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Rethinking Intellectual Capital Accounting Through Professional Sport Organizations

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The purpose of this paper is to systematize sport accounting literature with intellectual capital (IC) lenses. Professional sport organizations are knowledge-based institutions, in which the IC plays a central role. IC is a significant driver for value creation for professional sport organizations and it is the expression of their market value. The relevance of IC in professional sport organizations allows us to delve into IC accounting research. Growing but highly fragmented literature focuses on accounting and reporting practices inside professional sport organizations, and analyzes single aspects of IC. As a starting point, we analyze the sport organizations' literature with the aim of investigating the IC value creation process. We then investigate IC accounting and reporting practices and the role of IC disclosure in relation to information transparency. The present work contributes to the extant literature by providing the "state of the art" of sport studies in accounting for IC. It also contributes to the extant literature by offering future avenues for advances in IC accounting research and theories.

Keywords: intellectual capital, professional sport organizations, accounting, stakeholder theory, legitimacy theory

Introduction

This paper explores intellectual capital (IC) accounting through the review of accounting studies focused on professional sport organizations. Several accounting scholars (Smith & Stewart, 2010; Rubio Martín, Manuel García, Rodríguez-López, & Gonzalez Sanchez, 2022; Vitolla, Raimo, Rubino, & Garzoni, 2022) agree that the professional sport field has unique characteristics about IC and demonstrates both similarities and differences between professional sport organizations and profit-oriented ordinary businesses. On the one hand, professional sport clubs share with ordinary business companies the professional management of tangible, intangible, and financial assets (Yang & Sonmez, 2005; Moore & Levermore, 2012). On the other hand, the knowledge's relevance level in sport organizations is greater than the average level in ordinary businesses. Professional sport organizations are knowledge-based institutions, in which the IC components, i.e. human, structural, and relational capital, play a relevant role (Garcia-Perez, Ghio, Occhipinti, & Verona, 2020).

Sport club's value is mainly related to intangible resources, such as the club's management team experience, its players' talent, its supporter passion, its championship placement, and its performance (Andrikopoulos & Kaimenakis, 2009; Garcia-Perez et al., 2020). In addition, sport organizations are significantly involved in satisfying the supporters' passions, and the trade-off between business and sport goals represents a distinctive characteristic (European Commission, 2007; Chadwick, 2009). As they are knowledge-based institutions,

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professional sport organizations represent an interesting ground for potential advances in IC accounting research (Garcia-Perez et al., 2020; Massaro, Mas, Bontis, & Gerrard, 2020; Migliaccio, Lucadamo, Napoli, & Gallo, 2022). There is a growing but highly fragmented sport literature which focuses on accounting and reporting practices and analyzes single aspects of IC (Amir & Livne, 2005; Risaliti & Verona, 2012; Neri, Russo, Di Domizio, & Rossi, 2021). We systematize sport accounting research through IC lenses in order to identify literature gaps, future avenues for sport IC accounting research, and advances for IC accounting research overall.

Our review process is conducted in three stages. First, we select sport accounting studies (216 research papers) using key words related to accounting and IC issues. Secondly, we analyze them with the aim of answering two research questions.

RQ1: What is the role of IC in sport organizations? Does it impact accounting and reporting practices?

RQ2: Do the sport dimension features impact the IC accounting and reporting practices?

Finally, we identified 46 papers suitable for answering our two research questions and through IC lenses we systemized the central themes and implications for future IC research.

After the analysis of the IC components within sport organisations, we investigate the IC value creation process and its limitations. The IC components' interdependence is the core source of value inside professional sport organizations. However, according to prior research about sport organisations (Carlsson-Wall, Kraus, & Messner, 2016), the value creation for certain stakeholders implies the value destruction for others. We employ the stakeholder and legitimacy theory to describe this value destruction process and systematize the sport literature empirical evidence. Through the analysis of the limitation of the IC value creation process, we explain the complexity of the relationships between IC and financial performance and we identify potential advances for IC research.

The relevance of human capital in professional sport organizations allows us to investigate accounting and reporting practices for IC. Evidence retrieved from sport organizations reveals the possibility to capitalize human capital costs related to players transferred from one club to another (Risaliti & Verona, 2012; Neri et al., 2021; Nappert & Plant, 2022). However, the accounting methods do not allow sport organizations to represent totally the value of their IC and thus differences between market and book value are produced. This creates the conditions for earnings manipulations by sport managers providing useful suggestions to extend research about earnings management practices' incentives in knowledge-based organizations.

Finally, the distinctive characteristics of professional sport organizations make sports an interesting ground for broader research about the role of IC disclosure in relation to information transparency (Lardo, Dumay, Trequattrini, & Russo, 2017; Rubio Martin et al., 2022; Vitolla et al., 2022). IC disclosure mitigates the information asymmetry between the company and the stakeholders. Therefore, it can improve the club's reputation, discourages opportunistic behaviours, and can increase earnings quality.

The present work makes several contributions to the literature. First, it systematizes the central themes, opportunities, and challenges for IC accounting within sport organizations. Secondly, it offers future avenues for advances in IC accounting research and theories. Sport empirical evidence offers opportunities to deepen studies about (1) IC value creation process, (2) IC accounting and reporting practices, and (3) the role of IC disclosure concerning information transparency.

The remainder of the paper proceeds as follows. The second section describes the research design. The third section focuses on the IC value creation and its limitations within sport organizations. The fourth section presents the state of knowledge of accounting for IC, and it focuses on IC accounting and reporting practices and on the relationships between IC disclosure and information transparency. The concluding section points out the contributions and implications of this study for the field, proposing further applications and extensions.

Research Design

This section documents our method for selecting and reviewing the papers used in our research. We inform our analysis on past studies aiming to systematically analyze the literature and identify potential avenues to future studies, e.g., Prencipe, Bar-Yosef, and Dekker (2014); Galvagno et al. (2014); Crane and Glozer (2016); Garcia-Perze et al. (2020).

The review process was conducted in three stages. In the first stage, we selected from Scopus database 216 sport accounting studies, using keywords related to accounting and IC issues, such as "accounting and sport", "accounting and football", "intellectual capital and sport", "intellectual capital and football", "earnings and sport", "earnings and football", and "player registration right". We limited the search to journals classified in the Scopus "Business, Management and Accounting" subject area[1].

In the second stage, we organized the papers collected with the aim of answering our two research questions. We manually analyzed the abstract of the 216 papers selected to identify the final sample of 46 papers suitable for answering our questions[2]. Papers were included in our sample if they provide theoretical and/or empirical evidence about the role of IC in sport organizations and its impact on accounting and reporting practices[3].

In the third stage, through the IC lenses, we systemized the central themes, the empirical evidence, the opportunities and challenges for IC research. We grouped and linked sport empirical evidence in order to propose advances in IC accounting research and theories.

IC and Professional Sport Organizations: The Value Creation Process and Its Limitations

In this section, we analyze the sport dimension to study the IC value creation process and its limitations. The interdependence among the IC components, i.e. human capital, structural capital, and relational capital, is the core source of value creation inside professional sport organizations and athletic performance is the main expression of that interdependence (Mnzava, 2013; Garcia-Perez et al., 2020; Massaro et al., 2020; Migliaccio et al., 2022).

The sport human capital consists of the integrated knowledge and competencies embedded within the employees. It includes all the skills and sport performance data of the organisational actors, such as players, managers, and coaches. Sports structural capital refers to the features of sport club identity, which differ from the physical presence of human capital. Sport relational capital is about the relationships between the sport organization and the stakeholders. It includes the relationships with the media, the supporters, the capital providers, the regulators, the government, and the society (Andrikopoulos & Kaimenakis, 2009; Lardo et al., 2017; Harris & Brown, 2021).

According to prior research (Carlsson-Wall et al., 2016; Rubio Martin et al., 2022), empirical evidence demonstrates that often investment in IC generates value destruction within professional sport organizations. We

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[1] The search was made on 31 December 2018 and we repeated it on 31 December 2022 to update the search.

[2] The final sample includes also papers cited by the papers of the initial sample in case they were judged relevant for our research scope.

[3] To ensure the robustness of the selection process, the latter was repeated by three external accounting scholars. Papers were included in the sample if at least two of the three scholars agreed on their inclusion.

use the stakeholder and legitimacy theory to analyze the IC value destruction process within sport organizations. Through the analysis of this process, we explain the complexity of the relationships between IC and financial performance, identifying potential advances for IC research.

The Stakeholder Theory

Sport organizations are characterized by several relationships with multiple stakeholders, i.e., regulators, supporters, members, sponsors, funding agencies, affiliated organizations, staff, board members, and suppliers (Hoye, Smith, Nicholson, & Stewart, 2015; Perechuda & Cater, 2022; Vitolla et al., 2022). Sport managers operate in a context of intense pressure from several stakeholders. In this light, the stakeholder theory framework enables us to examine how the stakeholder's interests are managed (Gray, Kouhy, & Lavers, 1995; Friedman, Parent, & Mason, 2004; Dimitropoulos, Leventis, & Dedoulis, 2016). According to the stakeholder theory (Friedman et al., 2004, p. 172), "an organization's general success is directly linked to the needs, goals, and motivations of the parties with whom the organization interacts". The stakeholder theory clarifies the dynamics of IC value creation by explaining the multiple decoupling stakeholders' interests and their differentiated pressures.

The identification of stakeholders and their interests is an important task for managers with effects on the IC value creation and thus on the corporate value (Mitchell, Agle, & Wood, 1997; Friedman et al., 2004). The importance of the stakeholders depends on the stakeholders' power to control decision-making and to provide financial support to sport clubs (Ullmann, 1985). Under the stakeholders' pressure, managers define strategies which can create value only for certain stakeholders. According to prior sport research, professional sport organizations can adopt a profit maximization or win maximization business model. Win maximizers are sport clubs in which capital providers have as their main objective employing IC for maximizing value for fans and media. They are involved in meeting the passions of the fans and creating entertainment for the media. Therefore, they are willing to pay high salaries to the best and most popular players at the expense of their long-term profit generation and financial sustainability. Conversely, profit maximizers are sport clubs, in which capital providers have as main objective to use IC to maximize profit. Profit maximizer sport clubs meet the financial rules, and therefore they maximize the value creation for regulators, who succeed in guaranteeing the national collective interest of financial stability among clubs. Profit maximizers are not interested in investing in popular players. Therefore, they sustain costs for athletic performance with the aim of covering them with revenues (Smith & Stewart, 2010; Sloane, 2015; Terrien et al., 2017; Ahtiainen & Jarva, 2022). Sport managers may try to convince team owners to switch from a profit maximization to a win maximization business model in order to satisfy the fans' and media sport success interest. As a consequence of the switching strategy, the sport club does not create value for the other stakeholders, such as regulators, and the IC value creation process can be broken.

Prior sport literature employs the stakeholder theory to explain the relationship between the manager, financial regulator, and fans (Dimitropoulos et al., 2016; Garcia-Perez et al., 2020) and to analyze the accounting implications. Sports managers address the financially conflicting demands of the fans and the financial regulator (Dimitropoulos et al., 2016). On the one hand, fans' utmost goal is winning, and they consider the club a "community asset" of which the owners are mere custodians (Kennedy, 2013; Dimitropoulos et al., 2016). When clubs score poorly, fans demand expensive player transfers and high salaries, regardless of the financial condition of the sports club (Solberg & Haugen, 2010). On the other hand, the financial regulatory body appears as a dominant stakeholder with coercive power whose primary aim is to protect the national collective long-term interest (Dimitropoulos et al., 2016). Therefore, managing fans' and regulators' conflicting interests have earnings quality implications. The value creation for fans implies manipulating earnings in order to satisfy the coercive financial rules. Dimitropoulos et al. (2016) empirically verify this claim in the European football context. In the aftermath of UEFA's regulatory intervention on Financial Fair Play, football club managers undertake intensive earnings management practices in order to achieve sporting success and financial compliance in parallel (Dimitropoulos et al., 2016).

Overall, the stakeholder theory explains how the stakeholders conflicting interests impact the IC value creation process. With the aim of creating value for a group of stakeholders, sport clubs may have incentives to manage earnings.

The Legitimacy Theory

Sport organisations interact in a society under a social contract (Deegan, Rankin, & Tobin, 2002) and they are supposed to meet society's expectations. The legitimacy theory permits to explain the organizations' strategies to gain, maintain, and repair their legitimacy (Dowling & Pfeffer, 1975; O'Donovan, 2002; Deegan, 2014). Since the satisfaction of the stakeholder expectations implies value creation for them, the legitimacy theory can describe the IC value creation process and its potential limitations.

Prior studies (Slack & Shrives, 2008; Dimitropoulos & Koumanakos, 2015) have employed the legitimacy theory to explain the increased amount and quality of information the sport organizations disclose to their stakeholders to repair their legitimacy. The high players' wages, the poor financial performance, the sport hooliganism (on and off the pitch), the racism, and the perception of sport as "new commercialism" damage the sport organization's legitimacy by creating a legitimacy gap (Slack & Shrives, 2008, p. 19), i.e., a lack of correspondence between the society expectations and the sport clubs' behaviours. A more detailed disclosure about sport performance can move attention away from poor financial performance and other financial issues, such as excessive player wages, and can reduce the so-called legitimacy gap (Deegan, 2014; Garcia-Perez et al., 2020).

The sport dimension enables us to advance in the legitimacy theory research and so, in the IC value creation research. First, the sport sector consents to fill the research gap about the identification of which social group confers legitimacy (Deegan, 2014). Thanks to the sport dimension's analysis, it is possible to identify the expectations of multiple groups of stakeholders and so their legitimizing power (Fry, Serbera, & Wilson, 2021; Ahtiainen & Jarva, 2022). Supporters' expectations of sport success legitimize the sport clubs' manager to enforce a win maximization business model, paying high salaries and high transfer fee for maintaining and acquiring talents, i.e., sport human capital. However, the financial regulator expects clubs to attain the financial rules, and their expectation legitimizes sport clubs' manager in achieving a profit maximization business model. Therefore, the decoupling stakeholder expectations legitimize sport club manager in manipulating earnings with the aim of meeting all the stakeholder expectations. Sport organizations become a testing ground for further research about balancing different stakeholder groups' expectations and advance the study about the accounting implications of creating value for different stakeholders.

Secondly, the sport sector enables us to fill the research gap about the issue of how to measure the organization's level of legitimacy (Deegan, 2014). The sport dimension offers evidence about the measure of the level of legitimacy in relation to the expectations of the stakeholder groups. The higher the consistency between the organization's strategy and stakeholder expectations, the higher is the organization's legitimacy. Through the identification and measurement of the sport organizations' strategies, we can estimate the level of organizations' legitimacy and so the level of value created by IC. For example, the salaries and transfer fees paid for maintaining and acquiring talents represent the measure of the legitimacy level achieved by the organization in relation to the supporters' expectations.

To summarize, the legitimacy theory explains how sport organizations employ IC for gaining, repairing, maintaining the IC value creation process. Further research could study the sport organizations for advancing the legitimacy theory research (Deegan, 2014). Sport organizations offer opportunities for identifying the legitimation power of multiple groups of stakeholders, and the value creation for each of them. In addition, sport organizations permit to measure the organization's legitimacy level in relation to the expectations of multiple stakeholders and the value created by IC.

Accounting for IC and Sport: The State of Knowledge

In this section, we analyze the professional sport organization dimension to investigate IC accounting and reporting practices. The relevance of IC in professional sport organizations enables us to delve into studies about accounting for human capital, focusing on human capital cost capitalization and valuation and on the difference between market and book value. By fostering the differences between market and book value, and offering incentives for earnings management practices, sport IC accounting and reporting practices impact the financial reporting information transparency, i.e. the reliability and relevance of financial information.

The theoretical frameworks, i.e., stakeholder and legitimacy theory, explain the breaking of IC value creation process and the incentives for earnings management practices. The trade-off between business and sport goals, the difficulties in managing different stakeholders' interests, and the legitimation process contribute to reducing earnings quality (Risaliti & Verona, 2012; Dimitropoulos, 2014; Shilbury, O'Boyle, & Ferkins, 2016). Reduced earnings quality corresponds to a reduced level of information clarity and accuracy.

The followings paragraphs analyze IC accounting and reporting practices (Amir & Livne, 2005; Risaliti & Verona, 2012; Neri et al., 2021) and the role of IC disclosure in relation to information transparency (Lardo et al., 2017; Vitolla et al., 2022). We first review prior studies, and we then identify literature gaps. Finally, we provide directions for future research and advances in IC research and theories in relation to accounting and financial reporting practices.

Accounting for Human Capital

Players' registration and valuation are the main financial reporting practices concerning the accounting for human capital in sport organizations. The player costs have a significant impact on the financial statements due to the sharp increase in player salaries and recruiting costs. For example, in the Premier League Championship clubs' wage costs outweighed revenues for the fourth sequent year, resulting in a record of 125% wage/revenue ratio (Deloitte, 2022).

The sport dimension offers empirical evidence about human capital costs capitalization (Nappert & Plant, 2022). Players are reported as assets when clubs are able to trade players through a transfer market, for example in the European Context. It also offers empirical evidence about non-capitalized and non-revalued human capital costs, giving opportunities for studying the difference between market and book values and the effect on the financial reporting's informativeness. The accounting methods poorly permit to represent totally the value of the sport organizations IC, leading to hidden value (Biancone & Solazzi, 2012; Oprean & Oprisor, 2014; Dimitropoulos & Koumanakos, 2015). The market estimates the value of companies with high intangible assets to be higher than the book value (Maditinos, Chatzoudes, Tsairidis, & Theriou, 2011).

Players' costs: Accounting and reporting practices. The accounting standards and the ways to acquire players determine the possibility to record athletes as intangible business assets, i.e., the possibility to capitalize or not the human capital costs. Players can work as free agents, can be home-grown youth athletes, or can be transferred through the payment of transfer fees (Risaliti & Verona, 2012; Oprean & Oprisor, 2014; Neri et al., 2021; Maroun, van Zijl, Chesaina, & Garnett, 2022; Nappert & Plant, 2022). Players' cost capitalization has a relevant impact on the deviation of the club's equity market value from its book value. Increasing the profit generation and the book value of the sport organizations, players' costs capitalization has a positive effect on the income statement. Otherwise, non-capitalized players' costs generate hidden value. In this case, players' costs are expensed in the income statement, reducing the profit generation and so the book value.

Prior studies (Shareef & Davey, 2005; Biancone & Solazzi, 2012; Risaliti & Verona, 2012; Kulikova & Goshunova, 2014; Oprean & Oprisor, 2014; Dimitropoulos et al., 2016) mainly focus on the European Football, and analyze the appropriateness of recording players as intangible assets within the terms of the IAS/IFRS criteria for definition and recognition of assets.

First, the free players' contracts are not recognized as intangible assets. The lack of an active market for comparable parameters makes difficult to comply with the IAS 38[4]'s cost-reliable measurement requirements. Sport clubs stipulate a contract directly with a free player and expense the players' wages to the income statement on an accrual basis (Risaliti & Verona, 2012; Kulikova & Goshunova, 2014; Oprean & Oprisor, 2014).

Second, home-grown youth players' costs are internally developed intangibles not recognized as assets under either IAS 38 (Shareef & Davey, 2005; Oprean & Oprisor, 2014). The expenditures on young players' development and education are expensed to the income statement (Kulikova & Goshunova, 2014; Oprean & Oprisor, 2014). Oprean and Oprisor (2014) highlight the lack of costs' reliable measurement and share a consensus about the young player costs' non-capitalization. Conversely, Kulikova and Goshunova (2014) consider the prohibition of home-grown player costs' capitalization fundamentally wrong. Home-grown young players ensure the game stability and future good sport performance results. Investments in young players represent an asset formed over the years in sports academies, thanks to training and education. The costs for young player training and education meet the criteria of an intangible asset because they are capable to generate future economic benefits. Specifically, the development and education costs are correlated to the future sport clubs' revenues, such as tickets-season, sponsorships, broadcasting revenues, and competition prizes (Rossi, Thrassou, & Vrontis, 2013; Kulikova & Goshunova, 2014; Balliauw, Bosmans, & Pauwels, 2022; Nessel, 2022).

Third, players can be counted as an asset when clubs can trade players through a transfer market, such as the European transfer market. The player transfer occurs with a fee being paid to the club the player is exiting from. The fee can be capitalized and it stands for the cost of benefiting from players' performances. The payment of the transfer fee guarantees the reliable measurement of asset cost in compliance to the IAS 38 (Biancone &

[4] IAS 38 Intangible Assets.

Solazzi, 2012; Risaliti & Verona, 2012; Kulikova & Goshunova, 2014; Oprean & Oprisor, 2014; Dimitropoulos et al., 2016).

Also capitalizing players' costs as fixed intangible assets presents significant challenges, such as the lack of control over the athletes-assets, difficulties related to the estimation of future economic benefits and to the estimation of the period in which athletes will generate future benefits (Rowbottom, 2002; Amir & Livne, 2005; Risaliti & Verona, 2012). The limitations represent an obstacle to compliance with the IAS 38 capitalization requirements. In particular, the lack of control over the athletes limits the possibility of capitalization. Despite the regular contract, it is difficult for the club to sustain substantial and absolute control over the intangible resource as a player can always put his club in a position to sell or terminate his contract before its natural expiry (Rowbottom, 2002). The estimation of future economic benefits is uncertain. It is difficult to envisage the player's sporting performance and thus estimate the period in which this resource will be capable of generating economic benefits (Amir & Livne, 2005). In brief, it is uncertain to predict whether acquiring players will increase the club's financial performance (Pavlović, Milačić, & Ljumović, 2014). Despite the aforementioned limitations, the accounting principle that provides for the capitalization of acquisition costs has generally prevailed among football clubs, as we can see in the five major European Leagues (Smith & Stewart, 2010; Risaliti & Verona, 2012). Building upon past studies (Risaliti & Verona, 2012; Neri et al., 2021), future research could investigate the incentives in choosing certain accounting behaviours. In light of the IAS 38's capitalization requirements, how have sport clubs overcome the limits on players' transfer costs capitalization?

Besides the players' costs capitalization challenges, the valuation of players-as-assets presents significant uncertainties. Unlike other assets losing value over time, the players increase in value, yet their revalued amounts are not recorded on the balance sheet (Risaliti & Verona, 2012; Maroun et al., 2022). IAS 38 consents to choose between the cost method and the revaluation model. The revaluation model requires a reliable measure of the fair value in relation to an active market. However, this criterion presents application difficulties in sport organizations (Risaliti & Verona, 2012), since the player transfer market cannot be comparable to an active market characterized by frequent homogeneous goods transactions. As a consequence, the player-as-assets are undervalued in the balance sheet.

There is no rigorous and reliable methodology for evaluating sport clubs' human capital (McKenzie, 2022). Certain methods evaluate the player's sporting performance using detailed data collection, such as the number of successful passes and goals scored; other evaluation methods use the player's score combined with other determinant variables, such as the injury propensity. In addition, there are empirical methods based on the analysis of prices negotiated in comparable player transfers. The negotiated price is not always representative of the players' real economic value. For example, the bargaining power of an acquiring club might be reduced by the need to replace injured players immediately (Hirotsu & Wright, 2003; Tunaru, Clark, & Viney, 2005; Risaliti & Verona, 2012).

The aforementioned fair value identification problems make the impairment test particularly difficult and it represents a disincentive to devaluate player-as-assets. Intangible assets are written down for impairment when permanent value losses occur, i.e., the carrying value exceeds the value recoverable through use or sale (Muller, Lammert, & Hovemann, 2012). The conditions indicating impairments may come from internal and external source of information. Examples of internal information sources are players' injuries, resignation from professional activity, and early termination of the agreement. External information sources are relegation to a lower category, significant decrease in player market value due to unexpected bad sporting performances. In addition to player costs impairment test, the sport club should check the value of the cash generating unit (CGU) identified with the team (IAS 36). After a bad performance, individual athletes lose value not only individually but also as team (Biancone & Solazzi, 2012). Gazzola and Amelio (2016), in their study on listed Italian Football Clubs, confirm the impairment test difficulties and the disincentives to devaluation. Moreover, they do not find companies which apply the CGU impairment test.

To summarize, the social and human nature of sport shows the relevance of IC in the sport industry. The players are the main and core assets in sport clubs, but they are only partially recognized as intangible assets in accounting. First, the sport dimension offers empirical evidence about non-capitalized and non-revalued human capital costs, providing opportunities for studying the difference between market and book values and the effect on the financial reporting's informativeness. The internally grown player costs are not capitalized and the player-as-assets are undervalued; therefore, remarkable deviations of the market value from the book value are generated. The inefficient accounting methods for sport human capital's representation gives the opportunity to study the benefits and the disadvantages of sector-specific standards setters.

Furthermore, while sport scholars (Shareef & Davey, 2005; Biancone & Solazzi, 2012; Risaliti & Verona, 2012; Kulikova & Goshunova, 2014; Oprean & Oprisor, 2014; Dimitropoulos et al., 2016) focus on non-capitalized and undervalued players to explain the difference between market and book values, future research can deal with other human capital's intangibles values, i.e. coach skills, and internally developed brand. The coaches and the brand can be considered internally developed intangible resources which do not compare totally in the traditional financial report. The sport setting enables us to investigate the impact of IC accounting and reporting practices on the differences between market and book value (Roslender & Fincham, 2001).

Secondly, the sport context offers empirical evidence about the registration of human capital costs as business assets. Despite all the capitalization uncertainties, the sport transfer market permits to register players as intangible assets. Players have a transfer price and they meet the standards criteria for recognition as intangible assets, whereas home-grown players' costs cannot be capitalized because of a lack of reliable cost measures. In ordinary businesses, human capital costs do not meet the standard criteria for registration as intangible assets because they lack a labour transfer market. Could the business labour market work as a transfer market in which employees have a resale value? Furthermore, human capital research development could test opportunities and effects of the labour market operating as an employee transfer market.

IC Disclosure

The sport dimension shows evidence of the impact of IC on financial reporting information transparency (Shareef & Davey, 2005; Morrow, 2013; Dimitropoulos & Koumanakos, 2015; Lardo et al., 2017; Vitolla et al., 2022). On the one hand, IC accounting and reporting practices generate differences between market and book value, impairing the quality, clarity, and accuracy level of disclosure. On the other hand, they create incentives for earnings management practices. For example, the capitalization of player' rights and the player trading combined with the lack of players active market offer to sport clubs' managers the possibility to put in place real earnings management practices (Risaliti & Verona, 2012; Neri et al., 2021), which are "departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations" (Roychowdhury, 2006, p. 337). The lack of players' active market allows sport managers to manipulate earnings by overvaluing player exchanges in order to mask losses and negative shareholder equity. Losses are covered with capital gains obtained from the player exchanges between clubs (Risaliti & Verona, 2012; Dimitropoulos et al., 2016).

While IC accounting and reporting practices contribute to reducing the information transparency, IC voluntary disclosure can play a relevant role in increasing information reliability and relevance. In line with extant IC research, sport scholars share a common consensus about the relevance of IC voluntary disclosure to gain legitimacy (Slack & Shrives, 2008; Dimitropoulos & Koumanakos, 2015). IC voluntary disclosure can permit increasing the financial reporting information quality. The difficulties of incorporating sport human capital costs into traditional financial statements make IC voluntary disclosure useful to represent hidden value (Rubio Martin et al., 2022). IC voluntary disclosure can provide a more complete representation of the company value, increasing the prices of the stock and the shareholder value (Dumay, 2012; Vitolla et al., 2022). IC voluntary disclosure clarifies the difference between company market and book value, and therefore it reduces the information asymmetry between the company and its stakeholders (Lev, 1992; Guthrie, Petty, Yongvanich, & Ricceri, 2004; Castilla-Polo & Gallardo-Vázquez, 2016). Thanks to the mitigation of information asymmetry, sport IC disclosure improves the club's reputation, discourages opportunistic behaviours (Javier & Lozano, 2011; Dimitropoulos & Koumanakos, 2015), and can increase earnings quality. IC voluntary disclosure can allow sport organizations to couple the different stakeholder expectations, and club managers are no more legitimized to manipulate earnings to meet the stakeholder expectations. Future studies can use the sport setting to test the reliability and relevance of IC voluntary disclosure and its impact on earnings quality. Moreover, scholars could focus on the professional sport organizations in order to study the relevance of IC disclosure in relation to stakeholders' groups (Andrikopoulos & Kaimenakis, 2009; Dimitropoulos & Koumanakos, 2015; Lardo et al., 2017).

In addition to the IC voluntary disclosure, sport organizations are an interesting setting to explore IC involuntary disclosure. Dumay and Guthrie (2017, p. 29) define involuntary disclosure as "what external stakeholders and stakeseekers[5] disclose about a company"; thus it includes all the information published in newspapers and social media. The level of relevant involuntary disclosure in professional sports organizations is higher than in ordinary business. Whereas ordinary businesses are characterized by business secrets which cannot be uncovered by involuntary disclosure, but only through voluntary disclosure, the media and the business press can uncover almost totally the information about sport IC. The professional sport organizations' IC value creation process is visible from the outside. The sport performance, the player and coach's skills, and the clubs' strategies are observable (Dumay & Guthrie 2017). Further research is needed to compare IC involuntary disclosure levels in professional sport organizations with the ones in ordinary businesses.

Conclusions

Professional sport organizations are knowledge-based institutions, in which the IC's components, i.e., human capital, structural capital, and relational capital, play a relevant role and IC is often more important than financial capital. Sport clubs' value is mainly related to intangible resources, such as the club's management, the players' talent, and the supporters' passion (Andrikopoulos & Kaimenakis, 2009; Garcia-Perez et al., 2020). As

[5] Dumay and Guthrie (2017) consider stakeseekers the groups which are not investors or do not influence directly the firm but seek to uncover privately held information.

they are knowledge-based institutions, professional sport organizations are an interesting ground for potential advances in IC accounting research (Guthrie, Ricceri, & Dumay, 2012). Growing but highly fragmented literature explores accounting and reporting practices inside professional sport organizations and analyzes single aspects of IC (Risaliti & Verona, 2012; Rubio Martín et al., 2022; Vitolla et al., 2022). The sport organizations' knowledge-based nature allows us to translate sport accounting research into sport IC accounting research with the aim of identifying literature gaps, future avenues for sport IC accounting research, and advances for IC accounting research overall.

First, we investigate the IC value creation process through the analysis of professional sport organizations. By employing the stakeholder and legitimacy theory we describe the limitations of the IC value creation process within sport organizations. We explain the complexity of the relationship between IC and financial performance and we identify potential advances for IC research. The stakeholder theory explains how the stakeholders conflicting interests impact the IC value creation process. Intending to create value for a group of stakeholders, sport clubs have high incentives to manage their earnings. Finally, the legitimacy theory allows us to explain how sport organizations employ IC for gaining, repairing, maintaining the value creation process.

Secondly, professional sport organizations enable to study accounting and reporting practices for IC. The social and human nature of sport allows us to investigate human capital cost capitalization and valuation and the difference between market and book values. The accounting methods poorly permit the representation of the sport organization's IC value, leading to hidden value (Shareef & Davey, 2005; Morrow, 2013; Dimitropoulos & Koumanakos, 2015; Lardo et al., 2017; Garcia-Perez et al., 2020).

Finally, the distinctive characteristics of professional sport organizations make sport an interesting ground for broader research about the role of IC disclosure concerning information transparency (Lardo et al., 2017; Vitolla et al., 2022). The professional sport organizations IC value creation process is visible from the outside. Therefore, IC voluntary and involuntary disclosure can increase financial reporting reliability and relevance.

This paper provides several contributions. It discusses future avenues for advances in IC accounting research and theories. Furtherly, sport empirical evidence offers opportunities to deepen studies about IC value creation process, IC accounting and reporting practices, and the role of IC disclosure in relation to information transparency.

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