



Underdogs in the game: how sport start-ups navigate collaboration with external actors

Daniele Canini, Anne Tjørndal & Francesca Vicentini

To cite this article: Daniele Canini, Anne Tjørndal & Francesca Vicentini (23 Jun 2026): Underdogs in the game: how sport start-ups navigate collaboration with external actors, Sport Management Review, DOI: [10.1080/14413523.2026.2692226](https://doi.org/10.1080/14413523.2026.2692226)

To link to this article: <https://doi.org/10.1080/14413523.2026.2692226>



Published online: 23 Jun 2026.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)



Underdogs in the game: how sport start-ups navigate collaboration with external actors

Daniele Canini ^a, Anne Tjørndal ^b and Francesca Vicentini ^a

^aDepartment of Movement, Human and Health Sciences, University of Rome “Foro Italico”, Rome, Italy;

^bFaculty of Social Sciences, Nord University, Bodø, Norway

ABSTRACT

Start-ups have become important catalysts of innovation in sport. Despite their organizational agility and experimental capacity, sport start-ups remain constrained by scarce resources, low legitimacy, and limited access to innovation infrastructures, making it essential to understand how they engage in collaboration with external actors. This study examines how sport start-ups experience collaborative opportunities and interactions with established actors in their ecosystem. Theoretically, we draw on the open innovation literature in combination with theories of organizational learning. Methodologically, the study is based on qualitative interviews conducted between May and August 2025 with 15 executives of sport start-ups in Italy. Data were analyzed thematically through a collective qualitative analysis strategy. The findings demonstrate that collaboration with external actors is both necessary and risky for sport start-ups. Furthermore, the study shows that Italian sport start-up executives continually navigate power asymmetries as well as bureaucratic and institutional complexities in their interactions with external actors within their ecosystem. Collaborations therefore appear ambivalent for sport start-ups. While they are crucial for access to resources, skills and legitimacy, they are also a source of vulnerability if the relationship with the external actor is unbalanced or slowed down by institutional logic that is incompatible with the rapid pace that characterizes start-ups. This study indicates that meaningful analyses of open innovation in sport must consider the institutional complexities and bureaucratic constraints shaped by national innovation systems and national sport models.

KEYWORDS

Open innovation;
organizational learning;
exploration-exploitation;
innovation; institutional
complexity; institutional
logic

Introduction

Contrasting most sport organizations, start-ups represent catalysts of innovation in sport. Whereas established sport organizations are often described as traditionalistic and resistant to change (Canini & Tjørndal, 2025; Trabal, 2008; Uhlenndorf & Uhrich, 2024), start-ups draw on institutional agility and experimental capacity to develop technological and organizational change (Audretsch et al., 2021, 2023). Defined as temporary companies with the aim of developing scalable business models (Blank, 2010), start-ups are characterized by lean organizational structures and limited

resources. Although these characteristics make start-ups important drivers of sport innovation, they also expose them to limitations that more established sport entities do not encounter. As young and small firms, start-ups face disadvantages related to resource scarcity, low legitimacy and restricted access to innovation infrastructures. These conditions are known as liabilities of newness and smallness (Albano & Lubello, 2018; Carrasco-Carvajal et al., 2022). Taken together, these differences in innovative capacities and constraints demonstrate the necessity of examining how sport organizations and start-ups may effectively collaborate to overcome their respective constraints and generate sustained innovation in sport.

The relevance of this knowledge gap is bolstered by developmental trends of hybridization in sport (Gammelsæter, 2021; Lucassen & Bakker, 2016). Across international and national contexts, sport progressively spans leisure, health, non-profit organizations, public bodies, commercial enterprises, and professional teams. This hybridity produces fluid and interconnected organizational landscapes in which innovation becomes a strategic necessity for sport organizations seeking to sustain competitive advantage (Canini & Tjønndal, 2025). Yet, despite these developments, research offers limited insight into how sport start-ups experience and manage collaborative relationships with more established actors in their ecosystems. Little is known about how sport start-ups experience collaborations with public bodies, investors, universities, sports federations, clubs, fans and users. These are all stakeholders that shape both the opportunities and constraints for sport innovation.

From this starting point, this study aims to analyze how sport start-ups experience collaboration with external actors. Specifically, the following research question is examined: How do sport start-ups experience collaborative opportunities and interactions with established actors in their ecosystem? To explore this, we utilize qualitative interviews with executives in sport start-ups in Italy. Theoretically, we draw on literature on start-ups, Open Innovation (OI), Open Innovation Ecosystems (OIE), Organizational Learning, and Exploration-Exploitation. The article continues with a review of the literature on innovation and start-ups in sport, followed by an outline of our theoretical framework.

Literature review: innovation and start-ups in sport

To examine how sport start-ups experience collaborations with other actors in their ecosystem, we draw on two streams of research: (1) open innovation in sport and (2) sport start-ups.

Open innovation in sport

Innovation has been examined in a variety of empirical contexts in sport, including mega events (Hoff & Leopkey, 2025), sport governing bodies (Harris et al., 2020) and sport organizations (Von Schomberg et al., 2025). There is also a plethora of studies into different types of sport innovations (Tjønndal, 2021), such as social innovation (Harith et al., 2025; McSweeney et al., 2022; Svensson et al., 2019), technological innovation (Pizzo et al., 2021; Uhrich, 2021), organizational innovation (Corthouts et al., 2021), service innovation (Behnam et al., 2020) and open innovation (Delshab et al., 2022; Knaus & Merkle, 2020; Wemmer & Koenigstorfer,

2016). We regard studies on OI as the most relevant to our research question as they directly engage with the collaboration mechanisms central to our inquiry into sport start-ups.

In their study of attitudes towards OI and organizational performance of nonprofit sports clubs in Iran, Delshab and colleagues (2022) found that knowledge management could predict nonprofit sports clubs' organizational performance via their attitude toward innovation and innovativeness. In other words, knowledge management enabled nonprofit sport organizations to improve their innovative capacity through network building, collaborations and idea sharing. Based on their findings, Delshab et al. (2022) highlights the need for nonprofit sport organizations to put more effort into OI strategies. In another study, Wemmer & Koenigstorfer (2016) studied the impact of a coopetition-based OI approach on organizational performance of nonprofit sports clubs in Germany. Using structural equation modeling, they found that engaging in coopetitive relationships increases nonprofit sports clubs' use of external knowledge, which in turn leads to more implemented innovations and improved organizational performance. Clubs that actively collaborated with commercial fitness centers, educational institutions, other sports clubs, and related organizations benefited the most in terms of innovation implementation. Therefore, Wemmer and Koenigstorfer (2016) argued that nonprofit sport organizations should exploit and even expand their organizational boundaries to access diverse knowledge sources.

Knaus and Merkle (2020) report similar insights in their study of OI processes at the FIFA Museum. Drawing on interviews with museum managers, they demonstrate how sports organizations can generate competitive advantages by co-creating value with their fans. On this basis, they argue that fan involvement in a sports organization's OI activities should be embedded at a strategic level rather than treated as an operational add-on.

While the contributions of Knaus and Merkle (2020), Wemmer and Koenigstorfer (2016) and Delshab et al. (2022) are valuable and relevant for our work, they all focus on established sports organizations. The role of new entrepreneurial enterprises (such as start-ups) remains unexplored in OI research in sport. Established actors such as nonprofit sport organizations and institutional museums do not face the disadvantages that start-ups do, related to resource scarcity, lower legitimacy, and restricted access to innovation infrastructures. Hence, attitudes towards collaboration and the impact of engaging in OI strategies are likely to be different for nonprofit sport organizations and start-ups.

Sport start-ups

Sport start-ups can be described as new businesses that develop new products, services or business models related to sport, often based on digital technologies, platforms or data-driven solutions (Ratten, 2020). These young companies contribute to the transformation of the sport sector through the introduction of technological innovations, new services for athletes and consumers and organizational models that are alternative to traditional sporting institutions (Ahonen & Savolainen, 2017; Spender et al., 2017). Still, empirical studies on sport start-ups are few and thematically diverse. For instance, Jæger's (2019) conducted qualitative interviews with stakeholders in the sport event start-up Finnmark Race. Her analysis demonstrates how the establishment and success of the start-up contributed to the creation of new pathways for sport and tourism in northern Norway.

Jæger's (2019) findings highlight how sport start-ups in rural areas can become a catalyst for regional development.

Solinas and colleagues (2025) conducted a bibliometric analysis of sport start-ups in Germany and Italy. Their analysis identifies clear national patterns in the literature: German scholarship emphasized interdisciplinary collaboration and integration of sport technology business innovation and higher education, which manifested in applied entrepreneurship courses and university innovation labs. By contrast, Italian research was more localized, centering on community-based sports initiatives and regionally funded entrepreneurial education, with a strong focus on experiential learning that connected grassroots sport development to entrepreneurial skill building. A key point from their findings is how academic research and educational practice across Europe shape the emergence of sport start-ups. Together, the findings of Solinas et al. (2025) and Jæger (2019) demonstrate the importance of studying the conditions of sport start-ups in different geosocial contexts. However, these studies focus mainly on the institutional and contextual conditions that favor the development of sport start-ups, offering limited insights into how these companies interact with other actors in the sports innovation ecosystem.

Addressing this gap, Mondalizadeh et al. (2024) proposes a conceptual framework for analyzing the opportunities of sport start-ups within the sport ecosystem. Through a qualitative approach, her study shows how many opportunities for start-ups are closely linked to the structural challenges of the sport system, including infrastructure, organizational processes, and sport policy. The results also demonstrate how different stakeholders and institutions influence the ability of start-ups to access resources, knowledge, and investments.

In another recent study, Gerke et al. (2025) examined the importance of networking and collaborations with incubators for the innovativeness of sport start-ups. In their study, they surveyed 50 start-up firms to examine the role of business incubators in the innovativeness of sport start-ups. Their findings show that while start-up attributes such as size and cohesiveness of strategy are positively correlated with reported innovativeness, networking does not necessarily improve the innovativeness of incubated sport start-ups. From these findings, Gerke et al. (2025) argue that sector-specific incubators are important for developing start-up innovativeness, along with incubator management.

Although sport start-ups are recognized as important drivers of innovation in the sport sector, current research largely concentrates on the contextual and institutional conditions that enable their development. Studies highlight regional development opportunities (Jæger, 2019), national differences in entrepreneurship education (Solinas et al., 2025), and the relevance of networking and ecosystem support (Gerke et al., 2025; Mondalizadeh et al., 2024). Yet these contributions offer limited insight into how start-ups themselves experience their interactions with established actors. To address this gap, our study examines how sport start-ups experience collaborative opportunities within their ecosystems, focusing on their engagement with more established actors.

Theory

Introduced by Chesbrough (2003), the concept Open Innovation is based on the idea that companies must integrate external resources, knowledge and skills into their innovation

process going beyond traditional organizational boundaries. OI therefore represents a significant change from traditional closed innovation models, promoting interconnection between different actors and fostering mechanisms of collaboration, exchange and co-development (Audretsch et al., 2023; Bogers et al., 2017; Yun et al., 2020). In turn, this perspective has led to the development of the concept of Open Innovation Ecosystems (OIE). OIE can be described as communities of heterogeneous, interdependent and hierarchically independent actors that gravitate around a central company and co-create value by facilitating innovation through collaborative processes and translational knowledge flows (Thomas & Ritala, 2025). Thomas and Ritala (2025) also emphasizes that OIE are characterized by specific configurations of actors, activities and governance mechanisms that coordinate interactions between organizations and facilitate the generation and diffusion of innovation. Recent studies have also highlighted how different categories of actors, collaborative dynamics and openness strategies are central components for understanding OIE, including in the sport sector (Canini et al., 2026). The innovative capacity of the ecosystem depends on its ability to manage knowledge flows, resources, and mechanisms of trust and legitimacy among actors (Adner, 2016; Audretsch & Belitski, 2022; Bogers et al., 2017). According to literature, OI strategies constitute the main approach to managing knowledge flows between OIE actors. Initially, research has distinguished three core strategies: (1) inside-out, (2) outside-in, and (3) coupled (Gassmann & Enkel, 2004). More recent contributions have expanded this set to include (4) outside-out strategy and (5) inside-in strategy (Gutmann et al., 2023). The inside-out strategy involves leveraging internal resources and knowledge through collaborations with external actors, while the outside-in approach is based on integrating external knowledge to strengthen the company's innovation processes (Mazzola et al., 2012). The coupled strategy combines both strategies through exchange and co-development processes with external partners (Mazzola et al., 2012). The outside-out strategy describes the knowledge transfer processes between external actors without the direct involvement of internal R&D, while the inside-in strategy reflects a closed innovation model based on the internal circulation of knowledge (Gutmann et al., 2023; Randhawa et al., 2024). For start-ups, the adoption of OI strategies can help mitigate the structural disadvantages by enabling them to access external knowledge, build credibility and scale their innovation efforts through strategic alliances (Bereczki, 2019; Lappalainen et al., 2023; Usman & Vanhaverbeke, 2017).

The intensity and variety in which companies adopt these strategies differ considerably. In research, two concepts are often used to describe these differences: breadth and depth (Ahn et al., 2015; Laursen & Salter, 2006). Breadth measures the extent of OI practice adoption, i.e. the number of external sources involved. Depth refers to the intensity in which each source is used or integrated into innovation processes. These concepts allow us to analyze the complexity of start-ups' openness, which can range from broad but superficial collaborations to highly selective and integrated partnerships.

Hence, OIE differs from traditional networks in terms of their collaboration mechanisms, structured coordination and shared innovation aims (Lappalainen et al., 2023; Leydesdorff, 2012). The effectiveness of OI strategies depends on sport start-ups' capacity to manage relational complexities within their ecosystem (Audretsch et al., 2021; Lappalainen et al., 2023). Equally crucial is the establishment of trust, which fosters knowledge sharing, mitigates uncertainty, and facilitates the formation of sustainable

collaborative relationships (Canini et al., 2026; Hasche et al., 2016; Mastrostefano et al., 2020).

Organizational learning and balancing exploration-exploitation

Organizational learning describes the processes through which organizations acquire, distribute and incorporate knowledge, transforming it into collective practices (Levitt & March, 1988). Within organizational learning, a central concept is the strategic trade-off between exploration and exploitation (March, 1991). Exploration involves experimentation, searching for new opportunities and taking risks, while exploitation focuses on efficiency, refining existing skills and utilizing already available resources (Tushman & O'Reilly, 1996). Finding a balance between these two approaches, and thus developing organizational ambidexterity, has been identified as one of the main strategic challenges for innovative organizations (Tushman & O'Reilly, 1996). Furthermore, studies have shown that exploration and exploitation are not static and opposing orientations, but complementary forms of learning that can coexist in open innovation processes (Gupta et al., 2006; Li et al., 2008).

Linking exploration and exploitation to OI, start-ups' collaborations with external actors can be interpreted as mechanisms of organizational learning. Through such collaborations, start-ups have the opportunity to explore new sources of knowledge and, at the same time, exploit to consolidate skills already acquired. Sport start-ups, in particular, are characterized by limited legitimacy and heavy dependence on external partners (Canini & Tjørndal, 2025). Analyzing how these young companies manage the strategic trade-off tension therefore offers a lens for understanding their innovation processes and how they develop and maintain their ability to learn in complex and institutionally hybrid contexts.

Method

This research is situated within the interpretive philosophical paradigm and thus is committed to epistemological constructionism and ontological relativism (Willis, 2007). Methodologically, our study is based on qualitative interviews with executives in sport start-ups. This section elaborates on our sample, the interview procedure, and our analytical approach.

Context and participants

To understand how sport start-ups perceive collaborative opportunities and interactions with other actors in their ecosystem, we conducted qualitative interviews with 15 executives from 15 different start-ups in Italy between May and August 2025. As an empirical context, Italy's sport ecosystem is characterized by multiple levels of public and private governance, strong traditionalism and significant structural barriers that influence how organizations interact and collaborate. In such a setting, start-ups' challenges, such as limited legitimacy and restricted access to innovation infrastructures, are likely to be especially pronounced. Therefore, these characteristics make Italy a relevant context for

examining how sport start-ups experience collaborative relationships with more established actors.

Interviewees were selected through purposive sampling (Jones et al., 2013) and included executives directly involved in decision-making processes related to innovation strategy and ecosystem interaction. Specifically, we recruited C-suite executives as they are responsible for strategic decisions regarding external collaborations and innovation partnerships within their organizations. In addition, interviewees had to be part of start-ups that meet three criteria: (1) represent different stages of development (pre-seed /seed), (2) operate with different business models and (3) belong to a variety of sub-sectors in sport. These criteria were established to ensure diversity within the sample while maintaining a focus on the initial organizational conditions that characterize sport start-ups and shape their collaborative dynamics. Recruitment took place through direct contact on LinkedIn and through contacts made at RiminiWellness, a national sport industry event in Italy. Table 1 provides an overview of the interviewees and the main characteristics of their start-ups. To ensure anonymity, the interviewees were given pseudonyms.

The table shows the role held within the start-up, the year of foundation, the business model, the stage of development and the sector in which the start-up operates. The role list includes CEO (Chief Executive Officer), responsible for overall strategic direction and management of the company; CFO (Chief Financial Officer), responsible for financial planning and resource allocation; COO (Chief Operating Officer), who supervises operational processes and day-to-day activity; and CTO (Chief Technological Officer), responsible for technological development and product innovation. It is important to note that in the context of start-ups, these roles are often fluid due to the limited resources typical of the initial stage. It is common for one person to cover several functions at the same time. The stage of development of the start-ups reflects the level of maturity of the business and available financial resources. Specifically, the Pre-Seed phase refers to an initial stage in which the main aim is to develop a Minimum Viable Product (MVP), validate it on the market, and build a solid founding team (EY, 2023). The Seed phase concerns start-ups that have already clearly identified their value proposition and show the first sign of monthly growth. The main aim of this phase is to obtain additional funding to

Table 1. Interviewee details.

ID	Name (fictitious)	Role	Founded	Business Model	Stage	Sub-Sector
1	Alessio	CEO	2022	B2C; B2B2C	Pre-Seed	Fans & Content
2	Lorenzo	CEO	2023	B2B; B2C	Pre-Seed	Management & Organization
3	Marco	CEO	2023	B2B; B2C; B2B2C	Pre-Seed	Fans & Content
4	Simone	CFO	2019	B2B; B2C	Pre-Seed	Fans & Content
5	Beatrice	CEO	2023	B2B; B2C	Pre-Seed	Activity & Performance
6	Davide	CEO	2021	B2B; B2B2C	Pre-Seed	Fans & Content
7	Gabriele	CEO	2016	B2B	Seed	Activity & Performance
8	Paolo	CEO	2024	B2B2C	Pre-Seed	Fans & Content
9	Chiara	CEO	2023	B2B2C	Pre-Seed	Fans & Content
10	Tommaso	COO	2021	B2B2C	Pre-Seed	Activity & Performance
11	Elena	CEO	2023	B2C	Pre-Seed	Activity & Performance
12	Alessandra	CEO	2021	B2B2C	Seed	Activity & Performance
13	Riccardo	CEO	2023	B2B	Pre-Seed	Activity & Performance
14	Stefano	CEO	2023	B2B	Pre-Seed	Fans & Content
15	Federico	CTO	2019	B2B2C	Pre-Seed	Management & Organization

refine the product's market positioning and consolidate the start-up's competitive presence (EY, 2023). Finally, the classification of start-ups into different sectors is based on the taxonomy developed by SportsTechX, an online database specializing in the sport and wellness sector. This classification divides the start-ups into categories based on their target audience: (1) For Athletes – Activity & Performance, (2) For Executives – Management & Organizations, and (3) For Fans – Fans & Content (SportsTechX, n.d.).

Procedure

Data collection was conducted through semi-structured interviews carried out online via Microsoft Teams by the first author, with a duration ranging from 25 to 49 minutes. All interviews were transcribed and then translated into English since not all members of the research team spoke Italian. At the beginning of each interview, the first author explained the paradigm of OI and was available to provide further clarification on the subject throughout the interview. The interview guide was divided into five thematic areas. First, participants were asked to describe the organizational context of the start-up. The second topic was the four OI strategies, excluding inside-in strategy that reflects a closed innovation model (Gutmann et al., 2023; Randhawa et al., 2024). We investigated OI strategies with questions such as "In your experience, which Open Innovation strategies are particularly important for start-ups in the sports sector, and what makes them so?". Third, participants were asked about the breadth and the depth of collaborations with external partners, for instance: "Could you describe a particularly successful/unsuccessful collaboration with external actors?". The interviews continued with a reflection on the main barriers and obstacles encountered in the sport sector ("What are the main obstacles you have encountered in adopting Open Innovation practices? How have you worked to overcome these barriers?"). Finally, interviewees were asked to reflect on the prospects for evolution of their start-up over the next years and to give advice to someone who wants to develop a sport start-up and collaborate with external actors.

Analytical approach

Data analysis followed an inductive thematic approach utilizing collective qualitative analysis (CQA) (Eggebø, 2020). CQA is a methodological approach based on Braun and Clarke's (2019) reflective thematic analysis, where researchers collaborate in workshops and engage in analysis together. By involving multiple researchers as critical friends in the coding process, CQA can be said to strengthen the rigor of qualitative inquiry (Eggebø, 2020; Smith & McGannon, 2018). Dialogue between researchers as critical friends "acknowledges that other and/or additional plausible interpretations of the data can exist that are also defensible but are not being utilized in a particular study or at that time" (Smith & McGannon, 2018, p. 114). Because CQA recognizes that researchers interpret data in different ways, it reflects our relativist ontological stance. Working together in the analysis also aligns with our constructivist epistemology, highlighting how knowledge is co-constructed through interaction.

In practical terms, the process of CQA consists of four phases. Firstly, the authors worked through the data by writing and presenting individual summaries of each interview. Secondly, we mapped the data thematically and reflected collectively on

Table 2. Analytical themes and subthemes.

Themes			
Ecosystem positioning and collaborations with external actors	User-driven innovation	Navigating power asymmetries	National context and bureaucracy
Subthemes			
• Complicated to collaborate with big companies • Small-scale/individual collaborations • “Bad” vs “good” collaborations • Sport federations as unattractive collaboration partners • Collaboration as a necessity for growth and survival	• Co-creation • Fundamental for development • Source of feedback (innovative performance) • Market validation through users	• Start-ups as dependent on public sector funding • Big companies as both a risk and an opportunity • Big companies as “stealing” ideas/buying out start-ups	• Differences in pace between start-ups and public sector • Digital literacy amongst sport federations and public bodies • Slow funding systems • Sport policy makers as “bureaucratic machines” • Lack of public funding for sport start-ups

the differences and similarities in our individual mapping. During this phase, key themes were developed amongst the authors. Thirdly, the data was sorted, where we reflected on which of the themes fit together, and what were the important main themes and sub-themes, in line with Braun and Clarke’s (2019) reflexive thematic analysis. The fourth step consisted of creating a work plan for writing up the findings. The inductive analytical themes and subthemes developed are presented in Table 2.

Findings and discussion

Our findings and the discussion of them are structured into four thematic sections: (1) User-driven innovations and market validation, (2) Strategic positioning within the ecosystem, (3) Navigating power asymmetries and strategic trade-off, (4) Navigating Open Innovation in the Italian context.

User-driven innovations and market validation

All of the interviewees described end users as having a central role in the development of their start-up. Within the theoretical literature on OI, users are considered crucial sources of co-creation (Thomas & Ritala, 2025). Users, such as fans (Knaus & Merkle, 2020), have also been found to drive the innovation processes of start-ups in sport (Woratschek et al., 2014). Although users are traditionally placed at the end of a product cycle, the interviewees emphasized the need to place users at the center of the development process:

- Alessio: The consumer always comes at the end in the product cycle but in reality, the thought goes on the beginning ... everything has to be projected to the consumer.
- Marco: The main players are my customers, the end users; this is because you build a product on them, on their requests, on their needs.

The quotes from Alessio and Marco exemplify how continuous interaction with users is an essential condition for fostering rapid and market-driven innovation cycles. This finding supports evidence from research on other OIE actors in sport, which has documented the importance of user involvement in strengthening organizational development in non-profit sport clubs (Behnam et al., 2020) as well as the health and fitness industry (Pizzo et al., 2021). Our findings extend this evidence to the context of sport start-ups, indicating how user engagement may also work as a mechanism of legitimization for these young companies. Another executive added to this, explaining that:

Stefano: There is close dialogue with the customer, and the relationship with them is fundamental.

Stefano's point about close interaction with users can be linked to the concept of depth in OI. According to Laursen and Salter (2006), the depth of external sources of knowledge (including end users, customers and communities) is a key driver of the innovative capacity of young companies such as start-ups, for which the search for the Minimum Viable Product (MVP) is a crucial factor for their growth. Along these lines, Simone describes how the strength of a community can sometimes turn into growth opportunities:

Simone: The user side has worked very well for us; having created a very strong community, many opportunities have arisen from users ... If I had to give you a percentage, I'd say 80% comes from the users, from the community's affection for you.

The importance of a strong user community could be interpreted as a dimension of OIE particularly relevant for start-ups working in specific sub-sectors of sport. Simone's start-up is geared towards fans, an area of sport where end users often engage with great passion and enthusiasm in innovation processes (Knaus & Merkle, 2020; Winand et al., 2021). Hence, while users are important to any sport start-up, a strong community of users might be especially crucial in certain sub-sectors of sport innovation (Canini & Tjønnndal, 2025). For instance, it could be that users are less relevant for start-ups working within the management and organization sub-sector, compared to start-ups in the fans and content sub-sector (see Table 1). Several interviewees also linked users to their market-validation phase. As Tommaso explained, his main advice to any new sport start-up would be to focus on end users and market validation:

Tommaso: I would definitely start by telling them to identify their target audience, their community, and understand what that community needs, because they will be your customers tomorrow ... Another very important thing is to validate, because you need to know if they would pay for that service ... So, validating that someone would pay for it is essential, and then you can start from there.

Another interviewee said that he would give similar advice:

Davide: Before diving in, you need to gain a better understanding of the market, identifying needs, so your approach is correct.

The central role of users for the start-ups in our sample can also be interpreted through the lens of organizational learning, as a form of exploitation (March, 1991). As outlined by Tommaso and Davide, sport start-ups seek external feedback to test ideas and hypotheses, refine their value proposition, and reduce uncertainty. This iterative learning process

is a mechanism by which start-ups seek to overcome their disadvantages by building legitimacy through market validation rather than through institutional recognition. The importance of involving users in market validation also underlines the findings of Audretsch et al. (2023), who emphasize that the relationship between openness and performance is not linear, but depends on the ability of start-ups to test, learn and quickly adapt their business models to market needs. Hence, it is no coincidence that validation was strongly emphasized when interviewees were asked what advice they would give to someone who is building their own sport start-up. It could be argued that thorough market validation involving users (athletes, coaches, fans, sport organizations) is particularly important in a hybrid sector like sport, which spans leisure, volunteerism, elite sport, public services and commercial businesses (Gammelsæter, 2021; Lucassen & Bakker, 2016). Hence, potential customers' willingness to pay for a service or product might be lower than in other sectors such as technology, healthcare or financial services. These sector-specific characteristics are likely to shape how start-up executives experience the importance of users for market validation. As previous research has primarily focused on more established actors in sport OIE (Delshab et al., 2022; Wemmer & Koenigstorfer, 2016), our findings add to this literature by showing how implications of engaging in OI strategies differ substantially for start-ups. In contrast to established sport organizations, start-ups rely on user involvement to compensate for limited legitimacy, visibility, and access to resources within the ecosystem.

Strategic positioning within the ecosystem

In addition to the centrality of users, the interviewees describe how collaborations with other external entities are useful for accelerating growth and expanding internal knowledge:

Simone: The best way for you to keep up with the times is to embrace Open Innovation. Not necessarily by acquiring companies, but simply by collaborating. Because if you collaborate with that company without acquiring it, you increase its turnover and improve your processes, which saves you money and is a win-win for everyone.

Simone's quote illustrates a systemic perspective on OIE, which considers collaboration as an essential mechanism for co-creating and managing knowledge flows (Adner, 2016; Granstrand & Holgersson, 2020). The "win-win" logic described by Simone is mentioned by several interviewees and demonstrates how the start-ups in our sample see themselves as providers of specific skills that can be exploited if integrated with those of large companies and institutional partners:

Chiara: I think the key thing is to find a balance where I, as a start-up, can offer my specific knowledge and skills, and the market and partners can do the same for me.

Another interviewee pointed out that even the smaller-scale initiatives, such as setting up internships with university students, could be beneficial for the development of a start-up:

Alessio: We are doing a lot of internships, and the students are doing well; so, it's a win-win for us and for the students.

The quotes of Simone, Chiara and Alessio show that coupled strategies are central for sport start-ups approach to OI (Gassmann & Enkel, 2004; Randhawa et al., 2024). However, our data also indicate that the sport start-ups have ambivalent experiences of interacting with other actors in their ecosystem. This seemed to be particularly prevalent for collaborations with universities:

Gabriele: Universities are often disconnected from the business world ... a lot of theory and little practicality.

Simone: Often when universities engage in open innovation, they do so only to obtain additional government funding and not with the real aim of doing open innovation ... Then every now and then something good comes out of it, but it's more of a fluke.

Similar OI dynamics have been described by Öberg and Alexander (2019), who illustrate how institutional differences can hinder effective collaborations. Simone went on to describe how he experienced that the impact of collaborating with a university accelerator was marginal:

Simone: We were an accelerated start-up at [university acceleration programme] but in the end, I'll tell you, 90% you do yourself with the start-up and 10% comes from [university acceleration programme] ... So, they play a fairly marginal role from that point of view ... I think a start-up needs more.

Simone's experience can be interpreted through OIE theory, as an example of structural misalignment between the collaborative approach of sport start-ups and that of universities as established ecosystem actors. Within an OIE, effective collaboration requires shared innovation objectives and complementary governance mechanisms (Canini et al., 2026; Thomas & Ritala, 2025). When these conditions are not met, as in Simone's case, the breath of collaboration widens without increasing in depth, resulting in collaboration that consumes resources without generating any innovative value. However, Simone's experiences were not echoed by interviewees who collaborated with sport-specific accelerators:

Davide: The accelerator always challenges you; They constantly ask you questions about your business models, your market, your customers ... And it creates a network for you.

Chiara: Accelerators ... provided us with small funds and skills, especially on the business side ... useful both for getting to know the partners who are part of the ecosystem and for better focusing our business model.

The positive experiences with sport-specific accelerators (Davide and Chiara) and the negative experience with general accelerators (Simone) supports Gerke and colleagues' (2025) arguments that sector-specific entrepreneurial support organizations (such as incubators and accelerators) are important for developing start-up innovativeness. The divergent experiences of our interviewees on the role of accelerators show how their contribution largely depends on their ability to offer resources that meet the needs of start-ups. This can be interpreted as a reflection of the structural weaknesses linked to young companies' liability of newness (Albano & Lubello, 2018; Carrasco-Carvajal et al., 2022), which make it difficult for sport start-ups to gain credibility and resources in the initial stage of their development. The liability of

newness is also evident when the interviewees describe their collaborations with investors:

Paolo: Investors in general, because they look for start-ups that are already up and running; that says it all. If you're not already up and running, it's too much of a leap of faith for them.

Beatrice: We spoke with some important investors, and they said, "Until you have 100,000 users, there aren't any interesting metrics, we can't even make a small investment". At that point, I think that when you have 100,000 users and significant traction, maybe you don't even need them.

At the same time, the role of investors is recognized as decisive in the more advanced stages of the start-up life cycle:

Davide: Investors become crucial when you need to take your project to the next level.

Our data demonstrate a discrepancy between investors as an established actor in sport OIE and start-ups. For our interviewees, access to capital is key to growing their start-ups, while they experience that investors prefer businesses that are already up and running and can demonstrate quantifiable results. This finding extends those of Gerke et al. (2025) who identified that the size of sport start-ups positively correlated with their reported innovativeness, while networking did not necessarily improve the innovativeness of incubated sport start-ups. Our data indicate that the size of the start-up influences their access to external financial resources (investments), something which is likely to influence their innovativeness. Secondly, our data also suggest that start-ups in the seed phase are more likely to have their networking efforts end in beneficial collaborations with investors.

Overall, collaborations are crucial for start-up growth, but their effectiveness depends on the quality of the interactions and the capacity to maintain a balance between openness and internal development (Audretsch et al., 2023; Bogers et al., 2017). This balance reflects the trade-off between exploration and exploitation (Li et al., 2008; March, 1991).

Navigating power asymmetries and strategic trade-off

The trade-off between exploration and exploitation does not only concern internal development but is also reflected in collaborative dynamics with established sport OIE actors. In managing these relationships, tensions and power asymmetries often arise, affecting the ability of start-ups to pursue OI strategies effectively. While all the participants described collaborating with established actors as crucial for the success of their start-up, many of them described how their collaborative efforts were characterized by tensions and difficulties. A recurring sentiment among participants was that, as a start-up, they constantly needed to be the ones initiating collaboration with other actors in the ecosystem:

Simone: It is always you who seeks or proposes to others. In 99.9% of cases, this is always the case ... if you don't insist, promote, organize and orchestrate everything, it's impossible.

The pressure of always being the actor seeking and initiating collaboration was something that Elena attributed to the size and novelty of start-ups:

Elena: When you're a start-up nobody knows you, and that's the hard part. So, you can collaborate, but only on a small scale.

Similarly to Elena, Davide also recognized the challenges of adapting to other actors, while simultaneously highlighting how the ability to do so is a strength of start-ups:

Davide: It's challenging to adapt what you're doing to requests that often come from outside, like companies, especially medium to large corporations. But in this sense, the strength of a start-up lies in its agility, its ability to move and change course or change its product very easily.

Agility, risk taking and capacity for experimentation are all features that Audretsch et al. (2023) describe as strengths of start-ups in an OIE. As highlighted by Simone and Davide, these dynamics can also be related to the intensity and variety of collaborations with other ecosystem actors, what Laursen and Salter (2006) describe as the breadth and depth of OI strategies (see also Ahn et al., 2015). From the experiences of Simone and Davide, it seems that start-ups are often dependent on cultivating strategic relationships with a variety of actors (breadth). In the interview, Davide went on to describe how engaging with high intensity (depth) with one external actor, especially companies, was risky:

Davide: You need to be careful here because some companies collaborate and others prefer to do things independently, the "buy-it or made-it" concept, so you need to be careful.

This tension between breadth and depth reflects what March (1991) described as the strategic balance between exploration and exploitation. This balance seems to be even more important for the sport start-ups, which constantly assessed whether to diversify their relationships in search of new opportunities or to deepen selected partnerships to consolidate trust and resources. Our findings suggest that this equilibrium may be more difficult to achieve because of power asymmetries limit start-ups' ability to freely shape their collaboration choices. Several of the interviewees had negative experiences of engaging in intensive collaborations (depth) with companies, as they felt that larger, more established companies were trying to take advantage of them. Two examples came from Riccardo and Simone:

Riccardo: [Name of company], the only thing they could say was ... "We're buying 100% of [name of start-up], we're going to make it disappear and you [interviewee] will remain an employee for two years", they could have said, "We're going to incubate it, we're going to do a joint venture with [interviewee]". But no, they make you an employee for two years, bound by the know-how; you can't do anything else in the sector for the next five years, but it's the sector I want to work in.

Simone: We still did some really interesting things and did them well, achieving numbers that the [name of company] had never achieved before, and then the following year they disappeared and came back with a service that was designed to be our direct competitor. So, this gives you an idea of the situation.

These examples demonstrate some of the structural disadvantages that sport start-ups face in their interactions with other OIE actors (Albano & Lubello, 2018). These disadvantages related to the resource scarcity, lower legitimacy, and difficulty in accessing

established innovation infrastructures (Carrasco-Carvajal et al., 2022). The quotes of Riccardo and Simone also insinuate that there is a lack of a shared innovation aim in the interactions between sport start-ups and companies (Lappalainen et al., 2023; Leydesdorff, 2012). From our data, it is clear that these disadvantages impact both the strategic interactions that sport start-ups engage in, as well as their trust towards big companies and other established OIE actors (Audretsch et al., 2023; Bogers et al., 2017). However, these issues of trust between start-ups and other actors may not be universal but vary between national sport contexts and cultures across Europe. For instance, Jæger's (2019) study is situated in Norway and illustrates collaborations between sport start-ups and big companies characterized by high degrees of trust and mutual engagement, something which is contrasting to our data from Italian start-ups. Similarly, Solinas et al. (2025) identified contextual differences between the ecosystems of sport start-ups in Germany and Italy. These contradicting findings between previous studies (Jæger, 2019; Solinas et al., 2025) and ours suggest that national innovation systems and sport models significantly shape how sport start-ups experience collaboration with other actors in their OIE. In terms of exploration-exploitation, the experiences shared by Riccardo and Simone show how power asymmetries can preclude the exploitative aspect of collaboration. Rather than deepening partnerships to consolidate resources and expertise, start-ups are in these cases forced to end the relationship or completely revise their strategies.

The interviewees in our sample develop adaptive strategies to protect their autonomy and knowledge in their unbalanced interactions with big companies in their OIE: they learn from failed collaborations, reconfigure their networks and adapt their approach to new partnerships as they develop. In this sense, organizational learning becomes necessary for dealing with uncertainty and navigating the institutional and relation complexity of sport. Furthermore, the start-ups in our sample indicated that these disadvantages extended to their interactions with a broader range of OIE actors, including accelerators, public sector sport federations, and investors:

Federico: We initially approached an accelerator. But we realized that they didn't favor start-ups but rather harmed them. We realized that what they were asking for was too much. For example, they wanted to join the start-up with equity, but with a significant stake in the start-up; they even asked us to contribute money in order to have access to consulting services. This did not bring us any value, so we decided not to go ahead.

Chiara: I found some unacceptable clauses. We had a meeting where I tried to negotiate; we managed to agree on a few things, but I always felt that something was wrong. On the other side, there was this attitude of "Well, we're [name of sport federation] you have to accept anything because you're just a small start-up", and I honestly didn't agree.

Davide: There are many who present themselves as investors, but in reality, when you talk to them, they want to give you between €1,000 and €5,000 ... The reality is that most of them don't want to give you money without telling you why, and that's the worst thing.

These experiences of power asymmetries in the start-up's interactions and collaborations with other actors show how OIEs are still fragmented and underdeveloped in sport (Canini & Tjørndal, 2025). OIE are said to be characterized by hierarchically independent actors who co-create through collaborative processes and translational knowledge flows (Thomas & Ritala, 2025). In the experiences of Chiara, Federico, Riccardo and Simone, other actors do not appear to consider sport start-ups as equal partners or hierarchically

independent of them. As highlighted through our material, the precariousness and disadvantages of being a “small” actor in an OIE is prominent in our findings. However, some of the interviewees expressed their efforts to resist the pressures of other actors:

Chiara: To be a start-up does not mean that I have to accept anything you offer me just because we are small and inexperienced.

This sentiment reflects the dual nature of exploration and exploitation. While start-ups engage in exploration to diversify opportunities and reduce dependence on dominant actors in order to establish their autonomy, they also rely on the exploitation of consolidated collaborations to secure legitimacy and resources. Interviewees also explained how achieving this balance is particularly difficult due to navigating bureaucratic structures and institutional complexity, factors that further shaped their strategic decisions and interactions.

Navigating open innovation in the Italian context

Our data on Italian sport start-ups show that two factors that greatly influence their opportunities are the structure of national innovation systems and the national sport model. Regarding the national sport model, the interviewees describe how sport federations and large sport organizations are not interested in collaborating with start-ups:

Simone: For me, in Italy it doesn't make sense . . . to involve federations.

When asked about why it “doesn't make sense” to involve sport federations in their innovation processes, our interviewees related this to sport organizations in Italy being “uninterested” in innovation:

Marco: I'm not interested in talking to people who don't give a damn. I'm interested in talking to people who are open to change.

Federico: There's no real open innovation. It's all very fragmented. Even the federations don't communicate with each other or with the clubs.

The interviewees' experiences of sport federations as “uninterested” in OI align with studies from France (Trabal, 2008) and from Germany and UK (Uhlendorf & Uhrich, 2024), which show that established sport organizations often exhibit innovation resistance and strong traditionalism. However, within our sample, Marco went further, suggesting that Italian sport federations were not just “uninterested” or reluctant to change, but tended to view start-ups as potential competitors rather than as possible innovation partners:

Marco: Federations say they block projects like ours because they think it undermines their direct business.

Together, the quotes from Simone, Marco and Federico illustrate the need to further contextualize the experiences of start-ups' collaboration with established OIE actors in relation to national sport models. Within our data, many interviewees did not mention sport federations as potential collaborators at all, something which could indicate that within the Italian sport model, support for OI is limited. While the start-ups in our sample rarely engaged in collaboration with sport federations, many of the interviewees describe collaborations with other established OIE actors like public bodies, large companies and

universities. Here, our data indicate that these collaborations frequently require the management of complex bureaucratic processes:

Alessio: We sometimes had problems, especially in terms of timing and pace ... we really struggle with the public side ... We detached ourselves strongly from public entities for funding or others because they go at a very odd speed ... We have won grants; “within 30 days the transfer”, then if it arrives after 120 days it is an incredible damage because you rely on those grants ... Public bodies are sometimes not very interested in helping start-ups ... the bureaucracy prevents you from doing anything.

Chiara: We’re encountering many problems with the timing of receiving the funds we’ve won. We were informed at the end of January that we had won the prize for this event, but there are a series of bureaucratic obstacles that are lengthening the process considerably. We were supposed to receive the prize by March, and it’s now June.

Tommaso: Public bodies? They are very slow. That’s the problem with start-ups: you have a very short life cycle, and if you miss that window because you have to chase after these players who can make you lose six months or even a year, you can say “bye-bye” to your project.

The contextual conditions described by Alessio, Chiara and Tommaso, suggest that the bureaucratic challenges may be particularly prominent in Italy compared to other national innovation schemes with a leaner governance structure. These quotes illustrate how bureaucratic delays limit sport start-ups’ ability to exploit existing opportunities, forcing them to seek alternative partnerships and financing mechanisms. Previous studies have also shown how bureaucratic structures and governance misalignment influence innovation processes in established sports organizations (Delshab et al., 2022; Wemmer & Koenigstorfer, 2016). Our findings extend these insights to sport start-ups, recognizing the complexities of national innovation systems and national sport models as factors which can slow down innovation processes. As noted by Tommaso, misaligned institutional timelines directly affect survival and innovation capacity, making it crucial to find a balance between exploration and exploitation. The mismatch between the national innovation system in Italy and the rapid life cycle of start-ups is a structural characteristic of the Italian context that influences how OI can be developed in practice. These differences serve to weaken the legitimacy of public bodies amongst the interviewees (Audretsch et al., 2023; Bogers et al., 2017).

Challenges of managing bureaucracy also extend beyond the start-up’s interactions with public bodies, as many of the interviewees said that long and complex bureaucratic processes were persistent also in their collaborations with other OIE actors, such as companies:

Alessandra: It becomes difficult because they are stuck in bureaucracy, which we start-ups don’t have ... they may not realize how complex it can be to develop things specifically for them. Sometimes they demand a lot but give little in return.

Davide: It’s always difficult to talk to external companies because they don’t understand that a start-up has certain objectives with certain deadlines and certain budgets ... It’s very different from being an established company with other budgets.

Awareness of these differences in organizational structures forces start-ups to adapt their strategies by prioritizing partnerships with more responsive actors. In

line with the observations of Albano and Lubello (2018) and Carrasco-Carvajal et al. (2022), our findings suggest that the bureaucratic inertia described by the interviewees is not confined to the public sector. Rather, it permeates a variety of ecosystem relationships, including those with corporations, agencies, and universities, which are all key actors in OIE. The recurring descriptors of “old mentality”, “slow process”, and “stuck in bureaucracy” reflect entrenched organizational cultures and governance structures that are resistant to the temporal demands and iterative practices of sport start-ups. From the interviewees’ perspective, these bureaucratic hurdles translate into transaction costs that exceed what their resource-constrained operations can absorb. As Davide noted, agencies and corporations struggle to understand the organizational realities of start-ups, illustrating goal misalignment that echoes findings from Hasche et al. (2016) on the fragility of trust in OI arrangements. In these conditions, delays jeopardize the commercial viability of innovation projects, particularly given the narrow market windows which are characteristic of sport start-ups. Several interviewees also spoke of their efforts in navigating institutional complexities and bureaucracy in their collaborations with universities and large companies. For instance, Marco explained how he felt that universities “live in a world of their own”:

Marco: The mentality is still old and the bureaucracy is so slow that it slows down the whole process ... if it takes me a week to do something with my company, it took me six months at university and it's not possible because business is fast (...) the university lives in a world of its own and this is what slows down the whole innovation process.

Another interviewee described similar issues in collaborating with large companies:

Davide: We also started with another large company ... I would say that the main problems were time, but above all motivation ... we basically wasted four months of time on nothing ... The companies we have encountered on our journey have shown a great deal of interest in Open Innovation managers ... But then we realize that there is no corporate mindset to support Open Innovation ... Open Innovation does not have the importance that I believe it should have at company level.

These findings further illustrate how sport start-ups learn and make selective choices in managing collaborations, focusing on partnerships with actors perceived as more agile and strategically aligned. Here, our findings also contribute to the theoretical literature on OI and OIEs by identifying how bureaucracy influences start-ups’ abilities to navigate the complexities of their ecosystem (Audretsch et al., 2021; Lappalainen et al., 2023). Similarly, we add to the arguments made by Albano and Lubello (2018) and Carrasco-Carvajal et al. (2022), who emphasize that the effects of OI on start-ups’ performance and development are context-dependent. Specifically, our interview data indicate that analyses of OI in sport must account for the institutional complexities and bureaucratic conditions embedded in both national innovation systems and national sport models.

Conclusion

The aim of the article was to examine how sport start-ups experience collaborative opportunities and interactions with established actors in their ecosystem. Central to our findings is the notion that engaging in collaboration with established OIE actors is

both necessary and risky for sport start-ups. Specifically, our findings show how sport start-ups continuously manage power asymmetries and bureaucratic complexities in their interactions with investors, universities, accelerators, public agencies, large companies and sport federations. Collaborations with established OIE actors therefore appear ambivalent. While these collaborations are crucial to access resources, skills and legitimacy, they are also a source of vulnerability when the relationship with an external actor is unbalanced or slowed down by contextual complexities that are incompatible with the rapid pace of start-ups.

Two striking examples of such ambivalences relate to collaborations with large companies and interactions with public bodies. For the Italian sport start-ups, partnerships with large companies drive growth yet require caution, as larger firms often attempt to buy them out or even steal their business ideas. Another example of such ambiguity relates to the start-ups' interactions with public bodies. Most of the start-ups in our sample are dependent on funding from public bodies through grants. While the start-ups considered such grant opportunities important, the interviews also show how the bureaucracy of public bodies diminishes the practical value of such funding. In this way, a main finding from our data concerns the need to further contextualize knowledge on OI and start-ups in sport. Our results indicate that the conditions determining start-ups' engagement in OIE are shaped by both national innovation systems and national sport models. While research in other sectors has documented how national innovation systems impact OI processes (Cetindamar et al., 2024; Junqueira Botelho & Almeida, 2024; Wang et al., 2011), further work is needed to understand how the interplay between national sport models and national innovation systems shapes sport start-ups' collaborative experiences with established OIE actors.

These results offer a theoretical contribution to literature on OIE in sport on two levels. First, they extend the concept of OIE by showing that hierarchical independence, described by Thomas and Ritala (2025) as a characteristic of OIEs, is far from guaranteed for peripheral actors such as sport start-ups. Second, they add to perspectives on organizational learning by demonstrating that the exploration-exploitation trade-off is an internal strategic choice shaped by power asymmetries and structural barriers that start-ups face in their interactions within the ecosystem. While literature has emphasized the role of start-ups as agile actors capable of generating innovation (Audretsch et al., 2021, 2023; Usman & Vanhaverbeke, 2017), our findings show that this potential can only be realized when start-ups develop organizational learning capabilities and adaptation strategies to handle the breadth and the depth of their collaborations (Ahn et al., 2015; Laursen & Salter, 2006) within the ecosystem. Furthermore, our study extends research on innovation processes in sport by providing empirical evidence on the collaboration experiences of start-ups, an empirical context that has received limited scholarly attention in sport management. It should be noted, however, that our findings are situated within one geosocial context (Italy), which limits the transferability to other national contexts. Additionally, the start-ups in our sample mainly represent early-stage start-ups (pre-seed), which also limits the transferability of our findings to cases of advanced stages of start-ups.

From a practical and managerial point of view, the findings demonstrate the importance of greater strategic awareness from all actors in the sports' OIE. For start-

ups, this implies the ability to select and manage partners to reduce the risks of dependence on more powerful actors without sacrificing the flexibility needed to look for new opportunities. For sport federations, investors, large companies, universities and public institutions, the results show the need to move beyond opportunistic and bureaucratic approaches in favor of fair and sustainable co-creation processes (Adner, 2016; Granstrand & Holgersson, 2020). Reducing bureaucracy and creating specific programs for the sport sector appears to be key for strengthening the ecosystem. Furthermore, the evidence presented in this article contributes to current research on sport start-ups by offering new empirical perspectives on issues of legitimization, networking and forms of entrepreneurial support in sport contexts (Gerke et al., 2025; Jæger, 2019; Mondalizadeh et al., 2024; Ratten, 2020; Solinas et al., 2025).

Looking ahead, the experiences of the sport start-up executives in our sample illustrate the need for greater consideration of contextuality in research on OI and start-ups in sport. Specifically, our findings prompt a broader consideration of how sport start-ups view the potential and pitfalls of engaging in collaboration with other ecosystem actors nationally and internationally. We hope that this study will stimulate academic interest in exploring these dynamics in international contexts and in relation to other actors in the ecosystem. This may offer interesting opportunities for theoretical and empirical comparisons in sport management, building a more comprehensive understanding of OI processes in sport. Future research should also examine governance mechanisms within OIEs that can mitigate power asymmetries for peripheral actors, trace how organizational routines develop through longitudinal designs and investigate how the exploration-exploitation balance is recalibrated as sport start-ups grow and relationships within their ecosystem mature.

Acknowledgments

The authors acknowledge the use of ChatGPT (<https://chatgpt.com> – version GPT-5) and Microsoft Copilot GPT5 for text correction and checking of grammatical errors. The prompts applied were designed to: (1) correct grammatical errors, sentence structure, punctuation, and verb tense consistency; and (2) enhance vocabulary and readability by suggesting more precise, context-appropriate terms and replace repetitive words.

These suggestions were used to improve the language quality of the article, as neither author is a native English speaker. The authors take full responsibility for the content, as recommended by Committee on Publication Ethics (COPE), while recognizing the use of AI.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Daniele Canini  <http://orcid.org/0000-0001-8108-3378>

Anne Tjørndal  <http://orcid.org/0000-0002-8579-1539>

Francesca Vicentini  <http://orcid.org/0000-0002-8955-3087>

References

- Adner, R. (2016). Ecosystem as structure: An actionable construct for strategy. *Journal of Management*, 43(1), 39–58. <https://doi.org/10.1177/0149206316678451>
- Ahn, J. M., Minshall, T., & Mortara, L. (2015). Open innovation: A new classification and its impact on firm performance in innovative SMEs. *Journal of Innovation Management*, 3(2), 33–54. https://doi.org/10.24840/2183-0606_003.002_0006
- Ahonen, A., & Savolainen, S. (2017). The importance of entrepreneurship in small and medium-sized sport enterprises. In M. Dodds, K. Heisey, & A. Ahonen (Eds.), *Routledge handbook of international sport business* (pp. 374–381). Routledge. <https://doi.org/10.4324/9781315709635-41>
- Albano, M., & Lubello, N. (2018). How start-ups overcome their liabilities. Emerging topics and future research path. *Piccola Impresa Small Business*, 2018(1), 1–19. <https://doi.org/10.14596/pisb.272>
- Audretsch, B. D., & Belitski, M. (2022). The limits to open innovation and its impact on innovation performance. *Technovation*, 119, 102519. <https://doi.org/10.1016/j.technovation.2022.102519>
- Audretsch, D. B., Belitski, M., & Caiazza, R. (2021). Start-ups, innovation and knowledge spillovers. *The Journal of Technology Transfer*, 46(6), 1995–2016. <https://doi.org/10.1007/s10961-021-09846-5>
- Audretsch, D. B., Belitski, M., Caiazza, R., & Siegel, D. S. (2023). Effects of open innovation in startups: Theory and evidence. *Technological Forecasting and Social Change*, 194, 122694. <https://doi.org/10.1016/j.techfore.2023.122694>
- Behnam, M., Delshab, V., & Tuan, L. T. (2020). Perceived service innovation in non-profit sports clubs: The antecedents and consequence. *European Sport Management Quarterly*, 22(3), 440–462. <https://doi.org/10.1080/16184742.2020.1799051>
- Berezki, I. (2019). An open innovation ecosystem from a startup's perspective. *International Journal of Innovation Management*, 23(8), 1–17. <https://doi.org/10.1142/S1363919619400012>
- Blank, S. (2010, January 25). *What's a startup? First principles*. Steve Blank. <https://steveblank.com/2010/01/25/whats-a-startup-first-principles/>
- Bogers, M., Zobel, A. K., Afuah, A., Almirall, E., Brunswicker, S., Dahlander, L., Frederiksen, L., Gawer, A., Gruber, M., Haefliger, S., Hagedoorn, J., Hilgers, D., Laursen, K., Magnusson, M. G., Majchrzak, A., McCarthy, I. P., Moeslein, K. M., Nambisan, S., Piller, F. T. ... Sims, J. (2017). The open innovation research landscape: Established perspectives and emerging themes across different levels of analysis. *Industry and Innovation*, 24(1), 8–40. <https://doi.org/10.1080/13662716.2016.1240068>
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise & Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Canini, D., & Tjønnndal, A. (2025). The impact of culture on sport innovations. In V. Girginov & K. Girginova (Eds.), *Handbook on sport and culture* (pp. 64–76). Edward Elgar Publishing. <https://doi.org/10.4337/9781033739983.00013>
- Canini, D., Tjønnndal, A., & Vicentini, F. (2026). Open innovation ecosystems: A scoping review and conceptual model for sport management. *Managing Sport and Leisure*, 1–19. <https://doi.org/10.1080/23750472.2026.2620493>
- Carrasco-Carvajal, O., Castillo-Vergara, M., & García-Pérez de Lema, D. (2022). Measuring open innovation in SMEs: An overview of current research. *Review of Managerial Science*, 17(2), 397–442. <https://doi.org/10.1007/s11846-022-00533-9>
- Cetindamar, D., Renando, C., Bliemel, M., & De Klerk, S. (2024). The evolution of the Australian start-up and innovation ecosystem: Mapping policy developments, key actors, activities, and artefacts. *Science, Technology and Society*, 29(1), 13–33. <https://doi.org/10.1177/09717218231201878>
- Chesbrough, H. W. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business School Press.
- Corthouts, J., Winand, M., & Scheerder, J. (2021). A three-dimensional model of innovation within Flemish non-profit sports organisations. *European Sport Management Quarterly*, 23(3), 853–876. <https://doi.org/10.1080/16184742.2021.1936115>
- Delshab, V., Winand, M., Sadeghi Boroujerdi, S., Hoeber, L., & Mahmoudian, A. (2022). The impact of knowledge management on performance in nonprofit sports clubs: The mediating role of

- attitude toward innovation, open innovation, and innovativeness. *European Sport Management Quarterly*, 22(2), 139–160. <https://doi.org/10.1080/16184742.2020.1768572>
- Eggebo, H. (2020). Kollektiv kvalitativ analyse. *Norsk Sosiologisk Tidsskrift*, 4(2), 106–122. <https://doi.org/10.18261/issn.2535-2512-2020-02-03>
- EY. (2023). *Ey venture capital barometer, 2022: Italia*. EY Strategy and Transactions. <https://www.ripartelitalia.it/wp-content/uploads/2024/01/ey-vc-barometer-2023.pdf>
- Gammelsæter, H. (2021). Sport is not industry: Bringing sport back to sport management. *European Sport Management Quarterly*, 21(2), 257–279. <https://doi.org/10.1080/16184742.2020.1741013>
- Gassmann, O., & Enkel, E. (2004, July 07–09). Towards a theory of open innovation: Three core process archetypes [Conference presentation]. Proceedings of the R & D Management Conference (pp. 1–18). Lisbon, Portugal.
- Gerke, A., Haas, A., & Wäsche, H. (2025). Playing as a team or solo? Determinants for innovativeness of incubated sport business startups. *Sport, Business and Management: An International Journal*, 16(1), 122–142. <https://doi.org/10.1108/SBM-01-2025-0016>
- Granstrand, O., & Holgersson, M. (2020). Innovation ecosystems: A conceptual review and a new definition. *Technovation*, 90–91, 102098. <https://doi.org/10.1016/j.technovation.2019.102098>
- Gupta, A. K., Smith, K. G., & Shalley, C. E. (2006). The interplay between exploration and exploitation. *Academy of Management Journal*, 49(4), 693–706. <https://doi.org/10.5465/AMJ.2006.22083026>
- Gutmann, T., Chochoiek, C., & Chesbrough, H. (2023). Extending open innovation: Orchestrating knowledge flows from corporate venture capital investments. *California Management Review*, 65(2), 45–70. <https://doi.org/10.1177/00081256221147342>
- Harith, S., McSweeney, M., Willem, A., Winand, M., & Marlier, M. (2025). The dark side of social innovation: Integrating a digital application for sport-for-development programmes. *Sport Management Review*, 28(4), 676–704. <https://doi.org/10.1080/14413523.2025.2497598>
- Harris, S. J., Metzger, M. L., & Duening, T. N. (2020). Innovation in national governing bodies of sport: Investigating dynamic capabilities that drive growth. *European Sport Management Quarterly*, 21(1), 94–115. <https://doi.org/10.1080/16184742.2020.1725090>
- Hasche, N., Linton, G., & Öberg, C. (2016). Trust in open innovation - the case of a med-tech start-up. *European Journal of Innovation Management*, 20(1), 31–49. <https://doi.org/10.1108/ejim-10-2015-0111>
- Hoff, K., & Leopkey, B. (2025). Initiate, adopt, implement, and transfer: Exploring the innovation process undergone by mega-sport event organizing committees. *Sport Management Review*, 28(3), 476–497. <https://doi.org/10.1080/14413523.2025.2466923>
- Jæger, K. (2019). Event start-ups as catalysts for place, sport and tourism development: Moment scapes and geographical considerations. *Sport in Society*, 23(1), 40–55. <https://doi.org/10.1080/17430437.2018.1555218>
- Jones, I., Brown, L., & Holloway, I. (2013). Sampling. In I. Jones, L. Brown, & I. Holloway (Eds.), *Qualitative research in sport and physical activity* (pp. 35–44). SAGE Publications. <https://doi.org/10.4135/9781473914995.n5>
- Junqueira Botelho, A. J., & Almeida, M. (2024). Start-ups in the Brazilian innovation ecosystem. *Science, Technology and Society*, 29(1), 120–139. <https://doi.org/10.1177/09717218231220344>
- Knaus, D. L., & Merkle, T. (2020). Open innovation in sports management - the case of the FIFA Museum in Zurich, Switzerland. In V. Ratten (Ed.), *Sport entrepreneurship: An economic, social and sustainability perspective* (pp. 43–53). Emerald Group Publishing. <https://doi.org/10.1108/978-1-83982-836-220201008>
- Lappalainen, L., Aleem, M., & Sandberg, B. (2023). How to manage open innovation projects? An integrative framework. *Project Leadership and Society*, 4, 100095. <https://doi.org/10.1016/j.plas.2023.100095>
- Laursen, K., & Salter, A. (2006). Open for innovation: The role of openness in explaining innovation performance among UK manufacturing firms. *Strategic Management Journal*, 27(2), 131–150. <https://doi.org/10.1002/smj.507>
- Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology*, 14(1), 319–338. <https://doi.org/10.1146/annurev.so.14.080188.001535>

- Leydesdorff, L. (2012). The triple helix, quadruple helix, and an n-tuple of helices: Explanatory models for analyzing the knowledge-based economy. *Journal of the Knowledge Economy*, 3(1), 25–35. <https://doi.org/10.1007/s13132-011-0049-4>
- Li, Y., Vanhaverbeke, W., & Schoenmakers, W. (2008). Exploration and exploitation in innovation: Reframing the interpretation. *Creativity and Innovation Management*, 17(2), 107–126. <https://doi.org/10.1111/j.1467-8691.2008.00477.x>
- Lucassen, J. M. H., & Bakker, S. D. (2016). Variety in hybridity in sport organizations and their coping strategies. *European Journal for Sport and Society*, 13(1), 75–94. <https://doi.org/10.1080/16138171.2016.1153880>
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87. <https://doi.org/10.1287/orsc.2.1.71>
- Mastrostefano, C., Giachino, C., & Parola, F. (2020). The importance for a start-up to trust in open innovation: A systematic literature review. *Journal of Innovation & Knowledge*, 5(3), 193–204. <https://doi.org/10.1016/j.jik.2020.01.003>
- Mazzola, E., Bruccoleri, M., & Perrone, G. (2012). The effect of inbound, outbound and coupled innovation on performance. *International Journal of Innovation Management*, 16(6), 1240008. <https://doi.org/10.1142/S1363919612400087>
- McSweeney, M., Svensson, P., & Hayhurst, L. & Safai, P. (Eds.). (2022). *Social innovation, entrepreneurship, and sport for development and peace*. Routledge. <https://doi.org/10.4324/9781003212744>
- Mondalizadeh, M., Khalilzadeh, A., & Heydari, A. (2024). Startup opportunities in the sports industry based on developing a conceptual framework for the sports ecosystem in Iran. *Interdisciplinary Journal of Management Studies*, 17(2), 491–506. <https://doi.org/10.22059/ijms.2023.339962.675079>
- Öberg, C., & Alexander, A. T. (2019). The openness of open innovation in ecosystems - integrating innovation and management literature on knowledge linkages. *Journal of Innovation & Knowledge*, 4(4), 211–218. <https://doi.org/10.1016/j.jik.2017.10.005>
- Pizzo, A. D., Baker, B. J., Jones, G. J., & Funk, D. C. (2021). Sport experience design: Wearable fitness technology in the health and fitness industry. *Journal of Sport Management*, 35(2), 130–143. <https://doi.org/10.1123/jsm.2020-0150>
- Randhawa, K., Vanhaverbeke, W., & Ritala, P. (2024). Legitimizing digital technologies in open innovation ecosystems: Overcoming adoption barriers in healthcare. *California Management Review*, 67(1), 45–68. <https://doi.org/10.1177/00081256241276553>
- Ratten, V. (2020). The need for entrepreneurship in sport startups. In V. Ratten (Ed.), *Sport startups: New advances in entrepreneurship* (pp. 17–28). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-78973-081-420201002>
- Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport & Exercise Psychology*, 11(1), 101–121. <https://doi.org/10.1080/1750984X.2017.1317357>
- Solinas, R., Pirina, M. G., & Farooq, M. (2025). Sports startups in Europe: A comparative bibliometric analysis of Germany and Italy. *EDULEARN25 Proceedings*, 10596–10604. <https://doi.org/10.21125/edulearn.2025.2794>
- Spender, J. C., Corvello, V., Grimaldi, M., & Rippa, P. (2017). Startups and open innovation: A review of the literature. *European Journal of Innovation Management*, 20(1), 4–30. <https://doi.org/10.1108/EJIM-12-2015-0131>
- SportsTechX. (n.d.). *Sportstech framework*. Retrieved June 5, 2026, from, <https://intelligence.sportstechx.com/framework>
- Svensson, P. G., Andersson, F. O., Mahoney, T. Q., & Ha, J. P. (2019). Antecedents and outcomes of social innovation: A global study of sport for development and peace organizations. *Sport Management Review*, 23(4), 657–670. <https://doi.org/10.1016/j.smr.2019.08.001>
- Thomas, L. D. W., & Ritala, P. (2025). Open innovation ecosystems. In E. Päivi, M. Tero, L. Pikka-Maaria, & A. Hannula (Eds.), *Elgar encyclopedia of innovation management* (pp. 117–122). Edward Elgar Publishing. <https://doi.org/10.4337/9781035306459.00039>
- Tjønndal, A. (Ed.). (2021). *Social innovation in sport*. Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-63765-1>

- Trabal, P. (2008). Resistance to technological innovation in elite sport. *International Review for the Sociology of Sport*, 43(3), 313–330. <https://doi.org/10.1177/1012690208098255>
- Tushman, M. L., & O'Reilly, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(4), 8–30. <https://doi.org/10.2307/41165852>
- Uhlendorf, K., & Uhrich, S. (2024). A multi-method analysis of sport spectator resistance to augmented reality technology in the stadium. *Journal of Global Sport Management*, 9(3), 545–574. <https://doi.org/10.1080/24704067.2022.2155210>
- Uhrich, S. (2021). Sport spectator adoption of technological innovations: A behavioral reasoning analysis of fan experience apps. *Sport Management Review*, 25(2), 275–299. <https://doi.org/10.1080/14413523.2021.1935577>
- Usman, M., & Vanhaverbeke, W. (2017). How start-ups successfully organize and manage open innovation with large companies. *European Journal of Innovation Management*, 20(1), 171–186. <https://doi.org/10.1108/EJIM-07-2016-0066>
- Von Schomberg, L., De Vita, K., Ghinoi, S., De Vita, R., & O'Rourke, G. (2025). Innovation in sport organisations: The role of formal organisational structures and informal networks. *Sport Management Review*, 28(5), 1054–1081. <https://doi.org/10.1080/14413523.2025.2534245>
- Wang, Y., Vanhaverbeke, W., & Roijakkers, N. (2011). Exploring the impact of open innovation on national systems of innovation - a theoretical analysis. *Technological Forecasting and Social Change*, 79(3), 419–428. <https://doi.org/10.1016/j.techfore.2011.08.009>
- Wemmer, F., & Koenigstorfer, J. (2016). Open innovation in nonprofit sports clubs. *Voluntas International Journal of Voluntary and Nonprofit Organizations*, 27(4), 1923–1949. <https://doi.org/10.1007/s11266-015-9571-5>
- Willis, J. W. (Ed.). (2007). *Foundations of qualitative research: Interpretive and critical approaches*. SAGE Publications. <https://doi.org/10.4135/9781452230108>
- 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. *The Journal of Business Research*, 136, 99–109. <https://doi.org/10.1016/j.jbusres.2021.07.029>
- Woratschek, H., Horbel, C., & Popp, B. (2014). The sport value framework - a new fundamental logic for analyses in sport management. *European Sport Management Quarterly*, 14(1), 6–24. <https://doi.org/10.1080/16184742.2013.865776>
- Yun, J. H. J., Park, K. B., Del Gaudio, G., & Della Corte, V. (2020). Open innovation ecosystems of restaurants: Geographical economics of successful restaurants from three cities. *European Planning Studies*, 28(12), 2348–2367. <https://doi.org/10.1080/09654313.2020.1721438>