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MSA - Master of Advanced Studies in Sport Administration and Technology

PERSONAL PROJECT

Pay Well, Play Experienced

The Results of a Multivariable Research on Football Club Sports Performances

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Lausanne

November, 2007

UNIVERSITÉ DE GENÈVE

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EPFL ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

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Acknowledgements

To Professor Daniel Oyon, inspiring tutor and guide. The author of the whole plan, in possession of mastery in the football field, as well as regard the world of academic research, and economic science. The person without whom all that is following would have not been realized.

To Professor Bill Gerrard, whose impressive knowledge of the football economics, and an overflowing passion for sports, is widely recognized. Here I want mostly to thank the courtesy and the ready availability each time it was required.

To the Deloitte Consultant agency, which went beyond its duties, supporting the research with an extra delivery of "Annual Review of Football Finances" back copies. Many thanks to their great sensitivity and generosity.

To Professor Tony Davila for his precious contribution to the statistical part, and his analysis of the results.

To Buffy Martin, for the review of the first draft and for her irreplaceable linguistic advice.

To Dr. Alberto Mirisola, for his competence in the statistical field, as well as for his helpful attitude.

To Dr. Carlo Amenta, lifelong friend and guide for football economy issues.

Dedication

To my family, who deserve it above all.

To my uncle and aunt, for their lifelong support.

To my beloved Claudia, for her lovely care.

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ABSTRACT

A comprehensive study on football performances has been carried out using several variables. A master sheet made up of 6,675 cells filled with single information was created in order to provide information on 23 different variables which were regrouped in four main blocks with two additional smaller ones. The sports performances of English Premier and Championship Leagues (the first and second division) were researched over a five year period.

The main variables researched were player trading activity, wages, and the home-grown and superstar effects. Alongside them, other variables such as attendance, net transfer expenditure, net assets/liabilities, and coach tenure were investigated.

Sports and human resource management literature was investigated in order to formulate the hypotheses of the study.

Two different kinds of regressions were run: they showed that a high player turnover and a high recourse to youngster from the academy is harmful to the teams, limited to the Championship League. Wage, net assets/liabilities variables and attendance are shown to be positively correlated to performance, with differing importance in the Premier and Championship Leagues.

No impact on sports performance has emerged as regards coach tenure and the superstar effect, as well as net transfer expenditure.

SUPERVISOR: Daniel Oyon, Professor of Management, University of Lausanne

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EXECUTIVE SUMMARY

It is interesting, and can be quite surprising, to know that no impact emerges when fielding as many youngsters as possible, and attendance is important yet perhaps not as important as wages in the Premier League. Another study investigating what makes a team win or lose has been carried out from the perspective of examining at as many variables as possible.

Team sports performances are complex mechanisms that need to be analysed from different angles which is why this study used 23 different variables researched over five English football seasons, and two different tournaments: the Premier and Championship Leagues, first and second divisions.

Fifty-three clubs were sifted through by looking at every kind of useful information in order to understand what makes the difference, at the end of the day – financial figures, coach tenure, player trading activity, and the superstar or home-grown effects. The sports performance was measured both through points and ranking.

There was not much helpful sports literature as regards player turnover. Thus we referred then to the human resource management literature, and what happens in the business world. To make sense of this colossal amount of information (6,675 cells of single information) two different kinds of regressions were run at the end.

The outcome indicates that it is wiser to limit player turnover, and it is not as important as a high spending in the player transfer windows.

The area in which money has to be spent is wages due to the fact that payrolls are very important in determining winning teams. However, it is not fundamental buying superstars. Better paying a good high quality team instead of focusing on the two or three best players that does not have a positive impact on sports performances, so statistics tell us.

If a team plays in the Championship League, it is much better to have a big crowd in the stadium each match as the relevance can be, quite unexpectedly, up to 20% of the points seasonal amount.

The net assets are shown to have a statistical incidence on performance in Premier League only. This is not the same for the aspect of the coach in that there was no statistical support that retaining them for longer, or changing them as little as possible, would be beneficial. This is different to what was observed in the greatest teams, and, in any case, it might be can be wise not

to follow this finding too literally, although it is one of the results that could be put on the football argumentations table in order to shed light on a seemingly endless issue.

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F inding out why a professional sports team is winning is the dream of any coach, manager, club's owner, researcher, and even passionate fan. In the past, many attempts to find the magical formula have been tried in different academic fields, taking into account a multitude of variables: teams budget, coaching and players qualities, style of play, size of supporters, and so on. Unfortunately, no definitive recipe for success has ever emerged – or perhaps we should say, fortunately, because this is the ultimate beauty of sports.

In spite of that, many pieces of knowledge have been put together in the past, all of each make the whole picture a little clearer. A sharper image of the forces that influence sports performances is now clear to see.

However, we did not find a paper encompassing variables such as trading activity or the home-grown, and superstar effect on team results, all together. No detailed work has been done concerning player turnover, whereas more has been done on the relevance of the "academies' products", and even more on the influence that superstars can have on team performance. This is, however, a decisive factor in team performance. Totally different results can arise from different turnover policies.

The three variables are obviously correlated: a high/low player turnover is linked to a high/low recourse to players coming from the youth programme, and in turn the importance of the best players affects the turnover rate.

The difficulty in finding connections to previous studies in the area of player turnover has been overcome by "migrating" towards the human resource management literature, where employee turnover has been investigated to a much greater extent. We decided to compare employees and players, doing the same for the home-grown and superstar sections of the study.

In the business literature we looked at parameters such as promotion from within and/or internal development (home-grown players) as well as the performance of key players within companies.

The hypotheses we built up were then:

- H1) Does trading activity have a positive impact on performance?
- H2) Does it have a negative impact?
- H3) Does this impact have a UShape or inversed UShape form - that is, a curvilinear one, without straightforward correlation/causality, between the

dependent variable (sports performance, measured in points or the teams' final ranking), and the independent one, namely the turnover rate?

In the area of personnel development we asked:

- H4) Does it have a positive impact? Are winning teams able to shape the kind of players - or employees - that they need?

- Or, H5) does the internal development have a negative outcome, perhaps due to these players' inexperience?

- Finally, the last hypothesis (H6): how much does the team performance rely solely on superstars? In the end, is winning or losing just a matter of some players being in three-four key positions?

We chose professional English football leagues as the elected field of study for both the financial and playing purposes of the research. Unlike other leagues - as well explained by Barajas, Fernàndez-Jardòn and Crolley (2005) - English football clubs submit their annual financial reports within which the information is collected, classified and easily accessible. Furthermore, professional English footballing bodies give external observers plenty of data for analysis such as coaches, players, results, attendance and many more which are carefully listed and available.

Thanks to this wealth of data we have been able to build a master sheet comprised of 23 different variables regrouped in four main blocks with two additional smaller ones. Fifty-three clubs were studied in total, the teams of which have played in the first or second divisions – the so- called English Premier League and Championship League) for five seasons: from 2001-02 to 2005-06, which is the most recent season with available financial data.

A thorough research made of 6,675 cells filled with single information: 7,380 player origins, 216 coach provenience and tenure, 1,533 financial data, or 219 clubs seasonal attendance, just to cite some of them.

This effort was carried out in order to shed light on not only the relatively unexplored matter of the correlation between the player (or employee) turnover rate and team performances, its link to home-grown and superstar effects, but also on all of the other potential variables' effect on a team's winning or losing.

2. **LITERATURE REVIEW**

We have already mentioned the lack of research into player turnover literature in sports science. Lodging an analogy between the management of professional football and that of enterprises gave us more studies to examine.

However, even going beyond the natural "enclosure" of the present work, we have found neither consensual agreement nor the clear view on the effects of the observed phenomena. Not for all of them, to be frank: if we consider players trading activity, and the significance of employees' internal development, there is no shared standpoint; the situation about the "superstar effect" appears to be a little clearer. The importance of the best players (or employees) in a team, or a company is more widely recognized.

Let us now explore what the science of sports management, or business company specialists, have written about the three topics which are the object of the present study.

2.1 The Dependent Variable: Measuring Sport performance By Points or Ranking?

With all of this said all at about the independent variables, the dependent variable still remains to be discussed. In our case we attempt to use both points obtained by a team and its ranking at the end of the season to display sports performance.

According to Fort and Quirk's analysis on the competitive balance issue, the first method (or win-percent model) would be a more relevant measure of success, over the "championship model". Both methodologies are suggested by other authors (see also Murphy in Barajas, Fernàndez-Jardòn and Crolley), but Fort and Quirk (1995) recognize the correlation of the two measures. However, they observe, that "predictions based on that model [Championship, specifically the ranking] have been less successful than those derived from the win percent model" (p. 1267). In a test performed on Major League Baseball, "the win percent model is the clear and ambiguous winner" (*ibid.*). The introduction of a play-off system is the practical consequence of the choice not to reward simply the winner, by "expanding the set of 'successful' teams from a single champion to all teams qualifying for the play-offs (p. 1269).

2.2 The Independent Variables

2.2.1 Trading Activity

The literature regarding the turnover of employees is rich, and finds his roots far back in the past as studies about employees' management have been published for decades now. The situation in the sports world is totally different where, to our knowledge, the only reference is the one from Vrooman (1996), which analyses player movement in Major League Baseball, in the USA. In the domain of the labour market that he is studying, Vrooman finds evidence that "free agent talents predictably migrate from small quality market teams to franchises in large markets" (p. 358). Something that it is not directly concerned to the object of our work.

There have been a vastity of researches originating from sports literature, but with no concurrence between them. The more numerous group of studies is one which does not clearly examine whether a high level of turnover within a company is harmful or not.

> "Turnover *can* have negative effects on firm performance. We emphasize the word 'can'"
>
> Glebbeek and Bax (2004)

From Staw (1980), to Glebbeek and Bax (2004), there is no univocal answer. The latter points out that "turnover *can* have negative effects on firm performance. We emphasize the word 'can' since economic performance depends on many factors that vary according to type of firm and related circumstances" (p. 285). Many factors influence the course of business within a company, as well as within a professional football team.

As an example of the uncertainty, Mathieu and Baratta (1989) found a totally different outcome to Schwab (1991). While the first research gives evidence of superior performance among "stayers" (on a study upon bank tellers), the second declares higher performers are tenured faculty members that are more likely to leave. To make the picture duller, he says that among those more likely to leave there are also poor performers among untenured members. Is turnover thus beneficial to the company, as if low performers would often go away? Or, is it detrimental, as with the case of higher performers who more freely leave the company?

This last study allows us to introduce the concept of visibility, here present. Schwab illustrates the characteristics of the tenured faculty members market, namely "externally visible performance coupled with external demand" (p. 973). Alongside this, a system to reward research performance was put in place, and those elements are important in order to compare this research to the topic of interest. Within professional football, we also find a market made of high external demand and visibility, plus a very remunerative system of reward to players. It is interesting, then,

observing that, even though the situation where the bank tellers subject of the study were working was really comfortable, "other institutions were able to skim particularly attractive tenured faculty members during the time period studied" (*ibid.*) which is exactly what happens in professional football.

Another element of similarity with the football field is that of economics. Schwarb found that which were losing the best performers were those whose median department salary level for tenured members was 88 per cent of that at peer institutions (Schwab, as cited in Schwab, 1991). The strength of economic power, then, works just as well for the football market as for that of business.

Dealing with the same relationship visibility-turnover-reward system, Allen and Griffeth (1999) came out with the same result:

> When both visibility and reward contingency are high, we again might expect very little relationship between performance and turnover. High performers might have high ease of movement, but their desirability of movement should be quite low compared to low performers" […] These leavers might represent high performers who are lured out of the organization by unsolicited job offers (p. 545).

A curvilinear relationship between turnover and performance was found in two cases. Janckofsky, Ferris and Breckenridge (1986) tested two diverse employee group, finding that "performance was related to turnover in a curvilinear fashion in both professional and no professional samples" (p. 105). Two years before, the same Janckofsky (1984) published a study in which a graph clearly stated adequate performers were at the bottom level of turnover, while the worst performers were the more likely to leave, then the best ones. A typical U-Shape.

However, the outcome of this study is openly questioned by the aforementioned Mathieu and Baratta, who clearly stated that no evidence of a curvilinear pattern had been found.

Some other papers, to tell the truth, place themselves on one or the other side of this debate.

Among the ones which see a positive impact on performance from high trading activity, we found Johnston and Futrell (1989), as well as Keller (1984). The first two authors are more cautious than openly lined up, indeed: "Salesforce research has traditionally viewed turnover as intrinsically bad for the organization. However, recent research on turnover suggests that this approach is overly pessimistic in its treatment of the turnover problem" (p. 141). Keller bases his work on the authors who have argued that turnover can be beneficial or functional for an organization. He stated then that "turnover of lower performing employees may be another benefit

for the business organization if better replacements are available in the labour market" (p. 182). The market he tested was in a typical situation for professional football, that is an environment with plentiful employment opportunities.

On the other side of the "barricade" stand, among the others, McEvoy and Cascio (1987), as well as Dreher (1982). The first two authors, based on a quantitative work made up of 24 studies indicated "that good performers are significant less likely to leave an organization than are poor performers" (p. 758). Thus, if the best employees tend to stay, a high turnover will have a negative impact on the company. Dreher is of the same viewpoint in that of the organizations he studied, he found no indication that the high performers leave more frequently. Even for the companies which would like to hire new employees, thus having the advantage of a high turnover, no good workers would be available if the more skilled tend to stay where they are.

The solution to the dilemma of a good turnover seems to rest on keeping the best performers at work, whilst letting the lowest performers leave. It may appear rather obvious, but it is still very difficult to translate into an everyday reality. Among the human resource management practices that Pfeffer (as cited in Ahmad and Schroeder, 2003) found to be effective in improving and sustaining the organizational performance of a company, there is just such a selective hiring of new personnel (p. 20). The aforementioned study of Dreher explains the situation well: "If an organization is successful in retaining relatively superior employees, the negative impact of turnover on organizational effectiveness should be reduced" (p. 145).

The same author addresses another important point in his research: the costs of turnover. He sees the difference in mean performance appraisal between stayers and leavers as being approximately one standard deviation. Citing Schmidt, Hunter, McKenzie, and Muldrow and their research on computer programmers, one standard deviation was found to be at around $10,871. It would be interesting to quantify one standard deviation for footballers too, by exploring the distribution of salaries between them.

Among the other both positive and negative consequences of turnover, that Staw listed differentiating them from moderating and outcome variables, are costs of recruitment, selection, and training, as well as potential for operational disruption. Anyhow, he also found greater chances of innovation and adaptation to be possible benefits the due to a higher turnover.

Regarding a high employee turnover's negative consequence, Garman, Corbett, Grady and Benesh (2005) help with their work in recognizing temporary labour, recruiting, training and the "learning curve" as hidden costs, among others aspects.
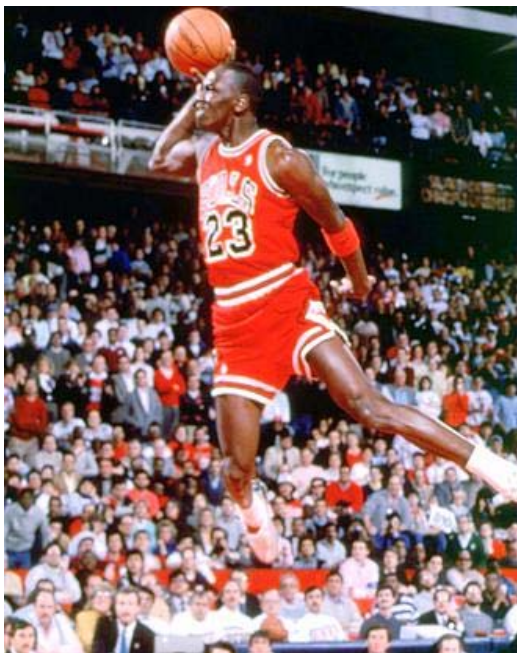
2.2.2 The Superstar and Wage Effect

As has already been pointed out, there is more agreement on the decisive importance of superstars' role on teams performances compared to what has just been highlighted as regards employee turnover. With the exception of only one reference, the others that we were able to find are all in agreement about the externality provided by the best players in any given team, or employees if we refer to a company.

On widening the perspectives to the correlation between the payroll (the) and the performances, the mutual point of view already observed becomes almost a consensus. This last finding gives us the chance to add another variable: wage or salaries. Superstar and wage effects are linked, even not reflecting exactly the same phenomena. It is true that the larger is the payroll of the team, the greater are the possibilities of having excellent players in the team. However, the two things are not absolutely consequential.

Starting with a clarification, we rely on Schulze's analysis on superstars in different areas (2003):

> The competitive model in its simple version tells us that people are remunerated according to their (marginal) productivity. This would imply that, given the enormous differences in income between the average writer or actor and, say, Stephen King or Sean Connery, there would have to be a huge gap between the talent of the stars and of those that come next but do not enjoy a star status. If you agree with me that Britney Spears' talent is not *hugely* different from that of your local music's club singer, there must be more to the superstar phenomenon that the simple model would be able to portray (p. 431).

Picture 2.1: MJ made the NBA richer

That said, Schulze recognizes that this difficulty in identifying superstars' characteristics does not affect the sports sector, as much it does in other artistic fields: "'Soft skills' like charm, looks or lyrics play a less important role: [in sports] performance is measurable in inches, milliseconds or goals. Therefore empirical analyses of the superstar phenomenon in sports are more promising" (*ibid.*). In a work on talent distribution and revenue among the teams in a league, that is competitive balance as a whole, Hausman and

Leonard (1997) conducted a thorough analysis on the National Basketball Association league to show that "superstars are quite important for generating revenue, not only for their own teams but for other teams as well" (p. 586). Using data from television rating, attendance and paraphernalia sales, the authors estimate the value of the superstar by definition of this game, Michael Jordan, to be approximately $53 millions. This value is considered as a plus not merely "to the teams that employ them, but also to other teams in the league" (p. 623).

Almost ten years later, Berri and Schmidt (2006) found a similar outcome following the same path, but from different data. These authors extended Hausman and Leonard's work, via an examination of road attendance. The evidence reported did not move away from the aforementioned results, if not that here the superstar externality is more of an advantage for the opponents than for the team which owns the superstar itself.

If one were puzzled that the aforementioned findings do not really fit one of the initial hypotheses - namely, the way in which superstars affect performances -, it is a rather obvious answer that the externality observed helps the team(s) to perform better. The more revenue produce, the more money at their disposal, hence the better it is for the team, and this happens in a quite exceptional and different way to the other players do.

As an advantage to the present research, Lucifora and Simmons (2003) move in the same way in that they work on football data; more precisely, they collect figures from Italian football. Supporting the conclusion that "a relatively small number of performers dominate their industry and earn a disproportionate share of revenues" (p. 51), they explain that it happens because "the perception by consumers that other performers, who might perform similar services, are highly imperfect substitutes" (*ibid.*) A spectator is thus willing to pay an extra price to see the superstar play.

This bring us back to the beginning of the section, to the competitive model mentioned by Schulze. Staying with Schulze's comparison to other artistic fields, Lucifora and Simmons illustrate that while "in the film industry, studios can create duplicate prints of movies at nearly constant marginal cost […], duplication of soccer matches is not possible. Each match, even if replayed between the same teams, has a different context and meaning for the audience" (p. 52).

The authors move even forward, providing an interesting insight into whom the superstars are. Generated by consumer interest, the effect exists mostly on forward players, namely those who create or score goals.

Other studies on the area of professional football agree on the point that a higher payroll leads a team to an increased chance of success. Forrest and Simmons (2000) found this relationship in four North American sports leagues, as well as in three European soccer leagues. The effect was greater in the American tournaments, but nevertheless quite well-determined in Europe too, and England in particular. Furthermore, this correlation has increased over the last decade, adding importance to the presence of superstars in a team in order to attain success.

The same experiment between Major League Baseball and English soccer was done by Hall, Szymanski and Zimbalist (2002), who conclude that, as regards Forrest and Simmons' work, the correlation increased in the 1990s, and it is less elastic in soccer than in baseball, perhaps because the open market for player talent in the former sport, compared to the trade restrictions of the latter.

We left the conclusion of the section to a contrary voice: that of Depken (2000). His opinion is that "teams with greater wage disparity experience a reduction in team performance" (p. 87). It is quite a common occurrence as the presence of superstars in a team implies a high disparity in term of wage balance. In his study on Major League Baseball, Depken concludes that a greater difference in salaries can lead to a reduction in overall team performance.

Actually, he develops two hypotheses with a different outcome. The team-cohesiveness theory "predicts that greater and mistrust among workers" potential hypothesis reads that 'damage potential' or worker-production" (p. 88). These substitutable tasks, "should be desire to inflict damage on the

> "Teams with greater wage disparity experience a reduction in team performance"
> Craig A. Depken II

wage disparity motivates jealousy (p. 91). Otherwise, the damage-"differentiated labour introduces specific risk to firm or team workers, who have low paid more so as to mitigate their team's productivity" (*ibid.*).

The breakdown of team morale caused by intra-team wage disparity could also "occur if lower paid players feel they must make themselves as individually productive as possible, perhaps inconsistent with the team's best interest (p. 88-89). Therefore, the solution to the dilemma between the need of superstars and negative consequences they may bring, is provided in the same paper, that is avoiding salary disparity as much as possible.

2.2.3 Home-Grown/Promotion from Within

We leave the definition of home-grown players to Szymanski and Kuypers (1999) in that they represent those who sign with the club without ever having registered with another one.

Such as for the player turnover we don't have much in the field of sport as regard for the importance of the academies, or home-grown players, to the final outcome.

It is easy to think that football academies are beneficial as "money savers" for the teams to which they belong. If one observes the importance of player transfer in professional football clubs' balance sheets, the reasons for home- growing talents are obvious. However, looking beyond the financial side, are they as beneficial for the results on the pitch?

One of the few studies comparing performances and teams' home-grown rates, was conducted by Berman, Down and Hill (2002) in the NBA league. It "found a statistically significant association between team performance and shared experience", to use the words of Gerrard (2004). Working on the resource based view of the firm theory, the three authors investigated the tacit knowledge which was relevant - in our case - to their group- or team-based version. They defined it "in something akin to a 'collective mind'" (p. 15). Citing Weick and Roberts, this explains their concept: "People in close relationship enact a single transactive memory system […]. People rely upon one another to contribute missing details that cue their own retrieval" (*ibid.*). Taking a sailing boat as an example, they explain that each individual has a role to play, and lacks the knowledge required to undertake the role of the others. The knowledge with which a complex task would be performed relies on the group as a whole, each of whom has a different responsibility.

Berman, Down and Hill tested this theory on NBA teams finding a positive relationship between tacit knowledge and performances, but only to a certain extent. Beyond that, what they defined as knowledge ossification occurs. As shared experience grows, the beneficial effects of the tacit knowledge become outweighed by the routine. The easiest gains come early in the relationships between players – they explain –, then environmental changes can provoke a group into no longer responding anymore to the previous changes.

Gerrard applied this theory to eight professional English football clubs and, even without a detailed econometric study as he points out, he found that it still held true. Explaining the sustained competitive advantage of Manchester United over

Picture 2.2: the MU Youth Academy, a treasure for the club

the years, he showed that a major source of the team's success in the sporting domain "has been its development of a group of highly talented home-grown players who have contributed to a high level of shared experience and continuity that rival clubs have been unable to match over a sustained period" (p. 80).

This same concept of tacit knowledge is developed by Szymanski and Kuypers, who observe: "If the same players appear together regularly over a season, they are likely to develop a better rapport with each other" (p. 178). Regarding the home-grown ones specifically, they notice that on average 45 percent of players in the leagues are home-grown, and clubs in higher position tend to develop talent more than lower-league-positioned clubs do. However, there is a limit that we can observe in investing in home-grown players. This implies restraint in not exceeding the point whereby the cost of developing these players merely matches the cost of extra talent from outside the club. Beyond this point the bargain obtained by developing, and not buying talent, is lost. Hence, the conclusion of the authors is that there is "no significant difference to the league performance of a club, once the effect of wage spending has been included" (p. 181).

It might lead to the same conclusion if further investigated, but it is worth citing the Moorhouse (1999) work on European professional football. Data from English football show that smaller clubs, usually thought of as busy talent-sellers in order to survive, should not observe this rule as strictly as they currently do. "Figures, in fact, do not support this view […]. The transfer system is an added burden on the smaller clubs taken as a whole" (p. 93).

Looking towards the business side, interesting findings have been noted by papers dealing mainly with employee turnover. In his study on the oil company sector, Dreher addresses the point that the higher performers were the "stayers", promoted at a faster rate than the "leavers". Thus, the best employees were the ones climbing the internal development ladder, much the same as home-grown players in football clubs.

Staw, instead, highlights the widely recognized benefit of the "promotion from within" companies (or teams), that is the costs. He acknowledges that inside succession eases costs and boosts morale, "yet at the same time it may not produce as much innovation and adaptation as would outside succession" (p. 267).

The standpoint of Becker, Huselid, Pickus and Spratt (1997) is clearer regarding the company research on the correlation between home-grown and team performance. The companies which included promotion from within in a Human Resource System that also foresees "extensive training, incentive pay, and relatively greater pay differentials between high and low employee performance", show higher performances (p. 43).

2.3 Post Literature Review: Expected Results

It is not easy to go through such a nebulous matter such as predictions of sports performances. It is even more difficult to focus on the three main variables we chose to analyse (trading activity, superstars and the home-grown effect), due to the lack of evidence in sports literature. Having said that, we can expect some results after the revision of the aforementioned academic literature.

We expect to find a correlation between turnover of players and performance that will be negatively oriented. To be precise, an excessive turnover harms teams, unless the influence of superstars does not overcome this effect. Clearer still, we want to take the same direction of Ahmad and Schroeder: a selective hiring of employees (players) is determinant.

Furthermore, we expect to find the so-called "superstar effect" at least teams revenues. The effect of this variable on the results of the pitch appears less simple to predict. The Depken analysis may prove effective also in football, so the beneficial effect of a superior talent may be surpassed by the difficulty of managing great players within a team. Alongside this, we expect clubs with higher payrolls to be being more successful than those whit a less substantial payroll.

In conclusion, we expect to find a positive impact of home-grown players on the financial records of the clubs. Performance on the pitch are, again, a little more complicated to predict. The tacit knowledge theory by Berman, Down and Hill is fascinating and makes a lot of sense, but the same authors recognize that its effect is limited in time.

3. RESEARCH METHODOLOGY

In order to translate practically what is suggested by the literature review, in the search of what determines football performances, we built up the aforementioned worksheet, covering all of the potential variables of interest.

The research into the database's construction was conducted through different sources, both online and as printed documents. The main ones were the website of football statistics www.soccerbase.com, and the Deloitte Annual Review of Football Finance. Regarding the latter, we worked on the 2003 to 2007 editions.

As already pointed out at the end of the introduction section, six variables were researched through extensive screening over 23 sub-variables. Five different English football seasons were taken into account from seasons 2001/02 to 2005/06. 53 clubs were considered, the teams of which competed both in the first (Premier League) and second divisions (Championship League) in England, during the same period.

At the end of the research, two regressions have been run in different ways, in order to verify if one of the hypotheses found evidence in our sample. In one regression, Premier and Championship League were analysed separately, and then regrouped, to see the results of these different clusters. A confidence interval of 0.05 has been set up.

Many parameters were used as a guide to collect the relevant data. The explanation follows variable by variable. We will focus solely on those which were utilized to obtain the final results. Not all of the variables researched, in fact, were eventually used as explanatory factors of sports performances. Although accounted for, some parameters were finally left out.

3.1 Sporting Performance, the Dependent Variable

3.1.1 Season/League

Season and league were the discriminating factors in classifying our teams. Each season obviously provided a different result to look at. At the end, regrouping the five seasons together gave us the ultimate picture about what most affects football performances.

The league distinction was useful in comparing the two most important divisions in English football. We then worked then on 28 Premier League, and 41 of Championship League clubs.

It was important to distinguish between the two tournaments. Big differences in terms of the variables considered are there: Premier League, especially at the top level, can be considered another planet in comparison to the Championship League. The disparity of income is so vast that it was necessary to look at a lower level in order to understand if the variables really explained the performances on the pitch.

3.1.2 Points/Ranking

We have already given the different points of view, based on the scientific literature, upon sports performances measurement. We wanted to include both kinds (points and ranking), even though, ultimately, they are likely to produce the same results. It is fairly obvious that a greater number of points produces a better position in the ranking as a consequence.

The importance of this variable is due to the award given to the first position-holders in the table. In the Premier League, the first four places guarantee a Champions League spot, the most important European football competition for clubs. Fifth and sixth position in the league ranking give the clubs the chance to compete for the Uefa Cup, the second most important European football competition. By the same token, the three teams which occupy the last positions in the table are relegated to the lower division. In the Championship League, the two highest-placed clubs at the campaign end obtain the right to play in the Premier League the following season, while the teams from third to sixth place are allowed to enter the play-offs in a bid to obtain an additional spot for promotion to the highest division. As in the Premier League, the same principle applies here for the last three teams at the bottom of the table.

We didn't reverse the ranking, running the regressions. It means that a positive causality between the dependent and independent variable will be a negative factor for the teams: if the slope has a negative inclination in presence of the independent variable, the ranking of the club is higher, and then the position at the end of the season will be negative.

3.2 Independent Variables

3.2.1 Trading Performance
3.2.1.1 Players In & Out

A minimum threshold of matches played was set up to include players on the transfer lists. The limits are thus: 10% of starting XI squad games, or 20% all included (either playing from the first minute, or going onto the pitch from the bench during the match). This decision was taken in

order to give value to the players' transfers, that is, only those players who played a significant role in the season - arbitrarily set up at 10% or 20% of the total matches -, were accounted for in the calculations.

3.2.1.2 Superstars

Aim of this variable was to observe how much the "superstars" weigh into the "economy" of a club's seasonal campaign. For this reason, we clustered the arrivals and departures of these top players according to the football season and not to the financial year. If, for example, a player was bought in May, after the last match of the season, we included him as among the purchases of the following season even though the financial year was still to be concluded.

3.2.2 Financial Performance

3.2.2.1 Wage

Wage/salaries were one of the three variables considered as financial factors potentially predicting performance on the pitch. Some other indicators of clubs' financial standing were collected (operation profit before players trading, pre-tax profit or loss, and net funds or debt), but not taken into account for the final regression.

Wage and salaries costs, as reported in the Deloitte report from which these figures were collected, are the "total of staff emoluments as disclosed in the notes to the accounts" (Deloitte Appendices 2007: 4). Very few cases were unavailable from our source, and thus not considered for our research for the affected season.

3.2.2.2 Net Assets/Liabilities

This figure tells us about the equilibrium of the clubs, as regards the availability of their goods. Generally speaking, current assets include cash and other assets turned into cash in one year. Instead, liabilities are obligations due and payable within 12 months. This is to be considered as important information about the financial stability of clubs.

3.2.2.3 Net Transfer Expenditure

This parameter represents the compendium of the clubs' activity on the football market during the season. The balance between money spent on player purchase, and money received

when players were sold, is situated here. It gives us information on how much a club relies on the player market, and in which percentage is related to the total turnover.

3.2.3 Home-Grown

For this measure only players chosen by the coach to play from the first minute of each game were taken into account. The final percentage, season by season, is then the effective weight of the club's youth academy on the starting XI squad.

3.2.4 Attendance

The average league attendance was utilized here, as displayed by Deloitte reports. It gave our research the information needed in order to understand the extent of the influence of the supporters watching the match at the stadium. This variable is somehow linked to the total turnover, as die-hard fans are generally the ones who attend the matches, as well as spend money on club merchandise.

3.2.5 Coaching Performance

3.2.5.1 Tenure

All of the coaches managing the teams in the five seasons which are the object of the research were considered and listed on a separate coach sheet. However, for the purpose of the regressions only those who were at the helm at the end of the football season were taken into consideration. Coach tenure is counted monthly. If a coach took care of a team in seasons prior to 2001/02, these months are accounted for and duly considered for the regressions. The rationale here is of "weighing" the influence of different coach tenures on sport performance.

4. RESULTS

We will go through this section following the same path we did for the research methodology part. Firstly, we will illustrate first the main findings, and then we will go further into details about the variables involved. For this, subheadings will be used both for trading activity, and for superstars and the home-grown effect. The same procedure will be applied for the other variables that may have an impact on performance, according to the regressions made: club wages and coach tenure.

4.1 Main Findings

In one area only the outcome was not as we had anticipated: home-grown players, whose use has a negative causality on sports performances (although not with each kind of regression). It was otherwise observed (no regressions run) that the financial impact is not as consequent as one would expect.

Regarding the other variables the results were as expected. Performance depend on wages (and turnover, which is highly correlated with salaries). Turnover had a negative impact, that is the more players a team brings in, the worse the ranking is. Attendance showed a positive impact for the Championship League.

No definitive evidence showing causality was found regarding superstar effect and coaching tenure.

4.2 Trading Activity

It is the most robust causality found: in Premier and in Championship League, as well as when regrouped and in both of the types of regressions run. The results were always the same: strong negative impact on the performance on the field.

Being taken into account in one regression only as "players in" (thus, only players acquired by the team), it showed great significance when regressed against ranking. Its "t value", the significance value of the relationship was 4.30 for the Premier League, 4.07 for the Championship League, and 3.32 if regrouped. If we consider the confidence interval as set up at (0.05), we have an extremely low value of 0.000 in both leagues. It also showed a positive correlation with the dependent variable, namely the ranking.

Given we did not reverse the ranking, as explained in the research methodology chapter (see 3.1.2), it means that the greater the number of new players each year, the higher the team's ranking, thus the worse the sporting performance.

In order to better understand the causality between the two variables, the graph below explains the way in which the acquisition of players influences the ranking. The dependent variable is represented in the Y axis, while the independent variable in is the X axis. From the graph how the positive relationship works: the more players a team acquires each season, the higher the ranking, and the worse is the placing at the end of the campaign.

Y (ranking)

X (players in)
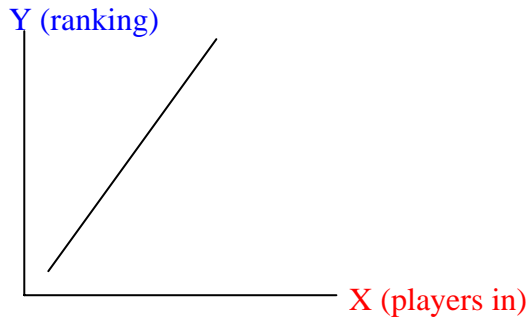
Graph 4.1: Relationship between ranking and player turnover

We obtain the same result if we look at the relationship between points and the variable players acquired. Here the confidence interval is the same in both leagues, as we observed for the relationship ranking versus players acquired (0.000), while the statistical significance value of the relationship is even greater here for the Championship (4.32), than what was found before. The negative relationship gives us the same outcome as the ranking: the more players in every season, the fewer points at the end of it.

Y (points)

X (players in)
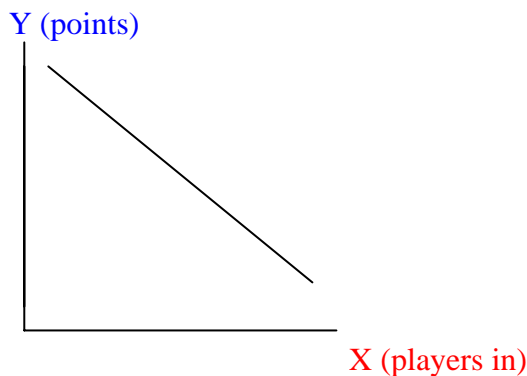
Graph 4.2: Relationship between points and player turnover

For the sake of resuming, in the following page are the values of the statistical significance, as well as the confidence interval of the variable considered.

Chart 4.1: Statistical causality between ranking and player turnover

Ranking		
Premier League	t 4.30	P >	t	0.000
Championship League	t -4.07	P >	t	0.000

Chart 4.2: Statistical causality between points and player turnover

Points		
Premier League	t -3.88	P >	t	0.000
Championship League	t -4.32	P >	t	0.000

Looking at the grids of the following pages it is easy to verify what the regressions say. In the Premier League, of the five highest-ranking clubs, three had acquired fewer players. Arsenal, Manchester United and Liverpool – respectively the first-, second- and fourth-highest best placed team in the five years of the researched – , were the last, and second last on the list of teams which had bought more players.

The other two teams in the top five are Newcastle, which is only the 20th of 28 teams on the list of the most frequent "acquirers" – and Chelsea, which was affected by the "Abramovich effect". The extraordinary economic power of the Chelsea's president probably played a role in balancing the negative effect of the high number of player acquisitions. In any case, the Londoners are below average in the "players in" ranking. The avidity of changing of the Abramovich-Mourinho period (limited only to the beginning of their reign, in all honesty), is counterbalanced by the sobriety of the Bates-Ranieri management.

Not surprisingly, the five best-ranked five clubs are also those who amass the greatest amount of points. There is only a shift between Chelsea and Manchester United: the "Blues" are here the second best team, the "Red Devils" the third one.

If we look from the other angle, we find two of the five busiest teams in the transfer windows at the bottom of the ranking table. Wolverhampton and Leicester occupy the last seats in term of ranking, but they are third (Leicester) and fourth (Wolverhampton) when it comes to welcoming the most players each year. The other three clubs with the worst ranking-average are all above the mean in the "players in" list: Derby County, Crystal Palace and Ipswich Town.

In the Championship League, two of the top five clubs in terms of ranking are among the five who acquire fewer players, that is Manchester City and Wigan. One "new entry" in the top five clubs with the greatest number of points is Reading, that takes the place of Birmingham in the ranking list. The average number of player acquisitions in this club is well below that of the Championship League over the five years examined.

The regression run takes into consideration not only the players acquired, but those who left the club show the same result. In this case the "R Square", namely the level of prediction of this statistical work is much higher than the other one: 71.7% against 27.8% (ranking versus players in) and 65% (points against players in). The significance value is quite interesting too:

0.10 with a negative correlation of -2.63. The outcome is the same as before: a high intensity of trading ("players in + out variable") leads to worse results.

The grids confirm the aforementioned figures. Of the first five in the ranking and points list in the Premier League, four have less intense trading activity (Arsenal, Manchester United, Liverpool and Newcastle). In the Championship League the same Wigan and Manchester City that both attain a high ranking and number of points with low acquisition of players are here well placed here as regards the intensity of trading. As before, the other three teams that changed less as a whole, are either about average on the ranking and points list (Luton), or in some cases far below (Crewe and Gillingham). Further investigation on these last two clubs could show why it happened.

Chart 4.3: Relationship between sports performance and player turnover in Premier League

	Club/Ranking	Club/Points	Club/Players in	Club/Plrs in+out
1	Arsenal 2	Arsenal 81	Arsenal 3.2	Arsenal 6.4
2	Manchester Utd 2.4	Chelsea 79.2	Manchester Utd 4	Manchester Utd 7
3	Chelsea 2.8	Manchester Utd 79	Everton 4.4	Charlton 7.6
4	Liverpool 3.8	Liverpool 68.8	Liverpool 4.4	Liverpool 8
5	Newcastle 6.6	Newcastle 59.6	Charlton 4.6	Newcastle 8.2
6	Tottenham 9.4	Tottenham 52.4	Leeds Utd 4.66	Everton 8.8
7	Wigan 10	Charlton 52	Manchester C. 4.75	Ipswich T. 9
8	Blackburn 10.4	Blackburn 51	Middlesbrough 4.8	Middlesbrough 9.4
9	Everton 10.8	Wigan 51	Newcastle 5	Southampton 9.5
10	Bolton 11	Everton 50.4	Aston Villa 5.4	Fulham 9.6
11	Middlesbrough 11	Bolton 50.2	Blackburn 5.8	Leeds Utd 9.66
12	West Ham 11	West Ham 50	Fulham 6	Aston Villa 10
13	Aston Villa 11.2	Leeds Utd 48.66	West Brom 6	Manchester C. 10
14	Charlton 11.4	Middlesbrough 48.4	Bolton 6.2	Blackburn 10.6
15	Manchester C. 12	Aston Villa 48	Chelsea 6.4	Birmingham 10.75
16	Fulham 12.2	Fulham 47.2	Birmingham 6.5	Chelsea 11.6
17	Southampton 12.75	Manchester C. 46.75	Southampton 6.75	Bolton 11.8
18	Leeds Utd 13	Southampton 44	Derby C. 7	West Ham 12.66
19	Birmingham 13.25	Portsmouth 40.66	Ipswich T. 7	Crystal P. 13
20	Portsmouth 15.33	Ipswich T. 40	West Ham 7	Norwich 13
21	West Brom 17	Derby C. 37	Tottenham 7.2	Tottenham 13
22	Crystal P. 18	Crystal P. 33	Norwich 8	Wolves 13
23	Ipswich T. 18	Norwich 33	Wigan 8	Leicester 13.5
24	Derby C. 19	Wolves 33	Wolves 8	West Brom 13.66
25	Leicester 19	Leicester 30.5	Crystal P. 9	Sunderland 15
26	Norwich 19	West Brom 30	Leicester 9	Derby C. 16
27	Sunderland 19	Birmingham 29.5	Sunderland 9	Wigan 17
28	Wolves 20	Sunderland 24.66	Portsmouth 13.66	Portsmouth 21.33
	Average Ranking 11.21	**Avrg Points 48.34**	**Avrg Plrs In 6.49**	**Avrg Plrs In/Out 11.39**

Chart 4.4: Relationship between sports performance and player turnover in Championship League

	Club/Ranking	Club/Points	Club/Players in	Club/Plrs in+out
1	Manchester C. 1	Manchester C. 99	Crewe 3.75	Luton 5
2	Sunderland 2	West Brom 87.5	Luton 4	Crewe 7.25
3	West Brom 2	Sunderland 86.5	Wigan 4.5	Gillingham 8.5
4	Wigan 4.5	Reading 81.25	Wimbledon-Mk Dons 4.66	Wigan 8.5
5	Birmingham 5	Wigan 79	Ipswich T. 5	Manchester C. 10
6	Reading 5.25	Birmingham 76	Manchester C. 5	Reading 10.5
7	Norwich 6	Portsmouth 75.5	Gillingham 5.25	Rotherham 11
8	Wolves 6	Norwich 75	Reading 5.75	Wimbledon-Mk Dons 11
9	Sheffield Utd 6.8	Wolves 73.75	Rotherham 6	Preston 11.8
10	Ipswich T. 7.5	Sheffield Utd 73.6	Millwall 6.2	Ipswich T. 12.5
11	Preston 8.8	West Ham 73.5	Grimsby 6.5	Millwall 12.6
12	Crystal P. 9	Ipswich T. 71	Nottingham F. 6.5	Crystal P. 13.25
13	Portsmouth 9	Preston 69.4	Preston 6.8	Nottingham F. 13.75
14	Luton 10	Leeds Utd 69	Burnley 7	Grimsby 14
15	Leicester 11	Crystal P 68.25	Norwich 7	West Brom 14
16	Millwall 11.2	Leicester 67.66	Watford 7	Wolves 14.25
17	West Ham 11.33	Queen's Park R. 66	Wolves 7	Brighton 14.33
18	Southampton 12	Millwall 63.6	Crystal P. 7.25	Burnley 14.4
19	Watford 12.8	Watford 61.8	Queen's Park R. 7.5	Norwich 14.5
20	Leeds Utd 13	Luton 61	Brighton 7.66	Watford 15.6
21	Cardiff C. 13.33	Cardiff C. 59.66	Cardiff C. 7.66	Cardiff C. 15.66
22	Coventry 14	Burnley 59.4	Barnsley 8	Queen's Park R. 16
23	Stoke C. 14.25	Coventry 59.2	Sheffield Utd 8.4	Birmingham 16
24	Wimbledon-Mk Dons 14.33	Stoke C. 58.75	West Brom 8.5	Sheffield Utd 16.2
25	Burnley 14.4	Nottingham F. 58	Sunderland 8.5	Barnsley 17
26	Nottingham F. 14.75	Southampton 58	Birmingham 9	Plymouth 18
27	Derby C. 15.5	Derby C. 57.5	Stoke C. 9	Stoke C. 18
28	Plymouth 15.5	Gillingham 56.75	Derby C. 9.25	West Ham 18
29	Queen's Park R. 16	Plymouth 54.5	Bradford 9.66	Hull C. 20
30	Gillingham 16.5	Wimbledon-Mk Dons 53.66	Plymouth 10	Derby C. 20.25
31	Hull C. 18	Hull C. 52	Walsall 10.33	Sunderland 20.5
32	Bradford 19	Walsall 52	Leicester 10.66	Leeds Utd 21.5
33	Walsall 19	Sheffield W. 49.33	Hull C. 11	Walsall 21.66
34	Rotherham 19.25	Crewe 48.5	Leeds Utd 11.5	Bradford 22.33
35	Sheffield W. 20.33	Barnsley 48	Coventry 11.6	Leicester 22.33
36	Crewe 20.75	Rotherham 47.75	Portsmouth 12	Portsmouth 22.5
37	Grimsby 21.5	Bradford 47.66	Sheffield W. 12.33	Sheffield W. 22.66
38	Brighton 22.3	Brighton 44.66	West Ham 13.5	Coventry 24.8
39	Barnsley 23	Grimsby 44.5	Southampton 14	Stockport 31
40	Stockport 24	Stockport 26	Stockport 15	Southampton 36
	Avrg Club/Ranking 12.74	**Avrg Club/Points 61.33**	**Avrg Players In 8.20**	**Avrg Players In/Out 16.43**

4.3 Superstar Effect

No causality was found between this variable and the sports performance. The regression was run in only one fashion, and the result was not significant: 0.582, far above the confidence interval of 0.05. To a limited extent we can observe that the best teams in the ranking and points list (thus, the best team in the sport performance) are almost all those who, on average, spent more on top players in average for each of the seasons taken into account. Manchester United, Chelsea, Newcastle and Liverpool topped the three classifications. The exception to the rule is Sunderland, which falls just behind the two giants Chelsea and Man Utd as superstars eagers, but it had very poor sports performances, both as regard points and ranking.

Regarding the other four leading teams, because only three years of the Abramovich management at the helm of "Blues" are considered in our research, the "Red Devils" are still ahead of Chelsea. During the tenure of the Russian billionaire in the top seat at Stamford Bridge almost £26m were spent by Chelsea in comparison to Man Utd.

The correlation observed between the busiest superstar-buyers and the teams which win most frequently is far from being automatic, though. As we can see in the chart 4.5, clubs around the average in acquiring top players (Blackburn, Leeds United, Birmingham and Ipswich Town) are either around the mean in points and ranking lists, or much lower.

In the Championship League we observe a similar pattern (chart 4.6), with three teams topping all three lists (superstars buyers, points and ranking), namely Manchester City, West Bromwich Albion and Wigan. The fourth club in the best five of the "superstar" variable had a very good sports performance (Wolverhampton), whilst the outsider is Coventry, whose passion for superstars is only limited to one season out of the five researched.

We expected that in a league with less talent than Championship League, the star could make the difference. It is not, however, not the case. There are only eight teams which spent on average more than £1 million a season for the big champion. The difference in spending between these teams and others is rather consistent. The next closest team is then Leeds with £825,000, where the mean of the league is only a little more than £0.63m (in the Premier League the mean is almost £5.3m). Even with such a shortage of money available for superstars, these top players don't make the difference.

Apart from the five clubs already mentioned, the other three big spenders did not display extraordinary sporting performances. Whereas Norwich could be happy about its policy, since it was in the play-off zone as an average seasonal ranking, Crystal Palace and Portsmouth were far from being among those who fought for the Premier League spots.

Chart 4.5: Superstar Effect in Premier League

	Club/Ranking	Club/Points	Superstar Avrg Cost (£000)
1	Arsenal 2	Arsenal 81	Man Utd 19,584
2	Man Utd 2.4	Chelsea 79.2	Chelsea 14,680
3	Chelsea 2.8	Man Utd 79	Sunderland 12,550
4	Liverpool 3.8	Liverpool 68.8	Newcastle 8,500
5	Newcastle 6.6	Newcastle 59.6	Liverpool 8,400
6	Tottenham 9.4	Tottenham 52.4	Middlesbrough 6,662.5
7	Wigan 10	Charlton 52	Tottenham 6,640
8	Blackburn 10.4	Blackburn 51	Arsenal 6,300
9	Everton 10.8	Wigan 51	Blackburn 5,100
10	Bolton 11	Everton 50.4	Birmingham 4,750
11	Middlesbrough 11	Bolton 50.2	Everton 4,500
12	West Ham 11	West Ham 50	Ipswich 4,500
13	Aston Villa 11.2	Leeds 48.66	Leeds Utd 4,500
14	Charlton 11.4	Middlesbrough 48.4	West Ham 4,283.33
15	Man City 12	Aston Villa 48	Aston Villa 3,910
16	Fulham 12.2	Fulham 47.2	Man City 3,900
17	Southampton 12.75	Man City 46.75	Charlton 3,275
18	Leeds Utd 13	Southampton 44	Fulham 3,010
19	Birmingham 13.25	Portsmouth 40.66	Derby C. 3,000
20	Portsmouth 15.33	Ipswich T. 40	Norwich 3,000
21	West Brom 17	Derby C. 37	Wigan 3,000
22	Crystal P. 18	Crystal P. 33	Southampton 2,937.5
23	Ipswich T. 18	Norwich 33	West Brom 2,833
24	Derby C. 19	Wolves 33	Portsmouth 2,566.66
25	Leicester 19	Leicester 30.5	Crystal P. 2,000
26	Norwich 19	West Brom 30	Wolves 2,000
27	Sunderland 19	Birmingham 29.5	Leicester 925
28	Wolves 20	Sunderland 24.66	Bolton 780
	Avrg Club/Ranking 11.21	**Avrg Club/Points 48.34**	**Club Average 5,291.79**

Chart 4.6: Superstar Effect in Championship League

	Club/Ranking	Club/Points	Superstar Avrg Cost (£000)
1	Man City 1	Man City 99	Man City 5,000
2	Sunderland 2	West Brom 87.5	West Ham 1,750
3	West Brom 2	Sunderland 86.5	Wolves 1,600
4	Wigan 4.5	Reading 81.25	Coventry 1,550
5	Birmingham 5	Wigan 79	Wigan 1,400
6	Reading 5.25	Birmingham 76	Crystal P. 1,275
7	Norwich 6	Portsmouth 75.5	Norwich 1,203.75
8	Wolves 6	Norwich 75	West Brom 1,125
9	Sheffield Utd 6.8	Wolves 73.75	Portsmouth 1,100
10	Ipswich T. 7.5	Sheffield Utd 73.6	Leeds Utd 825
11	Preston 8.8	West Ham 73.5	Cardiff C. 800
12	Crystal P. 9	Ipswich T. 71	Birmingham 700
13	Portsmouth 9	Preston 69.4	Sheffield W. 625
14	Luton 10	Leeds Utd 69	Reading 600
15	Leicester 11	Crystal P 68.25	Sheff. Utd 560
16	Millwall 11.2	Leicester 67.66	Leicester 500
17	West Ham 11.33	Queen's Park R.66	Burnley 470
18	Southampton 12	Millwall 63.6	Preston 406
19	Watford 12.8	Watford 61.8	Wimbledon-Mk Dons 375
20	Leeds Utd 13	Luton 61	Nottingham F. 368.75
21	Cardiff C. 13.33	Cardiff C. 59.66	Watford 360
22	Coventry 14	Burnley 59.4	Barnsley 350
23	Stoke C. 14.25	Coventry 59.2	Luton 250
24	Wimbledon- Mk Dons 14.33	Stoke C. 58.75	Plymouth 250
25	Burnley 14.4	Nottingham F. 58	Hull C. 220
26	Nottingham F. 14.75	Southampton 58	Crewe 205
27	Derby C. 15.5	Derby C. 57.5	Millwall 191
28	Plymouth 15.5	Gillingham 56.75	Queen's Park R. 150
29	Queen's Park R. 16	Plymouth 54.5	Stockport 150
30	Gillingham 16.5	Wimbledon-Mk Dons 53.66	Ipswich T. 137.5
31	Hull C. 18	Hull C. 52	Derby C. 125
32	Bradford 19	Walsall 52	Grimsby 125
33	Walsall 19	Sheffield W. 49.33	Brighton 116.66
34	Rotherham 19.25	Crewe 48.5	Southampton 90
35	Sheffield W. 20.33	Barnsley 48	Sunderland 87.5
36	Crewe 20.75	Rotherham 47.75	Stoke C. 75
37	Grimsby 21.5	Bradford 47.66	Rotherham 75
38	Brighton 22.3	Brighton 44.66	Gillingham 62.5
39	Barnsley 23	Grimsby 44.5	Bradford 33.33
40	Stockport 24	Stockport 26	Walsall 0
	Average Ranking 12.74	**Average Points 61.33**	**Club Average 632,17**

4.4 Home-Grown Effect

In the best-case hypothesis for this variable, this aspect does not affect sports performance. From another standpoint, it makes them worse. In one of the regressions run, the home-grown effect (HG) is present in the Championship League, worsening the results of the clubs that more employ youngsters. The causality is rather solid (0.001), with a significance of 3.40 in the case of ranking, becoming even more constant when we take the points into account, more specifically 0.000, with a negative causality of 3.96 ("t").   As we did for "trading activity" – with a purely informational scope, without wanting to give the exact inclination to its slope –, the graph below shows the causality between sports performance (both ranking and points), and the use of home-grown players. The more a club employs them, the higher will be the ranking at the end of the season, an therefore the worse the final placement will be. The same reasoning applies for points. Given that the causality is negative, the slope goes down which means that the more the clubs use youngsters from the academy, the fewer points at the end of the season.

We want to represent the inclination of the slope as the case of trading activity, since the result has the same strength. However, the significance of the statistics is here a little less representative in this case.
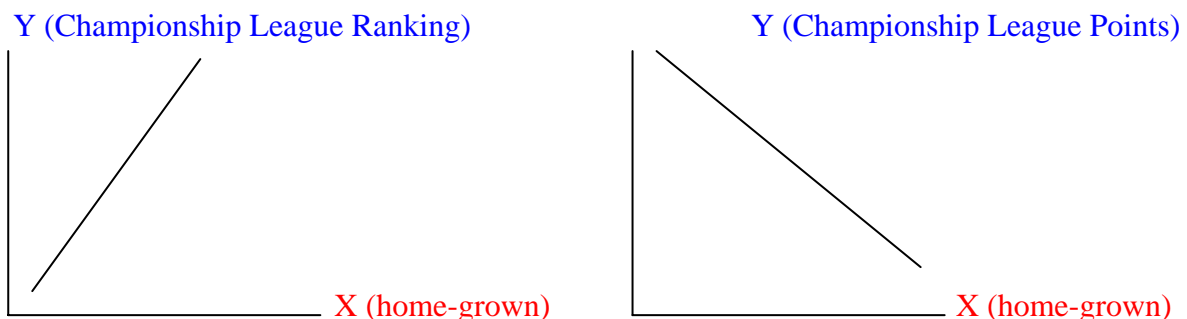
Graphs 4.3 and 4.4: Relationship between sports performance and home-grown rate in CL

In the Premier League, this phenomenon does not apply, taking neither ranking nor points into consideration. The same situation occurs when the regression in run another way.

Looking at the charts 4.7 and 4.8 we see how Manchester City, Wigan and West Bromwich Albion – among the top five both in the ranking and the points list – stand among the clubs which dealt with fewer home-grown players. Regarding the other two, Sunderland is a little below league average, while Birmingham is the exception with an employment of young footballers above the mean.

Given the coefficient of -37.27 in the points versus home-grown regression, we may assume that for each 1% of home-grown players used, the effect is equivalent to -0.37 points.

Thus, teams which fielded 20% of young players each season, stood to lose 7.4 points on average.

In the Premier League (chart 4.7) the situation is more confused, as demonstrated by the regressions. Among the top five in the ranking and on the points list, two are keen appliers of young talent: Manchester United and Liverpool. Newcastle also used them, while Arsenal and Chelsea to a lesser extent. The four clubs that picked the most players from the academy are well below the average both in the ranking and on the points list.

Chart 4.7: Relations sports performances/. hg rate in PL   *Chart 4.8 Relations. sports performances/ hg rate in CL*

	Club/Ranking	Club/Points	Home-Grown (%)
1	Arsenal 2	Arsenal 81	Birmingh. 2.28
2	Man Utd 2.4	Chelsea 79.2	W. Brom 2.87
3	Chelsea 2.8	Man Utd 79	Ipswich T. 4.54
4	Liverpool 3.8	Liverpool 68.8	Portsm. 4.86
5	Newcastle 6.6	Newcastle 59.6	Man City 7.41
6	Tottenham 9.4	Tottenham 52.4	Wigan 8.37
7	Wigan 10	Charlton 52	Derby C. 8.49
8	Blackburn 10.4	Blackburn 51	Leicester 9.68
9	Everton 10.8	Wigan 51	Chelsea 9.85
10	Bolton 11	Everton 50.4	Fulham 10.47
11	Middlesbrough 11	Bolton 50.2	Wolves 10.76
12	West Ham 11	West Ham 50	Blackb. 10.91
13	Aston Villa 11.2	Leeds 48.66	Bolton 11.91
14	Charlton 11.4	Middlesbrough 48.4	Norwich 11.96
15	Man City 12	Aston Villa 48	Totten. 12.05
16	Fulham 12.2	Fulham 47.2	Southam. 12.40
17	Southampton 12.75	Man City 46.75	Arsenal 12.62
18	Leeds Utd 13	Southampton 44	W. Ham 13.17
19	Birmingham 13.25	Portsmouth 40.66	Charlton 14.06
20	Portsmouth 15.33	Ipswich T. 40	Everton 15.88
21	West Brom 17	Derby C. 37	Newcast. 16.07
22	Crystal P. 18	Crystal P. 33	Middl. 16.55
23	Ipswich T. 18	Norwich 33	Cryst. P. 17.22
24	Derby C. 19	Wolves 33	Sunderl. 18.18
25	Leicester 19	Leicester 30.5	Liverp. 22.34
26	Norwich 19	West Brom 30	Leeds U 28.46
27	Sunderland 19	Birmingham 29.5	Aston V. 31.14
28	Wolves 20	Sunderland 24.66	Man Utd 39.37
	Avrg Club/Ranking 11.21	**Avrg Club/Points 48.34**	**Avrg Club/ HG 13.70**

	Club/Ranking	Club/Points	Home-Grown (%)
1	Man City 1	Man City 99	Hull C. 1.58
2	Sunderland 2	West Brom 87.5	West Br. 4.05
3	West Brom 2	Sunderland 86.5	Man City 4.15
4	Wigan 4.5	Reading 81.25	Reading 5.5
5	Birmingham 5	Wigan 79	Burnley 5.88
6	Reading 5.25	Birmingham 76	Cardiff C. 6.29
7	Norwich 6	Portsmouth 75.5	Wigan 6.42
8	Wolves 6	Norwich 75	West Ham 6.81
9	Sheffield Utd 6.8	Wolves 73.75	Portsm. 9.18
10	Ipswich T. 7.5	Sheffield Utd 73.6	Walsall 10.8
11	Preston 8.8	West Ham 73.5	Leicester 11.64
12	Crystal P. 9	Ipswich T. 71	QPR 11.95
13	Portsmouth 9	Preston 69.4	Preston 14.07
14	Luton 10	Leeds Utd 69	Coventry 14.46
15	Leicester 11	Crystal P 68.25	Barnsley 14.82
16	Millwall 11.2	Leicester 67.66	Leeds U. 14.83
17	West Ham 11.33	QPR 66	Bradford 15.28
18	Southampton 12	Millwall 63.6	Luton 15.41
19	Watford 12.8	Watford 61.8	Gillingh. 15.51
20	Leeds Utd 13	Luton 61	Wolves 16.91
21	Cardiff C. 13.33	Cardiff C. 59.66	Norwich 17.65
22	Coventry 14	Burnley 59.4	Sunder. 17.78
23	Stoke C. 14.25	Coventry 59.2	Stoke C. 17.98
24	Wimb.-Mk D. 14.33	Stoke C. 58.75	South. 18.37
25	Burnley 14.4	Nottingham F. 58	Sheff. W. 18.84
26	Nottingh. F. 14.75	Southampton 58	Sheff. U 19.64
27	Derby C. 15.5	Derby C. 57.5	Rotherh. 21.54
28	Plymouth 15.5	Gillingham 56.75	Birming. 21.85
29	Queen's Park R. 16	Plymouth 54.5	Derby C. 22.42
30	Gillingham 16.5	Wimb.-Mk D. 53.66	Crystal P. 23.14
31	Hull C. 18	Hull C. 52	Watford 24.15
32	Bradford 19	Walsall 52	Grimsby 24.20
33	Walsall 19	Sheff. W. 49.33	Stockport 26.28
34	Rotherham 19.25	Crewe 48.5	Ipswich 28.25
35	Sheffield W. 20.33	Barnsley 48	Brighton 32.40
36	Crewe 20.75	Rotherham 47.75	Plymouth 33.19
37	Grimsby 21.5	Bradford 47.66	Millwall 33.28
38	Brighton 22.3	Brighton 44.66	Nottin. 39.57
39	Barnsley 23	Grimsby 44.5	Wim.-Mk 43.47
40	Stockport 24	Stockport 26	Crewe 53.20
	Average Ranking 12.74	**Average Points 61.33**	**Avrg Club/ HG 18.57**

We might then expect a positive impact of the home-grown effect on financial figures. As shown in the chart 4.9, this is not always the case in the Premier League. Three out of five major users of young players do not have better results in operational profit or loss before player trading figure, an item which takes the operating margin into account before the player market deals. A good youth academy can be important in this regard. In the Premier League we see that Manchester United and Liverpool top both of the lists, but Sunderland, Aston Villa and Leeds United are below the average. The five busiest home-grown users all show all numbers above the average as regards net assets and liabilities – although this is more likely to be related to the size of the club –, and once again, a contradictory pattern for net funds/debt.

In the Championship League, the two teams which used players from their own academy less frequently show among the highest operational profit before player trading (Hull City and West Brom). The same negative correlation appears for Leeds United. However, other clubs that preferred more to use their own "products" also saw a profit (Stockport, Crystal Palace, Grimsby, Plymouth, Rotherham). In observing the correlation between the variable home-grown and the results from items net assets/liabilities and net funds/debt, the situation mostly remains confused.

One can expect a positive home-grown effect on net transfer expenditure, if the clubs save money not by buying players, but nurturing them from within the club. In this case too the correlation is confused. Three of the five clubs which have had more home-grown players in the team – Manchester United, Liverpool and Aston Villa – saw net transfer expenditure below the average, while Sunderland and Leeds United express a positive home grown effect in this regard. However we look at it, the two clubs which had a better economic performance in buying and selling players are either above the mean of home-grown users (Newcastle), or below it (Derby County).

In the Championship League, the outcome is similar. Only one club had a positive correlation with home grown use among the best five in the net transfer expenditure list which was Brighton. On the contrary, Milwall, Plymouth, Crewe and Nottingham Forest do not combine both a good balance at the end of the players markets and a high use of youngsters from the academy.

In any case, there is no correlation even when taking the teams that field fewer players from the academy into account. The first three in the list (Hull City, West Bromwich Albion and Manchester City) have a net transfer expenditure balance below the average.

Chart 4.9: Relationship between home-grown rate and financial figures in Premier League

	Home-Grown (%)	Operational Profit/Loss Before Plrs Trading (£000)	Net Assets/Liabilities (£000)	Net funds/debt (£000)
1	Man Utd 39.37	Man Utd 41,473	Man Utd 170,228.4	Man Utd 15,624
2	Aston V. 31.14	Liverpool 18,454.2	Arsenal 97,12.2	Middlesbrough 6,094.75
3	Leeds Utd 28.46	Arsenal 15,627.8	Chelsea 72,827.4	Birmingham 5,581.25
4	Liverpool 22.34	Newcastle 15,152.6	Liverpool 44,595	West Brom 2,913
5	Sunderland 18.18	Wolves 11,858	Aston V. 42,711.8	Tottenham -2,093.4
6	Crystal P. 17.22	Norwich 11,432	Tottenham 37,368.8	Wolves -3,056
7	Middlesbrough 16.55	West Brom 10,248	Middlesbrough 33,926	Aston V. -3,132
8	Newcastle 16.07	Tottenham 9,935.2	Sunderland 32,540.33	Charlton -4,301.8
9	Everton 15.88	Wigan 9,897	Newcastle 30,097.8	Portsmouth -9,156
10	Charlton 14.06	Crystal P. 8,533	Man City 26,386.25	Leicester -14,190
11	West Ham 13.17	Birmingham 7,355.3	Leeds 26,242.33	Norwich -18,480
12	Arsenal 12.62	Leicester 7,324	Charlton 24,546.4	Liverpool -19,517
13	Southampton 12.40	West Ham 6,035.33	Wolves 21,525	Southampton -21,440.75
14	Tottenham 12.05	Portsmouth 5,961.66	West Ham 14,172.66	West Ham -26,612
15	Norwich 11.96	Middlesbrough 4,625	West Brom 13,934.66	Everton -28,733.6
16	Bolton 11.91	Sunderland 3,734	Norwich 13,543	Derby C. -29,115
17	Blackburn 10.91	Man City 3,574	Southampton 11,549.75	Wigan -29,487
18	Wolves 10.76	Everton 3,431.6	Blackburn 10,193.8	Bolton -30,503.4
19	Fulham 10.47	Southampton 3,274.6	Birmingham 9,911.25	Sunderland -30,685.33
20	Chelsea 9.85	Chelsea 3,079.6	Portsmouth 9,092.33	Blackburn -30,786.8
21	Leicester 9.68	Bolton 3,069.6	Ipswich T. 7,296	Ipswich T. -31,438
22	Derby C. 8.49	Aston V. 2,689.2	Leicester 6,638	Newcastle -44,747
23	Wigan 8.37	Ipswich T. 2,523	Bolton 253.2	Leeds -58,860.33
24	Man City 7.41	Charlton 763.4	Everton -7,038.8	Man City -85,168.25
25	Portsmouth 4.86	Blackburn 293.8	Derby C. -21,291	Chelsea -113,584.4
26	Ipswich T. 4.54	Derby C. -1,516	Wigan -28,644	Fulham -128,992.6
27	West Brom 2.87	Leeds Utd -14,383.66	Fulham -118,104	Arsenal -154,192
28	Birmingham 2.28	Fulham -35,463	Crystal P. n/a	Crystal P. n/a
	Avrg HG/Club 13.70	**Avrg Op. Profit/Loss before Plrs Trading 4,366.07**	**Avrg Net/Assets Liabilities 1,533.30**	**Avrg Net Funds/Debt -30,710.41**

Chart 4.10: Relationship between home-grown rate and financial figures in Championship League

	Home-Grown (%)	Operat. Profit/Loss before Plrs Trading (£000)	Net Assets/Liabil. (£000)	Net Funds/Debt (£000)
1	Crewe 53.20	Crystal P. 5,722	Sunderl. 30,619.5	Southampton 11,109
2	Wim.-Dk Dons 43.47	Portsmouth 4,967.5	Millwall 11,138	West Ham 9,427
3	Nottingham F. 39.57	Stockport 1,648	Wolves 9,165	Coventry 5,742
4	Millwall 33.28	West Brom 1,567.5	Norwich 8,889.25	Ipswich 3,055.75
5	Plymouth 33.19	Grimsby 754	Southamp. 8,754	Sunderland 2,011
6	Brighton 32.40	Plymouth 688.5	West B. 7,815.25	Leeds Utd 1,774
7	Ipswich T. 28.25	Leeds Utd 402	Sheff. Utd 7,372.4	Sheffield U. 1,470.8
8	Stockport 26.28	Hull City 220	Preston 7,008.8	Derby C. 1,217
9	Grimsby 24.20	Rotherham 213.33	Crewe 6,676.5	Millwall 1,098.8
10	Watford 24.15	Crewe 83.75	Watford 6,617.4	Cardiff C. 996.5
11	Crystal P. 23.14	Gillingham -6,25	Brighton 5,685.33	Brighton 758.33
12	Derby C. 22.42	Sunderland -499	Man City 4,997	Preston 448.8
13	Birmingham 21.85	Norwich -516.66	W. Ham 4,617.5	Stoke C. 338.25
14	Rotherham 21.54	Walsall -601.66	Walsall 3,863.66	Plymouth 323.5
15	Sheffield Utd 19.64	Sheffield W. -855	Leicester 3,068.66	Grimsby 202.5
16	Sheffield W. 18.84	Stoke C. -1,019.5	Gillingham 2,047	Stockport 108
17	Southampton. 18.37	Leicester -1,171.33	Plymouth 1,889	Burnley 26.2
18	Stoke C. 17.98	Brighton -1,337.56	Crystal P. 988	Walsall 18.66
19	Sunderland 17.78	Sheffield Utd -1,361.6	Birmingham 977	Gillingham 8
20	Norwich 17.65	Preston -1,598.2	QPR 897	Crewe -70.5
21	Wolves 16.91	Burnley -1,861	Stockport 301	Reading -251.02
22	Gillingham 15.51	Queen's Park R. -2,119	Reading -120.5	QPR -264
23	Luton 15.41	West Ham -2,218	Rotherham-427.25	Norwich -319.25
24	Bradford 15.28	Reading -2,256	Grimsby -774	Sheffield W. -382.5
25	Leeds Utd 14.83	Birmingham -2,726	Burnley -1,061.4	Nottingham F. -415
26	Barnsley 14.82	Ipswich T. 2,730.25	Hull C. -1,087	Watford -515
27	Coventry 14.46	Millwall -3,179	Sheff. W.-1,252.33	Leicester -528
28	Preston 14.07	Nottingham F. -3,242.5	Portsm. -1,578.5	Hull C. -1,078
29	Queen's Park R. 11.95	Coventry -3,691.25	Ipswich -1,645.93	Portsmouth -1,607.5
30	Leicester 11.64	Wolves -4,135.66	Stoke C. -3,464.75	Crystal P. -2,068.75
31	Walsall 10.8	Derby C. -4,375.5	Nott. F. -6,797.5	Wolves -2,460
32	Portsmouth 9.18	Watford -5,054.8	Coventry -20,318	West Brom -2,483
33	West Ham 6.81	Wigan -5,141.5	Leeds U. -23,959.5	Wigan -3,716
34	Wigan 6.42	Cardiff C. -5,801.33	Cardiff -27,151.66	Manchester C. -12,083
35	Cardiff C. 6.29	Manchester C. -5,939	Wigan -32,054	Birmingham-15,184
36	Burnley 5.88	Southampton -7,220	Derby C. -35,329.3	Barnsley n/a
37	Reading 5.5	Barnsley n/a	Barnsley n/a	Bradford n/a
38	Manchester C. 4.15	Bradford n/a	Bradford n/a	Luton n/a
39	West Brom 4.05	Luton n/a	Luton n/a	Rotherham n/a
40	Hull City 1.58	Wimbl./Mk Dons n/a	Wimbl./Mk Dons	Wimbl./Mk Dons n/a
	Avrg HG/ Club 18.57	**Avrg Op. Prof./Loss -1,522**	**Average -656.23**	**Average -13,759.39**

Charts 4.11 and 4.12: Relationship home grown rate/net transfer expenditure in PL and CL

	Home-Grown (%)	Net Transfer Expenditure (£000)
1	Man Utd 39.37	Newcastle 11,076.6
2	Aston V. 31.14	Derby C. 1,082
3	Leeds Utd 28.46	Leeds Utd 750.66
4	Liverpool 22.34	Charlton -1,409.6
5	Sunderland 18.18	Bolton -1,749.2
6	Crystal P. 17.22	Fulham -1,784.2
7	Middlesbrough 16.55	Leicester -1,873
8	Newcastle 16.07	Everton -2,124.4
9	Everton 15.88	Man City -3,113.5
10	Charlton 14.06	West Ham -3,199.33
11	West Ham 13.17	Sunderland -4,087.66
12	Arsenal 12.62	South. -4,262.25
13	Southampton 12.40	Norwich -4,558
14	Tottenham 12.05	Blackburn -4,919.4
15	Norwich 11.96	Portsmouth -4,957.6
16	Bolton 11.91	West Brom -5,592.33
17	Blackburn 10.91	Wolves -6,414
18	Wolves 10.76	Crystal P. -6,489
19	Fulham 10.47	Ipswich T. -7,362
20	Chelsea 9.85	Wigan -7,388
21	Leicester 9.68	Birmingham -7,942.5
22	Derby C. 8.49	Arsenal -8,802.8
23	Wigan 8.37	Aston V. -9,576.4
24	Man City 7.41	Tottenham -9,843.8
25	Portsmouth 4.86	Middles. -14,230.33
26	Ipswich T. 4.54	Man Utd -15,729.6
27	West Brom 2.87	Liverpool -16,866.2
28	Birmingham 2.28	Chelsea -74,501
	Avrg Club/ HG 13.70	**Avrg Club/Net Trasfer Ex. 5,051.44**

	Home-Grown (%)	Net Transfer Exp.
1	Crewe 53.20	South. 11,109
2	Wimbl.-Mk 43.47	West Ham 9,427
3	Nottingh. 39.57	Coventry 5,742
4	Millwall 33.28	Ipswich T. 3,055
5	Plymouth 33.19	Sunderland 2,011
6	Brighton 32.40	Leeds Utd 1,774
7	Ipswich T. 28.25	Sheff. U. 1,470
8	Stockport 26.28	Derby C. 1,217
9	Grimsby 24.20	Millwall 1,099
10	Watford 24.15	Cardiff C. 996.5
11	Crystal P. 23.14	Brighton 758
12	Derby C. 22.42	Preston 448
13	Birmingham 21.85	Stoke C. 338
14	Rotherham 21.54	Plymouth 323
15	Sheffield Utd 19.64	Grimsby 202
16	Sheffield W. 18.84	Stockport 108
17	Southampton 18.37	Burnley 26.2
18	Stoke C. 17.98	Walsall 18.66
19	Sunder. 17.78	Gillingham 8
20	Norwich 17.65	Crewe -70
21	Wolves 16.91	Reading -251
22	Gillingham 15.51	QPR -264
23	Luton 15.41	Norwich -319
24	Bradford 15.28	Sheffield U.-382
25	Leeds Utd 14.83	Nott. F. -415
26	Barnsley 14.82	Watford -515
27	Coventry 14.46	Leicester -528
28	Preston 14.07	Hull C. -1,078
29	QPR 11.95	Portsmouth -1,607
30	Leicester 11.64	Crystal P. -2,086
31	Walsall 10.8	Wolves -2,460
32	Portsmouth 9.18	West B. -2,483
33	West Ham 6.81	Wigan -3,716
34	Wigan 6.42	Man City -12,083
35	Cardiff C. 6.29	Birming. -15,184
36	Burnley 5.88	Bradford n/a
37	Reading 5.5	Burnsley n/a
38	Man City 4.15	Luton T. n/a
39	West Brom 4.05	Rotherham n/a
40	Hull C. 1.58	Wim.-Mk D. n/a
	Avrg Club/ HG 18.57	**Avrg Club/Net Transfer Ex. 598.35**

4.5 Wage

This aspect is very well linked with sports performance, in all of the regressions run. The evidence is more present in the Premier League than the Championship League, where it is also shown a rather high causality. In the case of the Premier League it is the highest causality observed among of all the variables taken into consideration. As regards the other type of regression run, the outcome of the causality wage-sports performance can be comparable. This outcome is well below the confidence interval considered and with an even bigger predictive value even than the first regression.

The causality wage-sports performance works in the same way both for ranking and points, as demonstrated by the charts below.

Ranking		
Premier League	t -7.06	P >	t	0.000
Championship League	t -2.52	P >	t	0.014

Chart 4.13 Statistical causality between ranking and wage

Points		
Premier League	t 10.33	P >	t	0.000
Championship League	t 2.11	P >	t	0.038

Chart 4.14 Statistical causality between points and wage

As aforementioned regarding the trading activity, the "t value" is the significance of the statistics. The further this number is from zero, the more statistical value the result has. A confidence interval below 0.05 (the P > | t | parameter) is taken as significant.

In the other regression run about this variable (Premier and Championship League together), the confidence interval is always 0.000, with a "t" value of 8.884. The other difference is about the aforementioned "R Square": the level of prediction of the other statistic is 71.7% against 27.8% of what illustrated in the chart 4.13, or 65% of what is summarized in the chart 4.14.

As already done previously, in the following page the two graphs that explain the direction of the causality, just in order to visualize it.
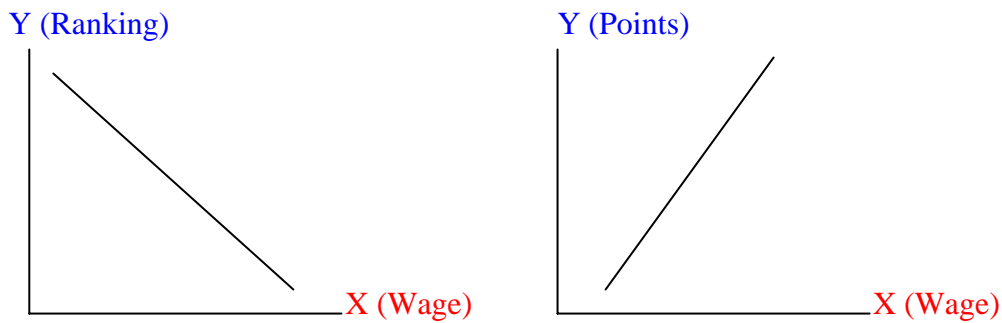
Graphs 4.5 and 4.6: Relationship between sports performance and wage

4.5.1 Net Assets/Liabilities and Net Transfer Expenditure

Difference is shown from the outcome of these two financial variables. The main assets of a club can give a boost to sporting performances of Premier League teams. A statistical significance value of 0.024 with a "t" (value of the relationship) at -2.29 tells us about the importance of assets for the big English clubs: the more the assets at disposal the lower (then the better the ranking). We see the same if we take points into account: here the significance value is of 0.034, while the "t value" is at 2.15 (see the demonstrative graph below). Here the relationship is positive: the bigger the assets, the more the points. The same does not happen for the smaller clubs of Championship League.

The other financial variable here considered marks the activity of the clubs during player market transfers. However, the amount of money spent does not affect the sport performances.
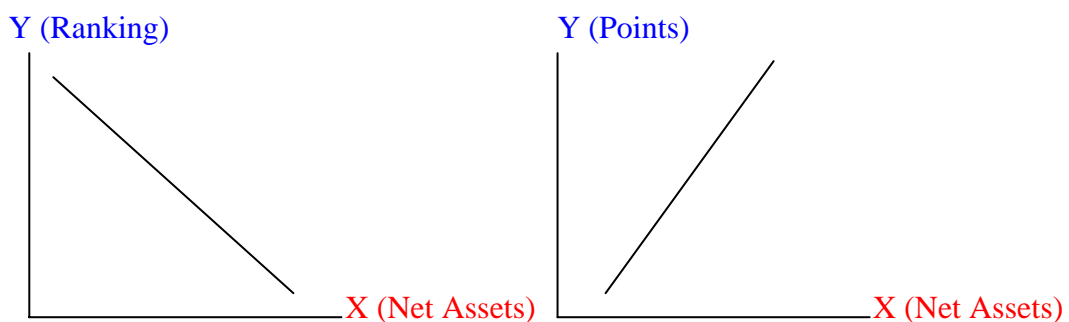
Graphs 4.7 and 4.8. Relationship between sports performance and net assets

4.6 Coaching Performance

This did not show any causality, in the regression run. Two sub-variables of the coaching performance were considered: changes and tenure.

The first one was quite close to reveal causality in the form of a confidence interval of 0.054, against 0.258 of tenure.

In exhibit 1, in consulting the whole coach sheet, featuring tenure and changes, we can observe some patterns here.

In the Premier League, the first five teams in ranking and points kept the coach for quite long time: Manchester United's coach holds the record for longevity both for the first and second leagues, with 223.73 months, more than 23 years. Arsenal's bench is also very solid lasting: 92.81 months, whilst Newcastle kept Bobby Robson for 56.39 months before changing twice in two years. Chelsea had a significant serving by Ranieri, before shifting to Mourinho, and Liverpool ended the Houllier management at 26.98 months only before hiring Benitez in the last two years terms of the research.

If we look at the bottom, the outcome is less clear. Wolverhampton and Norwich kept their coaches stable, whereas Leicester, Derby and Sunderland changed more frequently. As regards coach change during the season, the most four successful teams kept this number quite low. This is not the case for the clubs at the bottom of the ranking and points list.

In the Championship League, the best clubs observed the same rule. There were no changes in the bench for the first five clubs of the ranking/points list, and all had a significant tenure: Bruce 53.67 months at Birmingham, Jewell 48 at Wigan, and Megson 40.25 at the helm of West Bromwich Albion.

4.7 Attendance

This does have a causality in the Championship League, but no impact within the Premier League. With an interval confidence of 0.010 and a coefficient of 0.65, this regression tells us that for every 1,000 spectators in the lower division a club gains 0.65 points. The same applies for ranking: 0.014 of confidence interval, significance -2.49, coefficient -0.29. Thus, as visualized in the graphs of the next page: the higher the attendance, the better the ranking, as well as the more numerous the points.

Y (Championship League Ranking)　　　　Y (Championship League Points)
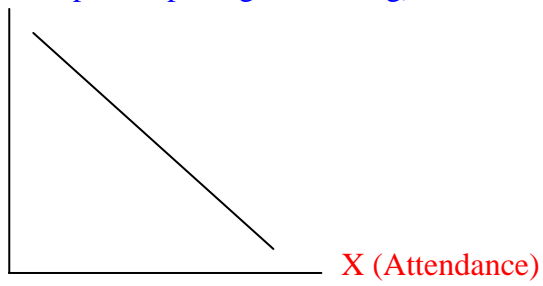
X (Attendance)　　　　X (Attendance)
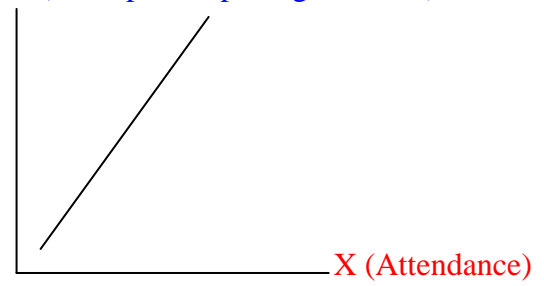
Graphs 4.9 and 4.10: Relationship between sports performance and attendance in Championship League

Chart 4.15: Relationship between sports performances, player turnover and attendance in Championship League

	Club/Ranking	Club/Points	Club/Players in	Attendance
1	Manchester C. 1	Manchester C. 99	Crewe 3.75	Manchester C. 33,059
2	Sunderland 2	West Brom 87.5	Luton 4	Sunderland 27,970
3	West Brom 2	Sunderland 86.5	Wigan 4.5	West Ham 29,285
4	Wigan 4.5	Reading 81.25	Wimbledon-Mk Dons 4.66	Leeds U. 25,781
5	Birmingham 5	Wigan 79	Ipswich T. 5	Leicester 25,196
6	Reading 5.25	Birmingham 76	Manchester C. 5	Ipswich T. 24,969.75
7	Norwich 6	Portsmouth 75.5	Gillingham 5.25	Wolves 24,946.25
8	Wolves 6	Norwich 75	Reading 5.75	Derby C. 24,263.75
9	Sheffield Utd 6.8	Wolves 73.75	Rotherham 6	Southampton 23,614
10	Ipswich T. 7.5	Sheffield Utd 73.6	Millwall 6.2	West Brom 22,728
11	Preston 8.8	West Ham 73.5	Grimsby 6.5	Sheffield W. 22,014.66
12	Crystal P. 9	Ipswich T. 71	Nottingham F. 6.5	Birmingham 21,854
13	Portsmouth 9	Preston 69.4	Preston 6.8	Norwich 20,779.25
14	Luton 10	Leeds Utd 69	Burnley 7	Sheffield Utd 20,024.6
15	Leicester 11	Crystal P 68.25	Norwich 7	Hull C. 19,841
16	Millwall 11.2	Leicester 67.66	Watford 7	Nottingham F.18,901
17	West Ham 11.33	Queen's Park R. 66	Wolves 7	Derby C. 17,711.25
18	Southampton 12	Millwall 63.6	Crystal P. 7.25	Reading 17,120.5
19	Watford 12.8	Watford 61.8	Queen's Park R. 7.5	Portsmouth 17,025.5
20	Leeds Utd 13	Luton 61	Brighton 7.66	Coventry 16,483
21	Cardiff C. 13.33	Cardiff C. 59.66	Cardiff C. 7.66	Plymouth 15,102
22	Coventry 14	Burnley 59.4	Barnsley 8	Stoke C. 14,975.25
23	Stoke C. 14.25	Coventry 59.2	Sheffield Utd 8.4	Stoke C. 14,748.5
24	Wimbledon-Mk Dons 14.33	Stoke C. 58.75	West Brom 8.5	Watford 14,572.4
25	Burnley 14.4	Nottingham F. 58	Sunderland 8.5	Preston 14,278.4
26	Nottingham F. 14.75	Southampton 58	Birmingham 9	Cardiff 13,421.66
27	Derby C. 15.5	Derby C. 57.5	Stoke C. 9	Barnsley 13,292
28	Plymouth 15.5	Gillingham 56.75	Derby C. 9.25	Bradford 13,122.33
29	Queen's Park R. 16	Plymouth 54.5	Bradford 9.66	Millwall 10,698
30	Gillingham 16.5	Wimbledon-Mk Dons 53.66	Plymouth 10	Wigan 10,538
31	Hull C. 18	Hull C. 52	Walsall 10.33	Luton 9,139
32	Bradford 19	Walsall 52	Leicester 10.66	Gillingham 8,424
33	Walsall 19	Sheffield W. 49.33	Hull C. 11	Crewe 7,222.25
34	Rotherham 19.25	Crewe 48.5	Leeds Utd 11.5	Walsall 7,215.66
35	Sheffield W. 20.33	Barnsley 48	Coventry 11.6	Rotherham 7,105
36	Crewe 20.75	Rotherham 47.75	Portsmouth 12	Stockport 6,244
37	Grimsby 21.5	Bradford 47.66	Sheffield W. 12.33	Brighton 6,209
38	Brighton 22.3	Brighton 44.66	West Ham 13.5	Grimsby 6,157
39	Barnsley 23	Grimsby 44.5	Southampton 14	Burnley 2,492.4
40	Stockport 24	Stockport 26	Stockport 15	Wimbl./Mk Dons 1,583.66
	Average Club/Ranking 12.74	**Average Club/Points 61.33**	**Average Club/plyrs in 6.49**	**Avrg Club/Attendance 32,422**

With the exception of Wigan and Reading, all the others four best performers in terms of ranking and points had an average attendance above the mean. Looking from the bottom, all seven worst clubs had an attendance below the average.

5. DISCUSSION

Some consequences can be drawn by the aforementioned results. The areas covered by the research are of central interest to the football club as they impact the clubs' life. The potentially harmful effect of trading activity and the home-grown effect, as well as the benefits coming from high wages and big crowds, are the main causalities shown in this work.

However, let us see what could be suggested, or concluded by the phenomena described up to now.

5.1 Trading Activity

It is common sense not to change every season without good reason. This takes stability away from a team, as they are forced to reinvent new cooperation mechanisms every season. This suggests the rule of patience so often forgotten by football club owners and managers that winning teams are complex constructions that have to be put together piece by piece, with no rush as the risk of failure is otherwise too high.

The human resource management literature also suggested that. Dreher observed that the best pieces of the puzzle are difficult to obtain as the more powerful employees/players are often very well placed and it is difficult to get them to move. One can imagine how difficult it can be replacing many of these players/employees each year.

Other authors agree. Allen and Griffeth remind us that in a situation similar to what we found in football (high visibility and reward) the best performers are not such eager to leave. Ahmad and Schroeder see the solution to the dilemma in selective hiring . It is without doubt the most difficult policy to pursue, however it is not by changing players in an indiscriminate fashion each year that a club will find the route to success.

If the averages suggest a threshold of 6.49 players to enter the Premier League, and 8.20 for the Championship League, whereas the total mean turnover for each season is set at 11.39 for the most important football league, and 16.3 for the lower one, the evidence suggests that the most successful clubs keep that limit as low as possible, even sensibly lower.

5.1.1 Superstar Effect and Net Transfer Expenditure

There is no superstar effect, in neither the Premier nor the Championship League, and this was, frankly, quite unexpected. By taking the externality produced by the superstar for granted, as proved by several authors, we did not find any impact on sport performances.

The same outcome occurred for net transfer expenditure, which is a highly related item since a club usually spends a lot to acquire the top players.

Comparing financial figures with superstars acquisitions was not a scope of the present research. We can make a comparison between these variables through the charts available in our study. Coming down to the point, is perhaps Depken who saw it the clearest: too much of a difference in salary produces more detrimental effects than beneficial due to jealousy and frictions. Or, probably, it is not the great players who make the difference to how a group of good players work together. This is confirmed by the findings as regards the wage variable.

Coming back to the hypotheses formulated at the beginning, it is not about the role of two or three key players, but it is more the case of a team playing together that makes a team win.

5.2 Wage

It was expected that clubs that who pay their players more are more likely to be successful than those who pay less. The literature, and also common sense, suggested that the result did not betray the expectancy. To a greater extent in the Premier League, as noted in chapter 4.5, the inequalities are more significant than in the Championship League, and the payoff is higher.

No club holds the highest position in both the ranking and points lists, which is also true for the highest spots in the wage classification (see chart 5.1). The opposite is observable as Leeds United or Manchester City did not take in what was expected by the payrolls, but from Manchester United to Chelsea, from Liverpool to Newcastle, just to mention some, all of the winning teams paid high salaries.

Some exceptions are otherwise present in the Championship League. Out of the first six highest-placed clubs in the ranking or points lists, two are below the salary average (West Brom and Wigan), while another is average(Reading). While the differences in terms of money are not as exasperated as in the Premier League, wage does not play such a determinant role.

5.3 Home-Grown Effect

There was a big surprise in this field compared to what was expected. The tacit knowledge from Berman, Down and Hill's theory did not apply here. Perhaps the inexperience of the players who have to be formed before being launched on the big stage is the key here. What is intriguing is that the home-grown effect had a negative role on the Championship League, and none on the Premier League. We can expect that players with little experience can have major difficulties playing in the top tournament, but, on the contrary, it was the lower division which showed the negative externality produced by the youngsters. This is matter of further analysis. In any case, neither in the Premier nor in the Championship League, the expected benefit for the balance sheets by saving money home-growing players and not buying them is clearly stated. The costs of player formation probably have a big effect here.

Chart 5.1: Relationship between sports performances and club wages

	Club/Ranking	Club/Points	Wage
1	Arsenal 2	Arsenal 81	Chelsea 89,951
2	Man Utd 2.4	Chelsea 79.2	Man Utd 77,757
3	Chelsea 2.8	Man Utd 79	Arsenal 68,178
4	Liverpool 3.8	Liverpool 68.8	Liverpool 61,839
5	Newcastle 6.6	Newcastle 59.6	Leeds Utd 49,097
6	Tottenham 9.4	Tottenham 52.4	Newcastle 44,907
7	Wigan 10	Charlton 52	Tottenham 36,591
8	Blackburn 10.4	Blackburn 51	Man City 36,283
9	Everton 10.8	Wigan 51	Aston V. 33,688
10	Bolton 11	Everton 50.4	Fulham 32,439
11	Middlesbrough 11	Bolton 50.2	Blackburn 32,248
12	West Ham 11	West Ham 50	Everton 31,992
13	Aston Villa 11.2	Leeds Utd 48.66	Middlesbr.29,298
14	Charlton 11.4	Middlesbrough 48.4	West Ham 28,237
15	Man City 12	Aston Villa 48	Charlton 27,615
16	Fulham 12.2	Fulham 47.2	Southampt. 25,864
17	Southampton 12.75	Man City 46.75	Sunderland 25,715
18	Leeds Utd 13	Southampton 44	Portsm. 25,131
19	Birmingham 13.25	Portsmouth 40.66	Birmin. 24,382
20	Portsmouth 15.33	Ipswich T. 40	Leicester 24,109
21	West Brom 17	Derby C. 37	Bolton 24,060
22	Crystal P. 18	Crystal P. 33	Derby C. 22,191
23	Ipswich T. 18	Norwich 33	Wigan 20,562
24	Derby C. 19	Wolves 33	Wolves 19,279
25	Leicester 19	Leicester 30.5	Crystal P. 18,081
26	Norwich 19	West Brom 30	West Brom 17,615
27	Sunderland 19	Birmingham 29.5	Norwich 16,195
28	Wolves 20	Sunderland 24.66	Ipswich T. 14,536
	Average Club/Ranking 11.21	**Average Club/Points 48.34**	**Average Club/ Wage 34,208**

	Club/Ranking	Club/Points	Wage
1	Man City 1	Man City 99	Wolv. 56,306
2	Sunderland 2	W. Brom 87.5	Man C.24,386
3	West Brom 2	Sunderl. 86.5	W.H. 21,741
4	Wigan 4.5	Reading 81.25	South. 18,811
5	Birmingham 5	Wigan 79	Leeds 16,628
6	Reading 5.25	Birmingh. 76	Sund. 16,581
7	Norwich 6	Portsmouth 75.5	Ipsw.14,536
8	Wolves 6	Norwich 75	Birm. 13,206
9	Sheffield Utd 6.8	Wolves 73.75	Leice. 12,508
10	Ipswich T. 7.5	Sheff. Utd 73.6	Derby 11,814
11	Preston 8.8	West Ham 73.5	Ports. 11,806
12	Crystal P. 9	Ipswich T. 71	Cove. 11,742
13	Portsmouth 9	Preston 69.4	Norw. 11,461
14	Luton 10	Leeds Utd 69	Read. 10,875
15	Leicester 11	Crystal P 68.25	Cryst. 10,296
16	Millwall 11.2	Leicester 67.66	Watf. 10,209
17	West Ham 11.33	QPR 66	West B. 9,876
18	Southampton 12	Millwall 63.6	Cardiff 9,485
19	Watford 12.8	Watford 61.8	Shef. U 9,482
20	Leeds Utd 13	Luton 61	Shef.W. 8,959
21	Cardiff C. 13.33	Cardiff C. 59.66	Nott. F. 8,747
22	Coventry 14	Burnley 59.4	Wigan 7,497
23	Stoke C. 14.25	Coventry 59.2	Millw. 7,115
24	Wim-Mk D. 14.33	Stoke C. 58.75	Preston 6,413
25	Burnley 14.4	Notting. F. 58	Burnley 6,386
26	Nott. F. 14.75	Southamp. 58	QPR 6,020
27	Derby C. 15.5	Derby C. 57.5	Hull C. 5,868
28	Plymouth 15.5	Gillingh. 56.75	Stoke 5,551
29	QPR 16	Plymouth 54.5	Walsall 4,525
30	Gillingham 16.5	Wim-Mk. 53.66	Gilling. 4,454
31	Hull C. 18	Hull C. 52	Plym. 3,887
32	Bradford 19	Walsall 52	Stockp. 3,714
33	Walsall 19	Sheff. W. 49.33	Rother. 3,704
34	Rotherham 19.25	Crewe 48.5	Grim. 3,619
35	Sheffield W. 20.33	Barnsley 48	Brigh. 3,583
36	Crewe 20.75	Rotherham 47.75	Crewe 2,882
37	Grimsby 21.5	Bradford 47.66	Barnsley n/a
38	Brighton 22.3	Brighton 44.66	Bradford n/a
39	Barnsley 23	Grimsby 44.5	Luton n/a
40	Stockport 24	Stockport 26	Wim./Mk n/a
	Average Ranking 12.74	**Average Points 61.33**	**Avrg Club/ Wage 10,963.30**

5.4 Attendance

The celebration of the "12th player" is important in that the crowd plays a positive role, although this is limited to the Championship League. Playing with the coefficient we may say that Manchester City owes its supporters around 21.5 points for the great 2001/02 season of 99 points, Sunderland over-18 gained 94 points in 2004/05 when it reached the Premier League, and West Bromwich Albion should reward its fans for the 14.7 extra points obtained in 2001/02, season of glory. It is interesting to observe this, and it is a further lesson in how much this variable weighs where others - like wage – do not hold such importance as in the Premier League.

5.5 Coaches

Keeping the same coach for long time does not seem to have the same importance, but further investigation into this is required. Simple observation of the data collected suggests that the winning teams hold the same guide for a long time, but evidence from one regression run here also shows the contrary.

It would be interesting to collect literature on this probably well-investigated sports performance topic and to run more regressions in order to establish more solid findings.

It is not possible to discuss this issue in greater depth here. It was not one of the most researched areas, and the sole regression does not help us to shed light on the role of long-serving coaches.

5.6 The Route to Success

A well-balanced club seems to be one which does not change too many players each season, pays its footballers well and, as regards the Championship League, can count on a big crowd in the stadium. Even if the club does not buy superstars, spending that much in the seasonal market windows can have a beneficial effect overall.

Limiting the use of youngsters emerging from the academy appears to be a better choice. A good balance is also needed here in that too much use is harmful, as it is better to choose only the best and field them.

Finally, it seems to be a good idea not to change the coach often. Although this is not demonstrated with certainty in the present work, it is hard to sustain the contrary if a team wants to win.

6. CONCLUSION

The present work takes into account the football performances as they are related to different variables. Many parameters were analysed in order to understand whether a team is winning or losing. We mainly focused on player trading activity, as well as on the impact of superstars and home-grown players. The Premier and Championship Leagues in England were the tournaments taken into account, by studying the five seasons, from 2001 to 2006. The sports performance was been measured with both points and ranking, and regressions were run to give high and significant statistical bases to the findings.

The literature on these topics was lacking in the sports sector, thus we headed to human resource management where the findings regarding the benefit of a high turnover were unclear. The outcome of the present study, thanks to the regressions run, is that a high turnover of players is harmful to the teams.

More was present in the sports literature on the so-called home-grown effect, but this research was able to draw the opposite of what had been suggested for other leagues (tacit knowledge theory applied to the NBA). Here we saw that a high recourse to youngsters from the Academy was also harmful to the team although limited to the lower division. The positive impact on financial figures of high home-grown use, including net transfer expenditure, was also not so clear.

Instead, as expected, there was a benefit produced by the wages. The literature in the sports area suggested a high payroll leads to major trophies, and we found exactly the same, although more so in the Premier League than in the Championship League. The result was not the same for the so-called superstar effect in that the key role played by great players was not shown in the research.

Other variables were taken into consideration even though the literature on these matters was not consulted. One of them is attendance, for which a positive impact was found in the Championship League. Here the higher the crowd was at the stadium, the better the results were.

As one would have expected, coach tenure and change did not show any statistical impact, as with net transfer expenditure and net assets or liabilities.

In conclusion, even after such a big effort was made in producing the present work no ranking can ever be perfect. Minimal mistakes are possible, both from our calculation and from the sources used. Furthermore, we are aware that the system designed for our measurements is open to discussion, despite the fact that by following the road of including as many variables as we did, the chances of misunderstanding a complex issue such as sport performances decrease.

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Club	Season	League	Coach	Months*
ARSENAL	2001/02	Premier	A. Wenger	12
	2002/03	Premier	A. Wenger	12
	2003/04	Premier	A. Wenger	12
	2004/05	Premier	A. Wenger	12
	2005/06	Premier	A. Wenger	12
ASTON VILLA	2001/02	Premier	J. Gregory	7.25
	2001/02	Premier	S. Gray&J. Deehan	0.39
	2001/02	Premier	G. Taylor	4.36
	2002/03	Premier	G. Taylor	12
	2003/04	Premier	D. O'Leary	12
	2004/05	Premier	D. O'Leary	12
	2005/06	Premier	D. O'Leary	12
BARNSLEY	2001/02	Championship	N. Spackman	4.29
	2001/02	Championship	G. Hodges	0.48
	2001/02	Championship	S. Parkin	7.23
	2002/03	/	/	/
	2003/04	/	/	/
	2004/05	/	/	/
	2005/06	/	/	/
BIRMINGHAM CITY	2001/02	Championship	T. Francis	3.43
	2001/02	Championship	M. Mills&J.Barron	1.90
	2001/02	Championship	S.Bruce	5.67
	2002/03	Premier	S. Bruce	12
	2003/04	Premier	S. Bruce	12
	2004/05	Premier	S. Bruce	12
	2005/06	Premier	S. Bruce	12
BLACKBURN ROVERS	2001/02	Premier	G. Souness	12
	2002/03	Premier	G. Souness	12
	2003/04	Premier	G. Souness	12
	2004/05	Premier	T. Parkes	0.29
	2004/05	Premier	M. Hughes	11.71
	2005/06	Premier	M. Hughes	12
BOLTON WANDERERS	2001/02	Premier	S. Allardyce	12
	2002/03	Premier	S. Allardyce	12
	2003/04	Premier	S. Allardyce	12
	2004/05	Premier	S. Allardyce	12
	2005/06	Premier	S. Allardyce	12
BRADFORD CITY	2001/02	Championship	J. Jefferies	6.27
	2001/02	Championship	S. Smith	0.23
	2001/02	Championship	N. Law	5.5
	2002/03	Championship	N. Law	12
	2003/04	Championship	N. Law	5.23
	2003/04	Championship	Br. Robson	6.77
	2004/05	/	/	/
	2005/06	/	/	/
BRIGHTON & HOVE A.	2001/02	/	/	/
	2002/03	Championship	M. Hinshelwod	2.71
	2002/03	Championship	S. Coppell	9.29
	2003/04	/	/	/
	2004/05	Championship	M. McGhee	12
	2005/06	Championship	M. McGhee	12

	2001/02	Championship	S. Ternent	12
	2002/03	Championship	S. Ternent	12
BURNLEY	2003/04	Championship	S. Ternent	12
	2004/05	Championship	S. Cotterill	12
	2005/06	Championship	S. Cotterill	12
	2001/02	/	/	/
	2002/03	/	/	/
CARDIFF CITY	2003/04	Championship	L. Lawrence	12
	2004/05	Championship	L. Lawrence	12
	2005/06	Championship	D. Jones	12
	2001/02	Premier	A. Curbishley	12
	2002/03	Premier	A. Curbishley	12
CHARLTON ATHLETIC	2003/04	Premier	A. Curbishley	12
	2004/05	Premier	A. Curbishley	12
	2005/06	Premier	A. Curbishley	12
	2001/02	Premier	C. Ranieri	12
	2002/03	Premier	C. Ranieri	12
CHELSEA	2003/04	Premier	C. Ranieri	12
	2004/05	Premier	J. Mourinho	12
	2005/06	Premier	J. Mourinho	12
	2001/02	Championship	G. Strachan	4.55
	2001/02	Championship	R. Nilsson	7.19
	2001/02	Championship	T. Peake&S. Ogrizovic	0.26
	2002/03	Championship	G. McAllister	12
	2003/04	Championship	G. McAllister	6.23
COVENTRY CITY	2003/04	Championship	E. Black	4.71
	2003/04	Championship	S. Ogrizovic	1.06
	2004/05	Championship	P. Reid	7.03
	2004/05	Championship	A. Heath	0.55
	2004/05	Championship	M. Adams	4.42
	2005/06	Championship	M. Adams	12
	2001/02	Championship	D. Gradi	12
	2002/03	/	/	/
	2003/04	Championship	D. Gradi	2.95
CREWE ALEXANDRA	2003/04	Championship	N. Barker	0.81
	2003/04	Championship	D. Gradi	8.24
	2004/05	Championship	D. Gradi	12
	2005/06	Championship	D. Gradi	12
	2001/02	Championship	S. Bruce	4:58
	2001/02	Championship	T. Bullivant&S. Kember	0.87
	2001/02	Championship	T. Francis	6.55
	2002/03	Championship	T. Francis	10.84
	2002/03	Championship	T. Bullivant&S. Kember	1.16
CRYSTAL PALACE	2003/04	Championship	S. Kember	5.35
	2003/04	Championship	K. Simons	1.58
	2003/04	Championship	I. Dowie	5.07
	2004/05	Premier	I. Dowie	12
	2005/06	Championship	I. Dowie	12

	2001/02	Premier	J. Smith	3.73
	2001/02	Premier	C. Todd	3.19
	2001/02	Premier	B. McEwan	0.52
	2001/02	Premier	J. Gregory	4.56
	2002/03	Championship	J. Gregory	8.95
DERBY COUNTY	2002/03	Championship	M. Lillis	0.32
	2002/03	Championship	G. Burley	2.73
	2003/04	Championship	G. Burley	12
	2004/05	Championship	G. Burley	12
	2005/06	Championship	P. Brown	7.19
	2005/06	Championship	T.Westley	4.10
	2001/02	Premier	W. Smith	8.92
	2001/02	Premier	D. Moyes	3.05
EVERTON	2002/03	Premier	D. Moyes	12
	2003/04	Premier	D. Moyes	12
	2004/05	Premier	D. Moyes	12
	2005/06	Premier	D. Moyes	12
	2001/02	Premier	J. Tigana	12
	2002/03	Premier	J. Tigana	9.85
FULHAM	2002/03	Premier	C. Coleman	2.15
	2003/04	Premier	C. Coleman	12
	2004/05	Premier	C. Coleman	12
	2005/06	Premier	C. Coleman	12
	2001/02	Championship	A. Hessenthaler	12
	2002/03	Championship	A. Hessenthaler	12
	2003/04	Championship	A. Hessenthaler	12
GILLINGHAM	2004/05	Championship	A. Hessenthaler	6.32
	2004/05	Championship	J. Gorman	0.23
	2004/05	Championship	S. Ternent	5.45
	2005/06	/	/	/
	2001/02	Championship	L. Lawrence	6.39
	2001/02	Championship	P. Groves	5.61
GRIMSBY TOWN	2002/03	Championship	P. Groves	12
	2003/04	/	/	/
	2004/05	/	/	/
	2005/06	/	/	/
	2001/02	/	/	/
	2002/03	/	/	/
HULL CITY	2003/04	/	/	/
	2004/05	/	/	/
	2005/06	Championship	P. Taylor	12
	2001/02	Premier	G. Burley	12
	2002/03	Championship	G. Burley	3.65
	2002/03	Championship	T. Mowbray	0.55
IPSWICH TOWN	2002/03	Championship	J. Royle	7.80
	2003/04	Championship	J. Royle	12
	2004/05	Championship	J. Royle	12
	2005/06	Championship	J. Royle	12
	2001/02	Premier	D. O'Leary	12
	2002/03	Premier	T. Venables	8.42
	2002/03	Premier	P. Reid	3.58
LEEDS UNITED	2003/04	Premier	P. Reid	5.32
	2003/04	Premier	E. Gray	6.68
	2004/05	Championship	K. Blackwell	12
	2005/06	Championship	K. Blackwell	12

	Season	League	Manager	Value
	2001/02	Premier	P. Taylor	3.48
	2001/02	Premier	G. Parker	0.32
	2001/02	Premier	D. Bassett	5.87
	2001/02	Premier	M. Adams	2.33
	2002/03	Championship	M. Adams	12
LEICESTER CITY	2003/04	Premier	M. Adams	12
	2004/05	Championship	M. Adams	3.63
	2004/05	Championship	D. Bassett	0.65
	2004/05	Championship	C. Levein	7.72
	2005/06	Championship	C. Levein	7.22
	2005/06	Championship	R. Kelly	4.78
	2001/02	Premier	G. Houllier	3.96
	2001/02	Premier	P. Thompson	5.06
	2001/02	Premier	G. Houllier	2.98
LIVERPOOL	2002/03	Premier	G. Houllier	12
	2003/04	Premier	G. Houllier	12
	2004/05	Premier	R. Benitez	12
	2005/06	Premier	R. Benitez	12
	2001/02	/	/	/
	2002/03	/	/	/
LUTON TOWN	2003/04	/	/	/
	2004/05	/	/	/
	2005/06	Championship	M. Nevell	12
	2001/02	Championship	K. Keegan	12
	2002/03	Premier	K. Keegan	12
MANCHESTER CITY	2003/04	Premier	K. Keegan	12
	2004/05	Premier	K. Keegan	8.63
	2004/05	Premier	S. Pearce	3.37
	2005/06	Premier	S Pearce	12
	2001/02	Premier	A. Ferguson	12
	2002/03	Premier	A. Ferguson	12
MANCHESTER UTD	2003/04	Premier	A. Ferguson	12
	2004/05	Premier	A. Ferguson	12
	2005/06	Premier	A. Ferguson	12
	2001/02	Premier	S. McLaren	12
	2002/03	Premier	S. McLaren	12
MIDDLESBROUGH	2003/04	Premier	S. McLaren	12
	2004/05	Premier	S. McLaren	12
	2005/06	Premier	S. McLaren	12
	2001/02	Championship	M. McGhee	12
	2002/03	Championship	M. McGhee	12
	2003/04	Championship	M. McGhee	3.71
	2003/04	Championship	D. Wise	8.29
MILLWALL	2004/05	Championship	D. Wise	12
	2005/06	Championship	S. Claridge	1.59
	2005/06	Championship	C. Lee	4.81
	2005/06	Championship	D. Tuttle	3.97
	2005/06	Championship	T. Burns	1.63
	2001/02	Premier	Bo. Robson	12
	2002/03	Premier	Bo. Robson	12
	2003/04	Premier	Bo. Robson	12
	2004/05	Premier	Bo. Robson	1.74
NEWCASTLE UNITED	2004/05	Premier	J. Carver	0.45
	2004/05	Premier	G. Souness	9.81
	2005/06	Premier	G. Souness	7.48
	2005/06	Premier	G. Roeder	4.52

	2001/02	Championship	N. Worthington	12
	2002/03	Championship	N. Worthington	12
NORWICH CITY	2003/04	Championship	N. Worthington	12
	2004/05	Premier	N. Worthington	12
	2005/06	Championship	N. Worthington	12
	2001/02	Championship	D. Platt	1
	2001/02	Championship	P. Hart	11
	2002/03	Championship	P. Hart	12
	2003/04	Championship	P. Hart	7.45
NOTTINGHAM F.	2003/04	Championship	J. Kinnear	4.45
	2004/05	Championship	J. Kinnear	5.79
	2004/05	Championship	M. Harford	0.81
	2004/05	Championship	G. Megson	5.40
	2005/06	/	/	/
	2001/02	/	/	/
	2002/03	/	/	/
	2003/04	/	/	/
PLYMOUTH ARGYLE	2004/05	Championship	B. Williamson	12
	2005/06	Championship	B. Williamson	2.74
	2005/06	Championship	J. Scott	0.55
	2005/06	Premier	T. Pulis	8.71
	2001/02	Premier	G. Rix	9.29
	2001/02	Premier	H. Redknapp	2.71
	2002/03	Premier	H. Redknapp	12
	2003/04	Premier	H. Redknapp	12
PORTSMOUTH	2004/05	Premier	H. Redknapp	4.55
	2004/05	Premier	V. Zajec	4.45
	2004/05	Premier	A. Perrin	2
	2005/06	Premier	A. Perrin	5.21
	2005/06	Premier	J. Jordan	0.42
	2005/06	Premier	H. Redknapp	6.37
	2001/02	Championship	D. Moyes	8.86
	2001/02	Championship	K. O'Hanlon	1.42
	2001/02	Championship	C. Brown	1.72
PRESTON NORTH END	2002/03	Championship	C. Brown	12
	2003/04	Championship	C. Brown	12
	2004/05	Championship	C. Brown	2.21
	2004/05	Championship	B. Davies	9.79
	2005/06	Championship	B. Davies	12
	2001/02	/	/	/
	2002/03	/	/	/
QUEEN'S PARK R.	2003/04	/	/	/
	2004/05	Championship	I. Holloway	12
	2005/06	Championship	I. Holloway	7.62
	2005/06	Championship	G. Waddock	4.38
	2001/02	Championship	/	/
	2002/03	Championship	A. Pardew	12
	2003/04	Championship	A. Pardew	2.55
	2003/04	Championship	K. Dillon	0.74
READING	2003/04	Championship	N. Hammond&B. McDermott	0.19
	2003/04	Championship	S. Coppell	8.52
	2004/05	Championship	S. Coppell	12
	2005/06	Championship	S. Coppell	12

	2001/02	Championship	R. Moore	12
	2002/03	Championship	R. Moore	12
	2003/04	Championship	R. Moore	12
ROTHERHAM UNITED	2004/05	Championship	R. Moore	6.75
	2004/05	Championship	A. Knill	3.23
	2004/05	Championship	M. Harford	2.02
	2005/06	/	/	/
	2001/02	Championship	N. Warnock	12
	2002/03	Championship	N. Warnock	12
SHEFFIELD UNITED	2003/04	Championship	N. Warnock	12
	2004/05	Championship	N. Warnock	12
	2005/06	Championship	N. Warnock	12
	2001/02	Championship	P. Shreeves	4.03
	2001/02	Championship	T. Yorath	7.97
	2002/03	Championship	T. Yorath	4.31
SHEFFIELD WEDNESDAY	2002/03	Championship	B. Green	0.19
	2002/03	Championship	C. Turner	7.50
	2003/04	/	/	/
	2004/05	/	/	/
	2005/06	Championship	P. Sturrock	12
	2001/02	Premier	S. Gray	4.18
	2001/02	Premier	G. Strachan	7.82
	2002/03	Premier	G. Strachan	12
	2003/04	Premier	G. Strachan	7.60
	2003/04	Premier	S. Wigley	0.61
SOUTHAMPTON	2003/04	Premier	P. Sturrock	3.79
	2004/05	Premier	P. Sturrock	2.02
	2004/05	Premier	S. Wigley	3.48
	2004/05	Premier	H. Redknapp	6.5
	2005/06	Premier	H. Redknapp	5.46
	2005/06	Championship	D. Bassett	0.68
	2005/06	Championship	G. Burley	5.86
	2001/02	Championship	A. Kilner	4.42
	2001/02	Championship	C. Madden	0.26
	2001/02	Championship	C. Palmer	7.32
STOCKPORT COUNTY	2002/03	/	/	/
	2003/04	/	/	/
	2004/05	/	/	/
	2005/06	/	/	/
	2001/02	/	/	/
	2002/03	Championship	S. Cotterill	3.60
	2002/03	Championship	D. Kevan	0.71
STOKE CITY	2002/03	Championship	T. Pulis	7.69
	2003/04	Championship	T. Pulis	12
	2004/05	Championship	T. Pulis	12
	2005/06	Championship	J. Boskamp	12
	2001/02	Premier	P. Reid	12
	2002/03	Premier	P. Reid	3.56
	2002/03	Premier	H. Wilkinson	5
SUNDERLAND	2002/03	Premier	M. McCarthy	3.41
	2003/04	Championship	M. McCarthy	12
	2004/05	Championship	M. McCarthy	12
	2005/06	Premier	M. McCarthy	9.23
	2005/06	Premier	K. Ball	2.77
	2001/02	Premier	G. Hoddle	12
TOTTENHAM HOTSPUR	2002/03	Premier	G. Hoddle	12
	2003/04	Premier	G. Hoddle	2.84

TOTTENHAM HOTSPUR	2003/04	Premier	D. Pleat	9.16
	2004/05	Premier	J. Santini	5.48
	2004/05	Premier	M. Jol	6.52
	2005/06	Premier	M. Jol	12
WALSALL	2001/02	Championship	R. Graydon	7.21
	2001/02	Championship	C. Lee	4.76
	2002/03	Championship	C. Lee	12
	2003/04	Championship	C. Lee	9.74
	2003/04	Championship	P. Merson	2.26
	2004/05	/	/	/
	2005/06	/	/	/
WATFORD	2001/02	Championship	G. Vialli	12
	2002/03	Championship	R. Lewington	12
	2003/04	Championship	R. Lewington	11
	2004/05	Championship	R. Lewington	9.14
	2004/05	Championship	T. Bullivant& N. Gibbs	0.23
	2004/05	Championship	A. Boothroyd	2.63
	2005/06	Championship	A. Boothroyd	12
WEST BROMWICH ALBION	2001/02	Championship	G. Megson	12
	2002/03	Premier	G. Megson	12
	2003/04	Championship	G. Megson	12
	2004/05	Premier	G. Megson	4.28
	2004/05	Premier	F. Burrows	0.45
	2004/05	Premier	B. Robson	7.27
	2005/06	Premier	B. Robson	12
WEST HAM UNITED	2001/02	Premier	G. Roeder	12
	2002/03	Premier	G. Roeder	11.42
	2002/03	Premier	T. Brooking	0.58
	2003/04	Championship	G. Roeder	1.74
	2003/04	Championship	T. Booking	1.84
	2003/04	Championship	A. Pardew	8.42
	2004/05	Championship	A. Pardew	12
	2005/06	Championship	A. Pardew	12
WIGAN ATHLETIC	2001/02	/	/	/
	2002/03	/	/	/
	2003/04	Championship	P. Jewell	12
	2004/05	Championship	P. Jewell	12
	2005/06	Premier	P. Jewell	12
WIMBLEDON-MK DONS	2001/02	Championship	T. Burton	12
	2002/03	Championship	S. Murdoch	12
	2003/04	Championship	S. Murdoch	12
	2004/05	/	/	/
	2005/06	/	/	/
WOLVERHAMPTON W.	2001/02	Championship	D. Jones	12
	2002/03	Championship	D. Jones	12
	2003/04	Premier	D. Jones	12
	2004/05	Championship	D. Jones	4.46
	2004/05	Championship	S. Gray	1.19
	2004/05	Championship	G. Hoddle	6.35
	2005/06	Championship	G. Hoddle	12

* In order to take into account the days also, the monthly tenure have been calculated as in the example:
  6 (days)/31 (days of the month) x 100
N.B. In some cases the calculated yearly tenure is inferior to 12 months