



Sport entrepreneurship: the role of innovation and creativity in sport management

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Abstract

This article examines the state of research on sport entrepreneurship, with a particular focus on the intersection of entrepreneurship, innovation, and creativity in sport management. Sport is an increasingly important sector of the global economy, yet little attention has been given to the role of entrepreneurship in its development. This article argues that entrepreneurship, innovation, and creativity are crucial drivers of change, innovation, and employment in sport and that sport entrepreneurship is an emerging but unorganized stream of business research. To better understand the relationship between these research fields, we performed a study that combined a systematic review and a bibliometric analysis. This article presents thematic shifts in the field of sport entrepreneurship, innovation, and creativity. It proposes an integrated model of sport entrepreneurship, offering novel perspectives that contribute to the field. Furthermore, the article addresses the lack of research on creativity, sustainability, and the sport entrepreneur, charting underexplored territories. Overall, this article provides a comprehensive overview of current research on sport entrepreneurship and identifies key areas for future investigation.

Keywords Sport entrepreneurship · Innovation · Creativity · Sport management · Review

JEL Classification M10 · M20 · O10 · Z20

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1 Introduction

The sport industry is one of the fastest-growing in the world and is steadily expanding its influence on the global economy (Zhang et al. 2018). The importance that sport plays in our daily lives has led to sport being studied from many different angles (Olivier 2006). However, the sport industry as an economic entity is not recognized by practitioners or scholars, and little is known about sport from an entrepreneurial perspective (Pellegrini et al. 2020). Scholars have anticipated this research gap, as evidenced by the increasing number of academic papers on sport entrepreneurship in recent years (González-Serrano et al. 2020; Pellegrini et al. 2020). This rapid and uncoordinated growth in publications has led to a fragmented and disorganized field of research. As a result, it is currently difficult to find conceptual delineations of sport entrepreneurship within sport management. In addition, it is unclear how and what dynamics have influenced the intellectual structure of sport entrepreneurship during its development.

1.1 Theoretical foundations

Entrepreneurship has become a driver of innovation, change, and employment in the sport industry and is essential to meet the rapidly changing needs of consumers (Ball 2005). For sport organizations, entrepreneurship has become an essential tool for business management in general (Hammerschmidt et al. 2020; Núñez-Pomar et al. 2016) and especially in times of crisis (Escamilla-Fajardo et al. 2020a, b; Hammerschmidt et al. 2021). As a result, sport entrepreneurship is emerging as a significant but unorganized stream of business research within the field of entrepreneurship (González-Serrano et al. 2020; Pellegrini et al. 2020).

Enhancing and maximizing the performance of sporting organizations and the individuals inside can be achieved through measures such as innovation and entrepreneurship (Escamilla-Fajardo et al. 2020a, b). Increasingly, the sport industry is demanding employees with entrepreneurial skills (González-Serrano et al. 2017; Jones and Jones 2014). Ayazi et al. (2015) suggested that entrepreneurship in sport can be applied to entrepreneurial opportunities that involve sport and are based on improving the market through highly innovative developments. More recently, Hammerschmidt et al. (2022) defined sport entrepreneurship as “the identification and exploitation of opportunities to create new value through the medium of sport” (Hammerschmidt et al. 2022, p. 6). However, although different scholars agree on the unique characteristics of sport entrepreneurship, there are still discrepancies in the terminology employed (Hammerschmidt et al. 2022).

The differences in the terminology of entrepreneurship in the sport discipline also apply to the application of the concepts of innovation and entrepreneurship in sport. Innovation is an element that is essential for entrepreneurship to occur (Hughes and Morgan 2007; Kraus et al. 2012; Wiklund and Shepherd 2005) and should therefore be considered as an integral aspect rather than an exclusive one. Innovation can be seen as a supporting factor of entrepreneurial behavior and is certainly a key skill

for sport entrepreneurs to create ideas and value. However, to achieve innovation, individual creativity must first be nurtured (Amabile 1988).

Understanding how businesses can develop innovation requires a thorough understanding of creativity, which is "the construction of ideas or products, which are new and potentially useful" (Fillis and Rentschler 2010, p. 49). The benefit of creativity in businesses is the capacity to find innovative solutions that increase operational effectiveness (DiLiello and Houghton 2008). Researchers are examining the role of creativity in sport (Fardilha and Allen, 2020) and in sport employees (Barnhill and Smith 2019; Kim et al. 2023; Paek et al., 2022) as the field of research on creativity in sport organizations develops. Employees in the sport industry are an especially pertinent group for the creation of novel concepts since they are in charge of a variety of distinct activities, such as the organization of sporting events and standard business procedures (Hoeber et al. 2015; Hoeber and Hoeber 2012). The symbiotic connection between innovation, and thus creativity, and entrepreneurship is a promising field in sport management (Hammerschmidt et al. 2023). However, with some emerging exceptions (Barnhill and Smith 2019; Smith and Green 2020), there is a lack of research in the sport management literature that focuses on the creativity of individuals in particular (Kim et al. 2023).

In the realm of sport entrepreneurship, innovation, and creativity research, several distinct theoretical approaches were employed, each elucidating different facets of the dynamic sport industry. These approaches provide frameworks for understanding how entrepreneurial principles, innovative practices, and creative strategies contribute to the evolution and advancement of the research field. Systematically outlining the different perspectives used by scholars to approach theory provides a comprehensive overview for the current study and establishes the groundwork for enhancing theoretical frameworks (see Table 1).

1.2 Previous research

Several reviews have been conducted in this field of study thus far. Among them, there are bibliometric studies that focus on sport entrepreneurship (Pellegrini et al. 2020), innovation and sport entrepreneurship (González-Serrano et al. 2020), or innovation in sport (Ferreira et al. 2020). In addition, systematic reviews on sport entrepreneurship and intrapreneurship (Lara-Bocanegra et al. 2022) and narrative reviews on creativity in sport (Fardilha and Allen, 2020) were found, as well as other types of reviews analyzing the interconnectedness of entrepreneurship, innovation, and sport policy frameworks (Pounder 2019). In general, researchers' findings highlight great interest and growth experienced in recent years in the field of study of sport entrepreneurship (González-Serrano et al. 2020; Pellegrini et al. 2020) as well as innovation (Ferreira et al. 2020) and creativity (Fardilha and Allen, 2020).

The bibliometric studies mentioned above were published in the same year; however, they all differ in their objectives. The analysis of Ferreira et al. (2020) is based on a co-citation and citation analysis of the field of sport innovation and focuses on the synthesis of this diverse and interdisciplinary scientific field. The studies of González-Serrano et al. (2020) and Pellegrini et al. (2020) represent more

Table 1 Synthesis and trajectory of theory applications

Theoretical approach	Application in sport entrepreneurship, innovation and creativity studies	Implications and research directions
Entrepreneurship Theory	Entrepreneurial principles and practices applied in the context of the sport industry, including aspects such as sport management, business models, and organizational strategies	Develop sport-specific entrepreneurship research principles and integrate them into a sport entrepreneurship research framework. Investigate how entrepreneurial thinking influences decision-making processes in sport ventures and sport organizations
Innovation Theory	Various forms of innovation within the sport industry, including technological advancements, product and service innovation, and the adoption of innovative practices to enhance fan experience and operational efficiency	Pursue a balance across innovation theory themes and develop insights into the functioning and success drivers of innovation processes across different sports and levels of competition
Social Entrepreneurship Theory	Contribution of sport organizations and individuals to societal and community development emphasizing social impact, sustainability, and social responsibility	Craft theories to focus on the role of social entrepreneurship in sport management research. Analyze the effects of sport-based social entrepreneurship in achieving long-term societal goals
Network Theory	Interactions, collaborations, and relationships among different stakeholders in the sport industry, including athletes, organizations, fans, and external partners	Investigate the role of sport networks in promoting cross-disciplinary collaborations and knowledge exchange
Organizational Theory	Internal structures, processes, and dynamics of sport organizations, examining how organizational culture, leadership, and management practices impact entrepreneurship, innovation, and creativity or vice versa	Craft research and theories to generate more solid implications of organizational theory in the context of sports

comprehensive bibliometrics, and both were conducted in the field of sport entrepreneurship. Pellegrini's study aimed to identify key substreams of sport entrepreneurship discipline and their interrelationship, recognizing, through a bibliographic coupling approach, four main themes within the field: (1) sport entrepreneurship theory and factors triggering sportspeople's entrepreneurial propensity, (2) environmental factors and conditions fostering sport entrepreneurship, (3) sport entrepreneurial education and (4) the social role of sport entrepreneurship and its implications. Although the study of González-Serrano et al. (2020) also focused on sport entrepreneurship, innovation was additionally included in the search string. The main thematic areas identified differ accordingly: (1) technology innovation products and services, (2) entrepreneurship, management, and education, and (3) determinants of innovation in sport organizations. In addition, they highlighted the lack of empirical studies, the scarce existence of studies analyzing specific types of entrepreneurship, and cross-cultural studies. The fact that only Pellegrini et al. (2020) cite one of the other studies suggests that all three bibliometric studies were developed at almost the same time.

Other systematization efforts in the discipline are far more diverse. Lara-Bocanegra et al. (2022) manually identified subthemes related to sport entrepreneurship, and their study is the only systematic research highlighting social entrepreneurship and intrapreneurship as the main themes in sport. From another perspective, Pounder (2019) examined the interconnectivity between entrepreneurship and innovation in sport in a way that was similar to González-Serrano et al. (2020), but without a systematized review approach. In this work, the focus was mainly on the development of a sport policy framework based on the theoretical and practical insights gained in sport entrepreneurship and innovation research. Finally, Fardilha and Allen (2020) provided a systematic narrative review of sporting creativity. They mainly referred to the ability within sport to perform unpredictable actions and pointed out that there seems to be a connection between creativity and innovation in sport management but that there is a gap in current knowledge on this topic.

1.3 Limitations of prior reviews and research goals

The review studies conducted thus far in the field have described the current status and general themes investigated, without focusing on specific subthemes and their evolution. Moreover, several reviews have been performed, but they have not researched the connection between innovation and creativity in sport management (Fardilha and Allen, 2020). Additionally, no studies have analyzed entrepreneurship, innovation, and creativity in sport management together, resulting in fragmented research. The practical challenge facing the sport industry lies in its need to evaluate its past and present to shape its future, given the numerous changes taking place (Hayduk and Newland 2020). Theoretical challenges include the lack of research connecting entrepreneurship, innovation, and creativity in sport management, which is necessary to present an integrated model of sport entrepreneurship. Thus, this review investigates the symbiotic interconnectivity between innovation and

entrepreneurship in sports (Pounder 2019), providing a comprehensive analysis of the literature and suggesting future research in the field. Specifically, this article seeks to answer the following questions: (1) *How has the emphasis on sport entrepreneurship, innovation, and creativity research evolved over time*, (2) *how can the existing fragmented literature be unified into an integrated model that captures multifaceted interactions*, and (3) *what implications does this model have for advancing theoretical coherence and guiding future research directions in the field?*

In doing so, we apply a systematic literature review and a bibliometric thematic evolution approach to contribute to the understanding of the theme. Scientific research includes review papers and literature reviews as essential components (Kraus et al. 2022a, b). Systematic literature reviews support better decision-making by policy-makers and employers and assist scholars in synthesizing the reviewed literature (Kraus et al. 2020). When analyzing research over time, a prevalent longitudinal approach involves segmenting the dataset into distinct timeframes, the length of which is determined by the amount of data available (Cobo et al. 2011). To derive insightful outcomes, the years under study were categorized into the following time subperiods: 2000–2010 (beginnings of the field of study), 2011–2020 (development and evolution), and 2021–2022 (latest trends). The methodological approach used in this research combines (1) a systematic literature review and (2) a bibliometric thematic evolution approach to identify and illustrate conceptual subdomains (specific or generic themes). This is done by identifying articles based on the systematic literature review process (Kraus et al. 2020; Moher et al. 2009). Subsequently, the thematic evolution of the research field is quantified and visualized through the analysis of co-words in a longitudinal framework (Muñoz-Leiva et al. 2012). To show the conceptual development, thematic areas are identified in the process, which in turn are represented graphically in a proposed visualization approach. Finally, the articles assigned to the clusters of main themes are analyzed and synthesized in the distinctive subperiods.

1.4 Main contributions and structure of the study

This study contributes to the literature by analyzing the evolution of the field of study on entrepreneurship, innovation, and creativity in sport management over the last two decades. The longitudinal approach used in this study allows for a comprehensive understanding of the field's development and identifies the most relevant literature and research needs. The study presents an integrated view of sport entrepreneurship by analyzing articles from a holistic perspective. It identifies different research streams that have been studied historically and highlights the main findings and gaps in the literature. The study's findings can lay the foundations for future research, contribute to the development and consolidation of the field, and assist policy-makers and sport entrepreneurs in making better decisions. Furthermore, the study highlights the lack of entrepreneurship in sport management academia and emphasizes the potential contribution of sport entrepreneurship to the future of the sport management field (Ciomaga 2013; Hammerschmidt et al. 2023; Shilbury 2011a, 2011b).

The structure of this paper is as follows. First, the methodology used to collect, select and analyze the data is stated. Next, the results of the thematic evolution are presented through maps and described. After that, a discussion and conclusions section of the results found is proposed focusing on the future directions for the study of entrepreneurship, innovation, and creativity research in sport management. Finally, theoretical and practical implications, limitations, and future research suggestions are presented.

2 Methodology

2.1 Data collection

This research is based on the recommendations of Kraus et al. (2022a, b), who described a process for conducting a systematic review of the literature. An advanced search was conducted in the Thomson Reuters Web of Science (WoS) Core Collection™ to identify documents published on innovation, creativity, and entrepreneurship in sport management in scientific journals included in this database. The WoS is an accepted database containing high-quality articles published in high-impact journals (Skute 2019; Van Nunen et al. 2018). According to recent studies, the WoS database should be considered when exploring research hotspots and new research frontiers and finding high-quality literature, as it contains internationally authoritative, high-impact, core and credible academic journals (Gan et al. 2022). Furthermore, in the context of sport management, the WoS database was used for conducting bibliometric analyses and systematic literature reviews, as the impact factor (IF) has been considered crucial for ensuring the credibility and high quality of the selected journals and articles (Chiu et al. 2023; Hammerschmidt et al. 2023; Shilbury 2011a, 2011b). Therefore, this database appears to be the most appropriate for this research field and was selected to perform a search string.

The search string used was $TI=((sport*) AND ((innovat*) OR (creativ*) OR (entrepreneur*)))$. Thus, variations in the endings of the selected words were accepted (e.g., sports, sportive, innovation, innovative, creativity, creative...). The search was limited to the appearance of these words in the title (TI). It was decided to search for these words only in the title of the articles since, according to the authors, they tend to present the main theme of the article in the title, acting as a preview of the whole article (Wang and Bai 2007). As a result, several bibliometric and review articles have identified documents by using the title field in the search (González-Serrano et al. 2020; Kraus et al. 2022a, b; Lenart-Gansiniec et al. 2023). Only the following indices were selected: Science Citation Index Expanded (SCI-EXPANDED), Social Sciences Citation Index (SSCI), and Emerging Sources Citation Index (ESCI). We selected these indices because they include documents published in the sport management research field. The search was limited solely and exclusively to articles or reviews written in English. This criterion was selected to ensure high-quality methodological rigor and standards since articles undergo peer review before being published (Kraus et al. 2020). In addition, only the following WoS categories were selected: Hospitality, Leisure, Sport & Tourism

OR Management OR Business OR Business Finance OR Economics OR Sports Sciences. This selection of categories was chosen to ensure that the articles were exclusively related to the field of sport management research.

The initial search string yielded 211 documents as of the date the search string was performed (November 8th, 2022). Subsequently, the journals in which the articles and reviews were published were reviewed. Only those journals that published articles related to sport management or economics were selected. Of the initial 79 journals in which articles on this theme had been published, 30 journals were discarded. As a result of excluding journals unrelated to sport management or economics, a total of 61 articles were removed from consideration. Finally, 150 documents were obtained that had been published on this subject in 49 journals in the field of sport management or economics.

The authors adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach (Moher et al. 2009) to review the search documents and select the definitive records from the search. Previous authors have used this approach in bibliometric analyses (Kraus et al. 2022a, b; Thananusak 2019). In the second step, the screening process, no ineligible papers were found, and hence, we did not eliminate any documents ($n=0$). Then, the authors checked the titles, keywords, and abstracts of the records to determine the relevance of the remaining 150 papers in the third step, which is known as the eligibility-checking procedure. The criteria for excluding the papers were the following: (1) the subject matter was not related to sport management, (2) entrepreneurship, innovation, or creativity had been analyzed in students, and (3) sport entrepreneurship, innovation, or creativity was not the main focus of the article. Two of the authors reviewed the papers jointly, and discrepancies were resolved through discussion and consensus with the first author. In this process, 131 papers remained (19 documents were deleted) for the bibliometric analysis, which was used to determine the main themes of each sub-period of the field and to assign each article to the corresponding theme. All articles that were not assigned to a main theme were removed due to lack of relevance ($n=53$). The final database for the literature review was composed of 78 documents (see Fig. 1). Finally, the selected papers were downloaded in plain text together with information on the authors, year of publication, affiliation, citations, title, abstract, journal, subject, and references.

2.2 Data analysis

The analyses conducted in this article are based on three stages: (1) a systematic literature review process to identify the articles, (2) bibliometric analysis within these articles to identify thematic evolution subperiods and their main themes, and (3) a literature review to synthesize and review the articles of the main themes in their distinctive subperiods.

After identifying the relevant articles according to the abovementioned PRISMA approach (Moher et al. 2009), we conducted a thematic evolution analysis based on co-word network analysis. In addition, clustering was performed to discover the evolution of the themes within this research field. Callon et al. (1991) proposed

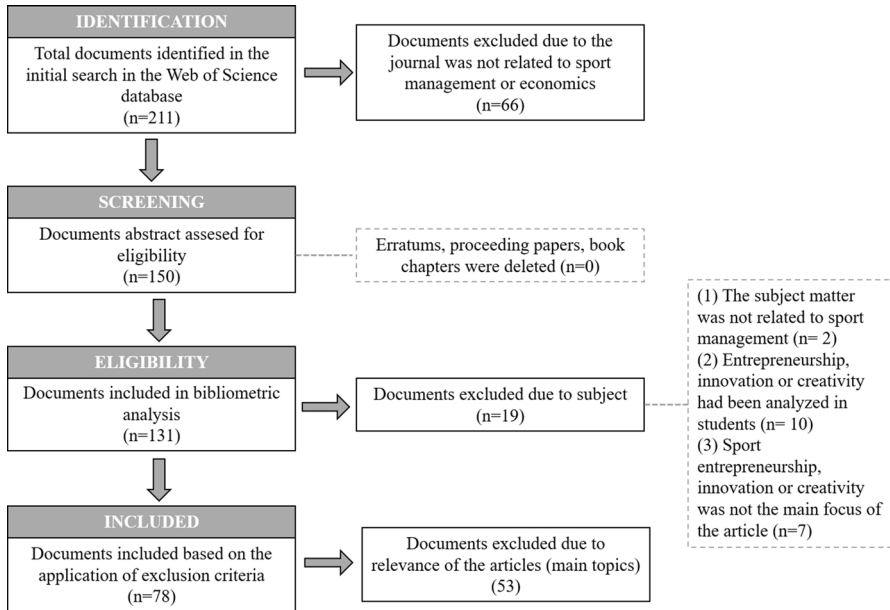


Fig. 1 PRISMA flow diagram protocol for the selection of articles related to entrepreneurship, innovation, and creativity in sport management

co-word analysis as an effective content analysis method for mapping the degree of association between informational elements in textual data. In this type of analysis, clusters represent groups of textual data that can be interpreted as conceptual or semantic clusters of various research-relevant themes (Cobo et al. 2011). By using keyword analysis, researchers can discover and concentrate on dominant research themes (Torres et al. 2020). Therefore, co-word analysis allows the discovery of the main concepts addressed by the research field and is a prevailing approach for discovering and examining the linkages between research fields (Cobo et al. 2011).

In this case, co-word analysis is employed in a longitudinal approach to measure and map the thematic progression of this field of study (Muñoz-Leiva et al. 2012). The data were imported into R studio and converted into a bibliographic data framework. The co-word analysis was performed through an automated process facilitated by the bibliometrix R package. In this analysis, the software automatically identifies and generates co-word clusters based on the author keywords present within the analyzed documents. The process involves two primary steps (Aria and Cuccurullo 2017):

1. Author Keyword Occurrence: Initially, the software examines the frequency of occurrence of each author keyword across the analyzed documents. This frequency provides insight into the prevalence and significance of specific keywords within the research field.
2. Interconnection Analysis: Subsequently, the software evaluates the interconnections between different author keywords. This entails determining

how frequently distinct author keywords appear together within the same documents. The strength and frequency of these co-occurrences contribute to the establishment of meaningful relationships between keywords.

The thematic evolution and thematic map parameters were as follows: the field was author keywords, number of words was more than or equal to 500, minimum cluster frequency (per thousand docs) was more than or equal to 4, weight index was the inclusion index weighted by word occurrences and minimum weight index was more than or equal to 0.10. The Louvain clustering algorithm was selected to detect the clusters (Blondel et al. 2008).

We employ co-word analysis to extract the main themes of specific years of publication. By comparing these themes, we can examine their evolution within the distinct research field (Callon et al. 1991; Muñoz-Leiva et al. 2012). Ideally, data analysis intervals should span one year to avoid data smoothness. In the research field being studied, co-word analysis is limited by the quantity of data, preventing high-level analysis. Consequently, it is recommended to group years into equivalent subperiods (Cobo et al. 2011). The study will analyze three subperiods: (1) 2000–2011, (2) 2012–2020, and (3) 2021–2022. For our analysis, we selected the first subperiod of 12 years (2000–2011). This is because there were few researchers and publications in the field of entrepreneurship, innovation, and creativity in sport management at the outset. For the third subperiod, a subperiod of 2 years was chosen because of the significant increase in publications. Moreover, this helps provide an up-to-date analysis of current trends related to the research question.

To represent the results visually, strategic diagrams were used to present thematic areas in the field that indicate a conceptual evolution. In this way, a two-dimensional strategic diagram was generated by showing the discovered cluster (Callon et al. 1991). The x-axis measures the cluster centrality (using Callon's Centrality index), understood as the relevance degree of a research theme, while the y-axis measures the cluster density (development degree of a specific theme). Centrality is a concept that describes the extent of the interrelationships of the analyzed network. The research problem is considered more important by the research community if the network has stronger connections with other networks. A theme with high centrality is a strategically important pillar of the discipline and fundamental for anyone who wants to interact with the field. The density corresponds to the extent of the intrarelationship of the connections within the network (clusters). The research problem becomes more integrated and coherent as the connections grow stronger because the density is calculated by dividing the sum of the keywords by the number of different keywords. If the density of a cluster is high, it means that the network has the capacity to self-perpetuate and develop over time.

In these spatial representations, themes are shown as circles, and their size indicates the number of documents that are linked with them. The circle is additionally labeled with three keywords that feature the highest level of centrality of the associated theme (most co-occurrences). The topics, represented as a circle, are then plotted in a two-axis diagram and can be divided into four topics according to their position (Cobo et al. 2011):

- (1) Motor themes: Located in the upper right quadrant, they are themes that are considered well developed and significant to the structure of a research area. They are themes that represent a high level of density and centrality.
- (2) Basic and transversal themes: These themes are positioned in the lower right quadrant and are valued for a field of research due to their quality of interrelationships. However, they are internally weakly developed.
- (3) Emerging or declining themes: These themes are in the lower left quadrant and are regarded as poorly or slightly developed. Low density and low centrality characterize the themes in this quadrant.
- (4) Niche themes: These themes are located in the upper left quadrant and are regarded as well-developed because of the high quality of intrarelationshps. However, niche themes are of low importance to the scientific area due to their low centrality.

3 Results

This section shows the evolution of the main themes of sport entrepreneurship, innovation, and creativity in sport management divided into three subperiods: (1) 2000–2011, (2) 2012–2020, and (3) 2021–2022. First, the evolution of the main themes is shown globally (see Fig. 2), and second, the thematic analysis is deepened in each of the abovementioned subperiods through strategic diagrams (see Figs. 3, 4, 5). The strategic diagrams (Figs. 3, 4, 5) provide an overview of the subperiods, but as mentioned in the methodology section, only the articles associated with the main themes shown in Fig. 2 are subsequently analyzed and reviewed.

Figure 2 shows that the first articles (2000–2011) published in this research field dealt mainly with entrepreneurship. Subsequently, during the second subperiod (2012–2020), more attention is given to innovation, which becomes a large cluster, and new, more specific, and smaller themes appear within this research field, such as technology, entrepreneurial orientation, and social

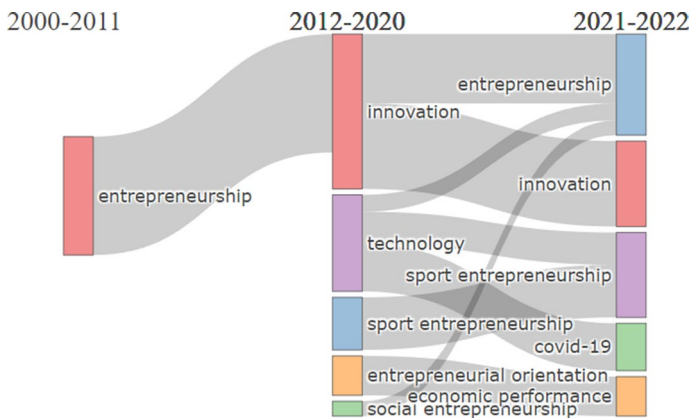


Fig. 2 Evolution diagram of the main themes

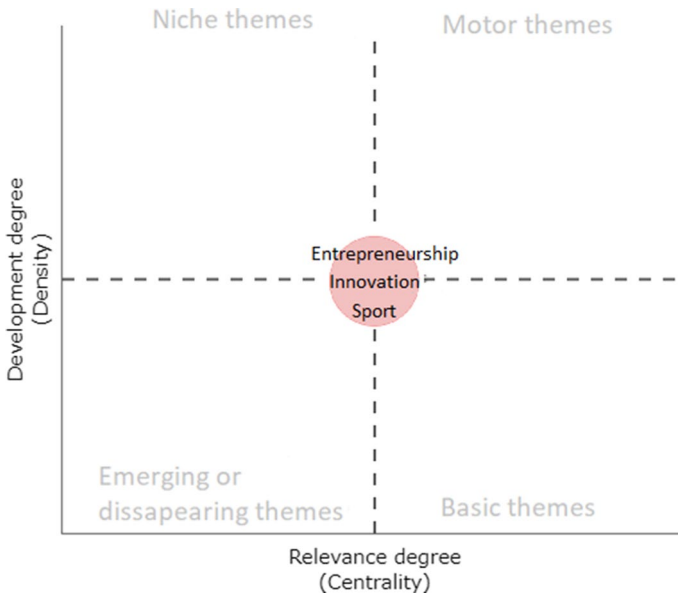


Fig. 3 Strategic diagram of generic thematic clusters in the subperiod 2000–2011

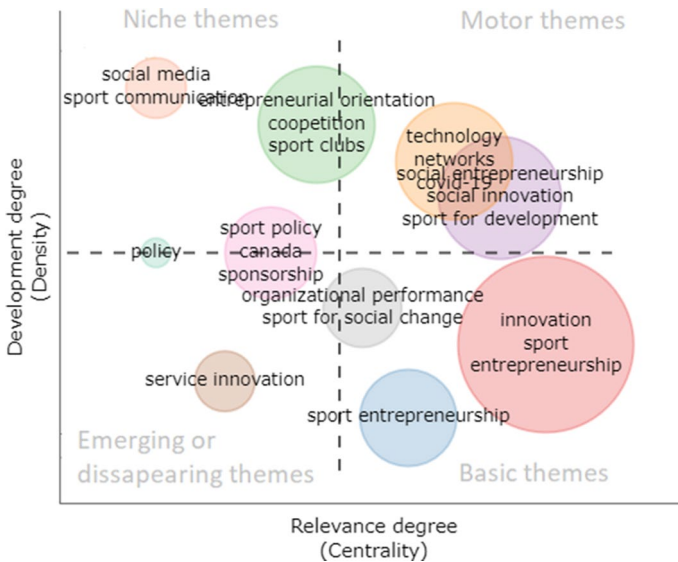


Fig. 4 Strategic diagram of generic thematic clusters in the subperiod 2012–2020

entrepreneurship. Finally, in the last subperiod (2021–2022), the themes in the innovation field diversify into innovation and entrepreneurship (larger clusters), and technology themes evolve into sport entrepreneurship and COVID-19. In

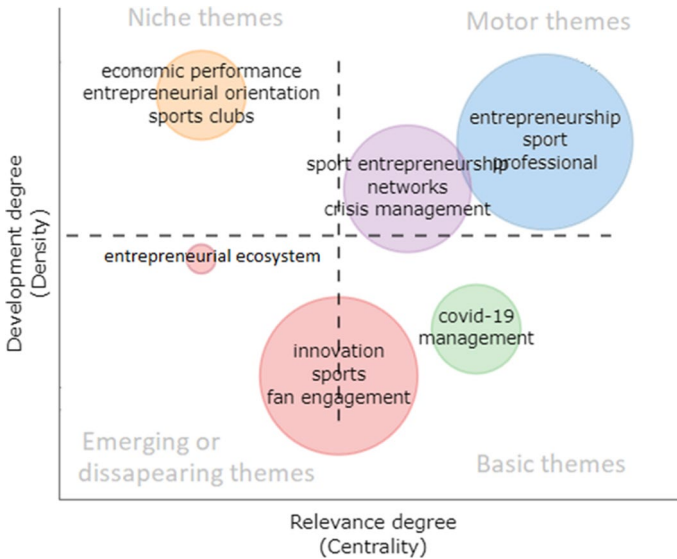


Fig. 5 Strategic diagram of generic thematic clusters in the subperiod 2021–2022

addition, the interest in entrepreneurial orientation evolves toward the analysis of economic performance. Finally, social entrepreneurship evolves toward entrepreneurship in general.

3.1 Subperiod 2000–2011: origins of the research field

From 2000 to 2011, studies on entrepreneurship and innovation in sport management focused mainly on the study of entrepreneurship and innovation in general terms. In total, this subperiod represents 8.40% of all articles analyzed and received a total of 702 citations. Only one generic cluster is found in this period, which is at a central point in terms of centrality and density (see Fig. 3).

This subperiod is, therefore, the beginning of the field of study of *entrepreneurship* and *innovation in sport*, in which the initial attempts to conceptualize this phenomenon occurred. Of particular note are the articles by Ratten (2010, 2011), in which the author lays the foundations for the concept and theory for studying sport entrepreneurship. These articles were the first to emphasize the importance of an integrated approach toward entrepreneurship in sport for understanding sport management. The author suggested that sport entrepreneurship is based on behaviors characterized by innovation, creativity, and risk-taking always in the sport context (Ratten 2011). These articles provide a theoretical foundation for the concept of sport entrepreneurship; however, they are literature-based and yet not supported by evidence.

3.2 Subperiod 2012–2020: development of the research field

In the next subperiod, from 2012 to 2020, the themes of the research field begin to diversify (10 thematic clusters) and position themselves in different quadrants (see Fig. 4). As seen in Fig. 2, the main themes and therefore drivers of the subperiod were *innovation*, *technology*, *sport entrepreneurship*, *entrepreneurial orientation*, and *social entrepreneurship*. In this subperiod, 57.25% of the publications in this field of study were published, and they have received a total of 1208 citations.

3.2.1 Innovation

Upon analyzing the articles, it is evident that the thematic blocks of *innovation* and *sport entrepreneurship* lack specificity and depth, which can also be seen in their low degree of development. The articles in these blocks tend to be generic and broad in nature, making it difficult to categorize them under specific themes. Specifically, the theme of sport entrepreneurship stands out as it features only one dominant keyword—sport entrepreneurship—with limited recurring keywords. As a result, a wide range of sport entrepreneurship articles is covered under this block, making it challenging to discern specific trends and patterns. This lack of specificity and depth in the literature presents an opportunity for future research to delve deeper into these thematic blocks and identify specific subthemes that can be further explored.

The articles in the innovation cluster cover a variety of themes in sport management and entrepreneurship. One of the main insights from these articles is that sport entrepreneurship is an emerging field of research that requires further methodological strategies to understand its major research trends and developments (González-Serrano et al. 2020). Studies have found that innovation is crucial for the success of community sport organizations (Hoerber et al. 2015; Winand et al. 2016) and outdoor sports (Boutroy et al. 2015; Duret and Angué, 2015), particularly in today's globalized, technology-focused and market-driven environment (Petrović et al. 2015; Tjønnedal 2017). Factors such as a clear vision, effective work processes, and social interactions among employees have been shown to influence organizational creativity (Smith and Green 2020). Other studies have explored the challenges of managing institutional pluralism when establishing a new professional sport league (Nite et al. 2020). The findings from these articles suggest that sport entrepreneurship faces unique challenges due to oligarchical league structures, isomorphic and hypertraditional cultures, hierarchical organizational structures, and institutional infrastructure (Nite et al. 2020; Smith and Green 2020). To overcome these barriers, sport entrepreneurs can employ design thinking approaches that emphasize user feedback, diversity of perspectives, and a bias toward action (Joachim et al. 2020).

3.2.2 Sport entrepreneurship

Sport entrepreneurship is an emerging field of research in this subperiod and has received increasing attention. Research has highlighted how sportspeople exhibit higher levels of entrepreneurial orientation and intention compared to the

general population and how sport-related entrepreneurial ventures can positively impact community development (Pellegrini et al. 2020). Additionally, to guide the development of inclusion-driven strategic management, planning, and practice in sport organizations, researchers have developed an entrepreneurial business approach called the Universal Transformational Management Framework (UTMF) (Yélamos et al. 2019). However, this literature is still fragmented and lacks proper systematization, making it difficult to identify its intellectual structure and research themes. Pellegrini et al. (2020) conducted a bibliometric analysis and systematic literature review to address these structural issues in the field. The study revealed that research on sport entrepreneurship can be categorized into four clusters: theoretical definitions and internal factors, environmental factors, pedagogical approaches and education, and the impact on community development and social benefits. Finally, there has been an exploration of religious aspects in sport entrepreneurship, highlighting the potential for sport to provide meaning and physical activity beyond the material realm (Toledano 2020).

3.2.3 Technology, networks, and the COVID-19 pandemic

During this subperiod, new themes emerged in the technology cluster, such as *networks* and *COVID-19*, which became motor themes in this area of study. Within this cluster, several articles have focused on how a breakthrough in rethinking the introduction of technological innovations in sport occurred during the COVID-19 pandemic (Majumdar and Naha 2020). Specifically, this need was highlighted during the COVID-19 pandemic for the entire sport industry (managers, coaches, fans, etc.) to make use of entrepreneurial thinking and technological innovations to act creatively (Ratten 2020). In addition, it also served as a starting point to rethink how to improve fan engagement at sporting events, even for those who are not at the event on-site, through the use of technology (Majumdar and Naha 2020). In the same vein, Miragaia et al. (2019) identified the use of technology for enhancing fan engagement as a possible solution to improve the control of the sport clubs of their financial resources due to their positive relationship to sport performance. Thus, investment in recent years by companies in technology to improve processes and establish alliances and networking has increased (Hayduk and Newland 2020), as investment in digital media and the esports industry is beginning to emerge (Hayduk and Walker 2018). Likewise, technology has also been useful in establishing partnerships and networking between sport entrepreneurs and investors (Hayduk and Newland 2020).

3.2.4 Entrepreneurial orientation

In terms of niche themes, keywords such as *entrepreneurial orientation* and *coopetition* are found with a medium degree of development, high levels of centrality, and medium levels of relevance. In the coming years, this theme could either consolidate as a niche theme or evolve into a driving theme. During this subperiod, several articles have shown how entrepreneurial orientation in sport clubs can positively affect their performance (Hammerschmidt et al. 2020; Núñez-Pomar

et al. 2020, 2016; Radaelli et al. 2018). Entrepreneurial orientation has become a well-developed niche theme but may become a motor theme in the future due to its position within the quadrant.

3.2.5 Social entrepreneurship and sport for development

The social entrepreneurship cluster, with additional keywords such as *social innovation* and *sport for development*, became another motor theme during this subperiod. Within this cluster, several articles have focused on the understanding of social innovation in sport for development (SFD) organizations (Svensson and Hambrick 2019; Svensson and Mahoney 2020; Svensson and Seifried 2017; Webb et al. 2019). SFD organizations can be organized in a variety of legal structures, but leaders of SFDs have the common feature that they employ different and innovative strategies to manage the distinct internal mechanisms of SFDs to achieve sustainable organizational development and social impact (Svensson and Seifried 2017). Furthermore, to facilitate social innovation in organizations, evidence demonstrates the importance of both the internal aspects of the organization (culture, leadership, paid staff, organizational infrastructure, and financial resources) (Svensson and Mahoney 2020) and the importance of external aspects related to the collaboration and interaction of stakeholders (Svensson and Hambrick 2019).

From another perspective, articles have focused on the social entrepreneur and his or her motivations for becoming a social entrepreneur in sport that drive his or her social value proposition (Cohen and Peachey 2015). Likewise, entrepreneurs in the small business fitness industry have been categorized as social entrepreneurs due to their “desire to help others through body betterment” and to offer their services in a “safe and stimulating social environment” (Hemme et al. 2017, p. 10). However, there are still few articles published on social entrepreneurship in sport, and there is no common definition of this phenomenon (Bjärsholm 2017).

3.2.6 Underdeveloped and weakly interrelated themes

The cluster of *organizational performance* and *sport for social change* has a high density and low centrality, indicating the potential for either consolidation or disappearance in the near future. Similarly, the theme of *social media* and *sport communication* has a small degree of development. The cluster of *service innovation* is an emerging theme that could either become a core theme or disappear. Finally, the *policy* and *sport policy* and *sponsorship* clusters are located at the intersection of the lower and upper left quadrants, indicating the need for further analysis in the future to determine their development as niche themes or disappearing themes.

3.3 Subperiod 2021–2022: latest trends in the research field

Finally, in the subperiod from 2021 to 2022, 34.35% of the scientific production of this field of study is concentrated, which has received 158 citations. As seen in

Fig. 5, in this last year, sport entrepreneurship is a field of study that has evolved to become a driving theme, also largely developed by the size of the cluster.

3.3.1 Entrepreneurship literature in sport gaining conceptual clarity

The literature on entrepreneurship has increased in terms of density and centrality for several reasons. One reason is the increasing recognition of entrepreneurship as a critical driver of economic impact. For instance, the COVID-19 pandemic has highlighted the need for professional sport clubs to develop entrepreneurial strategies to cope with crises, which may require greater managerial and financial skills (Hammerschmidt et al. 2021). In addition, corporate initiatives can create a lasting economic and social impact if strategically managed through entrepreneurial approaches (Schyvinck et al. 2021).

Another factor is emerging research discussing the capacities of the connected processes associated with starting an entrepreneurial initiative and managing a professional athlete's career (Hindle et al. 2021). Additionally, there is growing interest in how athletes can drive entrepreneurship and social change; however, formal support for athletes who wish to venture into entrepreneurial activities is limited (Moustakas and Kalina 2021). A promising strategy to support the successful entrepreneurial transition of former athletes is to gain work experience through a dual career, especially during the last year of their active athletic careers (Ramos et al. 2022). In addition, in the subject area of entrepreneurship, there has recently been a general increase in empirical studies, and this can be another factor that positively influences the conceptual development of the theme.

The situation is the opposite with articles on the cluster *sport entrepreneurship*, which has evolved out of the *innovation* cluster. The theme has developed and gained density but has lost centrality. One reason for this may be that the articles in this theme area continue to be predominantly theory-based and therefore, in this stadium of the research field, contribute only to a limited extent to further development and a deeper understanding.

3.3.2 Innovation and fan engagement

The theme of fan engagement is an emerging area of research within the literature regarding innovation in sports. The literature seeks to understand how innovation affects fans' experiences, preferences, emotions, and behaviors and what implications these may have for sport leagues, teams, and marketers. The use of technology such as decision-aiding tools (Winand et al. 2021) and complementary digital experiences (CDXs) is being explored to improve the fan experience (Yuksel et al. 2021). However, it is also important to consider the potential drawbacks and negative outcomes of these innovations, such as the impact of legal sports betting on fan engagement (Blank et al. 2021). Additionally, the development of "smart" stadiums is influencing sport innovation, but it remains unclear how it may affect discussions on big data in sports (Yang and Cole 2022). Overall, understanding "fans' preferences toward technology in sports and the importance of debate for fandom identity" (p.99) is crucial in implementing

effective innovations that enhance fan engagement but also poses challenges and risks that need to be carefully considered and managed (Winand et al. 2021).

3.3.3 The COVID-19 pandemic and management

The theme of the COVID-19 pandemic and management describes the importance of innovation in addressing crises within the sport industry. Due to the position it occupies, the cluster may either become a motor theme in the coming years or disappear. In particular, two studies are mentioned. The first study, conducted by Crespo Celda et al. (2022), emphasizes the need for a more innovative mindset among tennis federations in Latin America to address future crises. The second study by Hayton (2022) highlights the significance of utilizing a combination of digital and physical innovations in third sector sport organizations during the COVID-19 pandemic to enable physical sports practice for individuals with disabilities. These findings suggest that innovation can play a critical role in navigating crises within the sport industry.

3.3.4 Entrepreneurial orientation and economic performance

The literature on entrepreneurial orientation has retained its position within the field as a well-developed niche theme. Articles about entrepreneurial orientation in this subperiod suggest that the entrepreneurial orientation of sport club managers, as well as the size and sport level of the clubs, may be influential factors in economic performance. In particular, larger clubs with managers who had high levels of risk-taking and innovation were more likely to achieve high levels of economic and sporting performance (Escamilla-Fajardo et al. 2022). However, managers of professional sport clubs with high levels of proactivity were more likely to have higher economic performance than managers of amateur clubs (Escamilla-Fajardo et al. 2021).

4 Discussion

The research field of sport entrepreneurship has grown, evolved, and diversified greatly since its inception at the beginning of the twenty-first century. These findings are in line with previous studies that showed the growth experienced in the field of entrepreneurship (González-Serrano et al. 2020; Pellegrini et al. 2020), innovation (Ferreira et al. 2020), and creativity in sport (Fardilha and Allen, 2020). Our analysis shows that the field has progressively increased, especially recently, as proportionally, there were significantly more articles published in the short subperiod from 2021 to 2022 (34.35% of articles) than in the previous longer subperiod 2012–2020 (57.25% of articles).

4.1 Navigating thematic shifts in sport entrepreneurship

Although the analysis shows that most of the literature on sport entrepreneurship, innovation, and creativity is scattered and fragmented, there are themes within this substream of sport management that have emerged as a coherent research problem. Most notably, entrepreneurial orientation emerged as a strongly developed niche theme in the subperiods 2012–2020 and 2021–2022. The reasons for this can be suggested by Fig. 5, where the term "economic performance" takes the lead in the thematic cluster alongside "entrepreneurial orientation", showing how closely these areas are linked. Likewise, the content-focused literature analysis showed that the articles from this network use the theory of entrepreneurial orientation to determine whether this concept is suitable as a managerial strategy to develop the economic performance of sport clubs. The close linkage of the themes discussed in the entrepreneurial orientation/economic performance network has led to the emergence of a strong niche theme that can be useful as a model for the development of other themes.

The development of the "COVID-19" theme shows that the field has a distinct capacity to mobilize novel research trends. COVID-19 was still a subtheme in the technology cluster in the subperiod from 2012 to 2020, but it was possible to observe how the irruption of the COVID-19 pandemic generated increased attention. The article with the most citations in the 2021–2022 subperiod by Hammerschmidt et al. (2021) highlights the importance of sport entrepreneurship for professional sport clubs to survive the challenges of the COVID-19 crisis.

Although much attention was given to social entrepreneurship and sport for social change during the second subperiod, academics seem to have lost interest in the topic. This may be due to the lack of a common definition of this phenomenon and the fact that sports play a minor role in most published articles (Bjärsholm 2017). However, McSweeney (2020) points out that, within academia, social entrepreneurship is an emerging research stream that is increasing its focus on the sports field. There are several possible reasons why the concept of social entrepreneurship has lost attention in recent years in the field of sport entrepreneurship and innovation. One reason may be that social entrepreneurship has become a widely popularized and often misused term in various fields, leading to a dilution of its meaning and impact (Bjärsholm 2017). Another reason may be that the focus of sport management, in general, has shifted toward more commercial managerial strategies that prioritize profit over social and environmental impact (Ciomaga 2013; Gammelsæter 2021). Additionally, the lack of clear and consistent measurement frameworks for social impact in sport entrepreneurship may also contribute to the neglect of social entrepreneurship in this field (Rawhouser et al. 2019).

4.2 An integrated model: a new perspective on sport entrepreneurship, innovation, and creativity

The results of this analysis suggest that the sport management discipline should aim to further develop the field of sport entrepreneurship, creating a common thematic stream to strengthen the interconnections of the field and thus its integrity. This process can be supported by an integrated model of sport entrepreneurship. The integrated model is not limited to individual elements of sport entrepreneurship but includes all aspects and facets of sport entrepreneurship science. Similar to sport management in general (Hammerschmidt et al. 2023), sport entrepreneurship research can also benefit from a holistic approach, as the integrated model allows for an improved understanding of the relationships among the elements of the research.

The results of the bibliometric analysis indicate that the innovation cluster is the largest network in the literature studied in the 2012–2020 subperiod. This implies that sport entrepreneurship, as a theoretical concept overlapping innovation (Hughes and Morgan 2007; Kraus et al. 2012; Wiklund and Shepherd 2005), has played a disproportionate role in the sport management literature. This is also suggested by previous results within the literature since the number of articles on sport entrepreneurship fundamentally increased only after 2015 (González-Serrano et al. 2020), whereas innovation in sport had been discussed earlier and developed progressively, especially starting in 2010 (Ferreira et al. 2020).

However, our analysis shows that there was a change in these trends during the subperiod from 2021 to 2022, and that sport entrepreneurship has emerged as an overarching theme according to its theoretical basis, gaining large shares of the innovation network (see Fig. 2). It should also be noted that the analysis is based on the authors' keywords, and some articles have used the keyword "sport entrepreneurship", but some articles have used two keywords, namely, "sport" and "entrepreneurship". This can also be seen in Fig. 5, where "entrepreneurship" is the strongest keyword in the cluster, followed by the keyword "sport". This means that in the subperiod from 2021 to 2022, it is likely that the "entrepreneurship" and "sport entrepreneurship" clusters are closely linked, and if they are accordingly considered together, their dominance is considerably more significant.

In addition, in the subperiods 2012–2020 and 2021–2022, the combination of the keywords "entrepreneurship" and "sport" is superior to the keywords "sport entrepreneurship" in terms of size, centrality, and density. This is an additional indication that the concept of sport entrepreneurship, similar to sport management in general (Shilbury 2011b), lacks conceptual clarity thus far, and that research is scattered. An integrated model of sport entrepreneurship can provide a holistic approach that will contribute to a more coherent and comprehensive understanding of the fragmented research. A more focused framework of sport entrepreneurship will help to reduce the conceptual ambiguity surrounding the field, thereby facilitating its development and growth.

That the process toward an integrated model of sport entrepreneurship has likely already been initiated, however, can be surmised from the movements of social entrepreneurship toward the thematic network of entrepreneurship (see Fig. 2).

Social entrepreneurship focuses on creating social and environmental impact alongside economic returns (Bjärsholm 2017), and this aligns with the growing demand for sustainable and socially responsible business practices in sport management (Gammelsæter 2021). Moreover, the field of sport can be a powerful platform for social entrepreneurship, as it can reach and engage a large audience and inspire positive social change (Svensson and Hambrick 2019). Sport entrepreneurs can leverage this platform to create innovative solutions that address social and environmental challenges while also creating economic value or pursuing the goal of winning (Hammerschmidt et al. 2022). From the perspective of an integrated model of sport entrepreneurship, social entrepreneurship should be included as a key component to address social and environmental issues while also promoting innovation and creativity in sport management Fig. 6.

5 Future lines of research

5.1 Prospects for progress: future research directions based on the integrated model of sport entrepreneurship

The integrated model is a guiding framework that unites the various aspects of sport entrepreneurship. By integrating different viewpoints, this model achieves conceptual clarity, methodological synergy, and the possibility for sustained growth. Both researchers and practitioners are equipped with renewed cohesion to navigate the complex field of sport entrepreneurship, which allows the field to continue to

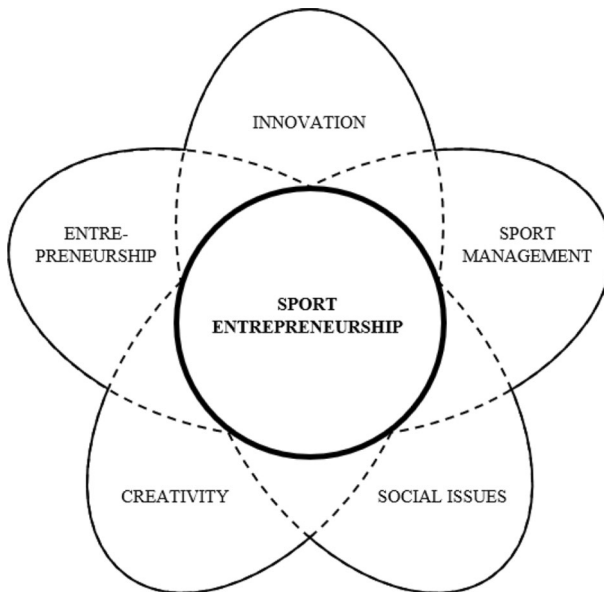


Fig. 6 Integrated model of sport entrepreneurship

progress. The integrated model of sport entrepreneurship opens up several promising avenues for future research, leading to a comprehensive exploration of the field's dynamic dimensions.

5.1.1 Cross-cultural contexts

Examining the application of the integrated model in diverse cultural and geographical settings can yield insights into how entrepreneurial innovation and creativity can be adapted to different sport management landscapes. Comparative studies can unearth contextual nuances that inform best practices and elucidate potential barriers to implementation.

5.1.2 Educational interventions

Researchers can assess the efficacy of educational initiatives designed to cultivate an entrepreneurial mindset and creative skills among sport management professionals. Investigating the impact of such interventions on fostering innovation, stimulating creativity, and aligning with sustainability goals can provide insights into enhancing the capabilities of future sport entrepreneurs. Building upon the insights synthesized from this model, researchers can delve into nuanced areas that can enrich our understanding and inform practical strategies within sport management.

5.1.3 Stakeholder interventions

An essential exploration pertains to how various stakeholders, such as athletes, fans, governing bodies, and sponsors, interact within the context of the integrated model. Understanding the expectations, motivations, and collaborative potential of these stakeholders can guide the formulation of entrepreneurial strategies that maximize value creation across the sport ecosystem.

5.1.4 Causal relationships

Researchers can employ longitudinal studies and experimental designs to uncover causal relationships among the elements of the integrated model. By establishing causal linkages, scholars can provide evidence-based guidance to practitioners on how to leverage entrepreneurship, innovation, and creativity to drive desired outcomes.

5.1.5 Policy and regulation

Delving into the policy and regulatory landscape surrounding sport entrepreneurship, innovation, and creativity can provide insights on the enabling conditions or barriers. Such research can inform the development of frameworks that facilitate entrepreneurial initiatives while aligning with broader societal goals.

In summary, the integrated model of sport entrepreneurship paves the way for various research inquiries. These lines of exploration hold the potential to not only

advance theoretical coherence but also empower sport management practitioners to leverage a holistic understanding for effective decision-making and sustainable growth in the dynamic landscape of sport entrepreneurship.

5.2 Addressing the lack of research on creativity

While there has been a significant amount of research on innovation and entrepreneurship in sport management, creativity remains an underexplored area of study. According to Kim et al. (2023), the sport management literature lacks research that specifically focuses on the creativity of individuals. This is surprising, given that creativity is a crucial enabler of innovation in sport and therefore, in sport entrepreneurship. There are several possible reasons for the lack of research on creativity in the field of sport entrepreneurship and innovation. One reason could be, similar to social impact in sports, that creativity is often considered a difficult construct to define and measure, which makes it challenging to study empirically (Fardilha & Allen, 2020). Additionally, there may be a perception that creativity is a more abstract concept compared to innovation and entrepreneurship, which could make it less appealing to researchers. Another possible reason could be the focus on practicality and efficiency in the sport industry (Gammelsæter 2021), which may discourage experimentation and risk-taking, leading to a lack of emphasis on creativity. However, it is essential to recognize that creativity is not just about generating new ideas but also about applying them effectively in practice (Fillis and Rentschler 2010). The lack of research on creativity in the field of sport entrepreneurship and innovation represents a significant gap in our understanding of how innovation can be fostered in sport management. More research is needed to identify the factors that contribute to creativity in sport management (Fardilha & Allen, 2020), as well as how creativity can be fostered and supported in sport entrepreneurship and innovation.

5.3 Uncharted sustainability dynamics in sport entrepreneurship research

In addition, the intersection between sport entrepreneurship and sustainability has received limited attention in research. The integration of sustainability into sport entrepreneurship is a relatively new area of inquiry that has been underexplored in the literature. While there is growing recognition of the importance of sustainable business practices in sport, little is known about how sport entrepreneurs engage with sustainability issues and how they incorporate these issues into their managerial strategies and practices.

One possible reason for this limited research is the perception that sustainability may not be a key concern for sport entrepreneurs. Additionally, there may be a lack of understanding of how sustainability can be integrated into the managerial strategies and practices of sport entrepreneurs, as well as a lack of knowledge about the potential benefits of such integration. The integrated model of sport entrepreneurship invites researchers to investigate how sustainability factors can be seamlessly integrated into sports entrepreneurship. Delving into case studies

and empirical analysis, scholars can discern strategies that effectively integrate sustainable practices without compromising innovation and entrepreneurship, thereby fostering socially responsible and environmentally conscious sport ventures.

The complexities of sport management, with its multiple stakeholders and unique cultural and social contexts (Smith and Stewart 2010), make it difficult to develop standardized metrics and tools for assessing sustainability performance. Overall, while there is growing recognition of the importance of sustainability in professional sports (Miragaia et al. 2019), there remains a need for more research to better understand how sport entrepreneurs can effectively incorporate sustainability and the potential benefits and challenges associated with doing so.

5.4 The under investigated role of the sport entrepreneur

Despite the increasing interest in sport entrepreneurship, there is a lack of research that specifically investigates the performance of sport entrepreneurs in the business realm. Existing studies have mainly focused on the characteristics and motivations of sport entrepreneurs (Ramos et al. 2022; Winand et al. 2023), as well as the challenges they face in the sport industry (Goxe and Viala 2010; Parris et al. 2014). However, the specific individual factors that contribute to the success or failure of sport entrepreneurial ventures have not been thoroughly examined. This lack of research on the performance of sport entrepreneurs in sport management is unexpected, given the unique nature of sport and the potential impact of sport entrepreneurship on value creation (Escamilla-Fajardo et al. 2022; Hammerschmidt et al. 2020). In light of challenges such as the COVID-19 pandemic, exploring how sport entrepreneurs leverage innovation and creativity to navigate crises and adapt their strategies offers valuable insights (Hammerschmidt et al. 2021). Understanding the role of resilience building within the integrated model can contribute to developing robust entrepreneurial strategies that withstand disruptions.

Furthermore, given the increasing popularity and commercialization of sports (Ciomaga 2013), it is essential to understand the factors that drive the success of sport entrepreneurial initiatives. Such knowledge could inform policies and strategies to support sport entrepreneurship and enhance the sustainability of sport management organizations. Therefore, research on the sport entrepreneur as an individual could identify the key factors that contribute to the success of sport entrepreneurial ventures, including the role of personal and situational factors, entrepreneurial strategies and practices, and industry-specific factors.

6 Limitations

Finally, several limitations must be mentioned. Depending on the database used, the conclusions of bibliometric analyses can differ (Mongeon and Paul-Hus 2016). Therefore, future studies should use other databases (e.g., Scopus, SPORTDiscus, Google Scholar, etc.) and replicate this study to see if the results are similar. In addition, as in all bibliometric studies, the keywords used to limit

the search results may have an impact by excluding some papers on the theme (Terán-Yépez et al. 2020). The titles given by authors to their articles may influence the documents retrieved by the search string. However, we consider this to be unlikely and assume that if this is the case, it affects very few documents. Accordingly, we are confident that the globality and validity of the results are not affected in this study.

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References

- Amabile TM (1988) A model of creativity and innovation in organizations. *Res Organ Behavior* 10(1):123–167
- Aria M, Cuccurullo C (2017) bibliometrix: An R-tool for comprehensive science mapping analysis. *J Informet* 11(4):959–975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Ayazi M, Toraji F, Esmaili MR, Zarei A (2015) Development and validity of the test of entrepreneurial behavior scale in sport's SMEs in Tehran. *Int J Biol Pharm Allied Sci* 4(11):899–911
- Ball S (2005) The importance of entrepreneurship to hospitality, leisure, sport and tourism. *Hosp Leis Sport Tour Netw* 1(1):1–14
- Barnhill CR, Smith NL (2019) Psychological contract fulfilment and innovative work behaviours of employees in sport-based SBEs: the mediating role of organisational citizenship. *Int J Sport Manag Mark* 19(1/2):106–128. <https://doi.org/10.1504/IJSMM.2019.097020>
- Bjärsholm D (2017) Sport and social entrepreneurship: a review of a concept in progress. *J Sport Manag* 31(2):191–206. <https://doi.org/10.1123/jsm.2017-0007>
- Blank AS, Loveland KE, Houghton DM (2021) Game changing innovation or bad beat? How sports betting can reduce fan engagement. *J Bus Res* 134:365–374. <https://doi.org/10.1016/j.jbusres.2021.05.036>
- Blondel VD, Guillaume J-L, Lambiotte R, Lefebvre E (2008) Fast unfolding of communities in large networks. *J Stat Mech Theory Exp* 2008(10):P10008. <https://doi.org/10.1088/1742-5468/2008/10/P10008>
- Boutroy E, Vignal B, Soulé B (2015) Innovation theories applied to the outdoor sports sector: panorama and perspectives. *Soc Leis* 38(3):383–398. <https://doi.org/10.1080/07053436.2015.1083755>
- Callon M, Courtial J-P, Laville F (1991) Co-word analysis as a tool for describing the network of interactions between basic and technological research: the case of polymer chemistry. *Scientometrics* 22(1):155–205. <https://doi.org/10.1007/BF02019280>
- Chiu W, Cho H, Won D (2023) The knowledge structure of corporate social responsibility in sport management: a retrospective bibliometric analysis. *Int J Sports Mark Spons* 24(4):771–792. <https://doi.org/10.1108/ijms-09-2022-0178>
- Ciomaga B (2013) Sport management: a bibliometric study on central themes and trends. *Eur Sport Manag Q* 13(5):557–578. <https://doi.org/10.1080/16184742.2013.838283>

- Cobo MJ, López-Herrera AG, Herrera-Viedma E, Herrera F (2011) An approach for detecting, quantifying, and visualizing the evolution of a research field: a practical application to the fuzzy sets theory field. *J Informet* 5(1):146–166. <https://doi.org/10.1016/j.joi.2010.10.002>
- Cohen A, Peachey JW (2015) The making of a social entrepreneur: from participant to cause champion within a sport-for-development context. *Sport Manag Rev* 18(1):111–125. <https://doi.org/10.1016/j.smr.2014.04.002>
- Crespo Celda M, Botella-Carrubi D, Jabaloyes J, Simón-Moya V (2022) Innovation strategies in sports management: COVID-19 and the Latin American tennis federations. *Acad Rev Latinoam De Adm* 35(2):239–256. <https://doi.org/10.1108/ARLA-07-2021-0136>
- DiLiello TC, Houghton JD (2008) Creative potential and practised creativity: Identifying untapped creativity in organizations. *Creat Innov Manag* 17(1):37–46. <https://doi.org/10.1111/j.1467-8691.2007.00464.x>
- Duret P, Angué K (2015) Two norms for innovation in outdoor sports: technical and social innovation. *Soc Leis* 38(3):372–382. <https://doi.org/10.1080/07053436.2015.1083756>
- Escamilla-Fajardo P, Núñez-Pomar JM, Calabuig F, Gómez-Tafalla A (2020a) Effects of the COVID-19 pandemic on sports entrepreneurship. *Sustainability* 12(20):8493. <https://doi.org/10.3390/su12208493>
- Escamilla-Fajardo P, Núñez-Pomar JM, Ratten V, Crespo Hervás J (2020b) Entrepreneurship and innovation in soccer: web of science bibliometric analysis. *Sustainability* 12(11):4499. <https://doi.org/10.3390/su12114499>
- Escamilla-Fajardo P, Núñez-Pomar JM, Prado-Gascó V (2021) Economic performance in Spanish sports clubs: entrepreneurial orientation of professional and non-professional teams analysed through fsQCA. *Eur J Int Manag* 15(2–3):214–230. <https://doi.org/10.1504/EJIM.2021.113240>
- Escamilla-Fajardo P, Núñez-Pomar JM, Calabuig F (2022) Does size matter? Entrepreneurial orientation and performance in Spanish sports clubs. *Sport Soc* 25(8):1565–1583. <https://doi.org/10.1080/17430437.2021.1882424>
- Fardilha FdS, Allen JB (2020) Defining, assessing, and developing creativity in sport: systematic narrative review. *Int Rev Sport Exerc Psychol* 13(1):104–127. <https://doi.org/10.1080/1750984X.2019.1616315>
- Ferreira JJ, Fernandes C, Ratten V, Miragaia D (2020) Sports innovation: a bibliometric study. In: *Sport entrepreneurship and public policy*. Springer, Germany, pp 153–170. https://doi.org/10.1007/978-3-030-29458-8_10
- Fillis I, Rentschler R (2010) The role of creativity in entrepreneurship. *J Enterp Cult* 18(01):49–81. <https://doi.org/10.1142/S0218495810000501>
- Gammelsæter H (2021) Sport is not industry: bringing sport back to sport management. *Eur Sport Manag Q* 21(2):257–279. <https://doi.org/10.1080/16184742.2020.1741013>
- Gan Y-N, Li D-D, Robinson N, Liu J-P (2022) Practical guidance on bibliometric analysis and mapping knowledge domains methodology—a summary. *Eur J Integr Med* 56:102203. <https://doi.org/10.1016/j.eujim.2022.102203>
- González-Serrano MH, Crespo Hervás J, Pérez-Campos C, Calabuig F (2017) The importance of developing the entrepreneurial capacities in sport sciences university students. *Int J Sport Policy Politics* 9(4):625–640. <https://doi.org/10.1080/19406940.2017.1316762>
- González-Serrano MH, Jones P, Llanos-Contrera O (2020) An overview of sport entrepreneurship field: a bibliometric analysis of the articles published in the Web of Science. *Sport Soc* 23(2):296–314. <https://doi.org/10.1080/17430437.2019.1607307>
- Goxe F, Viala C (2010) The entrepreneurial capacities of retiring athletes: Personal and social factors among French champions. EURAM (European Academy of Management) conference, Rome, Italy
- Hammerschmidt J, Eggers F, Kraus S, Jones P, Filser M (2020) Entrepreneurial orientation in sports entrepreneurship—a mixed methods analysis of professional soccer clubs in the German-speaking countries. *Int Entrep Manag J* 16(3):839–857. <https://doi.org/10.1007/s11365-019-00594-5>
- Hammerschmidt J, Durst S, Kraus S, Puimalainen K (2021) Professional football clubs and empirical evidence from the COVID-19 crisis: time for sport entrepreneurship? *Technol Forecast Soc Chang* 165:120572. <https://doi.org/10.1016/j.techfore.2021.120572>
- Hammerschmidt J, Kraus S, Jones P (2022) Sport entrepreneurship: definition and conceptualization. *J Small Bus Strategy* 32(2):1–10. <https://doi.org/10.53703/001c.31718>
- Hammerschmidt J, Calabuig F, Kraus S, Uhrich S (2023) Tracing the state of sport management research: a bibliometric analysis. *Manag Rev Q*. <https://doi.org/10.1007/s11301-023-00331-x>

- Hayduk T, Newland B (2020) Signalling expertise in sport entrepreneurship: a mixed-methods approach using topic modeling and thematic analysis. *J App Sport Manag* 12(1):2. <https://doi.org/10.7290/jasm120102>
- Hayduk T, Walker M (2018) Mapping the strategic factor market for sport entrepreneurship. *Int Entrep Manag J* 14(3):705–724. <https://doi.org/10.1007/s11365-017-0482-3>
- Hayton JW (2022) Facilitating disability sport and physical recreation during the initial months of COVID-19: examining organizational innovation in third sector organizations. *Leis Sci*. <https://doi.org/10.1080/01490400.2021.2023373>
- Hemme F, Morais DG, Bowers MT, Todd JS (2017) Extending sport-based entrepreneurship theory through phenomenological inquiry. *Sport Manag Rev* 20(1):92–104. <https://doi.org/10.1016/j.smr.2016.07.005>
- Hindle K, Viala C, Hammerschmidt J, Kraus S, Jones P, Calabuig F (2021) Converting sporting capacity to entrepreneurial capacity: a process perspective. *Eur J Int Manag* 15:197–213. <https://doi.org/10.1504/EJIM.2021.10029617>
- Hoerber L, Hoerber O (2012) Determinants of an innovation process: a case study of technological innovation in a community sport organization. *J Sport Manag* 26(3):213–223. <https://doi.org/10.1123/jsm.26.3.213>
- Hoerber L, Doherty A, Hoerber O, Wolfe R (2015) The nature of innovation in community sport organizations. *Eur Sport Manag Q* 15(5):518–534. <https://doi.org/10.1080/16184742.2015.1085070>
- Hughes M, Morgan RE (2007) Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. *Ind Mark Manag* 36(5):651–661. <https://doi.org/10.1016/j.indmarman.2006.04.003>
- Joachim G, Schülenkorf N, Schlenker K, Frawley S (2020) Design thinking and sport for development: Enhancing organizational innovation. *Manag Sport Leis* 25(3):175–202. <https://doi.org/10.1080/23750472.2019.1611471>
- Jones P, Jones A (2014) Attitudes of sports development and sports management undergraduate students towards entrepreneurship: a university perspective towards best practice. *Educ+ Train* 56(8/9):716–732. <https://doi.org/10.1108/et-06-2014-0060>
- Kim M, Oja BD, Anagnostopoulos C (2023) An expanded psychological capital (A-HERO) construct for creativity: building a competitive advantage for sport organisations. *Eur Sport Manag Q* 23(3):722–744. <https://doi.org/10.1080/16184742.2021.1922480>
- Kraus S, Rigtering JPC, Hughes M, Hosman V (2012) Entrepreneurial orientation and the business performance of SMEs: a quantitative study from the Netherlands. *RMS* 6(2):161–182. <https://doi.org/10.1007/s11846-011-0062-9>
- Kraus S, Breier M, Dasí-Rodríguez S (2020) The art of crafting a systematic literature review in entrepreneurship research. *Int Entrep Manag J* 16(3):1023–1042. <https://doi.org/10.1007/s11365-020-00635-4>
- Kraus S, Bouncken RB, Görmar L, González-Serrano MH, Calabuig F (2022a) Coworking spaces and makerspaces: Mapping the state of research. *J Innov Knowl* 7(1):100161. <https://doi.org/10.1016/j.jik.2022.100161>
- Kraus S, Breier M, Lim WM, Dabić M, Kumar S, Kanbach D, Mukherjee D, Corvello V, Piñeiro-Chousa J, Liguori E (2022b) Literature reviews as independent studies: guidelines for academic practice. *RMS* 16(8):2577–2595. <https://doi.org/10.1007/s11846-022-00588-8>
- Lara-Bocanegra A, Bohorquez MR, Garcia-Fernandez J (2022) Innovation from sport's entrepreneurship and intrapreneurship: opportunities from a systematic review. *Int J Sports Market Spons* 23(5):863–880. <https://doi.org/10.1108/IJMSMS-12-2020-0212>
- Lenart-Gansiniec R, Czakon W, Sułkowski Ł, Pócek J (2023) Understanding crowdsourcing in science. *RMS* 17:2797–2830. <https://doi.org/10.1007/s11846-022-00602-z>
- Majumdar B, Naha S (2020) Live sport during the COVID-19 crisis: fans as creative broadcasters. *Sport Soc* 23(7):1091–1099. <https://doi.org/10.1080/17430437.2020.1776972>
- McSweeney MJ (2020) Returning the 'social' to social entrepreneurship: future possibilities of critically exploring sport for development and peace and social entrepreneurship. *Int Rev Sociol Sport* 55(1):3–21. <https://doi.org/10.1108/JEPP-D-18-00060>
- Miragaia D, Ferreira J, Carvalho A, Ratten V (2019) Interactions between financial efficiency and sports performance: data for a sustainable entrepreneurial approach of European professional football clubs. *J Entrep Public Policy* 8(1):84–102. <https://doi.org/10.1108/JEPP-D-18-00060>

- Moher D, Liberati A, Tetzlaff J, Altman DG, Group* P (2009) Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Ann Intern Med* 151(4):264–269. <https://doi.org/10.7326/0003-4819-151-4-200908180-00136>
- Mongeon P, Paul-Hus A (2016) The journal coverage of Web of Science and Scopus: a comparative analysis. *Scientometrics* 106(1):213–228. <https://doi.org/10.1007/s11192-015-1765-5>
- Moustakas L, Kalina L (2021) Sport and social entrepreneurship in Germany: exploring athlete perspectives on an emerging field. *World J Entrep Manag Sustain Dev* 17(3):550–559. <https://doi.org/10.1108/WJEMSD-06-2020-0069>
- Muñoz-Leiva F, Viedma-del-Jesús MI, Sánchez-Fernández J, López-Herrera AG (2012) An application of co-word analysis and bibliometric maps for detecting the most highlighting themes in the consumer behaviour research from a longitudinal perspective. *Qual Quant* 46(4):1077–1095. <https://doi.org/10.1007/s11135-011-9565-3>
- Nite C, McLeod CM, Beldon Z, Nauright J (2020) Establishing a professional Rugby Union Football League in the USA: managing institutional pluralism in sport entrepreneurship. *Sport Manag Rev* 23(5):883–897. <https://doi.org/10.1016/j.smr.2020.02.004>
- Núñez-Pomar JM, Prado-Gascó V, Añó Sanz V, Crespo Hervás J, Calabuig F (2016) Does size matter? Entrepreneurial orientation and performance in Spanish sports firms. *J Bus Res* 69(11):5336–5341. <https://doi.org/10.1016/j.jbusres.2016.04.134>
- Núñez-Pomar JM, Escamilla-Fajardo P, Prado-Gascó V (2020) Relationship between entrepreneurial orientation and social performance in Spanish sports clubs. The effect of the type of funding and the level of competition. *Int Entrep Manag J* 16:981–999. <https://doi.org/10.1007/s11365-020-00660-3>
- Olivier S (2006) Moral dilemmas of participation in dangerous leisure activities. *Leis Stud* 25(1):95–109. <https://doi.org/10.1080/02614360500284692>
- Paek B, Martyn J, Oja BD, Kim M, Larkins RJ (2022) Searching for sport employee creativity: a mixed-methods exploration. *Eur Sport Manag Quarterly* 22(4):483–505. <https://doi.org/10.1080/16184742.2020.1804429>
- Parris DL, Troilo ML, Bouchet A, Peachey JW (2014) Action sports athletes as entrepreneurs: female professional wakeboarders, sponsorship, and branding. *Sport Manag Rev* 17(4):530–545. <https://doi.org/10.1016/j.smr.2013.12.005>
- Pellegrini MM, Rialti R, Marzi G, Caputo A (2020) Sport entrepreneurship: a synthesis of existing literature and future perspectives. *Int Entrep Manag J* 16(3):795–826. <https://doi.org/10.1007/s11365-020-00650-5>
- Petrović LT, Milovanović D, Desbordes M (2015) Emerging technologies and sports events: innovative information and communication solutions. *Sport Bus Manag Int J* 5(2):175–190. <https://doi.org/10.1108/JEPP-08-2019-111>
- Pounder P (2019) Examining interconnectivity of entrepreneurship, innovation and sports policy framework. *J Entrep Public Policy* 8(4):483–499
- Radaelli G, Dell’Era C, Frattini F, Messeni Petruzzelli A (2018) Entrepreneurship and human capital in professional sport: a longitudinal analysis of the Italian soccer league. *Entrep Theory Pract* 42(1):70–93. <https://doi.org/10.1177/1042258717732957>
- Ramos AS, Hammerschmidt J, Ribeiro AS, Lima F, Kraus S (2022) Rethinking dual careers: success factors for career transition of professional football players and the role of sport entrepreneurship. *Int J Sports Mark Spns* 23(5):881–900. <https://doi.org/10.1108/IJSM-02-2021-0029>
- Ratten V (2010) Developing a theory of sport-based entrepreneurship. *J Manag Organ* 16(4):557–565. <https://doi.org/10.5172/jmo.2010.16.4.557>
- Ratten V (2011) Sport-based entrepreneurship: Towards a new theory of entrepreneurship and sport management. *Int Entrep Manag J* 7(1):57–69. <https://doi.org/10.1007/s11365-010-0138-z>
- Ratten V (2020) Coronavirus disease (COVID-19) and sport entrepreneurship. *Int J Entrep Behav Res* 26(6):1379–1388
- Rawhouser H, Cummings M, Newbert SL (2019) Social impact measurement: current approaches and future directions for social entrepreneurship research. *Entrep Theory Pract* 43(1):82–115. <https://doi.org/10.1177/104225871772771>
- Schynvink C, Babiak K, Constand B, Willem A (2021) What does entrepreneurship add to the understanding of corporate social responsibility management in sport? *J Sport Manag* 35(5):452–464. <https://doi.org/10.1123/jsm.2020-0356>
- Shilbury D (2011a) A bibliometric analysis of four sport management journals. *Sport Manag Rev* 14(4):434–452. <https://doi.org/10.1016/j.smr.2010.11.005>

- Shilbury D (2011b) A bibliometric study of citations to sport management and marketing journals. *J Sport Manag* 25(5):423–444. <https://doi.org/10.1123/jsm.25.5.423>
- Skute I (2019) Opening the black box of academic entrepreneurship: a bibliometric analysis. *Scientometrics* 120(1):237–265. <https://doi.org/10.1007/s11192-019-03116-w>
- Smith NL, Green BC (2020) Examining the factors influencing organizational creativity in professional sport organizations. *Sport Manag Rev* 23(5):992–1004. <https://doi.org/10.1016/j.smr.2020.02.003>
- Smith ACT, Stewart B (2010) The special features of sport: a critical revisit. *Sport Manag Rev* 13(1):1–13. <https://doi.org/10.1016/j.smr.2009.07.002>
- Svensson PG, Hambrick ME (2019) Exploring how external stakeholders shape social innovation in sport for development and peace. *Sport Manag Rev* 22(4):540–552. <https://doi.org/10.1016/j.smr.2018.07.002>
- Svensson PG, Mahoney TQ (2020) Intraorganizational conditions for social innovation in sport for development and peace. *Manag Sport and Leis* 25(3):220–238. <https://doi.org/10.1080/23750472.2020.1727358>
- Svensson PG, Seifried CS (2017) Navigating plurality in hybrid organizing: the case of sport for development and peace entrepreneurs. *J Sport Manag* 31(2):176–190. <https://doi.org/10.1123/jsm.2016-0129>
- Terán-Yépez E, Marín-Carrillo GM, del Pilar Casado Belmonte M, de las Mercedes Capobianco-Urriarte M (2020) Sustainable entrepreneurship: review of its evolution and new trends. *J Clean Prod* 252:119742. <https://doi.org/10.1016/j.jclepro.2019.119742>
- Thananusak T (2019) Science mapping of the knowledge base on sustainable entrepreneurship, 1996–2019. *Sustainability* 11(13):3565. <https://doi.org/10.3390/su11133565>
- Tjøndal A (2017) Sport innovation: developing a typology. *Eur J Sport Soc* 14(4):291–310. <https://doi.org/10.1080/16138171.2017.1421504>
- Toledano N (2020) Looking for god, meaning, physical fitness and beyond: the religious and spiritual space in sport entrepreneurship. *Int Entrep Manag J* 16(3):897–916. <https://doi.org/10.1007/s11365-019-00619-z>
- Torres RT, Carvalho J, Cunha MV, Serrano E, Palmeira JD, Fonseca C (2020) Temporal and geographical research trends of antimicrobial resistance in wildlife—a bibliometric analysis. *One Health* 11:100198. <https://doi.org/10.1016/j.onehlt.2020.100198>
- Van Nunen K, Li J, Reniers G, Ponnet K (2018) Bibliometric analysis of safety culture research. *Saf Sci* 108:248–258. <https://doi.org/10.1016/j.ssci.2017.08.011>
- Wang Y, Bai Y (2007) A corpus-based syntactic study of medical research article titles. *System* 35(3):388–399. <https://doi.org/10.1016/j.system.2007.01.005>
- Webb A, Richelieu A, Cloutier A (2019) From clipboards to annual reports: innovations in sport for development fact management. *Manag Sport Leis* 24(6):400–423. <https://doi.org/10.1080/23750472.2019.1684838>
- Wiklund J, Shepherd D (2005) Entrepreneurial orientation and small business performance: a configurational approach. *J Bus Ventur* 20(1):71–91. <https://doi.org/10.1016/j.jbusvent.2004.01.001>
- Winand M, Scheerder J, Vos S, Zintz T (2016) Do non-profit sport organisations innovate? Types and preferences of service innovation within regional sport federations. *Innovation* 18(3):289–308. <https://doi.org/10.1080/14479338.2016.1235985>
- Winand M, Schneiders C, Merten S, Marlier M (2021) Sports fans and innovation: an analysis of football fans' satisfaction with video assistant refereeing through social identity and argumentative theories. *J Bus Res* 136:99–109. <https://doi.org/10.1016/j.jbusres.2021.07.029>
- Winand M, Bell E, Zeimers G (2023) “It’s not just a job, it’s a passion”: passions and motivations of sport entrepreneurs. *Sport Bus Manag Int J* 13(3):269–288. <https://doi.org/10.1108/SBM-08-2021-0096>
- Yang C, Cole C (2022) Smart stadium as a laboratory of innovation: technology, sport, and datafied normalization of the fans. *Commun Sport* 10(2):374–389. <https://doi.org/10.1177/2167479520943579>
- Yélamos GM, Carty C, Moynihan Ú, Odwyer B (2019) The universal transformational management framework (UTMF): facilitating entrepreneurship in and through sport to leave no one behind. *J Entrep Public Policy* 8(1):122–146. <https://doi.org/10.1108/JEPP-D-18-00091>
- Yuksel M, Smith AN, Milne GR (2021) Fantasy sports and beyond: complementary digital experiences (CDXs) as innovations for enhancing fan experience. *J Bus Res* 134:143–155. <https://doi.org/10.1016/j.jbusres.2021.05.037>
- Zhang JJ, Kim E, Mastromartino B, Qian TY, Nauright J (2018) The sport industry in growing economies: critical issues and challenges. *Int J Sports Mark Spons* 19(2):110–126. <https://doi.org/10.1108/IJSM-03-2018-0023>

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