

# Calculating financial affect: The economic concept of success in european football

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**Abstract.** In recent years, football clubs from the top 5 leagues have dominated European football competitions. This paper empirically verifies whether only team value can influence performance success. Existing analyses focus primarily on achievements in domestic leagues and their connection with club finances but do not consider club competition in European cups. The aim of this work is to verify whether clubs' budgets and teams' financial value have direct effects on the results of international competitions. However, previous findings have not confirmed that there is a positive correlation between player values and team outcomes. The main finding indicates that a club's success crucially depends on team value in general, especially for English and German teams. However, a more important factor is the team's skill level, as shown for the majority of European leagues jointly and for the Spanish clubs in particular.

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## 1. Introduction

Sports occupy an important place in modern society, with millions of people around the world watching or participating in favourite games. It is believed that societies use sports as a tool for their social and cultural development (Aygün et al., 2023). Moreover, politics recognizes the value of sports as a phenomenon with unique functions and socioeconomic consequences (Razvan et al., 2020). In particular, football is unquestionably considered the most popular sport in the world. Notably, football is not just a sport anymore. For several years, it has held an important place in the current overall mechanisms of socioeconomic life (Dima, 2015). In addition, the structure of football can also be conceived as a form of ecosystem or even a social world (Parnell et al., 2021). The football industry is an interesting candidate to consider if one is willing to address the theory of contests and financial influence (Ascari & Gagnepain, 2007). It might seem that sport and finance are two completely different fields, but currently, evaluating professional football teams' performance in the field without linking it to their financial performance is inefficient (Barros & Leach, 2006; Guzmán-Raja & Guzmán-Raja, 2021) since the development of a football club is closely related to financial and sporting results (Szymanski, 1998). In fact, even some football managers believe that the final position in the league depends on the money spent (The Economist, 2014). For this reason, clubs face financial difficulties and are very often forced to reduce their budget significantly or go bankrupt (Ascari & Gagnepain, 2007), sometimes spending more money on player transfers than they can afford. Even international entities are interested in this issue, i.e., the UEFA provides and enforces financial fair play regulations (Caglio et al., 2023).

Since its origin, interest in the discipline has been constantly growing, and competition has attracted an increasing number of people in many different roles: fans, managers, employees of training and medical staff, of course the players themselves and potential future players, especially increasingly wealthy investors, who engage their funds not only to fulfil the desire to own a football club but also to generate further income, mostly from television broadcasting rights, advertisements on sportswear and the stadium or financial prizes for results achieved in competitions. In recent decades, professional football has developed into a multimillionaire industry, and clubs have become more commercially minded (Milanovic, 2005).

Currently, football contributes in many ways to international business, trade, and the economy (Batmunkh, 2021). To some extent, professional football has become just another branch of the corporate world (Castellanos et al., 2007). Even the United Nations assumes that there is a relationship between sport and economic development (Gásquez & Royuela, 2014). From an economic point of view, international competitions are more important, in which significant funds can be obtained for the results achieved, followed by profits from television broadcasts or best player transfers (Budzinski et al., 2019; Feuillet et al., 2021; Jagielski, 2024). Moreover, sport success contributes to increasing the market value of players but also involves the need to allocate larger amounts to the purchase of players to keep track of success or progress (Ferri et al., 2017; Metelski, 2021; Jagielski, 2022).

In the last two decades, the academic field of sports economics has grown substantially (Krumer & Szymanski, 2023), and the supply of sports economics research continues to grow. The growing economic importance of professional football and the recent fundamental changes in the regulatory regime governing football players' labour market together with the availability of detailed information on player salaries, transfer fees and contract lengths have convinced an increasing number of economists from all over Europe to devote their attention to the operation of that particular market (Frick, 2007). Several studies seem to indicate that results in sports, particularly football, have a significant effect on all kinds of revenues of a given team. In this context, empirical analyses of clubs' budgets have shown such relationships, mainly for English football (Szymanski & Smith, 1997; Dobson & Goddard, 1998; Szymanski, 2017). Football is currently a large industry, but it is also an excellent laboratory for studying success (Leifheit & Follert, 2021; Pantuso & Hvattum, 2021; Jagielski, 2022). While there is a common belief that football clubs do not maximize profits, empirical analysis provides evidence that, at least in England, profits matter a great deal (Leach & Szymanski, 2015). However, the challenge is to strive to maximize financial and sports results at the same time (Vrooman, 2000; Jagielski, 2022; Franceschi et al., 2024). Other studies have shown a link between stock exchange quotations from football clubs and sporting success, which is understood as the team's place in the official UEFA ranking (Sakinc et al., 2017). In another context of understanding success, i.e., as the result of a single match (win, draw, defeat), the dependence of the team's value, measured by the value of players, with the place on the table at the

end of the season, was shown, but no significant relationship with the results of individual matches during the season was demonstrated (Warias & Block, 2021).

Moreover, a cross-sectional comparison of one thousand football clubs worldwide revealed that, on average, those clubs in leagues with more foreign players present better results in the world rankings. Nevertheless, within each league, where all clubs have the same regulations, having more foreign players has no effect. In the end, when all teams have the same possibility for importing better players from abroad, the financial power needed to choose better players is important (Royuela & Gásquez, 2018). Notably, the Bosman ruling and its aftermath allowed football players to move more freely between clubs in Europe, establishing the freedom of sports professionals to work in the European Union (Frick, 2009; Radoman & Voia, 2022). As there is a relationship between the export of players and the performance of the team—the research in this area has been conducted by, among others, Horak et al. (2024), Jagielski (2022) and Coates et al. (2020)—it is likely that it became even stronger after the Bosman decision, which led to an enormous increase in the mobility of football players (Milanovic, 2005). Moreover, a consequence of the open market for players can be seen in any configuration of the relationship between finance and performance, such as the cross-sectional correlation between payroll and performance in English football (Hall et al., 2002). Nevertheless, at the club level, there is little evidence that the competitive balance of the domestic leagues was seriously harmed, although in the European Champions League, the top teams appear to have become noticeably stronger (Binder & Findlay, 2016). Richer countries have richer clubs that can afford to buy talent players all over the world, whereas poorer countries simply lack funds to offer competitive wages (Baur & Lehmann, 2007). Hence, clubs from poorer countries are perceived as less able to succeed in international competitions. Moreover, with respect to the influence of population, large city teams are considered to be more successful (Walker, 1986). However, GDP per capita as a wealth measure of those countries is not necessarily enough to explain import and export patterns as the differing power of teams (Hoffmann et al., 2002). Thus, other variables should be considered important to account for differences in sporting success (Gásquez & Royuela, 2014). Despite the popularity of football, the analysis of success factors in football remains a challenge.

## 2. Research materials and methods

Most of the contemporary original research on the relationship between club finances and sports results focuses on analysing individual leagues and is based mainly on English club football (Szymanski & Smith, 1997; Dobson & Goddard, 2001; Szymanski, 2017), which is justified because English football began taking steps towards becoming a business earlier than any other league did. The English Premier League is embedded within a European and international marketplace, and it offers relevance for the broader global football system (Parnell et al., 2021). Additionally, it was the first major league in the 1990s to see a significant increase in the value of broadcasting rights (Hoehn & Szymanski, 1999). Moreover, a comparative international analysis is carried out, particularly between European football and North American leagues in various disciplines (such as the NBA, NFL, MLB, and NHL), where sport is a business activity to a large extent (Szymanski, 2003).

However, the research to date does not consider competition in European Cups as an interconnected system. As shown, if the research addresses the link between finance and sports performance, it focuses only on a specific league (mostly the English Premier League) without considering international competition, and if it is included in the analysis, it is compared to one specific league or other discipline. The analyses undertaken in this paper have a wider scope and consider the combined European leagues and the success of teams from different leagues in UEFA European Cups, such as the Champions League, the European League, and, since 2021, the European Conference League. This paper focuses on the question of whether a club's success in those competitions significantly depends on the value of its players, whereas research to date has focused only on success in general. This research is important because the commercialization of football, measured by the amount of money invested, primarily concerns international competition, and for teams from these strong leagues, the main goal is not so much to win the national championship as to win the European Cup, one of its kinds mentioned above. Confirmation of the importance of European competitions for the financial situation of clubs involves various types of clubs' rankings according to their economic and financial value. Forbes magazine publishes annual lists of the most valuable football teams, which confirms that the main part of the clubs' budget is the profits from European Cups. Furthermore, the top football

teams are global brands with massive numbers of supporters, monetized in large part with generous television deals, and football leagues are already on the podium (Forbes, 2022).

Football is such a mass phenomenon, likely to a large extent, because of the unpredictability of football results. However, in recent years, teams from England, Spain, Italy and Germany have held the strongest position in the European market and have dominated European football competitions. Therefore, it is crucial to verify whether money and club budgets influence performance success. The aim of this work is to verify whether clubs' budgets and teams' financial value have direct effects on the results of international competitions. The research hypothesis assumes that the increase in the budget of a particular club, which is most often spent on player transfers, will not translate directly into success, resulting in club competition. Therefore, there is still an expansion of sports determination and victories of theoretically weaker teams. Although the Bosman decision restricted transfer fees for players, who leave their club after their contract finished, players often do not move to another club without compensation (Baur & Lehmann, 2007). The Bosman decision led to longer contracts to avoid losing a player without receiving compensation (Amir & Livne, 2005).

### 3. Research results

#### 3.1. Measure

To verify the research hypothesis, which assumes that the increase in the budget value will translate directly into success in clubs' competitions, the basic step for starting the analysis is to properly define success in a measurable form. Knowledge of success factors in professional football is critical. However, the identification of success factors has focused primarily on English and Spanish leagues and, recently, on the German league (Lepschy et al., 2020). Many factors influence success at professional football clubs, as each club has an exclusive definition and interpretation of success (Cruz et al., 2022). A traditional understanding of success is based almost exclusively on outcomes, such as prizes won, money earned or saved. Moreover, success is achieved as much as possible in European cups. When one plays in a European Championship, one always wants to go as far as possible. This does not mean winning every match but rather obtaining results that will allow you to advance to the next

round. Even in the knockout phase, two matches are played, and the total score counts. Therefore, the point indicator was considered success, not the number of wins. Despite the popularity of football, the analysis of success factors in football remains a challenge. In total, 76 different variables have been investigated in existing studies with respect to success factors in football, and among those with the greatest impact, market value has been identified (Lepschy et al., 2020). However, the studies presented methodological deficits, such as clear operational definitions of the investigated variables and small sample sizes. Some studies at the international level use the official FIFA or UEFA ranking as the dependent variable to analyse club performance (see Hoffmann et al., 2002; Houston & Wilson, 2002). A growing number of studies have examined the causes of success in international football, as measured not by the place in the ranking but by the number of FIFA ranking points earned and by the resulting rank (Leeds & Marikova-Leeds, 2009; Royuela & Gásquez, 2018; Leifheit & Follert, 2021; Jagielski, 2022; Varmus et al., 2025). However, existing research on the determinants of FIFA's international football rankings suffers from serious statistical problems, particularly sample selection bias and nonnormal errors (Macmillan & Smith, 2007).

In this context, success is considered to be the highest possible position at the end of the season in the domestic league or cup and whether this position guarantees participation in the continental cups, including the result of these competitions until elimination from the cup. This is a different approach than the well-known ELO rating system, which is used to calculate team ratings (Arntzen & Hvattum, 2021). For this purpose, the UEFA Club Ranking has been implemented as a success indicator, under which points are awarded for achievements in European competitions.

However, the club's budget value, as in the context of success, assumes that significant funds will be spent on player transfers and is represented by the value of the players' team of a given club, which is the sum of the values specified for each player from the squad. These data were retrieved from the website of transfermarkt.de, which is considered the largest and most reliable source dealing with player values in the world of football. Some researchers use Transfermarkt values as a proxy for the unknown salary of football players in Europe (Peeters, 2018; Coates & Parshakov, 2022), but this is not the right approach. The value of football players is largely related to their age and the league in which they play, not their salary, a good example of which

are currently Lewandowski, Messi and Ronaldo, whose market value is decreasing (due to their advanced age), while their salary is increasing. The portal provides data on two types of club values—the market value and the market value of players. Therefore, the concepts of ‘club value’ and ‘team value’ must be distinguished.

The scope of the study covers the last five full seasons, from 2017/18 to 2021/22 (as the summer round of the 2022/23 season is in progress). Teams from all European leagues eligible for European competitions were included in the study, which means that the results of Russian and Belarusian clubs were rejected because of their exclusion from competitions in response to the invasion of Ukraine by Russia, aided by Belarus (Lindholm, 2022).

### 3.2. Data and model

The analysis included those clubs that, in recent seasons, including the 2022/23 season (as what matters here is qualification for the European Cup this season, not the final result), have made appearances of 4–5 European Cups because no appearance means zero points in the data, which in turn would create fat tails implying more extreme values that exhibit a large skewness, which would imply the need to address either by log or Box–Cox transformations (Green, 2021). Moreover, a one-season appearance in a cup can be treated as incidental, even random, or just lucky. With this assumption, 146 clubs were eligible for the study (the distribution of the research sample by country is presented in Fig. 1).

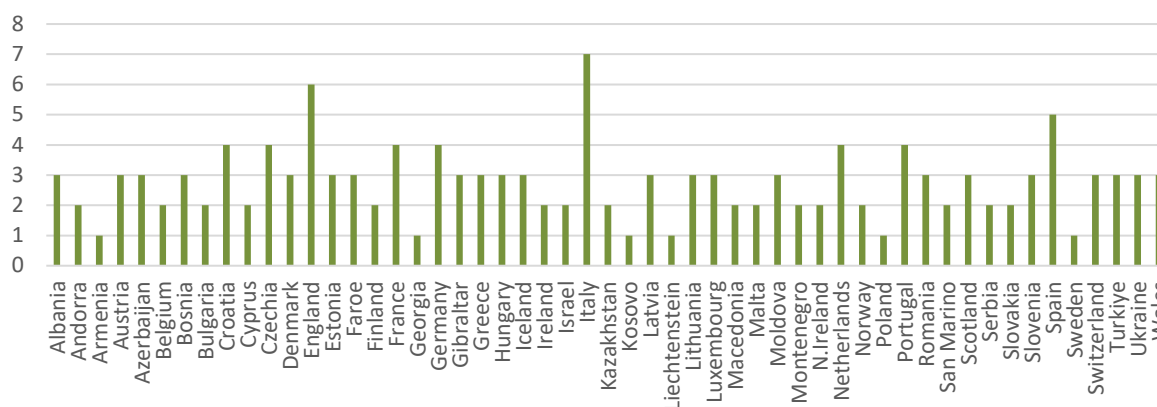
To ensure data consistency, ‘Market value top 20 players’ was used as the team value variable since clubs have different squad sizes. Nevertheless, hand-collected data on the season-by-season outcomes of all included teams from 2017/18 to 2021/22 were needed. The data that support the model estimation are available online (<https://doi.org/10.17605/OSF.IO/YV4TR>).

Next, whether and how team value impacts the success of club performance was tested empirically via a panel data model, including all European leagues at once. As the score of performance is determined at the end of the season, the squad value factor underlying this result is determined at the start of the season. Therefore, as an independent variable in the model, a lagged variable is taken into account, the value of which is determined at the beginning of the football season, and the value of the dependent variable being the effect is determined at the end of the season. Accordingly, the following panel data model is considered:

$$success_{ti} = \alpha_i + \alpha_1 * squad_{t-1,i} + \varepsilon_{ti} \quad (1)$$

where success is the value of points calculated to the UEFA Club Ranking in a given season, and squad is the sum of the top 20 players’ market values (in million euros) at the beginning of the football season but after the end of the summer transfer period.

Panel data provide an excellent opportunity to study data internationally and over a long-term horizon, which is needed to assess impacts on long-term growth (Levin et al., 2002). The calculation was performed in Gretl, a cross-platform open-source software package for econometric analysis



**Fig. 1.** The number of teams from each country regularly participating in European Cups from 2017/18 to 2021/22  
Source: own elaboration

(Baiocchi & Distaso, 2003). The model estimation uses the robust standard error procedure, which is adequate when many units are observed in relatively few periods (Arellano, 2003). The analysis uses a panel model with fixed effects (FEs) because it was assumed that there are constant differences between units (clubs) over time. Fixed effect models are an appropriate specification if the process research focuses on a selected group of entities (clubs in this case), and the conclusions are limited only to the examined units, not time series (Baltagi, 2005). The estimated models were checked by the Hausman test, which allows verification of which of the fixed or random effects occurs in the analysed collectives. The rejection of the null hypothesis in this test indicates that the FE estimator is unbiased and efficient (Hsiao et al., 2010). Additionally, in this study, the Pesaran CD test (Pesaran, 2015), which is widely used in the literature for investigating the unit root status of series with cross-sectional dependence, was applied, and the null hypothesis assumes no cross-sectional dependence. From the point of view of this study, this is highly important because the lack of dependency means that an increase in the value of one League does not reduce the chances of success of another League's clubs. Such a situation would also indicate that it is reasonable to analyse each league separately.

### 3.3. General panel data model and individual models for top domestic leagues

A model involving teams from all countries regularly participating in UEFA European Cups shows a statistically significant effect of the team's value on the result achieved in a given season. Therefore, the conducted analysis indicates that the performance difference can be significantly explained by team value. The fit of the model is significantly high, as the LSDV chi-square coefficient equals 80,47%. The

intercept in the panel data model is a time-constant individual effect for each unit (club in this case).

The results show that both the constant and the regression coefficient on the variable are statistically significant, with a greater effect of the intercept, whereas changing the team value has a negligible effect on success in European competitions (Table 1). Therefore, it can be concluded that the increase in the budget of a particular club, which is most often spent on player transfers, does not translate directly into success, resulting in club competition, and that competition between weaker teams and stronger teams still makes sense.

Moreover, the model shows that (more precisely, the significance of the intercept), apart from the financial factor, it is also important what team we are dealing with (we compete in cup), or, to generalize, what leagues the club comes from. According to the Pesaran CD test results, the null hypothesis is not rejected, and it is concluded that cross-sectional dependence does not exist. Therefore, it is crucial to analyse each league separately in terms of long-term dependence (Table 2).

Detailed models were specified for the 'Big Four' European leagues: the English Premier League, the German Bundesliga, the Spanish La Liga and the Italian Serie A. This approach is also consistent with the UEFA coefficient ranking. French Ligue 1, which is fifth of the big ones, was not included because of the significant difference between one top club and the others, since Paris Saint-Germain F.C. was taken over by the Emir of Qatar through Qatar Sports Investments and therefore significantly exceeds the budgets of other clubs, the second most valuable Olympique Lyon on average by almost 230%, which, in turn, surpasses the third most valuable Olympique Marseille by only 65%. In the other leagues, the financial structure of the clubs is less asymmetric towards one entity. In addition, the Portuguese League was added to the analysis because it is a very specific League.

**Table 1.** Success model for all clubs regularly participating in UEFA European Cups

No.	Fixed Effect Model		
	coefficient	p value	
1	Const	3.973	< 0.001
2	Team value	0.015	< 0.001
3	LSVD chi-square	0.805	---
4	Welsch test	12.271	< 0.001
5	Pesaran CD test	-0.924	0.356

Source: Authors' own draft based on 730 observations, 146 cross-sectional data units included, time series length = 5

**Table 2.** International success models for selected domestic leagues

No.	Variable	English Premier League	German Bundesliga	Spanish La Liga	Italian Serie A	Liga Portugal
1	Const	-3.984	-5.406	12.769***	5.644	4.715
2	Team Value	0.030**	0.039**	0.012*	0.018	0.029*
3	LSDV chi-square	0.539	0.592	0.294	0.195	0.335
4	Welch test	1.608	0.351	0.489	0.545	1.325
5	HQC	201.569	135.352	176.207	249.018	131.628

Source: Authors' own draft based on 730 observations, 146 cross-sectional data units included, time series length = 5

#### 4. Discussion

Interestingly, all clubs from the Premier League regularly participating in European Cups (Liverpool, Manchester City, Chelsea, Manchester United, Tottenham, and Arsenal) occupied all the top places in the team value ranking in the analysed period (although in various seasons in different places). This fact alone suggests that success, measured by qualifying for European competitions, is determined by the budgets of the clubs. The results of the model confirm this assumption; only the team value factor is statistically significant, and the individual effect for each club is insignificant. Furthermore, this is consistent with the financial data observed in the football market because the hierarchy of transfer fees by national associations highlights the key role played above all by England in the global market for footballers. This result may explain the noticeable change in the Premier League, which has become more imbalanced and less competitive over time, which is what empirical evidence of the growth of the Herfindahl–Hirschman Index (HHI) suggests (Basini et al., 2023).

In financial terms, the German league is extremely stable; the first four places in the ranking of the most valuable teams have been occupied by the same teams for years and in the same order (Bayern Munich, Borussia Dortmund, RasenBallsport Leipzig, Bayer 04 Leverkusen). Only the fifth most valuable team changed every season. Moreover, the same teams regularly qualify for the Champions League competition. The model gives the same results as those for the English League; in this case, the team value factor is the only significant factor.

The characteristics of the Spanish league are that two teams (Real Madrid and FC Barcelona) are consistently the most valuable teams. Moreover, they are also the most valuable clubs in the entire world of football, not only in terms of player value but also in terms of the marketing value and revenue

generated each season. The model shows two important factors in this case: the financial value of the team and the individual effect for the club. Given that the best players primarily choose to play for the two leading clubs in this League, it is difficult for other teams to significantly increase the value of their squad. However, other teams are also very successful in European cups, such as Villarreal CF (UEFA Europa League winner in 2021), Sevilla FC (UEFA Europa League winner in 2020, 2016, 2015, 2014), and Atletico Madrid (UEFA Europa League winner in 2018, 2012, 2010). The importance of the individual effect (which intercepts an enormous value of 12.77) in the model confirms the ability of Spanish clubs to achieve success and win against more valuable teams.

The Italian league is the most financially uneven among the top European leagues. Every season, the values of teams change significantly, and on the other hand, it is also the league with the largest number of teams regularly participating in European competitions. This finding shows that it is difficult for the remaining teams to qualify for European competition, despite the small differences in the value of the teams compared with the best teams. This is also confirmed by the results of the model, as the financial factor has a statistically insignificant effect on the success of the team. With 7 league places in all UEFA European Cups, this basically means that the same teams qualify for European competitions over and over, with occasional one-off success for other teams. There is no such situation in any of the other top leagues. This means a league of two dimensions, where the best teams fight for the championship and the remaining teams fight to avoid relegation from the league, which would involve the loss of lucrative TV contracts and, consequently, a reduction in significant revenues for the club. Moreover, in countries such as Italy, the salaries of the richest people, including footballers, are strictly regulated by the State. For example, higher salaries are offered to players arriving in Italy for the first time (a form of incentive to work) and

differ from those who have been in the country for a longer period of time (Bernardo et al., 2022; Neri et al., 2023). The incentives used for migrating players may be the reason for the intralague polarization of wealth (Vrooman, 2007).

In addition, the Portuguese League was added to the analysis because it is a very specific League. Portuguese clubs are very successful in European Cups (including Porto, which won the Champions League in the season of 2003/2004, and the Europa League in the seasons of 2002/2003 and 2010/2011, defeating another Portuguese team in the final, SC Braga), and the domestic league is quite predictable; from time immemorial clubs from Lisbon and Porto dominate, Braga are trying to match them. In terms of value, the first three places are constantly occupied by Porto and the Lisbon clubs, changing only places, but the value of these teams far exceeds that of the other clubs in the domestic league. The fourth-place value ranking is Braga, which, although it stands out from the first three clubs, also significantly exceeds the other teams. The specificity of this league is that the leading clubs of the League have large fluctuations in value from season to season, which is associated with numerous transfers of their own players, after successful matches in European competitions, to stronger leagues, for quite significant amounts. Despite this, the strength of these teams does not weaken, and new players appear in teams that quickly gain value. In this respect, the League seems interesting in the context of estimating how the initial value of the team affects the result. The model estimation results for such a specific league, interestingly, are very similar to those of the English league model, with the value of the only significant factor almost at the same level. This may be the result of not just a similar sports level of clubs but rather a similar proportion of financial differences between the leading clubs and the rest of the League.

The findings of this study are consistent with those of a statistical analysis that evaluated the relationships among the sporting success of football clubs, their market value and the economic performance of the regions in which they are located, which revealed that clubs in relatively poor Europe could reach above-average results at the highest European level and, vice versa, that a club with high market value from an economically highly overdeveloped region could lag behind (Klobučník et al., 2019).

## 5. Conclusions

This paper investigated the influence of the market value of clubs on sporting success. It was found that, generally, the market value of a team is a significant factor for the European Cups results. However, a more important factor is the sports level of the team, which is not significantly dependent on time, and the league from which the competing teams come. This proves the legitimacy of fans' expectations and, at the same time, proves that the victories of teams with less valuable players are not as unexpected as they are perceived in the media. It can therefore be concluded that it is not money that determines success but rather sports determination. This indirectly explains why model predictive modelling is not effective and why logistic regression models, including the ELO rating used to estimate the win probability (Carpita et al., 2019), are not accurate predictors. Additionally, Transfermarkt values aggregated to the team level are used to predict the outcome of football matches and compare those results to the predictions based on FIFA rankings and ELO ratings (Peeters, 2018). The crowd-sourced values perform better than do the FIFA and ELO scores (Coates & Parshakov, 2022). However, this is not surprising because the valuation on the website is adapted to European realities and translates into the UEFA ranking but not the FIFA ranking.

Only the models for individual top leagues revealed that the only significant factor is the financial value of the team. As the value of the club is measured by the value of the players, it confirms that the most valuable players are in the strongest leagues; on the other hand, it means that the club budget is very important. This may, however, lead to the fact that in the system of promotions and demonstrations, clubs from lower leagues will strive for promotion mainly to achieve much greater financial profits, which is confirmed by some empirical studies (see Speer, 2023). This can be seen in the rivalry between the teams of the German and English leagues, where there is much interest in promotion matches (hence, the solution of play-off matches is effective from the economic point of view), which is not visible in the Italian and Spanish leagues. Moreover, an important goal of football clubs from other nontop leagues is to maximize the market value of players, as most clubs in less prosperous leagues sell the best players, hoping to achieve high profits that are necessary for their continued functioning. Therefore, the team should be treated as a whole, a network of players, and the



most appropriate indicator for this is the value of the team measured by the value of players.

Furthermore, the findings indicate clear differences between the 'Big Four' European leagues, and this result may be surprising since the Top 4 leagues are commonly considered at the same level. While the models indicate that the budgets of English and German clubs generate success in international competitions, no such relationship was shown for the Italian league, and only the Spanish league shows quite a significant importance of the club sports level, which in turn is confirmed by the results of Spanish clubs, other than Real Madrid and Barcelona, in European competitions.

This study has several limitations. The specified models use the value of a given team as a causal factor of success. However, the use of such a variable has one major disadvantage: the value of individual players varies depending on the performance of the team, so there is a somewhat indirect factor. Moreover, the model does not include the number of minutes spent on the pitch, which means that the financial resources involved may be inefficiently used by the team coach. For this reason, it would be preferable to repeat the study in a modified form, where the independent variable will be the transfer balance of a given season or only the value of funds spent on the purchase of new players. On the other hand, transfer expenses alone will not reflect the situation of strengthening the teams' squads in 2022 with players from Russian clubs who, after the exclusion of Russian clubs from UEFA competitions, were free to change to any other club in Europe without a transfer fee, and most of them were players with significant financial value, which significantly increased the teams' value but was not reflected in transfer expenses.

An interesting issue would also be a more detailed analysis at the level of each national league, where success would be measured by the place in the final table. This would make it possible to determine the financial resources needed to obtain a suitable place in domestic competitions. It can be expected that more significant casual relationships will be for leagues of medium level and below because, in the best leagues, a more important goal is promotion to the UEFA Champions League, which is not necessarily synonymous with winning the domestic league. Such analysis of club budgets could be linked to the financial situation of clubs that are struggling to stay in the league or be promoted from a lower league. As other studies have shown, clubs balancing the verge of promotion and relegation from the league, because of prestige and television exposure, are more willing to increase spending on

new players to compete in the top division (Speer, 2023).

As the models indicate that the individual effect of a particular team is more influential and that the increase in the budget of a particular club, which is most often spent on player transfers, matters but has little value effect (an average of approximately 0.03 points in the ranking for every million euro), the competition between weaker teams and stronger ones still makes sense. This could undermine the media's widespread plans to create a Super League. Sports fans or customers pay for the service or product they are receiving, such as watching a live football match. Moreover, sport supporters prefer regional brand origin over national and foreign brand origin. Therefore, it is more important for them that a particular club achieves successes, not the international successes of other clubs from their own country, wherein people may be extremely supportive of their own club without necessarily disliking other teams. Both the importance and the utility attached to the regional brand origin increase with higher levels of consumer ethnocentrism (Garcia-Gallego & Mera, 2016). However, there is also a certain risk associated with the results obtained. The importance of the team's financial value for achieving success in European cups explains why the wages paid to footballers and their transfer fees have risen so much. There are few elite clubs, and they compete for a small number of stars. The high wages and high prices of stars increase the wages and prices of other stars. For this reason, this topic is being discussed more willingly and more often among many researchers, public opinion and female football players.

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