THE IMPACT OF INVESTORS ON TRANSFER FEES IN THE ENGLISH PREMIER LEAGUE: A STUDY OF THE OWNERSHIP STRUCTURES

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Transfer fees in European football have experienced a rapid increase in the past years. Simultaneously, an increasing number of domestic and recently foreign investors — who are assumed to further increase team spending in European football — have entered the football market by becoming club owners. In light of these developments, fears associated with an increasing influence of foreign (majority) investors from the financial as well as the emotional fan perspective have increased. Given the rather limited number of empirical studies focusing on the impact of investors on transfer fees, we shed further light on this topic. Based on a data sample including transfer fees, player characteristics, player performance and team performance from 2012–2013 to 2018–2019 for the English Premier League, we estimate OLS regressions and quantile regressions to analyze the effects of ownership concentration and investor origin on the amount of individual transfer fees. While we do not find strong evidence that ownership concentration increases the willingness to pay, we find fairly consistent results that foreign investors are willing to pay a premium compared to domestic investors. Our results also indicate that especially foreign investors who own a majority share of a club have a positive effect on transfer fees for the upper quantiles.

Keywords: Sports Finance, Property Rights, Club Ownership, Investors, Football Transfer Market

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1. INTRODUCTION

In recent years, European football has experienced a considerable economic step-up that is made most evident by numerous revenue and transfer fee records. Some crucial determinants for this development are higher broadcasting revenues and the ongoing globalization of Europe’s top leagues (Rohde & Breuer, 2017), which have increased the global sales potential for clubs. Another driver...
that has gained regularly considerable attention in the sports-economics literature, and the general public is the entry of (foreign) investors with high spending power (Lang, Grossmann, & Theller, 2011; Wilson, Plumley, & Ramchandani, 2013; Madden, 2015; Sims, 2018).

Foreign (majority) investors first appeared in England at the end of the 1990s (Rohde & Breuer, 2016b); however, over the past decade, the number of investors has also increased in other European leagues (especially France and Italy). Even Germany, despite its strict “50 + 1”-rule (for more on the “50 + 1”-rule, see Dietl and Franck, 2007), shows an increasing number of investors who own stakes in football clubs. Due to the increasing importance of club-ownership structures and investors’ origins, even the highly-scrutinized annual football reports by Deloitte and Europe’s football governing body, UEFA, contain a dedicated section on club ownership (Deloitte, 2019; UEFA, 2020).

Building on property-rights theory as well as theoretical and empirical findings from foreign (direct) investments, this study sheds further light on the impact of ownership concentration and foreign investors on the transfer-market behavior of football clubs. In doing so, we focus on the English Premier League as the forerunner and most illustrative example for the presence of (foreign) investors.

Despite the ongoing public and academic discussions concerning the impact of investors on team investments, the predominant part of earlier studies is of a theoretical nature (Franck, 2010a; Lang et al., 2011; Sass, 2016). As one of few exceptions, Rohde and Breuer (2016b) empirically study the effect of (foreign) majority owners on team wages in the English Premier League. Furthermore, Rohde and Breuer (2016a) analyze the influence of (foreign) private majority owners on the aggregated net transfer investments among Europe’s top 30 clubs.

Our research contributes to the earlier literature in multiple ways. First, we use recent data to provide further empirical evidence of the impact of investors on transfer fees. Second, we analyze the transfer spending by focusing on individual player transfer fees rather than analyzing the team’s overall transfer investments. This allows individual player characteristics (e.g., sporting performance, remaining contract duration) to be controlled for when analyzing an individual player’s transfer fee. Third, including single investors as a third category for the ownership concentration extends Rohde and Breuer’s studies (2016a, 2016b), who only differentiate between minority and majority investors.

Particularly, we address the following research questions:

- RQ1: What impact does ownership concentration have on the amount of player transfer fees?
- RQ2: What impact do foreign investors have on the amount of player transfer fees?

The remainder of the paper is structured as follows: Section 2 contains the theoretical background on the labor market and club ownership in football as well as the hypothesis development. The empirical analysis including the results is presented in Section 3. The paper closes with a discussion in Section 4 and a conclusion in Section 5.

2. THEORETICAL BACKGROUND ON THE FOOTBALL LABOR MARKET AND CLUB OWNERSHIP

2.1. Labor-market characteristics and transfer fees in European football

Similar to other markets on which goods and services are being traded, the transfer market in football allows player registrations to be traded between football clubs (Franck, 1995; Frick, 2007; Morrow, 1996). Before finalizing a transfer, both contracting parties must negotiate a transfer fee, with club and player characteristics determining the amount of compensation (Carmichael & Thomas, 1993; Speight & Thomas, 1997). Player characteristics determining salaries, transfer fees, and market values can mainly be categorized into the following dimensions: human capital, performance, popularity (Müller, Simons, & Weimann, 2017; Frenger, Follert, Richau, & Emrich, 2019; Richau, Follert, Frenger, & Emrich, 2019), and effort as a fourth category (Weimar & Wicker, 2017). Furthermore, compensation will equal the marginal revenue product a player can generate for the buying club (Frick, 2011; Lucifora & Simmons, 2003). As an exception, no transfer is required when players have expired contracts.

Driven by higher revenues (e.g., due to commercialization and higher broadcasting income) the aggregated transfer fees in all major European leagues have increased considerably in the past decade. Moreover, money injections by private investors provided additional financial means to clubs (Franck, 2010b). As a result, the transfer-fee spending of the English Premier League in 2018, for example, was more than three times the amount spent in 2009 — even when accounting for inflation. The other major leagues demonstrate a comparable trend, although to a lesser extent (Transfermarkt.de, 2019).

In this context, previous literature describes the tendency to overinvest as characteristic for the football labor market (Dietl & Franck, 2000; Franck, 2010a), which does not only refer to transfer spending but also to team wages as another part of team investments. Frequently, the metaphor of a “rat race” (Akerlof, 1976) is used to describe the investment behavior of football clubs (Franck, 2010b; Szynanski & Weimar, 2019). Stereotypical symptoms of this “rat race” are, for example, high debt levels and low profitability at the club level (Rohde & Breuer, 2016b). In order to regulate extraordinary club investments and to ensure the financial stability of European football, UEFA has

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1 Investors are only permitted to own up to 49.9% of the club shares.

2 In our study, we deal only with one side of the contracting parties. However, from the perspective of negotiation theory, this is not problematic insofar as the impact of an investor on the buyer, for example, changes the buyer’s decision field. If this results in a higher willingness to pay, the buyer’s marginal price shifts to the right, resulting in a larger negotiation interval, ceteris paribus. It is not far to assume that the agreement price will then also be higher, given the individual negotiation skills of the parties. On the role of negotiation for negotiations see, e.g., Follett, Herbener, Olbrich, and Rapp (2018).

3 Defined as a shift towards a more business-oriented behavior by clubs and leagues.
introduced the so-called “Financial Fair Play” regulations (Müller, Lammert, & Hovemann, 2012; Franck, 2014).

2.2. Club ownership models in European football

Over the decades, the legal forms and the corresponding ownership structures of European football clubs have been subject to recurring changes (Dietl & Franck, 2007; Leach & Szymanski, 2015). Generally, researchers differentiate between three main types of ownership models in European football (Franck, 2010a; Dietl & Weingärtner, 2011):

- members’ associations;
- public companies listed on stock exchanges;
- private companies similar to classic capitalist firms.

Nowadays, private ownership has become the dominant model in many European leagues. Based on the UEFA benchmarking report for the financial year 2018, all clubs in the top divisions in England, France and Italy are under private ownership. In Spain, private ownership dominates with 70% of the clubs operating under this model. Among the five major European leagues, only Germany has a low share of 28% of private owners (UEFA 2020, p. 52) due to its restrictive “50 + 1” rule. Across all European leagues (not only the five largest leagues), 80% of the private owners are domestic. However, especially in the English Premier League, foreign ownership plays an important role with 12 out of 20 clubs under foreign private ownership (UEFA 2020, p. 53).

Due to the increasing variety and importance of ownership structures in professional football, the topic has been the subject of several earlier studies. Comparing the different ownership models, Franck (2010a) theoretically shows that clubs under private ownership are superior in generating additional funding and reinvesting these financial resources into the team. Dietl and Weingärtner (2011) show that members’ associations facilitate the generation of revenues from sponsorships. In another study, Wilson et al. (2013) empirically evaluate the impacts of the stock model, as well as domestic and foreign private ownership, on clubs’ financial and sporting performance. Their main findings include the better financial performance of the stock-market model and inferior sporting performance of clubs with domestic ownership. Acero, Serrano, and Dimitropoulos (2017) evaluate the effect of ownership concentration on the financial performance of football clubs and find a positive effect of an increasing ownership concentration in case of dispersed ownership. At the same time, they identify a negative effect of increasing concentration when the ownership concentration is already high.

2.2.1. Definition, financial impact and financing concept of investors

Our research focuses, particularly, on the private ownership model. Previous research often refers to private investors as so-called “sugar daddies” that inject money into a club (e.g., Franck, 2010b; Lang et al., 2011; Rohde & Breuer, 2016b). Different studies analyze the impact of “sugar daddies” on clubs’ investment strategies and a league’s competitive balance. Franck and Lang (2014) theoretically show that money injections by such investors lead to riskier investment strategies of the clubs. Using a theoretical model, Lang et al. (2011) describe a contest model of a sports league under the presence of “sugar daddies” and demonstrate that such investors affect the competitive balance — the direction of the effect depends on the club’s market size, on the one hand, and the investors’ win preference, on the other hand. Considering UEFA’s “Financial Fair Play” regulations (FFP), which aim at preventing overspending of football clubs, Sass (2016) points out that FFP can limit the financial spending of investors but can also prevent their investments in smaller clubs, which could increase the competitive balance. Furthermore, the absence of external financial (majority) investors can result in a competitive disadvantage and, thus, lead to negative effects on the international competitive balance (e.g., for German clubs) (Franck, 2010b).

The entry of external investors is often associated with the promise to provide additional financial resources to improve the player roster and to bring further sporting success to a club. Based on this promise, investors are considered an additional driver in the “rat race” (Andreff, 2007; Franck, 2010b). From a financial perspective, the monetary support provided by investors beyond the acquisition investment is comparable to soft debt. Investors provide interest-free loans for player transfers or other expenses, which the club is supposed to pay back at a later point. In reality, however, investors mostly do not expect the club to repay a loan (Beech, Horsman, & Magraw, 2010). Therefore, clubs can operate under a soft budget constraint (Storm & Nielsen, 2012; for more details on soft budgets, see Kornai, 1979). A prominent example is Roman Abramovich, who reportedly provided Chelsea London with an interest-free loan of £1.1 billion until 2018 without any repayments up to this point (Fifield, 2018).

As compared to the “sugar-daddy” literature, we use a broader definition of investors: We not only define investors as natural persons (“sugar daddies”) but also include legal entities (i.e., corporations such as media companies and sport-investment firms) that own equity shares of a football club.

2.2.2. Typical objectives of investors in football

Usually, investments in conventional asset classes such as shares are seen as a vehicle to maximize the investor’s welfare by promising financial returns (Brealey, Myers, & Allen, 2019; Copeland, Weston, & Shastri, 2013). Investors in football clubs, however, generally follow a more diverse set of objectives. Hence, the idea often found in finance-related literature (Damodaran, 2012) that a focus on financial objectives leads to utility maximization on the side of investors is often not applicable to football clubs. Evaluating the objective function of clubs in sports, several studies discuss whether clubs act in terms of either (expected) win or profit maximizers (Madden & Robinson, 2012). The predominant view is that clubs in North American sports act as (expected) profit maximizers, while clubs in European sports rather act as (expected) win maximizers (Garcia-del-Barrio & Szymanski, 2009; Sloane, 2015). In terms of this
idea, previous literature follows the assumption that European football clubs try to maximize the club’s sporting success subject to a financial break-even constraint as first stated by Sloane (1971).

By the same token, when categorizing the objectives of investors in football, a distinction between financial and non-financial objectives can be made. As one of the core economic objectives, some investors might be interested in direct monetary benefits from ownership of a football club. One way to achieve such benefits is to demand yearly payments from a club as a form of a dividend. Another way is to increase the value of a club by, for example, developing a strong brand with a high marketing and sporting potential. This makes it possible that an investor earns a profit by negotiating a selling price that is above the price he or she initially paid (Millward, 2011, p. 57). Club ownership can also have a positive indirect economic effect for investors in the form of spillover effects by promoting other business activities, which is already a well-established business practice in American sports (Franck, 2010a). However, in line with the view that clubs in European football are win maximizers, many investors presumably do not expect any monetary benefit from their investment in a club. One of the traditional non-financial motives, especially for domestic investors, is the financial support of a club they already have an emotional relation with. Another positive effect of club ownership is the opportunity to achieve some kind of “social and political acceptance” (Franck, 2010a, p. 115). For instance, critics accuse the owners of Premier League club Manchester City of using their sports investment to whitewash medial accusations against their country concerning human rights and the treatment of migrant workers (Watson, 2018). The third non-financial motive of investors refers to the concept of “conspicuous consumption” (Veblen, 1973; for an application to football, see Franck, 2010b). By sinking significant money into a club, an investor can increase public attention and gain personal glory, especially in case of sporting success of the club (for details on the economics of attention, see Franck, 1998). In case an investor is simply aiming for personal glory, ownership of a particular club has only limited priority. Multiple examples (e.g., Queens Park Ranger’s owner Tony Fernandez; FC Reading’s owners Dai Yongge and Xiu Li⁵) illustrate that investors sometimes make offers for multiple clubs just for the sake of owning a football club and benefiting from the rewards.

2.2.3. Investor categorization and hypotheses development

Building on previous literature on corporate governance and investors in football, we use two dimensions to differentiate investors: ownership concentration and investor origin. We follow the approach proposed by Rohde and Breuer (2016b) and address ownership concentration by building on property-rights theory. As for the investor’s origin, in turn, we adapt a theoretical and empirical insights from research on foreign direct investments (FDIs) to the football industry and, thus, provide a complementing angle on this topic.

Ownership concentration: Property-rights theory

Property-rights theory (Coase, 1960; Demsetz, 1967; Furubotn & Richter, 2005; Picot, 1991; Picot & Dietl, 1993) claims that ownership over any resources consists of three different elements (Furubotn & Richter, 2005; Milgrom & Roberts, 1992): residual control, residual claim, and the right to transfer the asset. Residual control describes the right to use the asset and to exclude others from using the asset; residual claim refers to the right over the rewards related to the asset, while the third right allows the owner to transfer the asset (Libecap, 1990, p. 1). The different rights do not have to reside within the same person or legal entity but can belong to different parties. Inherent to the theory is the assumption that all owners of property rights try to maximize their utility (Alchian & Demsetz, 1973). Applying property-rights theory to the different legal forms of football clubs, Dietl and Weingärtner (2011) show that all property rights belong to the club owners in case of private ownership, whereas for listed clubs and members’ associations, the property rights belong to two different parties or do effectively not exist (see further Franck, 2000).

Building on property-rights theory, an increasing number of shareholders ultimately results in higher costs, including negotiation costs (Buchanan & Tullock, 1962), and can lead to contradicting objectives (Kieser & Walgenbach, 2010; Preisendörfer, 2016). Furthermore, based on Berle and Means (1968) the separation of property and management can also lead to classical agency problems (Jensen & Meckling, 1976; Ross, 1973).

Therefore, a high level of ownership concentration increases investment incentives and results in a more efficient allocation of resources based on the utility function of the owner (Demsetz, 1967). Adapted to football, higher ownership concentration leads to higher autonomy (Franck, 2010b), reduces negotiation costs (Buchanan & Tullock, 1962; for an application to FIFA, see Follert, Richau, Emrich, and Pierdzioch, 2020) with other owners, reduces negotiation costs (Grossman & Hart, 1988), and allows an investor to maximize his or her (expected) utility in the most efficient way⁶. Assuming that European football clubs try to maximize sporting success under a financial break-even constraint, investors with a higher share have a priori stronger incentives to invest in team quality, as they can also claim a higher share of the respective rewards associated with sporting success and they can collect the full utility stream. Thereby, sporting success also has positive effects on the economic as well as reputational objectives discussed in Section 2.2.2 (e.g., higher brand value or spillover effects, higher international recognition, political or social influence). Rohde and Breuer (2016b) confirm this hypothesis by showing that majority owners have a significant positive effect on team wages⁷.

Applying these findings to individual player transfer fees, we hypothesize that a higher ownership concentration leads to higher transfer fees, which is supported by evidence for European football clubs (Conn, 2011; Parkes, 2011).

⁵ See Conn (2011) and Parkes (2011).

⁶ Although there might also be external stakeholders such as fan initiatives that can prevent the owner from implementing his or her strategy in the most efficient way.

⁷ Without including a variable differentiating between foreign and domestic majority owners.
concentration has a positive effect on individual transfer fees in the sense that investors with a higher share are presumably more likely to provide the financial means to sign the players that promise the highest sporting success for their team:

**H1:** Investors with a higher ownership share pay higher fees for individual player transfers.

**Investor origin: Foreign (direct) investments**

Several studies have compared different investment options for foreign investors including foreign direct investments, portfolio equity securities, portfolio debt securities, and loans (Daude & Fratzescher, 2008; Razin, Sadka, & Yuen, 1998). In addition, the effect of foreign investments on target firms has been studied (Wang & Wang, 2015). One of the main differentiations of FDIs compared to the other investment options is, thereby, that foreign investors do not only provide capital but are also in control of a firm, which allows an investor to influence management decisions (Mankiw & Taylor, 2008, p. 618).

Of particular relevance is the question of which factors influence the pecking order of international cash flows (Razin et al., 1998). The findings include that one disadvantage for foreign investors when investing abroad is information asymmetries compared to domestic investors. Considering such information asymmetries between domestic and foreign investors, earlier studies argue that the control associated with FDIs helps to overcome such information asymmetries and allows managing an investment more efficiently (Goldstein & Razin, 2006; Razin et al., 1998).

In football, there exist several investment options for investors ranging from different sponsorship agreements (e.g., minor sponsor/stadium sponsor/jersey sponsor) to different degrees of ownership (minor/major). Adapting the foreign investment literature to football, foreign club ownership in football is comparable to an FDI because club owners control their investment and can influence business operations (e.g., through seats in the supervisory board or in the operative management). Thus, when a foreign investor decides to buy a club instead of pursuing one of the other investment options, this suggests a high degree of commitment to his or her objectives because he or she prefers control and decision power to looser forms of investments with higher information asymmetries.

One of the early conceptual approaches on FDIs was conducted by Hymer (1976) who argues that firms pursuing FDIs need some kind of competitive advantage in order to be successful when competing with domestic firms because of the above-mentioned information advantages of domestic competitors. Sources for this competitive advantage can include technology, market power, and financial means. The argument of some competitive advantage of foreign companies when investing abroad was picked up and expanded in later studies (e.g., Dunning, 1980). In football, the major source of competitive advantage of foreign investors lies in the financial means investors can provide to achieve sporting success (for the relation between investments and sporting success, see Frick, 2005). In case of English football, the background of the foreign owners includes billionaires (e.g., Chelsea London), multinational companies (e.g., Wolverhampton Wanderers) and state-backed investors (e.g., Manchester City) and, thus, at least indicates that these investors can provide high financial means for example due to their transnational operations and network. Higher spending power of foreign investors is also highlighted by Rohde and Breuer (2016b), who rely on the resource-based view in their study that uses the investor origin (i.e., foreign) as a proxy for wealth.

Regarding the effect of FDIs, several studies find a positive influence on productivity and wages. Arnold and Javorcik (2009), for example, show that higher investments as well as higher wages under foreign ownership lead to higher plant productivity in Indonesia. Results from other studies support the finding of a positive effect of foreign ownership on average wages (Aitken, Harrison, & Lipsey, 1996; Huttunen, 2007; Wang & Wang, 2015). Thus, empirical findings from other industries suggest that foreign ownership is associated with higher investments for employees.

In summary, similar to **H1**, club ownership allows foreign investors to control and exercise power on their investment and meet their objectives. However, in distinction to the **H1**, there are additional factors that suggest that foreign investors might pay higher transfer fees than their domestic counterparts. In addition to the empirical support for positive effects of FDIs on investments for employees from other industries, these factors include the potentially higher spending power of foreign investors (i.e., their competitive advantage), and the international objectives of foreign investors (for the international scope, Millward, 2011, p. 49). Because international recognition benefits from sporting success, which is strongly related to team investments, we argue that foreign investors have a higher willingness to pay a premium for players than domestic investors do in order to outbid other teams when signing players. Supporting this line of argumentation, Wilson et al. (2013) find that clubs under domestic ownership show inferior performance compared to clubs under foreign ownership. While Rohde and Breuer (2016a, 2016b) confirm the existence of a positive effect of foreign majority ownership on aggregated team wages and net transfer investments, this paper analyses the effect on individual player transfer fees, which renders it possible to include player-specific control variables that have proven to influence a player’s transfer fee (see Section 2.1):

**H2:** Foreign investors pay higher fees for individual player transfers than domestic owners.

Taking into account that the effect of higher control and higher willingness to pay by foreign investors can interact with each other, we combine **H1** and **H2** and additionally test for a potential positive effect of foreign investors that are majority or single owners:

**H3:** Foreign majority or foreign single investors pay higher fees for individual player transfers.
3. EMPIRICAL ANALYSIS

3.1. Data and methodology

Our sample contains all transfers (n = 1,124 — thereof 749 transfers with data for all variables) of the English Premier League for the seasons 2012/13-2018/1910. Applying property-rights theory, we categorize the ownership concentration into “dispersed ownership”, which includes minority owners and corporations even if they own a majority share11. The reason is that corporations have internal control mechanisms that prevent single persons from making investment decisions on their own (Mintzberg, 1979) and, thus, create negotiation costs (Buchanan & Tullock, 1962). As an extension to the work of Rohde and Breuer (2016b), we differentiate between “majority” and “single owners” because even investors with a small share can demand some kind of representation and, thus, create costs. The origin of the largest shareholder is categorized as either “domestic” or “foreign”.

As a further extension to the studies by Rohde and Breuer (2016a, 2016b), player-specific control variables are incorporated. In addition to age, squared age, and the player position, we control for the sporting performance of a player by including the overall FIFA-Index provided by the software developers of the EA sports video game “FIFA”. To reflect the most recent performance, the index is regularly updated with the support of thousands of volunteers around the world (Kirschstein & Liebscher, 2019). We also control for the remaining duration of the player’s contract due to its effect on the bargaining power in transfer negotiations. As shown in previous studies, the closer the contract comes to its expiration the lower is the bargaining power of a selling club because the risk of not receiving compensation at all increases (Muehlheusser, Frick, & Feess, 2004). We also include the respective season to account for changes over time. Further, we include the league rank of a team in order to control for sporting differences between teams (Leach & Szymanski, 2015; Dimitropoulos, Travlos, & Panagiotopoulos, 2018). Because the league rank is highly correlated with the revenue ranking within a league, the league rank is also a proxy for higher spending power based on better sporting performance12.

For collecting our data, we used multiple sources. Transfer fees, player age and the player’s position are available on www.transfermarkt.de. FIFA-Index and remaining contract duration were gathered from the website www.fifaindex.com13 while the remaining contract duration was also cross-validated with newspaper articles and press releases. The club’s league ranking at the time of the transfer period is available on the website of the well-respected German sports magazine Kicker (www.kicker.de). The share of the owners as well as their nationalities were collected from the official club websites, press releases and widespread international newspaper articles (e.g., BBC, Guardian). Table 1 presents the measures and variables we used in our analyses.

| Table 1. Overview of variables |
|-------------------------------|
| **Variable category** | **Variable** | **Description** |
| Independent variables | Transfer fee | Stake of largest shareholder clustered into: 1) Dispersed ownership: ≤ 50% [Reference category] 2) Majority owner: > 50% and < 100% 3) Single owner: 100% |
| | Inv_cluster | Origin of largest shareholder: 1) Domestic if from the United Kingdom [Reference category] 2) Foreign if not from the United Kingdom |
| | Inv_origin | Player age at the time of the transfer (squared influence is considered) |
| | FIFA-Index | Player skill level at the beginning of the season of the transfer (index ranging from 0 to 100) |
| | Position | Main playing position as indicated by transfermarkt.de: Goalkeeper, Defender, Midfielder, Forward [Reference category] |
| | Contract | Remaining contract duration with the selling club |
| | Rank | League rank of the buying club at the end of the previous season (summer transfers) or at the end of the first half of the season (winter transfers) — ranking from 1 to 17 for the teams staying in the league; 21–23 for the three teams being promoted |
| | Season | Dummy for a respective season from 2012–2013 [Reference category] to 2018–2019 |

As shown in Table 2, the average transfer fee (including inflation) was €13M. The median rank of the club at the time of the transfer (period) was 12. Players were on average 25 years old and had an average FIFA-Index of 75. The remaining contract duration was 2.2 years.

| Table 2. Descriptive statistics for the entire sample14 |
|---------------|---------------|---------|--------|-------|
| **Fee in CM** | Mean/Median | SD/IQR | Min | Max |
| 13.0 | 14.2 | 0.1 | 108.8 |
| **Age** | 24.6 | 3.4 | 17 | 36 |
| **FIFA** | 75.0 | 3.8 | 51 | 89 |
| **Contract** | 2.2 | 1.1 | 0.5 | 7 |
| **Rank** | 12 | 11 | 1 | 23 |
| **Obs.** | 749 |

Overall, the clubs acquired a total number of 1,124 players during the seven seasons. From this sample, free agents15 were excluded. A full set of information was available for 749 transfers, which were, therefore, suitable for the analysis.

10 Excluding loans and internal youth player promotions. Due to the different contractual structure, various motives for loans, and the high fluctuation of players on loan compared to other players, loans should be analyzed separately. Youth players are (at least partly) promoted to the team roster for regulatory reasons and are therefore excluded.

11 Families and spouses are treated as one investor, building on Becker’s (1981) assertion that one family maximizes its utility as a whole.

12 Due to the high correlation with league rank, the position in the revenue ranking was not included as a control variable.

13 Website providing an overview of the individual player assessments in the video game “FIFA”.

14 Median and interquartile ranges for ordinal scaled variable (rank), mean and standard deviation for the other variables (fee, age, FIFA-Index, and contract duration).

15 Again, free agents were excluded due to their different contractual structure.
The majority of owners accounted for 217 transfers in the data sample, single owners for 327, and dispersed ownership for 205 transfers. Foreign owners accounted for 434 transfers (Table 3).

**Table 3. Sample split by investor type**

| Overall Ownership concentration split | Investor origin split |
|--------------------------------------|-----------------------|
| Total                                | Obs.:                 |
| Dispersed                            | 749                   |
| Majority                             | 205                   |
| Single                               | 217                   |
| Domestic                             | 327                   |
| Foreign                              | 315                   |
| Foreign                              | 434                   |

In order to test our hypotheses, we first estimate four different OLS regression models (with robust standard errors based on White, 1980) by using log-transformed transfer fees as the dependent variable to account for the skewness of the transfer fees (the similar approach used by Bryson, Frick, and Simmons, 2013; Franck and Nüesch, 2012, for salaries and market values). In the Model 1, we only include the investor cluster variable in addition to the control variables. The Model 2 only includes the investor origin, while the Model 3 includes both investor variables. In the Model 4, an interaction term between investor cluster and origin is added to account for a potential interaction between the two variables. The full Model has the following form:

\[
\ln(\text{Transfer Fee}) = \beta_0 + \beta_1 \cdot \text{Inv_cluster} + \beta_2 \cdot \text{Inv_origin} + \beta_3 \cdot \text{Age} + \beta_4 \cdot \text{Age}^2 + \beta_5 \cdot \text{FIFA} + \beta_6 \cdot \text{Position} + \beta_7 \cdot \text{Contract} + \beta_8 \cdot \text{Rank} + \beta_9 \cdot \text{Season} + \beta_{10} \cdot (\text{Inv_cluster} \cdot \text{Inv_origin}) + \varepsilon
\]  

(1)

Similar to previous sport-economics studies (e.g., Frick, 2011, as well as Bryson et al., 2013, for salaries; Franck and Nüesch, 2012, for market values), we also conduct quantile regressions (Koenker & Bassett, 1978; Koenker, 2005) to analyze whether there are any differences within the (conditional) transfer-fee distribution with regard to the spending behavior of (foreign) investors. Following previous studies, we use bootstrapping with 1000 replications to compute robust standard errors (Lehmann & Schulze, 2008; Franck & Nüesch, 2012)\(^6\).

Most of the changes to a team roster occur in the summer transfer window (597 summer vs. 152 winter transfers), whereas winter transfers usually include some opportunistic behavior (e.g., in case of the threat of relegation). Thus, we separately analyze sub-samples that only include the summer and the winter transfers. However, due to the major importance of summer transfers compared to winter transfers, we only show and discuss the results for summer transfers\(^7\) besides the overall sample in this paper.

### 3.2. Results

The results of the different OLS models estimated for the entire sample are presented in Table 4. For the first two models, neither the investor cluster nor investor origin show any significant effect when analyzed separately. However, the signs of the effects indicate a positive impact of majority investors while single investors surprisingly seem to have a negative effect. Foreign investors tend to have a positive effect on transfer fees. When including both investor variables (Model 3), again no significance can be observed for the investor variables. Only in the Model 4, which includes the interaction effects, the negative effect of single owners turns out to be significant. Both interaction effects are statistically insignificant but indicate a positive effect on transfer fees. While the positive effect of foreign ownership remains through all models as well as the negative effect of single owners, the positive effect of majority investors turns negative in Models 3 and 4. The control variables have the expected sign with mostly significant effects. As shown in previous studies, goalkeepers and defenders are transferred for lower fees. Teams that are more successful pay higher transfer fees and a longer remaining contract duration increases transfer fees. Furthermore, the past seasons have brought higher transfer fees compared to the reference category 2012–2013.

For the summer sample (Table 5), the results for the investor variables are partly different. Foremost, the positive effect of foreign investors on transfer fees is significant at the 5% level in Models 2 and 3 with a positive effect on transfer fees of 11% and 13.4%\(^8\) respectively compared to domestic owners. However, this effect gets smaller and turns insignificant when including the interaction term. The effect of single investors is similar to the entire sample; majority ownership on the other hand shows a positive effect in Models 1 and 3 that turns negative when including the interaction term. The control variables are fairly similar to the entire sample.

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6 We used the statistics software R (R Core Team 2020) including the package “quantreg” (Koenker, 2021).

7 Results for the winter transfer window are available upon request.

8 Calculated as exp(β) - 1, where β represents the coefficient estimate (based on Halvorsen and Palmquist, 1980; for an application to football, see Bryson et al., 2013; Kuethe and Motamed, 2010).
### Table 4. Results for OLS models (entire sample)

|                                | Model 1               | Model 2               | Model 3               | Model 4               |
|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| **Inv_cluster**                |                       |                       |                       |                       |
| Inv_major                      | 0.018 (0.065)         | -0.00006 (0.066)      | -0.024 (0.087)        |                       |
| Inv_single                     | -0.059 (0.056)        | -0.086 (0.059)        | 0.142* (0.083)        |                       |
| **Inv_origin**                 |                       |                       |                       |                       |
| Inv_major                      | 0.049 (0.049)         | 0.072 (0.052)         | 0.003 (0.098)         |                       |
| Inv_single                     | -0.083 (0.002)        | -0.038 (0.013)        | 0.037 (0.013)         |                       |
| **Age**                        |                       |                       |                       |                       |
| Inv_major                      | 0.025 (0.101)         | 0.036 (0.103)         | 0.038 (0.103)         | 0.037 (0.103)         |
| Inv_single                     | -0.003 (0.002)        | -0.003 (0.002)        | -0.003 (0.002)        | -0.003 (0.002)        |
| **FIFA**                       | 0.141*** (0.007)      | 0.140*** (0.008)      | 0.159*** (0.008)      | 0.140*** (0.008)      |
| **Position**                   |                       |                       |                       |                       |
| Inv_major                      | 0.014 (0.056)         | 0.008 (0.056)         | 0.012 (0.053)         | 0.012 (0.056)         |
| Inv_single                     | -0.263** (0.112)      | -0.269** (0.110)      | -0.267** (0.112)      | -0.267** (0.112)      |
| **Age**                        |                       |                       |                       |                       |
| Inv_major                      | -0.214*** (0.061)     | -0.215*** (0.060)     | -0.214*** (0.060)     |                       |
| Inv_single                     | -0.216*** (0.061)     | -0.217*** (0.060)     | -0.216*** (0.060)     |                       |
| **Contract**                   | 0.188*** (0.022)      | 0.186*** (0.023)      | 0.187*** (0.022)      | 0.187*** (0.022)      |
| **Rank**                       |                       |                       |                       |                       |
| Inv_major                      | -0.016*** (0.005)     | -0.017*** (0.005)     | -0.016*** (0.005)     | -0.015*** (0.005)     |
| Inv_single                     |                       |                       |                       |                       |
| **Season**                     |                       |                       |                       |                       |
| 2013-2014                      | 0.088 (0.084)         | 0.092 (0.084)         | 0.088 (0.084)         | 0.081 (0.086)         |
| 2014-2015                      | 0.372*** (0.090)      | 0.378*** (0.089)      | 0.375*** (0.089)      | 0.376*** (0.089)      |
| 2015-2016                      | 0.349*** (0.090)      | 0.339*** (0.090)      | 0.348*** (0.090)      | 0.345*** (0.090)      |
| 2016-2017                      | 0.345*** (0.093)      | 0.331*** (0.092)      | 0.340*** (0.092)      | 0.345*** (0.093)      |
| 2017-2018                      | 0.620*** (0.084)      | 0.630*** (0.085)      | 0.621*** (0.084)      | 0.627*** (0.083)      |
| 2018-2019                      | 0.596*** (0.093)      | 0.600*** (0.093)      | 0.593*** (0.093)      | 0.590*** (0.093)      |
| **Interaction**                |                       |                       |                       |                       |
| Inv_major * Foreign            |                       |                       |                       | 0.069 (0.132)         |
| Inv_single * Foreign           |                       |                       |                       | 0.113 (0.119)         |
| **Intercept**                  |                       |                       |                       |                       |
| 2013-2014                      | -8.033*** (1.150)     | -8.150*** (1.154)     | -8.140*** (1.163)     | -8.129*** (1.160)     |
| 2014-2015                      | 0.6801                | 0.6796                | 0.6809                | 0.6813                |
| Observations                   | 749                   | 749                   | 749                   | 749                   |

Notes: * p < 0.1, ** p < 0.05, *** p < 0.01; robust standard errors in parenthesis.
Looking at the results of the quantile regressions, we focus on Models 3 and 4 of the summer sample, as this is the transfer window with the strategic planning where most transfers happen. Hence, including the winter transfers might dilute the results. The results of Models 3 and 4 are presented in Table 6 and Table 7. Both models show some variance over the (conditional) transfer-fee distribution. While the statistically significant effects of the FIFA-Index and remaining contract duration are stable among the control variables for all model specifications, the main variables of interest (i.e., investor variables) show statistical significance for the upper quantiles.

Without considering the interaction term (Model 3), foreign investors pay a premium for players with higher (conditional) transfer fees as the effect turns insignificant with the 0.25 quantile. The effect size on transfer fees compared to domestic owners increases from the 0.1 to the 0.75 quantile and then decreases slightly in the 0.9 quantile. The effect ranges from 6.1% (0.1 quantile) to 20.4% (0.75 quantile). Single investors, in turn, seem to have a significantly negative effect on the transfer fee for the players with the highest (conditional) transfer fees that increases from the 0.25 quantile to the 0.9 quantile (-12.9% for the 0.9 quantile compared to dispersed ownership). The majority of investors indicate a positive effect across all quantiles except for the 0.9 quantile without showing any statistical significance.

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Table 5. Results for OLS models (summer sample)

|                       | Model 1          | Model 2          | Model 3          | Model 4          |
|-----------------------|------------------|------------------|------------------|------------------|
|                       | [Ref. dispersed] |                  |                  |                  |
| Inv_major             | 0.073 (0.068)    |                  | 0.0420 (0.069)   | -0.037 (0.090)   |
| Inv_single            | -0.020 (0.060)   |                  | -0.072 (0.065)   | -0.149* (0.091)  |
|                       |                  | [Ref. domestic]  |                  |                  |
| Inv_foreign           |                  | 0.104*** (0.053) | 0.126*** (0.058) | 0.001 (0.106)    |
| Age                   | 0.090 (0.107)    | 0.112 (0.109)    | 0.121 (0.109)    | 0.123 (0.110)    |
| Age^c                 | -0.004* (0.002)  | -0.004** (0.002) | -0.004** (0.002) | -0.004** (0.002) |
| FIFA                  | 0.151*** (0.008) | 0.149*** (0.009) | 0.148*** (0.009) | 0.148*** (0.009) |
|                       |                  | [Ref. Forward]   |                  |                  |
| Midfielder            | 0.031 (0.058)    | 0.021 (0.058)    | 0.025 (0.058)    | 0.022 (0.058)    |
| Goalkeeper            | -0.279** (0.121) | -0.288** (0.120) | -0.289** (0.122) | -0.296** (0.122) |
| Defender              | -0.209** (0.065) | -0.218** (0.065) | -0.219** (0.065) | -0.222** (0.065) |
|                       |                  | [Ref. 2012-2013] |                  |                  |
| 2013-2014             | 0.076 (0.083)    | 0.082 (0.083)    | 0.076 (0.083)    | 0.077 (0.084)    |
| 2014-2015             | 0.316*** (0.090) | 0.322*** (0.090) | 0.318*** (0.090) | 0.326*** (0.090) |
| 2015-2016             | 0.320** (0.096)  | 0.309** (0.096)  | 0.320** (0.095)  | 0.325** (0.096)  |
| 2016-2017             | 0.229** (0.100)  | 0.233** (0.100)  | 0.219** (0.100)  | 0.231** (0.099)  |
| 2017-2018             | 0.526*** (0.092) | 0.543*** (0.092) | 0.531*** (0.092) | 0.542*** (0.090) |
| 2018-2019             | 0.543*** (0.099) | 0.551*** (0.098) | 0.539*** (0.098) | 0.559*** (0.098) |
|                       | [Ref. Winter]    |                  |                  |                  |
| Major * Foreign       |                  |                  | 0.182 (0.138)    | 0.177 (0.129)    |
| Single * Foreign      |                  |                  | 0.172 (0.129)    | 0.172 (0.129)    |
|                       | [Ref. Winter]    |                  |                  |                  |
| Intercept             | -0.624*** (1.151) | -0.840*** (1.153) | -0.886*** (1.151) | -0.884*** (1.150) |
| Estimated R^2         | 0.7102           | 0.7109           | 0.7126           | 0.7136           |
| Observations          | 597              | 597              | 597              | 597              |

Notes: * p < 0.1,  ** p < 0.05, *** p < 0.01; robust standard errors in parenthesis.

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15 The results for the entire and winter sample as well as for Models 1 and 2 are available upon request.
16 Although the effect size slightly decreases from the 0.1 quantile to the 0.9 quantile.
The quantile regressions for Model 4 show changing signs for the effect of the investor origin along with the distribution while remaining insignificant. For the 0.9 quantile, both majority (-22.8%) and single investors (-20.2%) have a significantly negative effect. The interaction effect of foreign majority investors and foreign single investors on the other hand consistently shows a positive effect on transfer fees that is statistically significant for the 0.9 and 0.75 quantiles in case of foreign majority owners.

**Table 6. Results for quantile regression: Model 3 (summer sample)**

| Quantile | 0.1     | 0.25    | 0.5     | 0.75    | 0.9     |
|----------|---------|---------|---------|---------|---------|
| Inv_cluster | [Ref. dispersed] |         |         |         |         |
| Inv_major | 0.026 (0.162) | 0.074 (0.110) | 0.040 (0.076) | 0.045 (0.071) | -0.001 (0.104) |
| Inv_single | 0.055 (0.138) | -0.051 (0.103) | -0.108 (0.074) | -0.131* (0.070) | -0.138* (0.084) |
| Inv_origin | [Ref. domestic] |         |         |         |         |
| Inv_foreign | 0.039 (0.124) | 0.121 (0.085) | 0.163** (0.066) | 0.186*** (0.056) | 0.133* (0.079) |
| Age | 0.037 (0.234) | 0.071 (0.179) | 0.248 (0.151) | 0.139 (0.129) | 0.108 (0.125) |
| Age² | -0.009* (0.005) | -0.003 (0.004) | -0.007** (0.003) | -0.005** (0.003) | -0.004 (0.002) |
| FIFA | 0.181*** (0.018) | 0.164*** (0.014) | 0.139*** (0.008) | 0.125*** (0.008) | 0.107*** (0.009) |
| Position | [Ref. Forward] |         |         |         |         |
| Midfielder | 0.140 (0.125) | 0.075 (0.089) | -0.078 (0.062) | -0.044 (0.071) | 0.040 (0.077) |
| Goalkeeper | -0.576** (0.253) | -0.271 (0.197) | -0.388** (0.142) | -0.184 (0.137) | -0.234 (0.146) |
| Defender | -0.177 (0.162) | -0.167 (0.103) | -0.277*** (0.062) | -0.216** (0.069) | -0.221** (0.086) |
| Contract | 0.299*** (0.056) | 0.200*** (0.038) | 0.170*** (0.027) | 0.151*** (0.027) | 0.127*** (0.027) |
| Rank | 0.0002 (0.011) | -0.014* (0.007) | -0.020*** (0.005) | -0.016*** (0.005) | -0.019*** (0.006) |
| Season | [Ref. 2012–2013] |         |         |         |         |
| 2013–2014 | 0.216 (0.168) | 0.182 (0.125) | 0.166 (0.112) | 0.026 (0.091) | 0.003 (0.098) |
| 2014–2015 | 0.276 (0.203) | 0.418*** (0.142) | 0.325*** (0.121) | 0.387*** (0.116) | 0.482*** (0.117) |
| 2015–2016 | 0.344* (0.188) | 0.407*** (0.140) | 0.415*** (0.108) | 0.441*** (0.110) | 0.450*** (0.108) |
| 2016–2017 | 0.142 (0.242) | 0.292** (0.124) | 0.306*** (0.112) | 0.301** (0.130) | 0.408*** (0.108) |
| 2017–2018 | 0.571*** (0.187) | 0.573*** (0.148) | 0.575*** (0.110) | 0.576*** (0.115) | 0.653*** (0.109) |
| 2018–2019 | 0.386** (0.191) | 0.567*** (0.179) | 0.685*** (0.124) | 0.618** (0.100) | 0.670*** (0.107) |
| Intercept | -15.977*** (2.942) | -10.989*** (1.933) | -10.657*** (1.613) | -8.109*** (1.686) | -5.849*** (1.527) |
| Pseudo R² | 0.4767 | 0.4828 | 0.5031 | 0.5116 | 0.5313 |
| Observations | 597 | 597 | 597 | 597 | 597 |

Notes: * p < 0.1, ** p < 0.05, *** p < 0.01; including bootstrapped standard errors with 1000 replications.
Overall, with regard to our hypotheses, the results show no consistent picture regarding a significant effect of ownership concentration and investor origin. In particular, we find no evidence supporting H1. In contrast to what we expected, the results of most model specifications indicate that rather than having a positive effect on transfer fees, especially single ownership seems to have a negative effect on individual transfer fees. With regard to H2, we find fairly consistent results for a higher willingness to pay by foreign investors especially for players with transfer fees in the upper quantiles in our sample. This tendency is especially observable for foreign majority investors as indicated by the significant, positive effect of the interaction term (H3).

4. DISCUSSION

Although no consistent picture emerges, the results of our study lend some support to the hypothesis that especially foreign investors that hold a majority share are willing to pay a premium compared to domestic investors for players with comparable player characteristics and performance. This effect is especially observable for the upper end of the (conditional) transfer-fee distribution. Thereby, for this subset of foreign investors, we (cautiously) confirm the findings concerning the effect of foreign ownership in other industries that also identify higher investments under foreign ownership.

Similarly, the positive effect of foreign majority investors on aggregated wages and net team investments (Rohde & Breuer, 2016a, 2016b) seems to be partly observable also for individual transfer fees while accounting for player characteristics. As
we control for player characteristics such as the performance, the question arises if foreign majority investors experience a winner's curse (Capen, Clapp, & Campbell, 1971) when they pay a premium compared to their domestic counterparts. However, even if this is the case, these investors seem to be willing to do so in order to achieve their objectives associated with club ownership. On the other hand, the results do not confirm the findings from previous studies in sports economics, that higher ownership concentration has a positive effect on transfer fees (Rohde & Breuer, 2016a, 2016b).

This investment behavior of foreign (majority) owners touches on two main fears in European football. The first one addresses the financial competitiveness within and among the European football leagues, while the other concern is rather of an emotional nature associated with a club's identity.

The first aspect refers to the assumption that the investor's wealth is crucial for his or her investment behavior (Rohde & Breuer, 2016b). In this context, it is important to note that with an increasing number of foreign investors, the variety found in the owners' backgrounds has also increased. Nowadays, there are not just wealthy private investors or corporations that own football clubs, but also investors that have the financial support of entire states, which results in very different spending powers for the clubs (England & Ahmed, 2019).

Attempting to control the high spending of football clubs, the governing bodies have adjusted their regulatory framework. To combat overspending and ensure competitive balance, UEFA tried to put limits on the clubs' spending by introducing the “Financial Fair Play” regulations (Franck, 2014). Despite these regulations, transfer fees and wages (on the individual and aggregated level) still reached new dimensions almost every year — figures that are partly driven by foreign investors as shown in this study.

Based on this investment behavior, ethical discussions about the background and motivations of club owners have increased. As a reaction, the national leagues have introduced different complementing mechanisms such as owner tests and restrictions on multiple club ownership (UEFA, 2020, p. 55) to exclude investors with questionable objectives.

From an emotional side, football fans regularly express the fear that (foreign) investors might have negative effects on the club's identity and traditions when the club is forced to follow the investor's financial or reputational objectives. The discussion leads to growing hatred, especially in the ultra-fan camp, which sometimes even manifests itself in death threats — for example, against the Glazer family and their affiliates (Ducker, 2014; Wilson, 2020). The main criticism focuses on the perceived objective of revenue maximization, as some fan groups argue that certain sponsorship deals and other commercial activities of the clubs are against the clubs' traditions (e.g., “Red Bull” in Leipzig).

In the past, this has already led to fan groups quitting their support for the club and founding their own club in a lower division (Millward, 2011). Therefore, one of the key concerns, especially for foreign club owners, should be to avoid tensions with a larger fan base as this might have negative consequences on their objectives (both financial and reputational). At this point, future research regarding the interface between the communication and marketing departments could give new strategic insights on how to solve the problem, especially in countries with strong fan bases.

While focusing on the English Premier League in this paper, the topic is equally important for other European leagues. Moreover, the English Premier League can be seen as a pilot project for foreign investors because English clubs were the first investment objects for those investors. On one hand, therefore, potential investors can learn from the activities of prior investors; and on the other hand, clubs can also gain important insights for their strategic decisions concerning opening their clubs for foreign investors. Among the five major leagues, investors have entered all leagues at this point, although to different extents. Particularly in Germany, the country with the lowest number of investors, the entry of these foreign club owners has significantly increased. As a result, fan groups argue that certain sponsorship deals and other commercial activities of the clubs are against the objective of revenue maximization, as some fan groups argue that certain sponsorship deals and other commercial activities of the clubs are against the clubs' traditions (e.g., “Red Bull” in Leipzig).

Therefore, one of the key concerns, especially for foreign club owners, should be to avoid tensions with a larger fan base as this might have negative consequences on their objectives (both financial and reputational). At this point, future research regarding the interface between the communication and marketing departments could give new strategic insights on how to solve the problem, especially in countries with strong fan bases.

In conclusion, the financial concerns of many German football clubs due to the COVID-19 pandemic may potentially fuel the discussion again, as investors might be beneficial for German clubs to consolidate their finances in case of abolition of the “50+1” rule (on the economic impact of COVID-19 in European football, see Drewes, Daumann, and Follert, 2021).

5. CONCLUSION

Part of the limitations of this study concerns the availability of data. Among the dimensions determining transfer fees, data popularity and effort were not available for all periods in scope. While the wealth of the investors would be an additional interesting variable to consider, information about the wealth is similarly not available over time. Although the information about the remaining contract duration used in this study is reliable, we could not account for special contract clauses, such as fixed transfer fees or exit clauses in cases of relegation. Furthermore, bonus payments based on the future performance of a player that can increase transfer fees could not be incorporated due to a lack of data.

When interpreting the results, it is important to note that this study focuses particularly on individual transfer fees and not on the total investments of a financial investor. While Rohde and Breuer (2016b) have already analyzed the impact on aggregated team wages, the impact of investors on other club-related investments (e.g., investments in infrastructure) should be subject to future research. Future research should also validate the results by analyzing other leagues — such as the Ligue 1 and Serie A — including an analysis of whether (foreign) investors also have an effect on the income from transfer activities (i.e., player departures). Lastly, the interaction between player agents and club owners is of further interest, as agents have become key figures operating in the transfer market (Bergin & Bryan-Low, 2019). Evaluating these topics will provide further empirical evidence on the effect of investors on team investments in football. Related to the COVID-19 pandemic, it will be interesting to observe how potential revenue decreases will affect the transfer fees and the financial support by investors.
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