Economia Aziendale Online

Business and Management Sciences
International Quarterly Review

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Pavia, September 30, 2025
Volume 16 – N. 3/2025

DOI: 10.13132/2038-5498/16.3.953-972

www.ea2000.it
www.economiaaziendale.it

Pavia University Press

Electronic ISSN 2038-5498
Reg. Trib. Pavia n. 685/2007 R.S.P.

Vol. 16-3/2025 - DOI: 10.13132/2038-5498/16.3.953-972

Financial performance and sport performance: some insights from Italian football clubs

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Cite as:

Medioli, A., Gabrielli, G., Marchini, P. L., & Lugli, E. (2025). Financial performance and sport performance: some insights from Italian football clubs. E*conomia Aziendale Online*, *16*(3), 953-972.

Section:

Refereed Paper

Received: June 2025
Published: 30/09/2025

ABSTRACT

Recent years have shown great instability in the football industry that could be related to the need of investing large amount of money to be competitive. Since literature is characterized by mixed results that do not define a clear landscape, this paper aims to explore if a relationship between sporting performance and financial performance in professional football clubs exists, with a specific focus both on the Italian premier league but also in the minores ones. We tested our hypothesis using a panel regression on a dataset that includes financial and sporting data for 70 Italian professional football clubs which have competed in the three main national championships over a ten-year period (2010-2019). Results show a negative relationship between financial and sports performance and that football clubs with good financial performance reach lower sports outcomes. Hence our findings highlight that, both for the major Italian League and for the minority ones, clubs fail to pursue both high sports achievement and good financial outcomes. These results may suggest and encourage better managerial practices aimed to reduce failure. Better practices are need not only for the football teams in top championships but also in for the less prestigious ones. These results should also stimulate policy makers to provide regulations that can foster a better balance of the sport and financial dimensions of both top and minor leagues.

Gli ultimi anni hanno mostrato una grande instabilità nell'industria del calcio che potrebbe essere correlata alla necessità di investire grandi quantità di capitali per essere competitivi. Poiché la letteratura è caratterizzata da risultati contrastanti che non definiscono un panorama chiaro, questo articolo si propone di esplorare se esiste una relazione tra performance sportiva e performance finanziaria nelle società di calcio professionistiche, con un focus specifico sia sulla Premier League italiana che su quelle minori. Abbiamo testato la nostra ipotesi utilizzando una panel regression su un dataset che include dati finanziari e sportivi per 70 club di calcio professionistico italiani che hanno partecipato ai tre principali campionati nazionali in un periodo di dieci anni (2010-2019). I risultati mostrano una relazione negativa tra prestazioni finanziarie e sportive e che le squadre di calcio con buone prestazioni finanziarie raggiungono risultati sportivi inferiori. Quindi i nostri risultati evidenziano che, sia per i principali campionati italiani che per quelli minoritari, i club non riescono a perseguire sia alti risultati sportivi che buoni risultati finanziari. Questi risultati possono suggerire e incoraggiare migliori pratiche manageriali volte a ridurre i fallimenti. Migliori pratiche sono necessarie non solo per le squadre di calcio dei campionati più importanti, ma anche per quelle meno prestigiose. Questi risultati dovrebbero anche stimolare i responsabili politici a fornire regolamenti che possano favorire un migliore equilibrio tra le dimensioni sportive e finanziarie sia delle massime leghe che di quelle minori.

Keywords: Financial sustainable performance, Sport performance, Accounting behaviors, Mismanagement, Major and minors leagues

1 – Introduction

Football is the most popular entertaining event in the world, with a worldwide audience and, due to its social, cultural, and economic relevance, is an interesting subject for both theoretical and empirical approaches (Andon & Free, 2019; Romanelli & Osculati, 2022). Professional football is a big business today. Over the last three decades, football has seen several changes that have deeply reshaped the way this industry and its clubs are run.

Many discussions and analyses from regulators, investors and academics were focused on football companies and the whole business model of a unique industry as it is. One of the main reasons for this increasing interest is the significant transformation and growth of the financial side of football, with increased attention to foreign markets and the trademark exploitation, to identify and develop new sources to obtain money and resources, and the definition of innovative competitive tournaments (e.g. The Super League launched by Real Madrid) able to enhance clubs' financial statements (Galariotis *et al*., 2018). Trying to boost revenue related to success on the field, driven by the rise of resources, teams has faced an even greater increase of expenses leading the European football industry into financial instability (Lago *et al*., 2006; Plumley *et al*., 2021)

To understand how the financial side of football is quickly becoming a significant topic for managers it could be enough to read the news from the media. Recently, in many competitions, the focus is placed on the millions of euros associated with mere participation instead of the sporting results that can assure prestige and honour. Recent financial strains have further increased the stranglehold of financial aspects over sporting ones. Money, or more considerably the pursuit of more money, appears as the dominant driver that pushes clubs to have success on the field.

Hence, football industries see companies that, need to balance and manage two different dimensions: financial and sporting performance. European football scenario, and especially the Italian one, has been characterized by the try to maximize sporting success without any concern about financial performance. Along with the historical approach of clubs' owners focused on sporting performance, the system of promotion and relegation contributed to financial mismanagement. The combination of these two elements has produced a loss-making spiral and as a result football industry has shown great instability over the years, with many companies in financial distress in the Italian scenario. In this scenario, Italian 'Serie A' distinguished itself as a negative example of financial instability and mismanagement (Dimitropoulos & Scafarto, 2021; Lago *et al*., 2006). However, recent years seem to show greater awareness of companies from football sector to the issue of financial sustainability with the goal to combine the two dimensions mentioned above. Thus, the attempt to maintain high competitiveness on the field through the achievement of good financial performance.

Creating a balance between proft-seeking and pursuing sporting success is a crucial challenge for football clubs. What sets football clubs apart is the inherent connection between their profits and the level of sporting competition. When the competition intensifies, consumers naturally become more interested in purchasing he output, which is primarily represented by the sporting events themselves.

This paper aims to investigate if it exists a relationship between sporting performance and financial performance football clubs, to understand if the Italian scenario has produced the right balance between them. Previous literature that aims at understanding the relationship between financial and sporting performance mainly use revenues as a measure of financial performance and not profitability. This study uses profitability to measure financial performance as in most industries. To test our hypothesis, we estimated panel regressions using both fixed and random effects estimators. Our results suggest that good financial performance leads football clubs to be more competitive on the field. This this sense, good profitability and return of the investment seem to not trigger a virtuous circle and value creation mechanism that allows football clubs obtain victories and good sporting results. In other words, being efficient does not ensure on-field success.

While our focus on Italian professional football allows us to investigate one of the most relevant European leagues, it also introduces contextual and temporal boundaries that need to be acknowledged. First, the study is limited to Italian clubs, and therefore its results may be influenced by the institutional, cultural, and economic specificities of this national context, which might differ from other European or international leagues. Second, the timeframe under investigation covers the pre-Covid period, which is an important boundary condition, since the Covid-19 pandemic has had profound economic and organizational consequences for the football industry worldwide. These limitations should not be seen as weaknesses but as defining features that frame the scope of our analysis. At the same time, they also open up opportunities for future research, particularly through cross-country comparative analyses and the inclusion of post-pandemic data, which could shed further light on how clubs have adapted to unprecedented financial and sporting pressures.

The paper is organized as follows. Section 2 describes the background of our work and develops out hypothesis. Section 3, present the sample selection and, research design. Section 4 demonstrates the empirical results. Concluding remarks are provided in Section 5.

2 – Literature Background and Hypothesis Development

2.1 – *Literature Review*

Professional football is an industry characterized by specific logics that make unique the companies that compose it. There are, in fact, specific accounting, management and control rules that regulate part of the activities performed by these companies.

The football industry in Europe shows the characteristics of the European approach to sporting sector, which is different from North American models (Andreff & Staudohar, 2000; Hoehn & Szymanski, 1999; Szymanski, 2003). European and American models arise with some differences strictly related to revenue creation process and the ability to compete. However, all the differences derive from the starting approach to professional sports clubs. North American sport system is more profit-driven, with profitability as the dominant factor able to drive managerial decisions (S. Dobson & Goddard, 2001), in a scenario where there are not promotions and relegation but a possible change of location if there is not a satisfying level of profits from that market. In the college football context, it even depends on external revenues from donations, media rights, ticket sales. If they are not satisfying, the football program will not survive (Omondi-Ochieng, P. 2019; Omondi-Ochieng, P. 2019 bis).

By contrast, the literature suggests that the Europe is more oriented towards a logic of maximising results on the field (Garcia-del-Barrio & Szymanski, 2009; Kesenne, 1996, 2000; Rohde & Breuer, 2018; Sloane, 1971). Therefore it is and will remain unique, but with certain possible points of contact (Andreff & Staudohar, 2000).

The focus of the companies operating in the football industry, in fact, over the course of time, has shifted more and more, reducing the gap with the more traditional business model, from the management of "a game" to the need to focus on the economic and managerial aspects of the business and the economic "role" of football companies, increasing the importance of the ability to generate revenues from these companies.

The definition of more efficient strategies, which could link together sporting and financial results is one of the main goals of football policies such as UEFA's Financial Fair Play. This policy should strengthen financial health and foster future sustainability of clubs. Anyways, this could generate a situation where in order to respect the financial constraints of the UEFA's FFP, club management reduces accounting quality trying to spread an image of a financially stable organization (Dimitropoulos *et al*., 2016; Dimitropoulos & Scafarto, 2021).

Literature shows different theoretical approaches regarding football companies' performance. A strand of knowledge followed the approach from Szymanski and Smith (1997) and Késenne (1996) that highlighted a mixed scenario where football clubs aim at maximizing both profits and victories (Vrooman, 1997, 2000; Ribeiro and Lima 2012; Kounetas 2014). This approach represents the midpoint between two other streams of literature suggesting that football firms operate only focused on one of the two dimensions, neglecting the other one. A body of literature views football clubs as typical companies that prioritize profit maximization (Quirk & El-Hodiri, 1974; Quirk & Fort, 1992), with a lower focused on sport results. However, an alternative viewpoint, initially proposed by Sloan (1971) and subsequently supported by (Késenne, 1996; 2006) suggests that football clubs primarily aim to optimize sporting results. Clubs should maximize their utility in the pursuit of sports goals, leaving out profit and financial performance. Therefore, financial performance is just a constraint to be respected rather than a goal to be achieved. In this view, there is a coincidence of managers' interests and sports performance.

Chenhall, Hall, and Smith (2013) also showed that different performance logics could influence each other and the coexistence of different performance logics could create a positive effect on firms' degree of performance and have emphasized that football clubs are subject to different performance logics that can influence each other.

Moreover, following the approach of Szymanski and Smith (1997) and Késenne (1996), Lago *et al*. (2004) suggested the existence of a theoretical model based on the relationship between different dimensions of managing football companies. This approach underlines three different dimensions: financial performance, business performance and sports performance. Economic and financial performance is closely related to sports performance and the team's reputation. The management strategy of football clubs is to initiate a sort of virtuous circle that starts from a sequence of intermediate goals of an intangible nature (best players and coach, sports results, image improvement), to achieve, at the end, an economic and financial balance. The start of this virtuous circle requires high investments and economic resources (greater than what usually happens in other business sectors). This is due to the greater importance of the intermediate objectives, which make the final one almost secondary, and the immaterial nature (so less predictable) of the same. Investments are certainly more relevant in the initial phase but also in the further steps of development (promotion to higher categories, participation in international competitions, and so on). So, as shown in the literature, the business of football clubs is therefore capital intensive: to achieve satisfactory sporting results, teams have to make huge investments and their capabilities to attract investment are related to different and various reasons (Kirsch *et al*., 2024).

The virtuous circle given by investments-sports performance, image improvement, economic-financial balance, which every football club tries to start, depends on the size of the club.

Prior literature (Lago *et al*., 2004; Marchini & Lugli, 2018) distinguishes large from small clubs and highlights that in large clubs the availability of huge financial resources allows purchasing the best talent players who, notoriously, are determinant to achieving sporting goals. Small clubs, with a smaller catchment area, pursue different economic and financial intermediate goals. In this case, the virtuous circle is based on the selection of young talents grown in their own nurseries or purchased at a low price from minor leagues around the world.

Thus, a competitive team comes thanks to these young promises, allowing one to preserve the permanence or be promoted to the top division. Consequently, achieving this target leads football clubs to have higher revenues coming from television rights and ticket sales, as well as making substantial capital gains thanks to the sale of the most talented players. Smaller teams, which usually compete in minor division, face higher risks in terms of financial sustainability, for this reason, it is interesting to understand if there is a similar sporting and financial performance as the one which exists in top division. Currently, there is a lack of studies that examine the relationship between profit-seeking and sporting success in minor divisions of football. When considering minor divisions, it is important to acknowledge that they are owned by families or fans who prioritize sport performance over profitability. This emphasis on sporting success may give rise to challenges regarding financial sustainability, as teams striving to win their divisions, and being promoted, may experience lower profitability outcomes. Concluding, football teams should consider two types of performance. On one hand, they should consider the need for high sports performance; on the other hand, they should reach the expected levels of economic and financial performance to ensure their going concern.

In the light of the above and using this theoretical framework as a lens for the research, we focus on sports and financial performance logics and aims to investigate how these different logics coexist in Italian football teams, with reference to major and minor leagues. In other words, this paper aims to explore the relations among the financial variables that affect sports performance

2.2 – *The "Italian scenario"*

Recently, looking at its peers 'Serie A' has constantly produced losses, failing to deliver a profit even at the operating level (Deloitte, 2016, 2017, 2018, 2019; Hamil *et al*., 2010; Manni, 2012). Although decreasing, Italian main league still has highest wages-to-revenue ratio among top championships. Confirming the positive trend, the recent report issued by (FIGC *et al*., 2019), seems to provide a useful financial image of professional football in Italy, with Serie A that seemed to have embarked on a path of improved results in the overall financial position, before pandemic crisis (FIGC *et al*., 2017, 2018),

Historically, Italian clubs struggle to deliver financial stability because of governance structure. This structure was characterized by club controlled by business individuals or families that exercising a dominant influence on management through a highly concentrated decision-making structure. This approach leads to decisions aimed at maximizing the owner or family's utility function, where on-field success was prioritised over profitability (Hamil *et al*., 2010). Moreover, in the recent history, the close tie between the family-owner and management, lead to Italian football business at the top of the fame due to sporting fraud, misconduct and others personal or team responsibilities (Mazanov *et al*., 2012; Romanelli & Osculati, 2022). However, in recent years, Serie A seems to begin following the path of the other big football industries, mainly because of the presence of foreign investors.

The increased volume of financial resources within the "football sector" has, over time, aroused the interest of an increasing number of investors, who especially in recent years have operated in order to give concrete implementation to the axiom of assuming that football clubs can actually represent profitable investments, thus paying more and more attention to the correct management of the trade-off between sporting and financial success.

Therefore, football industry is characterized by the fact that two different, and sometimes opposite, dimensions need to coexist and be balanced to obtain the best outcome: financial and sporting performances, that it could also be seen as on-field and off-field performance.

With the previously mentioned growth of a traditional business approach to clubs' management, the debate about the importance of financial performance and the extent to which they might compromise on-field performances have increased. This is one of the most highlighted topics in English Premier League with clubs that have had to deal with this thorny issue. In order to remain competitive, English teams needed to spend huge amount of money to acquire and maintain player. In the meanwhile, they tried to reach the right economic balance, by adopting a successful and sustainable approach to financial side. The reconciliation of the sporting and financial dualism is not an easy task, although there is already partial recognition that these dimensions may be linked. To obtain a better knowledge of this new reality, establishing if the two dimensions are connected, how they are connected and how to manage the interrelationship would ensure a remarkable enrichment in the sport management literature. Football clubs' managers have to face a difficult challenge: being able to achieve relevant sporting results while also obtaining economic performance required to ensure the going concern of the company.

This contribution aims to show if these logics coexist in the Italian football industry as well as how they affect each other. Financial performance refers to the ability to secure the going concern value of the business and it is the consequence of the reaching of specific financial targets in terms of profitability or debt sustainability. Sports performance is related to the need to succeed in leagues and competitions. The coexistence of these two performance logics in this industry, as well as in others, has been recognized in the literature (Carlsson-Wall *et al*., 2016; Dimitropoulos, 2014; Dimitropoulos & Limperopoulos, 2014; Szymanski, 1998a).

2.3 – *Hypothesis Development*

The above-mentioned shift of football to a more efficient business model lured the interest of the academic community, in order to study the issues related to the management performance of football clubs. Several contributions have highlighted that football clubs are subject to different performance logics that can influence each other (Smith & Stewart, 2010), and this is the reason why the literature is developed in many different strands since the performance of a football club can be analysed from several points of view depending on which kind of performance variable is chosen.

Scholars tried to identify the link between sport performance and some of the issues of the game itself, such as team features, management and coaching (Boscá *et al*., 2009; Dawson & Dobson, 2002; de Dios Tena & Forrest, 2007; Frick *et al*., 2010); or financial performance (Barros & Leach, 2006; S. M. Dobson & Goddard, 1998; Gerrard, 2005; Guzmán & Morrow, 2007; Haas, 2003; Kounetas, 2014; Pinnuck & Potter, 2006; Ribeiro & Lima, 2012). Other strands of research go more in depth on the accounting topics, focusing their attention on specific financial statement items, for example intangible assets, particularly significant in the football industry or on the quality and transparent level of financial disclosure, analysing football clubs' financial statements (Amelio *et al*., 2020; Gazzola & Amelio 2016).

Research with the aim to relate sporting and financial results can be further divided into two subgroups. There is a relevant amount of studies that want to study the efficiency of companies combining variables, applying the Data Envelopment Analysis (DEA) (Barros & Leach, 2006; Barros & Santos, 2004; Guzmán & Morrow, 2007; Haas, 2003; Haas *et al*., 2004; Kounetas, 2014; Ribeiro & Lima, 2012).

The second subgroup of research brings together studies that try to identify the correlation between financial and sports performance indicators (Dobson and Goddard 1998; Gerrard 2005; Pinnuck and Potter 2006; Szymanski 1998)

The first set of studies is performed to analyse how teams exploit their resources and investments, and therefore the extent to which football clubs transforms inputs into outputs trying to win games. These studies show uneven, and in some cases conflicting, results.

Haas (2003), collecting data from the 00/01 seasons of the English top League, shows the lack of a relation between team efficiency and sporting performances of the team, since the sporting ranking at the end of the season and efficiency scores is not related in a significant way. According to its results, teams with good efficiency indexes are not among the best of the sports ranking.

Barros and Santos (2004) and Haas *et al*. (2004), studying respectively Portugal and Germany, found out that it does not exist a correlation between efficiency levels of teams and the sporting performance. In fact, teams with very different sport performance achieved during the season, from the best to the worst, seems to have similar and good results in term of efficiency.

Focused on seasons from 2002/2003 to 2008/2009 of Portugal's League, Ribeiro and Lima (2012) reveals that being efficient does not ensure on-field success, showing lower sports performance at higher efficiency scores. Their analysis shows that four of the six most efficient clubs ranked among the last six in the final classification.

Certain conclusions drawn in England, Germany and Portugal, align with the findings highlighted by Kounetas (2014) for Greece. In Greece, top teams are not the most efficient ones. Smaller clubs that do not compete to win the championship seems able to employ resources in a more efficient manner than companies that compete for trophies.

In contrast, Barros and Leach (2006) come to a completely different outcome. In fact, their conclusion exhibits a positive relationship between efficiency and sporting results achieved. Studying English Premier League from 98/99 to 02/03 they combined sporting and financial elements. Drawing on their results, clubs with better final standings tend to register better efficiency indexes than clubs with worse results.

It is also shown turnover tends to be positively related higher efficiency scores, as teams with higher revenues obtain a higher score in terms of efficiency compared to those with smaller ones. They also highlighted the influence of the local environment, with clubs in wealthier areas having higher turnovers and better league standings.

A slightly broader sample has been employed by Guzmán and Morrow (2007) who have used a six-season time, concluding that there is not a significant relationship linking efficiency scores and sports achievements, though, their study did not run a correlation analysis as in extant literature.

However, it shows an inverse relationship between efficiency and sporting achievements. For instance, the top three clubs in championship standings are listed as inefficient (e.g Manchester United) and at the same time, clubs ranked between the mid and the bottom of the pack are classified as efficient (e.g. WBA). This is due to the fact that top teams achieve sporting results not proportioned to the level of investments made, therefore they appear to overconsume resources.

All the aforesaid contributions provide qualitative conclusions about football clubs' efficiency by analysing if financial and sporting performances affect each other, these studies come to different results and have some limits. There is a lack in terms of variables used, as in most cases, they are limited mainly to wages or transfer expenses and fail to capture the interactions of performance, in our study we tried to overcome this limit by focusing on variables different from only wages or transfer expenses.

Some other studies tried to address this issue. Focusing on English championship for the 96/97 season, Szymanski (1998), claims the existence of a relationship between league performances and financial results, measured by the revenues. Hence, better sporting results produce higher revenues. Good sporting results create an increase in hype around the team that produces more fans at the stadium and willing to pay higher ticket prices, increased sponsorship, and revenues from TV rights.

According to this study, the sport logic should definitely be the dominant one because without satisfactory on-field performance, clubs would have not the strength to achieve their planned financial goals. This sense of urgency could create financial instability that could mine clubs' survival.

Analysing a relevant group of 77 teams competing in English league, Dobson and Goddard (1998), show the absence of correlation between revenues and sporting achievements for the majority of the sample (about 80%). This is not the only aspect that their paper highlights because, consistent with Kounetas (2014), it seems that the connection exists mostly in smaller clubs. Again, they argue that the team's revenues depend on two drivers: on one side the performance of clubs that determines their attractiveness and therefore the capability to obtain new fans that can ensure new revenue's stream. On the other side by the system developed to share revenues among clubs, e.g. the broadcasting rights sharing mechanism.

Looking at Gerrard (2005) we can observe that revenues positively affects the competitive variable. This last one expressed by the sum of the points obtained during the championship. Still, Gerrard (2005) shows the negative effect of operating margin on sports performance.

These results are consistent with Galariotis *et al*. (2018) who found that, in France, teams with the worst financial performance stands at the top of the league and vice versa. Galariotis *et al*. (2018) also highlight two further findings: the first one is that football clubs can create a virtuous cycle phenomenon that are able to create high level of revenues improve their performance on the field, which in turn improves revenues in a virtuous cycle phenomenon. The second one is that football clubs that generate high revenues don't improve their financial performance.

Taking a sample of teams from 1993 to 2002, Pinnuck and Potter (2006), show that match attendance, which has a positive impact on revenues, is influenced by both short-term and long-term sports performance. This could be viewed as logical evidence because it is easy to understand that a winning team can lure in more supporters and richer sponsorship deals.

Lastly, coming into the Italian scenario, Ferri *et al*. (2017) studied Italian "Serie A" trying to tackle issues related to the main economic determinants of results on the pitch. Their model included 29 teams (seasons 2007-2013), only form the major league, finding that sports performance are positively impacted by the extent of players' salaries but not by resources invested to acquire players. Rey & Santelli (2017) studying the relationship between financial ratios and clubs' results, report a scenario of healthy financial teams, with low debts and a where teams with higher revenues are best performers on the field. They drew these conclusions, again as Ferri *et al*. (2017), on 29 teams from Serie A between 2011 to 2015.

Prior literature, turned also the light on different ways used to measure sport performance. This concept meant as the actions aimed at achieving a predetermined scope (i.e win a competition) has, in fact, a multidimensional nature and is investigated both with regard to the football team in general or to the football players. For example, Ferri *et al* (2017) estimate sport performance using the number of points scored by the football team in every season divided by the maximum number of points. Similarly, Barros and Leach (2006) refers to points obtained in the league at the end of each season. Dimitropoulos and Limperopoulos (2014) use the number of wins a club has achieved over the season. Bosca *et al* (2009) approximate with the number of goal scored over the course of the season.

With respect to our choice, we believe the most adequate indicator to measure the outcome supplied by the football team is the position at the end of each season. We start from the idea that the productive factors, in this case, are the football players organised by a coach. In this sense, the results and the outcome gained by the whole football team, that we named sport performance, may be reasonable measured using the position of the football club at the end of the season.

To summarize, the contribution by the extant literature to make the link between sports and the other performance dimensions is not solid, while when attempted the results are contradictory and some of the applications provide results that may suffer from reliability problems. For example, in most cases efficiency proxies are restricted to revenues or operating margins, while in some cases the techniques applied are not robust nor appropriate for the sample sizes, among other things.

Therefore, we propose our contribution to filling this gap considering one of the major leagues in the world, which is the Italian one. Moreover, our analysis fits in a relatively unexplored field which is those of the minor leagues (Serie B and Lega Pro). In other words, in fact, our paper looks at the key issue of financial sustainability in the football industry context with a focus on the sensitive and unexplored field related to, not only the Serie A, but also the minor leagues. We think to provide a more general overview and new significant results about the relationship between sport and financial performance in the football industry.

Accordingly, we propose our research hypothesis as follows:

H1: Football clubs' financial performance has a negative relationship with clubs' sports performance.

3 – Data and research design

3.1 – *Data selection*

This study utilizes a dataset that includes financial and sporting data for 70 Italian professional football clubs which have competed in the three main national championships over a ten-year period (2010-2019), for a total of 699 observations (unbalanced sample). The observed clubs are all those involved in the “Serie A” League, “Serie B” League, and “Lega Pro” League, which are the main divisions of the Italian professional football system, from 2010/2011 to 2018/2019 seasons. Each season begins in September and runs up to May of the following year. The analysis limits its context to the seasons which exclude pandemic period, so the study considers, as its last season in the sample, those represented by 2018/2019 since the next one involved, for half of the season, the pandemic year 2020. The choice to exclude COVID-19 period is because decisions assumed by FIFA and national and international governments in these months, may significantly influence clubs’ financial and sport performance.

The measures of sporting performance (final standings, season-end points, promotions and relegations) were hand-collected from the “Serie A” official website (www.legaseriea.it), the “Serie B” official website (www.legab.it) and from “Transfermarkt” official website (www.transfermarkt.it) for the “Lega Pro”.

All financial data were collected from clubs’ financial statements obtained by the AIDA database from Bureau Van Dijk.

3.2 – *Research design*

The aim of this paper is to investigate if a possible relationship between sporting performance and financial performance exists in professional football clubs. To test our hypothesis, we run a panel regression using the following equations. The estimation was made using both fixed effects (1) and random effects (2) estimators. We estimate the model using both fixed-effects and random-effects estimators. Year fixed effects are included to capture common shocks across time, while league fixed effects control for time-invariant heterogeneity across leagues.

$$SPORT\_PERFORMANCE_{it} = \beta_0 + \beta_1\ FIN\_PERFORMANCE_{it} + \beta_2\ CFO_{it} + \beta_3\ SIZE_{it} + \\ + \beta_4\ SALARY_{it} + \beta_5\ INV_{it} + \beta_6\ LEVERAGE_{it} + FE + e_{it} \quad (1)$$

$$SPORT\_PERFORMANCE_{it} = \beta_0 + \beta_1\ FIN\_PERFORMANCE_{it} + \beta_2\ CFO_{it} + \beta_3\ SIZE_{it} + \\ + \beta_4\ SALARY_{it} + \beta_5\ INV_{it} + \beta_6\ LEVERAGE_{it} + RE + e_{it} \quad (2)$$

Where SPORT_PERFORMANCE is the position of each club at the end of the season. We consider the football clubs of each League as they were participants of a unique same championship. In other words, SPORT_PERFORMANCE take a value from 1 to 62 where 1 is the value (position) of the last club in the "Lega Pro” League and 62 is the value of the first club in “Serie A” League, as the clubs play in a unique League and so, at the end of the season, they give rise to a unique leaderboard. FIN_PERFORMANCE represents the financial performance of the football club and it is proxied using Return on Asset (ROA) ratio as earnings before interest and tax (EBIT) over total assets at the end of the fiscal year.

As usual in the regression model, we include control variables to capture and to consider potential confounding factors. Given our analysis, we control for some specific firms characteristics (e.g. Kumar 2024; Chowdhury *et al*. 2018; Reddy and Sharma 2014). CFO is the operating cash flow of the current year measured as net earnings plus depreciation and amortization, SIZE is the natural logarithm of total assets at the end of the fiscal year, SALARY is taken from the cost of personnel considering only wages, INV measures the annual investment in intangible assets as absolute value of intangible asset in year t minus absolute value of intangible asset in year t-1, LEVERAGE is measured as total debts scaled by total equity at the end of the fiscal year. Variables are winsorized at the 1st and 99th percentiles to mitigate the influence of outliers. See APPENDIX for variable definitions.

We expect that FIN_PERFORMANCE has an impact on SPORT_PERFORMANCE by joining the strand of literature that shows significant evidence in the relationship between financial and economic results on achieving sports results.

4 – Empirical results

4.1 – *Descriptive statistics*

Table 1 presents the descriptive statistics for the variables in the regression models. The higher and lower value (Mix 1.000 and Max 62.000) assumed by SPORT_PERFORMANCE shows that, in our analysis, we consider all clubs to play in a unique League and so, at the end of the championship we built a unique league table including all clubs. The mean value of this variable is 27.29, in other words, obviously, the position 27th, that probably refers to a club playing in the "Serie B" League and classified in the middle of this championship.

Table 1– Descriptive statistics

Dependent variables	**N**	**Min.**	**Max.**	**Mean**	**SD**
SPORT_PERFORMANCE	**699**	1,000	62,000	27,290	17,574
Independent variables					
FIN_PERFORMANCE	**699**	-6,876	1,086	-0.358	0.683
Control variables					
CFO	**699**	-53,046,931.00	144,121,773.00	3,543,590.630	15,171,695.261
SIZE	**699**	11,846	20,557	15,936	2,071
SALARY	**699**	-32,634,482.00	256,858,000.00	17,003,213.310	34,411,712.606
INV	**699**	-49,178,038.00	169,743,766.00	2,465,299.11	13,756,586.879
LEVERAGE	**699**	-1,922.787	2,583.195	7,331	147,246

FIN_PERFORMANCE shows that the financial performance of football clubs, proxied using the ROA indicator, ranges from a negative ROA of 6.876 to a positive ROA of 1.086, with an average value close to zero. The mean value in our sample seems to be a little bit better than Acero *et al*. (2017) and Dimitropoulos and Tsagkanos (2012); this is probably due to the fact that they consider only "big" teams playing in the main European competitions.

Control variables show results similar to others non-football private firms (e.g. Chowdhury *et al*. 2018). Specifically, CFO and Leverage show positive mean value, reaching, respectively, about 3,5 million Euros in the CFO and 7,3 in the proportion of total debts on total equity. SALARY shows that the mean wages paid to football players are around 17 million Euros, with a high standard deviation in the sample, caused by the highly different levels of the three League analyzed. Lastly, SIZE has a mean value of about 16 and considering the natural logarithm is similar to results in Acero *et al*. (2017); INV tells about an average investment in intangible assets of 2,5 million Euros.

Table 2 shows the Univariate correlation between variables. For the variables significantly and highly correlated, we check the variance inflation factor (VIF) that is lower than 10. Thus, we conclude that there are no problems of multicollinearity.

Table 2 - Pearson correlation matrix

		1	2	3	4	5	6	7
1	**Sport_Performance**	1,000						
2	**Fin_Performance**	**0.267**	1,000					
3	**CFO**	**0.423**	**0.231**	1,000				
4	**Size**	**0.881**	**0.371**	**0.424**	1,000			
5	**Salary**	**0.675**	**0.172**	**0.440**	**0.697**	1,000		
6	**Inv**	**0.279**	**0.090**	**0.301**	**0.278**	**0.407**	1,000	1,000
7	**Leverage**	0.052	0.025	0.039	**0.081**	0.043	0.028	0.028

Correlation is measured by Pearson coefficients. Bold are coefficients significant at 5% level.

4.2 – *Regression results*

Building on the premise that football clubs must simultaneously pursue financial and sporting objectives, often requiring a delicate balance between two potentially conflicting dimensions (Carlsson-Wall *et al*., 2016; Dimitropoulos, 2014; Dimitropoulos & Limperopoulos, 2014), our findings suggest the existence of a link between these spheres, confirming our hypothesis. Rather than being independent goals, financial and sporting performance appear interrelated, such that outcomes in one dimension may shape results in the other. In other words, our results confirm the theoretical perspective that football teams should consider two types of performance, and they have to coexist.

Table 3 reports that stronger financial performance is associated with greater challenges in achieving sporting success. In the fixed effects specification (1), the coefficient of interest is negative (–0.283) and only marginally significant (p =0.082). This provides indicative evidence that clubs aiming for on-filed success may need to spend beyond financially sustainable levels, thereby compromising return of investments (financial performance is measured using ROA). In other words, our findings suggest that, for both major and minor Italian leagues, clubs cannot easily pursue high sporting achievement without affecting their financial standing. Good profitability and return of the investment seem to not trigger a virtuous circle and value creation mechanism that allows football clubs to get to the first position in the sports championship. Good profitability and returns on investment do not appear to generate a virtuous cycle that translates into sporting success; being efficient does not necessarily ensure on-field achievements. This is consistent with Haas (2003), who finds that teams with higher efficiency indexes are not typically among the best in the sporting rankings. The random effects estimators (2) show a similar negative association (coefficient=-1.93; P-value= <0.001) thereby reinforcing the evidence obtained with fixed effects.

Table 3 - Regression results

	(1) FE		(2) RE	
	Coefficient	p-value	Coefficient	p-value
Fin_Performance	-0.283	0.082	-1.93	<0.001
CFO	0.007	0.638	0.02	0.444
Size	0.13	<0.001	6.52	<0.001
Salary	0.039	0.002	0.07	<0.001
Inv	0.006	0.528	0.02	0.206
Leverage	-0.01	0.273	-0.01	0.038
Year FE	*YES*		*NO*	
League FE	*YES*		*NO*	
Intercept	44.97	<0.001	-78,896	<0.001
R2	0.68		0.79	
Number of observations	699		699	

Against the backdrop of prior mixed findings, our results contribute to a better understanding of the link between financial and sporting performance, shedding light on whether and how the two dimensions interact. Accordingly, we situate our analysis within the literature that supports the existence of such a relationship. In particular, our findings are in line with Gerrard (2005), Haas (2003), Ribeiro and Lima (2012), Kounetas (2014) and Galariotis *et al.* (2018) who argue that football teams with weaker financial indicators may nonetheless occupy the top positions in league standings, and vice versa.

4.3 – *Robustness test*

We conduct additional tests to assess the robustness of our empirical design. In particular, we employ alternative specifications for both our dependent and independent variables. First, we measure the dependent variable SPORT_PERFORMANCE differently. To allow for comparability of sporting performance across divisions, we construct a normalized measure based on the final league ranking of each club. Specifically, for every season and within each division (Serie A, Serie B, and Lega Pro), we compute the percentile rank (PERC_RANK) of each club's finishing position.

This transformation rescales the ordinal ranking to a continuous variable ranging from 0 (lowest rank in the league) to 1 (highest rank in the league). By normalizing within divisions and seasons, this measure preserves the relative performance of clubs in their respective competitions while ensuring comparability across leagues of different sizes and competitive structures. Table 4 (column 1) shows results which are similar to the main analysis when fixed effects are included.

We also employ an alternative specification of the independent variable capturing a club's financial performance. Instead of using ROA, we use EBITDA to further test the robustness of our results. As shown in Column 2 of Table 4, the findings remain consistent with the main analysis. Finally, we test the model on subsamples split by league (Serie A, Serie B, and Lega Pro). The results, although not tabulated for brevity, remain consistent with our main findings, thereby supporting the robustness of the relationship across different competitive contexts.

Table 4 – Robustness test

	(1) Perc_rank		(2) SPORT_PERFORMANCE	
	Coefficient	**p-value**	**Coefficient**	**p-value**
Fin_Performance (ROA)	-0.268	0.004		
Fin_Performance (EBITDA)			-0.121	0.033
CFO	0.009	0.305	0.003	0.823
Size	0.95	<0.001	0.247	<0.001
Salary	0.032	<0.001	0.037	<0.001
Inv	-0.002	0.891	0.006	0.532
Leverage	-0.01	0.165	-0.001	0.321
Year FE	*YES*		*YES*	
League FE	*YES*		*YES*	
Intercept	-1.798	<0.001	47.43	<0.001
R2	0.52		0.61	
Number of observations	699		699	

5 – Conclusion

Football is the most popular sport in the world and has a significant social, cultural, and economic impact. These reasons, with the meaningful changes and reshaping that the football sector has seen during the last years, leaded it to be an important topic both for researchers and practitioners. The unique characteristics of this industry and its business model have caught the attention of many.

Despite prior literature made a lot of effort to investigate football performance and various performance dimensions such as efficiency, and financial and economic results, it achieved contradictions findings. Our results, focused on one of the major leagues in the world, such as Serie A, may fill this existing gap and expand the horizon in this field by extending the analysis also to the minor leagues, giving a more complete overview of this topic and showing significant results about the relationship between sport and financial performance in the football industry.

Through the lens that, in football firms, sports and financial performance logics coexists, we show that football clubs' financial performance has a negative relationship with clubs' sports performance, so improving football clubs financial performance leads to lower sport results.

The importance of our findings, in addition to the above-mentioned meaningfulness of investigating the Italian League, has also to be reported to some recent events that involved bankruptcy and mismanagement in the Italian football teams. Furthermore, empirical evidence also on minor leagues offers a contribution to a relatively unexplored part of football industry.

These findings have significant implications both for the academic literature, for practitioners and for regulators and policy makers.

Results strongly support the view that football clubs may have a possible trade-off between financial and sports targets, and we add knowledge about the idea that they are inversely related, enriching the strand of literature that sustains that better financial performance does not always ensure better sports outcomes.

In relation to this, our study supports the idea that football clubs represent a valuable laboratory for studying the interaction between financial and non-financial performance objectives, offering empirical evidence of the tensions between profit maximization and competitive success. This encourages further exploration of the trade-offs faced by hybrid organizations that combine commercial and social logics. Second, our findings invite the development of new performance measurement frameworks that integrate accounting, financial, and sporting indicators, thereby extending traditional corporate finance approaches to the specificities of sport organizations. Moreover, the Italian context illustrates the importance of studying institutional and cultural variables that shape governance outcomes, highlighting opportunities for comparative studies across leagues and countries. Finally, our study suggests that future research should address the post-Covid environment and incorporate social welfare dimensions—such as community engagement and stakeholder value creation—into models of financial and sporting performance. In this way, football can serve as a fertile ground for interdisciplinary dialogue between accounting, strategy, finance, and sport management scholars.

Looking at practitioners, these results may suggest and encourage well-balanced strategies between sport and financial performances, suggesting to managers and governance bodies to focus on the real value of the football player and football team; this, maybe, may lead to less failure and general benefits for all.

In particular, for club managers, our findings reinforce the idea that excessive focus on sporting achievements can jeopardize financial sustainability. Managers should therefore adopt more balanced strategies, combining financial discipline with sporting ambition, for instance by leveraging performance measurement systems that integrate economic and sporting metrics. Investment in youth academies and data-driven player recruitment can help limit overreliance on expensive transfers, as also suggested by evidence on resource-based advantages in football.

For league administrators, our results emphasize the role of governance structures in promoting both competitive balance and financial resilience. Mechanisms such as enhanced revenue-sharing schemes or tailored versions of Financial Fair Play regulations can mitigate the risks of financial distress while avoiding the unintended consequences of one-size-fits-all policies. Administrators should also develop early-warning systems to detect financial fragility among clubs, a measure consistent with recent findings on the prevalence of mismanagement in Italian football, providing advisory support and financial literacy programs to clubs could further strengthen organizational resilience.

This study has also implications for regulators and policy makers, as it highlights that looking for competitive advantage on the field could have negative impact on the financial performance of football clubs. Football clubs are embedded in wider social and cultural systems, making financial stability a public interest issue. In this sense, regulators could be stimulated to produce more efficient regulations able to foster a better balancing between the sporting and financial logic. Policymakers should thus promote transparency and accountability through stricter licensing requirements, while also incentivizing investments in infrastructure, grassroots development, and community programs. Special attention should be given to minor leagues, where financial distress is more frequent, ensuring that promotion ambitions do not systematically compromise long-term solvency. This study provides evidence that clubs which aim to be promoted can sacrifice profitability to excel on the field. This have implications for policy makers that should be more focused on regulation of minor divisions that are receiving fewer attention in terms of regulation.

Our study is not free from limitations. As underlined in the Introduction, our study’s contextual and temporal scope should be interpreted with caution. By focusing exclusively on Italian clubs and on a pre-Covid timeframe, our findings capture dynamics that may not be directly generalizable to other leagues or to the post-pandemic era. It investigates only the Italian context, while the same methods with similar data could be applied to other countries also making a comparison between them. Future research could address these limitations by adopting a cross-country design, enabling comparisons across different institutional and economic settings, and by incorporating data from the Covid-19 period and beyond. This would allow scholars to investigate whether the pandemic has reshaped the relationship between financial sustainability and sporting performance, for example by accelerating digital revenues, altering transfer market dynamics, or modifying governance practices within football clubs. Extending the scope in this way would not only validate and strengthen our findings but also provide a more comprehensive understanding of the evolving football industry in times of crisis and recovery.

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APPENDIX 1 – Variable definitions

Variables	
SPORT PERFORMANCE	Position of each club at the end of the season, considering the football clubs of each League as participants of a unique same championship. It takes a value from 1 to 62, where 1 is the worst position and 62 the best one.
FIN PERFORMANCE	Earnings before interest and tax over total assets at the end of the fiscal year.
CFO	Operating cash flow of the current year measured as net earnings plus depreciation and amortization.
SIZE	Natural logarithm of total assets at the end of the fiscal year.
SALARY	Cost of personnel (considering only wages).
INV	Absolute value of intangible asset in year t minus absolute value of intangible asset in year t-1.
LEVERAGE	Total debts scaled by total equity at the end of the fiscal year.