

Human capital and financial performance in professional football: the role of governance mechanisms

Vincenzo Scafarto and Panagiotis Dimitropoulos

Abstract

Purpose – *The main purpose of this paper is to examine the relationship between human capital investments and financial performance in the professional football industry. The authors examine this association by controlling for internal (club-level) mechanisms of governance. Specifically, as they deal with a context of highly concentrated ownership and familial control of football clubs, they posit that the degree of family board representation and a dual leadership structure exert a moderating effect on the decision to spend on playing talent.*

Design/methodology/approach – *The empirical analysis employs a fixed-effect econometric model on a panel data set of 16 Italian football clubs that spans a nine-year time period ending up with 144 firm-year observations.*

Findings – *The main novel finding of this investigation is that clubs with CEO duality and a high degree of family board representation manage to profit from investments in player contracts as opposed to clubs which lack these governance mechanisms.*

Research limitations/implications – *A clear implication is that the presence of corporate governance mechanisms at club level may be value-enhancing. In terms of policy direction, the finding makes the case that regulatory bodies should consider the imposition of governance mechanisms at club level as a means to promote actual financial discipline and a further ally to current regulations that are restricted to monitoring processes tied to accounting data.*

Originality/value – *This study attempts to explain the financial outcomes of player investments by combining insights from the mainstream governance and family business literature. Prior works in the field are restricted to testing the direct relation between player investments and performance, but fail to consider the potential moderators of this association.*

Keywords *Financial performance, Human capital, CEO duality, Family board representation, Football industry*

Paper type *Research paper*

Vincenzo Scafarto is Assistant Professor at Department of Human, Social and Health Sciences, University of Cassino and Southern Lazio, Cassino, Italy. Panagiotis Dimitropoulos is a Teaching and Research Associate at Department of Sport Management, University of Peloponnese, Sparta, Greece.

Introduction

This paper primarily intends to investigate the financial impact of human capital investments in the professional football industry. The authors elaborate on this issue by exploring whether internal governance mechanisms affect the relation between player investments and financial performance, which has been rarely if ever addressed in prior research.

In the field of football economics and accounting, a general consensus exists that the core asset in a football club is the human asset and more exactly the exclusive ownership of football player registration rights (Morrow, 1996; Rowbottom, 2002; Lozano and Carrasco Gallego, 2011), let alone the ownership of stadium when present. In fact, one can argue that the bulk of revenues that accrue to a football club ultimately depends at least to some

Received 17 May 2017
Revised 10 July 2017
Accepted 20 October 2017

extent on the endowment and “quality” of the human asset. The causal mechanisms that underlie this contention have been described as follows (Szymanski and Smith, 1997; Leach and Szymanski, 2015): sporting performance is determined by the quality of players hired in a competitive market such that in general higher player expenditures lead to higher league performance, which in turn will generate increased revenues (in terms of championship participating rights, season and match ticket sales, sales from broadcasting rights) as a result of increased on-field success. In an attempt to trigger this “virtuous cycle”, leading clubs in Europe have been paying huge sums for acquiring the services (rights) of talented players in the transfer market. In this regard, the business advisory firm Deloitte (2016) in the most recent annual review of football finance reports that on average 85 per cent of additional revenue generated by the “big five” European leagues in 2014/2015 was spent on wage costs.

While prior research has consistently documented the positive impact of investments in playing talent on sporting performance and through this on revenue growth (Szymanski and Smith, 1997; Gerrard, 2005; Leach and Szymanski, 2015), the existing empirical studies that have analyzed the impact of player spending on profitability (Amir and Livne, 2005; Dimitropoulos and Limperopoulos, 2014; Mnzava, 2013; Dimitropoulos and Koumanakos, 2015; Nicolliello and Zampatti, 2016) have produced somewhat mixed results, such that further research is warranted. Indeed, this is the primary motivation for this article.

As far as the role of corporate governance is concerned, several recent investigations have documented the relevance of corporate governance quality in the context of professional football clubs. For instance, Dimitropoulos (2011) has documented that corporate governance quality in terms of increased board independence, managerial and institutional ownership and small board size contributes to high-quality financial reporting through mitigating earnings management behavior by football managers. Dimitropoulos and Tsagkanos (2012) have found that corporate governance quality leads to greater level of profitability and viability. Corporate governance quality has also been shown to reduce the level of debt that clubs decide to issue, thus lowering the risk of financial instability (Dimitropoulos, 2014). In general, the need for reliable corporate governance at club level has long been recognized by several researchers (Michie, 2000; Michie and Oughton, 2005; Dimitropoulos, 2010). However, the existing empirical research has not considered the potential influence exerted by corporate governance mechanisms on the relation between investments in playing talent and financial performance. This paper also intends to address this issue by using a sample of professional football clubs from the first division (Serie A) of Italian football covering a nine-year time period from the sporting season 2006-2007 up to 2014-2015.

Italian football provides an interesting research setting in terms of ownership structures and the resulting governance mechanisms, since professional football clubs are characterized by a high degree of ownership concentration and more specifically, they are fully or majority-owned by wealthy individuals or families either directly or via corporate holdings. This type of ownership structure results in the functions of ownership, control and residual claimant being internalized (Hamil *et al.*, 2010). As a result, business decisions and in particular those pertaining the level of investments in playing talent can be made with an aim to maximizing a dominant owner’s or family’s utility function, as club owners essentially monitor themselves and bear the full financial impact of their decisions. Consequently, they can either prioritize success on the field of play or profitability, but in the former case, business models tend to become unsustainable and rational financial management is de-emphasized.

Considering all the above, we posit that the degree of owners’ involvement in management (i.e. through a family CEO) and governance (i.e. through family representation on the board of directors and/or CEO-Chairman dual role) exerts a moderating effect on club financial

performance through affecting the decision to spend on playing talent. In addition, we control for the effect of board size as a further moderating governance variable. By doing so, this paper provides a somewhat novel perspective of analysis in that it attempts to explain the financial outcomes of human investments in a professional football setting by combining insights from the mainstream governance literature and from the family business literature which specifically addresses the potential advantages and shortcomings of family involvement in business.

Empirical results indicate that clubs with CEO duality, a family CEO and a high degree of family board representation (FBR) are better positioned to benefit from player investments relative to clubs which lack these internal attributes of governance. These findings are consistent with a stewardship explanation of the advantages associated with a joint leadership structure and family management. Under this theory, family managers and dual-role CEOs would act as good stewards of corporate value promoting long-term viability through less short-sighted decisions, investments in business development and financing conservatism (Miller and Le Breton-Miller, 2006).

This study extends prior research by documenting that the financial impact of player investments may be contingent on the internal governance mechanisms that are in place. A clear implication of this finding is that the presence of corporate governance mechanisms at club level may be value-enhancing. In terms of policy direction, these results suggest that regulatory bodies such as the Union of European Football Associations (UEFA) should consider the imposition of a corporate governance framework at club level to promote actual financial discipline and not limit to monitoring processes tied to accounting data (Dimitropoulos *et al.*, 2016).

The remainder of this paper is organized as follows:

- the next section provides a review of the relevant literature that has explored the association between human capital investments and firm financial performance and states the first research hypothesis accordingly;
- the subsequent section outlines the literature that addresses the performance implications of corporate governance mechanisms with a particular stress on family ownership and management and stipulates the related research hypotheses;
- next a description of the data selection procedure is provided and empirical findings are reported; and
- eventually the main conclusions are presented along with potential future research directions.

Literature review and hypothesis development

Human capital investments and firm performance

Human capital has long been argued to be a potential source of competitive advantage and a key factor explaining performance differences across firms (Wright and McMahan, 1992; Hall, 1993; Pfeffer, 1994). The term is commonly referred to as the knowledge, skills and abilities embodied in employees that bring economic value to firms.

The notion that firms can profit from investments in human capital has been forwarded by human capital theorists (Becker, 1964; Schultz, 1961), who have typically argued that firms can increase their human capital by internally developing the knowledge and skills (e.g. through training and development programs) of their current employees or by attracting individuals with high knowledge and skills from the external labor markets (Youndt *et al.*, 2004).

In the current “knowledge era” of business (Pulic, 2008), continuous investments in human capital are needed to enhance capabilities and sustain competitive advantage, especially in knowledge-based settings (Chatterjee, 2016). However, such investments also represent substantial costs imposed on firms, these including the replacement costs that are incurred whenever knowledge workers leave the firm (Olander *et al.*, 2015). Consequently, assessing the performance impact of human investments has become a major research issue, which bears significant implications for both theory and practice. Indeed, empirical research in this area has increased over recent decades, involving scholars with different research foci and backgrounds, such as strategic management researchers (Hall, 1993; Hitt *et al.*, 2001) and particularly human resource management researchers (Snell and Youndt, 1995; Youndt *et al.*, 2004) as well as accounting researchers involved in exploring the value relevance of human capital information (García-Ayuso *et al.*, 2000; Lajili and Zéghal, 2005; Sydler *et al.*, 2014) and intellectual capital accounting (ICA) researchers (Firer and Williams, 2003; Reed *et al.*, 2006; Chan, 2009; Nimtrakoon, 2015).

Each of these lines of research has produced compelling evidence that human capital investments bear some relationship to firm performance. However, a comprehensive account of many such investigations would be well beyond the scope of this paper.

For the purposes of the present analysis, we limit ourselves to consider the ICA research that relies on the cost approach for valuing human capital and its contribution to business performance. Essentially, this line of research has considered labor costs as disclosed in financial statements to be an appropriate proxy for human capital. Ante Pulic (2008; p. 7), an influential intellectual capital theorist, argues that the human capital of a company is represented by its workforce and in accounting terms by the expenditures for employees. The underlying contention is that employee expenditures and particularly investments in knowledge workers should be no longer regarded as costs but rather as asset-like investments since knowledge workers are “the main value creators of contemporary economy” (Pulic, 2008, p. 5). In the same line of thinking, García-Ayuso *et al.* (2000) assume that a significant part of the investments in human resources such as recruiting and training costs are reflected in income statements under labor costs. Moreover, labor costs are regarded as a rough proxy of a firm’s ability to attract and retain talented people, who usually command higher salaries and compensation packages (Pulakos *et al.*, 2003). Following this line of arguments, several empirical studies have used labor-related costs to assess the performance implications of human investments. Many of these studies consider human capital as a primary component of the intellectual capital (IC) construct and often employ a measure of labor productivity (i.e. the ratio of valued added to labor costs) to proxy the efficiency of knowledge workers. This research stream has yielded mixed results. For instance, Chen *et al.* (2005), Kamath (2008), Ting and Lean (2009b), Clarke *et al.* (2011), Maditinos *et al.* (2011) and Nimtrakoon (2015) have consistently reported a positive impact of human capital efficiency (HCE) on financial performance. By contrast, other studies (Firer and Williams, 2003; Shiu, 2006; Chan, 2009) have found a significantly negative impact of HCE on stock market performance and overall firm productivity (Morariu, 2014). Still other studies (Dženopoljac *et al.*, 2016; Celenza and Rossi, 2014; Mehralian *et al.*, 2012) have failed to find any significant impact of HCE on financial and stock market performance.

Recently, this measurement approach has also been applied in the professional football setting by Dimitropoulos and Koumanakos (2015), who have documented a positive association between HCE and financial performance for a sample of European listed football clubs.

Professional football provides a somewhat ideal setting for exploring the performance implications of human investments, first because it is a highly human-intensive industry, and second, because professional football companies are unique in recognizing human capital investments as assets on the balance sheet (Rowbottom, 2002). In this

respect, football players are quite distinct from other employees because purchased player registration rights can be capitalized and amortized due to the existence of the measurement aspect in the form of the market place (i.e. the transfer market) in which the registration rights of a player get traded (Morrow, 1996). As a result, transfer fees along with player wages are major components of labor costs for professional football companies (Amir and Livne, 2005).

Prior research into the professional football industry has used investments in player contracts (Amir and Livne, 2005; Dimitropoulos and Limperopoulos, 2014) either alone or in combination with player wages (Mnzava, 2013) to assess the impact of human capital expenditures on financial performance. Again, results have been inconclusive. Amir and Livne (2005) have reported a positive association between transfer fees paid for new player contracts and financial performance. Mnzava (2013) has shown a positive impact of player investments (as measured by the net book value of player registration rights) and wage costs on financial performance for a sample of UK listed football clubs. By contrast, Dimitropoulos and Limperopoulos (2014) have found that higher investments in player contracts in the three professional divisions of Greek football are associated with deteriorating financial performance. Most recently, Nicolliello and Zampatti (2016) have documented a highly negative impact of players' wages on net profitability for clubs participating in the top Italian professional league.

Considering the mixed results of the above studies, our first hypothesis stated in the null form is:

- H1. Human capital investments are associated with the level of financial performance of Italian football clubs.

Ownership structure, board governance and firm performance

The relationship between corporate governance mechanisms, family ownership and financial performance has been extensively examined in the academic literature, within different markets, economic environments and corporate sectors (Arora and Sharma, 2016; Rubino *et al.*, 2016; Minichilli *et al.*, 2010, 2016). Shleifer and Vishny (1997) argue that corporate governance provides the necessary monitoring mechanisms for protecting the interests of creditors and investors by restricting the appropriation of shareholders' wealth (Sun *et al.*, 2011). Practically firms with weaker governance structures face more agency problems and managers gain more private benefits. In addition, the impact of family control (in companies where family members own a block of shares) over corporate decisions (either by appointing family members on the board or as a CEO) has also been considered extensively by previous studies (Chen and Hsu, 2009). Habbershon and Williams (1999) document that family-owned or family-controlled firms are associated with higher and more stable profit margins, higher decision-making flexibility and lower costs. These characteristics contribute to a competitive advantage of family firms relative to non-family controlled firms.

Furthermore, previous studies in this field provide significant evidence that corporate financial performance is higher in companies with effective mechanisms of corporate governance such as board size or CEO duality (Yermack, 1996; Brown and Caylor, 2009; Kaserer and Moldenhauer, 2008; Elsayed, 2007; Rubino *et al.*, 2016). Also, in the sport industry, De Barros *et al.* (2007) and Dimitropoulos and Tsagkanos (2012) provide evidence on the existence of principal-agent problems in the Madeira and European sport clubs and declare that governance provisions must be incorporated in the clubs' daily operations so as to protect the interests of clubs' stakeholders since those mechanisms are associated to enhanced financial performance. Moreover, Ferri *et al.* (2017) argue that football clubs in Italy are controlled by family members and this

leads to decisions focusing on the medium- to long-term financial performance and stability relative to short-term performance. Therefore, we expect football clubs which have family control over corporate decisions to be characterized by a more significant association between investments in players' contracts and financial performance. Consequently, following previous literature, we examine the mediating role of internal governance mechanisms – and specifically, the size of the board of directors, whether the CEO of the club also serves as the chairman of the board, whether the CEO is a family member and the level of FBR – on player investments and its impact on clubs' financial performance.

Board size. The size of the board of directors has been considered extensively by empirical studies in the field of corporate governance as a significant mechanism that affects the firm's financial performance yet with conflicting results (Adams *et al.*, 2010; Arora and Sharma, 2016; Rubino *et al.*, 2016). Yermack (1996), Eisenberg *et al.* (1998), Lipton and Lorsch (1992) and Jensen (1993) argue that smaller boards are associated with higher market valuation and profitability consistent with the idea that the benefits of increased monitoring by larger boards may be outweighed by poorer decision-making. This is attributed to the lack of coordination and the increased communicational and organizational problems of larger boards, leading to inefficient decisions distorting shareholders' wealth and firm value. Empirical evidence by Guest (2009) and Arora and Sharma (2016) indicates that firms with smaller boards have higher Tobin's Q and stock returns. Also, Firstenberg and Malkiel (1994) argue that smaller boards are more likely to reach consensus on corporate decisions, allowing members to communicate in genuine debate and interaction leading to enhanced decision-making, faster reaction to environmental threats or opportunities and consequently improved financial performance. These arguments have been verified by Coles *et al.* (2008) and Boone *et al.* (2007).

Alternatively, larger boards can provide an increased pool of expertise, greater management monitoring and access to a wider range of contracts and resources (Cheng, 2008; Lehn *et al.*, 2009; Klein, 1998). Practically, the main advantage of large boards is the possession of greater collective information regarding those factors that affect firm value, thus providing an optimal monitoring leading to improved financial performance (Rubino *et al.*, 2016). Evidence by Dimitropoulos and Tsagkanos (2012) in the European football industry provides empirical support to these arguments documenting that clubs with larger boards are more profitable and viable.

In total, the empirical findings relative to the impact of board size on financial performance are quite contradictory with several studies arguing that larger boards perform more thorough control on managers' decisions, while on the contrary, others point that smaller corporate boards are more efficient monitors than large boards because they have a higher level of membership coordination and communication efficiency and a lower incidence of intense free-rider problems (Dimitropoulos and Asteriou, 2010). However, related studies on the European football industry are really scarce with only one published by Dimitropoulos and Tsagkanos (2012) who document a positive association between board size and profitability. Therefore, based on the above discussion, we form our second research hypothesis in the null form as following:

H2. Board size is associated to the level of financial performance of Italian football clubs.

CEO duality. Evidence on the impact of CEO duality on firms' financial performance is mixed, and this dichotomy on results has given support towards two theoretical paradigms, the agency and stewardship theories. Stewardship theory posits that a dual role of the CEO may enhance the firm's financial performance since the CEO has a thorough knowledge of the strategies and the operations of the firm (Davis *et al.*, 1997; Lin, 2005). Agency problems in firms with CEO duality are less severe and managers operate as good stewards of corporate assets. This is achieved through a reduction of costs of information transfers between executives and the board, a complete authority

of CEOs over the organization leading to a unified leadership contributing to better communication and control. A unified command can help the firm to respond faster to external events and produce a more efficient decision-making and faster implementation of strategies. Empirical evidence by [Brickley et al. \(1997\)](#) and [Guillet et al. \(2013\)](#) supports stewardship theory by finding a positive impact of CEO duality in the banking and hospitality industry, respectively.

On the contrary, agency theory argues that CEO duality can distort corporate value because CEOs may decide to increase their own wealth at the expense of shareholders since their influential and ultimate control can exacerbate agency problems in the firm ([Chang and Sun, 2010](#)). As [Mitchell \(2005\)](#) argues, CEOs can hide critical information from the directors (or even falsify it), and thus, they may influence the decisions of the board. Beyond that, CEOs who are also board chairmen can select specific individuals on the board who are more prone to support their proposals and decisions. So, under this framework, several studies have tested empirically the link between corporate financial performance and the duality of the CEOs such as [Pi and Timme \(1993\)](#), [Davidson et al. \(2004\)](#) and [Desai et al. \(2003\)](#) among others, who document that duality leads to inferior shareholder value. Consequently, proponents of agency theory emphasize the necessity of separation between the CEO and board chairman roles.

According to [Boyd \(1995\)](#), both theoretical perspectives are correct under different circumstances. Put it differently, CEO duality may be negatively associated to corporate performance under some circumstances and positively related in others. This notion is supported by [Rhoades et al. \(2001\)](#) and [Elsayed \(2007\)](#) who argue that CEO duality may have differential impacts on financial performance depending on the context of the study and the industrial sector under research. The impact of CEO duality on the financial performance within the football industry remains quite unexplored since an early study by [Michie and Oughton \(2005\)](#) which documents that 82 per cent of football clubs in England have separated these two roles, while on the contrary the relative percentage of CEO duality in a sample of European football clubs reaches up to almost 93 per cent and according to [Dimitropoulos and Tsagkanos \(2012\)](#) CEO duality impacts negatively on clubs' financial performance and viability supporting the agency theory perspective on CEO duality.

Nevertheless, the football industry is a sector characterized as highly labor intensive and faces increased seasonality and short-term actions. Within this environment, the decision-making process and the managerial power of the CEO may be crucial for football clubs and a dual leadership can allow greater freedom to the CEO to deal with the abovementioned issues in a timely manner. Therefore, taking into consideration the contradictory evidence from previous studies regarding the impact of CEO duality on financial performance, we state our third hypothesis in the null form as follows:

H3. CEO duality is associated to the level of financial performance of Italian football clubs.

Family involvement in management

A significant number of studies have tried to assess the impact of family involvement in management (FIM) on the firm's financial performance. Nevertheless, empirical findings are not conclusive since both positive and negative associations have been evidenced in the literature ([Sciascia and Mazzola, 2008](#)). [Rubino et al. \(2016\)](#) argue that family businesses are characterized by tight control not only by employing a family member as the firm's CEO, but also by employing family members on the board of directors. In this situation, agency problems are mitigated since problems arising from the separation between ownership and control are reduced, managerial monitoring is more

effective, reducing managerial entrenchment which in turn leads to superior corporate value and performance. Nevertheless, family control over corporate decisions may lead to another agency problem between majority and minority shareholders (Anderson and Reeb, 2003). Under this theory, controlling shareholders can use their privileged position to extract private benefits against the interests of minority shareholders (Rubino *et al.*, 2016).

Moreover, corporate governance within family firms is quite distinct relative to the governance of non-family firms. Several researchers argue that family firms are characterized by weaker governance mechanisms and a lack of professional capability, leading to higher agency costs and inefficient decision-making (Pérez-González, 2006). On the contrary, Minichilli *et al.* (2016) document that firms perform better when family members are involved in firm management as CEOs because family members may pursue financial and non-financial goals, creating socio-emotional wealth supporting the long-term viability of the firm (Gómez-Mejía *et al.*, 2007; Rubino *et al.*, 2016). Family members participating in the firm's management are the only executives who probably have invested most of their private wealth and reputation in the corporation and therefore have strong incentives to monitor management closely to avoid opportunistic behavior and managerial entrenchment.

Theoretical arguments by Minichilli *et al.* (2010) posit that family CEOs resolve to more long-term investment and capital expenditure decisions, developing significant capabilities to the firm which result in higher financial performance. This positive association is attributed to the "altruism" of the family CEO and so his/her efforts contribute to profit growth and corporate viability in the long run (Villalonga and Amit, 2010). This argument has been corroborated by Palia *et al.* (2008) and González *et al.* (2015), documenting that the intangible non-monetary benefits of the family CEO can lead to a benevolent entrenchment, making him/her work harder and exert greater effort relative to the most suitable manager in the labor market. Those non-monetary benefits pursued when the CEO is a family member do not necessarily end up to a bad outcome for shareholders (Burkart *et al.*, 2003). Empirically, Minichilli *et al.* (2010) and Rubino *et al.* (2016) verified that CEO duality and the presence of a family CEO are positively associated to firm financial performance only for family-controlled firms. The benefits of family CEOs in corporate value are achieved through the goal of family CEOs to protect the longevity of the firm, increase turnover for all shareholders and create an environment of loyalty and trustworthiness, which enhances the firm's relations with its internal (employees, partners) and external (creditors, investors, etc.) environment (Arregle *et al.*, 2007).

On the contrary, the opposite view posits that family CEOs do not maximize firm value due to the expropriation of shareholders' wealth and opportunistic behavior of family CEOs. Schulze *et al.* (2003) argue that family CEOs can use the resources of the firm for their own benefits (awarding themselves excessive perquisites, payouts and rewards), leading to several conflicts of interests and agency issues within the operation of family firms (Songini and Gnan, 2015). Since empirical evidence on the impact of a family CEO on the firm's financial performance is mixed, we state the fourth hypothesis in the null form as follows:

H4. The existence of a family CEO impacts clubs' financial performance.

In addition, the participation of family members on the board has also been examined in the literature with contradicting evidence. Minichilli *et al.* (2010) argue that FBR exacerbates agency threats in the firm and even subverts CEO's altruism for their personal benefits. While family members are expected to be more motivated to act in the best interest of the firm, nevertheless the potential to engage in opportunistic behavior is enhanced, leading family members to compensate themselves in the form of perquisites, bonuses,

misappropriation of firm resources or reduce their effort (Lubatkin *et al.*, 2007). These arguments have been verified by Sciascia and Mazzola (2008) and Dyer (2006), indicating that family members on the board have the possibility to substitute non-monetary returns with monetary returns and also lack the necessary professional management competencies to deal with the operations of the firm or even sustain a constant flow of information from diverse resources. All of the above may distort corporate value and most of the times not intentionally by family board members.

On the contrary, González *et al.* (2015) argue that family presence on the board mitigates information asymmetries and monitors CEOs effectively since family directors can use their knowledge of the firm's operations to determine whether the CEO is acting in shareholders' interest. Moreover, family board members have long investment horizons and make decisions which improve long-term viability instead of myopic short-term performance. On this merit, Andres (2008) documents that family firms outperform other firms when the founder (and its descendants) is also on the board since he/she has greater firm-specific experience and can exert greater rigor in assessing financial performance. Recent evidence by Minichilli *et al.* (2016) supports the view that outsider-dominated governance in family firms (less family members on the board) is not necessarily better than family-centric governance since family-dominated boards and the presence of a family CEO have a positive impact on firm performance and viability even during a period of financial turbulence.

Therefore, in light of the stewardship theory, it has been argued that family members on the board act as stewards since they identify themselves strongly with the firm, work with strong commitment because they perceive firm success as an extension of their own well-being (Sciascia and Mazzola, 2008). Miller and Le Breton-Miller (2006) provide evidence that family members on the board avoid hazardous moves to enhance revenues or even avoid large cutoffs that reduce costs with an adverse impact on human capital and employee morale. Conversely, family board members make far-sighted investments in human capital, training and research and development. All of the abovementioned decisions are strongly associated to superior financial performance. Football clubs are corporations which invest heavily in human capital and training and following the reasoning of Miller and Le Breton-Miller (2006), clubs with family members on the board may decide on such investments considering the club's sustainability and financial performance relative to clubs with no family members on the board. Yet, the conflicting evidence in the literature and the lack of studies on the football industry lead us to state the fifth and final hypothesis in the null form as follows:

H5. Higher FBR impacts clubs' financial performance.

Sample selection procedure and data collection

This research is based on a panel data set composed of accounting and governance data for 16 Italian professional football clubs spanning a nine-year time period (2007-2015), which total up to 144 club-year observations. All sample clubs are limited companies by share which are legally required to produce audited financial statements, with the audit function performed by an outside auditor (albeit this is not mandatory for all of them under the current company law).

To get a balanced panel, the sample has been restricted to clubs meeting the following criteria: first, clubs that have been participating in the top-tier division (Serie A) of the Italian professional football for the entire time period under investigation – which is the case with almost all sample clubs – or clubs that have undergone only a one-year relegation spell to the second-tier division; and second, clubs for which we were able to retrieve complete accounting data on total sales, labor costs (wages), total assets, total debt, operating profit, net profit and annual gains (losses) from disposals of player

registrations rights; governance data (notably ownership and board governance structure) as well as annual investments in player contracts measured as transfer fees paid for new player contracts.

All such data were manually sourced from clubs' financial statements, shareholders' meeting minutes (as far as governance variables are concerned) and other notes attached to financial statements such as the prospectus that details the annual changes in the value of player registration rights (e.g. new investments, disposals, amortizations).

Three out of the 16 clubs are listed clubs which are presently obliged to draw up their financial statements according to the international accounting standards (IAS), whereas the remainder clubs adopt the Italian generally accepted accounting principles (GAAP). However, this inconsistency is not a serious cause of concern in the context of this paper for the following reasons. First and foremost, all sample clubs consistently capitalize player registration rights based on the cost method; although under IAS 38 a club may elect to choose the "fair value" evaluation of its purchased player contracts, the three clubs which apply IAS have not opted for the fair value method due to application difficulties associated with the objective identification of a fair value for human assets (Risaliti and Verona, 2013). Consequently, sample clubs are virtually homogeneous in terms of evaluation criteria of player registration rights, thus ensuring full comparability of the related data.

Admittedly, a few line items included in the income statement as required under Italian GAAPs, which total up to the operating profit balance ("Risultato della produzione" in the Italian accounting jargon), differ in name from the items included in the operating profit under Italian GAAPs. However, we managed to achieve consistency in the calculation of performance measures and ratios by manually checking in the notes to the financial statements the differences between line items classified under the national GAAPs and IAS schemes.

Eventually it should also be noted that not all sample clubs include gains and losses from disposals of player registration rights in the calculation of their operating income because until recently football clubs have been allowed to account them as either extraordinary or operating items. To overcome this inconsistency, the operating income figure has been adjusted to include the gains and losses from player trading in all instances where they were classified as extraordinary items.

Research design

The football industry provides a unique setting for exploring the financial impact of human capital investments mainly because the football industry is a highly human intensive sector with most organizational operations requiring the involvement of human capital. According to Dimitropoulos and Limperopoulos (2014) and Dimitropoulos and Koumanakos (2015), football player contracts are the most significant investment of clubs and the majority of revenues is channeled in player registration rights. Previous studies on the impact of human capital investments in various sectors and in the football industry have proxied for human capital via wage costs, salaries, player transfer fees or player registration rights as published on clubs' balance sheets (Dimitropoulos and Limperopoulos, 2014; Amir and Livne, 2005; Gerrard, 2001). We extend previous studies by incorporating three measures of human capital including annual wages (WAGE), new cash investments in player contracts on an annual basis (INV_CONTR) and the difference between gains and losses from trading of player registration rights (PR_CONTR) which proxies for the net profitability from contract trading. Dimitropoulos and Limperopoulos (2014) found that higher investments in player contracts in Greece are associated to deteriorated financial performance and viability because those investment decisions are not based on economic

standards but are the outcome of clubs' attempt to enhance on-field success to the detriment of financial success. However, the recent study of [Dimitropoulos and Koumanakos \(2015\)](#) on a sample of European football clubs pointed to the opposite direction, as clubs' human capital proxied by wage costs is positively associated to financial performance. So, based on the contradicting evidence in the literature, we cannot form any expectation regarding the impact of new investments in player contracts, net profit from player contract trading and wages on financial performance.

Financial performance (the dependent variable) is captured using three variables including net profit after tax (PROFIT), adjusted operating profit (OP_PROFIT) estimated as the operating income adjusted to include the gains and losses from player trading in all instances where they were classified as extraordinary items, and the annual change in sale revenues ($\Delta SALES$). All variables are deflated by prior year sales as in [Amir and Livne \(2005\)](#). We employed a fixed effect panel regression analysis since panel analysis contains more information with more variability and less collinearity among the variables, leading to more efficient estimates and precise parameters of model estimation, allowing us to detect many effects that are not detectable in plain cross-sectional data analysis. The functional form of the model is the following:

$$FP_{it} = \alpha_0 + \alpha_1 PR_CONTR_{it} + \alpha_2 INV_CONTR_{it} + \alpha_3 SIZE_{it} + \alpha_4 LEV_{it} + \alpha_5 WAGE_{it} + \alpha_6 REL_CAP_{it} + e_{it} \quad (1)$$

Where FP is financial performance measured as net income after taxes to lagged sales, adjusted operating profit to lagged sales and the annual change in sale revenues. Furthermore, we have included some additional control variables which have been indicated as significant determinants of clubs' financial performance. Following previous evidence by [Dimitropoulos and Tsagkanos \(2012\)](#), [Dimitropoulos and Limperopoulos \(2014\)](#), [Dimitropoulos and Koumanakos \(2015\)](#) and [Acero et al. \(2017\)](#), we control for club size (SIZE) estimated as the natural logarithm of annual total assets. According to [Dimitropoulos and Tsagkanos \(2012\)](#), [Dimitropoulos and Limperopoulos \(2014\)](#) and [Orlitzky \(2001\)](#), firm size is positively related to firm performance because it may lead to economies of scale in operations and greater control over resources. In the case of football clubs, larger clubs tend to have a larger fan base and improved sport performance which can lead to higher revenues from various sources (tickets, sponsoring, league prizes, broadcasting rights, etc.), leading to enhanced financial performance relative to their smaller counterparts. Therefore, we expect SIZE to have a positive impact on financial performance.

Furthermore, we control for the impact of firm leverage (LEV) measured as the ratio of total debt to total assets. [Singh and Faircloth \(2005\)](#) and [Dimitropoulos and Tsagkanos \(2012\)](#) suggest that increased leverage has a negative impact on a firm's future investment opportunities, which can lead to a negative effect on the long-term operating performance. Moreover, highly leveraged clubs tend to pay increased cash flows in interests and other financial-related expenses, leaving less free cash flow available for investments in human capital and other types of future value-creating activities. Therefore, we expect a negative association between leverage and clubs' financial performance.

Finally, we control for clubs' relational capital (REL_CAP) which is the social capital of the club related to its reputation, awareness of the local society on its activities and its overall acceptance by the society ([Molodchik et al., 2014](#)). Nevertheless, the relation of football clubs with their fans and local societies is not a strict business–customer relationship. Football club management develops strong relationships with supporters who are directly affected by issues relating to identity, a sense of belonging and loyalty; thus, they cannot be considered as mere customers ([Kennedy, 2013](#); [Dimitropoulos et al., 2016](#)). Most of them choose their clubs at a young age and are brought up aspiring the idea that they are the

“real” owners of the club’s heritage while the owners are mere custodians who look after a “community asset” (Kennedy, 2013). It is indicative that, in times of financial distress, these communities may buy club shares to provide assistance mainly driven by the emotional attachment to the club which overwhelms them with feelings of indebtedness and obligation. In other words, relational capital in football clubs is an important asset not captured by the existing accounting standards; however, it has a strong influence on the performance and viability of football clubs.

Previous studies on intellectual capital measure relational capital via marketing or selling and advertising expenses (Sydler *et al.*, 2014; Scafarto *et al.*, 2016). However, more recent studies proxy relational capital via social media networks (Dumay and Guthrie, 2017; Lardo *et al.*, 2017). We follow a similar approach and establish the relational capital variable as an index from eight relational dimensions. Specifically, we searched clubs’ websites and relative corporate documents and ranked clubs activities in eight categories which are: education (activities relating to team work, numeracy/literacy, information and communication technologies (ICT) skills, job prospects and reading), community/charity (activities relating to children, community, religion, drug prevention, homeless, unemployed, fund raising, donations), youth/sport (activities on sport academies), environment (activities on environmental awareness, protection and various projects), health (nutrition, physical/psychological/social development, healthy leaving, hygiene, physical activity), supporters/fans (anti-violence, anti-social behavior), social inclusion (people with learning difficulties, disabilities, disadvantaged minorities, children) and an officially published code of ethics. If a club took initiatives in all these categories, it received eight points out of eight so it was assigned an index of 1. Clubs received one point for each category of initiatives and actions they have undertaken and disclosed via corporate documents, social media and websites. So, we expect that higher rankings for relational capital will be associated with higher financial performance.

To examine the moderating role of corporate governance on the impact of human capital on financial performance, model (1) will be estimated separately after distinguishing sample clubs into the four governance characteristics analyzed in the previous section. Specifically, model (1) will be estimated between:

- those clubs with CEO duality and those where the CEO and board chairman roles are occupied by two individuals;
- those clubs with high and low board size;
- clubs where the CEO is a family member; and
- those clubs with high and low FBR.

High and low board size and FBR are distinguished using the upper (high) and lower (low) median cut of the sample clubs based on the total number of directors on the board and the fraction of family members to the total number of board members, respectively. If the above governance mechanisms affect the relation between human capital and financial performance it is expected a significant difference between the regression coefficients for the governance sub-groups. The reason for selecting this type of analysis is because we can make direct inferences about the impact of human capital investments on performance across governance sub-groups and we also avoid the potential impact of endogeneity by not including the governance variables directly in the model (Dimitropoulos and Tsagkanos, 2012).

Empirical results

Descriptive statistics and univariate analysis

Table I presents the descriptive statistics of the sample variables for the period under investigation. Our sample clubs on average present losses both after taxes (-0.09) and

Table I Descriptive statistics of sample variables

Variables	Observations	Mean	SD	Minimum	Maximum
PROFIT	143	-0.096	0.255	-2.055	0.357
OP_PROFIT	143	-0.079	0.287	-1.889	0.444
ΔSALES	143	0.082	0.390	-0.812	1.483
INV_CONTR	143	0.367	0.270	0.008	1.689
PR_CONTR	143	0.186	0.171	-0.142	0.698
WAGE	143	0.570	0.247	0.084	1.597
SIZE	144	1.697	0.678	0.216	4.469
LEV	144	0.879	0.192	0.466	1.428
REL_CAP	144	0.401	0.200	0.125	0.875
CEO_DUAL	144	0.527	0.501	0.000	1.000
FAMILY CEO	144	0.327	0.300	0.000	1.000
BDSIZE	144	7.569	3.209	3	16
FBR	144	0.336	0.227	0.000	0.897

Notes: The sample includes data from 16 Italian football clubs participating in the top division of the national championship from the sporting seasons 2006-2007 up to 2014-2015. PROFIT is net profit after tax deflated by lagged sales, OP_PROFIT is operating profit adjusted for gains and losses from player trading and deflated by lagged sales, ΔSALES is the annual change in sale revenues, WAGE is annual player wages deflated by lagged sales, INV_CONTR is new cash investment in player contracts on an annual basis divided by lagged sales, PR_CONTR is the difference between gains and losses from trading of player registration rights deflated by lagged sales, club size (SIZE) estimated as the natural logarithm of annual total assets, firm leverage (LEV) is measured as the ratio of total debt to total assets, REL_CAP is the social capital of the club measured as the ratio of the number of social initiatives each club is involved out of eight categories, CEO_DUAL is a dichotomous variable receiving unity (1) if the CEO also serves as the chairman of the board of directors and zero (0) otherwise, FAMILY CEO is also a dichotomous variable receiving unity (1) if the CEO is a member of the controlling family and zero (0) otherwise, BDSIZE is the number of directors serving on the board and FBR is the family board representation estimated as the ratio of family members serving on the board to the total number of board directors

operating (-0.08) verifying their bad financial conditions as evidenced in other European countries over the past 15 years (Dimitropoulos and Tsagkanos, 2012). New investments in player contracts are on average 37 per cent of sales, indicating that a significant amount of revenues is channeled into investments on playing talent as a result of clubs' effort to enhance their on-field performance. Also, the net profit from contract trading is on average equal to 19 per cent of sales. Moreover, wages are the most significant type of cost of Italian football clubs since they cover the 57 per cent of total revenues. This number, even though it has declined relative to previous studies (Nicolliello and Zampatti, 2016), remains in relatively high levels, indicating that the majority of clubs' revenues are spent to cover player and personnel wages. Also, sample clubs are highly leveraged since total liabilities are on average up to 88 per cent of total assets.

In terms of governance characteristics, sample clubs have an average board size of eight directors (mean value = 7.569), ranging from a minimum of 3 to a maximum of 16; the average percentage of family members on the board is approximately 34 per cent, ranging from 0 to 0.89 per cent; the CEO also serves as the chairman in 53 per cent of the cases; and finally, the CEO is a member of the controlling family in 33 per cent of the observations. The average board size and leverage ratio observed in this study are comparable with those reported in a similar study (Regoliosi, 2016), which also uses Italian professional football as its research setting.

Table II presents the Pearson correlation coefficients of the sample variables. After tax profits and operating profits are negatively and significantly associated to wages (-0.597), size (-0.269) and leverage (-0.379), suggesting that clubs with more total assets, total liabilities and those which pay higher wages attain lower profitability, verifying previous findings in the literature (Dimitropoulos and Limperopoulos, 2014).

Table II Pearson correlation coefficients of sample variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. PROFIT	1												
2. OP_PROFIT	0.919** (0.001)	1											
3. ASALES	-0.045 (0.591)	0.102 (0.225)	1										
4. INV_CONTR	-0.114 (0.173)	-0.090 (0.281)	0.552** (0.001)	1									
5. PR_CONTR	0.203* (0.015)	0.297** (0.001)	0.536** (0.001)	0.406** (0.001)	1								
6. WAGE	-0.597** (0.001)	-0.528** (0.001)	0.654** (0.001)	0.396** (0.001)	0.112 (0.182)	1							
7. SIZE	-0.269** (0.001)	-0.248** (0.002)	0.688** (0.001)	0.629** (0.001)	0.484** (0.001)	0.520** (0.001)	1						
8. LEV	-0.379** (0.001)	-0.286** (0.001)	0.009 (0.908)	0.075 (0.372)	-0.091 (0.275)	0.329** (0.001)	-0.002 (0.978)	1					
9. REL_CAP	-0.135 (0.106)	-0.171* (0.041)	0.041 (0.623)	-0.282** (0.001)	-0.023** (0.004)	0.208** (0.012)	0.021 (0.801)	-0.077 (0.358)	1				
10. CEO_DUAL	0.068 (0.488)	0.117 (0.161)	0.117 (0.161)	-0.222** (0.007)	-0.096 (0.251)	-0.087 (0.301)	-0.124 (0.138)	0.192* (0.021)	0.180* (0.031)	1			
11. FAMILY_CEO	0.086 (0.303)	0.129 (0.123)	0.005 (0.949)	-0.170* (0.042)	-0.098 (0.240)	-0.102 (0.225)	-0.211* (0.012)	0.019 (0.816)	0.006 (0.942)	0.407** (0.001)	1		
12. BDSIZE	-0.454** (0.001)	-0.403** (0.001)	0.052 (0.537)	-0.043 (0.604)	-0.194* (0.019)	0.486** (0.001)	0.011 (0.894)	0.328** (0.001)	0.562** (0.001)	0.055 (0.510)	0.020 (0.807)	1	
13. FBR	0.217** (0.009)	0.219** (0.008)	0.002 (0.981)	0.008 (0.917)	0.094 (0.280)	-0.272** (0.001)	-0.178* (0.033)	-0.174* (0.036)	-0.449** (0.001)	0.285** (0.001)	0.473** (0.001)	-0.523** (0.001)	1

Notes: The sample includes data from 16 Italian football clubs participating in the top division of the national championship from the sporting seasons 2006-2007 up to 2014-2015. *, **, indicate statistical significance at the 5% and 1% significance level, respectively, p-values in parentheses

However, those same clubs earn higher revenues, corroborating arguments in the literature that larger clubs and those that pay higher wages are able to enhance their revenues, yet they are unable to translate those increased revenues into profitability (Dimitropoulos *et al.*, 2016). Referring to the governance variables, board size is negatively associated to profitability (after tax and operating profit), providing some initial support to the literature which argues that smaller boards are more efficient in communication and decision-making, thus are able to adhere to threats and opportunities improving firms' financial performance. FBR on the other hand is positively and significantly associated to profitability providing an indication that stewardship theory may be valid in Italian football clubs, suggesting that FIM and governance may be value-enhancing.

Moreover, CEO duality and the existence of a family CEO are negatively and significantly associated to new investments in player contracts, suggesting that a family CEO may be inclined to invest focusing on the long-term viability of the club instead of the short-term performance, and this may lead to conservative investments in new contracts, providing some initial support to the stewardship theory. This argument is further supported by the negative and significant correlation coefficient between wages and FBR (-0.272), indicating that FIM leads to better cost control and avoidance of exuberant payments. The rest of the significant correlation coefficients have economic meaning, and so, we restrict our analysis on the variables of main interest. Yet univariate evidence restricts our inferences regarding the direct impact of human capital investments on financial performance and the mediating role of corporate governance on this relation. Therefore, we proceed to the panel regression analysis results.

Panel regression analysis results

Table III presents the main regression results from the estimation of model (1) using the three dependent variables. The annual investment in new player contracts (INV_CONTR) and the net profit from player contract trading (PR_CONTR) are both positive and highly significant for all dependent variables. This outcome indicates that Italian football clubs are profiting from their investments in human capital, a fact that verifies H1 and corroborates prior works by Chen *et al.* (2005), Kamath (2008), Ting and Lean (2009b), Clarke *et al.* (2011), Maditinos *et al.* (2011), Nimtrakoon (2015) and Amir and Livne (2005) who reported a positive impact of human capital investments on financial performance. The rest of the control variables have the expected sign and economic significance. Larger football clubs (SIZE) are able to generate more revenues but those clubs which pay higher wages and have increased leverage are less

Table III the Impact of human capital investments on financial performance

Dependent variables	Net income		Operating income		Change in sales	
	Coefficient	Std. error	Coefficient	Std. error	Coefficient	Std. error
Constant	0.665***	0.214	0.253	0.231	-0.967***	0.237
PR_CONTR	0.482***	0.106	0.807***	0.114	0.746***	0.117
INV_CONTR	0.169**	0.083	0.189**	0.090	0.159*	0.092
SIZE	-0.039	0.049	-0.089	0.053	0.175***	0.054
LEV	-0.704***	0.173	-0.366**	0.187	-0.303	0.191
WAGE	-0.545***	0.115	-0.466***	0.124	0.926***	0.126
REL_C	0.025	0.031	0.059*	0.033	0.091***	0.034
F-stat	17.61***		16.75***		91.40***	
R ² -overall	0.413		0.345		0.624	
Observations	143		143		143	

Note: *, **, ***Indicate statistical significance at the 10%, 5% and 1% significance level, respectively

Table IV Regression results on governance, human capital and net income

Variables	CEO duality	Non-CEO duality	Diff.	Large BD_size	Small BD_size	Diff.	FAM_CEO	Non-FAM_CEO	Diff.	High FBR	Low FBR	Diff.
Constant	0.356 (0.361)	0.434 (0.257)	0.860	0.842** (0.364)	0.099 (0.298)	0.116	0.162 (0.334)	0.633** (0.294)	0.291	-0.052 (0.184)	1.979*** (0.416)	0.000***
PR_CONTR	0.581*** (0.170)	0.586*** (0.131)	0.981	0.591*** (0.208)	0.419*** (0.108)	0.464	0.618*** (0.163)	0.522*** (0.131)	0.646	0.541*** (0.095)	0.567*** (0.198)	0.905
INV_CONTR	0.550*** (0.166)	0.064 (0.085)	0.010**	0.195 (0.192)	0.111 (0.084)	0.689	0.457*** (0.153)	0.073 (0.089)	0.031*	0.316*** (0.086)	0.123 (0.148)	0.261
SIZE	-0.219** (0.096)	-0.038 (0.052)	0.099	-0.036 (0.106)	-0.038 (0.060)	0.986	-0.163* (0.096)	-0.044 (0.052)	0.277	-0.052 (0.047)	-0.061 (0.083)	0.924
LEV	-0.481* (0.274)	-0.476** (0.238)	0.989	-0.776*** (0.280)	-0.437** (0.223)	0.345	-0.246 (0.273)	-0.681*** (0.244)	0.236	-0.177 (0.181)	-1.369*** (0.289)	0.000***
WAGE	-0.393** (0.189)	-0.433*** (0.148)	0.867	-0.692*** (0.202)	-0.279** (0.151)	0.103	-0.511** (0.210)	-0.353*** (0.125)	0.519	-0.448*** (0.118)	-0.688*** (0.176)	0.259
REL_C	0.087 (0.054)	0.011 (0.034)	0.235	0.013 (0.042)	0.136 (0.092)	0.225	0.081 (0.052)	-0.001 (0.036)	0.196	0.094*** (0.027)	-0.123** (0.057)	0.000***
F-stat	9.97***	7.52***		9.58***	6.60***		10.06***	6.83***		14.08***	12.37***	
F ² -overall	0.299	0.555		0.388	0.286		0.309	0.460		0.462	0.383	
Observations	76	67		71	72		75	68		77	66	

Notes: *, **, *** Indicate statistical significance at the 10%, 5% and 1% significance level, respectively. Coefficients standard error in parentheses. Diff. indicates the significance of the difference of coefficients between the governance sub-groups based on the formula according to Cohen et al. (2003): $t = b_1 - b_2 / \sqrt{s_{e1}^2 + s_{e2}^2}$, $df = n_1 + n_2 - 4$

profitable. It seems that Italian clubs are able to boost their revenues by hiring more talented athletes (by paying higher wages) but they cannot transform those increased revenues into profits. Finally, relational capital (REL_C) is a significant determinant of clubs' profitability that can boost revenues and operating profits.

Table IV presents the panel regression results of model (1) using the net profit after taxes as the dependent variable and distinguishing between clubs with CEO duality and those where the CEO and board chairman role are occupied by two individuals, those clubs with high and low board size, clubs where the CEO is a family member and those clubs with high and low FBR. High and low board size and FBR are distinguished using the upper (high) and lower (low) median cut of the sample clubs based on the total number of directors on the board and the fraction of family members to the total number of board members, respectively. The significance of differences between coefficients has been determined by applying a *t*-test as in Cohen *et al.* (2003). Regressions F-stat is highly significant and R^2 is very satisfactory for this type of analysis, suggesting that the independent variables explain a significant portion of variability on the dependent variables.

As we can see, net profit from contract trading impacts positively on profitability irrespective of CEO duality, board size, FBR and family CEO existence, suggesting that player trading remains a significant determinant of clubs' profitability irrespective of governance mechanisms. This finding contradicts evidence in Dimitropoulos and Limperopoulos (2014) that higher investments in player contracts in Greece are associated to deteriorating financial performance and viability. One possible explanation of this result is that Italian clubs tend to make decisions on player acquisition and disposal considering the impact of these decisions on business viability, which may translate into better cost control, reduced lending and an improvement of clubs' viability and future prospects. In other words, the decisions regarding the trading (acquisition and disposal) of player contracts are mainly based on economical merits (in a greater extent than Greek clubs) and this fact affects positively the revenues and profits of Italian football clubs. Our finding could also be attributed to the increased size and significance of the Italian football market, suggesting that those decisions are based on economic standards and are not just the outcome of clubs' attempt to enhance on-field success to the detriment of financial success.

Regarding the second variable of interest (INV_CONTR), the results seem to provide support to the proponents of stewardship theory. Specifically, the annual investment in new player contracts is value-enhancing for clubs with CEO duality, clubs where the CEO is a family member and those with higher FBR since the respective coefficients are positive and significant relative to those clubs which lack the abovementioned governance mechanisms.

These findings provide support to the stream of literature which posits that a dual role of the CEO may enhance the firm's financial performance since the CEO has a thorough knowledge of the strategies and the operations of the firm (Donaldson and Davis, 1991; Davis *et al.*, 1997; Lin, 2005). Agency problems in firms with CEO duality are less severe and managers operate as good stewards of corporate assets. Our evidence corroborates findings by Minichilli *et al.* (2010) that family CEOs resolve to more long-term investment and capital expenditure decisions, developing significant capabilities to the firm which result in higher financial performance. Furthermore, we verify findings by Miller and Le Breton-Miller (2006) that family members on the board avoid hazardous moves to enhance revenues or even avoid large cost cutoffs which would impact negatively on human capital and employee morale. Overall, the main findings verify our main hypotheses H1 to H4 since all governance mechanisms proved significant moderators of clubs' financial performance.

Table V Regression results on governance, human capital and operating income

Variables	CEO duality	Non-CEO duality	Diff.	Large BD_size	Small BD_size	Diff.	FAM_CEO	Non-FAM_CEO	Diff.	High FBR	Low FBR	Diff.
Constant	0.145 (0.407)	0.436 (0.287)	0.559	0.187 (0.352)	0.340 (0.417)	0.779	0.073 (0.357)	0.510 (0.346)	0.381	-0.074 (0.252)	0.966** (0.452)	0.046**
PR_CONTR	0.900*** (0.192)	0.841*** (0.147)	0.805	0.955** (0.201)	0.730*** (0.152)	0.373	0.874*** (0.174)	0.765*** (0.154)	0.639	0.804*** (0.130)	0.893** (0.215)	0.723
INV_CONTR	0.494** (0.188)	0.059 (0.095)	0.04**	0.296 (0.186)	0.161 (0.118)	0.540	0.446*** (0.163)	0.027 (0.105)	0.032**	0.326*** (0.118)	0.202 (0.161)	0.535
SIZE	-0.174 (0.108)	-0.034 (0.058)	0.255	-0.181* (0.103)	-0.086 (0.084)	0.475	-0.125 (0.103)	-0.033 (0.062)	0.540	-0.053 (0.064)	-0.142 (0.091)	0.425
LEV	-0.277 (0.310)	-0.446 (0.266)	0.679	-0.336 (0.271)	-0.265 (0.312)	0.863	-0.122 (0.292)	-0.615** (0.287)	0.235	-0.124 (0.247)	-0.641** (0.314)	0.197
WAGE	-0.433** (0.214)	-0.573*** (0.165)	0.605	-0.463** (0.196)	-0.309 (0.210)	0.592	-0.628*** (0.224)	-0.361** (0.148)	0.321	-0.558** (0.037)	-0.461** (0.191)	0.618
REL_C	0.078 (0.061)	0.009 (0.038)	0.338	0.076** (0.041)	-0.010 (0.129)	0.526	0.073 (0.055)	0.006 (0.042)	0.334	0.093** (0.037)	-0.050 (0.062)	0.049**
F-stat	8.61***	9.63***		9.13***	6.21***		10.86***	6.91***		12.00***	7.18***	
R ² -overall	0.248	0.471		0.439	0.216		0.329	0.342		0.386	0.657	
Observations	76	67		71	72		75	68		77	66	

Notes: *, **, *** indicate statistical significance at the 10%, 5% and 1% significance level, respectively. Coefficients, standard error in parentheses. Diff. indicates the significance of the difference of coefficients between the governance sub-groups based on the formula according to Cohen et al. (2003): $t = (b_1 - b_2) / \sqrt{s_{b_1}^2 + s_{b_2}^2}$, $df = n_1 + n_2 - 4$

Table VI Regression results on governance, human capital and change in sale revenues

Variables	CEO duality	Non-CEO duality	Diff.	Large BD_size	Small BD_size	Diff.	FAM_CEO	Non-FAM_CEO	Diff.	High FBR	Low FBR	Diff.
Constant	-1.45*** (0.370)	-0.564** (0.296)	0.063**	-0.978*** (0.280)	-1.16** (0.506)	0.753	-1.23*** (0.330)	-0.604 (0.376)	0.212	-1.108*** (0.298)	-0.978*** (0.339)	0.773
PR_CONTR	1.009*** (0.175)	0.701*** (0.151)	0.184	0.606*** (0.160)	0.826*** (0.184)	0.368	0.918*** (0.161)	0.671*** (0.167)	0.288	1.009*** (0.154)	0.531*** (0.161)	0.039**
INV_CONTR	0.359** (0.171)	0.132 (0.097)	0.250	-0.082 (0.148)	0.219 (0.144)	0.147	0.433*** (0.151)	0.095 (0.114)	0.076**	0.545*** (0.140)	0.013 (0.121)	0.0004***
SIZE	0.181** (0.099)	0.182*** (0.059)	0.993	0.154** (0.082)	0.181** (0.102)	0.836	0.172** (0.095)	0.187*** (0.067)	0.897	0.078 (0.076)	0.278*** (0.068)	0.051***
LEV	0.138 (0.282)	-0.490** (0.274)	0.112	-0.364* (0.215)	-0.003 (0.379)	0.408	0.018 (0.271)	-0.518 (0.312)	0.196	-0.048 (0.293)	-0.156 (0.235)	0.774
WAGE	0.914*** (0.194)	0.755*** (0.170)	0.538	1.078*** (0.156)	0.951*** (0.256)	0.672	0.806*** (0.208)	0.926*** (0.160)	0.648	0.780*** (0.191)	0.914*** (0.143)	0.575
REL_C	0.099** (0.055)	0.023 (0.039)	0.261	0.086*** (0.032)	0.091 (0.157)	0.975	0.092** (0.051)	0.019 (0.046)	0.289	0.110** (0.044)	0.007 (0.339)	0.763
F-stat	55.82***	58.05***		56.79***	36.43***		50.47***	54.57***		55.36***	62.91***	
R ² -overall	0.601	0.792		0.679	0.685		0.616	0.745		0.690	0.766	
Observations	76	67		71	72		75	68		77	66	

Notes: *, **, *** indicate statistical significance at the 10%, 5% and 1% significance level, respectively. Coefficients standard error in the parentheses. Diff. indicates the significance of the difference of coefficients between the governance sub-groups based on the formula according to Cohen *et al.* (2003): $t = b_1 - b_2 / \sqrt{s_b^2 + s_b^2}$, $df = n_1 + n_2 - 4$

Regarding the control variables, LEV has a negative impact on profitability for clubs irrespective of governance mechanisms verifying previous findings by [Singh and Faircloth \(2005\)](#) and [Dimitropoulos and Tsagkanos \(2012\)](#) that increased leverage has a negative impact on a firm's future investment opportunities, which can lead to a negative effect on the long-term operating performance. Wages also have a negative impact on clubs' profitability, suggesting that a reduction on this cost can improve clubs' profitability. This finding corroborates arguments by [Dimitropoulos and Limperopoulos \(2014\)](#) and [Nicolliello and Zampatti \(2016\)](#) that wage costs are a detriment of clubs' profitability, and a proper management of this core expense can have value-enhancing results. Finally, relational capital has a positive impact on clubs' net profit after tax but only for those clubs with high FBR. This finding yields further support to the presence of family members on the board since they achieve closer relations with the fans and local communities, a fact that can prove helpful in periods of financial difficulties or can be value-enhancing under normal circumstances.

[Table V](#) presents the results from the estimation of model (1) using the adjusted operating profit as the dependent variable. The results are qualitatively similar as those on [Table IV](#). Specifically, new investments in player contracts impact positively and significantly on profitability only for clubs with CEO duality, family CEO and higher FBR, verifying again arguments in favor of stewardship theory. The rest of the control variables have the same sign and significance relative to [Table IV](#), and so, the same inferences are drawn for this Table. Additionally, [Table VI](#) presents results from the estimation of model (1) including the percentage change in sales as the dependent variable. The main conclusions remain unchanged relative to the previous tables. The only significant differences are on SIZE which was found positive and significant corroborating arguments by [Nicolliello and Zampatti \(2016\)](#) that larger clubs have a larger fan base, improved sport performance which can lead to higher revenues from various sources (tickets, sponsoring, league prizes, broadcasting rights, etc), leading to enhanced financial performance relative to their smaller counterparts. Also, higher player wages are associated to higher revenues verifying prior evidence that increased spending on players can lead to enhanced athletic performance which can attract more fans, TV viewers and sponsors, contributing to enhanced revenue streams. Eventually, the impact of relational capital on sales growth is positive but it is statistically significant only for clubs with larger boards, CEO duality and higher FBR, which suggests that these governance sub-groups make more valuable connections to their fans and local communities (by committing to social and sustainability practices) that seem to pay-off in terms of higher sales growth rates.

Sensitivity analysis

We performed several sensitivity tests to check for the robustness of the main findings regarding the definition of the variables and the functional form of the model. First of all, we controlled for the possible existence of the omitted variables problem and bias in the *t*-tests degrees of freedom due to the non-inclusion of governance variables in model (1). For this reason, we have included each governance attribute in model (1) and interacted it with the main independent variables. Untabulated results corroborate the main findings of [Tables IV-VI](#), since the interaction terms between CEO Duality, Family CEO and higher FBR with investments in player contract (INV_CONTR) are positive and significant for all dependent variables. Net profit from player contract trading (PR_CONTR) is positive and significant for all dependent variables, but the relative interaction terms with governance attributes are not significant within conventional levels. These findings verify our main results and indicate that PR_CONTR impacts positively on financial performance irrespectively of the governance characteristics of each club. Overall, the findings from the abovementioned analysis provide us with sufficient evidence that the main findings are not the result of a spurious correlation.

Furthermore, we re-estimated all ratio variables by using lagged total assets as the deflators instead of lagged sales but the results remained qualitatively unchanged relative to those in [Tables IV-VI](#). Also, we introduced gains and losses from contract trading as separate independent variables with no significant alteration on the results. Specifically, gains from player trading impact positively on profitability, while losses have the opposite effect. In addition, following [Amir and Livne \(2005\)](#) we introduced lagged variables of PR_CONTR and INV_CONTR as additional controls but their coefficients were insignificant within conventional levels indicating no time-lag effect on our main findings. In addition, following the study by [Coles et al. \(2008\)](#), we re-estimated the results on all tables by using a different cut off point to distinguish between large and small board size and high and low FBR. Instead of using the annual median as cut off point we used the annual mean but the results remained qualitatively unchanged.

Finally, we controlled for the possible impact of the recent financial crisis in Italy on the examined relation between investments in human capital and financial performance. On these grounds we followed previous studies by [Minichilli et al. \(2016\)](#) and [Rossi and Cebula \(2016\)](#) and divided the sample period into the pre-crisis period (2007-2008) and the post-crisis period (2009-2015) and then re-estimated model (1) for each sub-period separately. Untabulated evidence suggests that the investment in human capital is a more significant determinant of financial performance after the crisis, a result which has economic significance. After the crisis the financing opportunities of clubs (as for all economic units) were deteriorated (reduction of bank lending, devaluation of the stock market, etc.) and thus were forced to base their decisions on human capital on mere economic terms to gain the necessary funds for achieving their strategic objectives.

Conclusions

It is widely recognized by academic, practitioner and popular audiences that the main and core asset of professional football businesses is the human asset and consequently clubs with superior ability to channel funds into playing talent are better placed to retain a “competitive advantage” both in terms of sporting achievements and turnover ([Franck, 2010](#)). On the other hand, investments in playing talent are also held responsible for the financial distress of professional football businesses at least in as much as a club invests beyond its means and gambles on success, which if does not materialize places club viability at jeopardy.

The main objective of this paper was to empirically examine the impact of investments in playing talent on the financial performance of professional football clubs. Our interest in this issue was motivated by the fact that there exist relatively few studies that empirically document the impact of such investments on club financial performance, and their findings are quite mixed. Moreover, researchers have limited themselves to testing the direct association between player investments and financial performance but failed to consider the potential moderators of this association.

The research setting of this study is one of highly concentrated ownership, with clubs being under family/individual control. Accordingly we have focused on the potential moderating role of FIM either through a family CEO or FBR as well as on the effect of CEO duality and board size.

Empirical results have confirmed the existence of a moderating effect as they reveal a consistent pattern between the financial outcomes of player investments and the degree of FIM and CEO duality. Specifically, they indicate that clubs with higher levels of FBR, CEO duality and a family CEO manage to profit from their investments in playing talent as opposed to clubs that lack these internal governance mechanisms.

This outcome is robust to different performance specifications and is indeed the main novel finding of this study.

A likely explanation behind this finding is that clubs with a closer ownership oversight make their investment decisions based on an economic rationale rather than following a utility (win) maximization logic. A second, but closely related, explanation is that these clubs pursue a business model reliant on discovering, recruiting, developing and selling young talented players, which has been termed a “player development” business model (Regoliosi, 2016). This explanation closely parallels that offered by Baroncelli and Lago (2006) and is line with the findings and conclusions of most recent research (Regoliosi, 2016) exploring the determinants of profitability in Italian professional football.

Our research adds to the existing literature in several respects. As a first, it contributes to the limited existing research that empirically examines the financial implications of player investments. In fact, on the one hand, it reinforces previous findings that wage costs remain a major concern for modern football corporations and for Italian professional clubs in particular (Deloitte, 2016). On the other, this study extends previous research by revealing that the financial impact of player investments may be contingent on the internal governance mechanisms that are in place. Second and relatedly, our findings challenge the conventional view that football clubs in Europe are not run as profit-seeking enterprises (Leach and Szymanski, 2015), indicating that governance and profitability patterns may exist and are worth exploring to better understand the conditions of economic durability of football clubs.

Incidentally, our study may also be of interest to family business researchers since it provides novel empirical support for some key assumptions of their research agenda, suggesting that a “family effect” may exist and hold performance implications also within such a peculiar business setting as professional football.

In more general and practical terms, our findings imply that professional football businesses would benefit from effectively establishing corporate governance mechanisms and procedures that promote sound financial management as recommended by researchers like Michie and Oughton (2005) who have long stressed the need for good corporate governance at club level.

The issue of reliable corporate governance has become all the more a “hot topic” under the present regulatory environment, as professional football clubs have to deal with the aftermath of the Financial Fairplay Regulation introduced by UEFA with an aim to promoting more discipline and rationality of clubs’ finances. However, as rightly noted (Dimitropoulos and Tsagkanos, 2012), the financial requirements for club licensing are all set within the boundaries of manager discretions with no provision specifically dealing with the quality of corporate governance at club level. In this regard, the evidence of this study provides, though indirectly, further support to the notion that football regulators should enforce the adoption of monitoring and governance mechanisms (Dimitropoulos, 2011) at club level, if the current financial status of the European football is to be improved.

Admittedly, our findings and conclusions suffer from some limitations that could at least to some extent be overcome through further research. The basic limitation of this study lies in that the data set covers a single top-tier football league within a specific country, which does impinge on the generalizability of our results. Consequently, future research directions should include extending the analysis to lower-tier professional divisions of Italian football and ideally to different national leagues. A further avenue for future research should be to consider the personal characteristics such as age, education or professional background of board members and especially of family/individual owners involved in management and board governance which has not been addressed in the present study.

References

- Acerro, I., Serrano, R. and Dimitropoulos, P. (2017), "Ownership structure and financial performance in European football", *Corporate Governance: The International Journal of Business in Society*, Vol. 17 No. 3, pp. 511-523.
- Adams, R.B., Hermalin, B.E. and Weisbach, M.S. (2010), "The role of boards of directors in corporate governance: a conceptual framework and survey", *Journal of Economic Literature*, Vol. 48 No. 1, pp. 58-107.
- Amir, E. and Livne, L. (2005), "Accounting, valuation and duration of football player contracts", *Journal of Business Finance & Accounting*, Vol. 32 Nos 3/4, pp. 549-586.
- Anderson, R.C. and Reeb, D.M. (2003), "Founding-family ownership and firm performance: evidence from the S&P 500", *The Journal of Finance*, Vol. 58 No. 3, pp. 1301-1328.
- Andres, C. (2008), "Large shareholders and firm performance: an empirical examination of founding-family ownership", *Journal of Corporate Finance*, Vol. 14 No. 4, pp. 431-445.
- Arora, A. and Sharma, C. (2016), "Corporate governance and firm performance in developing countries: evidence from India", *Corporate Governance: The International Journal of Business in Society*, Vol. 16 No. 2, pp. 420-436.
- Arregle, J.-L., Hitt, M.A., Sirmon, D.G. and Very, P. (2007), "The development of organizational social capital: attributes of family firms", *Journal of Management Studies*, Vol. 44 No. 1, pp. 73-95.
- Baroncelli, A. and Lago, U. (2006), "Italian football", *Journal of Sports Economics*, Vol. 7 No. 1, pp. 13-28.
- Becker, G.S. (1964), *Human Capital*, Columbia University Press, New York, NY.
- Boone, A.L., Field, L.C., Karpoff, J.M. and Raheja, C.G. (2007), "The determinants of corporate board size and composition: an empirical analysis", *Journal of Financial Economics*, Vol. 85 No. 1, pp. 66-101.
- Boyd, B.K. (1995), "CEO duality and firm performance: a contingency model", *Strategic Management Journal*, Vol. 16 No. 4, pp. 301-312.
- Brickley, J.A., Coles, J.L. and Jarrell, G. (1997), "Leadership structure: separating the CEO and chairman of the board", *Journal of Corporate Finance*, Vol. 3 No. 3, pp. 189-220.
- Brown, L.D. and Caylor, M.L. (2009), "Corporate governance and firm operating performance", *Review of Quantitative Finance and Accounting*, Vol. 32 No. 2, pp. 129-144.
- Burkart, M., Panunzi, F. and Shleifer, A. (2003), "Family firms", *The Journal of Finance*, Vol. 58 No. 5, pp. 2167-2201.
- Celenza, D. and Rossi, F. (2014), "Intellectual capital and performance of listed companies: empirical evidence from Italy", *Measuring Business Excellence*, Vol. 18 No. 1, pp. 22-35.
- Chan, K.H. (2009), "Impact of intellectual capital on organisational performance: an empirical study of companies in the Hang Seng index (part 2)", *The Learning Organization*, Vol. 16 No. 1, pp. 22-39.
- Chang, J.C. and Sun, H.L. (2010), "Does the disclosure of corporate governance structures affect firms' earnings quality?", *Review of Accounting and Finance*, Vol. 9 No. 3, pp. 212-243.
- Chatterjee, J. (2016), "Strategy, human capital investments, business-domain capabilities, and performance: a study in the global software services industry", *Strategic Management Journal*, Vol. 38 No. 3, pp. 588-608.
- Chen, H.-L. and Hsu, W.-T. (2009), "Family ownership, board independence and R&D investment", *Family Business Review*, Vol. 22 No. 4, pp. 347-362.
- Chen, M.-C., Cheng, S.-J. and Hwang, Y. (2005), "An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance", *Journal of Intellectual Capital*, Vol. 6 No. 2, pp. 159-176.
- Cheng, S. (2008), "Board size and the variability of corporate performance", *Journal of Financial Economics*, Vol. 87 No. 1, pp. 157-176.
- Clarke, M., Seng, D. and Whiting, R.H. (2011), "Intellectual capital and firm performance in Australia", *Journal of Intellectual Capital*, Vol. 12 No. 4, pp. 505-530.
- Cohen, J., Cohen, P., West, S.G. and Aiken, L.S. (2003), *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, Lawrence Erlbaum Associates, Mahwah, NJ.

- Coles, J.L., Daniel, N.D. and Naveen, L. (2008), "Boards: does one size fit all?", *Journal of Financial Economics*, Vol. 87 No. 2, pp. 329-356.
- Davidson, W.N., Jiraporn, P., Kim, Y.S. and Nemecek, C. (2004), "Earnings management following duality-creating successions: ethnostatistics, impression management, and agency theory", *Academy of Management Journal*, Vol. 47 No. 2, pp. 267-275.
- Davis, J.H., Schoorman, F.D. and Donaldson, L. (1997), "Toward a stewardship theory of management", *Academy of Management Review*, Vol. 22 No. 1, pp. 20-47.
- De Barros, C., Barros, C.P. and Correia, A. (2007), "Governance in sports clubs: evidence from the island of Madeira", *European Sport Management Quarterly*, Vol. 7 No. 2, pp. 123-139.
- Deloitte (2016), *Annual Review of Football Finance: Reboot*, Sport Business Group, Manchester.
- Desai, A., Kroll, M. and Wright, P. (2003), "CEO duality, board monitoring, and acquisition performance: a test of competing theories", *Journal of Business Strategy*, Vol. 20 No. 2, pp. 137-156.
- Dimitropoulos, P. (2010), "The financial performance of the Greek football clubs", *Choregia*, Vol. 6 No. 1, pp. 5-27.
- Dimitropoulos, P. (2011), "Corporate governance and earnings management in the European football industry", *European Sport Management Quarterly*, Vol. 11 No. 5, pp. 495-523.
- Dimitropoulos, P. (2014), "Capital structure and corporate governance of soccer clubs: European evidence", *Management Research Review*, Vol. 37 No. 7, pp. 658-678.
- Dimitropoulos, P. and Asteriou, D. (2010), "The effect of board composition on the informativeness and quality of annual earnings: empirical evidence from Greece", *Research in International Business and Finance*, Vol. 24 No. 2, pp. 190-205.
- Dimitropoulos, P. and Koumanakos, E. (2015), "Intellectual capital and profitability in European football clubs", *International Journal of Accounting, Auditing and Performance Evaluation*, Vol. 11 No. 2, pp. 202-220.
- Dimitropoulos, P. and Limperopoulos, V. (2014), "Player contracts, athletic and financial performance of the Greek football clubs", *Global Business and Economics Review*, Vol. 16 No. 2, pp. 123-141.
- Dimitropoulos, P. and Tsagkanos, A. (2012), "Financial performance and corporate governance in the European Football Industry", *International Journal of Sport Finance*, Vol. 7 No. 4, pp. 280-308.
- Dimitropoulos, P., Leventis, S. and Dedoulis, E. (2016), "Managing the European football industry: UEFA's regulatory intervention and the impact on accounting quality", *European Sport Management Quarterly*, Vol. 16 No. 4, pp. 459-486.
- Donaldson, L. and Davis, J.H. (1991), "Stewardship theory or agency theory: CEO governance and shareholder returns", *Australian Journal of Management*, Vol. 16 No. 1, pp. 49-64.
- Dumay, J. and Guthrie, J. (2017), "Involuntary disclosure of intellectual capital: is it relevant?", *Journal of Intellectual Capital*, Vol. 18 No. 1, pp. 29-44.
- Dyer, W.G. Jr. (2006), "Examining the family effect on firm performance", *Family Business Review*, Vol. 19 No. 4, pp. 253-273.
- Dženopoljac, V., Janošević, S. and Bontis, N. (2016), "Intellectual capital and financial performance in the Serbian ICT industry", *Journal of Intellectual Capital*, Vol. 17 No. 2, pp. 373-396.
- Eisenberg, T., Sundgren, S. and Wells, M.T. (1998), "Larger board size and decreasing firm value in small firms", *Journal of Financial Economics*, Vol. 48 No. 1, pp. 35-54.
- Elsayed, K. (2007), "Does CEO duality really affect corporate performance?", *Corporate Governance: An International Review*, Vol. 15 No. 6, pp. 1203-1214.
- Ferri, L., Macchioni, R., Maffei, M. and Zampella, A. (2017), "Financial versus sports performance: the missing link", *International Journal of Business and Management*, Vol. 12 No. 3, pp. 36-48.
- Firer, S. and Williams, S.M. (2003), "Intellectual capital and traditional measures of corporate performance", *Journal of Intellectual Capital*, Vol. 4 No. 3, pp. 348-360.
- Firstenberg, P.B. and Malkiel, B.G. (1994), "The twenty-first century boardroom: who will be in charge?", *Sloan Management Review*, Vol. 36 No. 1, pp. 27-35.
- Franck, E. (2010), "Private firm, public corporation or member's association: governance structures in European football", *International Journal of Sport Finance*, Vol. 5 No. 2, pp. 108-127.

- García-Ayuso, M., Moreno-Campos, I. and Sierra-Molina, G. (2000), "Fundamental analysis and human capital: empirical evidence on the relationship between the quality of human resources and fundamental accounting variables", *Journal of Human Resource Costing & Accounting*, Vol. 5 No. 1, pp. 45-57.
- Gerrard, B. (2001), "A new approach to measuring player and team quality in professional team sports", *European Sport Management Quarterly*, Vol. 1 No. 3, pp. 219-234.
- Gerrard, B. (2005), "A resource-utilization model of organizational efficiency in professional sports teams", *Journal of Sport Management*, Vol. 19 No. 2, pp. 143-169.
- Gómez-Mejía, L.R., Haynes, K.T., Núñez-Nickel, M., Jacobson, K.J. and Moyano-Fuentes, J. (2007), "Socioemotional wealth and business risks in family-controlled firms: evidence from Spanish olive-oil mills", *Administrative Science Quarterly*, Vol. 52 No. 1, pp. 106-137.
- González, M., Guzmán, A., Pombo, C. and Trujillo, M.-A. (2015), "The role of family involvement on CEO turnover: evidence from Colombian family firms", *Corporate Governance: An International Review*, Vol. 23 No. 3, pp. 266-284.
- Guest, P.M. (2009), "The impact of board size on firm performance: evidence from the UK", *The European Journal of Finance*, Vol. 15 No. 4, pp. 385-404.
- Guillet, B.D., Seo, K., Kucukusta, D. and Lee, S. (2013), "CEO duality and firm performance in the US restaurant industry: moderating role of restaurant type", *International Journal of Hospitality Management*, Vol. 33, pp. 339-346.
- Habbershon, T.G. and Williams, M.L. (1999), "A resource-based framework for assessing the strategic advantages of family firms", *Family Business Review*, Vol. 12 No. 1, pp. 1-25.
- Hall, R. (1993), "A framework linking intangible resources and capabilities to sustainable competitive advantage", *Strategic Management Journal*, Vol. 14 No. 8, pp. 607-618.
- Hamil, S., Morrow, S., Idle, C., Rossi, G. and Faccendini, S. (2010), "The governance and regulation of Italian football", *Soccer & Society*, Vol. 11 No. 4, pp. 373-413.
- Hitt, M.A., Bierman, L., Shimizu, K. and Kochhar, R. (2001), "Direct and moderating effects of human capital on strategy and performance in professional service firms: a resource-based perspective", *Academy of Management Journal*, Vol. 44 No. 1, pp. 13-28.
- Jensen, M.C. (1993), "The modern industrial revolution, exit, and the failure of internal control systems", *The Journal of Finance*, Vol. 48 No. 3, pp. 831-880.
- Kamath, G.B. (2008), "Intellectual capital and corporate performance in Indian pharmaceutical industry", *Journal of Intellectual Capital*, Vol. 9 No. 4, pp. 684-704.
- Kaserer, C. and Moldenhauer, B. (2008), "Insider ownership and corporate performance: evidence from Germany", *Review of Managerial Science*, Vol. 2 No. 1, pp. 1-35.
- Kennedy, P. (2013), "Left wing' supporter movements and the political economy of football", *Soccer & Society*, Vol. 14 No. 2, pp. 277-290.
- Klein, A. (1998), "Firm performance and board committee structure", *The Journal of Law & Economics*, Vol. 41 No. 1, pp. 275-304.
- Lajili, K. and Zéghal, D. (2005), "Labor cost voluntary disclosures and firm equity values: is human capital information value-relevant?", *Journal of International Accounting, Auditing and Taxation*, Vol. 14 No. 2, pp. 121-138.
- Lardo, A., Dumay, J., Trequattrini, R. and Russo, G. (2017), "Social media networks as drivers for intellectual capital disclosure: evidence from professional football clubs", *Journal of Intellectual Capital*, Vol. 18 No. 1, pp. 63-80.
- Leach, S. and Szymanski, S. (2015), "Making money out of football", *Scottish Journal of Political Economy*, Vol. 62 No. 1, pp. 25-50.
- Lehn, K.M., Patro, S. and Zhao, M. (2009), "Determinants of the size and composition of US corporate boards: 1935-2000", *Financial Management*, Vol. 38 No. 4, pp. 747-780.
- Lin, Y.-F. (2005), "Corporate governance, leadership structure and CEO compensation: evidence from Taiwan", *Corporate Governance: An International Review*, Vol. 13 No. 6, pp. 824-835.
- Lipton, M. and Lorsch, J.W. (1992), "A modest proposal for improved corporate governance", *The Business Lawyer*, Vol. 48 No. 1, pp. 59-77.

- Lozano, F.J.M. and Carrasco Gallego, A. (2011), "Deficits of accounting in the valuation of rights to exploit the performance of professional players in football clubs: a case study", *Journal of Management Control*, Vol. 22 No. 3, pp. 335-357.
- Lubatkin, M., Lane, P.J., Collin, S. and Very, P. (2007), "An embeddedness framing of governance and opportunism: towards a cross-nationally accommodating theory of agency", *Journal of Organizational Behavior*, Vol. 28 No. 1, pp. 43-58.
- Maditinos, D., Chatzoudes, D., Tsairidis, C. and Theriou, G. (2011), "The impact of intellectual capital on firms' market value and financial performance", *Journal of Intellectual Capital*, Vol. 12 No. 1, pp. 132-151.
- Mehralian, G., Rajabzadeh, A., Sadeh, M.R. and Rasekh, H.R. (2012), "Intellectual capital and corporate performance in Iranian pharmaceutical industry", *Journal of Intellectual Capital*, Vol. 13 No. 1, pp. 138-158.
- Michie, J. (2000), "The governance and regulation of professional football", *The Political Quarterly*, Vol. 71 No. 2, pp. 184-191.
- Michie, J. and Oughton, C. (2005), "The corporate governance of professional football clubs in England", *Corporate Governance: An International Review*, Vol. 13 No. 4, pp. 517-531.
- Miller, D. and Le Breton-Miller, I. (2006), "Family governance and firm performance: agency, stewardship and capabilities", *Family Business Review*, Vol. 19 No. 1, pp. 73-87.
- Minichilli, A., Brogi, M. and Calabró, A. (2016), "Weathering the storm: family ownership, governance, and performance through the financial and economic crisis", *Corporate Governance: An International Review*, Vol. 24 No. 6, pp. 552-568.
- Minichilli, A., Corbetta, G. and MacMillan, I.C. (2010), "Top management teams in family-controlled companies: 'familiness', 'faultlines', and their impact on financial performance", *Journal of Management Studies*, Vol. 47 No. 2, pp. 205-222.
- Mitchell, L.E. (2005), "Structural roles, CEOs and informational monopolies: the missing link in corporate governance", *Brooklyn Law Review*, Vol. 70 No. 4, pp. 1313-1368.
- Mnzava, B. (2013), "Do intangible investments matter? Evidence from soccer corporations", *Sport, Business and Management: An International Journal*, Vol. 3 No. 2, pp. 158-168.
- Molodchik, M.A., Shakina, E.A. and Barajas, A. (2014), "Metrics for the elements of intellectual capital in an economy driven by knowledge", *Journal of Intellectual Capital*, Vol. 15 No. 2, pp. 206-226.
- Morariu, C.M. (2014), "Intellectual capital performance in the case of Romanian public companies", *Journal of Intellectual Capital*, Vol. 15 No. 3, pp. 392-410.
- Morrow, S. (1996), "Football players as human assets. Measurement as the critical factor in asset recognition: a case study investigation", *Journal of Human Resource Costing & Accounting*, Vol. 1 No. 1, pp. 75-97.
- Nicoliello, M. and Zampatti, D. (2016), "Football clubs' profitability after the financial fair play regulation: evidence from Italy", *Sport, Business and Management: An International Journal*, Vol. 6 No. 4, pp. 460-475.
- Nimtrakoon, S. (2015), "The relationship between intellectual capital, firms' market value and financial performance", *Journal of Intellectual Capital*, Vol. 16 No. 3, pp. 587-618.
- Olander, H., Hurmelinna-Laukkanen, P. and Heilmann, P. (2015), "Human resources – strength and weakness in protection of intellectual capital", *Journal of Intellectual Capital*, Vol. 16 No. 4, pp. 742-762.
- Orlitzky, M. (2001), "Does firm size confound the relationship between corporate social performance and firm financial performance?", *Journal of Business Ethics*, Vol. 33 No. 2, pp. 167-180.
- Palia, D., Ravid, A. and Wang, C.-J. (2008), "Founders versus non-founders in large companies: financial incentives and the call for regulation", *Journal of Regulatory Economics*, Vol. 33 No. 1, pp. 55-86.
- Pérez-González, F. (2006), "Inherited control and firm performance", *American Economic Review*, Vol. 96 No. 5, pp. 1559-1588.
- Pfeffer, J. (1994), *Competitive Advantage Through People: Unleashing the Power of the Workforce*, Harvard Business School Press, Boston, MA.
- Pi, L. and Timme, S.G. (1993), "Corporate control and bank efficiency", *Journal of Banking & Finance*, Vol. 17 Nos 2/3, pp. 515-530.

Pulakos, E.D., Dorsey, D.W. and Borman, W.C. (2003), "Hiring for knowledge-based competition", in Jackson, S.E., DeNisi, A. and Hitt M. (Eds), *Managing Knowledge for Sustained Competitive Advantage*, John Wiley and Sons, San Francisco, CA, pp. 155-177.

Pulic, A. (2008), "The principles of intellectual capital efficiency: a brief description", available at: www.cik-hr.com/data/principles_2008.pdf (accessed 12 May 2014).

Reed, K.K., Lubatkin, M. and Narasimhan, S. (2006), "Proposing and testing an intellectual capital-based view of the firm", *Journal of Management Studies*, Vol. 43 No. 4, pp. 867-893.

Regoliosi, C. (2016), "The accounting treatments in professional football clubs in Italy from a business model perspective", *Rivista Italiana di Ragioneria e di Economia Aziendale*, Vols 5/6/7/8 pp. 275-304.

Rhoades, D.L., Rechner, P.L. and Sundaramurthy, C. (2001), "A meta-analysis of board leadership structure and financial performance: are "two heads better than one?", *Corporate Governance: An International Review*, Vol. 9 No. 4, pp. 311-319.

Risalti, G. and Verona, R. (2013), "Players' registration rights in the financial statements of the leading Italian clubs. A survey of Inter, Juventus, Lazio, Milan and Roma", *Accounting, Auditing & Accountability Journal*, Vol. 6 No. 1, pp. 16-47.

Rossi, F. and Cebula, R.J. (2016), "Debt and ownership structure: evidence from Italy", *Corporate Governance*, Vol. 16 No. 5, pp. 883-905.

Rowbottom, N. (2002), "The application of intangible asset accounting and discretionary policy choices in the UK football industry", *The British Accounting Review*, Vol. 34 No. 4, pp. 335-355.

Rubino, F.E., Tenuta, P. and Cambrea, D.R. (2016), "Board characteristics effects on performance in family and non-family business: a multi-theoretical approach", *Journal of Management and Governance*, pp. 1-36, doi: [10.1007/s/10997-016-9363-3](https://doi.org/10.1007/s/10997-016-9363-3)

Scafarto, V., Ricci, F. and Scafarto, F. (2016), "Intellectual capital and firm performance in the global agribusiness industry: the moderating role of human capital", *Journal of Intellectual Capital*, Vol. 17 No. 3, pp. 530-552.

Schultz, T.W. (1961), "Investment in human capital", *The American Economic Review*, Vol. 51 No. 1, pp. 1-17.

Schulze, W.S., Lubatkin, M.H. and Dino, R.N. (2003), "Exploring the agency consequences of ownership dispersion among the directors of private family firms", *Academy of Management Journal*, Vol. 46 No. 2, pp. 179-194.

Sciascia, S. and Mazzola, P. (2008), "Family involvement in ownership and management: exploring nonlinear effects on performance", *Family Business Review*, Vol. 21 No. 4, pp. 331-345.

Shiu, H.J. (2006), "The application of the value added intellectual coefficient to measure corporate performance: evidence from technological firms", *International Journal of Management*, Vol. 23 No. 2, pp. 356-365.

Shleifer, A. and Vishny, R.W. (1997), "A survey of corporate governance", *The Journal of Finance*, Vol. 52 No. 2, pp. 737-783.

Singh, M. and Faircloth, S. (2005), "The impact of corporate debt on long term investment and firm performance", *Applied Economics*, Vol. 37 No. 8, pp. 875-883.

Snell, S.A. and Youndt, M.A. (1995), "Human resource management and firm performance: testing a contingency model of executive controls", *Journal of Management*, Vol. 21 No. 4, pp. 711-737.

Songini, L. and Gnan, L. (2015), "Family involvement and agency cost control mechanisms in family small and medium-sized enterprises", *Journal of Small Business Management*, Vol. 53 No. 3, pp. 748-779.

Sun, W., Stewart, J. and Pollard, D. (2011), *Corporate Governance and the Global Financial Crisis: International Perspectives*, Cambridge University Press, Cambridge, MA.

Sydler, R., Haefliger, S. and Pruksa, R. (2014), "Measuring intellectual capital with financial figures: can we predict firm profitability?", *European Management Journal*, Vol. 32 No. 2, pp. 244-259.

Szymanski, S. and Smith, R. (1997), "The English football industry: profit, performance and industrial structure", *International Review of Applied Economics*, Vol. 11 No. 1, pp. 135-153.

Ting, I.W.K. and Lean, H.H. (2009b), "Intellectual capital performance of financial institutions in Malaysia", *Journal of Intellectual Capital*, Vol. 10 No. 4, pp. 588-599.

Villalonga, B. and Amit, R. (2010), "Family control of firms and industries", *Financial Management*, Vol. 39 No. 3, pp. 863-904.

Wright, P.M. and McMahan, G.C. (1992), "Theoretical perspectives for strategic human resource management", *Journal of Management*, Vol. 18 No. 2, pp. 295-320.

Yermack, D. (1996), "Higher market valuation of companies with a small board of directors", *Journal of Financial Economics*, Vol. 40 No. 2, pp. 185-211.

Youndt, M.A., Subramaniam, M. and Snell, S.A. (2004), "Intellectual capital profiles: an examination of investments and returns", *Journal of Management Studies*, Vol. 41 No. 2, pp. 335-361.

About the authors

Vincenzo Scafarto is Assistant Professor of Business Economics at the University of Cassino and Southern Lazio (Italy). He holds a PhD in Business Administration from the University of Naples "Federico II" (Italy). His research interests range from intellectual capital accounting to corporate governance and history of accounting. Vincenzo Scafarto is the corresponding author and can be contacted at: vscaf@hotmail.com

Panagiotis Dimitropoulos is a Research and Teaching Associate of Accounting, International Finance and research methods at the Department of Sport Management, University of Peloponnese. His research interests range from financial accounting to accounting quality, corporate governance and sport finance. He has published in peer-reviewed journals such as *Corporate Governance: An International Review*, *International Journal of Sport finance* and *European Sport Management Quarterly*.

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgrouppublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.