

Predictors of Football Player Performance at sub-top Eredivisie clubs

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Abstract

The objective of this thesis is to identify nationalities, leagues, and player characteristics that maximise the probability of player performance at client FC Twente in particular, and other sub-top Eredivisie clubs. Existing literature has primarily concentrated on the top five leagues in Europe, which differ significantly in terms of financial capacities and market positions. Hence, this research aims to deepen scouting and transfer strategy knowledge for football clubs with less financial capacity, such as FC Twente. Specifically, it will provide guidance to sub-top Eredivisie clubs on the countries and nationalities to prioritise to increase the probability of player performance. A univariate analysis was performed to evaluate the effect of each individual variable on player performance. To further deepen understanding, continuous, and categorical variables were analysed using curve estimations and mean analyses, respectively. Significant effects that have practical implications for sub-top clubs Eredivisie clubs were found for cultural distance, league's financial resources, international cultural experience, co-worker support, market value, and prior season performance.

Key words: cultural distance, league strength, financial resources, player performance, scouting and transfer strategies, player acquisition, FC Twente, sub-top Eredivisie clubs.

Chapter 1

Introduction

1.1 Introduction – Research Question

The globality of football as a sport entails an enormous player market and a lot of competitions to scout from. This range of player choice has only expanded as the global football player market has become more transparent, due to increased data accessibility and the imposition of disclosure regulations (Urdaneta et al., 2021). Moreover, advancements in infrastructure and transport systems have made it easier to transfer football players globally, leading to a larger player market and an increased number of international transfers. Hence, football clubs face increased complexity in making good transfer choices with their available financial resources. These trends have been supported by a rising amount of money in the football industry, further complicating the decision-making process (FIFA, 2021). Therefore, developing effective scouting and transfer policies is crucial for football clubs to make successful player transfers and navigate this complex market. This is especially important considering the significant positive impact that successful player transfers can have on a club's sporting and economic success (Liu et al., 2016). Hence, this research aims to provide practical guidelines for football club managers to help them make informed and strategic transfer decisions.

This research is conducted in collusion with and commissioned by FC Twente. Stumbling upon the increased complexity of transfer choices, as described above, FC Twente is looking for clarity and direction in how to spend its relatively scarce transfer and scouting budget. Thus, what international markets they can best focus on to maximize their probability of a successful transfer.

The success of a player transfer can be measured by the performance of the player. As a player's transfer from one league to another can have a significant impact on their performance, understanding this relationship is crucial for clubs when scouting and signing new players. There are multiple league- and nationality-specific factors that affect player performance, but investigating all of them is not feasible. Thoroughly reviewing literature, and in collaboration with client FC Twente, cultural distance, league strength, and the league's financial resources have been identified as core factors that demand current academic and practical knowledge to be deepened. Analysing cultural distance will provide more clarity on how an expatriate's nationality and cultural background impact his performance, while league strength and financial resources are most significant in distinguishing between leagues. This research aims to analyse the impact of the above-mentioned factors on player performance, and subsequently identify the nationalities and competitions that align with the values optimal for player performance. Ultimately, this will provide advice on the nationalities and competitions that client FC Twente in particular, and other sub-top Eredivisie clubs, should focus on to increase their probability of player success.

A thorough review of literature and market, together with specific client preferences has resulted the research question to be formulated as follows: *What cultural and league-specific background of sports expatriates is optimal for maximising the probability of expatriate performance at sub-top Eredivisie clubs?*

For the areas of focus, captured by the independent variables, a comprehensive explanation of this choice will be provided in the Theoretical Model (section 3.1).

1.2 Academic Relevance

This research contributes to the growing body of literature on expatriates and fills a gap in the often-overlooked field of sports expatriates. Specifically, this study investigates the performance of football player expatriates after a transfer, focusing on sub-top Eredivisie clubs. By examining the impact of cultural distance, league strength, and a league's financial resources on player performance after a transfer, both individually and in combination, this study provides a more comprehensive and accurate

understanding of player performance after a transfer. This can have important implications for scouting and transfer policies and practice, as well as for future research efforts. Additionally, it helps to ensure that football research is based on the most current and relevant knowledge available, which can lead to more accurate and reliable findings. This is especially important for the football industry, given that it is a fast-developing environment. The following sections will elaborate on how this study contributes to filling the existing literature gaps.

For cultural distance, the current body of research is targeted at creating insight into the performance of culturally distant *teams*. However, a significant research gap exists with regard to the impact of cultural distance on *individual* player performance within a team. The sporadic research that investigated cultural distance and *individual* player performance used inadequate, short-sighted performance metrics. For example, attackers' performance was measured by the number of goals scored, midfielders' performance by the number of passes completed, and defenders' performance by the number of interceptions made (van Tilburg, 2020). Such simplistic measurements inadequately capture the nuanced and multifaceted nature of football player performance. Next to that, most research on the impact of cultural distance on team performance has been confined to studying the top five leagues, as determined by the FIFA ranking (Beyer, 2020; Maderer et al., 2014). However, clubs in these leagues significantly differ from sub-top Eredivisie clubs in terms of financial capacity and market position, as being determinants of scouting abilities and optimal transfer strategies (van den Berg, 2011). The elite clubs operate at the top of the pyramid, with only a selected number of players that have the required level, resulting in fewer transfer choices. On the sub-top level, the pool of players is a lot more extensive, and it requires more scouting work to find the best candidates. Consequently, the level of difficulty and probability of failure is significantly higher in the latter case. Hence, this research academically contributes by deepening scouting and transfer strategy knowledge for football clubs with fewer financial resources. All in all, the scarcity of research on cultural distance and *individual* player performance presents an opportunity to contribute new knowledge and insights to the field. Specifically, exploring the impact of cultural distance within clubs operating below the top five leagues financially is a promising area that deserves further attention.

For league strength, previous research has arrived at contradictory results. There are theories suggesting that transferring to a stronger league will improve performance, and transferring to a weaker league will decline performance (Szymanski and Kesenne, 2004; Barrons, 2009; Arkes, 2018). This is based on the idea that players will adapt to the higher or lower level of play in a league, thereby directly impacting player performance. On the other hand, there are studies suggesting that the lower level of competition in a weaker league may allow players to play more freely and hence, improve their performance (Schmidt and Berri, 2001; Tiedemann et al., 2010; Magel and Hoffman, 2015; Ribeiro et al., 2020). Therefore, creating clarity on this relationship in the un-researched context of the Eredivisie will contribute to the existing academic knowledge.

Regarding a league's financial resources, its impact on player performance has been frequently examined, and researchers consent that players transferred from leagues with high financial resources tend to have better performances. Despite this general consensus, there is a lack of research examining the specific relationship between a league's financial resources and player performance in the context of the Eredivisie. This research aims to address this gap in the literature by exploring the impact of a league's financial resources on player performance for sub-top Eredivisie clubs.

Additionally, as professional football and top business are both high-performing environments, showing considerable overlap (Molan et al., 2018), this research is also meaningful for literature on high-performing businesses. Thus, it offers valuable insights that can be applied to a wide range of elite teams and organisations, extending beyond the realm of sports alone. For instance, it aims to provide fresh insights on how cultural distance, along with the strength and financial resources of the professional environment, can impact the performance of international employees. In a more general sense, this study aims to shed new light on existing theories on international employee performance. Lastly, this study establishes the groundwork for future research by demonstrating the potential of analysing historical player data to inform and refine scouting and transfer practices in the future.

1.3 Practical Relevance

The first and foremost aim of this research is to provide practical guidelines to the scouting team of client FC Twente regarding the effective utilisation of their financial resources in player recruitment. To increase the study's applicability to practitioners, its scope is expanded by including Eredivisie clubs similar to FC Twente. Alongside FC Twente, data from AZ, FC Groningen, FC Utrecht, and Vitesse will be utilised, referred to as sub-top Eredivisie clubs (explanation of selection procedure in section 4.2). Since existing literature has mainly focussed on the top five leagues, which exhibit significantly different financial capacities and market positions, the recommendations derived from them may not be directly applicable to sub-top Eredivisie clubs. Therefore, this research is practically relevant as it seeks to deepen the understanding of scouting and transfer strategies for football clubs with less financial capacity. Specifically, it provides guidance to sub-top Eredivisie clubs on the countries and nationalities to prioritise to enhance player performance probabilities, ultimately contributing to the overall sporting success of the club.

As the research is conducted in the football environment, its findings are particularly applicable to football clubs, particularly those in the sub-top Eredivisie. However, considering the notable similarities between professional sports and high-performing businesses (Molan et al., 2018), the findings hold value for high-performing businesses as well. Hence, the research may assist managers in general in making hiring policies and decisions, offering a fresh perspective on performance issues within international teams. Furthermore, this paper can aid managers in understanding the underlying factors that influence successful cross-cultural adjustment and subsequent job performance of employees. By comprehending national cultural models and their impact on expatriate performance, managers can anticipate and navigate potential cultural differences and conflicts, fostering a more inclusive and productive working environment.

As football competitions vary in terms of level or strength, a player transferring between leagues must adapt to the new level of gameplay. Previous research indicates that the strength of the league and opponents strongly impact player performance. Regarding the financial resources of the league, it is evident that players transferred from leagues with higher financial resources tend to deliver better performances. However, no studies have specifically examined the Eredivisie in this context. This study analyses the effect that league strength and financial resources have on player performance within the Eredivisie. Such analysis can inform a of sub-top Eredivisie club's transfer strategies and increase the likelihood of successful player acquisitions.

From a player's perspective, the research may enable them, as well as employees in non-sports high-performing organisations, to better identify teams or organisations where they can maximise their potential.

1.4 Structure of the Paper

Following the introduction and the academic and practical foundations, Chapter 2 provides a comprehensive review of existing literature on the core variables and essential contextual knowledge on football transfer development and multicultural teams. Additionally, this chapter presents the hypotheses derived from the literature analysis. Hereafter, Chapter 3 introduces the theoretical model and provides an extensive clarification of all variables. Chapter 4 discusses the research design and data in detail, while Chapter 5 presents the results. In Chapter 6, the findings are discussed, and both academic and practical recommendations are provided, alongside acknowledging the research

limitations, and suggesting directions for future research. The conclusions will follow in Chapter 7, the final chapter.

Chapter 2

Literature Review

2.1 Evolution of Football Transfers and Current Trends

The history of football transfers can be traced back to the early days of professional football in the late 19th century. The first recorded player transfer occurred in 1893 when Willie Groves moved from West Bromwich Albion to Aston Villa. In the early days of professional football, transfers were relatively rare, as players often remained with a single club throughout their careers. However, as the sport became more popular and lucrative, transfers began to increase in frequency, and transfer fees became a primary method of acquiring new players. The introduction of European competitions such as the European Cup and the UEFA Cup in the 1950s and 1960s further increased the number of foreign players in domestic leagues, leading to a significant increase in transfer activity and transfer fees.

Another influential event in the history of football is the ‘Bosman ruling’, a decision by the European Court of Justice. This ruling abolished restrictions on foreign European Union (EU) players within national leagues and allowed EU players to move to another club without the payment of a transfer fee at the end of their contracts. The ruling promoted the free movement of labour and had a profound effect on player transfers, strengthening the power position of players towards clubs. It resulted in fewer transfer fee payments, and an increase in the number of transfers and player salaries. Additionally, as clubs were no longer bound by maximum limits on foreign players, an influx of international talent followed. Players began switching clubs more frequently after their contracts expired, prompting clubs to offer longer contracts to retain them.

In recent years, the transfer market has become increasingly globalised, with clubs from around the world spending large sums of money to acquire top players. This trend is reflected in the CIES Football Observatory's report (Poli, Ravenel, & Besson, 2020), which notes that global transfer spending reached a record of €6.1 billion during the 2019 summer transfer window.

Currently, there are several trends in the football transfer market. First of all, transfer fees have consistently risen over the past years, with clubs spending record amounts to acquire top players. For instance, the transfer of Neymar from Paris Saint-Germain to Barcelona in 2020 for €222 million established a new world-record transfer fee. Furthermore, clubs from smaller leagues outside the "Big Five" (English Premier League, La Liga, Bundesliga, Serie A, and Ligue 1) have increased their spending on transfers, leading to intensified competition among these leagues' clubs and a greater number of players moving between them. Additionally, the loan market is growing, with clubs increasingly utilising loan deals to acquire players, rather than paying transfer fees. This allows clubs to bring in players without committing to long-term transfers and provides opportunities for young players to gain experience at a higher level.

Another trend is the increase in the number of player agents and intermediaries, as a result of the growing popularity and financial aspects of football. Next, there is an increased focus on investing in young players, often referred to as "promising talents". These talents have the potential to increase in value, enabling clubs to build for the future and generate profits through transfer fees. Lastly, football clubs increasingly adopt a data-driven approach. As a result, the use of data analysis has become more prevalent in transfer decisions. Data is used to identify and target specific players, evaluate their performances, and assess their potential.

2.2 Multicultural Teams

Previous research investigating the relationship between cultural diversity in football teams and their sporting success has yielded inconsistent results. Gaede et al. (2002), analysing data from the 2000/2021 German Bundesliga season, discovered that culturally diverse teams achieved higher average performance. The authors attributed this to the club benefitting from the diverse technical skills and creativity brought by international talent. Andersen and Altman (2006) confirmed these findings by revealing a significant positive correlation between national diversity and the sporting success of professional football teams in the German Bundesliga. However, Brandes et al. (2009), using data from five Bundesliga seasons, did not find a significant influence of national diversity on performance. In fact, it was found that increasing cultural diversity in the defensive block had a negative impact on team success. Haas and Nüesch (2012) also used Bundesliga data, from seven consecutive seasons, and discovered that multinational football teams performed worse than more ethnically homogeneous teams.

Franck and Nüesch (2010) used more individual statistics of performance for all Bundesliga players from 2001 to 2007, and found that both average talent and talent disparity significantly increased team performance. Addesa et al. (2017) in a study covering five Serie A seasons, found that diversity had a strong negative effect on game scores and player performance ratings. Maderer et al. (2014), analysing 98 teams from the Big Five European leagues during the 2008/2009 season, also confirmed the negative impact of diversity on team performance. In contrast, Ingersoll et al. (2017) concluded that more heterogeneous teams outperformed less diverse teams in the UEFA Champions League (2003-2012).

By signing foreign players, club officials hope to capitalise on the unique strengths of individuals from different cultural backgrounds. Football players with different origins often have diverse and distinct skills due to variations in football education and training (Lanfranchi & Taylor, 2001; Theweleit, 2009). For instance, German teams emphasise efficiency, power, and discipline, Italian teams are renowned for their tactical expertise, while technical skills hold greater importance in Brazil (Müller, 2009, p. 273). Consequently, the blend of these diverse skills in multicultural football teams is expected to enhance their overall success. This positive perspective is also recognised in research on multicultural teams in general. Horwitz and Horwitz (2007) describe it as the "value-in-diversity" perspective, which recognises the advantages of having access to a greater variety of expertise, diverse talents, perspectives, and experiences that are relevant to the task at hand. However, Haas and Nüesch (2012) point out a possible negative side effect, referring to the potential for higher transaction costs due to conflicting expectations of team members, diverse cultural practices, and communication challenges.

Overall, findings have been inconsistent and inconclusive. However, considering the expectation that a compilation of specific skills in multicultural football teams enhances their success, sub-top Eredivisie clubs that solely focus on Dutch players might leave an unused potential in adopting international players in their selection and thereby increase performance. In other words, by only focusing on Dutch players, a sub-top Eredivisie club possibly restricts their opportunities to increase both economic and sporting performance.

2.3 Cultural Distance and Player Performance

As previously mentioned, research on the relationship between cultural distance and individual player performance in a football context is limited. While some studies have investigated the impact of cultural diversity on team performance in sports, individual player performance is a more specific and complex area of inquiry. Nonetheless, there are related studies performed in other environments that provide relevant insights into the possible effects of cultural distance on player performance in football. For example, research on the impact of cultural differences on team dynamics, motivation, and interpersonal relationships, as well as studies that have investigated the impact of culture on individual performance in other domains, such as the workplace or education. To arrive at a well-founded hypothesis, these

related studies are combined with the findings in section 2.2 on cultural distance and team performance in football.

Cultural differences can affect communication, trust, and social cohesion, which in turn impact individual performance. A study by Gelfand et al. (2007) found that individuals from cultures with high power distance (where hierarchies are respected and authority is emphasised) performed better under autocratic leadership styles, while individuals from cultures with low power distance (where egalitarianism is valued) performed better under democratic leadership styles. Considering the relatively democratic decision-making in the Netherlands, it is expected that individuals from low power distance cultures perform better. Another study by Gelfand et al., in 2011, differentiated between tight and loose cultures, where tight cultures have stronger norms and stricter sanctions against deviant behaviours. As the Netherlands is a relatively loose culture, it is expected that (sports) expatriates moving from very tight cultures have difficulties adjusting, which in turn influences their performance. However, the researchers argue that it is easier to adjust to local environment when an expatriate relocates from tight to loose culture than from loose to tight culture. Similarly, Heine et al. (1999) found that cultural differences in self-construal (individuals' perception of themselves as independent or interdependent) can impact individual performance in football by influencing how individuals perceive themselves and their role within the team, as well as how they communicate and collaborate with each other. Certain roles and positions in the team require more independent behaviour (e.g., a striker may need to be more individualistic and focus on scoring goals), while others demand more interdependence and collectivism (e.g., a defender may need to be more collective and focus on supporting the team's defensive efforts). Therefore, cultural differences in self-construal might complement each other.

In paragraph 2.2, it was established that cultural diversity can bring unique perspectives, skills, and experiences to a team, potentially improving performance (Lanfranchi & Taylor, 2001; Horwitz and Horwitz, 2007; Müller, 2009; Theweleit, 2009). The researchers approaching the subject from this angle suggest that multicultural teams, and thus individual players, perform better as players complement each other. However, there is also research indicating that cultural distance can complicate performance in a new environment, as differences in culture can lead to misunderstandings and conflicts (Haas and Nüesch, 2012). Therefore, the relationship between cultural distance and individual player performance is likely to be complex and may depend on various factors, including the level of acculturation among players, team dynamics, and character traits of a player.

This research will measure cultural distance along the dimensions of Hofstede and the Gelfand tightness scope, resulting in separate hypotheses for each measurement approach. While researchers have sporadically arrived at contradictory results, most literature found that players in multicultural teams complement each other, leading to increased performance. Consequently, the following hypotheses are formulated:

H1: Cultural distance will have a positive impact on individual player performance in a football context.

H1a: Cultural distance on Hofstede's six cultural dimensions will have a positive impact on individual player performance in a football context.

H1b: Players from tight cultures, as opposed to more loose cultures, will experience higher performance in the relatively loose culture of sub-top Eredivisie clubs.

2.3.1 International Cultural Experience

International cultural experience is expected to influence the hypothesised positive relationship between cultural distance and player performance in several ways. Firstly, international cultural experience can enhance players' ability to adapt effectively to new cultural environments. Players who have lived and played in different countries may be more culturally sensitive and be better equipped to handle cultural

differences compared to players without such experiences. This adaptability can result in improved performance in new cultural settings as players can adjust more seamlessly to their surroundings.

Secondly, international cultural experience can contribute to the development of intercultural competence among players. Exposure to different cultural norms and values through living and playing in diverse countries can enhance players' understanding of and ability to navigate cultural differences. This heightened intercultural competence enables players to collaborate more effectively with teammates from different cultural backgrounds, leading to improved performance on the field.

Lastly, international cultural experience can also help players to develop greater self-awareness. Living and playing in different countries exposes individuals to experiences that challenge their own cultural assumptions and beliefs. This can create greater self-awareness, helping players to better recognise and manage their own cultural biases and prejudices. This increased self-awareness facilitates effective communication and collaboration with teammates from diverse cultural background, ultimately enhancing performance.

Therefore, international cultural experience is likely to mitigate the misunderstandings and conflicts resulting from cultural distance (Haas and Nüesch, 2012). That way, international cultural experience will probably facilitate player performance in the new environment that a transfer brings along. Nonetheless, it is important to keep in mind that the impact of international cultural experience on player performance will likely vary depending on the specific circumstances of each player and the cultural context in which they are operating.

H2: International cultural experience amplifies the positive effect of cultural distance on player performance.

2.4 League Strength and Player Performance

In this paragraph, the existing literature on the relationship between league strength and player performance will be reviewed. As noted in the academic relevance section, previous research has produced contradictory results. One would expect players moving to lower-quality leagues to see a bump in their performance as they play against lower-quality opponents. However, this bump might also need to be factored against the change of team ability relative to the league, since although the player might be moving to a lower-quality league, they might also be moving from a top-of-the-table team to a relegation candidate. This is an example to illustrate that the aforementioned relationship between league strength and player performance is a complex phenomenon that involves multiple factors influencing the adaptation process. As such, it cannot be viewed as a straightforward or intuitive concept, and a nuanced approach is necessary to fully understand its implications.

One well-known theory that has been proposed to explain the relationship between league strength and player performance is the "step-up" or "adaptation" theory. Szymanski and Kesenne (2004) introduced this theory, which suggests that when players move to a higher-quality league, they will initially struggle to adjust to the higher level of competition and playing style. However, over time, they will adapt to the new environment and improve their performance. Conversely, when players move to a lower-quality league, they may experience a temporary bump in performance due to playing against lower-quality opponents. However, over time, they may struggle to maintain their performance due to a lower level of competition and reduced motivation. Thus, players will eventually adjust their level to the higher or lower level in a league, after a temporary period of adaptation. Based on this theory, players who transfer to a stronger league will improve their performance, while players who transfer to a weaker league will decline their performance. Hence, it would be advisable to transfer players from a weaker to a stronger league to improve their performance.

While some studies support the adaptation theory (Barrons, 2009; Arkes, 2018), others found contradictory results or approached the topic differently. For instance, Magel and Hoffman (2015) and

Schmidt and Berri (2001) found a positive association between the strength of the league a player transfers from and their performance in their new league. This can be attributed to the higher skill level, experience, and game intelligence that players from stronger leagues possess, allowing them to perform better in their new league. Tiedemann et al. (2010) also found that players transferring from stronger to weaker leagues tend to have higher performance ratings, potentially due to more opportunities to showcase their skills and to become key players. Similarly, Ribeiro et al. (2020) found that Brazilian football players who transferred to weaker European leagues tended to have higher performance ratings than those who transferred to stronger leagues. The authors suggest that this may be because players who transfer to weaker leagues may have more playing time and less pressure to perform immediately. This study also found that the impact of league strength on player performance varies by player position, with the strength of the league having a greater impact on the performance of strikers than it did on defenders. This suggests that different positions may require different skills and abilities that are more or less affected by the strength of the league.

Overall, literature agrees that the strength of a league plays a significant role in determining player performance. While there is no absolute consensus on the direction of the relationship, most of the recent studies concluded that players who transfer from stronger leagues tend to perform better compared to those who transfer from weaker leagues, and that this effect is stronger for attacking players compared to defensive players.

H3: There is a positive relationship between league strength and player performance, with stronger-league transfers performing better than weaker-league transfers.

2.5 League's Financial Resources and Player Performance

In 2012, Jones and Judge found that players transferring from high-revenue leagues, such as the English Premier League and the Spanish La Liga, were more likely to perform at a high level after their transfer compared to players from lower-revenue leagues. The authors suggested that this was due to the higher level of competition and resources available in these leagues, which could better prepare players for the demands of top-level football. Another study by Hessert and Ferreira (2017) also observed that players transferring from leagues with higher financial resources were more likely to be successful in their new clubs, as measured by performance metrics such as goals scored, assists, and minutes played. The authors argued that this was due to the higher investment in player development and support in these leagues, enhancing player skills and confidence. Similar findings were reported by Platz et al. (2019) and Grafton and Taylor (2015), who found a positive relationship between a league's financial resources and player performance. Access to better training facilities, coaching, and support systems in leagues with greater financial resources was suggested as a contributing factor.

Therefore, there is a consensus that greater financial resources in a league are associated with higher player performance. While existing research has been specified to the "Big Five" competitions, it is reasonable to expect a similar relationship for player transfers involving sub-top Eredivisie clubs.

H4: There is a positive relationship between a league's financial resources and player performance.

Chapter 3

Methodology

3.1 Theoretical Model

The hypotheses outlined in the previous chapter materialise into the theoretical model depicted in Figure 1. The model comprises three independent variables (cultural distance, league strength, and league's financial resources) and one dependent variable (player performance). In addition, a moderating variable is included (international cultural experience).

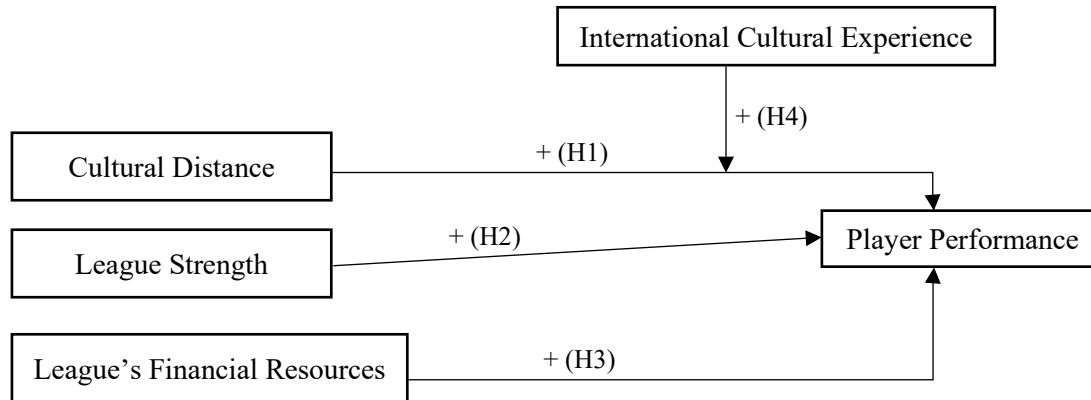


Figure 1. Theoretical Model

3.2 Design

The football industry is one of the most transparent industries with a lot of data available. Therefore, the professional football context provides favourable research conditions due to the many performance metrics available on player and team performance. Furthermore, each football match is played by the same rules with the same number of players at the start of each match and supervised by independent referees. This creates solid quasi-laboratory conditions, enhancing internal validity. Furthermore, by utilising the professional football environment, this research can broaden its applicability to top businesses. Namely, as elite football and top business are both high-performing environments showing considerable overlap (Molan et al., 2018), parts of the findings can be useful for top businesses.

3.3 Sample

To ensure the accuracy of results and thereby confidence in the estimate, the sample size is broadened by a selection of clubs similar to FC Twente. In this qualification process, the main determinant is the club's financial budget, assuming that the clubs approximately spend the same amount on scouting as FC Twente. Ajax, PSV, and Feyenoord are excluded, as their financial capacity and subsequent market position are significantly different. Including these clubs would hinder the provision of realistic advice to FC Twente and comparable clubs, scouting abilities and optimal transfer strategies are heavily influenced by financial capacity and market position. Likewise, Eredivisie clubs with considerably lower budgets than FC Twente are excluded because their limited resources do not allow for a similar international transfer strategy. Table 4.1.1 provides an overview of the qualified clubs, with club budgets from 2022 being used, as this is the most recent year for which data is available.

Club Name	Club budget 2022 (€)
Ajax	160,000,000
PSV	85,000,000
Feyenoord	80,000,000
AZ	32,000,000
FC Twente	30,000,000
FC Groningen	25,000,000
FC Utrecht	25,000,000
Vitesse	23,000,000
sc Heerenveen	18,000,000
Sparta Rotterdam	13,000,000
N.E.C.	12,000,000
Fortuna Sittard	11,000,000
Go Ahead Eagles	10,000,000
FC Volendam	9,500,000

FC Emmen	9,300,000
SC Cambuur	9,000,000
RKC Waalwijk	8,400,000
Excelsior	7,500,000

Table 4.1.1. Ordered overview of club budgets Dutch Eredivisie (data retrieved from Transfermarkt.com).

The research will include incoming transfers from all continents, with a particular focus on transfers from European countries. The decision to narrow the research focus to Europe is driven by several factors. First, because scouting in continents other than Europe is more expensive and time-intensive, and therefore less attractive for sub-top Eredivisie clubs. And second, Dutch regulations require clubs to pay a minimum of 75 percent of the average Eredivisie salary for non-European players under the age of twenty, and 150 percent for non-European players aged twenty and above. As these salary requirements are financially challenging for sub-top Eredivisie clubs, Europe is strategically the most interesting market for player acquisitions.

Furthermore, the data sample will include transfers from the past five completed seasons, spanning from 2017/2018 until 2021/2022. This five-year timeframe is recent enough to account for the rapid-changing financial football landscape, while also providing a sufficiently large sample size of 177 cases. Therefore, the analysis will include the incoming transfers of FC Twente, AZ, FC Groningen, FC Utrecht and Vitesse; also referred to as sub-top Eredivisie clubs, from season 2017/2018 until 2021/2022.

3.4 Method

This section outlines the methods used in this study. A quantitative research design is adopted, to test the proposed hypotheses and address the research question. Results are treated as significant from the 10% level onwards, although 5% and 1% significance levels are preferred. Prior to all statistical analyses, the assumptions of normality, linearity, and homoscedasticity were checked. If these assumptions were not met, appropriate transformations were applied to the data. Specifically, for variables that were not normally distributed, a natural log transformation was applied to normalise the data, or the data was categorised. For variables that showed heteroscedasticity, a square root transformation was used to equalise the variance across the range of the variable. The significance of the results was assessed using two-tailed tests, and effect sizes were reported.

The data analysis begins with an evaluation of the descriptive results to gain insights into the structure of the dataset. This is followed by a Pearson correlation matrix, which assesses the strength, significance, and direction of bivariate relationships between variables. Next, a series of univariate regressions is performed to determine the impact of individual variables on player performance. Univariate regression is preferred over multivariate regression to control for potential correlations that could undermine the results of the individual relationships.

For numerical variables, a curve estimation technique is employed to explore possible quadratic relationships. If a significant quadratic relationship is identified, the curve estimation produces a parabolic function that provides specific information about the relationship between the concerning variable and player performance. Numerical variables that do not follow a normal distribution are categorised. For these categorical variables, a mean analysis is performed to determine if certain categories exhibit substantially higher player performance means.

3.5 Data Sources

In this study, a range of data sources were utilised to test the hypotheses and answer the research question. The data were collected from secondary sources. Most player data was obtained from Transfermarkt.com, which is widely recognised as one of the largest and most reliable sources of football data worldwide. It contains comprehensive information on over 190,000 players and 330

football competitions. Transfermarkt.com is extensively used by football experts, scouts, managers, and researchers in sports analytics (Herm et al., 2014; Müller, 2009). The platform provided data on player nationality, age, position, transfer value, market value, new club, former club, former league, co-worker support, competition within the team, international cultural experience, and minutes played.

To gather data on the independent variables *league strength* and *league's financial resources*, Teamform.com and FootballManager were employed, respectively. Physical distance data was sourced from Distantias.com. Data on cultural dimensions were collected from Hofstede's cultural index, available from Hofstede-insights.com, and Gelfand's tightness scope (Gelfand et al., 2011). The dependent variable, player performance, was obtained from the online sports databases SofaScore and Whoscored.com. These databases were selected based on their extensive coverage of football matches and their reputation for providing reliable performance data. Section 3.3.1 elaborates further on the rationale behind choosing these databases.

3.6 Data Preparation

To ensure data accuracy, certain cases were excluded from the sample. For instance, players who return to their club after being on loan at another club are considered incoming transfers by Transfermarkt.com but were removed from the data sample as they were not newly acquired that year. Similarly, youth players who move up to the first team were excluded, as data on league strength and financial resources is not available for youth competitions. The same exclusion applies to players acquired from leagues for which no data is available, such as the U19 competition in Italy. Additionally, only summer transfers were selected, and thus winter transfers were excluded. This decision was made because performance ratings are available per complete season, and winter transfers' performance ratings would be a combination of their performance at two clubs. Since this study aims to distinguish between performance at the former and new club, accurately evaluating winter transfers' performance is difficult.

Some players in the sample have dual nationality, as identified by Transfermarkt.com. To ensure accuracy in determining their cultural values, their career and life course were observed to identify the country that best represents their cultural norms, values, and customs. This approach recognises that an individuals' cultural identity is often shaped by their environment and life experiences. For example, consider the case of Milos Kerkez, a footballer with both Hungarian and Serbian nationality. While he was born in Serbia, he was raised in Hungary and played for Hungary's national youth teams during his younger years. As a result, Hungary is likely to be the country that best reflects his cultural identity, and this study will use Hungary as Kerkez' nationality for the analysis.

3.7 Independent Variables

3.7.1 Cultural Distance

Nationality is often used as a proxy for culture in research on cross-cultural differences, as studies have shown that nationality can significantly affect individuals' values, beliefs, and behaviour, particularly in the context of intercultural interactions (e.g., Hofstede, 1980; Triandis, 1995). Therefore, the use of nationality as a proxy for culture in this study is appropriate, and it allows for a straightforward and practical way of measuring the cultural distance between the players and the Netherlands, which is the host country of FC Twente. However, it is also important to acknowledge that cultural identity is complex and multidimensional, and nationality alone may not capture all aspects of cultural differences.

National culture has been subject to various attempts at modelling, resulting in both single and multi-dimensional approaches. Hofstede's (1980) seminal work on national culture is one of the most widely used models to explain cross-cultural variations in various domains. Hofstede's model rates countries on the following six dimensions of national culture: collectivism, power distance, femininity, uncertainty avoidance, long-term orientation, and indulgence. Because of its widespread use and easy-to-obtain, extensive database, this study will utilise Hofstede's model for adequate quantification and comparison of cultural distance.

As this research is conducted in collaboration with FC Twente, the cultural distance variable, is based on the cultural differences between the home country, thus nationality, of the transferred football player and the Netherlands. A player's nationality instead of the country and competition where he plays is taken, as cultural values are often grounded in nationality (Hofstede, 1980). For the players that have dual nationality, their individual life and career course have been studied, and the country that best captures the players' cultural values is used. Each player is then assigned a cultural distance value, calculated by the difference between the cultural values of the Netherlands and his home country. For example, FC Twente acquired Giovanni Troupée in the summer of 2021. Troupée has a dual nationality: Curaçao and Dutch. As he grew up and spent his entire life in the Netherlands, his cultural values are probably best captured by the Dutch culture, and thus the study will treat him as Dutch.

For most countries, all six dimensions of Hofstede are quantified and its cultural distance to the Netherlands can be calculated accordingly. However, Costa Rica lacks data on Long-Term Orientation and Indulgence. As a solution, the mean of the three other Central Latin American countries (El Salvador, Guatemala, and Panama) on these factors will be used as data input for Costa Rica. This approach is justified by Hofstede's indication that Costa Rica is culturally similar to these Latin American countries. The idea of dividing Europe into cultural regions has been explored but found to be infeasible. As patterns along regions differ across cultural dimensions, it is difficult to group regions (Kaasa et al., 2014).

In addition to Hofstede's dimensions, this study will also evaluate cultural distance based on Gelfand's tightness scope. According to Gelfand (2011), cultures can be more tight or loose and this has the potential to be a major source of cultural conflict. Nations that are "tight" have strong norms and a low tolerance for deviant behaviour, while "loose" cultures have weak norms and a high tolerance for deviant behaviour. Gelfand's analysis encompassed 33 nations, all of which were assigned a tightness score. By incorporating Gelfand's tightness scope in the measurement of cultural distance, this study aims to explore performance differences of players acquired from more tight or loose cultures.

None of the existent cultural distance models has achieved widespread acceptance, and their individual applications have been limited in its ability to fully capture the complexities and nuances of cultural identity. Therefore, by using both Hofstede's dimensions and Gelfand's tightness scope, this study offers a more comprehensive and nuanced representation of cultural distance. The chosen methodology may provide insights into how cultural distance optimises the probability of player performance, enabling accurate recommendations for sub-top Eredivisie clubs on the cultural markets to target to improve the probability of transfer success.

3.7.2 League Strength

Europe counts 40 different professional football competitions, all varying in terms of level or strength. Hence, a player transferring from League X to League Y requires to adapt to the new level of gameplay, which can be either lower or higher. As found in the literature review, the strength of the league and opponent strongly impacts the performance of a player. Namely, it might be that a player has adapted himself very well to the surroundings, but because his opponents are much stronger and better, his performance does not improve as much. Therefore, examining the effect of league strength on player performance can yield valuable insights to sub-top Eredivisie clubs, which is the rationale for including league strength as an independent variable.

To operationalise rankings, league ranking data from TeamForm.com is used. The rankings are generated using a sophisticated rating system that involves statistical models and mathematical formulae, drawing on thousands of historical football results. TeamForm's system is sourced from over 1.7 million historical results of more than 700 football competitions in 160 countries. The extensive scope of data enhances the accuracy of the rating system as data error due to missing matches is minimised. Another advantage of using TeamForm's rating system is that it provides rankings for each

quartile, offering a comprehensive perspective. These rankings cover a period from Q1, 2015 up to the latest available quartile, which is Q1, 2023.

For each season, the league's rating at its start (September, Q3) is used. This choice is made because the start of the season best represents the league's strength at the time of the player transfer. For example, the league ranking data of Q3, 2021 is used to represent a league's strength for the 2021-2022 season.

3.7.3 League's Financial Resources

The football industry is known for its significant financial resources, yet the financial strength of football clubs greatly differs across countries and competitions. To gain insights into the relationship between a league's financial resources and the performance of transferred players, this variable has been included. It measures the average club budget of the league from which the player is transferred and compares it to the average club budget of Eredivisie. The aim is to provide guidance to sub-top Eredivisie clubs on which leagues to prioritise to enhance the probability of player performance. Specifically, this variable seeks to identify the leagues that offer the greatest potential for player performance in terms of league financial order of magnitude.

Financial information on football clubs and leagues is only limitedly available, which may be to the sensitive nature of financial data. As a result, Football Manager data has been identified as the most reliable and appropriate data source, providing estimates of transfer and wage budgets for individual clubs, covering 40 leagues. To calculate the average club budgets per league, the budgets of each club are summed and then divided by the number of clubs in the league. This process is repeated for each season from 2017 to 2022, resulting in a list of average club budgets per league for each year.

It should be noted, however, that Football Manager is a simulation game, and its financial data is based on assumptions and models, rather than actual financial statements. Thus, while Football Manager data can provide estimates of transfer and wage budgets, these estimates may not always accurately reflect the actual financial resources of clubs and leagues. Nevertheless, using Football Manager data to generate average club budgets per league can still be a useful exercise for comparing the financial resources of different clubs and leagues over time. However, it is important to keep in mind that these estimates should be interpreted with caution and not be used as definitive proof of a club or league's financial situation.

The idea of using the financial resources of the entire league, rather than considering the budget of the transferred players' club has been explored. And while using entire league budgets is an option, utilising the average financial resources of a league club provides a more complete understanding of the financial context in which the player has been operating. For example, because the number of clubs greatly varies between leagues. To illustrate, the Andorran Superliga and Croatian First Football League consist of 10 teams, while the English Premier League includes 20 teams. Therefore, using average club budgets as a data input allows for a more informative, thereby better serving the objectives of the client.

3.8 Dependent Variables

3.8.1 Player Performance

Analysing historical data on player performance is essential for evaluating their success after a transfer. To ensure accurate and reliable evaluation, player performance is assessed in two ways: in their first or "debut" season and in their entire playing period at the sub-top Eredivisie club. Each approach offers distinct advantages but combining them provides a comprehensive evaluation and allows for the most specific and nuanced recommendations to the client.

Analysing player performance in their debut season may provide valuable insights into how cultural distance, league strength, and financial resources impact individual performance. Focussing solely on the debut season allows for a clearer understanding of the *immediate* effects of these factors, as players

have had limited time to adapt. On the other hand, assessing performance throughout the entire playing period at the club enables us to observe how a player's performance evolves over time and identify any patterns or trends in performance that may be related to adaptation. This can be useful for understanding the longer-term effects of cultural distance, league strength and league's financial resources on individual player performance. However, using this more extensive period also introduces the influence of various other factors that may impact performance, such as changes in coaching staff or other external circumstances. Player performance deteriorates for other reasons than cultural distance, league strength or financial resources.

The ultimate goal for clubs is to have newly transferred players to perform well in the entire playing period at the club, not solely in the debut season. Therefore, results on performance in the entire playing period will be prioritised. Additionally, a players' performance in the season prior to being transferred will be included to investigate any relation with their performance at the new club. Thus, player performance data will be gathered for the season prior the transfer, for the first season at sub-top Eredivisie club, and the total period at the club.

SofaScore and Whoscored.com are two of the most accurate, respected, and well-known performance indicators in football, widely used among media giants, bookmakers, and football clubs. The ratings generated by these platforms are also valuable for quantifying player performance in research studies. As such, this research will employ the ratings generated by SofaScore and Whoscored.com to quantify player performance. SofaScore's statistical ratings are product from a computer algorithm that incorporates carefully selected parameters, eliminating potential human bias present in match reviews published in newspapers or web portals. The algorithm collects data on player contributions, including possession, passes, duels, tackles, runs, interceptions, and shots, resulting in player ratings on a scale of 1 to 10 based on the player's actions during their time on the pitch. Similarly, Whoscored.com's ratings are based on a comprehensive statistical algorithm that considers over 200 raw statistics, weighted according to the player's influence within the game. Every significant event is taken into account, with positive or negative effects on ratings weighted based on its location on the pitch and its outcome. The algorithm considers all aspects of the player's performance, providing an accurate and unbiased assessment of their contribution to the team's performance.

These performance indicators are highly respected due to their objective nature and the level of sophistication involved in their calculation. By combining both data sources, a more nuanced and well-rounded view of individual player performance can be obtained, as each data source captures slightly different aspects of performance. Furthermore, the correspondence between both performance metrics adds to the validity of measuring performance this way.

3.9 Moderating Variables

3.9.1 International Cultural Experience

International cultural experience refers to a player's exposure to different countries and competitions outside their home country. When a player has spent time playing in other countries, he has learned to adapt to a new environment, has experienced other cultures, and might even have adopted some of these cultural aspects. This cultural experience might ease the adaptation process when being transferred to another new environment, such as the Netherlands. Therefore, international cultural experience might moderate the impact of cultural distance on player performance. The effect might be strengthened, weakened, neutralised, or even opposite when taking into account international cultural experience. The measurement of international cultural experience is based on the number of years a player has played in countries and competitions outside their home country.

3.10 Control Variables

3.10.1 Age

Age is a factor that is likely to influence the performance of a player. More mature players have had more time to develop relevant tactical and technical football skills compared to players who have recently started their professional careers (Egilsson and Dolles, 2017). Also, mature players are more likely to have prior experience playing abroad, which can facilitate their adaptation to a new competition. Therefore, age has an impact on a player's performance after an international transfer, and thus the player's age will be included as a control variable. It is important to note that the dataset will include the player's age at the start of the season, rather than when the transfer was announced. Data on age is obtained from Transfermarkt.com.

3.10.2 Physical Distance

Playing football in a country far away from a player's home country can be tough, as players possibly need to deal with a lot of travelling, different time zones, potential feelings of loneliness, etcetera. Therefore, physical distance can affect player performance. Physical distance might sound similar to cultural distance. Yet, it is important to distinguish between the two, as countries can be physically very distant, but culturally very similar. To account for the effect of physical distance on player performance, physical distance is included as a control variable. It is measured by the number of kilometres between the capital city of the player's home country and Amsterdam, as being the capital of the Netherlands. Straight line distances are used, rather than travel distance or time. The latter two metrics can vary due to external factors (weather, type of transport, traffic, money availability, etc.), leading to a less accurate comparison. Straight line distances are retrieved from Distantias.com.

3.10.3 Transfer Fee

In most (international) transfers, the acquiring club pays a transfer fee to the player's former. As highlighted in section 2.1, transfer fees have been consistently rising over the past years, with clubs spending record amounts to secure top players. The transfer fee is often used as a control variable in various studies and is considered a proxy for player quality (van Tilburg, 2020). It is important to note that there is a conceptual difference between transfer fee and market value (Müller et al., 2017). The transfer fee represents the actual amount of money paid by a club to sign a player with a valid contract with a different team, while market value refers to the estimated value of a player in the current market (Müller et al., 2017). Various factors contribute to the actual transfer fee that is paid, such as the player's talent, contract length, demand for the player, and the network externalities of popularity (Adler, 1985). Network externalities refer to the frequency of a player's media mentions and general media coverage (Müller et al., 2017). As a result, transfer fees can be much higher than the actual valuation of a player based solely on their talent and previous performances. It is worth noting that high transfer fees can create pressure on players to perform well, as they are expected to meet the high expectations associated with such sums (Frick, 2009). This has a negative effect on a player's performance. Information on transfer fees is obtained from Transfermarkt.com.

3.10.4 Market Value

In addition to the transfer fee, the player's market value at the time of the transfer is controlled for in this study. Market value is defined as the estimated amount a club is willing to pay to sign the player, irrespective of the actual transaction (Herm et al., 2014). Therefore, it represents the player's performance and skills without considering market mechanisms that may influence the final transfer fee. Similar to the transfer fee, a high market value can create pressure on a player to perform well, as it is associated with higher performance expectations (Maderer et al., 2014). Consequently, high market values can become a burden for players as they may feel pressured to live up to the high expectations. Hence, it is possible that high market values negatively impact player performance (Frick, 2009). Market values are obtained from Transfermarkt.com.

3.10.5 Co-Worker Support

Co-worker support refers to the assistance provided by co-workers from the same cultural background in understanding the norms and behaviours of the host country, thereby reducing the expatriate's uncertainty (Bhaskar-Shrinivas et al., 2005). A similar mechanism is expected in football teams, as teammates from the same country help each other to adjust better and quicker to the new working environment. Additionally, Egilsson and Dolles (2017) identified social support from fellow countrymen as a significant factor in aiding professional athletes' adjustment to a new environment and consequently, enhancing their performance. For instance, if a team already has several Swedish players, it may be recommended to acquire another Swedish player to enhance co-worker support. Co-worker support is measured by the number of players in a team with the same nationality at the start of the season.

3.10.6 Competition

The level of competition within a team is likely to influence both playing time and player performance. According to Egilsson and Dolles (2017), many professional athletes struggle to perform after a transfer because of the intense competition within the team. However, increased competition can also motivate players to invest more in training and trigger them to perform at their maximum, leading to improved performance (Bakel and Salzbrenner, 2019). Competition is measured by the number of players that play the same position as the transferred player. Data on competition is retrieved from Transfermarkt.com.

3.10.7 Minutes Played

The number of minutes a player has played before being transferred provides valuable insights into their physical fitness, match rhythm, and possibly their mental state. These factors can potentially impact a player's overall performance. Hence, the number of minutes played is included as a control variable. Data on minutes played is retrieved from Transfermarkt.com.

3.10.8 Prior Season Player Performance

Similar to minutes played, the performance of a player in the season prior to being transferred can be indicative of their mental state (e.g., self-confidence) and form. These factors may have an impact on a player's performance, with the expectation that this effect is stronger on performance during the debut season, than for the entire playing period at the sub-top Eredivisie club. Data on player performance in the season prior to the transfer is obtained from SofaScore and Whoscored.com.

3.11 Overview Variables

Variables	Measure	Data source
<i>Independent variables</i>		
Cultural Distance	Hofstede Dimensions and Gelfand Tightness Scope	Hofstede-insights.com, (Gelfand et al., 2011)
League Strength	Global league ranking at time of transfer	Teamform.com
League's Financial Resources	Average club budget of league at time of transfer	FootballManager
<i>Dependent variables</i>		
Player Performance	Player rating ranging from 1 to 10	SofaScore and Whoscored.com
<i>Moderating variables</i>		
International Cultural Experience	Number of years having played outside home country	Transfermarkt.com
<i>Control variables</i>		
Age	In years at time of transfer	Transfermarkt.com
Physical Distance	Straight line distance in kilometres	Distantias.com

Transfer Fee	Transfer fee paid to acquire the player	Transfermarkt.com
Market Value	Player valuation at time of transfer	Transfermarkt.com
Co-Worker Support	Number of players with the same nationality	Transfermarkt.com
Competition	Number of players in same playing position	Transfermarkt.com
Minutes Played	Number of minutes played in the year before being transferred	Transfermarkt.com
Prior Season Player Performance	Player rating ranging from 1 to 10	SofaScore and Whoscored.com

Table 3.11.1 Overview of variables.

Chapter 4

Results

4.1 Descriptives and Correlations

This section will provide detailed information on the dataset used in the study. The dataset consists of 177 player transfers that occurred during the summer transfer periods from season 2017/2018 to 2021/2022. Among these transfers, 105 transfers were international transfers, while 72 transfers involved players moving to another team within the same country. Notably, 40.68% of the players were transferred from clubs in the Dutch First League (Eredivisie, 21.47%) or Second League (Keuken Kampioen Division, 19.21%). The remaining players were acquired from various other competitions, including the German Bundesliga (6.21%), the Belgian Jupiler Pro League (5.08%), the English Premier League (4.52%), the English Championship (3.95%) and the Swiss Super League (3.39%). Transfers from other competitions accounted for less than 3% of the total.

At the club level, Jong Ajax and Jong AZ were the most significant sources of players, contributing to 5.08% and 3.95% of the transfers, respectively. Other notable clubs that contributed to the dataset include AFC Ajax, Feyenoord, Heracles Almelo, and PSV, each accounting for 2.82% of the transfers.

Regarding nationality, Dutch players constituted the largest proportion of transfers (48.02%), followed by German players (6.21%), Swedish players (5.65%), Danish players (5.08%), and Belgian players (4.53%). The average age of the players in the dataset is 23.25, with the youngest player aged 17 and the oldest player aged 35. In terms of field positions, attackers comprised the majority of transferred players (34.46%), followed by defenders (31.07%) and midfielders (25.41%), while goalkeepers accounted for the remaining 9.04%. Specifically, central attackers (18.08%) and central defenders (16.95%) were the most frequently transferred positions.

The debut season performance scores ranged from 6 to 8, while the total period performance scores ranged from 6.01 and 7.8. The weakest league from which a player was acquired had a strength value of 57.8, representing the French National 2, which is the Fourth League in France. The strongest league from which a player was acquired had a strength value of 92, corresponding to the English Premier League. The financial resources of the leagues varied significantly, ranging from €130,000 to €100,000,000. Notably, the lowest financial resource was associated with the Belgian Jupiler Pro League, with an average club budget of €130,000 in the 2017-2018 season. Since then, the league's average club budget has grown to €989,000 for the 2021-2022 season. Regarding co-worker support, some players transferred to teams where they had no support, meaning no other player shared the same nationality. The highest level of support a player experienced was 33, indicating teams where almost all players shared the same nationality. Furthermore, the level of competition a player faces upon joining a new team varied notably, with the number of players playing in the same position ranging from 0 to 7. This also underlines the great contrasts a player can face after transferring to a new team. Table 4.1.1 provides further insight into the dataset.

Variable	N	Minimum	Maximum	Mean	Standard Deviation
SofaScore Debut Season ¹	168	6	8	6.83	.232
Whoscored.com Debut Season ¹	167	6	8	6.64	.323
SofaScore Total Period ¹	177	6.2	7.68	6.82	.218
Whoscored.com Total Period ¹	176	6.01	7.8	6.62	.304
Cultural Distance to Netherlands (Hofstede) ²	177	0	242	68.83	74.759
Cultural Distance to Netherlands (Gelfand) ²	131	0	6	1.33	1.908
League Strength ²	177	57.8	92	74.173	9.6486
League's Financial Resources ²	166	130000	100000000	15414807.23	23324519.6
International Cultural Experience ³	177	0	9.5	1.568	2.2678
Age ⁴	177	17	35	23.25	3.519
Physical Distance ⁴	177	0	16628.61	996.1535	2359.91989
Transfer Fee ⁴	46	150000	2600000	1024891.3	748322.189
Market Value ⁴	177	150000	7250000	1267655.367	1121438.05
Co-Worker Support ⁴	177	0	33	9.81	10.49
Competition ⁴	177	0	7	3.41	3.068
Minutes Played ⁴	177	0	3637	1810.47	952.323
Prior Season Performance (SofaScore) ⁴	114	6	8	6.87	.258
Prior Season Performance (Whoscored.com) ⁴	106	6	7	6.61	.342

Table 4.1.1 Descriptive Statistics and Correlations (two-tailed).

¹Dependent variable. ²Independent variable. ³Moderating variable. ⁴Control variable.

The dataset includes several missing observations. Out of the 177 transfers, 46 (25.99%) involved a transfer fee, while all other transfers were loaned or free agent players. This percentage is notably higher than the 14.9% of transfers involving transfer fees calculated in the FIFA Global Transfer Market Report of 2019. Additionally, the Gelfand cultural distance could not be calculated for 46 players, as their nation was not among the 33 nations analysed by Gelfand. Furthermore, there are 11 missing observations for the league's financial resources, and nine (SofaScore) and ten (Whoscored.com) players have missing debut season performance scores. Lastly, the prior season performance scores of 63 players (SofaScore) and 71 players (Whoscored.com) are missing, as these players competed in leagues not covered by the respective platforms. All other variables in the dataset have no missing values.

Complimenting Table 4.1.1, Table 4.1.2 presents the Pearson Correlation Matrix, with asterisks indicating significance levels. Overall, many significant correlations among the variables can be found.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SofaScore Debut Season (1)	1																	
SofaScore Total Period (2)	.878**	1																
Whoscored.com Debut Season (3)	.862**	.814**	1															
Whoscored.com Total Period (4)	.733**	.852**	.888*	1														
Cultural Distance to NL Hofstede (5)	-.044	-.018	-.088	-.011	1													
Cultural Distance to NL Gelfand (6)	.038	.104	.034	.109	.727**	1												
League Strength (7)	.188	.128	.085	.090	.276**	.305**	1											
League's Financial Resources (8)	-.064	-.015	-.054	-.011	.225**	.206*	.683**	1										
International Cultural Experience (9)	.140	.131	.104	.107	.121	-.039	.289**	.235**	1									
Age (10)	.101	.098	.033	.014	-.207**	-.178**	.189*	.070	.460**	1								
Transfer Value (11)	.338*	.394**	.284	.339*	.170	.340	.163	-.038	.189	-.290	1							
Physical Distance (12)	-.026	-.025	-.041	-.017	.536**	.338**	.076	.129	.021	-.223**	.414**	1						
Market Value (13)	.181*	.151*	.156*	.080	.016	.010	.323**	.147	.147	.040	.192	-.055	1					
Co-Worker Support (14)	-.016	-.066	.045	-.037	-.790**	-.768**	-.370**	-.230**	-.114	.139	-.163	-.366**	-.055	1				
Competition (15)	-.006	-.049	-.055	-.094	-.221**	-.211*	-.043	-.088	-.074	.171*	-.090	-.100	.059	.070	1			
Minutes Played (16)	.047	.066	.050	.062	-.137	-.137	-.357**	-.364**	-.098	.037	-.091	-.114	-.037	.180*	.128	1		
Prior Season Performance SofaScore (17)	.307**	.403**	.237*	.276**	-.167	.037	-.200*	-.139	-.058	.187*	.002	-.122	.034	.022	-.008	.501**	1	
Prior Season Performance Whoscored.com (18)	.280**	.330**	.294**	.325**	-.068	.142	-.177	-.099	-.149	.103	-.102	-.094	.040	-.046	-.026	.471**	.721**	1

Table 4.1.2 Correlations.

* Correlation is significant at the 0.05 level (two-tailed)

** Correlation is significant at the 0.01 level (two-tailed)

Regarding the dependent variables, there is a high correlation between debut season and total period performances highly correlate, and both these performance scores also correlate with prior season performance. This correlation holds for performance measured by both SofaScore and Whoscored.com. Furthermore, the performance values from SofaScore and Whoscored.com are highly correlated, increasing confidence in the individual measures and their combined use. Next, transfer values correlate with the performance metrics, with a stronger and more significant correlation with total period performance compared to debut season performance. Market values correlate at the 1% level with both performance variables, although this correlation is weaker than transfer value – player performance (e.g., 0.181 for market value and 0.338 for transfer value).

For the independent variables, there is a high positive correlation of 0.727 (at the 5% level) between the cultural distance metrics of Hofstede and Gelfand. League strength and the league's financial resources

also show slight correlations with both cultural distance metrics, suggesting that players from stronger leagues are often also players that are culturally more different. Cultural distance is positively correlated with physical distance, but negatively correlated to age, competition, and co-worker support. It can be argued that players from farther away are culturally more distant, and that greater cultural distance brings along lower co-worker support levels. For the age-cultural distance correlation, it can be argued that non-EU players are often more culturally distant. And as non-EU players are more expensive due to FIFA's salary impositions, clubs will opt for more arrived, often older non-EU players. However, the correlation of cultural distance with competition is less apparent. Further, there is a positive correlation of 0.683 between league strength and the league's financial resources, which is unsurprising as additional financial resources contribute to improving league strength. League strength and league's financial resources are also positively correlated with international cultural experience, and league strength with market values, indicating that players from stronger leagues are often valued higher. There exists a negative correlation between both league strength and financial resources with minutes played, indicating that players from (financially) stronger leagues have played fewer minutes in the prior season. This can be explained as players who play a lot in the strongest leagues in the world are financially not viable for sub-top Eredivisie clubs, and therefore represent only a very small portion of the sample. Also, a negative correlation between the two league variables and co-worker support exists, indicating that players acquired from leagues with greater differences in strength and financial resources compared to the Eredivisie are accompanied by fewer co-workers from similar cultures. Lastly, league strength shows a small positive correlation with age, meaning that players acquired from stronger leagues are generally older.

For the remaining variables, a natural positive correlation between international cultural experience and age can be observed. Furthermore, physical distance negatively correlates to age, as young players are less inclined to move far away from home, and co-worker support, as players from far away are often accompanied by less players with similar cultural values. Physical distance positively correlates to transfer value, as it is often more expensive to get players from far away. The last correlation that can be observed is the correlation between the minutes played and performance in the prior season to being transferred. Better performance often leads to playing more minutes, and in turn, more minutes allows for match rhythm and development, leading to better performance.

4.2 Results Univariate and Multivariate Analysis

In table 4.2.1. and 4.2.2. below, results of the univariate analysis for the dependent variables, debut season performance and total period performance, respectively, are presented. However, as total period performance scores are of greater importance to clubs, the focus of this analysis will be on the results of the total period performance as the dependent variable. Furthermore, all significant variables for debut season performance are also significant for total period performance. Hence, focussing solely on the results of the total period performance analysis avoids redundancy and emphasises the more pertinent information.

Parameter	Debut Season Performance SofaScore			Debut Season Performance Whoscored.com		
	B	Std. Error	Significance	B	Std. Error	Significance
Cultural Distance to NL Hofstede	-.002	.001	.144	.000	.000	.260
Cultural Distance to NL Gelfand	.005	.011	.678	.006	.015	.707
League Strength	.003	.002	.129	.003	.003	.274
League's Financial Resources	-6.35E-10	7.95E-10	.425	-7.31E-10	1.09E-9	.504
International Cultural Experience	.014*	.008	.070	.015	.011	.181
Age	.007	.005	.192	.003	.007	.671
Transfer Value	8.91E-8**	3.78E-8	.023	1.21E-7*	6.23E-8	.058

Physical Distance	-2.50E-6	7.46E-6	.738	-5.41E-6	1.04E-5	.603
Market Value	3.70E-8**	1.56E-8	.019	4.42E-8**	2.19E-8	.045
Co-Worker Support	-.011	.015	.470	.001	.002	.561
Competition	.000	.006	.943	-.006	.008	.481
Minutes Played	1.13E-5	1.89E-5	.549	1.68E-5	2.64E-5	.524
Prior Season Performance SofaScore	.292***	.088	.001	.307**	.122	.013
Prior Season Performance Whoscored.com	.197***	.067	.004	.284***	.091	.002

Table 4.2.1. Univariate analysis debut season performances (two-tailed).

* Significant at the 0.1 level. ** Significant at the 0.05 level. *** Significant at the 0.01 level.

Table 4.2.2. below depicts the univariate analysis on total period performance as the dependent variable. Results indicate that certain variables significantly impact total period performance. For SofaScore, league strength and international cultural experience have a significant impact at the 10% level, with a very small Beta of 0.003 for league strength. Specific details regarding the dynamics of international cultural experience in relation to player performance will be discussed in section 5.4. Transfer value is significant at the 1% level for SofaScore, with a small Beta of 1.15E-7, and at the 5% level for Whoscored.com, with an almost equally small Beta of 1.48E-7. For SofaScore, market value is also a significant predictor of total period performance at the 5% level. Additionally, prior season performance is significant at the 1% level for both measures of total period performance, with relatively high Betas ranging from 0.215 to 0.347.

Parameter	Total Period Performance SofaScore			Total Period Performance Whoscored.com		
	B	Std. Error	Significance	B	Std. Error	Significance
Cultural Distance to NL Hofstede	-5.10E-5	.000	.817	-4.62E-5	.000	.881
Cultural Distance to NL Gelfand	.012	.010	.239	.017	.014	.217
League Strength	.003*	.002	.090	.003	.002	.237
League's Financial Resources	-1.41E-10	7.31E-10	.847	-1.42E-10	1.00E-9	.888
International Cultural Experience	.013*	.007	.082	.014	.010	.158
Age	.006	.005	.195	.001	.007	.858
Transfer Value	1.15E-7***	4.02E-8	.007	1.48E-7**	6.17E-8	.021
Physical Distance	-2.33E-6	6.97E-6	.739	-2.20E-6	9.74E-6	.822
Market Value	2.94E-8**	1.45E-8	.044	2.15E-8	2.05E-8	.294
Co-Worker Support	-.001	.002	.385	-.001	.002	.629
Competition	-.003	.005	.520	-.009	.007	.213
Minutes Played	1.50E-5	1.73E-5	.386	1.98E-5	2.42E-5	.414
Prior Season Performance SofaScore	.347***	.074	< .001	.336***	.111	.003
Prior Season Performance Whoscored.com	.215***	.060	< .001	.299***	.085	< .001

Table 4.2.2. Univariate analysis total period performances (two-tailed).

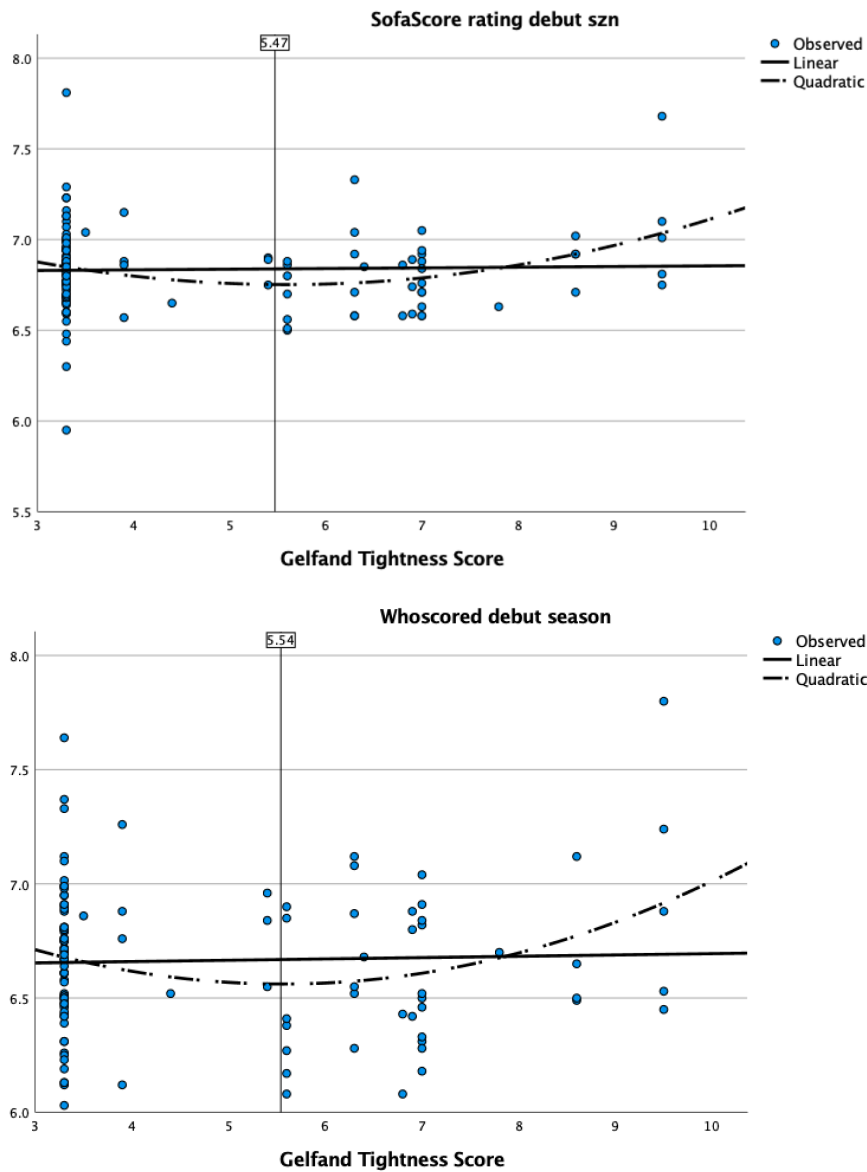
* Significant at the 0.1 level. ** Significant at the 0.05 level. *** Significant at the 0.01 level.

In order to examine the potential moderating effect of international cultural experience on the relationship between cultural distance and player performance (hypothesis H2), a multivariate analysis involving an interaction term was performed. The regression of cultural distance on player performance was supplemented with the interaction between cultural distance and international cultural experience. This multivariate analysis was executed separately for the cultural distance measures of Hofstede and Gelfand. However, neither regression showed a significant impact of international cultural experience on the cultural distance-player performance relationship, indicating the absence of a moderating role for international cultural experience.

4.3 Results Curve Estimation

This chapter will exclusively explain and illustrate the significant quadratic relationships that have been identified. Other continuous variables do not exhibit a significant quadratic relationship with player performance.

4.3.1 Cultural Distance



Graph 4.3.1. Gelfand Tightness Score and Debut Season Performance scores.

Graph 4.3.1. above illustrates the significant quadratic relationship between the independent variable, Gelfand Tightness Score (measure of cultural distance), and the dependent variable, debut season performance. Out of the total 177 cases, 57 were excluded, due to missing information on any of the variables for these cases. Among the remaining cases, 78 players are Dutch players, which have a cultural tightness score of 3.3.

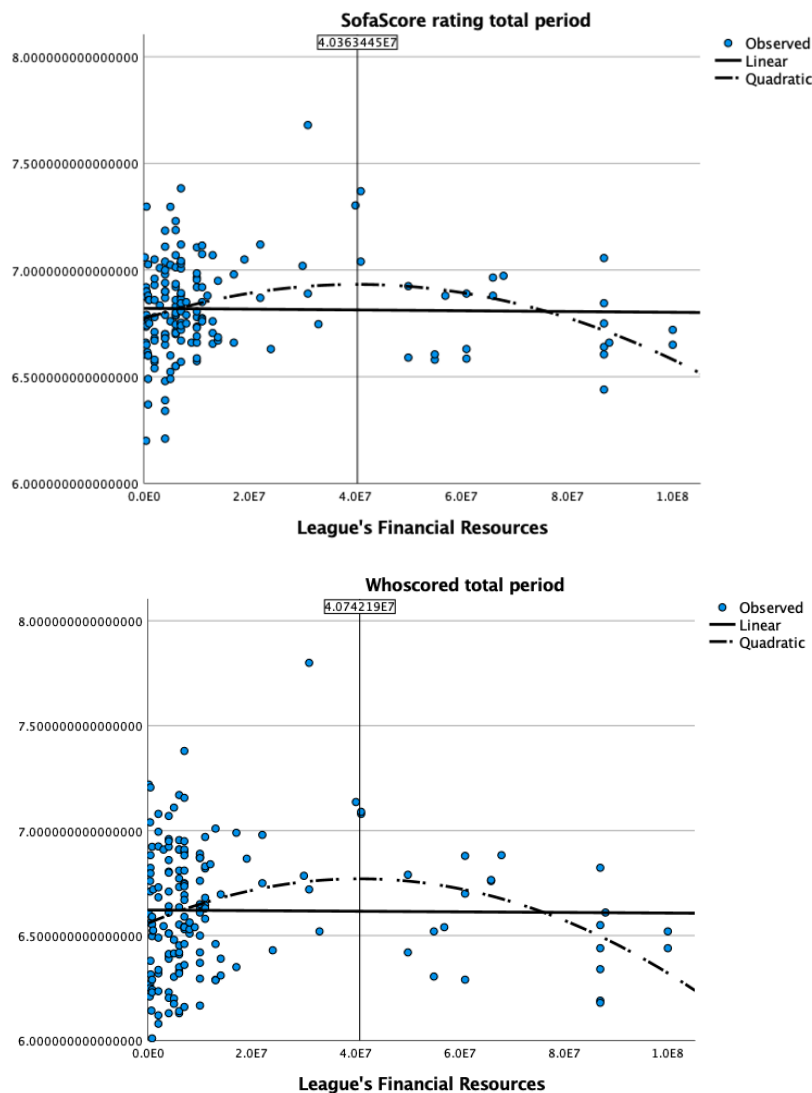
Both quadratic models are significant at the 5% level, with their individual parameters significant at the 1% level. SofaScore and Whoscored.com models have relatively low R-squared values of 6.2% and

4.6%, respectively. However, this is typical for models analysing human behaviour, and hence, no reason to discard the models (Ozili, 2023).

The curve estimation reveals a positive parabolic shape with the vertex at $x = 5.47$ for SofaScore and $x = 5.54$ for Whoscored.com. The parabolic function for debut season scores based on SofaScore is $y = 7.332 - 0.208x + 0.019x^2$ and for Whoscored.com it is $y = 7.270 - 0.255x + 0.023x^2$. This means that a Gelfand Tightness Score of 5.47 and 5.54 resulted in the lowest performance scores for SofaScore and Whoscored.com, respectively. Belgium corresponds to these tightness scores, predicting lower performance of their players compared to players from other countries. Belgium adequately represents the unfavourable range of tightness scores for performance, as all other countries have values of less than 4.5 or greater than 6.2. However, quadratic relationships between Gelfand Tightness Scores and *total period* performance scores are not significant.

4.3.2 League's Financial Resources

In the analysis of the league's financial resources, quadratic relationships with debut season and total period performances are found to be significant at the 5% level for both SofaScore and Whoscored.com. As total period performance is of primary interest to clubs, graph 4.3.2 will depict findings on financial resources and total period performance.



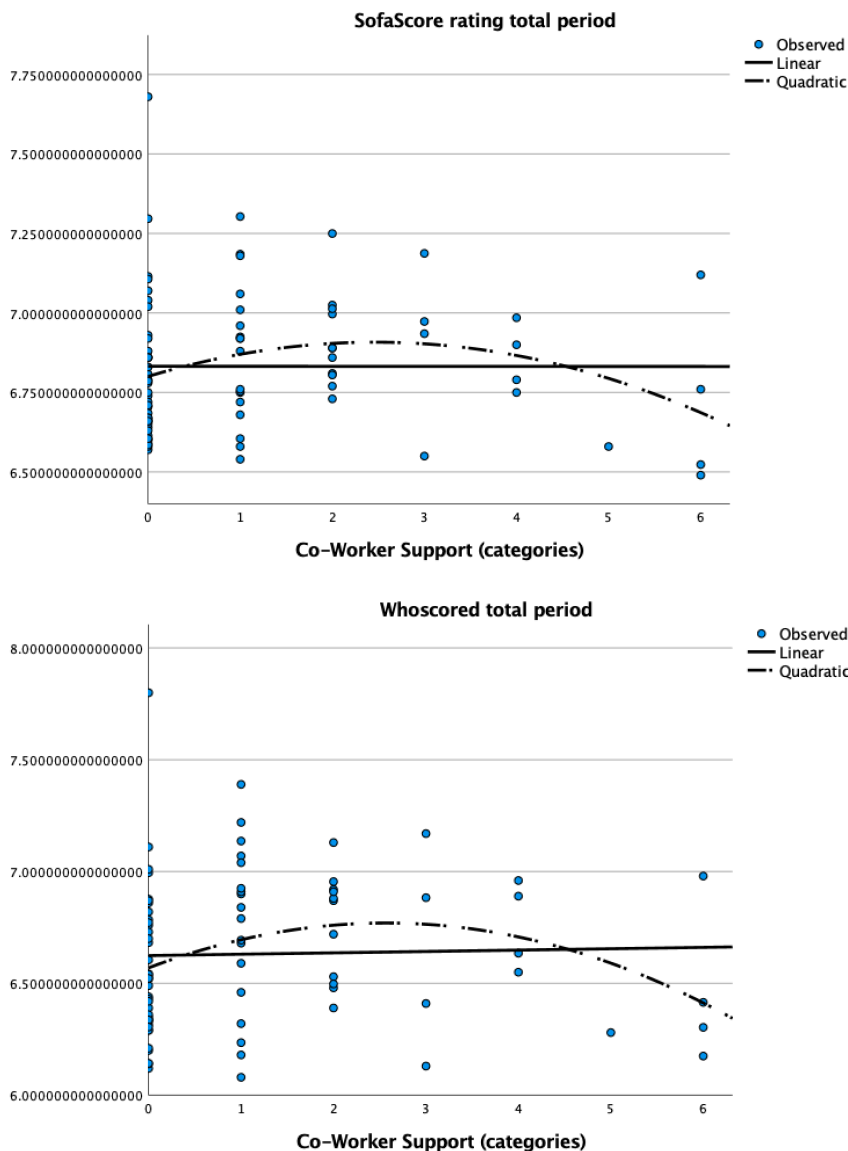
Graph 4.3.2. League's Financial Resources and Total Period Performance ratings.

Out of the total 177 cases, 11 were excluded due to missing financial resource data for the concerning leagues. R-squared levels for the models based on SofaScore and Whoscored.com are relatively low, at 6% and 5.3%, respectively, which is expected for studies analysing human behaviour.

The curve estimation reveals a negative parabolic relationship with a vertex at $x = 4.0363445E7$ for SofaScore and $x = 4.0742190E7$ for Whoscored.com. The function for total period scores based on SofaScore is $y = 6.772 + 7.996E-9x - 9.905E-17x^2$ and for Whoscored.com it is $y = 6.558 + 1.043E-8x - 1.280E-16x^2$. This indicates that players transferred from leagues with average club budgets of 40.4 and 40.7 million Euros achieve the highest performance scores on SofaScore and Whoscored.com, respectively. The French Ligue 1 corresponds to this financial order of magnitude. On the other hand, players from leagues with resources of 80 million or higher tend to perform below average, representing the Bundesliga and Premier League.

4.3.3 Co-Worker Support

In the analysis of co-worker support, a significant quadratic relationship is found between co-worker support and total period performance scores for both SofaScore (at the 10% level) and Whoscored.com (at the 5% level). This relationship is visualised in graph 4.3.3. below.

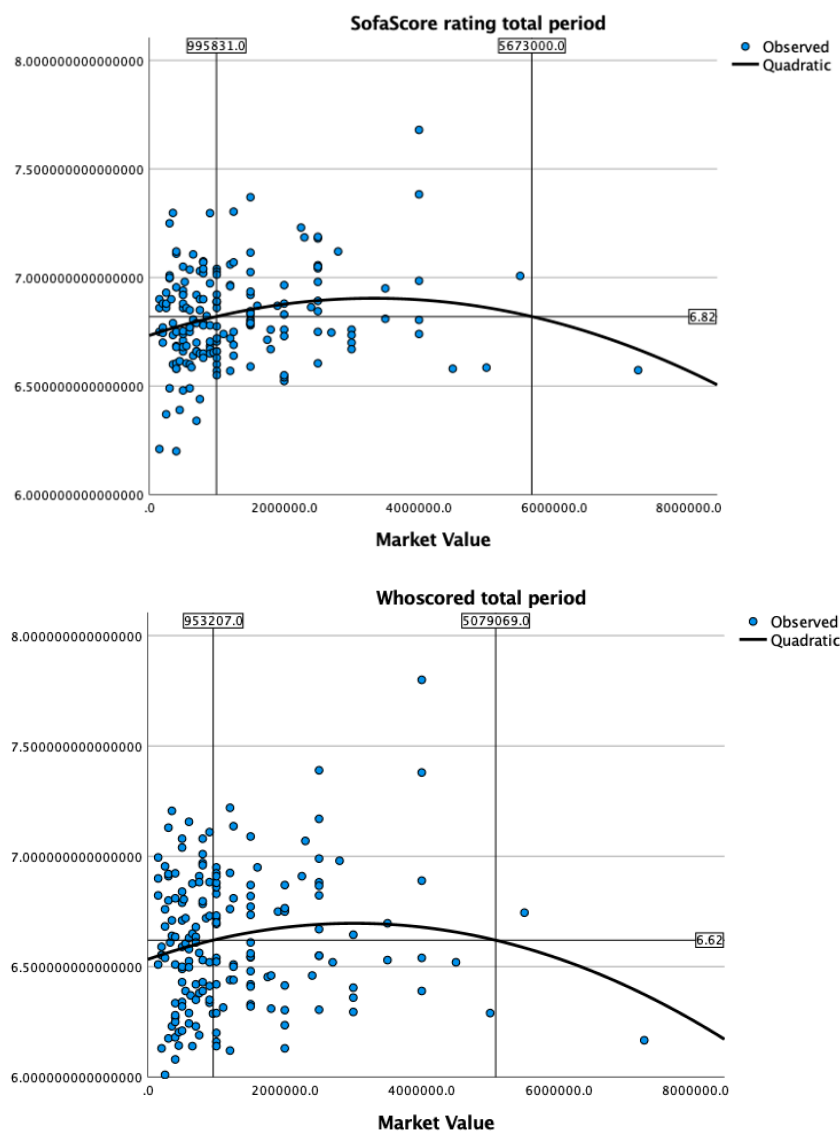


Graph 4.3.3. Co-Worker Support and Total Period Performance ratings.

The objective of this regression is to determine the optimal level of co-worker support for foreign players that enhances their performance. Therefore, Dutch players are excluded from the sample, and the analysis is based on 82 remaining cases. Among these 82 players, 42 did not receive any co-worker support, while the other 40 players were accompanied by one to six players from the same nationality. The R-squared values the SofaScore and Whoscored.com models are 6.1% and 7.5% respectively, which are relatively high but natural for analysing human performance data. The results show that having 1 to 4 co-workers of the same nationality predicts above-average performance scores for non-Dutch players during their total period at the club.

4.3.4 Market Value

Regarding market value, a significant quadratic relationship is found between market value and both debut season and total period player performance. Results on total period player performance are prioritised over debut season performance since clubs are interested in players' performance in their total period at the club. The statistical significance of market value and total period performance scores is confirmed at the 5% level for both SofaScore and Whoscored.com. The models explain 4.8% of the variance in the data, which is a typical level for models examining human performance behaviour. Furthermore, no cases had to be excluded, as market value data on all 177 players was available.



Graph 4.3.4. Market Value and Total Period Performance ratings.

For SofaScore, the descriptive results found the mean performance score of players to be 6.82. The function of the negative parabola is $y = 6.733 + 1.027E-7x - 1.540E-14x^2$. The parabolic function intersects with the player performance mean at (995831, 6.82) and (5673000, 6.82). Hence, market values of between 995,831 and 5,673,000 Euros are significantly related to above-average performance scores.

For Whoscored.com, the descriptive results found the mean performance score of players to be 6.62. The function of the negative parabola is $y = 6.533 + 1.084E-7x - 1.797E-14x^2$. The parabolic function intersects with the player performance mean at (953207, 6.62) and (5079069, 6.62). From this, it can be inferred that market values of between 953,207 and 5,079,069 Euros are a significant predictor of above-average player performance scores.

4.4 Results Mean Analysis

This chapter will exclusively present and explain the significant differences in means of categorical variables for player performance. This implies that the remaining categorical variables do not show significant differences in player performance scores across their categories. Therefore, the analysis will concentrate on discussing and interpreting the meaningful variations observed in the variables that do demonstrate significant differences.

4.4.1 Cultural Distance

Gelfand Tightness (cultural distance measure)		Debut Season Performance	Total Period Performance
Non-existent (Dutch nationality)	Mean	6.76	6.72
	N	72	78
	Std. Deviation	.272	.5047
Low (0-2.5)	Mean	6.70	6.77
	N	17	19
	Std. Deviation	.2605	.2465
Medium (2.5-4)	Mean	6.70	6.70
	N	23	23
	Std. Deviation	.2475	.2337
High (>4)	Mean	6.90	6.88
	N	10	11
	Std. Deviation	.365	.3516

Table 4.4.1. Cultural distance categorised along the Gelfand Tightness Scope, in relation to player performance.

Table 4.4.1. categorises players' cultural distance based on the difference in the culture's tightness in comparison to the Netherlands, according to Gelfand's scope. In contrast to what was expected, players from cultures that highly differ from the Netherlands in terms of tightness exhibit significantly higher performance scores. Players in this category come from Japan or Norway, and one player from Portugal. As the sample only contains one Portuguese player, the high means are primarily a result of Japanese and Norwegian player performances. The standard deviations of the performance scores are small and within an acceptable range. This indicates that there is no extreme dispersion of datapoints, and the standard deviations indicate that the data is normally distributed.

4.4.2 International Cultural Experience

International Cultural Experience		Debut Season Performance	Total Period Performance
Non-existent (years: 0)	Mean	6.73	6.71
	N	82	89
	Std. Deviation	.2875	.2617
Low (years: 0.5-2)	Mean	6.68	6.66
	N	39	41
	Std. Deviation	.2180	.2245
Medium (years: 2.5-4)	Mean	6.80	6.79

	N	25	25
	Std. Deviation	.2935	.3021
High (years: >4)	Mean	6.80	6.77
	N	22	22
	Std. Deviation	.2955	.2646

Table 4.4.2. International Cultural Experience categories in relation to player performance.

Table 4.4.2. displays the results of the mean analysis conducted on international cultural experience and its impact on player performance. The results reveal that players with medium or high levels of international cultural experience, which refers to those who have played outside their home country for more than two years, demonstrate higher individual performance scores. This enhanced player performance, as a result of more international cultural experience, is evident both during their debut season and throughout their total period at the club. The relatively low standard deviations suggest that there are no extreme values that influence average performance scores.

Chapter 5

Discussion

5.1 Discussion of Findings

In the following, the key findings of the research will be discussed and put into the context of sub-top Eredivisie clubs. The overall aim of this paper is to answer the following research question:

What is the optimal range for cultural distance, league strength, and a league's financial resources that maximizes the probability of player performance in sub-top Eredivisie clubs? And hence, which countries and nationalities should be prioritised in player scouting to achieve this?

As previously mentioned, player performance is evaluated separately for their debut season and total period at the club. Results on total period player performance will be prioritised over debut season performance, as clubs aim for sustained performance throughout the player's total period at the club, rather than solely perform well in the first season.

5.1.1 Cultural Distance

To adequately capture the complexity and nuances of cultural identity, this study employed two cultural models, Hofstede's cultural dimensions and Gelfand's tightness scope. These models give rise to separate hypotheses, with H1a covering Hofstede's cultural dimensions, and H1b focussing on Gelfand's tightness scope. H1a and H1b will first be answered, before concluding on the general thoughts regarding cultural distance and player performance.

H1a: Cultural distance on Hofstede's six cultural dimensions will have a positive impact on individual player performance in a football context.

The study employed univariate regression and curve estimation to explore to what extent Hofstede's cultural distance index holds effect with player performance. However, neither model provided significant evidence to support this hypothesis. An additional examination of the mean performance scores of players categorised by low, medium, or high cultural distance did not reveal any significant influence on individual player performance. Therefore, hypothesis H1a is rejected.

H1b: Players from tight cultures, as opposed to more loose cultures, will experience higher performance in the relatively loose culture of sub-top Eredivisie clubs.

In contrast to Hofstede's cultural dimensions, Gelfand's measure of cultural tightness did demonstrate a significant effect on player performance. The curve estimation indicated players from Belgium to represent a range of tightness scores that is unfavourable for performance in the relatively loose culture of sub-top Eredivisie clubs, but only during their debut season. After this first season, players evidently overcame the cultural barrier, and their performance was no longer negatively affected. Furthermore, the mean analysis revealed that players from cultures with the highest tightness scores exhibited substantially higher performance scores. 10 of the 11 players in this category were from Japan or Norway, suggesting that players from these countries may be more likely to achieve high performance scores at sub-top Eredivisie clubs due to their favourable cultural tightness backgrounds. This finding applies to both the debut season and total period performance of players.

Concluding from these findings, H1b is accepted. Namely, players from tight cultures are related to significantly higher performance scores in the Netherlands compared to players from loose cultures. Specifically, Japanese and Norwegian players have favourable cultural tightness backgrounds to perform in their first season and total period at sub-top Eredivisie clubs. On the other hand, the level of tightness in Belgium may lead to lower performance scores for players from that country in their first season compared to players from other countries.

H1: Cultural distance will have a positive impact on individual player performance in a football context.

Based on the Hofstede and Gelfand models, hypothesis H1 can be confirmed to the extent that cultural distance *in terms of tightness* positively impacts individual player performance in a football context. Specifically, the higher scores of cultural tightness scores in Japan and Norway predict better player performance scores in their first season and throughout their overall period at the sub-top Eredivisie club, whereas Belgium has an unfavourable level of tightness to perform during their first season in the loose Dutch culture. The finding that the negative impact of Belgium's cultural tightness is limited to the debut season aligns with existing literature, which suggests that cultural distance primarily affects a player's performance in their first season. And that after a period of cultural adaptation, culture does not hinder performance.

5.1.2 International Cultural Experience

H2: International cultural experience amplifies the positive effect of cultural distance on player performance.

To examine the moderating effect of international cultural experience, a multivariate analysis involving an interaction term was performed. Specifically, the regression of cultural distance on player performance was supplemented with the interaction between cultural distance and international cultural experience. The regression indicated no moderating role for international cultural experience.

Despite the lack of a moderating effect, an additional mean analysis shows a *direct* positive relation between a player's international cultural experience and his individual performance. Specifically, players who have spent more than 2 years playing outside their home country tend to have higher performance means than players who have not. This can be explained as those players have likely gone through the process of adaptation before. As a result, they may be better prepared to handle the challenges of transitioning to a new team or league in a different country. Players with international experience may be more familiar with the cultural norms and expectations of their new environment, which can help them integrate more quickly and effectively. In addition, players who have played in different countries may have had the opportunity to learn various playing styles, tactics, and strategies that they can bring to their new team or league. This can give them a competitive advantage and making them more valuable to their team, ultimately leading to higher player performance.

5.1.3 League Strength

H3: *There is a positive relationship between league strength and player performance, with stronger-league transfers performing better than weaker-league transfers.*

The univariate regression indicated a significant relation between league strength and player performance. However, the low beta coefficient of 0.003, combined with significance at the 10% level (i.o. 1% or 5%), does not provide sufficient evidence to support hypothesis H3. Instead, it can be inferred that league strength is no strong predictor of player performance, whether in their debut season or over the total period at the club. The rejection of hypothesis H3 is unexpected and contrasts with the expectation that league strength is a critical factor in predicting player performance.

5.1.4 League's Financial Resources

H4: *There is a positive relationship between a league's financial resources and player performance.*

Literature has been confined to the top five competitions and generally consents on greater financial resources of a league to lead to higher player performance. It was initially anticipated that a similar relationship would hold for sub-top Eredivisie clubs. However, the findings revealed a significant quadratic relationship for these clubs, demonstrating a negative parabolic function. This suggests that a league's financial resources improve player performance to a certain extent, until reaching the optimum point of the parabola. Hereafter, additional financial resources lower player performance. The optimal environment for player performance was found to be financial resources of 40-41 million Euros, which corresponds to the French Ligue 1. In other words, players from Ligue 1 have historically shown to achieve the highest performance scores at sub-top Eredivisie clubs. Some researchers attribute this effect to a player's access to better training facilities, coaching, and support systems. But it may also be attributed to the calibre of players that sub-top Eredivisie clubs are financially able to acquire from these leagues. These financially acquirable players are those whose transfer fees and financial demands align with the budget constraints of the club. Sub-top Eredivisie clubs may financially be better able to acquire middle to upper tier players from the Ligue 1, compared to the Premier League. Therefore, the Ligue 1 appears to provide the optimal balance between financially feasible players and top-notch training facilities, coaching, and support systems.

On the contrary, leagues with average club budgets exceeding 80 million Euros were associated with lower performance scores. This may be because sub-top Eredivisie clubs are not able to acquire the best players from these leagues and are limited to acquiring lower-tier players or young talents whose potential for development is uncertain. However, this study does not recommend strictly avoiding leagues with resources beyond 80 million Euros, thus avoiding the Premier League and Bundesliga. Instead, it alerts scouting and transfer policy makers to these mechanisms to help them make well-informed decisions.

5.1.5 Additional Findings

The univariate analysis revealed a highly significant, positive relationship between transfer value and player performance over the total period. However, simply paying a higher transfer sum for the same player does not increase player performance in itself, and therefore, implications drawn from this finding should be formed with caution. It can be taken away, however, that acquiring players for whom a higher transfer fee has to be paid can be rewarding in terms of their performance. Aside from transfer value, no significant effect on player performance was observed for the following control variables: player's age, physical distance of his home country to the Netherlands, competition he experiences within the team, and the minutes played in the season prior to joining the sub-top Eredivisie club.

Furthermore, the univariate regression indicated that prior season performance has a strong impact on a player's performance at his new club. Prior season performance levels are probably indicative of a player's mental state (i.e., self-confidence) and form, which can translate into better performance. It was expected that this effect would be stronger for performance during the debut season, than for the

total period at the sub-top Eredivisie club. However, the effect was found to be highly significant and of similar magnitude for both periods. This can be explained by considering that prior season performance may reflect a player's intrinsic quality, which can have a lasting effect on their performance at the new club. Alternatively, prior season performance could indicate a player's ability to adapt to new environments and handle pressure situations. Players who have demonstrated their ability to perform under pressure may have developed the mental fortitude and resilience necessary to succeed in a new club, where they may face new challenges and higher expectations.

Next, the univariate regression revealed a significant relationship between market value and player performance, which was further clarified by a curve estimation. The analysis uncovered the relation to follow a negative parabolic pattern. Specifically, player market values ranging from 1,000,000 to 5,000,000 Euros were associated with above-average performance scores. Players with market values below 1,000,000 may be less skilled or experienced, rendering them insufficiently prepared to perform at a sub-top Eredivisie club. And while players with market values exceeding 5,000,000 are typically of higher quality, it is important to note that players with extremely high market values may face added pressure to perform, which could negatively affect their on-field performance. It is crucial to note that market value is no *pure* representation of player quality, and that other factors like age, position, nationality, injuries, disciplinary issues, and overall demand for a player play a significant role in determining market value. Consequently, players may be undervalued or overvalued, underlining the need for diligent scouting and a thorough understanding of the market dynamics to accurately evaluate the impact of these factors.

The curve estimation analysis yielded valuable insights into the significant quadratic relationship between co-worker support and player performance, specifically for non-Dutch players. The optimal range for experiencing support was found to be between 1 and 4 co-workers of the same nationality, which consistently predicted above-average player performance. A player who lacks any co-worker support, i.e., being in a team without players of the same nationality, may feel distant and unable to identify with others in the group. On the other hand, when there are more than four players of the same nationality in a team, it can lead to the formation of exclusive subgroups that isolate themselves from the rest of the team. This internal division within the team undermines overall team cohesion and has a detrimental impact on individual player performance. Therefore, the finding that 1 to 4 co-workers is the optimal range for player performance aligns well with logical reasoning.

5.2 Practical Recommendations

This section provides practical guidelines based on the research findings to help improve scouting and transfer strategies at sub-top Eredivisie clubs. It begins with addressing league-specific and nationality-specific considerations and then offers additional recommendations.

First of all, sub-top Eredivisie clubs typically acquire their players from the Dutch Eredivisie, Dutch Keuken Kampioen Divisie, German Bundesliga, Belgian Jupiler Pro League, English Premier League, English Championship, and Swiss Super League. Therefore, sub-top Eredivisie clubs are most familiar with these markets and as a result, are more likely to be successful in attracting new players from these leagues. The subsequent league strength analysis did not provide conclusive evidence to support league strength as a strong predictor of player performance. Therefore, league strength does not have to be specifically considered in an attempt to increase the probability of successful player acquisitions. Instead, it is advisable to incorporate a league's financial resources in scouting and transfer policies. The Ligue 1 is found to represent the optimal balance between player development opportunities (top-notch training facilities, staff, and support systems), and financially feasible types of players. Hence, prioritising player acquisition from the Ligue 1 can improve the probability of player success. Conversely, leagues with average club budgets exceeding 80 million Euros, namely the Premier League and Bundesliga, are associated with lower player performance scores. This could be attributed to the fact that sub-top Eredivisie clubs are deemed to target lower-tier players from these leagues due to financial constraints. Therefore, even though sub-top Eredivisie are familiar with transferring players

from the Premier League and Bundesliga, it is advisable to approach transfers from these leagues with caution.

As cultural values are often grounded in nationality (Hofstede, 1980), the two-metric analysis of cultural distance allows to derive nationality-specific recommendations. Regarding Hofstede's cultural dimensions, no significant relationship with player performance was observed. Therefore, it is unnecessary to specifically consider Hofstede's dimensions in player acquisition. However, Gelfand's tightness scope revealed that players from tight cultures tend to perform better in the relatively loose Dutch culture compared to players from more loose cultures. Specifically, it is advisable to prioritise Japanese and Norwegian players in player scouting, as their favourable tight cultural backgrounds predict higher player performance throughout their entire period at a sub-top Eredivisie club. On the other hand, the cultural tightness level of Belgian players predicts lower performance in their first season, suggesting that clubs may want to consider avoiding Belgian players when seeking a player that performs immediately. Furthermore, considering a player's international cultural experience can contribute to more successful scouting and transfer strategies, as historical data indicates that players with over two years of such experience tend to perform better.

As previously mentioned, implications resulting from the positive relationship between transfer value and player performance should be formed with caution. While the positive relationship may suggest that investing more in a player leads to better performance, it is not recommendable for clubs to simply spend more for the same player, as paying more does not increase performance in itself. It can be taken away, however, that it might pay off to acquire a player from whom a (high) transfer fee has to be paid, as such players are expected to perform better than average.

No significant effects on player performance were observed for factors such as player's age, physical distance of his home country to the Netherlands, competition he experiences within the team, and the minutes played in the season prior to joining the sub-top Eredivisie club. Therefore, these factors do not require specific attention in scouting and transfer strategies. However, it is recommended to consider the aspect of co-worker support, as experiencing support of one to four players of the same nationality is related to higher performance scores for non-Dutch players at sub-top Eredivisie clubs. It is advisable for clubs to avoid placing a non-Dutch player without any co-worker support, as well as having a group of more than four players of the same, non-Dutch, nationality. Furthermore, sub-top Eredivisie clubs are advised to target players within the market value range of 1,000,000 to 5,000,000 Euros, as this range predicts above-average player performance. Lastly, targeting players that have high levels of prior season performance is another significant factor in maximising the probability of player success. Ultimately, above-mentioned considerations serve as a tool to assist FC Twente, and other sub-top Eredivisie clubs, in making informed recruitment decisions.

5.3 Limitations and Directions for Future Research

Despite the thoroughness and validity of this study, it is essential to acknowledge its inherent limitations and explore potential directions for future research. By understanding and addressing these limitations, researchers can refine and expand upon the current findings, thereby advancing the field's knowledge and contributing to its ongoing development.

First, this study measures a player's international cultural experience of a player as the number of years a player has spent playing in countries and competitions outside their home country. While this provides a general view on the international experience of the player, it fails to account for the difference in cultural impact between, for example, a Belgian player having played in Germany versus China. Having played in China probably provided the Belgian player with more cultural baggage than Germany, as Belgium and Germany are culturally more similar than Belgium and China. Thus, rather than only measuring international cultural experience quantitatively, investigating the quality of the years of international cultural experience would give a more accurate view.

Additionally, although this research has focussed on inter-country cultural distances for practical reasons, it would be valuable to explore the impact of intra-national cultural distances on football player performance. Because similar to cultural distances *between* countries, cultural distances *within* a country exist. For example, a player born and raised in Heerenveen who moves to AFC Ajax, would need to adjust to the cultural nuances in his new working environment. The required adaptation process might have consequences for the player's performance, depending on the magnitude and type of cultural distance.

Furthermore, the study does not consider the effect of language proficiency on adaptation and performance in a new football environment, but exploring this aspect could be an interesting next step. A player's proficiency in Dutch and/or English, as English is a widely accepted language in Dutch football clubs, can significantly impact their ability to effectively communicate with teammates. The likelihood of non-Dutch players learning Dutch and/or English is influenced by linguistic similarities. For instance, German players are more likely to learn Dutch than Portuguese players. Also, the extent to which a player received English education in his home country plays a role.

With regard to the cultural distance models used, Hofstede (2010) states that not only organisations are culture bound; theories about organisations are equally culture bound. Authors are as much "culturally conditioned" as anyone else, hence their theories reflect the cultural environment from which they originate. In consequence, there can be no guarantee that management theories and concepts developed within the cultural context of one country can, with good effect, be applied in another. This implies that it is not possible for such theories and concepts to be "universally valid" or applicable. While using both Hofstede's dimensions and Gelfand's tightness scope was a step towards obtaining a more valid and representative understanding of cultural distance, these two models alone may not provide a complete picture. Hence, future research should consider combining multiple national cultural models to gain a more holistic understanding of cultural identity and its impact on football player performance in foreign cultural contexts.

It is important to recognise that the higher performance of Ligue 1 players cannot be solely attributed to their financial resource environment. While the financial resources of a league are indicative of the facilities and development opportunities available to players, as well as the feasibility of acquiring top-tier players, other factors such as playing style should also be considered. For instance, the playing style in the Ligue 1 may be particularly advantageous for players aiming to perform well at sub-top Eredivisie clubs. While awareness of the historically high performance of Ligue 1 players is valuable for transfer and scouting strategies, more research on the dynamics and characteristics of leagues, and their impact on player performance, would contribute to a deeper understanding.

This research measures player performance solely as an output of their on-field contributions to the club. However, other factors such as increased media exposure, commercial benefits such as shirt sales, and filling specific gaps in the squad can influence a club's decision to acquire a player. Also, a club might acquire a young player who does not perform immediately as a long-term investment. In all these cases, the transfer may not be driven solely by the player's performance on the pitch but may still be considered a success if it helps the club achieve its wider objectives. Additional research on the successfulness of transfers beyond player performance would offer new insights.

This study relies on secondary data sources, which may not be entirely accurate or complete. While SofaScore and Whoscored.com are respected as reliable sources, recently, sports analytics firms have risen that developed advanced algorithms that are able to assess player performance more accurately. Hence, future research is encouraged to collaborate with sports analytics firms in order to gain an even more detailed and complete understanding of player performance. Additionally, while the sample size is deemed sufficient for the purposes of this study, enlarging the sample size could enhance the reliability of the results.

Most research on cultural distances in football focussed on men's professional football. As women's football continues to grow rapidly, investigating potential differences between men and women in their

adaptation to cultural distances would be beneficial. Women may face unique cultural challenges that are not necessarily shared by men. For instance, women may encounter greater barriers to participation in certain cultures, including limited access to training facilities, equipment, and funding. They may also experience discrimination and stigma, which can impact their ability to integrate into new cultural settings and ultimately affect their performance on the field. Therefore, broadening the current body of research to women's football would contribute to a more comprehensive understanding of the dynamics of cultural distance and performance.

Chapter 6

Conclusion

The research aimed to identify the nationalities, leagues, and player characteristics that maximise the probability of player performance at sub-top Eredivisie clubs, with a particular focus on client FC Twente. Throughout the study, findings on total period player performance took precedence over debut season performance since clubs desire players to perform well throughout their entire tenure at the club. To answer the research question, a quantitative approach utilising a two-metric analysis of player performance was employed. Data from Transfermarkt.com, Teamform.com, and FootballManager, were used as primary sources for league- and player-specific information, while cultural distance quantifications were retrieved from Hofstede-insights.com and Gelfand et al. (2011).

The findings indicate that cultural distance, specifically in terms of tightness, positively impacts individual player performance in the football context. Japanese and Norwegian cultures, characterised by high levels of tightness, are advantageous for performance within the relatively loose Dutch culture. Belgium, on the other hand, holds an unfavourable level of cultural tightness for performance, but that effect is only prevalent for a player's first season. This confirms existing scholars' belief that after a period of cultural adaptation, culture does not hinder performance. No significant relationship was observed between cultural distance measured by Hofstede's dimensions and player performance. Additionally, players with more than two years of international cultural experience demonstrated higher performance levels.

Regarding the league analysis, sub-top Eredivisie clubs showed familiarity for acquiring players from specific leagues, indicating an increased probability of successfully attracting talent from those leagues. Surprisingly, league strength was not found to be a critical factor in predicting player performance. However, the financial resources of a league were identified as a significant predictor of player success. Specifically, the Ligue 1 emerged as the league with the optimal financial magnitude, striking a balance between player development opportunities and financially viable players options. In contrast, the Premier League and Bundesliga, which exceed financial resources of 80 million Euros, predicted lower player performance levels.

Furthermore, a highly significant and positive relationship between transfer value and total period performance was found. Hence, acquiring players for whom a higher transfer fee has to be paid can be rewarding in terms of their performance. Conversely, no evidence suggesting an impact on player performance was found for the control variables age, physical distance, competition, and minutes played.

Next to that, this research has gathered supplementary insights into the factors that contribute to player performance after a transfer, enabling more accurate recommendations for FC Twente on how to allocate its relatively scarce transfer and scouting budget. The findings highlight the importance of considering certain factors in player acquisition strategies. For instance, non-Dutch players benefit from the support of one to four co-workers of the same nationality, as it is associated with higher performance levels. This emphasises the importance of fostering a supportive environment for non-Dutch players within the team. Additionally, signing players within the market value range of 1,000,000 to 5,000,000 Euros predicts higher performance levels at sub-top Eredivisie clubs, suggesting that clubs should focus their resources on players within this range. Furthermore, the research emphasises the significance of prior season performance as an important predictor of player performance at the new club. Therefore, targeting players who have demonstrated high performance levels in their prior season is recommended.

Overall, this study enhances our understanding of the league-, nationality-, and player-specific factors that maximise the probability of player performance at sub-top Eredivisie clubs. It provides valuable clarity and guidance to client FC Twente regarding the optimal allocation of its relatively scarce transfer and scouting budget, which was the primary objective of this research.

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