well developed and able to structure a field of research;

2. *Basic themes*, characterised by high centrality and low density, are important for a research area but are poorly internally developed;
3. *Emerging or Declining themes*, defined by low centrality and density, represent themes that are emerging or disappearing;
4. *Niche themes*, manifesting a low centrality but a high density, have a scarce ability to influence a given research field and are well-developed internally.

Once the statistical analyses inherent to bibliometric techniques had been implemented, which revealed the spread of knowledge and the main trends with reference to the professional football industry, a systematic literature review was conducted on an identified sub-set of papers. By reviewing the relevant literature, it is possible to identify the depth and breadth of existing scientific production to identify gaps to be filled (Xiao & Watson, 2017).

3. Results and discussion

3.1. General Statistics

The sample of the study subjected to the preliminary bibliometric analysis consisted of a total of 1.081 publications written by 2.231 authors affiliated with 1.012 institutions in 68 countries; they were published in 349 different academic sources and referred to 51.323 cited references (Table 2).

Database interrogation results were updated as of 07 November 2023.

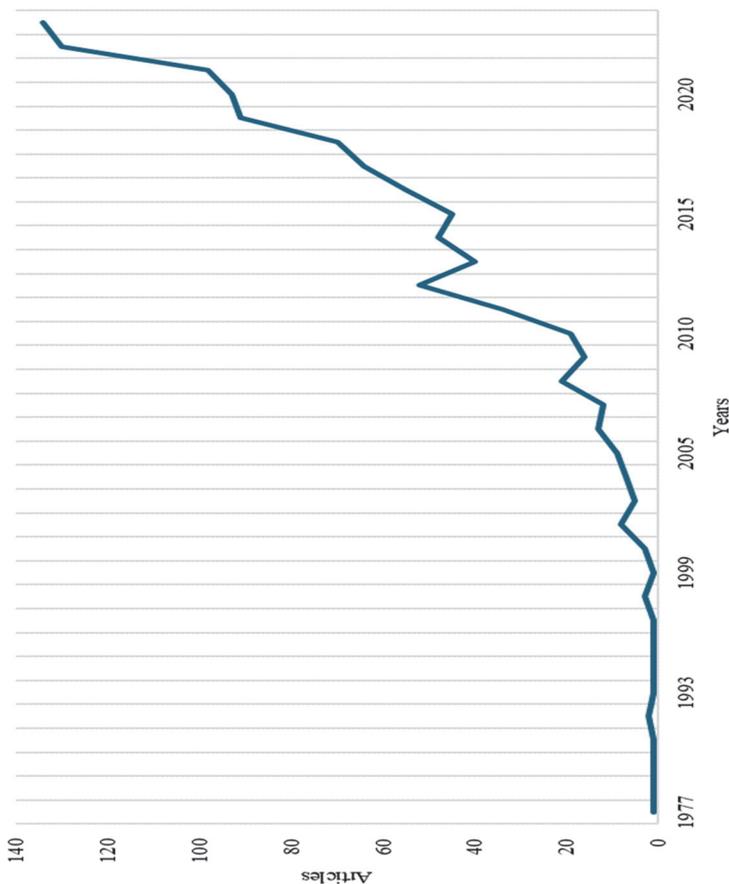
Table 2. Descriptive statistics of resulting publications. Source: own elaboration on Literature Selection phase data

Statistics of selected sample of papers	
<i>Publications</i>	1.081
<i>Article</i>	1.037
<i>Review</i>	44
<i>Authors</i>	2.231
<i>Sources</i>	349
<i>Institutions</i>	1.012
<i>Countries</i>	68
<i>Cited references</i>	51.323

3.2. Production

Figure 2 depicts the publications distribution in our sample by year: according to Bibliometrix output data, scholarly production, starting from its inception in 1977, has marked an Average Annual Growth rate of 11,23%. It's also relevant to note the novelty of the field under investigation, testified by the fact that most contributions in the sample have been published in the last 6 years (Document Average Age is 6,03, according to Bibliometrix output data) despite the much wider time span. The peak in the prolificacy of scholarly output in our sample occurred in 2015-2022 timeframe.

Figure 2. Publications distribution in the sample by year



Source: own elaboration on Scopus data

3.3. Sources

Regarding the Sources level, the pioneer journal is *Management Decision*, having published first on the subject in 1977. *Sport, Business and Management: an International Journal* and *European Sport Management Quarterly* represent the two most relevant sources, constituting about 15% of the total publications in the period considered (Table 3).

With reference to citations by sources not all the most prolific sources listed in Table 3 are also the most cited (Table 4). Emblematic in this sense is the case of the *Long Range Planning*, which despite accounting for only two contributions is the third most cited journal in our sample. Specifically, *European Sport Management Quarterly*, *Sport Management Review* and *Long Range Planning*, represent the three most cited sources with a total number of citations of 3.513, constituting 21% of the total number of citations on the subject.

According to the dynamics of the sources, which highlights the cumulative production on the football industry over time, the evolution of the 10 most productive journals is shown in Figure 3. In general, the cumulative production of the journals considered shows a steady growth. It can be noted that *Sport, Business and Management: An International Journal* is the source that has seen the greatest increase in terms of the number of papers, followed by *European Sport Management Quarterly*. Around 2010, the two journals outpaced the growth of all other journals by continuing to grow exponentially. Conversely, *Science and Medicine in Football* is the source that has reduced its output on the topic the most.

With respect to the source co-citation network (Figure 4), three clusters were delineated. From a conceptual point of view, the journals at the extremes of each cluster show a lower relationship with the other clusters. Instead, the size of the nodes refers to the level of interaction (Rodríguez-Soler et al., 2020). It should be noted that the Cluster 2 is located in the centre connecting Cluster 1 and 3. Within Cluster 2 are, in accordance with what was stated above, *European Sport Management Quarterly* and *Sport Management Review*, which are the two most cited and among the most prolific in terms of publications. According to the co-citation network and the journal titles represented, Cluster 1 refers to journals that mainly deal with marketing topics with reference to the football industry. This cluster features newspapers such as *Sport Marketing Quarterly*, *European Journal of Marketing* and *International Journal of Sports Marketing and Sponsorship*. Some of the most relevant topics covered are the importance of customer-based brand equity in professional football clubs (Bauer et al., 2005), the relationship between brand emotion and brand extension among fans of professional

football clubs (Abosag *et al.*, 2012), the effects of social media interactions on brand associations with reference to fan clubs of football clubs (Parganas *et al.*, 2017) and topics related to sponsorships of football clubs (Woisetschläge *et al.*, 2014; Grohs *et al.*, 2015). Cluster 2, the middle one, as already specified, deals with topics that are more transversal and shows connections with both extreme clusters. Finally, Cluster 3 deals with topics mainly related to financial literature, with a focus on the risk and financial performance of football clubs. In this regard, considering the major nodes represented by the *Journal of Sports Economics* and the *International Journal of Sport Finance*, among the most relevant papers on the topic can be mentioned Andreff, 2007; Dietl & Franck, 2007; Madden, 2015; Barajas & Rodriguez, 2014.

Table 3. Most prolific sources (Top 10). Source: own elaboration on Scopus data

Most Prolific Sources (Top 10)	Papers
<i>Sport, Business and Management: An International Journal</i>	101
<i>European Sport Management Quarterly</i>	60
<i>International Journal of Sports Marketing and Sponsorship</i>	46
<i>Journal Of Sports Economics</i>	33
<i>Sport Management Review</i>	32
<i>Managing Sport and Leisure</i>	30
<i>Frontiers In Sports and Active Living</i>	28
<i>International Journal of Sport Management and Marketing</i>	28
<i>Accounting, Auditing and Accountability Journal</i>	22
<i>Science And Medicine in Football</i>	18

Table 4. Most cited sources (Top 10). Source: own elaboration on Scopus data

Most Cited Sources (Top 10)	Citations
<i>European Sport Management Quarterly</i>	1.324
<i>Sport Management Review</i>	1.154
<i>Long Range Planning</i>	1.035
<i>Journal of Sports Economics</i>	982
<i>Sport, Business and Management: An International Journal</i>	976
<i>Journal of Sport Management</i>	720
<i>Tourism Management</i>	555
<i>Applied Economics</i>	438
<i>International Journal of Forecasting</i>	394
<i>Science And Medicine in Football</i>	364

Figure 3. Growth in sources (Top 10). Source: Bibliometrix output on Scopus data

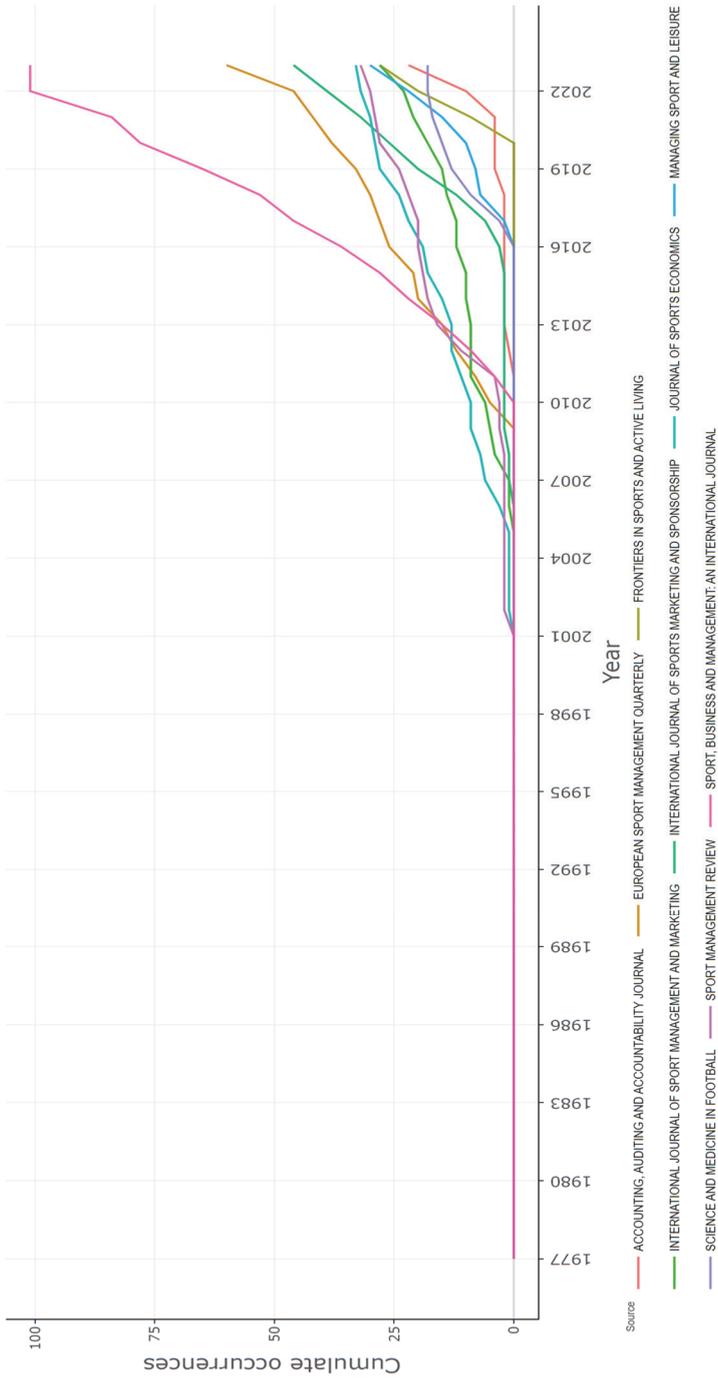
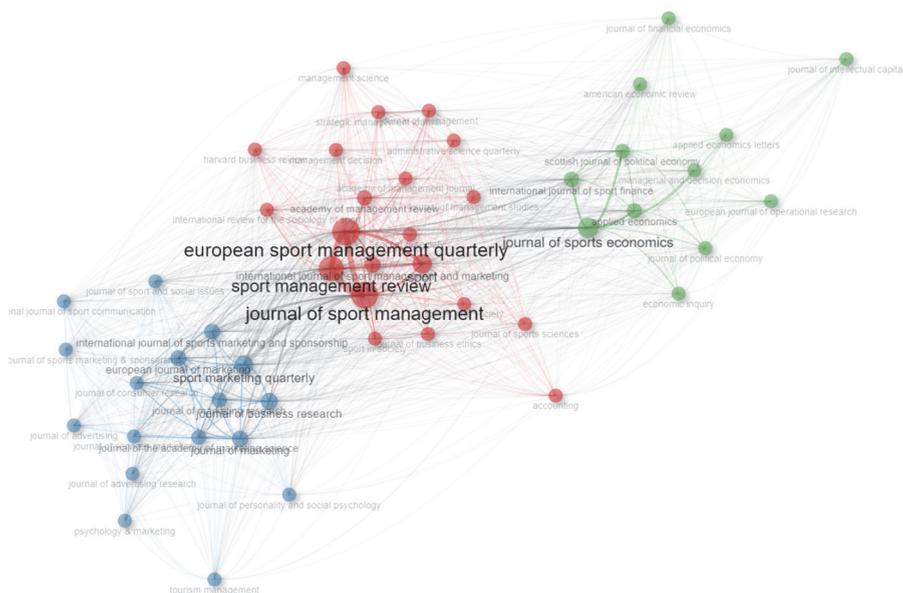


Figure 4. Sources co-citation network. Blue Cluster = Cluster 1; Red Cluster = Cluster 2; Green Cluster = Cluster 3. Source: Bibliometrix output on Scopus data



3.4. Authors

With reference to the Authors' level, the results show firstly the most relevant authors (Table 5), secondly the most cited ones (Table 6), thirdly the production of the main authors over time (Figure 5), and finally the collaboration network between authors (Figure 6).

As can be noted from Tables 5 and 6 below, not all the most prolific authors are also the most cited. In this regard, the case of Anagnostopoulos G. is emblematic. With 9 total publications, 5 less than the most prolific authors, he is the second most cited author.

The productivity of the top 10 authors is depicted in Figure 5. Morrow S. and Chadwick S. are the most continuous authors over time. Although Plumley D. and Wilson R. only started writing on the topic in 2013, the two authors present a very concentrated production from 2018 to 2022.

With reference to author collaboration to produce papers, considering the main 100 authors, all papers were written by more than two authors (Figure 6). The author collaboration network shows the groups of authors who published together. The colours identify different groups while the node size identifies the productivity of the authors. Based on the size of the nodes, the

most relevant clusters from a scientific production point of view were ordered. Cluster 1 presents two of the first three most productive authors, namely Plumley D. and Wilson R. The research topics of this cluster mainly concern the competitive balance and finances of professional football clubs and leagues. Cluster 2, with Morrow S. and Walters G. as the most productive authors, focuses on topics close to marketing and the study of the women's professional football industry. Finally, Cluster 3 has Chadwick S. and Anagnostopoulos C. as its most productive authors. In this case, the most discussed topics refer to the management of sports brands through social media and the effects of social media on club brand associations.

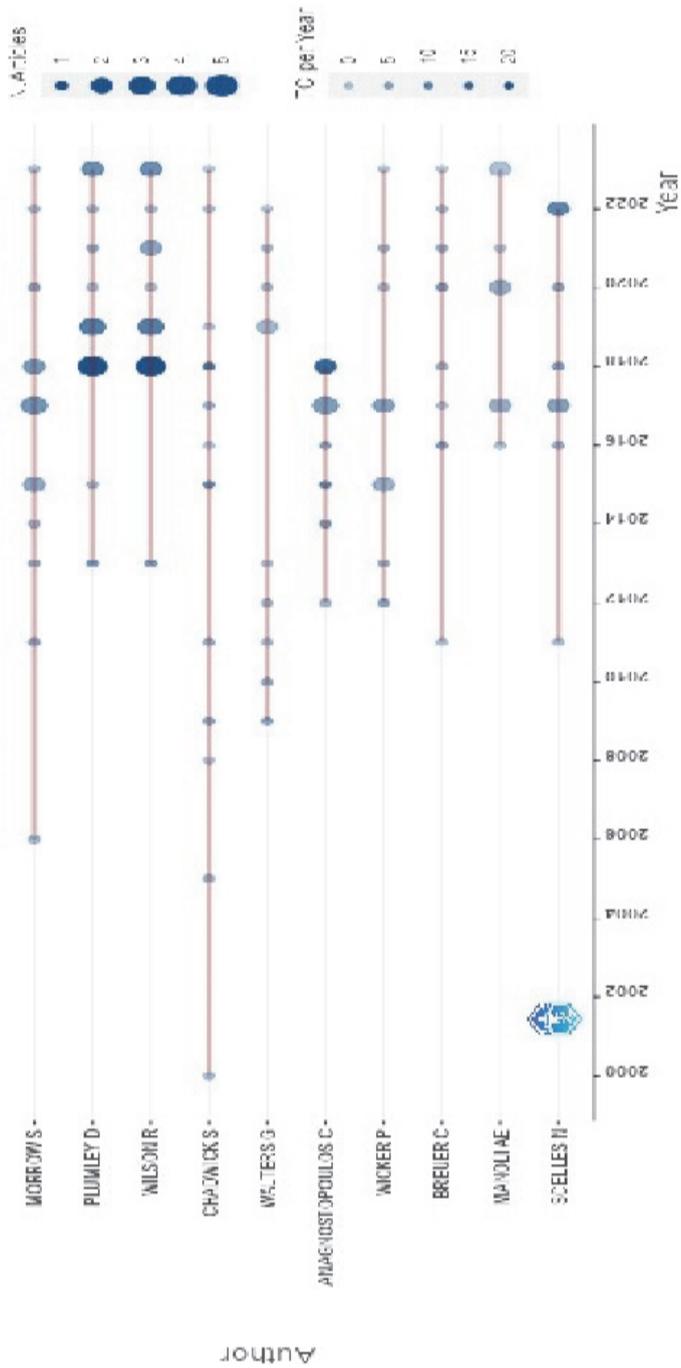
Table 5. Most prolific Authors (Top 10). Source: own elaboration on Scopus data

Most Prolific Authors (Top 10)	Papers
<i>MORROW S</i>	14
<i>PLUMLEY D</i>	14
<i>WILSON R</i>	14
<i>CHADWICK S</i>	12
<i>WALTERS G</i>	10
<i>ANAGNOSTOPOULOS C</i>	9
<i>WICKER P</i>	9
<i>BREUER C</i>	8
<i>MANOLI AE</i>	8
<i>SCELLES N</i>	8

Table 6. Most cited Authors (Top 10). Source: own elaboration on Scopus data

Most Cited Authors (Top 10)	Citations
<i>MORROW S</i>	320
<i>ANAGNOSTOPOULOS C</i>	362
<i>PLUMLEY D</i>	301
<i>WILSON R</i>	285
<i>CHADWICK S</i>	416
<i>DIMITROPOULOS P</i>	173
<i>SCELLES N</i>	164
<i>WALTERS G</i>	215
<i>WICKER P</i>	186
<i>BREUER C</i>	131

Figure 5. Production of top Authors over time. Source: Bibliometrix output on Scopus data



3.5. Country collaboration, production and citations

The analysis of the most productive countries was conducted by delving into authors' countries of affiliation, country collaboration social networks, national and international collaboration, and countries' citations.

Country-wise and institutional, the distribution in the sample is rather unbalanced, with European countries accounting for the vast majority of scholarly output in the sample (Table 7).

The ratio of Single Country Publications/Multiple Country Publications (SCP/MCP) shows that most of the contributions in the sample are written by authors from the same country (Figure 7).

From the analysis of collaborative networks between countries, Figure 8 shows collaboration networks between all countries. Multiple country publications occur mainly between the United Kingdom, Germany and the US. The most frequent collaborations occur between UK and France amounting to 18; Germany and Australia, and UK and US both amounting to 12; UK and Australia, and US and Australia both amounting to 11.

With reference to the most cited countries, Table 8 shows that the UK, Germany and US still prevail over the other countries in terms of total citations, with the UK having the highest total number of citations amounting to 2.970.

Table 7. Most prolific institutions (Top 10). Source: own elaboration on Scopus data

Most Prolific Institutions (Top 10)	Papers
<i>Sheffield Hallam University</i>	57
<i>Loughborough University</i>	29
<i>German Sport University Cologne</i>	27
<i>University of Stirling</i>	25
<i>Manchester Metropolitan University</i>	23
<i>University of Cassino and Southern Lazio</i>	20
<i>Leeds Beckett University</i>	19
<i>University of Peloponnese</i>	18
<i>University of Southern Denmark</i>	18
<i>University of Bayreuth</i>	17

Figure 7. Corresponding Authors' Countries. Source: Bibliometrix output on Scopus data

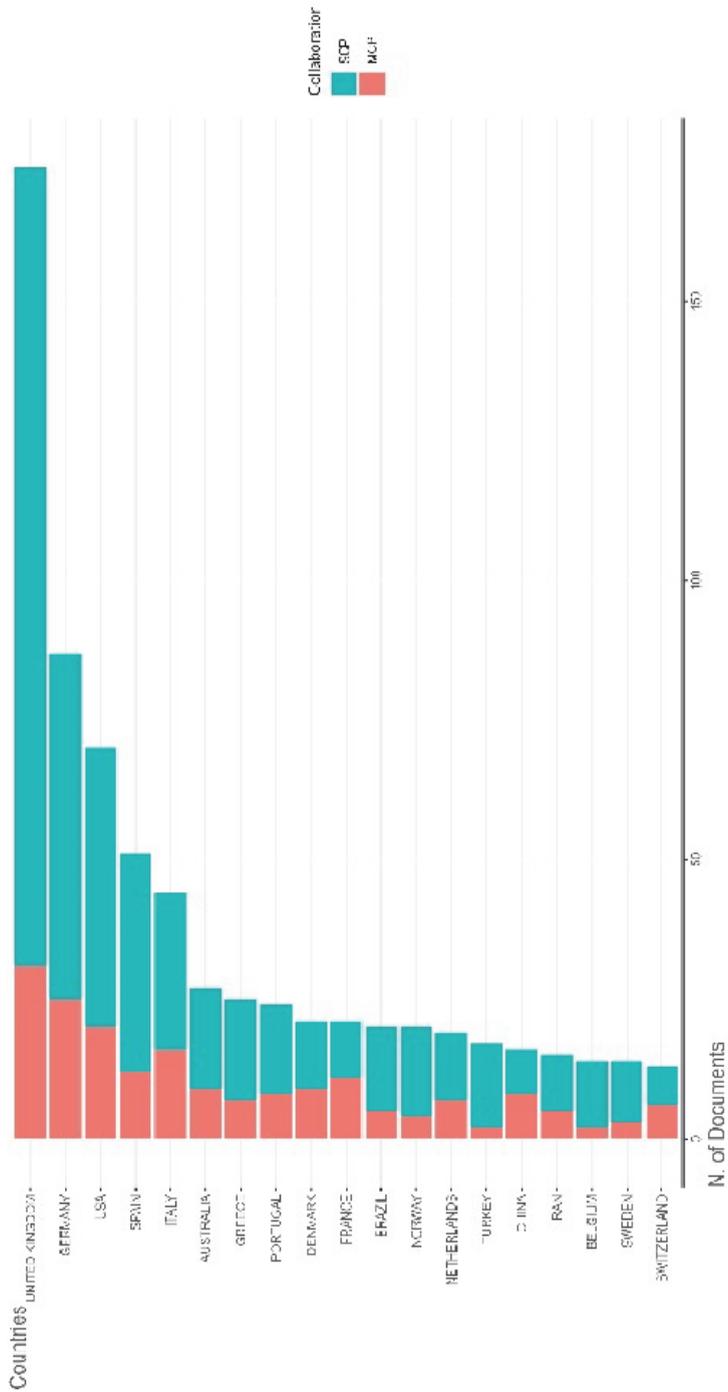


Table 8. Most cited countries (Top 10). Source: own elaboration on Scopus data

Most Cited Countries (Top 10)	Citations
<i>United Kingdom</i>	2.970
<i>Germany</i>	1.353
<i>USA</i>	1.162
<i>Spain</i>	860
<i>Greece</i>	630
<i>Portugal</i>	598
<i>Denmark</i>	555
<i>Italy</i>	479
<i>France</i>	403
<i>Australia</i>	392

3.6. Keywords

The analysis of the conceptual structure makes it possible to highlight the relationship between keywords and to identify macro-themes and main trends of literature.

The most frequent words used by the authors are soccer, sport, sponsorship, performance, corporate social responsibility, governance, competitive balance and so forth (Figure 9).

From the analysis of the research trends over time, Figure 10 shows that the themes related to the World Cup, governance, marketing, and stakeholder theory in football clubs appear to be the most treated.

Furthermore, it was decided to consider the co-occurrences between the 50 most recurrent words in the publications, shown in the network in Figure 11. The size of the network nodes represents the occurrence of the single keyword: the larger the size, the more the authors resort to this word. The length and robustness of the arcs refer to the frequency of joint use of the words by the authors. Jointly used words result in short and robust arcs and vice versa. Finally, the colours represent the thematic clusters. In Figure 12, mainly three differently coloured clusters are highlighted, which relate to three macro-themes:

1. Among others, marketing in football clubs, the use of social media to fuel brand equity and corporate social responsibility – Cluster 1;
2. The governance of football clubs – Cluster 2;
3. The financial equilibrium of football clubs, financial fair play regulations and so forth – Cluster

Figure 10. Trend topics over time. Source: Bibliometrix output on Scopus data

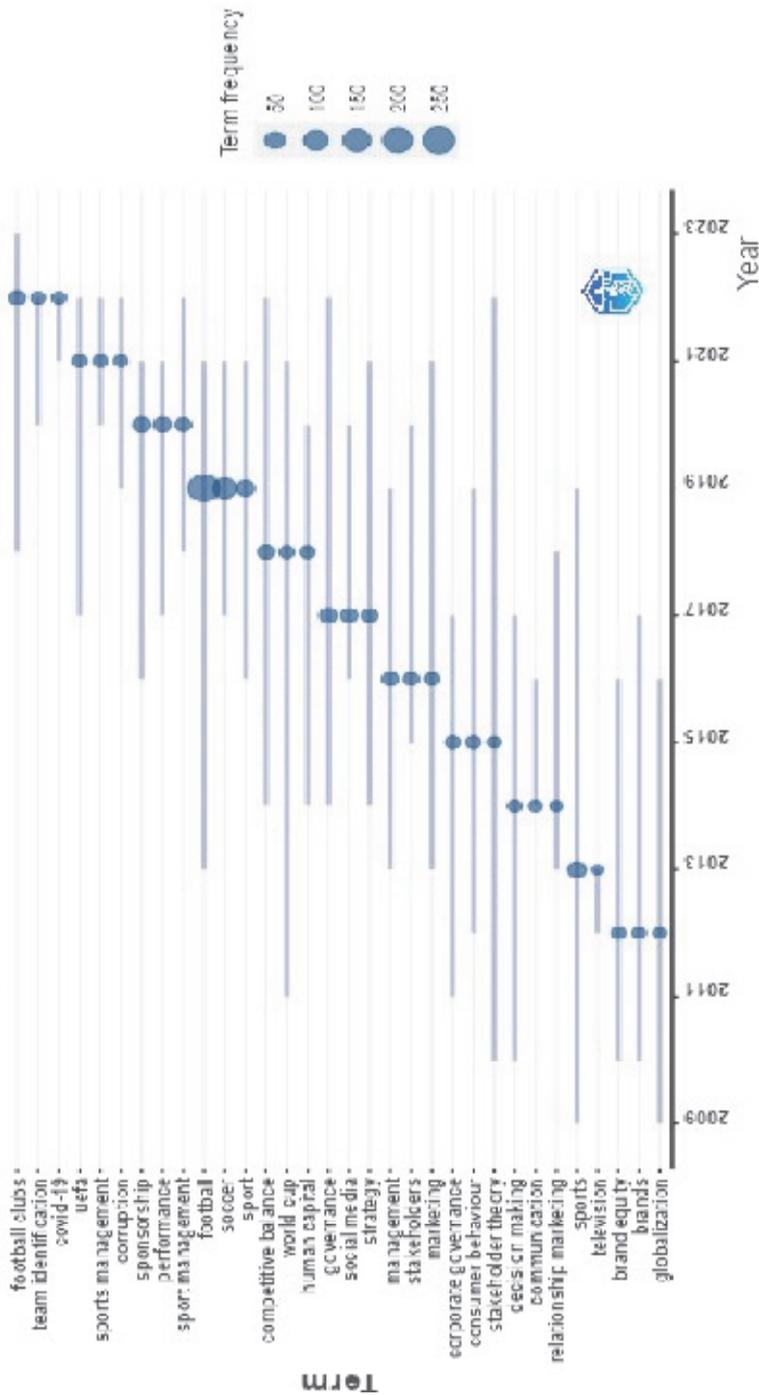
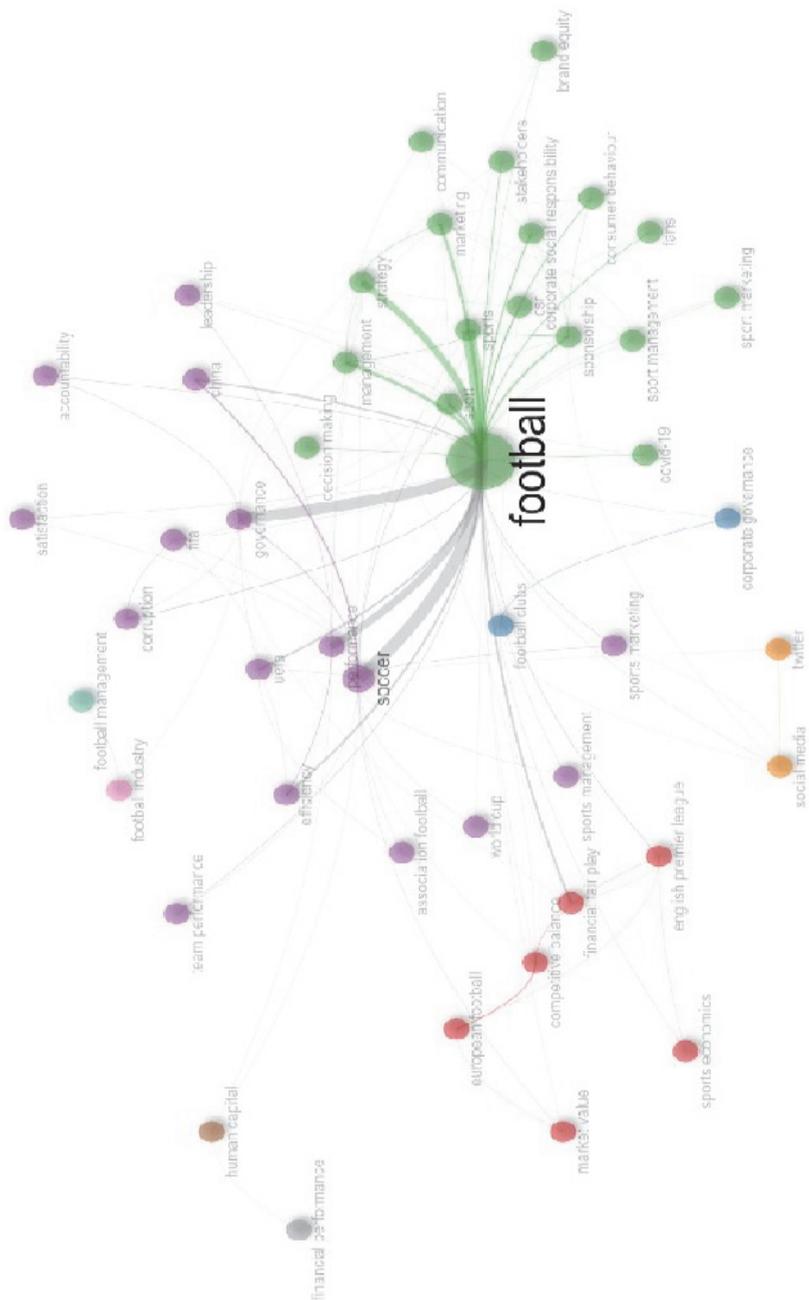


Figure 11. Keywords Co-occurrence Network. Green Cluster = Cluster 1; Purple Cluster = Cluster 2; Red Cluster = Cluster 3



Source: Bibliometrix output on Scopus data

3.7. Theme map and thematic evolution

A further in-depth analysis consists of the representation of the cognitive structure of the economic-managerial literature on the professional football industry by means of a science map. The matrix shown in Figure 12 represents through the above-mentioned Strategic diagram the word clusters in the four different quadrants. For the purposes of this work, it should be emphasised that the topics related to the financial and sporting performance of football clubs are placed among the Niche themes. These themes manifest a high density but low centrality. They are therefore internally consolidated but scarcely able to influence a certain field of research due to their low centrality.

Figure 13 shows the temporal evolution of the themes identified in the three periods 1977-2010, 2011-2020 and 2021-2023. In this regard, in the first period considered, the most discussed topics appear to be mainly related to corporate governance and marketing. Furthermore, it should be noted, for the purposes of this study, that the topics related to the financial performance of professional football clubs are absent in the first two periods, being addressed only in 2021-2023. Consistently, topics related to the impacts of the Covid-19 pandemic only appear in the last period under review.

Figure 12. Strategic diagram. Source: Bibliometrix output on Scopus data

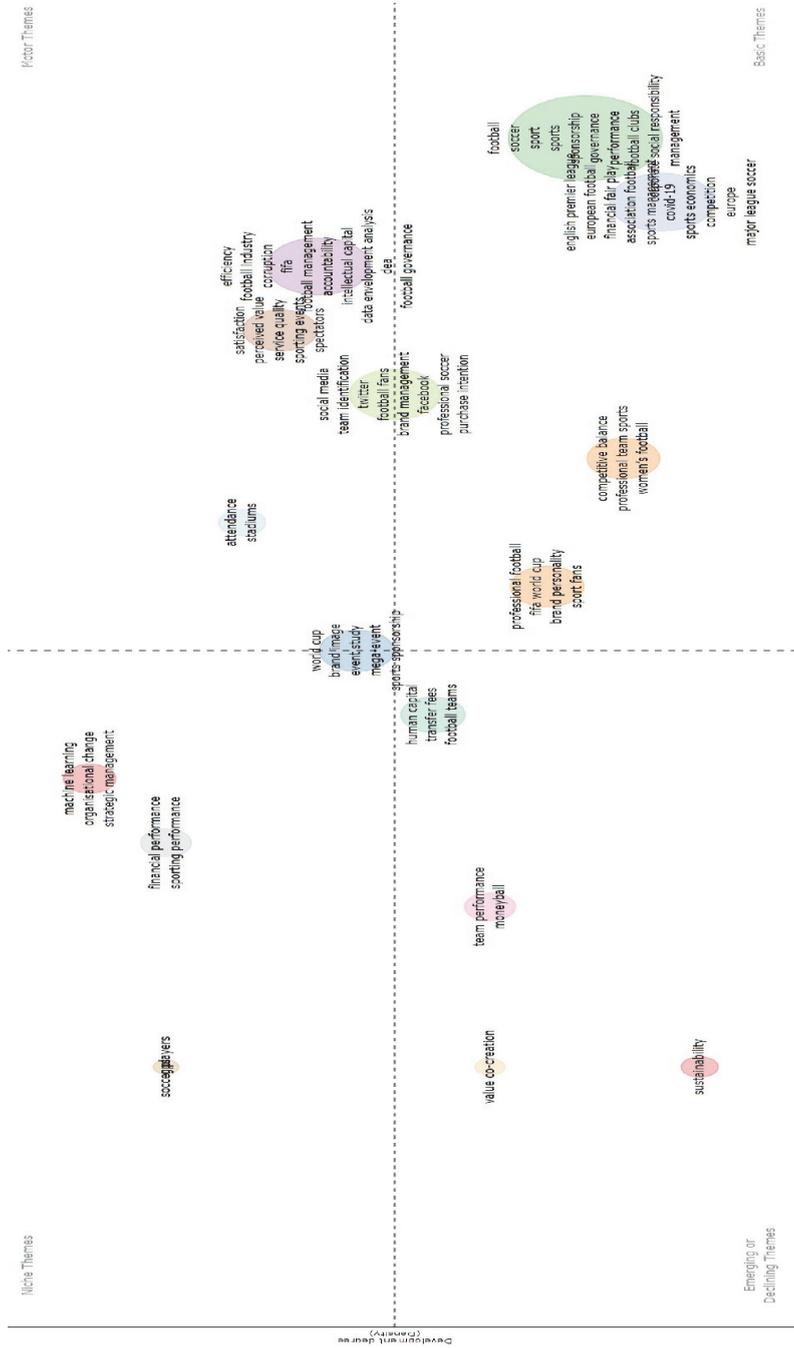
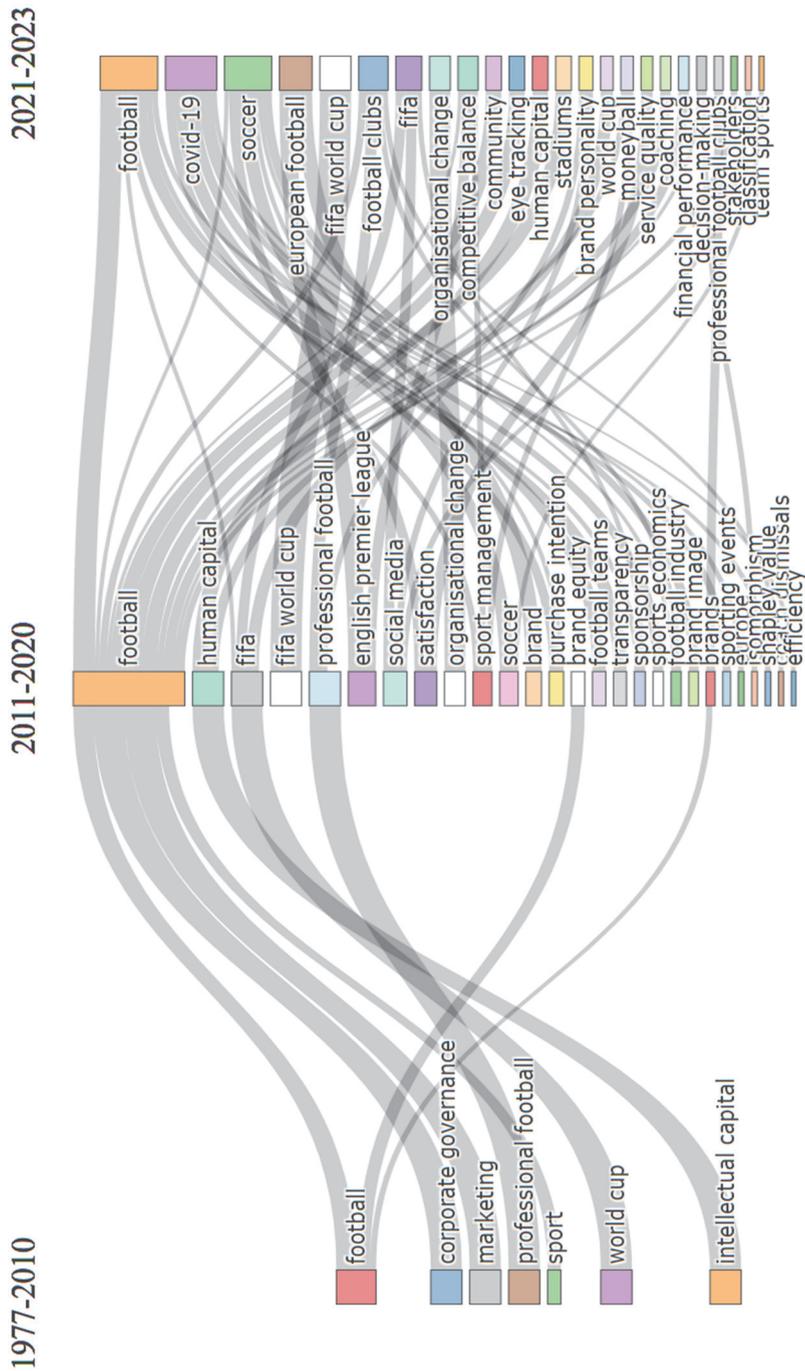


Figure 13. Thematic evolution (Sankey diagram). Source: Bibliometrix output on Scopus data



3.8. Systematic review

The bibliometric analysis enabled a systematisation of the economic-managerial literature on the football industry.

As a further in-depth analysis, a review was conducted on the papers from the cluster elected for bibliometric review that address issues related to the financial performance of football clubs and their capital structure decisions. In this regard, the procedure previously described in Section 2 on Methodology was followed. Table 9 shows the 18 papers selected for the in-depth review with title, authors, journal, research questions and main findings.

The analysis of the selected sub-set of papers revealed that there is a lack of specific studies with reference to the analysis of the operating (or unlevered) and financial (or levered) risk of professional football clubs. The former risk configuration is determined by the intrinsic business risk and the degree of operational leverage. Every football club, as well as every business, bears an intrinsic business risk related to revenue volatility induced by business choices and/or environmental factors. Chung (1989) argues that every business experience intrinsic business risk due to the cyclicity of its industry. The intensity with which intrinsic business risk acts on the volatility of operating results depends on the structural profile of the firm in terms of fixed costs and thus operating leverage (Renzi *et al.*, 2017). Further considerations regarding this area of risk for football clubs should also concern the role of slack resources and their interaction with investment projects and innovation (Esposito De Falco & Renzi, 2015). Conversely, the latter risk configuration is influenced by the degree of financial leverage.

Most of the reviewed studies link the financial performance of clubs to various factors, without delving into the declination of endogenous and exogenous risk drivers and their relationship to the volatility of sporting performance considering the aforementioned emerging trends in the football industry. For instance, the most cited paper of the identified subset links the financial success of football clubs to domestic and international sporting success and brand value, identifying as drivers of sporting success team investments that in turn are driven by foreign private majority investors (Rhode & Breuer, 2016). Furthermore, other empirical research shows that efficient governance mechanisms can reduce the financial instability of clubs (Dimitropoulos, 2014) and that intellectual capital measured through the value-added intellectual coefficient (VAIC) positively impacts performance (Dimitropoulos & Koumanakos, 2015). Other studies attempt to identify a relationship between financial, sport and share performance (Abbas, 2022; Emerald, 2022), while according to a more recent study profitability, age and sport performance are not deemed relevant for capital structure decisions (Pacheco, 2022).

Table 9. Selected papers for in-depth review. Source: own elaboration on Scopus data

#	Title	Authors	Year	Journal
1	THE OTHER ISL: ANALYSING THE FINANCES OF THE INDIAN SUPER LEAGUE (FOOTBALL) AND ITS FRANCHISEES	MONDAL S; PLUMLEY D; WILSON R	2023	MANAGING SPORT AND LEISURE
2	THE IMPACT SPORTING AND FINANCIAL PERFORMANCE OF FOOTBALL CLUBS ON THEIR STOCK PRICE: AN ANALYTICAL STUDY OF EUROPEAN CLUBS SAMPLE LISTED IN THE FINANCIAL MARKET	ABBAS NH	2023	REVIEW OF BEHAVIORAL FINANCE
3	THE OTHER SIDE OF THE "LEAGUE OF STARS": ANALYSIS OF THE FINANCIAL SITUATION OF SPANISH FOOTBALL	URDANETA-CAMACHO R; GUEVARA-PÉREZ, JC; MARTÍN VALLESPÍN ELE GLECHN	2023	INTERNATIONAL JOURNAL OF FINANCIAL STUDIES
4	HOW MUCH ARE FANS WILLING TO PAY TO HELP "THEIR" SOCCER CLUBS TO OVERCOME A CRISIS? AN ANALYSIS OF CENTRAL EUROPEAN FANS DURING THE COVID-19 PANDEMIC	LINTUMÄKI P; WALCHER C; SCHNITZER M	2022	JOURNAL OF RISK AND FINANCIAL MANAGEMENT
5	PERFORMANCE AND REVENUES IN EUROPEAN FOOTBALL: CLUBS' MEDIA VISIBILITY AND BRAND VALUE	AGUIAR; NOURY A; GARCIA-DEL-BARRIO P	2022	INTERNATIONAL JOURNAL OF THE ECONOMICS OF BUSINESS
6	ARE SPORTING, FINANCIAL AND SHARE PERFORMANCES LINKED?: EVIDENCE FROM LEADING EUROPEAN FOOTBALL CLUBS	[NO AUTHOR NAME AVAILABLE]	2022	STRATEGIC DIRECTION
7	GENDER DIVERSITY AND FINANCIAL SUSTAINABILITY IN PROFESSIONAL FOOTBALL: A COMPETITIVE STRATEGY AND PROPOSED INTERDISCIPLINARY RESEARCH AGENDA	CLARKSON B; PHILIPPOU C	2022	MANAGING SPORT AND LEISURE
8	CAPITAL STRUCTURE OF IBERIAN FOOTBALL CLUBS: DOES SPORT PERFORMANCE MATTER?	PACHECO LM	2022	INTERNATIONAL JOURNAL OF SPORT MANAGEMENT AND MARKETING
9	TOO BIG TO FAIL? ACCOUNTING FOR PREDICTIONS OF FINANCIAL DISTRESS IN ENGLISH PROFESSIONAL FOOTBALL CLUBS	PLUMLEY D; SERBERA J-P; WILSON R	2021	JOURNAL OF APPLIED ACCOUNTING RESEARCH
10	IMPACT AND EFFICIENCY RANKING OF FOOTBALL MANAGERS IN THE ITALIAN SERIE A: SPORT AND FINANCIAL PERFORMANCE	BUZZACCHI L; CAVIGGIOLI F; MILONE FL; SCOTTD	2021	JOURNAL OF SPORTS ECONOMICS
11	TRANSFER POLICY AND FOOTBALL CLUB PERFORMANCE: EVIDENCE FROM NETWORK ANALYSIS	COATES D; NAIDENOVA I; PARSHAKOV P	2020	INTERNATIONAL JOURNAL OF SPORT FINANCE
12	HUMAN CAPITAL AND FINANCIAL PERFORMANCE IN PROFESSIONAL FOOTBALL: THE ROLE OF GOVERNANCE MECHANISMS	SCAFAROTTO V; DIMITROPOULOS P	2018	CORPORATE GOVERNANCE (BINGLEY)
13	EUROPE'S ELITE FOOTBALL: FINANCIAL GROWTH, SPORTING SUCCESS, TRANSFER INVESTMENT, AND PRIVATE MAJORITY INVESTORS	ROHDE M; BREUER C	2016	INTERNATIONAL JOURNAL OF FINANCIAL STUDIES
14	INFLUENCE OF ORGANIZATIONAL SUPPORT ON RETIREMENT PLANNING AND FINANCIAL MANAGEMENT OF PROFESSIONAL SOCCER PLAYERS	SURJUAL J	2016	POLISH JOURNAL OF MANAGEMENT STUDIES
15	INTELLECTUAL CAPITAL AND PROFITABILITY IN EUROPEAN FOOTBALL CLUBS	DIMITROPOULOS PE; KOUAMANAKOS E	2015	INTERNATIONAL JOURNAL OF ACCOUNTING, AUDITING AND PERFORMANCE EVALUATION
16	SPANISH FOOTBALL IN NEED OF FINANCIAL THERAPY: CUT EXPENSES AND INJECT CAPITAL	BARAJAS A; RODRIGUEZ P	2014	INTERNATIONAL JOURNAL OF SPORT FINANCE
17	CAPITAL STRUCTURE AND CORPORATE GOVERNANCE OF SOCCER CLUBS: EUROPEAN EVIDENCE	DIMITROPOULOS P	2014	MANAGEMENT RESEARCH REVIEW
18	UDINESE CALCIO SOCCER CLUB AS A TALENTS FACTORY: STRATEGIC AGILITY, DIVERGING OBJECTIVES, AND RESOURCE CONSTRAINTS	DIMININ A; PRATTINI F; BIANCHI M; BORTOLUZZI G; PICCALUGA A	2014	EUROPEAN MANAGEMENT JOURNAL

#	Research question	Main findings
1	What are the finances of the ISL and its franchisees?	Many franchisees have reported poor financial performance for the period under study showing debt and profitability issues
2	What is the nature of the relationship between sporting, financial performance, financial performance, stock returns and sports performance. The study also revealed the impact of a win, a draw and a loss on stock returns and stock price of football clubs?	There is a positive correlation between stock returns and sports performance. The study also revealed the impact of a win, a draw and a loss on stock returns and explained that this impact is linked to the club's final result at the end of the sports season.
3	How effective is the financial control system implemented by the Spanish Football League?	The economic control measures imposed by the Spanish football league have helped to improve the financial situation of Spanish football in the short term, but may foster imbalances between clubs that undermine the sustainability of the current management model and, therefore, the competition system.
4	How much are fans willing to contribute financially to help their favourite teams Fans would be willing to participate in fundraising campaigns to support their favourite teams and could help overcome the current crisis, showing that the inclusion of overcome the financial difficulties caused by Covid-19?	Fans would be willing to participate in fundraising campaigns to support their favourite teams and could help overcome the current crisis, showing that the inclusion of fans in future risk management strategies is a promising approach.
5	What is the financial situation of European football clubs and the role of their impact on club revenue than performance in the previous season; (ii) current performance in the UEFA Champions League has a greater positive effect on club revenue media visibility and historical brand status?	The study argues that: (i) there is a positive relationship between revenue and performance in domestic leagues; (ii) current domestic points have a relatively greater impact on club revenue than performance in the previous season; (iii) current performance in the UEFA Champions League has a greater positive effect on club revenue than performance in the UEFA Europa League; (iv) brand value has a significant impact on the ability of clubs to generate revenue; and (v) the ability of clubs to generate revenue is directly related to the ability of the team roster to attract media attention.
6	What is the relationship between sporting, financial and share performances for Leading football clubs with successful sports results are able to generate additional revenue from various sources and improve their overall financial performance. European football clubs?	Sustained success in these two performance areas can increase the possibility of a favourable impact on the share price of a particular club.
7	What are the financial benefits of a greater gender diversity in professional football clubs boards?	Further research in this field is imperative to ensure all areas of potential improvement are considered by governing bodies, executives, and government in addressing the financial sustainability concerns in football.
8	What are the capital structure determinants of the major Spanish and Portuguese Size, total liquidity and asset intangibility are key factors affecting the capital structure and that pecking order theory seems more suited to those companies, whereas football clubs?	Sport performance variables are irrelevant.
9	How to anticipate financial distress with specific reference to footballs/ Financial The results show significant cases of financial distress amongst clubs in both divisions and that Championship clubs are in significantly poorer financial health than EPL Fair Play (FFP) regulations for EPL and EFL clubs?	The results show significant cases of financial distress amongst clubs in both divisions and that Championship clubs are in significantly poorer financial health than EPL clubs.
10	What is the contribution of managers to the performance of football teams in the Italian Serie A?	Managers exert a significant influence on both sport and financial performances with differences between top and worst coaches.
11	How do the characteristics of a football club's player transfer network activities Club management can find an optimal transfer policy to balance sport and financial performance by having a limited number of club partners and focusing on influence club performance?	Club management can find an optimal transfer policy to balance sport and financial performance by having a limited number of club partners and focusing on international deals.
12	What is the relationship between human capital investments and financial Clubs with CEO duality and a high degree of family board representation manage to profit from investments in player contracts as opposed to clubs which lack these performance in the professional football industry?	Clubs with CEO duality and a high degree of family board representation manage to profit from investments in player contracts as opposed to clubs which lack these governance mechanisms.
13	What drives revenues and investments in Europe's elite football clubs?	National sporting success positively impacts revenues and is primarily driven by team investments. Also, international sporting success and brand management drive revenues. Finally, there is a positive impact of private majority investors on team investments.
14	What is the influence of organizational support on retirement planning and financial management of professional soccer players?	Organizational support strongly influences retirement planning and financial management.
15	What is the impact of intellectual capital on the profitability of European listed football clubs?	Intellectual capital is a significant determinant of club's profitability and specifically football clubs with enhanced human capital efficiency achieve higher levels of financial performance.
16	What is the financial health of Spanish football clubs?	Spanish football is in a very bad financial condition and to improve its situation requires a substantial injection of financing capital through the issuance of shares or the solicitation of substantial contributions from members, the increase in revenues, the reduction of wages and salaries, and the reduction of current liabilities.
17	What is the impact of corporate governance quality on the capital structure of Efficient corporate governance mechanisms such as the increased board size and independence and the existence of more dispersed ownership (managerial and European soccer clubs)?	The existence of more dispersed ownership (managerial and institutional) result in a reduction in the level of leverage and debt, thus reducing the risk of financial instability.
18	How strategic agility can nurture economic value creation and ensure long term survival even in highly competitive environments?	Udinese has managed to implement a business model requiring balance of diverging strategic objectives under severe resources constraints, thanks to its strategic agility. The analysis shows that strategic agility depends on three meta-capabilities, namely resource fluidity, strategic sensitivity and leadership unity.

The current research therefore does not appear convincing in terms of the methods and variables examined. The literature analysed does not propose models for monitoring and managing risk in light of new trends in the football industry. Specifically, to the best of our knowledge, no research investigates the relationship between the volatility of sporting results from that of financial results, isolating the former from the latter and vice versa. Such an approach may allow research to be extended into new business models aimed at maximising sporting and financial results in a more risk-aware management perspective.

Ultimately, this study highlights the need to identify and deepen, considering emerging trends in the professional football industry, the structural and external determinants of football club risk and to establish a theoretical framework that consistently links the volatility of financial and sporting performance.

4. Conclusions and future research avenues

The aim of the present study was to achieve a systematisation of the economic-managerial literature on the professional football industry and to identify gaps to be filled by future research in terms of risk-return modelling. For this purpose, a bibliometric analysis was conducted, subsequently supported by an in-depth analysis on a sub-set of selected papers, to analyse the scientific production from 1977 to 2023. The main results are summarised below. In terms of scientific production on the subject, it was highlighted that most of the research was published in the period 2015-2022.

At the Sources level, it was shown that the journal *Sport Business and Management: An International Journal* represents the most productive and fastest growing source over time but not the most cited, which is *European Sport Management Quarterly*. Furthermore, *Long Range Planning*, which does not appear in the ten most productive sources, is the third most cited source.

The analysis at Authors level did not show a close correlation between the most productive authors and the most cited ones. In addition, the collaboration networks among the most productive authors focused on the topics of competitive balances and finances of football clubs, marketing and management of sports brands through social media.

Regarding the analysis of production at the Countries level, it emerged that European countries have the largest production of research on the subject. However, as far as cross-country collaborations are concerned, multiple country publications occur mainly between UK, Germany and the US. The

Keywords level revealed that the most recurring words over time are the World Cup, governance, marketing and stakeholder theory. The analysis of the co-occurrences of the words revealed three thematic clusters that mainly refer to marketing, corporate governance and the financial balance of football clubs.

From the analysis of the themes through the Strategic diagram, emerged that the topics related to the financial performance of football clubs are clustered among the Niche themes. Furthermore, the representation of the evolution of the themes over time by means of the Sankey diagram showed that the themes related to the financial performance of football clubs only appear from 2021 onwards, thus representing an attractive field for future research. The analysis of the sub-set of papers selected for the systematic review and focused on the financial performance of football clubs revealed a lack of specific studies with reference to the declination of endogenous and exogenous drivers of risk and their relationship with the volatility of sports performance.

In this regard, this study offers an opportunity for future researchers to delve into certain areas not yet researched. Specifically, possible research avenues can be outlined by proposing specific questions:

- How do the typical endogenous (e.g. operating leverage and financial leverage) and exogenous (e.g. intrinsic business risk) drivers of risk decline in a professional football club?
- To what extent can clubs manipulate such drivers to manage and control operational and/or financial risk?
- What is the correlation between the volatility of sporting and financial performance and how can the volatility associated with each be analysed separately?
- How do these factors impact the value of sports clubs in terms of capital remuneration and how can the relationship between value and prices of football clubs' franchisees be justified?

This work therefore has implications from both a practical and scientific perspective. Ultimately, future research in this area may concern the construction of one or more models for risk management in the context of the professional football industry.

4.1. Limitations

The present study relies on certain limitations that should be considered. First, the literature search was conducted using Elsevier's Scopus database. Although it is included among the most comprehensive and influential software in business and management disciplines, some publications may not be

indexed. Second, as it is a constantly updated database, a bibliometric analysis concerning an emerging topic may be subject to substantial variations in some years. Third, the systematisation approach adopted, relying on only one database, could be improved and extended by the combined use of more than one software package. Finally, the systematic review depends on a few papers. This is the consequence of the process described in section 2.1. Specifically, other thematic clusters could have contained topics related to risk management in professional football clubs.

However, the presented limitations do not affect the general assessment of the current intellectual territory and its implications for future research areas.

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