ERASMUS UNIVERSITY ROTTERDAM
ERASMUS SCHOOL OF ECONOMICS
Bachelor Thesis Economics & Business

Football Club's Ownership Structure and Financial Performance: An In-depth Analysis across the Top Five European Leagues

Author: Alec Koken
Student number: 545280
Thesis supervisor: dr. Ruben de Bliek
Second reader: dr. M.G. Gabarro Bonet
Finish date: 6 July 2023

ABSTRACT

This thesis investigates the relationship between ownership structure and financial performance in the football industry. It investigates whether clubs with higher ownership concentration achieved better financial performance and whether different leagues experienced significantly different financial performances. The differences in financial performance between various ownership types (privately, publicly, and fan-owned) are also studied. An OLS regressions and an ANOVA analysis are performed to answer the hypotheses and hereby a sample of 91 clubs from the top 5 European leagues between 2016 and 2021 is used. The results show that for the year 2021, the relationship between ownership concentration and financial performance is inverted U-shaped. However, this relationship is not found for the years between 2016-2020. The findings also show that higher ownership concentration did not result in significantly better financial performance during COVID-19 and that publicly and fan-based clubs experienced better financial performance compared to privately owned clubs. There are also significantly different financial performances across several leagues due to league-specific factors. This knowledge of the relationship between ownership and financial performance allows football clubs and investors to determine the most suitable ownership structure or investment plan.

Keywords: Ownership Structure, Ownership concentration, Financial Performance, Football Clubs, European Leagues, COVID-19

JEL codes: G32

TABLE OF CONTENTS

CHAPTER 1 Introduction

With the buying of Manchester City in 2008 by Sheikh Mansour bin Zayed the club was able to invest more money in the infrastructure of the club, the players, and coaches. Their sporting achievements also increased by winning multiple premier leagues and FA cups (The Guardian, 2021). The revenues that followed also saw a sharp increase between 2007 and 2022 from 82.3 million to 619.1 million pounds respectively (Deloitte, 2009; Deloitte, 2023). This example shows that a change in ownership structure can influence the financial performance of a football club.

The paper by Acero, Serrano, and Dimitropoulos (2017) already looked into this connection between ownership structure and financial performance. They looked at the effect of different ownership concentrations on financial performance metrics like return on assets (ROA) and return on sales (ROS). The authors used a time period of five years and gathered data on 94 teams that participated in the major European competitions from annual reports and other public sources between 2007/2008 and 2012/2013. They used statistical methods such as an ANOVA analysis and a regression analysis with panel-corrected standard errors. A nonlinear inverted U-shaped link between ownership concentration and financial success was discovered. This means that as ownership concentration increases to a certain point, financial performance improves, but additional increases in concentration results in a decrease in financial performance. They also argued that teams with higher fan ownership possibly have better financial performance. They said that fan-owned clubs may be more financially responsible and less likely to overpay for players, resulting in better financial performance. The study also discovered that clubs with larger debt had worse financial results.

The COVID-19 pandemic and the introduction of financial fair play (FFP) have caused changes in the football industry in recent years. The paper by Hammerschmidt et al. (2021) underlines the importance of entrepreneurial flexibility in navigating through crisis and in adapting to a changing environment. According to Franck & Lang (2014), privately owned clubs would be better positioned to respond to the problems of the pandemic since they have fewer bureaucratic restraints and greater freedom to make strategic decisions. However, recently, privately owned clubs were also in the news for breaking Financial Fair Play (FFP) regulations resulting in large fines (CNN, 2014) and lower financial performance. Another development described by the World Economic Forum (2021) suggested that football clubs wanted to focus more on the development of youth players rather than spending much on transfers and wages. The paper by Szymanski et al. (1997) argued that this careful management of transfer fees and wages can improve a club's financial performance. Next to this, Wilson et al. (2013) described that high-ownership clubs face more financial problems due to excessive spending on transfers. Therefore, one can argue that when excessive spending decreases the financial performance

of high-ownership clubs could be improved. As seen above, various modifications have had an impact on the relationship between ownership structure and financial performance. Therefore, the main research question I will try to answer in this thesis is: How does the ownership structure influence the financial performance of football clubs between 2016-2021?

Financial performance will be measured by the return on assets (ROA) via financial reports from Orbis (2023). I will use the percentage of shares directly owned by the largest shareholder in each club to calculate ownership concentration. This will also be obtained from Orbis (2023). The type of ownership variable will be divided into three dummy variables (private, public, and fan-based). I will classify clubs into these three categories using information from club websites and news articles. I will use a sample of 91 teams from the major European competitions between 2016 and 2021 including the German Bundesliga (10), the French Ligue 1 (13), the Spanish Liga (17), the English Premier League (26), and the Italian Serie A (25). I will run an OLS regression with financial performance as the dependent variable and ownership concentration as the independent variable. This regression also includes ownership_concentration^2 to investigate the non-linear relationship between ownership concentration and financial performance. I will perform a second OLS regression analysis with again financial performance as the dependent variable but now with the type of ownership as an independent variable. Both regression analyses will also include control variables such as firm size, debt, and growth of sales to account for confounding factors. Finally, I will also perform an ANOVA analysis to capture the average financial performance per league and to determine the significant differences in financial performance across leagues.

In this thesis, I expect to come up with new insights into the influence of ownership concentration and ownership type on the financial performance of European football clubs. Privately-owned clubs could potentially have outperformed the other types of structure due to more freedom in decision-making. Furthermore, the inverted U-shaped link between ownership structure and financial performance could have been altered due to less excessive spending at high-ownership clubs and a higher need for monitoring. Finally, differences in financial performances across leagues may explain league-specific regulations and characteristics.

The remainder of this thesis is structured as follows. Section 2 provides relevant literature and talks about previous research on financial performances and ownership structures and it also provides 4 hypotheses. Section 3 discusses the data sources, variables, and the football clubs that are being studied. Section 4 talks about the statistical methods used to answer the hypotheses and about the assumptions that have to be checked. Section 5 explains the findings, answers the hypotheses, and compares them to previous literature. Finally, section 7 summarizes the main findings and offers ideas for future research, and discusses possible limitations.

CHAPTER 2 Theoretical Framework

To understand the relationship between financial performance and ownership structure it is valuable to first look at what these variables mean in general and how they are being studied in corporate finance. Therefore, this theoretical framework will give an overview of existing literature about financial performance, ownership structures, and the link between them. Hypotheses will also be presented that will be tested in later sections of this thesis.

2.1 Financial Performance and Ownership Structure

2.1.1 Financial Performance

"Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of a firm's overall financial health over a given period" (Investopedia, 2023). Financial performance can be influenced by the corporate governance of companies (Kyere & Ausloos, 2021). It is not the same as operational performance (Tsolas, I., 2015). Financial performance namely talks about the firm's profitability, while operational performance focuses on production efficiency, quality, and customer satisfaction (Noah, A., 2017). In recent years, research on financial performance has broadened to the influence of factors like corporate social responsibility (CSR) (Bedi, H., 2009).

In the football industry, financial performance is often measured by return on assets (ROA) or return on sales (ROS) (Acero et al., 2017). Furthermore, the financial performance of football clubs highly depends on the softness of their budget constraint. This namely influences the club's ability to invest in players and infrastructure and gain a competitive advantage (Storm & Nielsen, 2012). However, it can also lead to financial mismanagement, and excessive expenditures which results in financial instability (Dimitropoulos, 2010). The financial stability of clubs is therefore crucial for their success in the long term (Cruz et al., 2022).

2.1.2 Ownership Concentration

"Ownership concentration refers to the distribution of ownership of a company's shares among its shareholders. It is a measure of the degree to which ownership of a company is concentrated in the hands of a few large shareholders or is widely dispersed among many small shareholders" (Geektonight, 2023). Ownership concentration can be compared to voting rights concentration as shareholders with a particular ownership often hold the same amount of voting rights (Schiehll, E., 2006). However, they are not the same when there is a dual-class share structure where different share classes have different voting rights (Bøhren et al., 2000). Ownership concentration also plays an

important role in corporate decision-making. Gaur et al. (2015) for example argue that widely dispersed ownership leads to a separation of ownership and control, thereby increasing agency costs.

2.1.3 Type of Ownership

In corporate finance, a company's ownership structure refers to the business type and identity of each person with ownership, control, or financial interest in the dispensing organization (Law Insider, 2023). Different ownership structures can have different types of shareholders (e.g. individual, institutional, foreign, government, and family) (Pedersen & Thomsen, 2003). The ownership structure is somewhat the same as the ownership concentration in a company. However, ownership structure not only talks about the distribution of shares but also includes the identity of shareholders (Pedersen & Thomsen, 2003).

The ownership structure in football clubs influences their corporate governance and decision-making (Morrow, 2003). They are often divided into three categories: private (typically foreign), public, and fan-based owned clubs (Acero et al., 2017; Wilson et al., 2013). Private-owned clubs are controlled by a single person or a small group of individuals, who hold the majority of shares. This often leads to increased strategic flexibility, but also higher risk due to more riskier investment of individual owners (Franck & Lang, 2014). Publicly owned clubs are listed on stock exchanges which provides a high level of transparency but also exposes clubs to market pressures (Wilson et al., 2013) and stakeholder expectations (Perechuda & Čater, 2022). Lastly, in fan-owned clubs supporters often hold the majority of shares. These clubs prioritize community values and long-term stability, which can lead to overly bureaucratic decision-making (Ward, 2013).

2.2 Relationship Between Financial Performance and Ownership Structure

An important aspect described in the literature when examining the relationship between ownership structure and financial performance is the agency problem, which arises due to the conflict of interest between owners and managers or between small shareholders and large shareholders (Saidat, 2018). Two effects that are related to this agency problem are the monitoring and exploration effect. The monitoring effect is a corporate governance mechanism that decreases the agency problem. In this case, dominant shareholders can make quicker decisions because they have a larger stake and, therefore, more influence. This quicker decision-making process is beneficial to the operations and financial performance of a firm. However, the exploration effect can counterbalance the monitoring effect. It suggests that when the influence of a majority shareholder increases, they might prioritize their interests over those of minority shareholders. This increased concentration of power could lead to decision-making that benefits the majority shareholder rather than the club or its minority shareholders and result in lower financial performance.

Hu and Izumida (2008) already suggested a regular U-shaped effect of ownership concentration on financial performance in corporate firms. This is the case when the exploration effect is dominant in low concentrations, and the monitoring effect takes over at high levels of ownership concentration. However, in football organizations, the controlling shareholders do not necessarily consider the interests of minority shareholders (Hamil et al., 2010; Acero et Al., 2017). They utilize their position to pursue their interests, and possibly damage the club. Therefore, business decisions may prioritize maximizing the utility of the owner over the club's financial profit.

As a result, Acero et al. (2017) found that in the football industry, there is evidence of an inverted U-shaped effect. This is the case when the monitoring effect at lower concentrations of ownership allows efficient decision-making and has a positive effect on financial performance but later becomes damaging to the club's interests as the majority shareholder gains too much power. However, according to Acero et al. (2017), after the introduction of FFP, this monitoring effect disappeared and there was only an exploration effect present. Therefore to investigate this relationship again for the years 2016 until 2021, the following hypothesis is formulated:

H1: The relationship between ownership concentration and financial performance in football clubs between 2016 and 2021 is non-linear and inverted U-shaped.

In the football industry, there is a clear difference between private and public ownership structures. The paper by Wilson et al. (2013) states that privately owned clubs are more focused on winning and public ownership is more on profit maximization. However, the financial performance of publicly owned football clubs is influenced by stock market fluctuations, creating instability (Wilson et al., 2013). Recent trends have shown a shift towards private firms (Wilson et al., 2013), which offers benefits such as faster decision-making and protection from stock market volatility. However, this shift could also increase the agency problem, with dominant shareholders potentially acting in self-interest rather than the club's interest. Furthermore, CNN (2014) reported that privately owned clubs like Paris Saint-Germain (PSG) and Manchester City received large fines due to breaches of Financial Fair Play (FFP) rules, resulting in lower financial performance. On the other hand, fan-owned clubs may have experienced better financial performance as fans often contribute during crises such as COVID-19 by purchasing shares out of kindness and as a commitment to their favourite football club (De Ruyter & Wetzels, 2000). It is therefore interesting to investigate which type of ownership resulted in the best financial performance and thus, the following hypothesis is formulated:

H2: Privately owned football clubs exhibited better financial performance between 2016 and 2021, compared to publicly owned or fan-owned clubs.

2.3 Ownership Structure and Financial Performance across Different Leagues

The English Premier League (EPL) has a high level of foreign ownership where a single owner typically owned most of the shares. This high concentration of ownership can lead to increased financial investment (Richau et al., 2021). However, according to Rohde & Breuer (2018), foreign investors can also reduce financial and sporting efficiency in the Premier League. As a result, the high level of foreign ownership and concentration influences the finances, competitive balance, and the general dynamics of the league (Jones & Cook, 2015). Furthermore, the decisions of these foreign owners can have a significant impact on the culture within the club and the connection with local fans, sometimes resulting in clashes (The Guardian, 2022). The participation of fans in the ownership of clubs is popular in Spanish La Liga. The two most successful clubs (Barcelona and Real Madrid) have operated under a fan ownership model, which promotes a more democratic and less concentrated ownership structure (Sánchez et al., 2021). However, for most Spanish clubs, increases in outside capital without fan investments resulted in a majority shareholder taking control over time (Sánchez et al., 2021). These clubs lacked stock-exchange protections leading to mismanagement by major shareholders. Some shareholders even used club resources to buy the club's shares, as seen with Atletico de Madrid and Betis (Sánchez et al., 2021). The German Bundesliga has a "50+1 rule", which states that a football club must hold a majority of its voting rights if it wants to compete in this competition. This governance model limits the ability of German clubs to secure funds from wealthy individuals with various motives, such as seeking political and social acceptance or laundering money. However, this model prevents income optimization from ticket sales and TV rights (Franck, E., 2010). Consequently, German clubs are less competitive in Europe (Franck, E., 2010). With growing awareness of this financial handicap, German clubs want to get rid of the "50%+1 vote" rule, hoping to attract more private ownership, and thereby new funding sources (Franck, E., 2010). In Italian football clubs, ownership is characterized by family control, either directly through individuals or families or indirectly via corporate groups. This structure narrows the gap between ownership and control. Consequently, this could lead to diminished external fiscal scrutiny over the operations of these organizations (Baroncelli & Lago, 2006). This has the potential to influence the financial performance and behavior of the clubs in a negative way (Hamil et al., 2010). In the French football league, there is significant control by the Direction Nationale du Contrôle de Gestion (DNCG). This organization creates balance and allows fans and unions to manage the league (Drut et al., 2012). However, the French model is not admired due to the weak performances of French clubs in European competitions (Andreff, 2018). However, French stakeholders often defend this less competitive success as its financial health is still comparable to the other European leagues (Andreff, 2014)

As seen above, ownership structures vary across different leagues due to factors such as league regulations, competitive balance, and investor protection. However, it is interesting to see which league had the best financial performance. Therefore, I formulated the following hypotheses:

H3: The financial performance of clubs across the top 5 European leagues is significantly different between 2016 and 2021 due to league-specific factors.

2.4 The Impact of COVID-19 on Ownership Structures and Financial Performance

In general, professional football clubs spend as much as they can because they value victory more than financial performance. They attempt to balance their budget and make a tiny profit (Storm & Nielsen, 2012). As a result, they are sensitive to financial crises and there is a significant requirement for any football organization to maintain constant monitoring (Hammerschmidt et al., 2021), as well as crisis preparation (Manoli, 2016). Moreover, during COVID-19, clubs wanted to invest more in the development of youth players (World Economic Forum, 2021) rather than excessive spending on established players. As a result, the transfer fees paid by European football clubs decreased substantially (Maguire, 2021). This careful financial management can increase a club's overall financial performance (Szymanski et al., 1997). Therefore, as high ownership clubs often had more excessive spending (Wilson et al., 2013) they may have experienced better financial performance. As a result of this, the following hypothesis is formulated:

H4: Due to the influence of the COVID-19 pandemic and other recent market changes, higher levels of ownership concentration resulted in relatively better financial performance.

CHAPTER 3 Data

The study uses a dataset of 91 football clubs that participated in the top 5 European competitions between 2016 and 2021. The sample includes clubs from the German Bundesliga (10), the French Ligue 1 (13), the Spanish Liga (17), the English Premier League (26), and the Italian Serie A (25). The Orbis database (2023) is used for financial statements and ownership information on all football clubs in the sample. For some observations, club websites and news articles were used for certain missing values. However, it was not possible to find them all.

The general relationship that is being investigated in this study is the link between the dependent variable financial performance and the independent variable ownership concentration and ownership type. These variables are measured as follows:

Financial Performance: The measure of this dependent variable is the Return on Assets (ROA). This indicates the profitability relative to the total assets of a club. ROA is used because it was also used in previous studies such as Acero et al. (2017)

Ownership Concentration: The measure of this independent variable is the percentage of control through direct ownership by the largest shareholder and this is used to investigate the relationship between ownership concentration and financial performance. Ownership concentration^2 is also included in the model to investigate the nonlinear link between ownership concentration and performance (possible monitoring and expropriation effect).

Ownership Type: Dummy variables are created to represent the three types of team ownership: privately owned, publicly owned, and fan-based ownership. Each team is classified as having one of these types of ownership. In the regression models, privately owned teams are used as the benchmark category. This means that the coefficients for the publicly owned and fan-based ownership dummy variables must be interpreted as the difference in financial performance between teams with that type of ownership and privately owned teams.

According to current literature (Acero et al., 2017), a few control variables are frequently used when studying the relationship between financial performance and ownership structure. I will also use these control variables in my analyses:

League: This variable captures the effect of each football league on financial performance. The five major European football leagues will be represented by a single dummy variable.

Debt: The ratio of long-term debt to total assets is used to measure this control variable. High debt, can hurt a firm's long-term financial performance (Singh and Faircloth, 2005; Acero et al., 2017). However, it may also function as a corporate control mechanism resulting in higher financial performance (Fraile & Fradejas, 2014; Acero et al., 2017).

Firm Size: This control variable is measured by the natural logarithm of the total assets of a football club. Firm size is positively related to firm performance because it leads to economies of scale in operations, and greater control over external stakeholders and resources, and with football clubs, clubs can get better players, which can increase their financial performance (Dimitropoulos and Tsagkanos, 2012; Acero et al., 2017).

Growth of Sales: This control variable is measured as a percentage of the annual growth of operating revenue, indicating the financial growth of matchday, broadcasting, and commercial revenue within a club.

Table 1: Descriptive statistics

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
Financial performance	503	-5.643	18.383	-91.027	47.127
Ownership type	546	0.363	0.688	0	2
Ownership concentration	495	79.645	28.232	0.18	100
Debt	513	2.924	7.568	0.074	145.877
Firm size	513	285800.2	372443.9	1228.349	2416249
Growth of sales	498	25.605	83.189	-80.654	559.177

When looking at Table 1, a mean value of ROA of -5.643 can be seen which shows that, on average, clubs are experiencing negative financial performance. The standard deviation is large at 18.383, suggesting considerable differences in financial performance across different clubs. The range from -91.027 to 47.127 is quite big, indicating again the presence of poorly performing and well-performing clubs. For example, clubs like Atalanta and Eibar have a ROA above 10 for most years while football clubs like Aston Villa and AS Roma have a ROA below -50 most of the time. The mean value of ownership type is 0.363 and this suggests that most clubs in the dataset are privately owned (0), as the mean is closer to 0 than to 1 or 2. With an ownership concentration mean of 79.645, there is quite a high concentration of ownership on average. This indicates that a small number of shareholders own a significant portion of football clubs. The standard deviation is large (28.232), meaning there is a widespread ownership concentration across clubs. Some clubs like Real Sociedad have an almost equal distribution of ownership (0.18%), while in most other clubs one shareholder could potentially own everything (100%). A debt ratio of 2.924 suggests that the average debt-to-assets ratio is not particularly high, however, the standard deviation of 7.568 is large, which indicates that there are clubs

with significantly different debt levels. The maximum value of 145.877 shows that some clubs like Benevento (Italy) have extremely high debt compared to their assets. Because a firm's size is measured by the fixed assets in US dollars, the mean size is quite large at 285800.2. The standard deviation is also large (372443.9), meaning there is a significant variation in firm sizes. The smallest club has fixed assets worth around 1228.349 dollars (Benevento) while the largest has around 2416249 (Tottenham Hotspur). The average growth of sales is 25.605%, indicating that, on average, clubs have experienced positive sales growth. However, the high standard deviation (83.189) suggests high variability in sales growth rates. Some clubs even had negative growth, as indicated by the minimum value of -80.654%, while the maximum growth was 559.177%. Overall, the data suggest a wide diversity among the football clubs in terms of their financial performance, ownership structure, debt ratio, firm size, and sales growth.

Furthermore, to ensure the validity of the statistical models a few assumptions need to be checked. The results in Table 2 show that none of the variables have a correlation coefficient close to 1 or -1, which would indicate multicollinearity. As a result, the assumption of no multicollinearity between the variables used in the regression models is satisfied.

Table 2: Correlation matrix

Variables	Financial performance	Ownership Type	Ownership concentration	Debt	Firm size	Growth of sales
Financial performance	1.0000					
Ownership type	0.0703	1.0000				
Ownership concentration	-0.1639***	0.3327***	1.0000			
Debt	-0.1824***	-0.0685	0.0366	1.0000		
Firm size	0.0452	0.1845***	-0.0429	0.2334***	1.0000	
Growth of sales	0.1797***	-0.0497	0.0150	0.0594	0.0942***	1.0000

Notes: ***: Statistical significance at the 1% level; **: Statistical significance at the 5% level; *: Statistical significance at the 10% level.

CHAPTER 4 Methodology

To test whether the relationship between ownership concentration and financial performance in football clubs between 2016 and 2021 is non-linear and inverted U-shaped (H1) and whether higher levels of ownership concentration resulted in relatively better financial performance (H4), 2 different quadratic regression models for all years between 2016 and 2021 will be performed. First I will only include the independent variable ownership concentration and ownership concentration^2 and after this, I will include control variables to prevent omitted variables bias and increase the validity of the model.

To answer the first hypothesis, I am going to examine the coefficients from regression models 1 and 2. I will look at β1 (ownership concentration) and β2 (ownership concentration^2). An inverted U-shape link would have a positive β1 and a negative β2, indicating that financial performance initially increases with ownership concentration, but then decreases after a certain point. For hypothesis 4, I will look at the β1 coefficient for ownership concentration across years in models 1 and 2. If β1 becomes larger and more positive in later years, it would support hypothesis 4.

Model 1 and 2:

1. $Financial\ performance = \beta 1\ ownership\ concentration + \beta 2 ownership\ concentration^2 + \varepsilon$

2. $Financial\ performance = \beta 1 ownership\ concentration + \beta 2 ownership\ concentration^2 + \beta 3 Debt + \beta 4 firm\ Size + \beta 5 Growth + \varepsilon$

To test whether privately owned football clubs exhibited better financial performance, compared to publicly owned or fan-owned clubs between 2016 and 2021 (H2), 2 different regression models using ownership type (a dummy variable, with privately owned clubs as the benchmark variable) as the independent variable will be performed. First I will only include ownership type. Finally to increase the validity of the model and to prevent omitted variable bias, control variables will be added. To test whether the financial performance of clubs across the top 5 European leagues is significantly different between 2016 and 2021 (H3), an ANOVA analysis will be performed followed by a post hoc analysis.

To answer hypothesis 2, I need to use the results from models 3 and 4. Here, the β1 coefficient represents the effect of being publicly owned on financial performance and β2 represents the effect of being fan-owned on financial performance, both compared to being privately owned (the benchmark

category). If β1 and β2 are negative and statistically significant, it will support the hypothesis that privately owned clubs had better financial performance compared to clubs that were publicly or fan owned. For hypothesis 3, I am going to look at the significance of the ANOVA analysis and the results of the post hoc analysis. If these are significant there is proof of a different financial performance across leagues.

Model 3 and 4:

3. $Financial\ performance = \beta 1 Publicitly\ owned + \beta 2 FanBased\ owned + \varepsilon$

4. $Financial\ performance = \beta 1 Publicitly\ owned + \beta 2 FanBased\ owned + \ \beta 3 Debt + \beta 4 firm\ Size + \beta 5 Growth + \varepsilon$

To further check the assumptions of an OLS regression model I conducted the White test to check for heteroskedasticity in all regression models across the years 2016 to 2021. The results of the White test revealed p-values below 0.05 for most of my regression models, indicating a strong presence of heteroskedasticity. Given these results, to address the heteroskedasticity problem, I chose to use robust standard errors in all regression models. I also introduced a quadratic term, ownership concentration^2, into regression models 1 and 2 to capture the non-linear effects between ownership concentration and financial performance. As a result, even though the relationship between ownership concentration and financial performance may be non-linear, my model will in this way satisfy the linearity assumption.

CHAPTER 5 Results & Discussion

Table 3: Regression analysis of model 1 with financial performance as the dependent variable, carried out for each year from 2016 to 2021. The two independent variables are ownership concentration and ownership concentration^2, which examines the potential non-linear relationship between ownership concentration and financial performance.

Variables	2016	2017	2018	2019	2020	2021
Ownership	0.064	-0.498	-0.126	0.030	0.195	0.383
concentration	(0.221)	(0.326)	(0.260)	(0.190)	(0.187)	(0.270)
Ownership	-0.002	0.003	-0.000	-0.001	-0.003	-0.004
concentration^2	(0.002)	(0.003)	(0.002)	(0.002)	(0 002)	(0.002)
Constant	4.963	15.348*	10.016	0.717	-3.157	-19.874***
	(3.663)	7.838	(10.549)	(3.771)	(3.457)	(7.077)
R^2	0.114	0.026	0.052	0.038	0.072	0.031
Observations	64	61	79	82	84	88

Notes: ***: Statistical significance at the 1% level; **: Statistical significance at the 5% level; *: Statistical significance at the 10% level.

None of the coefficients in Table 3 for ownership concentration are statistically significant for any year. At the same time, there is also no significance for ownership concentration^2 in any of the years. This shows that there is not enough evidence for a quadratic relationship (U-shaped or inverted U-shaped) between ownership concentration and financial performance in this regression. Given the lack of significant results and low explanatory power (low R^2) of the model in Table 3, I will make a model with additional control variables in Table 4. Control variables can namely account for other potential influences on financial performance, thereby improving the robustness and explanatory power of the model.

Table 4: Regression analysis of model 2 with financial performance as the dependent variable. The two independent variables included in the model are ownership concentration and ownership concentration^2, which examines the non-linear relationship between ownership concentration and financial performance. It also shows the regression results when additional control variables (Debt, Firm Size, and Growth of Sales) are included in the model. The analysis is performed for each year from 2016 to 2021.

Variables	2016	2017	2018	2019	2020	2021
Ownership	0.162	-0.358	0.040	0.150	0.031	0.507*
concentration	(0.185)	(0.328)	(0.200)	(0.210)	(0.200)	(0.265)
Ownership	-0.003	0.003	-0.002	-0.002	-0.001	-0.005**
concentration^2	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
Debt	-1.209**	-2.302**	-3.402***	-3.264*	3.417***	-8.345***
	(0.515)	(0.901)	(0.982)	(1.794)	(1.255)	(1.983)
Firm Size	-2.008	-0.073	-4.178*	-1.144	2.337	-5.872*
	(1.914)	(2.285)	(2.433)	(2.782)	(2.254)	(3.345)
Growth of sales	0.055	0.072***	-0.027	0.031*	0.077***	-0.004
	(0.040)	(0.026)	(0.041)	(0.017)	(0.022)	(0.033)
Constant	28.202	12.644	69.865**	18.650	-33.933	60.131
	(22.956)	(29.976)	(30.612)	(36.140)	(30.687)	(44.160)
R^2	0.254	0.406	0.380	0.2465	0.251	0.257
Observations	63	58	76	78	80	87

Notes: ***: Statistical significance at the 1% level; **: Statistical significance at the 5% level; *: Statistical significance at the 10% level.

The coefficients for ownership concentration in Table 6 are still insignificant for most years, except for 2021 at the 10% level. This means that a unit increase in ownership concentration leads to an average increase of 0.507 in financial performance in 2021. Ownership concentration^2 is also significant in 2021 at the 5% level. This shows that there is a non-linear link between ownership concentration and financial performance in 2021. The debt coefficients are negative in multiple years, suggesting that higher debt is associated with lower financial performance. Firm size is significant in 2018 and 2021, both with negative coefficients. Thus, bigger clubs tended to have lower financial performance in these years. The growth of sales is significant in 2017, 2019, and 2020. The positive coefficients state that higher sales growth is associated with higher financial performance in these years, while the lack of significance in the other years shows no clear relationship.

In conclusion, hypothesis 1, which stated that the relationship between ownership concentration and financial performance in football clubs between 2016 and 2021 is non-linear and inverted U-shaped, is

only partially supported in 2021. Only in 2021 a significant positive β1 (0.507) and significant negative β2 (-0.005) is seen, indicating an inverted U-shaped relationship between ownership concentration and financial performance as shown in Figure 1. In other years, this is not seen.

Figure 1: Scatterplot of the inverted U-shaped Relationship between ownership concentration and Financial performance in 2021.

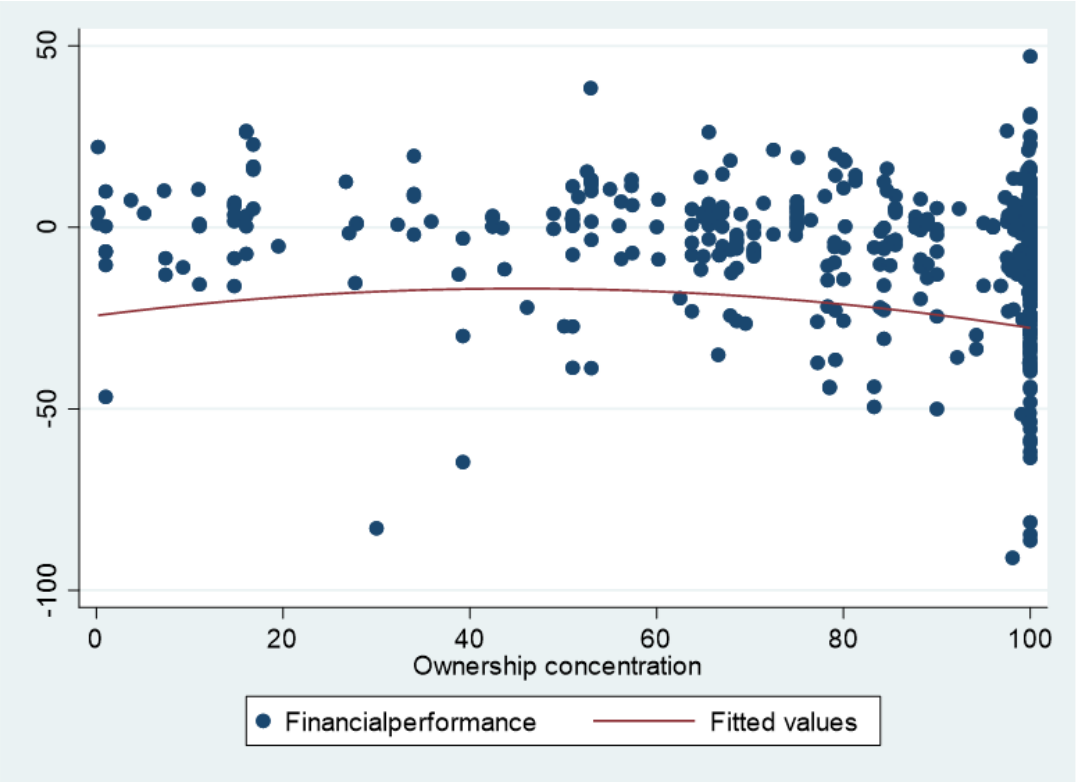

Figure 1 suggests that in 2021, there was an optimal point of ownership concentration that gave the best financial performance, and deviations from this concentration negatively impacted financial performance (exploration effect). This relationship, however, was not consistently observed over the years from 2016 to 2021, differing from Acero et al.'s (2017) findings that the monitoring effect significantly disappeared after the introduction of FFP and only an exploration effect was present. The significant change observed in 2021 however suggests that events such as the pandemic, caused the impact on financial performance to diverge from this pattern of only an exploration effect. This aligns with Manoli (2016) who noted the sensitivity of football clubs to financial crises and Hammerschmidt et al. (2021) who noted the importance of constant monitoring during crisis times and its positive effect on financial performance.

Furthermore, hypothesis 4, which stated that higher levels of ownership concentration resulted in relatively better financial performance, cannot be confirmed. From the data, it can be seen that the β1 coefficient for ownership concentration does indeed increase from 2016 (-0.162) to 2021 (0.507), with

a significant coefficient in 2021. However, for the years 2016 to 2020, while there's an increasing trend, the lack of significance shows that the relationship between ownership concentration and financial performance remains uncertain.

These insignificant results may be caused by other factors that influenced financial performance during COVID-19 such as revenue losses due to game cancellations, limited audience attendance, and reduced media rights sales (Bond et al., 2022). This may have outweighed any positive effect of an increase in ownership concentration (monitoring effect) on financial performance. Furthermore, the focus on youth player development (World Economic Forum, 2021) and decreased transfer fees (Maguire, 2021) could also have contributed to the financial performance in the long term instead of the short run resulting in no effect between 2016 and 2021 yet.

Table 5: Regression analysis of model 3 with financial performance as the dependent variable and publicly owned and fan-owned clubs as independent variables (against the privately owned benchmark variable).

Variables	2016	2017	2018	2019	2020	2021
Publicly owned	5.317*	-2.469	8.131*	8.236***	0.833	1.988
	(2.749)	(3.186)	(3.374)	(2.693)	(4.716)	(4.985)
Fan owned	15.171**	-1.377	6.913	11.360***	-6.115	4.529
	(7.232)	(6.268)	(4.280)	(4.116)	(4.547)	(5.453)
Constant	-5.162**	1.194	-3.237	-7.919***	-5.928	-16.940***
	(2.041)	(2.230)	(2.470)	(2.470)	(2.159)	(2.759)
R^2	0.061	0.003	0.031	0.055	0.016	0.006
Observations	76	81	83	87	87	89

Notes: ***: Statistical significance at the 1% level; **: Statistical significance at the 5% level; *: Statistical significance at the 10% level.

In Table 5, the publicly owned coefficient is significant in 2016 and 2018 at the 10% level and significant in 2019 at the 1% level. The positive coefficients in these years suggest that publicly owned firms have higher financial performance compared to the benchmark category, which is privately owned football clubs. However, this relationship is not found in the years 2017, 2020, and 2021 because the coefficients were insignificant for these years. With a positive coefficient, the variable fan-owned is significant in 2016 at the 5% level and in 2019 at the 1% level. This indicates that fan-owned clubs, on average, had higher financial performance compared to privately owned clubs in these years. This relationship is not observed in the other years as the coefficients are not significant. In conclusion, hypothesis 2, should be rejected based on the results above. However, given the low explanatory power (low R^2) of the current model, I will again make another model with

additional control variables to account for other potential influences on financial performance, thereby improving the robustness and explanatory power of the model.

Table 6: Illustrates the results from regression model 4 carried out for each year from 2016 to 2021. The independent variable here is ownership type (publicly owned, fan-owned). Control variables are the club's debt ratio, firm size, and growth of sales.

Variables	2016	2017	2018	2019	2020	2021
Publicly owned	7.467**	-3.627	11.994***	9.798**	2.747	-0.511
	(2.921)	(2.793)	(4.296)	(3.927)	(4.399)	(5.341)
Fan owned	14.973**	-3.054	5.037	14.570***	-4.439	2.982
	(6.449)	(7.201)	(4.721)	(3.548)	(5.015)	(5.953)
Debt	-0.851**	-0.922	-3.422***	-3.093**	3.040**	-8.704***
	(0.399)	(0.747)	(0.777)	(1.445)	(1.405)	(2.046)
Firm size	-2.745	1.114	-6.349***	-2.730	1.202	-6.704*
	(2.065)	(2.267)	(2.234)	(2.647)	(2.508)	(3.451)
Growth of sales	0.057**	0.063***	-0.034	0.034*	0.073***	-0.007
	(0.027)	(0.022)	(0.043)	(0.018)	(0.020)	(0.036)
Constant	28.147	-10.912	81.193***	30.209	-26.294	79.164*
	(25.513)	(28.767)	(28.357)	(34.617)	(32.865)	(45.530)
R^2	0.197	0.243	0.299	0.222	0.200	0.231
Observations	75	78	80	83	83	88

Notes: ***: Statistical significance at the 1% level; **: Statistical significance at the 5% level; *: Statistical significance at the 10% level.

When looking at Table 6, publicly owned clubs again demonstrated better financial performance in 2016 (5% level), 2018 (1% level), and 2019 (5% level). Fan-owned clubs also again showed better performance compared to privately owned clubs in 2016 at the 5% level and in 2019 at the 1% level. The debt ratio again significantly influenced financial performance negatively in most years. Firm size had a significant negative impact in 2018 and 2021. Growth of sales had a positive impact on financial performance in 2016, 2017, and 2020, but not in other years. In conclusion, hypothesis 2, that privately owned football clubs had better financial performance compared to publicly owned and fan-based owned clubs, is again rejected.

This agrees with the theory that public ownership structures would prioritize profit maximization and privately owned clubs would only focus on maximizing the amounts of wins, possibly neglecting their financial performance (Wilson et al., 2013). It suggests that public ownership structures might be better at balancing the needs for financial stability and competitive success. The results are also in line

with the information stated by CNN (2014) that privately owned clubs like PSG and Manchester City, got large fines after breaching the financial fair play regulations. These fines impacted these clubs resulting in relatively lower financial performance. The findings are also in line with De Ruyter & Wetzels (2000) who said that fan contributions during crises, such as the COVID-19 pandemic, might increase a club's financial performance.

For all models, I made robust regressions as an extra robustness check. The difference between an OLS regression and a robust regression is how they deal with outliers. In an OLS regression, the sum of squared residuals are being minimized and all residuals are treated equally. This makes an OLS regression sensitive to outliers, potentially leading to biased parameter estimates (UCLA, 2023). On the other hand, a robust regression wants to reduce the influence of outliers on the coefficients in the regression. This is done by weighting observations based on their residuals, giving less weight to observations with large outliers (UCLA, 2023). However, when I performed the robust regression there was no gain in the significance of the estimates because the p-values did not show significant reductions compared to the original regression model. This outcome supports the earlier findings that there is no significant link between ownership concentration and financial performance in most years (2016-2020).

Table 7: An overview of the ANOVA results of the differences in ROA across the top 5 European football leagues with the F-statistic of the model.

League	Observations	Mean (Financial performance)	ANOVA (F-significance)
Premier League	149	-9.287	
La Liga	90	2.635	
Serie A	141	-9.461	8.86 (0.000)
Bundesliga	50	-4.270	
Ligue 1	73	-1.967	

The results in Table 7 show that there are significant differences in the Return on Assets (ROA) among the top 5 European football leagues. A p-value of 0.000 indicates that at least one league performs significantly differently from the others financially. Liga has a positive mean financial performance of 2.635 while the Premier League (-9.287) and Serie A (-9.461) have negative financial performances. Meanwhile, Bundesliga (-4.270) and Ligue 1 (-1.967) also have negative financial performance, but not as big as the other two. In conclusion, hypothesis 3 which stated that there are significant differences in financial performance between the top 5 European leagues between 2016 and 2021, cannot be rejected.

Table 8: The post hoc analysis of the ANOVA analyses using the Sidak method (UCLA, 2023). This shows the differences in mean financial performance between each league with the Sidak-adjusted p-values for each comparison.

Variables	Premier League	La Liga	Serie A	Bundesliga
La Liga	11.913***			
Serie A	-0.173	-12.086***		
Bundesliga	5.018	-6.895	5.191	
Ligue 1	7.320**	-4.592	7.494**	2.303

Notes: ***: Statistical significance at the 1% level; **: Statistical significance at the 5% level; *: Statistical significance at the 10% level.

Table 8 makes a comparison in mean financial performance between each league instead of looking at the differences as a whole (Table 7). Each league has at least one significantly different mean financial performance compared to another league except for the Bundesliga. So again it can be concluded, that there is a significant difference in the financial performance across the top 5 European leagues between 2016 and 2021, except the Bundesliga.

The negative financial performance in the Premier League shown in Table 7 can be explained by the significant impact of the many foreign owners on the team's strategic direction which can reduce the financial efficiency of a club (Rohde & Breuer, 2018). This foreign ownership and its high ownership concentration could also have resulted in a disconnect with the local fans (The Guardian, 2022) leading to lower financial performance. In La Liga, the results in Tables 7 and 8 align with Sánchez et al.'s (2021) findings, which suggested that fan-owned clubs like Barcelona and Real Madrid achieved positive financial performance, possible thanks to the democratic and less concentrated ownership structure. However, it is still a surprise to see that La Liga had positive financial performance because as described in the literature in recent years more clubs were getting privately owned which resulted in an absence of stock-exchange protection and resulting mismanagement by these major shareholders (Sánchez et al., 2021). The negative financial performance in the Serie A as described in Tables 7 and 8 can be explained by the fact that a lot of clubs were family-owned in the Serie A (Baroncelli & Lago, 2006). The paper stated that the resulting convergence of ownership and control could diminish external fiscal scrutiny, leading to financial mismanagement. This might be the reason behind the negative financial performance of these Italian clubs. The small negative financial performance of the

French Ligue 1 as found in Table 7 is in line with Andreff's (2018) observations about the trade-off between financial prudence and sporting performances. Despite the lack of success of French clubs in European competitions, their financial health has been comparable to the major European leagues. The financial control due to the influence of the DNCG (Drut et al., 2012) may have helped maintain this financial stability. Finally, the mean financial performance of the Bundesliga was not significantly different compared to any other league. This is possible due to the low amount of observations of clubs from the Bundesliga in this study.

CHAPTER 7 Conclusion

The thesis aimed to investigate the relationship between the ownership structure and financial performance of football clubs across the top 5 European leagues between 2016 and 2021. By doing so, the financially best-performing ownership structures could be determined which provides valuable information for football clubs and their investors. For this purpose, multiple OLS regressions were performed with data from the Orbis database (2023) on variables such as ownership concentration and type of ownership. The differences in financial performances across leagues were also examined using ANOVA analyses. Only for the year 2021 an inverted U-shaped relationship between ownership concentration and financial performance was found. There was also no evidence to suggest that clubs with larger degrees of ownership concentration performed better financially during the pandemic, contrary to the expectations from the literature. Interestingly, the results showed that publicly owned and fan-owned clubs demonstrated stronger financial performance in some years compared to privately owned clubs, challenging the belief that private ownership is always financially better. Significantly variations in financial performance across the top five European leagues were also found, potentially due to differences in league regulations, competitive balance, and investor protection.

However, the study also faces a limitation which is related to the endogeneity problem. This endogeneity problem implies that not all variables that drive financial performance in football clubs are included in the regression models. This can lead to omitted variable bias which leads to wrong estimations of the coefficients. Therefore I can only make conclusions about the sign of the coefficients and not about their magnitude. Furthermore, for future research, I recommend studies on the relationship between ownership structure and financial performance over a longer period as the COVID-19 pandemic could have had long-term consequences for the financial performance of football clubs which is not shown by the findings in this thesis.

REFERENCES

Acero, I., Serrano, R., & Dimitropoulos, P. (2017). Ownership structure and financial performance in European football. *Corporate Governance: The international journal of business in society*.

Andreff, W. (2014). French professional football: how much different?. In *Handbook on the economics of professional football* (pp. 298-321). Edward Elgar Publishing.

Andreff, W. (2018). Financial and sporting performance in French football Ligue 1: Influence on the players' market. *International Journal of Financial Studies*, *6*(4), 91.

Baroncelli, A., & Lago, U. (2006). Italian football. *Journal of sports economics*, *7*(1), 13-28.

Bedi, H. S. (2009). Financial performance and social responsibility: Indian scenario. *Available at SSRN 1496291*.

Bøhren, Ø., & Ødegaard, B. A. (2000). The ownership structure of Norwegian firms: Characteristics of an outlier. *BI Norwegian Business School Research Report*, (13).

Bond, A. J., Cockayne, D., Ludvigsen, J. A. L., Maguire, K., Parnell, D., Plumley, D., ... & Wilson, R. (2022). COVID-19: the return of football fans. *Managing sport and leisure*, *27*(1-2), 108-118.

CNN. (2014). Financial Fair Play: Manchester City and PSG punished. Retrieved from https://edition.cnn.com/2014/05/16/sport/football/financial-fair-play-uefa-football/index.html

Cruz, J. M., Schregel, J. P., & Zülch, H. (2022). Measuring robustness: sustainable success factors affecting professional football clubs. *Sport, Business and Management: An International Journal*, *12*(3), 323-341.

Deloitte. (2009). Deloitte Football Money League. Retrieved from https://www.cies-uni.org/en/international/news/deloitte-football-money-league-reports-2005-2010

Deloitte. (2023). Deloitte Football Money League. Retrieved from https://www2.deloitte.com/uk/en/pages/sports-business-group/articles/deloitte-football-money-league.html

De Ruyter, K., & Wetzels, M. (2000). With a little help from my fans–Extending models of pro-social behaviour to explain supporters' intentions to buy soccer club shares. *Journal of Economic Psychology*, *21*(4), 387-409.

Dimitropoulos, P. (2010). The Financial Performance of the Greek Football Clubs. *Choregia*, *6*(1).

Dimitropoulos, P. E., & Tsagkanos, A. (2012). Financial Performance and Corporate Governance in the European Football Industry. *International Journal of Sport Finance*, *7*(4).

Drut, B., & Raballand, G. (2012). Why does financial regulation matter for European professional football clubs?. *International Journal of Sport Management and Marketing 2*, *11*(1-2), 73-88.

Fraile, I. A., & Fradejas, N. A. (2014). Ownership structure and board composition in a high ownership concentration context. *European Management Journal*, *32*(4), 646-657.

Franck, E. (2010). Private firm, public corporation or member's association–Governance structures in European football. *International Journal of Sport Finance*, *5*(2), 108-127.

Franck, E., & Lang, M. (2014). A theoretical analysis of the influence of money injections on risk taking in football clubs. *Scottish journal of political economy*, *61*(4), 430-454.

Gaur, S. S., Bathula, H., & Singh, D. (2015). Ownership concentration, board characteristics and firm performance: A contingency framework. *Management Decision*.

Geektonight. (2023). What is Ownership Concentration? Introduction & Components. Retrieved from: https://www.geektonight.com/what-is-ownership-concentration/?utm_content=cmp-true

Hamil, S., Morrow, S., Idle, C., Rossi, G., & Faccendini, S. (2010). The governance and regulation of Italian football. *Soccer & Society*, *11*(4), 373-413.

Hammerschmidt, J., Durst, S., Kraus, S., & Puumalainen, K. (2021). Professional football clubs and empirical evidence from the COVID-19 crisis: Time for sport entrepreneurship?. *Technological Forecasting and Social Change*, *165*, 120572

Hu, Y., & Izumida, S. (2008). Ownership concentration and corporate performance: A causal analysis with Japanese panel data. *Corporate Governance: An International Review*, *16*(4), 342-358.

Investopedia. (2023). Financial Performance: Definition, How it Works, and Example. Retrieved from: https://www.investopedia.com/terms/f/financialperformance.asp#:~:text=Financial%20performance%20is%20a%20subjective%20measure%20of%20how,firm%27s%20overall%20financial%20health%20over%20a%20given%20period

Jones, A., & Cook, M. (2015). The spillover effect from FDI in the English Premier League. *Soccer & Society*, *16*(1), 116-139.

Kyere, M., & Ausloos, M. (2021). Corporate governance and firms financial performance in the United Kingdom. *International Journal of Finance & Economics*, *26*(2), 1871-1885.

Law Insider. (2023). *Ownership structure definition*. Retrieved from: https://www.lawinsider.com/dictionary/ownership-structure

Maguire, K. (2021). Covid-19 and football: crisis creates opportunity. *The Political Quarterly*, *92*(1), 132-138.

Manoli, A. E. (2016). Crisis-communications management in football clubs. *International Journal of Sport Communication*, *9*(3), 340-363.

Morrow, S. (2003). *The People's Game?: Football, Finance and Society*. Springer.

Noah, A. (2017). The Relationship between Operational and Market Efficiency Improvement Towards Financial Performance. *Available at SSRN 3089244*.

Orbis. (2023). *Data set of European football clubs financials 2023*. Retrieved from: https://orbis-r1.bvdinfo.com/version-20230621-1-6/Orbis/1/Companies/Search

Pedersen, T., & Thomsen, S. (2003). Ownership structure and value of the largest European firms: The importance of owner identity. *Journal of Management and Governance, 7*, 27-55.

Perechuda, I., & Čater, T. (2022). Influence of stakeholders' perception on value creation and measurement: the case of football clubs. *Sport, Business and Management: An International Journal*, *12*(1), 54-76.

Richau, L., Follert, F., Frenger, M., & Emrich, E. (2021). The impact of investors on transfer fees in the English Premier League: a study of the ownership structures. *Corpor Ownership Control*, *18*(3), 241-256.

Rohde, M., & Breuer, C. (2018). Competing by investments or efficiency? Exploring financial and sporting efficiency of club ownership structures in European football. *Sport Management Review*, *21*(5), 563-581.

Saidat, Z. M. (2018). *Corporate Governance and Corporate Performance: Evidence from Jordanian Family and Non-Family Firms* (Doctoral dissertation, Queen Margaret University, Edinburgh).

Sánchez, L. C., Barajas, A., & Sanchez-Fernandez, P. (2021). Fans in the ownership of Big Five leagues: lessons for better football governance. *Soccer & Society*, *22*(4), 355-371.

Schiehll, E. (2006). Ownership structure, large inside/outside shareholders and firm performance: Evidence from Canada. *Corporate Ownership & Control*, *3*(3), 96-112.

Singh, M., & Faircloth*, S. (2005). The impact of corporate debt on long term investment and firm performance. *Applied Economics*, *37*(8), 875-883.

Storm, R. K., & Nielsen, K. (2012). Soft budget constraints in professional football. *European sport management quarterly*, *12*(2), 183-201.

Szymanski, S., & Smith, R. (1997). The English football industry: profit, performance and industrial structure. *International review of applied economics*, *11*(1), 135-153.

The Guardian. (2021, May 25). Manchester City's rise from stumbles of old to fine-tuned global product. Retrieved from https://www.theguardian.com/football/2021/may/25/manchester-citys-rise-from-stumbles-of-old-to-fine-tuned-global-product

The Guardian. (2022, Nov 23). Timeline: Glazers and their turbulent reign at Manchester United. Retrieved from: https://www.theguardian.com/football/2021/may/02/timeline-glazers-and-their-turbulent-reign-at-manchester-united

Tsolas, I. E. (2015). Firm credit risk evaluation: a series two-stage DEA modeling framework. *Annals of Operations Research*, *233*, 483-500.

UCLA. (2023). HOW CAN I DO POST-HOC PAIRWISE COMPARISONS USING STATA?. Retrieved from: https://stats.oarc.ucla.edu/stata/faq/faqhow-can-i-do-post-hoc-pairwise-comparisons-using-stata/

UCLA. (2023). ROBUST REGRESSION | STATA DATA ANALYSIS EXAMPLES. Retrieved from: https://stats.oarc.ucla.edu/stata/dae/robust-regression/

Ward, S. J. (2013). *A critical analysis of governance structures within supporter owned football clubs* (Doctoral dissertation, Manchester Metropolitan University).

Wilson, R., Plumley, D., & Ramchandani, G. (2013). The relationship between ownership structure and club performance in the English Premier League. *Sport, Business and Management: An International Journal*, *3*(1), 19-36.

World Economic Forum (2021). COVID-19: How the pandemic has made football's structural problems worse. *Future of Media, Entertainment and Sport*. Retrieved from: https://www.weforum.org/agenda/2021/06/covid-euro-2020-how-the-pandemic-has-changed-football/