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# The Influence of Managerial Characteristics on Season Performance: Evidence from English Football Leagues.

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## Abstract

This paper examines the effect of managerial characteristics on performance for English football clubs. Hand-picked data from the leading football database Transfermarkt on characteristics of managers from the Premier League and the Championship Football League is used over the sample period from 2014 to 2019. To measure the effect of managerial characteristics on performance, ordinary least squares (OLS) regression is used. The answer to the question whether managerial characteristics make an impact is twofold: on the one hand, the results indicate that managerial characteristics at the individual level make little to no difference. On the other hand, the results show that when multiple characteristics are observed simultaneously, there is a statistically significant relationship. Characteristics like experience as a manager, diffidence, and age seem to make an impact, but this ultimately depends on the context.

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# 1 Introduction

In August, English football leagues will start again, which means that transfer rumors are in full swing. This applies not only to the players, but also to the managers. Every club uses transfers to create the best possible team and the best possible staff. Some of those transfers are reinforcements for a longer period of time and some are for the short term. Some turn out to be successful and some prove to be a disappointment. However, when comparing the two, manager tenures seem to be a lot shorter. When looking at the 2014-2019 English football league seasons, this belief is confirmed: in five years of Premier League, there were a total of 83 managerial changes. This means that almost all 20 clubs undergo a managerial change per season on average. Additionally, in five years of Championship Football League there were a total of 138 managerial changes, which is undoubtedly a large amount. This means that each of the 23 clubs in the Championship Football League undergoes at least one managerial change per season on average, and one may ask why that is. An explanation could be that managers are seen as ultimately responsible, which is why they will also be the first to be blamed if there is a decline in success, which then often leads to the manager being sacked. However, this line of thinking does not feel entirely fair: while it is true that the manager is ultimately responsible, there is also a whole team of players who must show it in the end. Is it therefore fair to always blame the manager for a declining performance? The current way of assessing managers outlines the core problem: there is insufficient knowledge on what makes a good manager in sports. Are managers with high win rates necessarily good managers? Probably not, since the performance of football clubs is also a representation of player quality, randomness, and other external factors. However, this does not mean that managers cannot influence the performance during a season. On the contrary, through their tactics – and ultimately their characteristics and personality – they can make or break a team. As current literature does not provide many insights how managerial characteristics could influence sports performance, this paper aims to add relevant insights on managerial characteristics to the current literature, specifically for the English football leagues. This could then help clubs to get better results by hiring better managers.

The research question therefore is: *“To what extent do managerial characteristics impact the performance of English football clubs in the 2014-2019 seasons?”* In this paper, performance is defined as the average points per match per season. Managerial characteristics in this paper are age, experience as a manager, experience as a player, diffidence, and cultural affiliation. This research question will be answered by analyzing data using ordinary least squares, which examines the relationship between performance and managerial characteristics. To account for heteroskedasticity, robust standard errors are used. The regression models are applied to datasets from the Premier League, the Championship Football League, and a combination of both.

From the results, the impact of certain managerial characteristics on club performance will be derived. If club owners, management, or even ordinary firm owners make use of these results, they can amplify their results by appointing better managers or coaches. Also, if clubs decide to make optimal transfers, they do save money. Although the relation will not be causal, it can aid in reaching increased efficiency and profits. As a consequence, this paper will also be relevant for firms and managers.

Current literature, like Peeters, Mills, Pennings & Sung (2019), shows more in-depth evidence that certain manager characteristics can boost the performance of a team in the context of football. Szymanski, Alon & Kalra (2021) shows that multicultural and multilingual managers perform better than their monocultural colleagues in the context of (inter)national football competitions. Research like this is very new and shows only a part of managerial characteristics that could influence performance. In addition, literature such as Peeters, Salaga & Juravich (2020) describes the impact of managers in the context of the Major League Baseball. Although this examines the relationship between managers and performance, no extensive research has yet been done on this relationship in the context of football. This paper therefore aims to extend knowledge on managerial characteristics and performance and fill this gap in current literature. Empirical research like this can ultimately be the basis of football clubs being able to hire better managers, which is why this is such a relevant topic.

The results show that there is no significant relationship between performance and experience as a manager, experience as a player, or cultural affiliation. This means that managerial characteristics are not that important for performance when looked at individually. On the other hand, when combining multiple characteristics and then performing the regression analysis, it seems that there is a significant relationship. In addition, the results show that there is a wide variation in the importance of managerial characteristics between the Premier League and the Championship Football League. The latter league shows very little significance for the different characteristics, implying that in this league it is less important to pay attention to managerial characteristics. Thus, the answer to the question to what extent managerial characteristics make an impact is twofold: on the one hand, managerial characteristics are of little use when looking at the individual level. On the other hand, when multiple characteristics are measured, it already seems somewhat more important. So, it is meaningful to measure a manager's entire personality and see if it affects performance that way. However, the ultimate impact of managerial characteristics depends mostly on the context. This implicates that clubs should also take the level of their league into account when hiring a new manager. Thus, the results can help clubs to find better managers, but they do not indicate what an optimal manager looks like. When English football competitions are starting again in August, it is therefore useful for clubs to evaluate whether the staff fits the clubs' goals. They can also look at the earlier mentioned characteristics to hire better managers, to ultimately get better performance, but they must keep in

mind that performance is not merely dependent on characteristics. Yet, there is still not an unambiguous answer to the question what makes an optimal manager. Therefore, one may still ask why English football clubs undergo so many managerial changes.

The structure of this paper is as follows: first, a comprehensive review the literature will be provided, discussing all insights surrounding managers and sports. Next, the various hypotheses used in this paper will be explained. After that, the data will be discussed, followed by a section explaining the methods that will be used to answer the research question. This will include an explanation of the summary statistics. Next, the results will be discussed in detail and finally, a conclusion and discussion will follow to answer the research question.

## 2 Theoretical Framework

### 2.1 Introduction

To start off the question to what extent managerial characteristics make an impact on the performance of English football clubs in the 2014-2019 seasons, the existing literature will be assessed to give a broad idea of what is to be expected. Because this topic is relatively specific, it is divided it into three smaller topics: (1) managerial characteristics and the performance of general firms; (2) managers and sports performance; and (3) managerial characteristics and the performance is the context of sports. In this way, all relevant aspects of the topic are properly highlighted, and a clear picture can be formed to establish the right hypotheses. This literature review will address the following sub-questions respectively:

*What is the impact of managerial characteristics on general firm performance?*

*What is the impact of managers on sports performance?*

*What is the impact of managerial characteristics on sports performance?*

A comprehensive review of the relevant, existing literature will be provided for each sub-question. A conclusion will then be drawn from these studies and the main points will be linked back to the central issue. Then based on these main points, a general conclusion will follow, ultimately providing the hypotheses for this empirical study.

## 2.2 Managerial characteristics and general firm performance

To start off the theoretical framework to form a foundation of this research, the impact of managerial characteristics on general firm performance will be discussed to give an insight of what characteristics are generally preferred by firms for managers to have. While football clubs cannot be directly compared to general firms in the sense that their activities are widely different, it does give an insight to what managerial characteristics result in abnormal performance.

The fact that managerial characteristics do matter for firm performance is investigated in Allred, Snow & Miles (1996). The findings show that certain characteristics in managerial careers are preferred by companies. In the first place there must be a knowledge-based technical specialty. In addition, a degree of cross-functional and international experience is of great importance. Thirdly, being able to collaborate in leadership is key in larger firms. Fourthly, the skill to manage on your own is regarded as an important character trait. Finally, personal characteristics as flexibility, integrity, and trustworthiness are important in the eyes of firms. Boeker (1997) gives an insight of what managerial characteristics make strategic change more likely. It shows that long-serving managers do often perform poor strategically wise, ultimately leading to a strategic change. Thus, these studies show that managerial characteristics are important, but do not yet show which ones lead to better performance.

From small and medium-sized Greek and Spanish firms it follows that personal characteristics of decision-makers have a large impact on the export performance of a firm. Higher educated managers achieve better results, and the positive impact of multilingualism and international experience is emphasized. Age has an ambiguous effect: there is a negative relationship between age and profitability, but no relationship between age and firm size (Nakos, Brouthers & Brouthers, 1998; Acedo & Galán, 2011; Schlegelmilch & Ross, 1987). Kathuria & Porth (2003) also emphasizes this and states that higher levels of education lead to more innovative business operations, and ultimately to better performance. It also acknowledges that older managers are more likely to be risk averse and tend to be more conservative in their decision-making than their younger, innovative counterparts.

In the context of small and medium-sized enterprises in the United Kingdom, Blackburn, Hart & Wainwright (2013) also gives an insight of how manager characteristics can influence a firm's performance. It acknowledges the conclusions made in earlier mentioned research and adds to this by including owner-managers' business style in its model. It follows that risk-taking, innovativeness, and being open to new technologies positively affects the performance of firms. Not only do general characteristics of managers matter, but also personalities are important predictors for firm performance, just like Allred et al. (1996) states.

The first sub-question of this theoretical framework was: *“What is the impact of managerial characteristics on general firm performance?”* However, the answer depends on the context, with the result that there is no clear answer to the question. In many cases, higher education and multilingualism are predictors of good performance. However, characteristics like age and gender are difficult to optimize. In some industries, it may be advantageous for certain reasons to have a woman manage, and in others, a man. When looking at the age of a manager, it is important to look at the stage a company is in: is there a need for an innovative, risk-seeking, young manager or rather a conservative, older manager? An important note is that the literature regarding managerial characteristics on general firm performance is quite dated, which has some implications for the conclusions made in this sub-question. The fact that many studies are several decades old makes it so that the conclusions reached then may not match the reality of today. In the context of football, one might expect younger managers to be more risk-taking, which leads to abnormal performance differences. This might be useful for promoting teams, but it is not optimal for teams which are in race for the title. The positive impact of multilingualism should also hold for the context of football since today’s teams are often a mix of various cultures and nationalities. Also, experience is important for football managers too, as it helps them to form a strategy even in unfamiliar situations. The educational degree of managers is harder to translate to a football context. Of course, a trainer's degree is important, but traditional education does not necessarily contribute to performance. From the literature on managerial characteristics, it can be concluded that certain character traits influence performance, which is likely to be the same in the context of professional football.

### 2.3 Managers and sports performance

In the previous sub-question, literature is used to answer the question whether managerial characteristics have an impact on general firm performance. After that, these findings are connected to a football context. However, these results cannot be directly translated to a specific sports context, which is why literature regarding the impact of managers in sports will now be addressed. Again, the results of studies on managers in one sport might not be applicable to other sports, but it may give useful insights for the context of football.

Peeters, Salaga & Juravich (2020) analyzes the impact of managers on firm performance in Major League Baseball (MLB). It follows that both managerial ability and match quality are relevant factors influencing firm performance. The results show that there is no learning-by-doing, which implies that high-performing managers have certain characteristics that make them perform better. In this context, such characteristics are high-end technical experience and management experience. These results



confirm previous management studies on the MLB, such as Kahn (1993). This shows that better managers lead to better performance and players, which is the reason to hire the best manager possible.

In the context of the American National Basketball Association (NBA), Berri, Leeds, Leeds & Mondello (2009) analyzes the role of managers in team performance. According to economic theory, managers can influence performance through their knowledge and leadership. However, the performance of managers often relies on the quality of workers or athletes. The paper concludes that extraordinary performance is rare within the NBA. Managers do have a significant positive influence on the performance of the players, and ultimately to the win rate of teams. On the contrary, it seems that managers do not contribute significantly to the quality of players compared to a standard, more generic manager. So, this means that a manager is important, but especially the fact that there is a manager is important.

In addition to the manager's quality, it is often said that there is a large financial aspect to sports performance. Ferri, Macchioni, Maffei & Zampella (2017) finds that there is a strong positive relationship between Italian football players' salaries and team performance. This implicates that managers need to invest in players' salaries through hiring experienced, but transfer-free players. It also confirms previous studies like Frick & Simmons (2008), in which is concluded that clubs that heavily invest in player talent can be more successful in the league. Galariotis, Germain & Zopounidis (2017) comes up with a vicious circle regarding revenues in the Ligue 1: higher revenues lead to better athletic performance, which in turn leads to higher revenues, and so on. However, the findings part with earlier named studies, as it seems that financial performance negatively affects the club's performance. This is because using the revenues to attain healthy finances leaves less room for investments which could lead to better sports achievements. These findings do not implicate that managers have little to no influence over their club's performance, however, it gives an insight that there is more to performance than just the manager alone.

Andersen (2011) draws a different conclusion. It follows that a manager's leadership and manager succession have little to no impact on the performance teams. The study also has three implications which concretize the above conclusions: (1) managers must not be changed in the middle of an ongoing season, even if the team is not performing well; (2) if the manager has no future at the club, change managers between seasons; and (3) inside managers must be preferred over outside managers. The performance of teams will likely not change due to a certain manager, as it is mostly the result of the players, the opponents, and luck.

So, what is the impact of managers on sports performance? The recurring fact of the general utility of managers, or at least to a small extent, is undisputed by the existing literature on managers and sports performance. However, the degree of managerial impact is heavily disputed. From the literature it must be acknowledged that there is more to firm or sports performance than solely the manager. Business performance, financial performance, and player quality are all external factors from the manager's perspective, but they do play a large role in the performance of teams. In short, to some extent managers have influence over the performance of their teams, but it is limited as other factors play a greater role. If the presence of a manager is more important than the quality of the manager, it implies that one should not seek a high-quality manager. What is important, however, is that the manager connects with the club and players, which ultimately results in performance growth.

#### 2.4 Managerial characteristics and performance in other sports contexts

In the final sub-question, it will be discussed whether managerial characteristics make a difference in performance in other sports contexts than English football. This is slightly different from the previous sub-question, as there is now a real emphasis on personal characteristics that influence sports outcomes, which is even more applicable to the question to what extent managerial characteristics influence English football club performance.

In the context of football teams, Szymanski, Alon & Kalra (2021) finds that multilingual communication is important for the performance of teams, as this helps using the personnel in a more effective way and to communicate directly. In addition, it seems that in a highly competitive environment, multicultural managers outperform monocultural managers. Peeters, Mills, Pennings & Sung (2019) confirms this, as cultural distance worsens the learning-by-hiring, and ultimately the performance. The effect is however weakened if the manager has prior international experience. Szymanski & Ipek (2020) finds that biculturalism is often an advantageous characteristic, but it can also be a burden to leadership through stress. In addition to biculturalism, Boto-García, Bucciol & Zarri (2020) addresses confidence and risk tolerance in Italian soccer. The study shows that the two traits have positive influence on team performance. Thus, there are not only variables at the corporate level that influence performance, but personal characteristics as well.

What is the impact of managerial characteristics on performance in other sports contexts? Research shows in the first place that speaking multiple languages, and a manager's multicultural background are very important for the club to perform well. However, these are not the only things that are important, as there are also several skills that come down to a manager's creative attitude. Most importantly, clubs should look for a manager who has a fitting philosophy for the club. These findings have a couple

implications for the question to what extent managerial characteristics influence the performance of football teams. Because of the positive effect of multilingualism and multiculturalism, clubs would do well to hire a manager with such characteristics. Ultimately, this will lead to better gameplay and thus better performance. High-end technical experience and management experience also being two important traits, implicates that clubs should seek for experienced managers. The final implication, as is mentioned earlier, is that apparent optimal characteristics do not necessarily result in better performance. The manager must fit in with the club and should not be culturally distanced.

## 2.5 Hypotheses

So, what does the current literature tell about the influence of managerial characteristics on the performance of English football clubs? In the first place it can be concluded that there are some managerial characteristics that influence general firm performance. Characteristics such as age are trickier to have a unified expectation about since it can go either way. In addition, higher education was found to have a positive effect for business performance, but this is difficult to link to a sports context. There are, of course, trainer diplomas and other certificates, but traditional education does not guarantee a successful career. Multilingualism, on the other hand, is a trait that can be well related to a context of sports. Especially in internationally oriented, competitive leagues such as the Premier League, where many different nationalities and cultures come together, it is important that communication runs smoothly.

Besides multilingualism, it also important that a manager is a good fit for the club and that he is familiar with the culture. Existing literature shows that being multicultural is a positive determinant for the club's performance. In addition, getting to know the football culture of a country is beneficial for the manager, as this knowledge polishes his tactics. As a result, the first hypothesis is:

*H1: Cultural affiliation of managers is positively related to the performance of English football clubs in the 2014-2019 seasons.*

In the existing literature on management or managerial characteristics, there is a consensus that experience is positively related to subsequent performance. It follows that international experience is helping the managers out to set up a business strategy. This can be related to soccer, where experience as a player or manager can help to form a well-functioning strategy as well, ultimately resulting in good performance. Therefore, the last two hypotheses are:

*H2.1: Prior experience as a professional manager is positively related to the performance of English football clubs in the 2014-2019 seasons.*

## *H2.2: Prior experience as a professional player is positively related to the performance of English football clubs in the 2014-2019 seasons.*

Despite this, there are also voices that argue that managers or their characteristics have an insignificant effect. The quality of players, the quality of the opponents, the form of the day, and many more external factors can play a role in the performance of team. It is therefore important as a club not to place all its hopes on a manager, but also to look carefully at whether he or she fits within the team. After all, managers are needed, but it is unclear whether they are deserving of all the praise people give them.

### 3 Data and methodology

#### 3.1 Data

The purpose of this study is to measure the influence of managerial characteristics on the performance of English soccer teams through regression analysis. To do this, the corresponding characteristics of managers for the five seasons between 2014 and 2019 are used. Using *transfermarkt.com* (the largest platform for football statistics and facts), all football clubs from the 2014-2019 seasons in the Premier league and Championship Football League were listed. Afterwards, the results, playing systems and managers were extracted from the fixtures per competition for each club per year. With this, it was calculated how many points per game were gained by different managers during their careers that season. Unlike other research, match-based data was not used due to time constraints. Because there were no existing datasets on the Premier League and Championship Football League with the right usable information, all data was hand-picked. A match-based dataset would amount to approximately 10,000 data points for the time interval of this research, which is not realistic. In addition, it was calculated how many different game systems the manager used in their season, corrected for the number of matches managed. For the dates of birth, experience as a player and experience as a manager, *premierleague.com* and Wikipedia's personal manager pages in addition to those of *transfermarkt.com* were used. In the end, 133 and 181 observations respectively with six variables each were collected. Each observation represents a manager with his characteristics in a specific season. Thus, for example, clubs that undergo a managerial change during the season have two datapoints that season. This is because the right portion of club performance must be attributed to the right manager. Additionally, managers change in characteristics over time, which is why they have datapoints for each active season. In the end, the following variables were created:

*Points per match:* To measure the individual performance of managers, the measure of points per game has been chosen. In football, a win results in three points, a tie results in one point, and a loss results in zero points. Therefore, this dependent variable is somewhere between zero and three and shows how well a manager manages to accumulate points. This measure of performance was chosen because unlike absolute points, it is easy to compare with different leagues.

*Age:* Because a relationship between age and risk was suggested in the literature, age is also included in the model. To measure the age of managers, the age of each manager for each season is measured on January 1, as this is the middle of the season. This date has been chosen because it ensures that there are no managers who are a year older for most of the season.

*Years of experience (as a player):* Because a manager also factors experience as a player into tactical decisions around soccer, experience as a player is included in the equation. To find out the experience in years, the beginning year of the adult playing career is subtracted from the end year.

*Years of experience (as a manager):* Of course, it is also important to include experience as a manager, as this says something about the quality of the manager. Only data from senior teams where the manager in question was head coach is used. This means that no youth teams or interim tenures were included, as this differs in sporting and tactical terms. Often, interim tenures are too short to see any change in performance. To find out the experience in years, the beginning year of the adult managing career is subtracted from the end year, excluding youth teams and interim tenures.

*Cultural affiliation:* Because it is important for managers to understand English football culture, it is chosen to include cultural affiliation in the model. This dummy variable captures whether a manager played, coached, or was born in the United Kingdom (UK) or Ireland in the past. This variable generally tells whether one has experience with the English language and culture, and for the most part how English football works. If this dummy takes on the value of zero, there are barriers for the manager to manage his team and communicate the tactics. This variable is in line with Boto-García, Bucciol & Zarri (2020), which uses a nationality variable in its research.

*Diffidence:* It is also important to look at a manager's self-assurance and the extent to which he dares to make decisions. Based on the number of different systems he uses in his tenure, this variable will indicate the extent to which he is confident about his about his decisions. This variable is derived from Boto-García, Bucciol & Zarri (2020), in which a manager's self-assurance is measured as the percentage to which managers use the same playing system as in the previous match. The value of diffidence in this paper will be the ratio of the number of different systems to the number of matches under the manager's tenure that season.

*Last season's ranking:* Finally, it is good to include a variable in the model that shows the quality of the team, since not all the variation in the performance of soccer teams can be attributed to managers. This is done by using the team's ranking in the previous season. For the Premier League, this variable can take the value 1-17 and for the Championship Football League it is 1-21, since in both leagues the bottom three are relegated.

Some data was also excluded from the model. As already evident from the discussion of managerial experience, interim managers with a low number of matches were removed. This is because with such a low number of games, the measure of points per game says little about the quality of the manager. In the end, all managers with six matches or less were removed, either because little significant can change in such a short time, or because these managers often had unrealistically high or low points per match.

### 3.2 Methodology

In this paper, two types of samples will be used, one where all English football clubs from the Premier League and Championship Football League are combined, and one where an analysis by league is performed to make a comparison between the two. The full model to be used in this analysis is as follows:

$$\begin{aligned} \text{Points per match} = & \beta_0 + \beta_1 \times \text{Age} + \beta_2 \times \text{Years of experience (as a player)} + \\ & \beta_3 \times \text{Years of experience (as a manager)} + \beta_4 \times \text{Cultural affiliation} + \beta_5 \times \text{Diffidence} + \\ & \beta_6 \times \text{Last season's final ranking} + \mu \end{aligned}$$

Using this model, the relative importance of certain characteristics of managers will be looked at and it is seen to what extent this influences the performance of clubs. In addition, some hypotheses are tested to finally answer the research question. These hypotheses are tested both on the full dataset as well as on the two datasets by league. Firstly, it is tested whether cultural affiliation has a positive relationship with club performance, while controlling for the club's previous season's final ranking. To do so, the following model will be used:

$$\begin{aligned} H1: \text{Points per match} = & \beta_0 + \beta_1 \times \text{Cultural affiliation} + \beta_2 \times \\ & \text{Last season's final ranking} + \mu \end{aligned}$$

Next up, it is tested whether the influence of experience as a manager and as a player has a positive influence on the performance of clubs, again controlled for the previous season's final ranking. The two models are respectively as follows:

$$H2.1: \text{Points per match} = \beta_0 + \beta_1 \times \text{Experience (as a manager)} + \beta_2 \times \text{Last season's final ranking} + \mu$$

$$H2.2: \text{Points per match} = \beta_0 + \beta_1 \times \text{Experience (as a player)} + \beta_2 \times \text{Last season's final ranking} + \mu$$

These models are tested using OLS, and in the form of multiple linear regression. To account for heteroskedasticity, robust standard errors are used. Fixed effects are not used because the data is not suitable for a well-balanced panel dataset. That is, because established clubs (or clubs with many different managers) overrepresent the data at the expense of promoted clubs. As a result, some clubs have more datapoints than others, which is why the dataset is unbalanced, meaning that estimations will be biased.

Table 1 shows the summary statistics of the variables used in earlier mentioned regressions of the full dataset. It contains the number of observations, the mean, the standard deviation, the minimum values, and the maximum values.

*Table 1 Summary statistics of the variables used in the full sample regression model*

<b>Variable</b>	<b>Observations</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Points per match	315	1.278	0.445	0.143	2.632
Age	315	49.702	8.170	33	71
Experience – Player	315	15.092	5.097	0	26
Experience – Manager	315	11.829	9.559	0	42
Cultural affiliation	315	0.886	0.319	0	1
Diffidence	315	0.209	0.120	0.026	0.636
Last season's ranking	315	10.819	6.207	1	21

From the table it can be seen that there are 315 observations. This means that in the seasons between 2014 and 2019 there were 315 managers in the Premier League and Championship Football League combined, with the assumption that a manager changes in characteristics over time. There are also relatively large standard deviations for *Age*, *Experience as a player*, and *Experience as a manager*. This

means that the characteristics of managers are very different in English football. As expected, all managers have relatively high experience as a player, as it is often a logical step to continue working in football after a playing career, but as a manager rather than a player. It can also be concluded that a career as a manager can be continued for a relatively long time due the high maximum of 71 years of age. The average also shows that English football clubs do not necessarily prefer young, risk-seeking managers, but rather choose someone with more experience and a higher age. Finally, there is also a relatively high standard deviation for the average number of systems per match in the variable *Diffidence*, which is mainly due to the managers with few matches to their name trying out different systems and tactics in a short period of time.

Table 2 shows the summary statistics of each of the two leagues, but measured separately. Again, the number of observations, the mean, the standard deviation, the minimum value, and the maximum value are showed.

*Table 2 Summary statistics of the analysis by league*

<b>Variable</b>	<b>Observations</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Points per	134	1.277	0.507	0.143	2.632
match	(181)	(1.279)	(0.395)	(0.143)	(2.227)
Age	134	52.284	8.475	34	71
	(181)	(47.790)	(7.398)	(33)	(70)
Experience –	134	14.791	5.028	0	25
Player	(181)	(15.315)	(5.151)	(0)	(26)
Experience –	134	14.799	9.967	0	42
Manager	(181)	(9.630)	(8.634)	(0)	(38)
Cultural	134	0.843	0.365	0	1
affiliation	(181)	(0.917)	(0.276)	(0)	(1)
Diffidence	134	0.250	0.129	0.026	0.636
	(181)	(0.178)	(0.103)	(0.038)	(0.571)
Last season’s	134	8.470	5.274	1	17
ranking	(181)	(12.558)	(6.285)	(1)	(21)

*Note.* Values between parentheses are the summary statistics of the Championship Football League, others represent the Premier League.

Firstly, it can be noted that the Championship Football League has more observations because it has four more clubs in the league than the Premier League, which influences variables like *Last season’s ranking* and *Diffidence*. On the other hand, it may very well be that in the Championship Football



League managers are less insecure or dynamic and often choose the same line-up. In the 2014-2019 seasons, a large majority played a large number of matches in the 4-4-2 and 4-2-3-1 formations, which could have resulted in lower values of *Diffidence*. Another notable difference is that the standard deviation of *Points per match* in both competitions differs quite a bit. This may be the case because in the Premier League there are more absolute European top clubs and therefore differ relatively much from the clubs at the bottom of the league. As a consequence, there are more extremes in the Premier League, which means that the standard deviation is higher. This contrasts with the Championship Football League, where the level of clubs is closer to each other, and this is also reflected in the table. Also, cultural affiliation is higher in the Championship Football League due to the larger focus on English people. In addition, unlike the Premier League, in the Championship managers are younger and *Experience (as a manager)* is lower. This is mainly because the Premier League is a stage for the best clubs in the world and inexperienced managers often start at a lower level. This is also why the managers are younger at the lower level, as they are often still in the middle of their careers.

Table 3 shows the correlation between the variables used in the main model. Most correlations are quite weak. The correlation between *Age* and *Experience (as a manager)* however is strong (0.816), which is not surprising, as during a managerial career, experience grows with age. It is also the case that the oldest people often have the most managerial experience, because they have had the opportunity to work for more years. In addition, the correlation between *Diffidence* and *Points per match* appears to be quite strong (-0.503). This is also not against expectations, as consistency and experience within a system often leads to better quality of players and ultimately to better results. If a manager is more uncertain about certain playstyles, he will try out different systems of play, but the team will be less able to master them.

Table 3 Correlation matrix of the variables used in the full sample regression model

Variable	Points per match	Age	Experience - Player	Experience - Manager	Cultural affiliation	Diffidence	Last season's ranking
Points per match	1.000						
Age	0.011	1.000					
Experience - player	-0.054	0.021	1.000				
Experience - manager	0.078	0.816	-0.073	1.000			
Cultural affiliation	-0.043	0.003	0.207	-0.049	1.000		
Diffidence	-0.503	0.136	-0.012	0.057	0.007	1.000	
Last season's ranking	-0.200	-0.064	0.050	-0.071	0.028	0.119	1.000

## 4 Results

### 4.1 Full sample

Firstly, the complete model will be tested to see to what extent managerial characteristics influence the performance of English football clubs in the seasons between 2014 and 2019. In addition, the model containing the most significant variables is included, as well as the three models used for testing the hypotheses. This will first be done using the full sample (which is Premier League and Championship Football League combined) and later in this chapter, the results by league will be discussed. The results of the full sample OLS regressions are captured in table 4.

Table 4 Regressions of managerial characteristics on firm performance for the full sample

Variable	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)
Age	-0.001 (0.004)				
Experience as a player	-0.004 (0.005)				-0.004 (0.005)
Experience as a manager	0.005 (0.003)	0.004** (0.002)		0.003 (0.003)	
Cultural affiliation	-0.031 (0.074)		-0.053 (0.087)		
Diffidence	-1.818*** (0.191)	-1.821*** (0.190)			
Last season's ranking	-0.009** (0.004)	-0.010** (0.004)	-0.014*** (0.004)	-0.014*** (0.004)	-0.014*** (0.004)
Constant	1.825*** (0.201)	1.709*** (0.066)	1.479*** (0.093)	1.394*** (0.064)	1.490*** (0.084)
Observations	315	315	315	315	315
R <sup>2</sup>	0.285	0.282	0.041	0.044	0.042

Note. Robust standard errors are in parentheses; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

In the full model of regression 1, *Age*, *Experience as a player*, *Experience as a manager* and *Cultural affiliation* are not significant at conventional levels, which are at least 5%. This means that they are poor predictors of club performance for English football clubs in 2014-2019. *Diffidence*, on the other hand, is a significant (1%) negative variable that decreases *Points per match* by 1.818 when *Diffidence* increases by one, ceteris paribus. In reality, such a large increase is not possible, and the average *Diffidence* is about 0.209. In addition, *Last season's ranking* is a significant (5%) negative variable that decreases *Points per match* by 0.009 when the variable increases by 1 (and thus decreases by 1 in the ranking), ceteris paribus.

In the optimal model of regression 2, results are more significant. In the first place, *Experience as a manager* is a significant (5%) positive variable that increases *Points per match* by 0.004 if a manager's experience increases by 1 year, ceteris paribus. *Diffidence* is again a significant (1%) variable, that decreases *Points per match* by 1.821 if the variable increases by 1, ceteris paribus. Furthermore, *Last season's ranking* is a significant (5%) negative variable that decreases *Points per match* by 0.010 if it increases by 1, ceteris paribus.

Regression 3 is used to test whether cultural affiliation has a positive relationship with performance. Control variable *Last season's ranking* is a negative significant (1%) variable that decreases *Points per match* by 0.014 if the value increases by 1, ceteris paribus. *Cultural affiliation* however is not significant at conventional levels. This means that there is not enough evidence to reject the null hypothesis that there is no relationship between cultural affiliation and the performance of English football clubs in the 2014-2019 seasons.

Regression 4 is then used to test whether experience as a manager has a positive relationship with performance. Control variable *Last season's ranking* is a negative significant (1%) variable that decreases *Points per match* by 0.014 if the value increases by 1, ceteris paribus. *Experience as a manager* is however not significant at conventional levels, which means that there is not enough evidence to reject the null hypothesis that there is no relationship between experience as a manager and the performance of English football clubs in the 2014-2019 seasons.

Regression 5 is thereafter used to test whether experience as a player has a positive relationship with performance. Control variable *Last season's ranking* is a negative significant (1%) variable that decreases *Points per match* by 0.014 if the value increases by 1, ceteris paribus. *Experience as a player* is however not significant at conventional levels, which means that there is not enough evidence to reject the null hypothesis that there is no relationship between experience as a player and the performance of English football clubs in the 2014-2019 seasons.

From the regression output it follows that some managerial characteristics matter for the performance of English football clubs. In none of the specifications, age, experience as a player and cultural affiliation seem to be significant. In the most optimal specification, experience as a manager has a significant positive effect on performance, but on an individual level that does not seem to be the case. Therefore, it can be said that there is some sort of effect of experience, but it is not as pronounced as the literature describes it to be.

In addition, cultural affiliation seems to be irrelevant for the performance of English football clubs. This is quite surprising, as modern football requires managers to bind multiple cultures together, and one would expect that cultural affiliation would help with that and the understanding of English football. However, it could be the case that other character traits affect a manager's people management better than this proxy. Experience as a player and age are significant in none of the models and are not capable of predicting a club's performance sufficiently. For a manager's age it could be the case that most of the managers are all about the same age and start their careers after a player career in football. In addition, a professional football career approximately has the same length for everyone and does

not change over time in a managerial career. Therefore, these variables are not sufficiently significantly related to the performance of English football clubs in the 2014-2019 seasons.

In conclusion it can be said that managerial characteristics affect performance of English football clubs to a certain extent. From the hypotheses it follows that on an individual level it is not the case, but when adding multiple personal characteristics, there seems to be some sort of relationship. Especially for a manager's prior experience as a manager and its diffidence. In addition, the quality of the players plays a large role, which is captured in the variable *Last season's ranking*.

## 4.2 Analysis by league

### 4.2.1 Premier League

Next up, the Premier League sample and the Championship Football League sample will be discussed individually. After that, a comparison between the two will follow. Table 5 contains the regression results of the Premier League.

*Table 5 Regressions of managerial characteristics on firm performance for the Premier League*

Variable	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)
Age	-0.011 (0.007)	-0.012* (0.007)			
Experience as a player	-0.003 (0.008)				-0.004 (0.007)
Experience as a manager	0.013** (0.006)	0.014** (0.006)		0.007* (0.004)	
Cultural affiliation	-0.062 (0.109)		-0.108 (0.130)		
Diffidence	-1.824*** (0.276)	-1.823*** (0.278)			
Last season's ranking	-0.020*** (0.007)	-0.020*** (0.007)	-0.035*** (0.008)	-0.036*** (0.008)	-0.035*** (0.008)
Constant	2.357*** (0.328)	2.312*** (0.322)	1.668*** (0.142)	1.473*** (0.111)	1.636*** (0.126)
Observations	134	134	134	134	134
R <sup>2</sup>	0.372	0.370	0.142	0.156	0.138

*Note.* Robust standard errors are in parentheses; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

In the full model of regression 1, *Age*, *Experience as a player* and *Cultural affiliation* are not significant at conventional levels. This means that they are poor predictors of club performance for Premier League clubs in 2014-2019. *Experience as a manager*, on the other hand, is a significant (5%) positive variable that increases *Points per match* by 0.013 if a manager's experience increases by 1 year, *ceteris paribus*. In addition, *Diffidence* is a significant (1%) negative variable that decreases *Points per match* by 1.824 when its value increases by one, *ceteris paribus*. Finally, *Last season's ranking* is a significant (1%) negative variable that decreases *Points per match* by 0.020 when its value increases by 1 (and thus decreases by 1 in the ranking), *ceteris paribus*.

Using the optimal model, there is one extra significant variable, namely *Age*. *Age* is a negative significant (10%) variable that decreases *Points per match* by 0.012 if a manager's age increases by 1, *ceteris paribus*. At conventional levels however, this is not significant enough. *Experience as a manager* is significant (5%) as well, and it increases *Points per match* by 0.014 if a manager has 1 extra year of experience, *ceteris paribus*. Furthermore, *Diffidence* is a negative significant (1%) variable that decreases *Points per match* by 1.823 if its value increases by 1, *ceteris paribus*. Finally, *Last season's ranking* is a negative significant (1%) variable that decreases *Points per match* by 0.020 when its value increases by 1, *ceteris paribus*.

Regression 3 is then used to test whether cultural affiliation has a positive relationship with performance. Control variable *Last season's ranking* is a negative significant (1%) variable that decreases *Points per match* by 0.035 if the value increases by 1, *ceteris paribus*. *Cultural affiliation* however is not significant at conventional levels. This means that there is not enough evidence to reject the null hypothesis that there is no relationship between cultural affiliation and the performance of English football clubs in the 2014-2019 seasons, when specifically looking at the Premier League.

Regression 4 is thereafter used to test whether experience as a manager has a positive relationship with performance. Control variable *Last season's ranking* is a negative significant (1%) variable that decreases *Points per match* by 0.036 if the value increases by 1, *ceteris paribus*. *Experience as a manager* is a positive significant (10%) variable that increases *Points per match* by 0.007 if a manager has an extra year of experience, *ceteris paribus*. However, the hypothesis is tested at a 5% significance level, which means that there is still not enough evidence to reject the null hypothesis that there is no relationship between experience as a manager and the performance of English football clubs in the 2014-2019 seasons, when specifically looking at the Premier League.

Regression 5 is used to test whether experience as a player has a positive relationship with performance. Control variable *Last season's ranking* is a negative significant (1%) variable that decreases *Points per match* by 0.035 if the value increases by 1, *ceteris paribus*. *Experience as player*

however is not significant at conventional levels. This means that there is not enough evidence to reject the null hypothesis that there is no relationship between experience as a player and the performance of English football clubs in the 2014-2019 seasons, when specifically looking at the Premier League.

#### 4.2.2 Championship Football League

Next up, the regression results of the Championship Football League are included in table 6.

*Table 6 Regressions of managerial characteristics on firm performance for the Championship Football League*

Variable	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)
Age	0.004 (0.005)				
Experience as a player	-0.003 (0.006)				-0.003 (0.005)
Experience as a manager	-0.002 (0.004)			0.001 (0.004)	
Cultural affiliation	0.039 (0.092)		-0.002 (0.115)		
Diffidence	-1.885*** (0.311)	-1.864*** (0.309)			
Last season's ranking	-0.001 (0.004)		-0.006 (0.005)	-0.006 (0.005)	-0.006 (0.005)
Constant	1.441*** (0.004)	1.611*** (0.057)	1.357*** (0.118)	1.343*** (0.072)	1.401*** (0.103)
Observations	181	181	181	181	181
R <sup>2</sup>	0.244	0.238	0.009	0.010	0.011

*Note.* Robust standard errors are in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

In the full model of regression 1, *Age*, *Experience as a player*, *Experience as a manager*, *Cultural affiliation* and *Last season's ranking* are all not significant at conventional levels. This means that they are poor predictors of club performance for Championship Football League in 2014-2019. However, *Diffidence* is a significant (1%) negative variable that decreases *Points per match* by 1.824 when its value increases by 1, *ceteris paribus*.

Using the optimal model, all the insufficiently significant variables are removed, except for *Diffidence*. *Diffidence* is a negative significant (1%) variable that decreases *Points per match* by 1.864 if its value increases by 1, ceteris paribus.

Regression 3 is used to test whether cultural affiliation has a positive relationship with performance. Control variable *Last season's ranking*, as well as independent variable *Cultural affiliation* are not significant at conventional levels. This means that there is not enough evidence to reject the null hypothesis that there is no relationship between cultural affiliation and the performance of English football clubs in the 2014-2019 seasons, when specifically looking at the Championship Football League.

Regression 4 is then used to test whether experience as a manager has a positive relationship with performance. Control variable *Last season's ranking*, as well as independent variable *Experience as a manager* are not significant at conventional levels. This means that there is not enough evidence to reject the null hypothesis that there is no relationship between experience as a manager and the performance of English football clubs in the 2014-2019 seasons, when specifically looking at the Championship Football League.

Regression 5 is thereafter used to test whether experience as a player has a positive relationship with performance. Control variable *Last season's ranking*, as well as independent variable *Experience as a player* are not significant at conventional levels. This means that there is not enough evidence to reject the null hypothesis that there is no relationship between experience as a player and the performance of English football clubs in the 2014-2019 seasons, when specifically looking at the Championship Football League.

#### 4.2.3 Premier League versus Championship Football League

When looking at both leagues, the results are mixed. In fact, the results of the Championship Football League are so insignificant that they also affect the significance in the model with the full sample. In both leagues, *Age* is of low significance. This is probably because all managers are of a certain age and being older does not necessarily implicate better results. The idea of risk-taking young managers versus traditional managers playing it safe does neither hold for the Premier League nor the Championship Football League. However, this is expected as the literature does not implicate an unambiguous relationship between age and managerial performance.

In addition, experience as a player is not as important as previously thought, as both competitions do not produce significant relationships at conventional levels. This probably has to do with the fact that



being a manager is often a follow-up career after being a football player. Almost all managers in the data have played professional football somewhere between the ages of 18 and 35, which means that they all played for approximately the same number of years. Combined with the fact that this number is unchanging during a managerial career, it follows that this relationship is not significant at conventional levels.

The effect of experience as a manager is however harder to capture. Whereas the Championship Football League gives an insufficiently significant effect in all forms, the effect in the Premier League is significant in each case. Although the hypothesis cannot be rejected at a significance level of 5%, this relationship is significant at 10%. This phenomenon can be explained by the fact that, on the one hand, the Premier League is not an entry level for a managerial career, which means that few managers have little experience. On the other hand, it is precisely because of the level of the league that managers with less experience perform worse. The Championship Football League could therefore be characterized as 'more forgiving'.

In both cases, the effect of cultural affiliation is not significant at conventional levels, which is surprising given the consensus in the literature. In addition, in many cases the slope is negative rather than positive. A possible explanation could be that managing people and creating a bond is not necessarily linked to a nationality or previous experience within a country, but rather to the personality of a manager.

The effect of a manager's diffidence is however the same for both competitions, as was expected. This is the same for a club's last season's ranking, but only for its slope. A possible explanation could be that the Championship Football League level gap between clubs is small, which makes it that a good performance in one year is no guarantee for a good performance the next year. Another explanation may be that the Championship Football League is a somewhat inferior league, so outstanding performance might lead to clubs from better leagues buying its players. The result is that the quality of the players drops, without being able to arrange worthy replacements, as many players only want to play at the highest level.

In conclusion, it can be said that character traits at the individual level are not very important for the performance of football clubs. However, when looking at several traits at once, and thus measuring the whole personality, it already seems to be slightly more important, especially in the Premier League. However, not all character traits seem to be of importance, like the experience as a player or the cultural affiliation of a manager.

## 5 Discussion and conclusion

This paper analyzed the relationship between managerial characteristics and firm performance within English football between 2014 and 2019. The research question examined in this paper is: *“To what extent do managerial characteristics impact the season performance of English football clubs in the 2014-2019 seasons?”*

To answer this question, three hypotheses were defined and answered using OLS. Hypothesis 1 was: *“Cultural affiliation is positively related to the performance of English football clubs in the 2014-2019 seasons.”* For both the full sample, and for the Premier League and Championship Football League individually, there is no statistically significant relationship between cultural affiliation and performance at conventional levels. Therefore, hypothesis 1 is not true and it seems that cultural affiliation is not important for the performance of English football clubs in 2014-2019.

The second hypothesis was: *“Prior experience as a professional manager is positively related to the performance of English football clubs in the 2014-2019 seasons.”* For neither the full sample nor the Championship Football League sample was there a statistically significant relationship, which is why the second hypothesis does not seem to be true at conventional levels. However, for the Premier League sample, there seems to be a significant relationship between experience as a manager and performance, but just at a 10% level. Although there is a significant relationship, we cannot reject the null hypothesis at a 5% level either. Therefore, hypothesis 2 is not true and it follows that prior experience as a manager is less important than previously thought.

The third hypothesis was: *“Prior experience as a professional player is positively related to the performance of English football clubs in the 2014-2019 seasons.”* For both the full sample, and for the Premier League and Championship Football League individually, there is no statistically significant relationship between prior experience as a professional player and the performance of English football clubs in the 2014-2019 seasons at conventional levels, which is why the third hypothesis is not true.

However, the hypotheses examine the relationship of individual managerial characteristics and the performance of English football clubs. As is mentioned earlier in this paper, it is probable that a club's performance does not solely depend on an individual managerial characteristic, but moreover on a selection of multiple characteristics. Therefore, not only are the hypotheses important in answering the research question, but also a variety of regression models using multiple characteristics. In the end, there is an optimal model, which shows the most significant characteristics for each sample. In the case of the full sample, a club's ranking last season, a manager's diffidence and prior experience as a manager seems to be important for the performance of English football clubs. In the case of the

Premier League, age seems to be relevant as well. However, the Championship Football League shows only significant results for a manager's diffidence.

From the hypotheses it cannot be concluded that managerial characteristics have an impact on the performance of football clubs in the 2014-2019 seasons. However, when taking the optimal regression models into account, it seems that a combination of some characteristics can be beneficial for a club's performance. But then again, even within the sample of English football it seems that there are contradictions as to what managerial characteristics would be important. Therefore, just like the literature suggested, there is no unambiguous answer to the question whether managerial characteristics matter in the context of English football in 2014-2019. In the end, it depends on the context (or league), and the way characteristics are measured. In some ways characteristics show to have some impact, but not when measured individually, or when looking at the Championship Football League.

These findings have a couple implications for English football clubs. Unfortunately, the question whether managerial characteristics matter remains ambiguously answered. The results show that some characteristics make an impact, but not on the individual level. It is therefore not wise to hire a manager purely based on his characteristics. They could and potentially should be considered, but ultimately the game is played on the pitch. As the literature suggested, it is also important to hire a good people manager who has a well-suited philosophy for the club.

This paper has several limitations. The first being the amount of data, as there are just 315 datapoints. For example, when using match-based data instead of season-tenure-based, there are many more data points, which could change the results. In addition, using match-based data could open the possibility for including club-season fixed effects, resulting in more accurate estimates and ultimately conclusions. Next to that, variables like *Diffidence* could be adjusted, as with the current set up it favors managers that have been in charge all season long. Another limitation is that experience as a manager or player is now measured as if only the number of years do matter. The level of the football league they managed or played in would make it that this variable represents experience in a better way. The final limitation of this paper is the fact that even though the leagues are similar in the sense that these are the highest two levels of football in England, the comparative level of play between them differs quite substantially. This might take some away from the local applicability of the results, but they could be slightly more reliable if two leagues of equal level were used.

Further research could therefore focus on using match-based data to get more robust estimates to ultimately better conclusions. It could also help to include club-season fixed effects, which could assist in explaining more variation. For example, this could address performance differences to a certain

season or club. This ultimately helps answering the question whether managerial characteristics matter for performance in an unambiguous way. Furthermore, examining the impact of managerial characteristics in the context of other sports would give interesting insights. In addition, tweaking variables like *Diffidence*, *Experience as a manager* and *Experience as a player* would add robustness to the model. The last two should contain a level vector, as someone playing or managing in the Championship Football League is not as experienced as someone doing the same job in the Premier League. Finally, it would be interesting to add more managerial or personal characteristics, like multilingualism, risk aversion, or attitude towards technology. Ultimately, this will allow the model to predict performance based on a manager's full personality. Hopefully, this will lead to a better understanding of managerial characteristics and their importance for the performance of firms and sports clubs.

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