Master's degree thesis

IDR950 Sport Management

Squad stability, rather than squad age and homegrown players, seem to affect performance in Norwegian top level football

Jonas Otto Jensen

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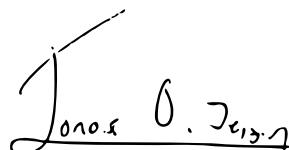
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Preface

With this thesis, the Master of Science in Sport Management at Molde University College is being completed. The 2 years of studying this degree in Molde has been very educational and enjoyable.

The process of writing an academical thesis of this size alone has been new for me, but it has been very interesting, and I have learned a lot. It's very interesting to be able to conduct research on something which you truly desire to get some answers at. I have always been very passionate about Norwegian football, and by doing this research it has been interesting to see the football in this type of perspective.

I will like to express gratitude to my tutors Geir Oterhals and Kjetil Kåre Haugen. They have guided me with their knowledge and expertise through the whole writing process of this thesis. They have given me feedback and useful pointers throughout the semester. It has been easy to communicate even though we were in different cities during the writing process.

I will also express gratitude to my classmates that have been available for discussion when it has been needed. Solveig Straume do also deserve to receive recognition for motivating us students through this semester which have been quite special considering the circumstances around the pandemic.

Thank you!

Jonas Otto Jensen
Nittedal, 09.06.2020

Summary

The subject of this thesis was how Norwegian top division teams perform with young players. By looking at average age and sporting achievements, well as linking it to the aspects of talent development and homegrown players, the Norwegian top division of 2019 was examined. The purpose of this thesis was to investigate how teams consisting of young players do perform, in both directions, and discover aspects which may affect the performances or not.

The main focus areas chosen in this thesis to answer the purpose above is linked to foreign vs homegrown players, competition between local talents and bought in players, young team´s performances in other leagues, squad stability, peak performance age and the use of the Academy Classification 2019 report from NTF.

The research method used in this thesis was quantitative, based on secondary data collection. The data collection does not include statistics based on not seeing the relevancy of including this in the research. The research aimed at identifying the meaningful patterns and trends from figures and tables, and not from inferential statistics.

The results in this thesis showed that there were no trends in Eliteserien 2019 of teams performing either good or bad. Results linked to performance and average age of homegrown players and homegrown player and performance showed no correlation. Players used and performance (squad stability) was presented did show a trend of teams using less players performing better.

Based on the quantitative research used to gather and examine an empirical research, it was concluded that there is no visible contextual relationship between sporting achievements and age/experience in Eliteserien 2019.

Keywords: Eliteserien, football, average age, homegrown players, peak age, foreign players, squad stability

Table of Contents

List of figures

List of tables

1.0 Introduction

This thesis explores how Norwegian top division teams perform with young players, looking at average age and sporting achievements in order to look for trends and findings, as well as linking it to the aspects of talent development and homegrown players. This thesis will focus mainly on the Eliteserien 2019 season.

Over the past years it has been demonstrated that squad compositions containing several young players perform well in the Norwegian top division in football. The elite football clubs in Norway are often using players of many different ages. Some clubs are using mostly young players while others are using a large number of returnees that have played in bigger leagues outside of Norway. It's a well discussed phenomenon that in different scales, in both directions, this can affect how a football team is performing. In this study it will be examined how well teams consisting of young players are performing, focusing on Norwegian elite football.

The last 20 years have shown a rapid growth in foreigners playing in the Norwegian top division (Besson, Poli & Ravenel, 2019). This is something that has been and is being discussed in the footballing environment in Norway. Bendiksen (2019) raised questions about why the Norwegian clubs are striving to recruit players from outside of Norway when *we* have so many good young players in the country. The thesis will look at how teams in the league are performing and try to connect it to the percentage of homegrown players in the squad. The aspect of homegrown players vs foreign players is also something which will be examined, because I do think that foreigners and national players do affect the opportunities for the homegrown players a lot. By recruiting foreigners and Norwegian players, the talents in the clubs will get less minutes played, and it may also affect the number of players coming up from the youth system to the senior squad.

In order to appropriate approach this thesis I have chosen to look at the academy classification 2019 report which is outlined by Norwegian Top Football (NTF). The reason for using this report is because it describes and rates how elite clubs in Norway are working and focusing on youth development. I think this report is important to include in my thesis because it shows a clear picture of how youth development is in Norway at a detailed level, which may be a key factor of how good the young players in the league are.

The work in academies and with youth teams in general is a well discussed topic, which some say is essential for how good the young players will become. On the other hand, some studies suggest that development through academies are not important for the youth development (Fenn, 2017).

The academy classification is a report aiming at evaluating the quality of football academies connected to the Norwegian clubs, as well as the youth development processes in general. The report sets the standards for the work connected to elite player development in Norwegian top clubs. The clubs are being rated based on 10 skill areas and 143 underlying criteria by being given 1- 5 stars and a total score. NTF have gathered data for the 2016, 2017 and 2018 season for this report (Norsk Toppfotball, 2019, p. 20).

NTF announced this classification in order to reach sporting improvements regarding the national teams and also to improve the Norwegian elite clubs playing more regularly in European cups (Norsk Toppfotball, 2019, p. 20). The CEO of NTF, Leif Øverland underlines this with his comment made when the report was published by saying that "the academy classification represents a professionalization and "benchmark" of how we work, above all the player development which will carry both the Norwegians clubs and ultimately the national team out in Europe and the world" (Thoresen, 2017).

Out of the 10 skill areas, 9 and 10 are the ones that are the most interesting to focus on in the context of this thesis. Number 9 is "Productivity – The club's ability to develop national and international top players. Measured in how the amount of time the players are playing" (Norsk Toppfotball, 2019, p. 42). This skill area addresses the quality and quantity of the young players that clubs in Norway are using in Eliteserien. Number 10 is the "Economy & facilities – Mapping the club´s priorities of resources connected to player development and the extent to which the club are exploiting available facilities to create a good base for the development process" (Norsk Toppfotball, 2019, p. 48). Here, the focus and priority of the youth development is being addressed, which is interesting to see in the context of my thesis.

Furthermore, it is interesting to highlight skill area 1 and 3 from the report, in the context of homegrown players. Number 1 is "Integration: Board, management and employees – A common understanding and experience of the club`s commitment to a chosen development

strategy" (Norsk Toppfotball, 2019, p. 26). This aspect is interesting to review because it comes down to improvement of youth prospects, which later on will play an essential role on the first team. Skill area 3 is also interesting to include in this thesis, which is the; "Framework – The academy classification is evaluating the club´s frameworks which touches the sporting activities" (Norsk Toppfotball, 2019, p. 30). Again, this comes down to the focus on youth development which is essential to attain in order to create quality talents. Skill area 1, 9, 10 among others, are being weighted more in the report (Norsk Toppfotball, 2019, p. 22).

The report is focusing on clubs in both Eliteserien and OBOS-ligaen. In this thesis, I will only focus on the clubs which participated in Eliteserien 2019. Below is a table that shows the score for each team playing in Eliteserien 2019.

Table 1: The Academy Classification 2019 scores and stars

Team	Score	Stars
Vålerenga IF	136,4	☆☆☆☆☆
Bodø/Glimt	133	☆☆☆☆
Stabæk	130,1	☆☆☆☆
Odds BK	130,1	☆☆☆☆
Tromsø IL	126,5	☆☆☆☆
Molde FK	125,2	☆☆☆☆
Brann	114,2	☆☆☆
Rosenborg BK	112,1	☆☆☆
Strømsgodset	110,6	☆☆☆
FK Haugesund	109,4	☆☆☆
Lillestrøm SK	108,6	☆☆☆
Sarpsborg 08	90,3	☆☆
Kristiansund BK	88,5	☆☆
Mjøndalen IF	86,6	☆☆

(Adapted from NTF, 2019).

When it comes to the relevant skill areas described in the paragraphs above, the clubs have performed with varying scores. I will now present how the clubs performed in the report on each skill area below.

Table 2: The Academy Classification 2019 specific chosen scores and stars

Team	1	3	9	10
Vålerenga IF	☆☆☆☆☆	20	23	☆☆☆☆☆
Bodø/Glimt	☆☆☆☆	20	10	☆☆☆☆
Stabæk	☆☆☆☆	15	30	☆☆☆☆
Odds BK	☆☆☆☆	15	30	☆☆☆☆
Tromsø IL	☆☆☆☆	16,5	30	☆☆☆☆
Molde FK	☆☆☆☆	17	27	☆☆☆☆
Brann	☆☆☆☆	18	15	☆☆☆☆
Rosenborg BK	☆☆☆☆☆	15	16	☆☆☆☆
Strømsgodset	☆☆☆☆	15	17	☆☆☆☆
FK Haugesund	☆☆☆☆	18	19	☆☆☆☆
Lillestrøm SK	☆☆☆	18,5	8	☆☆☆☆
Sarpsborg 08	☆☆☆☆	15	5	☆☆☆☆
Kristiansund BK	☆☆☆	15,5	4	☆☆☆☆
Mjøndalen IF	☆☆☆	10	2	☆☆☆

(Adapted from NTF, 2019).

The table above (table 2) shows the given score in the relevant criteria which are described in the paragraph above, described in stars and score.

The introduction given above is describing and revealing subjects being used to examine the chosen research, which will be conducted in this thesis. The Academy Classification 2019 report is describing talent development detailed with very relevant criteria to review in context of young players in Eliteserien. This report may lay the baseline for players in the league, which will be looked at in this thesis. By viewing and using some specific parts

in the report, the report will highlight my research question which is presented in the next part of this thesis.

2.0   Problem formulation

In this chapter, first of all, the research question will be presented. Subsequently, in subsection 2.3, it will be explained further, and possible sub-questions will be presented.

2.1   Background

The background for this research is that average age within a football club and sporting accomplishments as two variables is yet to be researched as two possible connected factors in elite Norwegian football. Although there already are some studies focusing on why football clubs gain success and examine factors which may affect their sporting performances, the research focusing specifically on age and performance together as two possible correlations needs further examination.

2.2 Research question

The underlying research question in this thesis is:

Does age profile among Norwegian teams affect performance?

2.3 Objective of the thesis

According to the research question, the main objective of this thesis is to investigate how teams consisting of young football players in different scales do perform in the Norwegian top division in football. The definition of a good sporting performance may vary from team to team based on goals, expectations and condition regarding resources. In order to perfectly understand the complexity of this study, the sub-questions below highlights connected aspects to my research question.

Hence, several sub-questions have been defined:

- Which impacts do the foreign players have on Norwegian local talents development?

- Which impacts does the Academy Classification 2019 report have on homegrown players and youth development in Norwegian clubs?

- How did the clubs in Eliteserien 2019 performing seen in context of the percentage of homegrown players in their squad?

- How does other comparable leagues perform in terms of young squads?

- How does the competition from other clubs in the league connected to internal player recruitment effect the quality of the young players in each squad?

2.4 Structure

This thesis consists of 5 parts. Firstly, relevant literature will be reviewed and presented in order to build a theoretical basis for evaluating the research question. Secondly, the methodology will be introduced and discussed. Then the results of the study will be presented in figures and tables with short descriptions. Further on the discussion part will occur where data findings are being discussed and analysed. Finally, conclusions regarding the research question will be drawn and recommendations for potential further research will be given.

3.0 Literature overview

In this chapter, there will be given a general introduction to literature on homegrown players, peak age, squad stability, competition connected to local players vs brought-in players. Additionally, how other comparable football leagues performances have been connected to young teams will be presented, in order to highlight possible areas of contribution to this thesis.

3.1 Homegrown players

Many of the biggest football clubs uses asizeable amount of resources on talent development and academies. Therefore, it would be logical if the number of homegrown players in the clubs with expensive academies were very high, but is this really the case? The number of homegrown players is depending on how many players falling under the definition of homegrown players. UEFA defines a homegrown player as "those who, regardless of their nationality, have been trained by their club or by another club in the same national association for at least three years between the age of 15 and 21" (UEFA, 2019).

It is important to know the difference between a player having played in a club since the age of 14 and a player being bought as a "complete" talent at a young age from another club. A player may be trained in the youth system of a club, but in theory still not defined as a homegrown player. In many cases, players are brought to a club at a young age and starts to play for the youth team, not the elite team. The players can be young players, either national or international, e. g. arriving at 17 years old. After a year and a half, the player plays regularly for the first team then gets sold a year after. The player is then not homegrown based on the rules from FIFA since he does not fulfill the FIFA requirement of being trained by a club in the national association for at least three years (UEFA, 2019).

UEFA´s purpose of the homegrown rule was to protect the young players from being overrun by foreign and non-local players. The rule "aims to encourage the local training of young players and increase the openness and fairness of European competitions" (UEFA, 2019). In this article UEFA presents concerns had about football talents before this rule was introduced. The fact that teams just buy young players from other nations which is already far developed is being highlighted. Back in 2006 UEFA started to introduce this rule step by step. Before the 2006/2007 season the registered 25-man squad had to contain minimum 4 homegrown players. The next season UEFA increased the minimum to at least 6 homegrown players in the 25-man squad. And then finally, before 2008/2009 season the minimum of homegrown players had to be at a minimum of eight players (UEFA, 2019).

The International Centre for Sports Studies (CIES Football observatory) collects and presents data connected to statistics about homegrown players in the European leagues. In

one of their many monthly reports (2019) they present the general development of the percentage of homegrown players in the European leagues from 2009 – 2019, which is presented in the figure below (Besson, Poli & Ravenel, 2019).
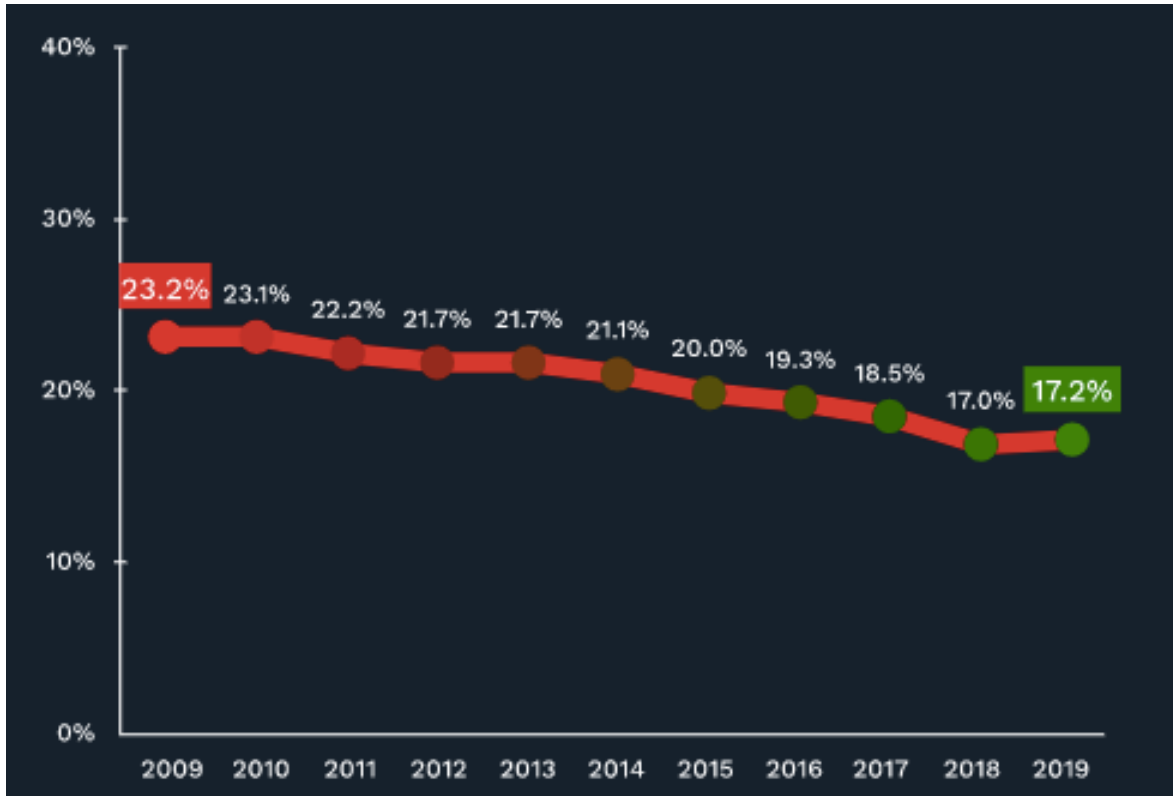
Figure 1: The development of number of homegrown (club-trained) players in European squads from 2009 – 2019
(Besson et al., 2019).

The figure above shows a trend where the squads of European teams are having fewer and fewer homegrown players (Besson et al., 2019). This may be an indicator of foreigners coming into to the squads, which will be furthermore described in the next paragraphs below. When it comes to the Norwegian top division and the percentage of homegrown players, the percentage measured 01/01/2019 was at 26.1 % (Besson et al., 2019). This is the 3rd highest percentage of all the 31 highest ranked football leagues in Europe, with only Slovenia at 27% and Denmark at 27,4% ranked higher (Besson et al., 2019). It is possible that foreign players entering the squads are responsible for the observed decrease in number of homegrown players. This potential correlation between foreign and homegrown players will be presented further in the next paragraphs.

3.1.1 Foreigners vs homegrown players

Based on the research question, it is essential to get a clearer view of how bought players are affecting the play time and opportunities for the young local talents. A heavily discussed topic in the world of football over the last years is the foreigner vs homegrown players debate. The article «The Impact of Foreign Player Acquisition on the Development and Progression of Young Players in Elite Level English Professional Football» written by Martin Littlewood in 2005 describes the entry of many foreign players in the English Premier League and its challenges connected to this phenomenon. The article presents examples from the football leagues in Scotland, France and Italy where researchers questions the fact that the flow of foreigners did reduce chances for national talents to play in the league. In Italy they were even more concerned than in Scotland and France. A respondent named Bonizzoni commented the foreign players are more damaging than assisting by their presence, and that foreign players is an insult to the scouts and coaches within domestic clubs (Littlewood, 2005, p. 66).

In the context of English football, a variety of commentators have expressed their thoughts on the concerns of foreign players in the league. Jody Morris, a product of the Chelsea FC youth system only got a few chances on the first team but soon realised that his long-term future could lie away from the club. He said that:

> …when I first came to the club and saw foreigners coming in like Luca Vialli and Roberto Di Matteo, I used to get a buzz. But as I've got older, I've started to think please don't buy another central midfielder, even if he is the best in the world. (Littlewood, 2005, p. 67).

In the context of Norwegian football Gammelsæter and Jakobsen (2006) discuss foreigners and player development in Norwegian football. They present that foreign players reached a drastic new peak at that time. They point out that coaches and teams often want to perform as soon as possible and be judged by that. The balance between short- and long-term achievements is hard to achieve (Gammelsæter & Jakobsen, 2006, p. 1). They also address the issues connected to the foreigners coming in and reducing the national talents possibility to participate (Gammelsæter & Jakobsen, 2006, p. 2). When the import of players increases, the playtime for Norwegian talents decreases. This is something that can

affect the quality of the national team because fewer national talents are playing. In some situations, the foreigners may strengthen the performances of the national players because the foreigners can trigger a competition between the players (Gammelsæter & Jakobsen, 2006, p. 2).
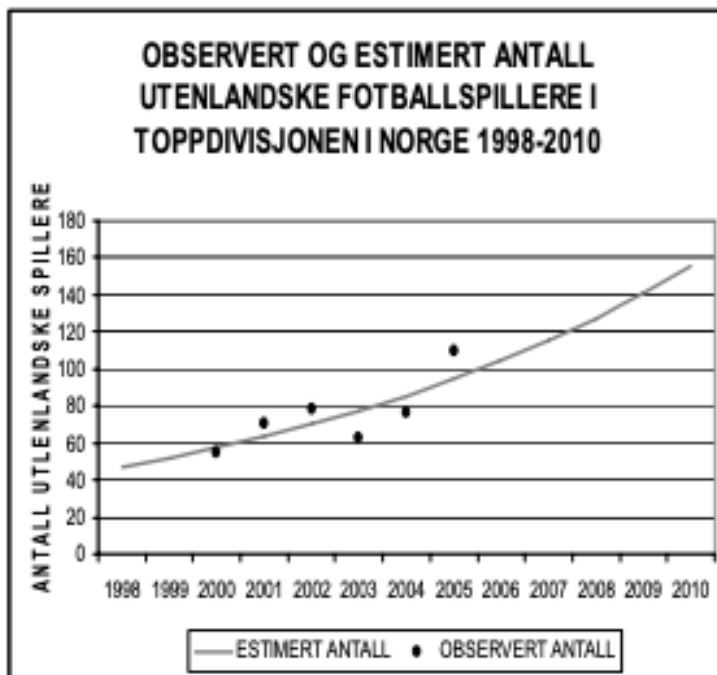
Figure 2: Observed and estimated numbers of foreigners in the Norwegian top division 1998 – 2010
(Gammelsæter & Jakobsen, 2006, p. 5).

Gammelsæter and Jakobsen (2006) has outlined a figure (shown above) which shows the development of foreigners in the league, both observed and estimated. By looking at figure 4, we can see that there is a trend of a drastic increase of foreigners (Gammelsæter & Jakobsen, 2006, p. 5). In percentage, the number of foreigners in 2005 – 2006 was at 37,5% (Andersen, Anker, Hanstad & Sitter, 2012). It is important to pinpoint the fact that this figure only show the actual outcome of foreigners until 2005 and not in the years after. To get a more precise picture of how the number of foreigners has evolved after this, further literature will be presented.

In order to get an overview of foreigners in Norwegian elite football after 2005, it is helpful to look at newer literature regarding this research. Mortensen (2009) did a study

which present an increase in priorities of recruitment of foreign players instead of developing own players. In comparison with numbers of the paragraph above, the Norwegian Top Division showed an increase from under 110 foreigners in 2005 to 129 in 2008 (Mortensen, 2009, p. 43). The thesis also presents the decrease in Norwegian players in the league from 2000 – 2008. The percentage of Norwegian players went from 85% to 67% during this time period, which clearly shows a trend of how the clubs prioritize to more frequently recruit foreign players at the expense of Norwegian players (Mortensen, 2009, p. 43). This literature does not explore the recruitment pattern of Norwegian elite clubs after 2008, the next paragraph will present literature on this.

To get a clearer picture of the foreign footballers in the Norwegian football after 2008, CIES Football Observatory and their reports will be presented. They publish demographic reports each year which describes detailed the number of foreigners in football leagues all around the world presented as a percentage.
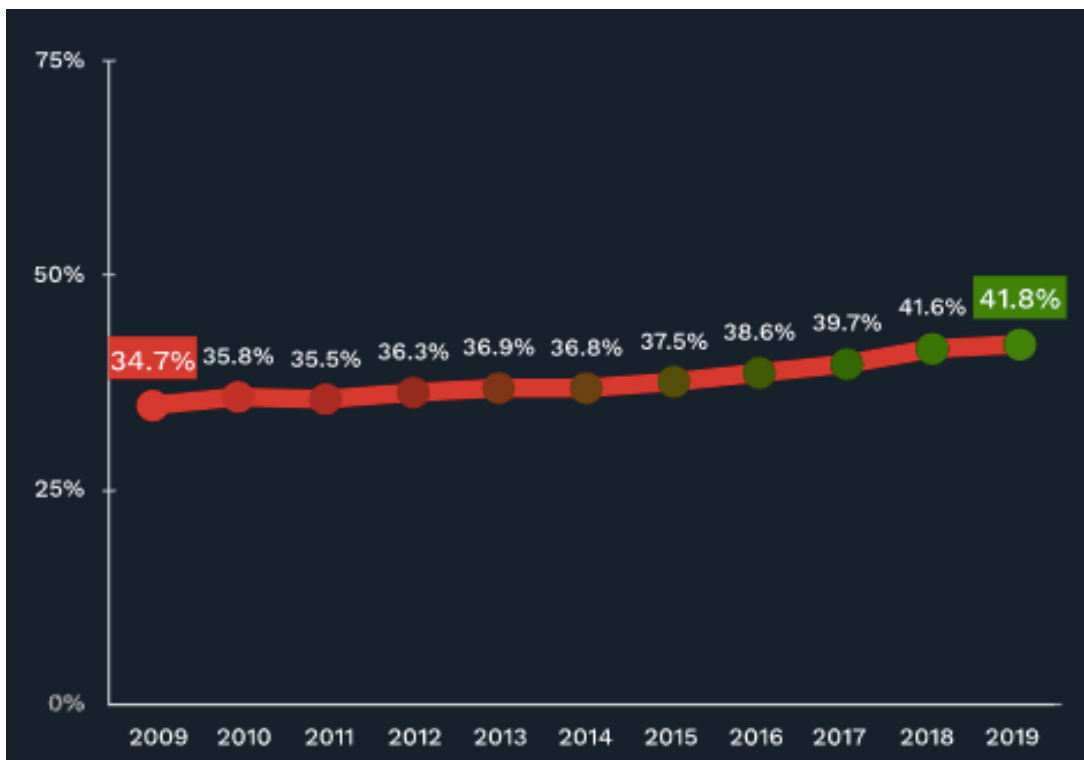

Figure 3: The evolution of foreign players in European leagues from 2009 – 2019 (Besson, Poli & Ravenel, 2019).

Figure 3 shows a steady increase of foreigners in the European leagues over the last 10 years (Besson et al., 2019). To get a clearer picture of how this development has been in

Norway, the following percentages below has been retrieved from CIES Football Observatory´s monthly reports from 2016 - 2019; In 2016 the percentage of foreigners in Eliteserien was 30,9% (Besson et al., 2016), in 2017 the percentage was 34,2% (Besson et al., 2017a), in 2018 it was 29,9% (Besson et al., 2018a) and in 2019 it was at 27,4% (Besson et al., 2019). To not only look at literature related to stats and numbers, the article presented below will illustrate how the entry of foreigner effect the clubs in practice.

In a news article in the Norwegian digital newspaper VG Ould-Saada (2018) posted an article in conjunction with the start of the 2018 season in Eliteserien where he addressed that several clubs where in "foreigner trouble". Molde FK, Sarpsborg 08, Brann and Start where all above the limited number of the allowed foreigners in their squad. The sporting director of Sarpsborg 08, Thomas Berntsen, made a comment saying that the limit of foreigners adds guidelines of how the clubs need to think. He also says that the Norwegian players which are good enough often costs too much, which is the reason for the high number of foreigners in their squad (Ould-Saada, 2018).

In order to get a clearer picture of how the foreign and national bought players are affecting the local talents in the clubs and the clubs average age, it is helpful to look at the recruitment processes and the competition between local and national/international players in the clubs.

3.2 Competition between clubs in buying young talented players

A well-known phenomenon in Norwegian elite football is how the biggest clubs such as Molde FK and Rosenborg BK have the substantial resources to buy the best players from their direct competitors in the league (Nærgaard & Solum, 2020). It's highly discussed how the biggest clubs often buy the best young players from other clubs in the same league. People see this as unfair because the smaller clubs can produce some high-quality talents, which after a good season or two, goes to one of the rivalry clubs in the league. By doing this, the biggest clubs can buy "finished developed products" and they know what they get. This is something which might affect the local talents' opportunities and spark a competition between the bought players and them.

Rosenborg BK has many times been named as a club which buy the best players from their competing clubs in the league. In VG, E. Sæther (2002) presents that Rosenborg BK bought many Norwegian quality players and describes the situation as quite precise as "This year, as many years before, Rosenborg has bought what they want when it comes to Norwegian players" (Sæther, 2002, translation by author). There is not much literature on this subject, but there are several examples in the newspapers which describes the statements above. In a more recent article published in VG, M. Pedersen (2019) writes about the potential players which Rosenborg BK are being linked to. The article also does discuss the fact that Rosenborg BK is in a need of rebuilding their team and many Norwegian quality players are being mentioned, both from bigger leagues and competing teams in Norway. Many different player names and potential transfers are being discussed instead of mentioning young players from the youth system which potentially may take the step up.

Odds BK´s CEO Einar Håndlykken made a statement to tv2.no (2016) where he expresses the concerns regarding how the competition for local players against bought player are in Norwegian elite football. He says that:

> Norwegian football have a negative trend and we need to facilitate for the talent development… By opening up for more talents in the first team squads at the elite level, it would lead to a development of more quality football players. (Borgstrøm, 2016, translation by author)

Another phenomenon which illustrate the competition between local talents and bought players is the approach of the process of strengthening squads when clubs are being promoted. Local players may have played several seasons in the club and when the promotion is a fact the players being recruited is either foreign or other national players, and the local players are not included anymore (Sivertsen, 2016).

Regardless if the player is local, national or foreign, the age of the player is often a determinative factor for the player to be included in the first team. Clubs tend to be impatient and sell or loan out players if they don't perform well quite fast (Sæther, 2010). Clubs tend to lack the long-term perspective and tend to make rushed decisions on whether a player is good enough or not, which leads to coaches using older and more established

players at the expense of the young local players. Coaches may see the long-term value of playing young local players as less important than the short-term success they can accomplish by playing football players that are in their prime age (Sæther, 2010). The question is what the prime age of a football players is? Research on peak performance within football might provide more detailed information concerning this question.

3.3 Peak performance

The age which footballers perform at their best is described as peak age. This part of the literature chapter will focus on the phenomenon of peak performance. This part is included in the literature chapter in order to understand more about the aspect of age and when football players tend to perform at their best. Knowledge about when a football player is expected to peak his performance might have an important consequence for long term planning of football careers for both the players, coaches and clubs that, in turn, also might impact transfers and contract lengths. Peak performance is defined by "a state of exceptional functioning" (Wells, 1998, p. 2). Peak performance is a well discussed theme among scientist and people involved in sports. There are published several articles where peak performance is being discussed and examined, some chosen literature below will describe this phenomenon.

Dendir (2016), by analyzing the average of players in the 5 biggest football leagues (England, Germany, Spain, Italy and France) in Europe, identified peak performances and average age of player between 25 – 27 years old, with different ages based on which position the players are having on the pitch. The average forward peaks at 25, while the average defender peaks at 27. The midfielders peak age varies between 25 – 27 (Dendir, 2016, p. 93).

The article also mentions the average age of the 32 teams that participated in the 2016 World Cup which was 27,5 years old. This is being described as "historically the perfect age to be a player in the World cup" since this happens to be the mean age which the winning teams of previous 19 World Cups had (Dendir, 2016, p.90). It is also presented in the article that a drop in one-year increase in the average squad age results in a performance which drops down four places. This example was not based on peak age, but it is still very interesting (Dendir, 2016, p. 90).

Kalén, Rey, de Rellán-Guerra and Lago-Peñas (2019) examined the evolution of players´ age over time. They discover an aging trend in the three last decades of the UEFA Champions League, from 1992/1993 – 2017/2018. Figure 4 below shows the average age trend (Kalén, Lago-Peñas, Rellán-Guerra & Rey, 2019, p. 4).

FIGURE 2 | Age trend of UEFA Champions League players.
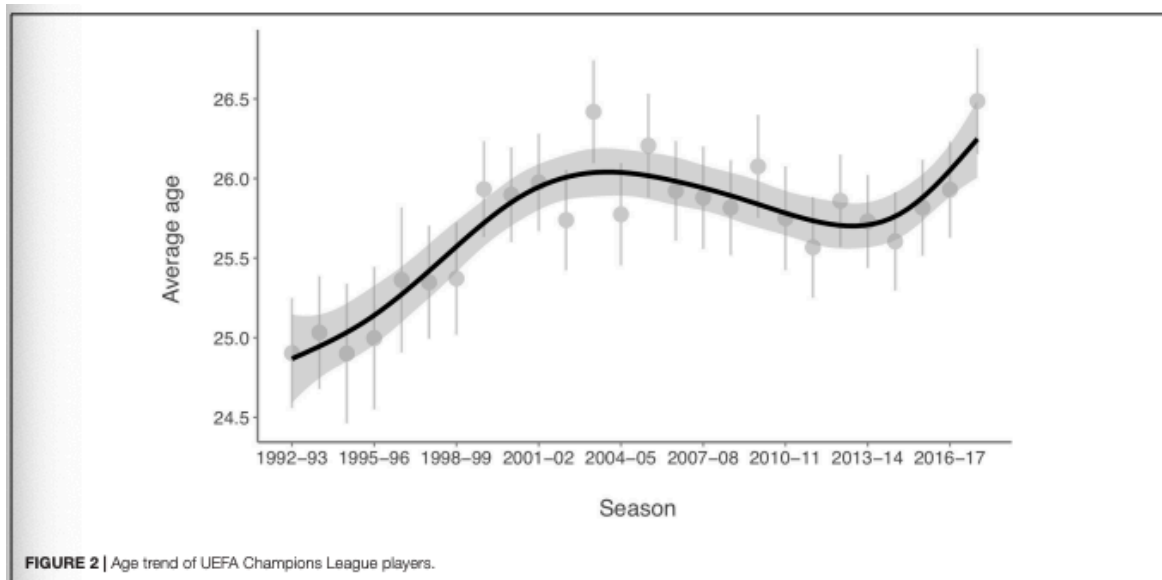
Figure 4: Age trend of UEFA Champions League players
(Kalén et al., 2019, p. 4).

The authors explain that the age tendency has occurred for all playing positions in the described time frame above, but they do say that goal keepers and central defenders tend to peak later than the players playing in other positions. This is explained by the differences in the physical demands of playing in each position (Kalén et al., 2019, p. 5) The authors underlines this by saying:

> Forward performs both higher number of (and longer) maximal sprints, higher number of shuffles, more contact at high intensity and higher amount of high and very high intensity activities; defenders the spend the least time running and sprinting, while midfielders the most. (Kalén et al., 2019, p. 5)

Further on, the article describes the lower physical demand for defenders to be one of the reasons why they tend to peak a later age, as well as they can perform on a higher level at an older age (Kalén et al., 2019, p. 5). Even though the peak age is a well-known

phenomenon, several European leagues contain teams with low average age. The next paragraph will present lower ranked leagues in Europa compared with the highest ranked ones.

It is interesting to take a look at comparable teams outside of Norway in order to compare performances of other young teams. Comparable refer to leagues which are in quite the same situation as in Norway based on factors such as size, location, and finances. CIES Football Observatory (2017) posted an overview in one of their weekly posts where they presented the youngest squads in European football ranked after average age. In top 100 there are only 15 teams from the 5 biggest leagues (England, Germany, Italy, Spain and France) included. The reason for the few big clubs on the top 100 is most likely the case because smaller leagues tends to buy foreign players or use young nation players, develop them and sell the players to bigger leagues (Besson, Poli and Ravenel, 2017).

Mathias Haugaasen (2015) focuses on peak performance of football players in their article «Developing football expertise: a football-specific research review». This article is a bit different from the two presented above based on the fact that this article presents peak age as something which can vary a lot. The authors present the peak age phenomenon as something which can be vary in the whole career of a footballer, which is from under 20 years up to 40 years of age (Haugaasen, 2015, p. 184). The article is one of a few which actually sees peak age as quite varying, even though they do see the average age quite similar to the other chosen articles in this chapter based on performances of elite players.

The article also focuses on individual awards such as The Ballon d'Or and FIFA World Player of the Year. They present that the mean age for players that have won these awards are 25,6 years old. Football players could have as much as 20 years of development before they reach their peak performance age, therefore the phenomena of sport entry is essential to be aware of, as well as the how many football specific practice hours they have completed from a young age (Haugaasen, 2015, p. 23).

Bloomfield, Butterfly & Polman (2005) in their article "Analysis of age, stature, body mass, BMI and quality of elite soccer players from 4 European Leagues" looks at which league which contain the highest number of quality players based on the factors in the article name, where age is one of the aspects which is relevant for this thesis. The

examined leagues are the top divisions in England, Spain, Germany and Italy (Bloomfield, Butterfly & Polman, 2005, p. 59). The study does discover that these 4 factors may vary a lot in the examined leagues. Given the big variation of these 4 leagues, it's natural to make assumptions of Eliteserien might having completely other demands than these. The article present findings which implicates that age, stature, body mass and BMI of players is varying in the different leagues when it comes to different positions on the pitch. This underlines the fact that different demands of the clubs competing in the different leagues (Bloomfield et al., 2005, p. 64).

The authors do express their concerns around different demands may lead to issues regarding recruitment and identification of national talents (Bloomfield et al., 2005, p. 65). This is something which can be seen connected to the Relative Age Effect, a phenomenon which will be described more detailed in the next part of this chapter. Players born earlier in the year does often have these demanded physical demands which are presented above, which leads to recruitment of players born in the early months of the year in many cases. The article does present a statement which implicates that players born early does have a higher chance of becoming a professional football player (Bloomfield et al., 2005, p. 65).

CIES Football Observatory published an article in 2018 where they analysed the 2017/2018 season in football. They ask the question: *"Is there an optimum squad age to win in football?"* (Besson, Poli & Ravenel, 2018b). The article present different squads in both ends of the scale when it comes to average age, and then do clarify that the age varies based on which position the players have. The figure below shows the average age for each position in the 31 highest ranked European leagues from 2009 to 2019.
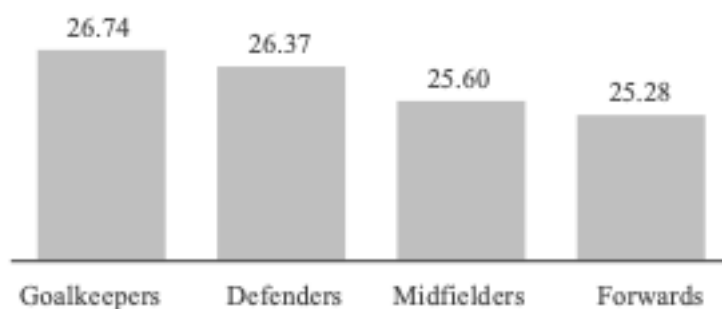
Figure 5: Average age per position, 31 European top division 2009 to 2017

(Besson et al., 2018b, p. 13).

The authors present Dutch and Croatian clubs which stands out from the average age of successful clubs, and they do "over-perform" compared to other clubs in Europe based on much lower average age. The figure below shows the correlation between average age and average UEFA ranking per league from 2009 – 2017.
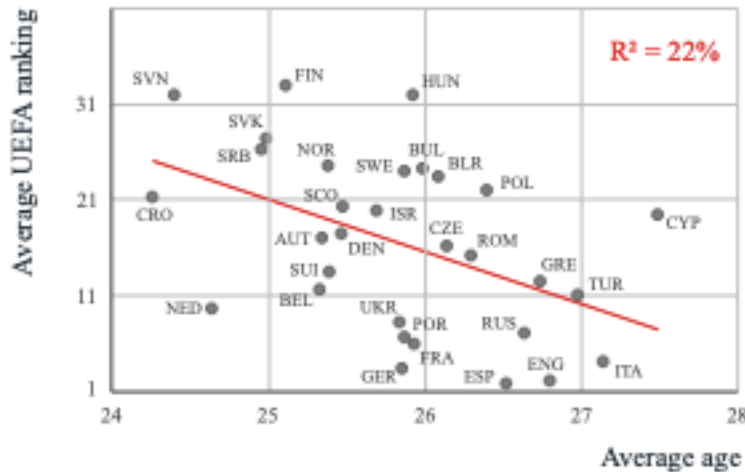
Figure 6: Correlation between average age and average UEFA ranking per league (2009-2017)
(Besson et al., 2018b, p. 13).

The article examines different factors which may affect the performance of a team and they do conclude that "...no single truth exists with regard to the relationship between age structure and success…" (Besson et al., 2018b, p. 16). The authors do present the median age of champions in the five major European leagues between 2009 and 2017 as another good indicator, which is 26,5 years old. The article does state that for teams to be able to achieve sustainable success, is it important to have as many players as possible who did not yet celebrate their 27th birthday (Besson et al., 2018b, p. 16).
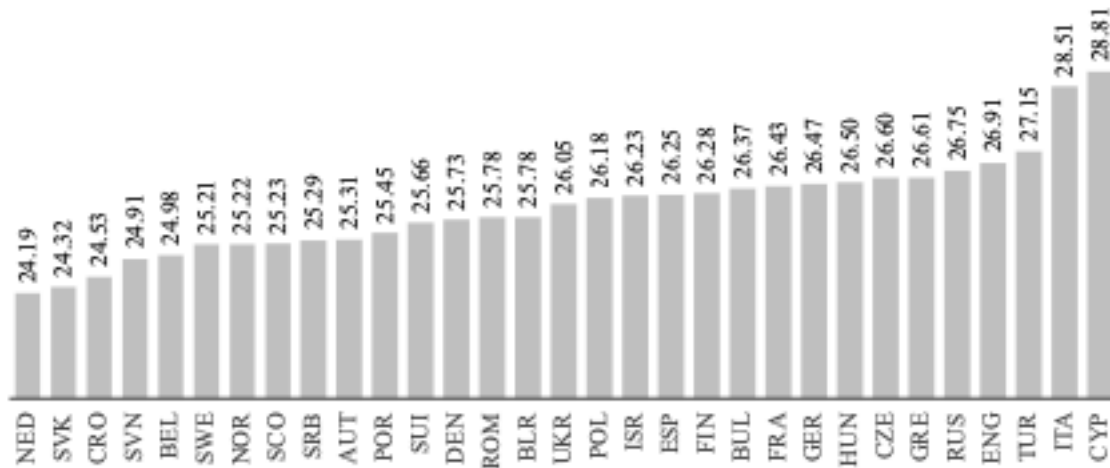
Figure 7: Average age of champions, by league (2009-2017)

(Besson et al., 2018b, p. 16).

Above, the average age of league champions from 2009 to 2017 in European leagues are showed. The average age of the Norwegian teams has been quite low compared to many other European leagues (Besson et al., 2018b, p. 16). The age average of champions in other European leagues and also the Norwegian leagues is an interesting aspect to include in this chapter in order to get a clearer view of how old the good performing teams have been previously. It's not only average age which is an aspect which do effect performances of teams, the stability of the squads is also an aspect which may be a factor which affect if a team accomplish success or not. Stability may also relate to how young/old a squad is, or the balance of homegrown players and their relations.

3.4 Squad stability

In football, teams are showing huge differences when it comes to players used in both starting elevens and also match-day squads. This aspect of stability also includes recruitment of new players, based on which frequency the clubs are doing this. The reason for including this type of literature in this chapter is because the conducted research in this thesis showed very big differences when it comes to number of different players used in Eliteserien 2019.

Optimal teamwork and cohesion are essential for performance in collective sports such as football. CIES Football Observatory (2018) are focusing on consistent squad management

in one of their many analytics. The research looks at the value of long-term planning for football clubs through squad stability. The top division in 31 UEFA member associations are being examined, included Norway. First team squad members are being used as the indicator to measure the stability of teams. The measurements are being based on players recruited by their employer club. Players coming from the youth teams is not included in the study as they are not seen as new signings (Besson et al., 2018b, p. 7).

Between 2009 – 2017, the percentage of new signings for the 31 leagues and clubs increased from 36,7% to 44,8%. In the year 2017, a new record of signing new players was recorded in 11 of the 31 top divisions, and Norway was one of these 11 (Besson et al., 2018b, p. 7). The study does conclude that team´s squads in general are more and more unstable. This is in correlation with the increased recruitment of foreign players which are presented earlier in this chapter.

The study discovers that Denmark, Sweden and Norway have the top divisions with the lowest percentage of signing new players together with Germany. The authors also present Turkey with their top division seeing many player signings. In two cases, the team with the highest percentage of new signings got relegated (Besson et al., 2018b). Success and stability are being heavily linked in the text, exposing a general finding which is that "the best performing teams have much more stable squads than the least competitive ones" (Besson et al., 2018b, p. 27). This aspect can also be linked to stability in starting elevens, people using the same 11 - 13 players in most parts of the season. This is something that will be discussed later on in the discussion chapter, and it will also be linked to the aspect of squad stability.

All the presented literature above may be a lot to digest, therefore these following paragraphs will highlight the most important findings and link the findings to the research question and sub-questions of this thesis. Homegrown players were presented first as a highly discussed theme in football, presenting the Norwegian top division ranked as the 3rd highest European footballing league when it comes to homegrown players included in the squads (Besson et al., 2019). Further, foreign players are being presented as a well-known phenomenon seen in context with the homegrown players. Gammelsæther and Jakobsen (2006, p. 6) presents the big increase of foreign players in the Norwegian top division in the mid 2000s, leading to less opportunities for the Norwegian talents. CIES Football

Observatory (2019) presents the evolution of foreigners in European football leagues from 2009 – 2019 which shows a steady increase from 34.7% in 2009 to 41.8% in 2019. The Norwegian percentage was at 27,4% in 2019 (Besson et al., 2019). This literature links to the first sub-question which is about the impacts the foreigners are having on the Norwegian local talents.

Further, the aspect of competition in terms of bought players vs local players in Eliteserien are being presented, identified by Sæther (2002) which describes RBK as a club that can buy whoever they want, instead of using young players from the club. The aspect of short-term vs long-term thinking of coaches are being presented as key factor for young local players not getting playtime (Sæther, 2010). This literature connects to the theme on the last sub-question which ask for the internal competitions in the Norwegian top division when it comes to player recruitment and the quality of the young players in the squads.

Peak age, when the players peak their performance is presented above and identified by Dendir (2016, p. 1) as happening when the player are 25 – 27 years old, depending on their position. Forwards tend to peak at a younger age, followed by the midfielder. Defenders and goalkeepers often peak their performances a bit later. Kalén et al. (2019, p. 4) and Besson et al. (2018b) supports these findings with their researches. It's important to mention that the Norwegian league tends to have a bit younger average age than the general average age in European leagues. This literature findings link directly to the main research question, as well as the sub-question regarding how other comparable leagues teams do perform based on average age.

The last part of the literature presented in this chapter is focusing on the aspect of squad stability, both in terms of players used during a season and the number of players recruited from season to season. Between 2009 – 2017, the percentage of new signings in the 31highest ranked European leagues increased from 36,7% to 44,8%. In the year 2017, a new record of signing new players was recorded in 11 of the 31 top divisions, and Norway was one of these 11 (Besson et al., 2018a, p. 7). The study does conclude that team´s squads in general are more and more unstable. This is in correlation with the increased recruitment of foreign players which are presented earlier in this chapter.

4.0   Methodology

The aim of this study is to investigate how teams perform based on their average age. This chapter will explain in detail how the research was conducted. First, the choice of quantitative research will be presented, then it will be explained how the data was gathered for this thesis and, lastly, how it was analysed.

4.1 Data Collection & Selection

The data for this thesis was gathered using secondary data collection. Secondary data collection is defined as *"data collected by an individual who is not the original user."* (Formplus Blog, 2019). The method in this research is based on searching for meaningful patterns and trends in the whole population of Eliteserien players in Norway in the 2019 season. When an entire population is analysed there is, according to Gibbs, Shafer and Dufur (2015) a danger that inferential statistics might mask meaningful patterns and trends. Based on the recommendations of Gibbs, Shafer and Dufur (2015) this thesis aimed at identifying the meaningful patterns and trends from figures and tables, and not from inferential statistics.

The data connected to age and performances was the most demanding part and also the most essential one in this thesis. In order to get a precise and desired outcome of the data collection in this part different options were considered. There are some articles and websites containing detailed statistics on age in European football leagues. Quite early in the phase of the research connected to this thesis, it was discovered that these webpages did not give a precise picture of the average age which was desirable. Some webpages counted average age from every player which is registered in the senior squad, which would have given a unprecise average age of the actual players being used.

The data collection was decided to be done based on going through all 30 matchdays in Eliteserien 2019, and from there look at each of the teams matchday squads in every round. AltOmFotball.no was used to gather the main data, both matchday squads and birthday data of the players (AltOmFotball, n. y.). A few times NFF´s homepage (fotball.no) was used in order cross check some data. The match squads contained regularly 18 players each round, but some teams had fewer players than 18 in some

matches. In order to have a precise age, the age of the players is being updated in each of the 30 rounds.

To make the average age more precise, the teams average age of only the starting eleven was reviewed because it was suspected that players on the bench may do affect the average in both directions. This examination showed that the bench did not affect the average age remarkably, the first described way of collecting the age data was used.

The next data collection is a collection of the number of different players included for each club during the 2019 season. This data was created by using the dataset which was made when looking at average age and performances. Every player which have been on the bench at least one time was included to create an overview for each club and then also discover the average in the league. The reason for including this data is to look at the aspect of squad stability, which is factor of performance in football, which may have an effect on my research question.

The top division in Sweden 2019 and the Danish 2018/2019 top division is included in the data for this thesis in order to compare these two leagues to the Norwegian top division. The data is collected from CIES Football Observatory's online demographic atlas (CIES Football Observatory, 2020). It's important to point out that the average age of each club is only including players which have been on the pitch, which is a bit difference from the data collection of Eliteserien 2019. The reason for doing this is because the average age itself is not the important aspect when comparing the leagues, the interesting data is how the youngest teams are performing.

Data on homegrown players in Eliteserien 2019 was also gathered in order to look at how the squad composition of the clubs look like. The data collection was done by using CIES Football Observatory's database, which describes every percentage of homegrown players in each club. The data was then presented together with the table finish of each club in order to look at some possible correlations. This data was also presented with a trendline to get a more precise picture of trends. This data was included to look at how the club´s percentage of homegrown players seen together with average age may affect the sporting performances. The players in this data presentation needs to have been on the bench at least once during the season in order to be included in the statistics.

Building on the data collection above, age on the homegrown players in each club was desired data to retrieve in order to make it easier to answer my research question. This data was able to collect by going through all individual players and see their club history before turning 21 (based on FIFA´s homegrown rule), but this kind of data collection would have been very time consuming. Instead, CIES Football Observatory sent over a file by email containing these data, which is being used to present the data connected to age on homegrown players and also the number of homegrown players in each squad. The reason for including the number of homegrown players in each club and their average age is to look at these findings in the context of the Academy Classification 2019 report, and also link this to my research question.

The data analysis was conducted by using Microsoft Excel version 16,36 and the average age was calculated by plotting in each players age, which was included in the 18-man squad for each of the 30 rounds, divided into 16 pages, one for each team. The age of each player was calculated into ages with two decimals, and the average age for each matchday squad was calculated. At the end the average of each of the 30 rounds was calculated for each team and placed into one external table together with their table finish, before calculating the average of the league.

After the average age for each team was calculated, the next step was to use the table presented in the last paragraph and plotted the variable into a x-y scatter diagram. Then a standard trendline, the linear forecast, was used to look after trends. The x-y scatter diagram, with the same trendline, was also used to examine trends in squad stability & performance, homegrown players & performance and age & homegrown players. All these calculations were done by using Microsoft Excel.

5.0 Results

In this part, the results of the empirical analysis of the data which is gathered for this thesis will be presented. This chapter will be divided into 4 parts which will present different data connected to relevant themes connected to my research question, all from Eliteserien 2019. Firstly, the age and performance results will be presented. The second part will

consist of results connected to homegrown players and performance. The third part is results connected to the age of the homegrown players for each squad. Finally, results connected to how many players each team has used.

5.1 Age and performance

The empirical analysis of the two factors age and sporting performance in Eliteserien 2019 show no visible correlation between each other, based on visible inspection of the figure. There are no trends which indicates whether a team performs well or not.

Table 3: Average age and performance in Eliteserien 2019

Team	Table Position	Average Age
Molde FK	1	26,49
Bodø/Glimt	2	24,67
Rosenborg BK	3	26,79
Odds BK	4	25,03
Viking	5	25,37
Kristiansund BK	6	26,26
FK Haugesund	7	24,77
Stabæk	8	24,49
Brann	9	28,07
Vålerenga IF	10	26,04
Strømsgodset	11	26,14
Sarpsborg 08	12	26,31
Mjøndalen	13	26,51
Lillestrøm SK	14	25,05
Tromsø IL	15	25,04
Ranheim TF	16	26,12

In Table 3 above the average age for each club is presented together with the table position for the Norwegian top division in 2019. 25,82 is the average age which is being used as the mark for if a team is young or not. By looking at their table finish together with the

average age, there are no clear patterns. The results tell us that young teams do not perform better than the older one, except in some single cases, which is not enough manifestation to draw some clear conclusions.

Age and performance – trends
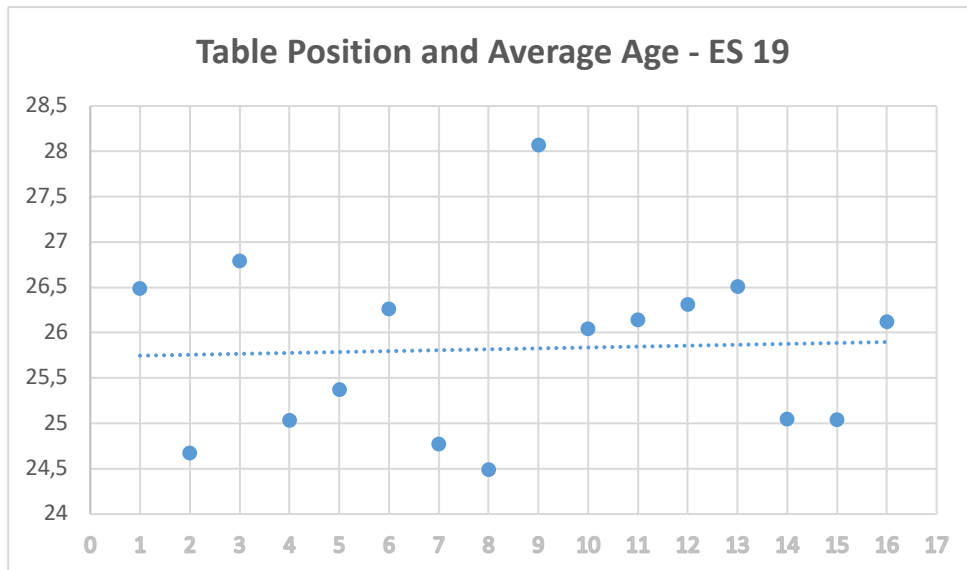
Figure 8: Age and performance with a trend line presented in a scatter chart

This data is a continuing on the data shown in Figure 8 in the last paragraph. The clubs are presented from left to right based on their table finish, 1 – 16. The individual team ages do seem to be scattered randomly, indicating no clear association between age and performances as two connected factors. By looking at the trendline, although a tendency towards better performance with lower age, the inclination of the line is very low, almost flat, also indicating no clear connection between team age and performance. Eliteserien 2019. Tromsø IL and Lillestrøm SK are showing poor performances with young squads, but on the other hand, Odds BK and Bodø/Glimt are performing well with a young squad. These indicates that the average age alone and performance in Eliteserien 2019 are two variables with no correlation. The oldest squads such as Brann, Rosenborg BK, Molde FK and Mjøndalen are also performing very differently, which gives an indicator of old teams not having any advantages above young teams.

5.1.1 Swedish and Danish top division

This part of the result chapter shows the average age and performance in the Swedish and Danish top division in order to have comparable leagues to the Norwegian top division. Both of the leagues results presented are based on players which have been on the pitch, not only the bench as presented in the part above.

5.1.1.1 Allsvenskan 2019

Table 4: Average age and performance in Allsvenskan 2019

Team	Table Position	Average Age
Djurgården	1	26,85
Malmö	2	29,36
Hammarby	3	27,89
AIK	4	28,77
IFK Norrköping	5	24,57
Häcken	6	28,43
IFK Göteborg	7	24,35
Elfsborg	8	27,08
Örebro	9	28,00
Helsingborg	10	28,42
Sirius	11	29,09
Östersund	12	24,70
Falkenberg	13	27,38
Kalmar	14	27,47
Sundsvall	15	27,32
Eskilstuna	16	25,28

(Adapted from CIES Football Observatory, 2020).

Allsvenskan 2019 showed no clear indications of young teams performing better than older team and the other way around. 27,19 is the average age for the clubs in the league, and teams are performing both well and not with a big variation of average ages. Djurdgården (26,85) won the league with a squad which was younger than the average age in the league with Malmö (29,36) finishing the spot below them with the oldest team in the

league. The youngest squads in the league as IFK Göteborg (24,35) finished 7th, IFK Norrköping (24,57) finished 5th and Östersund (24,70) finished 12th. There is no evidence of teams performing either well or bad based on their average age.

5.1.1.2 3F Superliga 2018/2019

Table 5: Average age and performance in the Danish Superliga 2019

Team	Table Position	Average Age
FC København	1	26,94
Midtjylland	2	26,79
OB	3	26,73
Brøndby	4	26,40
Esbjerg	5	25,31
Nordsjælland	6	21,58
AaB	7	25,43
Randers	8	26,42
AGF	9	25,85
Horserns	10	26,96
SønderjyskE	11	27,89
Vendesyssel	12	24,89
Hobro	13	27,53
Velje	14	25,26

(Adapted from CIES Football Observatory, 2020).

The teams which finished top 4 in the Danish top division in 2018/2019 all had an average age above the leagues average age which was 26 years old. This may be an indicator of a trend which shows that older squads did perform better than the young ones on this season. Both Hobro (27,53), SønderjyskE (27,89) and Horserns (26,96) all do contradict this trend by their weak performances, which like Sweden and Norway shows a big variation of performance teams in the league based on their average age. The youngest teams such as Nordsjælland (21,58) at 6th and Vendesyssel (24,89) at 12th underlines this by their performances.

5.2 Homegrown players and performance

The percentage of homegrown players in the different clubs below showed a huge variation spread all over the league with no clear patterns. There are no clear trends of homegrown players being a factor which alone affects the performance of a team.

Table 6: Percentage of homegrown players in Norwegian clubs participating in Eliteserien 2019

Team	Table Position	% homegrown players
Molde FK	1	9,1%
Bodø/Glimt	2	33,3%
Rosenborg BK	3	17,4%
Odds BK	4	45,5%
Viking	5	32,0%
Kristiansund BK	6	19,0%
FK Haugesund	7	17,4%
Stabæk	8	34,6%
Brann	9	31,8%
Vålerenga IF	10	33,3%
Strømsgodset	11	20,8%
Sarpsborg 08	12	20,7%
Mjøndalen	13	20,8%
Lillestrøm SK	14	20,8%
Tromsø IL	15	48,1%
Ranheim TF	16	8,7%

(Adapted from CIES Football Observatory, 2019).

The table shows that the percentage of homegrown players in Norwegian top football is quite varying. Molde FK and Ranheim TF are the ones with the lowest percentage of homegrown players which is interesting because they finished top and bottom of the league table with Molde FK as the league winners while Ranheim TF ended at 16th place,

completely last in the league. The squads consisting of most homegrown players are Tromsø IL with 48,1% which finished at 15th place and Odds BK with 45,5% which finished 4th. This is also an indicator of homegrown players alone not being a factor which affects a team performance.

Homegrown players and performance - trends
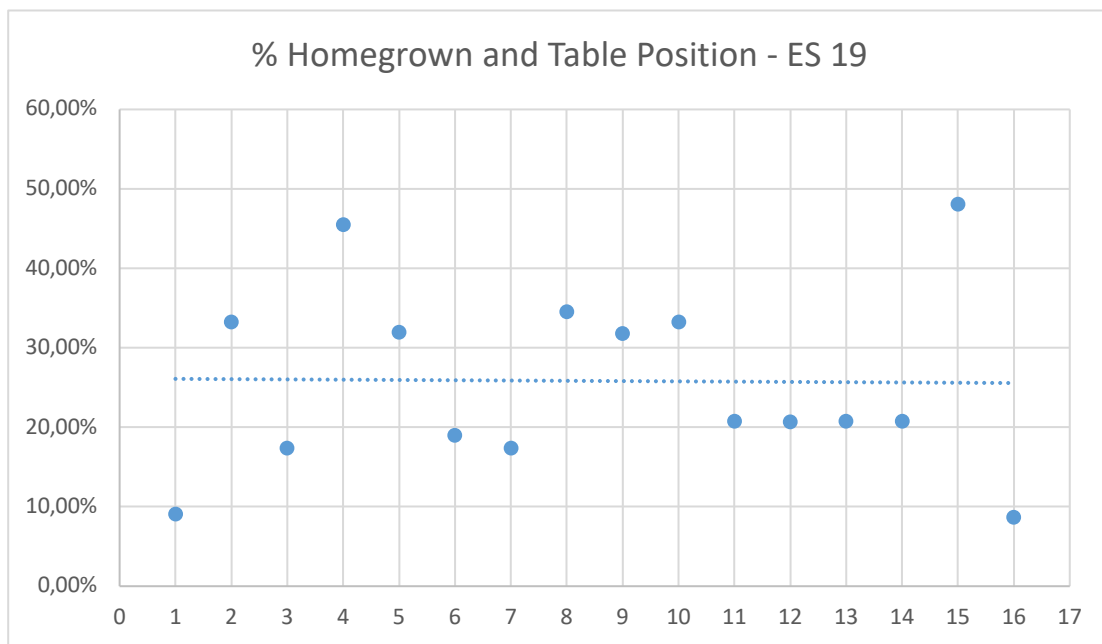
Figure 9: Percentage of homegrown players and the table position for teams participating in Eliteserien 2019
(Adapted from CIES Football Observatory, 2019).

In the scatter diagram presented above the percentage of homegrown players included in each of the Eliteserien 2019 squad is presented together with their table position. It is also added a trend line in order to see if there are some contextualities with sporting performance and the percentage of homegrown players in the squad. The data shows that the percentage of homegrown players are varying with no clear patterns of the performance.

5.3 Age and homegrown players

The teams in Eliteserien 2019 showed a big variation when it comes to the number of homegrown players in their squads and the average age of these players.

Table 7: Homegrown players and their average age in Eliteserien 2019

Team	# of Homegrown players	Average age homegrown players
Molde FK	7	20,16
Bodø/Glimt	10	20,73
Rosenborg BK	5	21,27
Odds BK	12	24,36
Viking	7	25,38
Kristiansund BK	4	25,22
FK Haugesund	6	25,22
Stabæk	12	20,47
Brann	8	22,66
Vålerenga IF	11	23,52
Strømsgodset	11	21,55
Sarpsborg 08	6	25,06
Mjøndalen	7	20,74
Lillestrøm SK	5	19,57
Tromsø IL	15	22,08
Ranheim TF	2	25,53

(Adapted from R. Poli, personal communication, June 2, 2020).

The table above shows no clear patterns in the average age of the homegrown players. Molde FK at 20,16 and Bodø/Glimt at 20,73 are performing well with young homegrown players, but at the same time Lillestrøm SK and Mjøndalen does not. The results are not showing any trends of which age that are good or not. It's also very varying the number of players included in each squad. It's important to be aware of the homegrown players included have been involved in varying degrees. It is also important to be aware of that some of the players that are registered as homegrown in the following clubs may have

played several years in other clubs or countries upon their time in the given club during the 2019 season.

Average age and homegrown players – trends

Figure 10: Average age and homegrown players in Eliteserien 2019 with trendlines
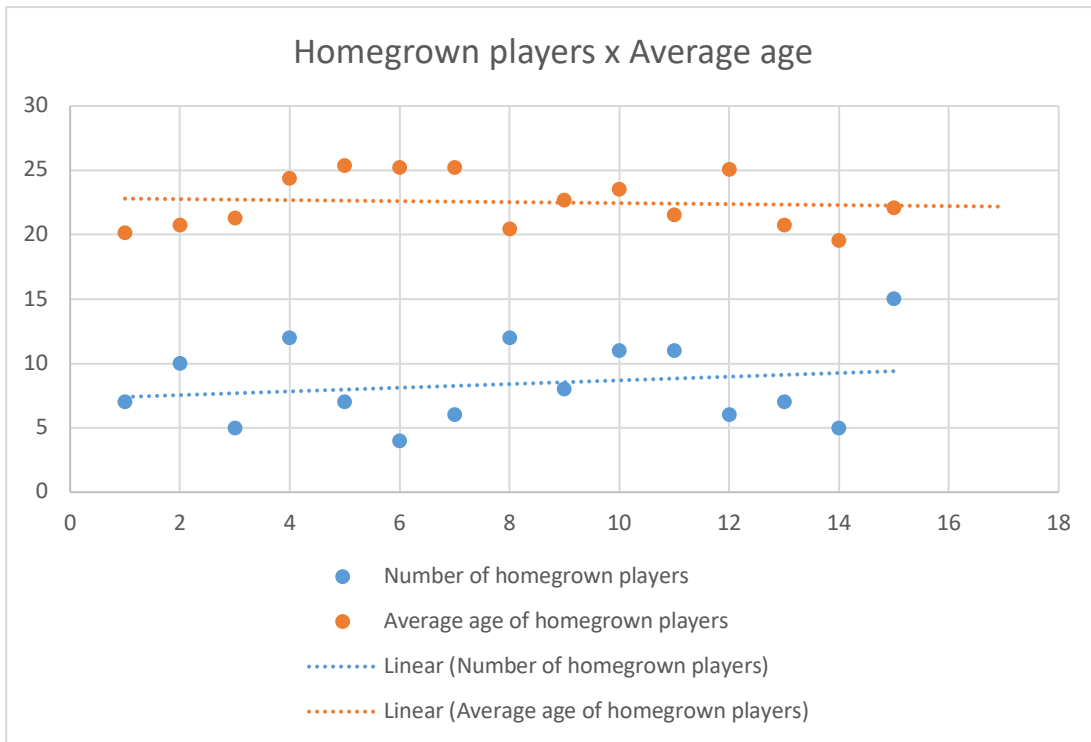
Figure 10: Average age and homegrown players in Eliteserien 2019 with trendlines (Adapted from R. Poli, personal communication, June 2, 2020).

As mentioned in the table above, there are no clear trends which indicates whether a team performs good or not depending on the average age of their homegrown players. The number of homegrown players involved in the different squads through the season is also very varying, with no trends being discovered.

5.4 Players used and performance (squad stability)

The results in this part are showing some tendencies of most of the teams at top 6 having used less players than the average in the leagues which is 29,44.

Table 8: Players used and performance in Eliteserien 2019

Team	Table Position	Players Used
Molde FK	1	31
Bodø/Glimt	2	26
Rosenborg BK	3	27
Odds BK	4	23
Viking	5	26
Kristiansund BK	6	24
FK Haugesund	7	30
Stabæk	8	33
Brann	9	30
Vålerenga IF	10	33
Strømsgodset	11	37
Sarpsborg 08	12	35
Mjøndalen	13	32
Lillestrøm SK	14	29
Tromsø IL	15	30
Ranheim TF	16	25

The top 6 teams in Eliteserien 2019 used mainly less different players in their matchday squads, expect for Molde FK which won the league. The tendencies of less used players give a clear indicator of squad stability as a factor to better performances. Ranheim TF contradicts this together with Molde FK, but the main tendency is that the more stable the team the better they perform.

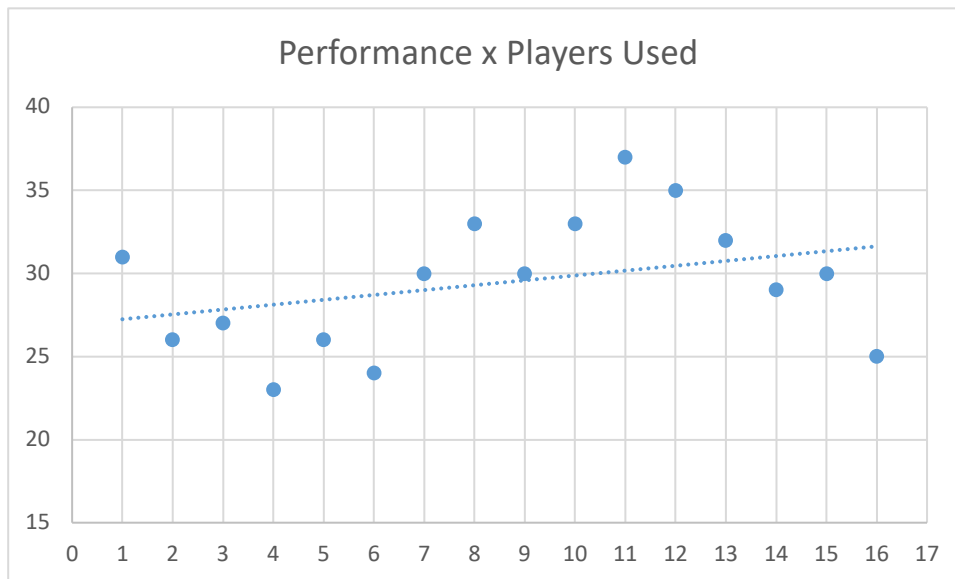**Players used and performance – trends**

Figure 11: Players used and performance

As mentions above, there is a trend of squad stability being a factor of good performance in Eliteserien 2019. It is a pattern of teams finishing on table position 7 – 15 using many players.

6.0 Discussion

The main aim for this study was to examine aspects which may affect the performance of the young Norwegian teams in Eliteserien 2019 and highlight the club's performances based on age. The first part of this discussion will be about homegrown players vs foreign players.

The number of homegrown players in the Norwegian top division is quite high at average compared to rest of Europe, presented in the table earlier in the text (Besson, Poli & Ravenel, 2019). There may be several reasons for the high number of homegrown players. Firstly, the Norwegian football clubs are often, especially in the last decade, seeing themselves struggling with finances. This is a factor which can be seen a catalysator for the clubs to use their own players from their youth teams. By not having the economic resources to recruit players from other Norwegian clubs or foreigners, the clubs often see themselves using many players from their youth system. Tromsø IL is an example of this with their 48,1% of homegrown players in their squad (R. Poli, personal communication, April 29, 2020). They were the team with the highest percentage in Eliteserien 2019, at the

same time they did also relegate. Their finances have not been good the last years, which strengthens the statement above. Tromsø IL has been dealing with enormous deficits over the last season, being on several million in minus (Eilertsen, 2018).

Furthermore, the clubs with more financial resources do have fewer homegrown players in their squads. Molde FK with their 9,1% of homegrown players in 2019 is example which strengthen this theory (R. Poli, personal communication, April 29, 2020). The club has been the best team in Norway the last years together with Rosenborg BK when it comes to honours and finances. Often, we see that Molde FK buy top players from the smaller Norwegian clubs and also from outside of Norway from both Danish and Swedish clubs. RBK did have 17,4% percentage of homegrown players in their 2019 squad, which is a bit higher than Molde FK but at the same time is quite low. The reason for RBKs higher percentage is that there is a philosophy, more like a saying, in their club of having own players coming through their system quite often between each time (CIES Football Observatory, 2019).

Another reason for the high number of homegrown players in Norwegian top football is built on the fact that clubs may have the philosophy of having homegrown players in their squads. By having imprinted traditions for playing and evolve homegrown players in their strategy or culture, clubs tend to focus on this aspect (Generation Adidas International, 2017). This is an aspect which is being weighted partly in criteria 1 and 3 in the Academy Classification report where the clubs are being evaluated based on how their integration of develop homegrown players are imprinted in the strategy in every level of the club (Norsk Toppfotball, 2019, p. 26). It's also about the framework which is about the sporting activities where youth development may or may not be included (Norsk Toppfotball, 2019, p. 30).

Odds BK is also a club which have a very high percentage of homegrown players in their squad at 45,5%, the second highest in the league. They do have a really visible strategy of picking up young local talents and develop them from a young age (CIES Football Observatory, 2019). This is something which is very well-known both inside and outside of the club (Torjusen, 2017).

Another reason for the high percentage of homegrown players in the Norwegian top division might be that many of the clubs are not having sufficient squad depth when it comes to backup players with quality in order to manage the 30 matchday rounds during a season. Many of the teams do have 11-13 players which are the ones playing most thorough the season while the rest of the squad registered for the season in general, and also matchday squads, are being filled up with players from the youth teams. This again comes down to financial resources available as a potential effect for this. This is something which may affect the results in in the research of this thesis in the part which examined the average age and number of homegrown players. Players being included in the matchday squads are only used to fill the squad and does not really play a part in the senior squad.

When it comes to the homegrown player´s opportunities, these may be limited by foreign players entering the clubs. The number of homegrown players being bought in European leagues has shown a steady increase over the last years (Besson et al., 2019). This leads to a competition between local talents and foreign players, as well as national players. The homegrown players are seeing lees playtime when the foreign players are being recruited to the clubs. Coaches often tend to prefer short-term solutions to achieve success, rather than seeing the long-term value in using homegrown players (Gammelsæter & Jakobsen (2006, p. 1) This is directly affecting how much chances the local players get, being underlined in the next paragraph with an example from the Norwegian elite football.

Sæther (2002) discuss the recruitment possibilities of Rosenborg BK which describes this competition for local players to involved by presenting many potential signings to rebuild the squad of Rosenborg BK. The possibilities of a local talent taking the step to play for the senior squad is not mentioned at all. This shows the challenges homegrown players face when the try to break into the senior squads of Norwegian elite clubs. National and foreign players in their peak age does in many cases rule out the chances for the local players. This is something which in many cases do affect the development of the Norwegian homegrown talents directly. The local players get less playtime and often tend to see themselves change club or being loaned out. The homegrown players struggling to get playtime may have many different ages, the next paragraph will discuss the average age of the homegrown players in Eliteserien.

The average age and the number of homegrown players in the 2019-season in Eliteserien presented in the result chapter shows no clear trends in how teams perform with either a high average age on their homegrown players or the number of homegrown players. It's possible to use the aspect of peak age in order to see which average ages of homegrown players. Dendir (2016, p. 93) defined the peak age at 25 – 27, varying from the position on the pitch.

Odds BK with an average age of their homegrown players at 24,36 performed well with their homegrown players being a bit younger than the peak performance age. It´s important to remember that they are the team with the second highest percentage of homegrown players, which indicates quality on their own developed players based on their performances. Both Bodø/Glimt, Molde FK and Stabæk performed well with a low average age of their homegrown players. Molde FK is mainly using only one player, E. Hestad, which is homegrown, so the results are not completely reliable in this example. Bodø/Glimt and Stabæk in the other hand are actually using many of the players included in the counted number of homegrown players and they do have a low average age (Adapted from R. Poli, personal communication, June 2, 2020).

The reason for Odds BK, Stabæk and Bodø/Glimt to perform well with many own developed players and with average ages under peak age, may lay in the youth development processes. They all received high scores in the Academy Classification 2019, all finishing in the top 4 of all clubs participating (Adapted from NTF, 2019). Criteria 9, productivity, is giving scores based on the production of player, both national and internationally measured in minutes played (NTF, 2019, p. 42). Stabæk and Odds BK performed highest in this measurement out of every club in the report. Since this report is consisting of data from the 2016 – 2018 seasons which is described earlier, this may have been a fundament for the good 2019 season. By letting their young players play together over several season, squad stability is being ensured and relations between players might have been strengthened. This might also have boosted the experience for the young players. These clubs are showing that the decision on seeing long-term value in being patient with their homegrown players is working very well in some cases (Sæther, 2010).

The results chapter did also present results on the percentage of homegrown players and sporting performances. The results showed no clear trends in how the percentage of

homegrown players affected the performances. This gives a clear indication of this factor alone not being a factor which affects a team performance. The quality of the homegrown players is something which can be essential, but this research is not conducted in this thesis. There are some studies being done to look at the effect which the homegrown players may have or not have. A research from MLS shows that the homegrown players doesn't affect the sporting performance direct, but in a long-term perspective may be very positive for the sporting performances (Toth, 2020).

There may be difficult for Norwegian clubs to play to many homegrown players when they are young in many cases because it's the general trends in Europe shows that the teams which have older squads tend to be more competitive (Besson et al., 2018b, p. 14). There are some examples of young teams performing well in some cases, which is seen in this study by Stabæk and Bodø/Glimt, but the general trend may "force" the clubs to not use to many young talents. The impact of the Academy Classification 2019 report is being discussed further in the next paragraph.

The Academy Classification 2019 report is containing data from 2016 – 2018, but it is still interesting to look at some findings in this report and see them in connection of the 2019-season. An interesting finding is that Stabæk were the team that had the youngest squad and also many homegrown players compared to the rest of the league in 2019. This is interesting when you see this in context with the Academy Classification where Stabæk had the 4th best overall score in the report. The fact that Stabæk did perform quite well, ended at 8th place, in terms of their expectations and resources may be an indicator of that their work connected to youth development has been successfully. They are the team with the highest score in many interesting areas of the report. They did perform best at criteria 9 which is about productivity – develop national and international players and also about minutes played by the players in the league, both in their own team and also sold players in the same league (NTF, 2019, p. 43). The reason because I choose to present this criterion is that Stabæk, by letting their young and own developed players play between 2016 – 2018, gives the young players experience that is something which can explain the good performances in 2019.

Bodø/Glimt did have one of their best seasons in several years and ended up finishing second in the league of 2019. They also had a very young squad with the second lowest

average age in the league. The percentage of homegrown players are also quite high compared to the rest of the league. Bodø/Glimt have the 3rd highest score in the Academy Classification 2019 report. In terms of criteria 9 about productivity, they did not perform more than more or less average compared to the other clubs. On the other hand, they did receive a high score, and this may explain why they did perform really well.

I find it very interesting that both Stabæk and Bodø/Glimt did have good seasons with the two youngest squads in the league while they at the same time had the 4th and 3rd best score in the Academy Classification. The data basis is not sufficient enough to say that young squads do perform better in Eliteserien 2019 based on the fact that more teams performed better with older squads, but I do think that it is interesting to see this in connection with the quality of the two teams youth development as well as the use of young players. The reason for the use of young players and good results is depending on many factors, but the focus on youth development is a factor which most likely has strengthened the performances in these cases.

Vålerenga has the highest score in the report and is the only club which have 5 stars out of 5 possible in the academy classification report. What's interesting about this is that Vålerenga had a very bad season when it comes to sporting achievements. They ended at very disappointed 10th place after they externally expressed that they wanted to challenge for the top 3. Vålerenga is one of the biggest clubs in Norway and they did disappoint based on their ambitions for the season and resources in hand. They have quite the same percentage of homegrown players as Stabæk and Bodø/Glimt. Looking at their average age Vålerenga does not have a remarkable high average age at 26,04 years old compared to the league, but they are still only the eight youngest squad in the league.

It is interesting to play with the thought that Vålerenga could perform better if they use more young players. It's impossible to draw a conclusion whether this could either boost or impair their performances, but it's interesting to present a possible performance boost based on the fact that two other teams which are in around the same rating in the classification do use more young players and performed better even with less resources. It's important to be aware of the fact that the percentage of homegrown players is for the players included in the squad used through the whole season, and not describing how much the homegrown players actually play.

Maybe we will see Vålerenga using more young and own developed players in the 2020 or 2021 season? This may be the case after they have used so many resources on the academy. Vålerenga has been underperforming for many years now and maybe this is their solution? The time will show, but it is possible that they can see a slight improvement by being patient and give the players experience over time. This was both Stabæk and Bodø/Glimt successful way of using young players over 2-3 seasons in order to make them into good football players in the Norwegian top division scale. This can be seen in the context of continuity in general which is presented in chapter with the results.

Tromsø IL did receive the 5th highest score in the report. As mentioned above, they did relegate and had a poor season. They together with Vålerenga contradicts the statement above which indicates that the Academy Classification 2019 did strengthen the performances of Stabæk and Bodø/Glimt. This may be an indicator of the report having an impact of some clubs, and some not, which makes it difficult to conclude that the academy work is a factor which affect the performances of the young players in any direction.

When it comes to the Academy Classification 2019 its is interesting to think of what kind of impact this classification may have on the homegrown players in Norwegian football. Firstly, clubs participating in this report will most likely focus more on youth development in order to meet requirements to get a good score in this report. This is something which could boost the development by using more resources on the development, which may include improving both facilities, routines and coaching for the players. By having this classification, clubs may be more motivated to focus on youth development which in long term will produce better and more homegrown players that not only take the step up to the first team, but also becomes players with a high quality.

To strengthen the statement above is it natural to look at Stabæk as an example. The classification has clearly had a huge impact of Stabæk´s youth development. The Head of Youth Development, Gaute Larsen underlines the statement above with his comment which is presented earlier in the text where he says that they have used 2017 and 2018 to implement tools and knowledge they have retrieved from NTF. This is a clear indicator of how the report itself has worked as a catalyst for Stabæk`s youth development, both in terms of an increased focus and also in quality.

It's very interesting to see a trend of teams performing well in the report using the youngest players in the league. The Academy Classification 2019 can be seen as a catalysator for teams use of young players in the teams which has good scores in the report, but it does not directly give the squads better young players as a factor alone.

The youth development is something which may be seen differently in the future for the Norwegian clubs. The focus in player development may also be more continuing and focused after a player has turned 20 years old should be more essential. When players are turning 20 years old, there is a tendency where often talent development models are stopping, like the well-known Côté´s Developmental Model of Sport Participation also known as the DMSP model (Bailey, Collins, Ford, MacNamara, Toms & Pearce, 2010, p. 24). This model and several others are focusing on players at a young age and not really all the way until a player has reached its peak age at 25 – 27 years old (Dendir, p. 93). The reason for focusing on young players in many smaller leagues in Europe, like the Norwegian, may lay in the reason of players being developed to get sold with profit (Klausen, 2018). The sales of the players tend to often happen before peak age is reached in many cases in the Norwegian football.

To continue the discussion of the young teams' performances in the Norwegian elite football, I will now look at the young teams in general on not only the homegrown talents. The research conducted on successful teams in Europe by Besson, Poli and Ravenel (2018b, p. 16) did not discover an optimum age to be successful in football clubs. There are no clear evidences of the relationship between age structure and success, but the median age for champions in the 5 biggest leagues between 2009 and 2017 was 26,5 years old, which links to the peak age literature mention earlier in this chapter. This may be used as a possible benchmark, but not something which can manifest any clear answers (Besson et al., 2018b, p. 16).

The average age for the teams which participated in Eliteserien 2019 showed no clear trends in how young average age affected the sporting achievement in both positive and negative directions. The average age of teams in Eliteserien 2019 was 25,82 years old. The performance of the teams in the league does vary very from top to bottom, with average ages both above and under the leagues average age. The average age of the top 3 teams

was Molde FK at 26,49, Bodø/Glimt at 24,67 and Rosenborg BK at 26,69. By only looking at these 3 teams it is easy to say that squads with older players perform better, but other squads contradicts this with high age and bad performances. Both Mjøndalen at 26,51 and Brann at 28,07 are to opposites of Molde FK and Rosenborg BK, while Bodø/Glimt also contradicts this by being the second youngest team and ending up at second place in the league.

The data tells us that there is no visible contextual relationship between sporting achievements and age/experience in Eliteserien 2019, which is confirmed by the statement presented above from Besson et al. (2018b, p. 16).

By looking at Allsvenskan 2019 and 3F Superliga 2018/2019, it is possible to see if the highly comparable leagues with Eliteserien, are showing any trends in performance based on age. The Swedish top division is showing similar non-existing trends as the Norwegian top division (Adapted from CIES Football Observatory, 2019). The Danish top division are having all top 4 teams average age above the leagues average age, which is interesting alone. But several teams performing bad with average ages contradicts this trend (Adapted from CIES Football Observatory, 2019). The Swedish, Danish and Norwegian leagues are all showing no clear trends in performances based on average age.

An interesting aspect is to see how good the clubs using old players may perform if they use more young players. The most interesting example is Brann which has the oldest squad with a much higher age than the rest of the league. They have an average age which is more than 1,0 more than the 15th oldest team in the league which is Rosenborg BK. Like presented above, Brann had a very upsetting season ending at 10th place which made both the fans and footballing experts wonder what went wrong. The fact that their squad has an average age above the peak age may indicate that they have to use more younger players in order increase their chances of performing better (Kalén et al., 2019, p. 5).

Rosenborg BK did have one of their worst seasons in many years in the 2019-season finishing at 3rd. Like mentioned above, Rosenborg BK did have the second oldest squad in Eliteserien 2019. It's quite interesting to see that they did have such a bad season when their average age was high compared to the rest of the league. As the biggest club in the league over several decades, it is natural to have more established players based on the

economy. This comes down to phenomenon of peak age presented in the literature review chapter. The peak age for football players is 25 – 27 years old, depending on which position (Dendir, 2016, p. 1). The bigger the club and the bigger the finances, it's more natural to look at players which are in their best performance age. Rosenborg BK is a club which often buy players from other Norwegian clubs when the players have performed very well and often is seen as "finished products" in their prime years, where often clubs from bigger leagues also shows interest (Sæther, 2002).

Molde FK is in quite the same category as Rosenborg BK, they have not been as good as them in all the years, but they are a top team with big economical muscles right now. They also buy players in their peak ages from other Norwegian clubs, which effect the average age to be higher than the average of the league in 2019. This also reflect the low percentage of homegrown players with the second lowest number of homegrown players presented earlier in this text at 9,3% (R. Poli, personal communication, April 29, 2020). The recruitment of established players in their peak age also explains the lack of local talents involved in the squad.

Both clubs do have the quite same squad composition which contains good Norwegian players in their best years as well as players which have returned from playing outside of Norway. This has often been a success for Rosenborg BK over the last years, but not the 2019-season. The reason for Molde FK to perform better than Rosenborg BK can be many, but they do have a younger squad which is interesting.

Another aspect is that the Academy Classification 2019 report may work as a catalyst for clubs to start using more young players in general, not only the homegrown which I will write more about in the paragraph below.

When looking at performances of young players in Eliteserien 2019 and their representative teams, it's important to not only focus on the average age as the factor of performance. The clubs performing well with young players may have some pillars which can be the reason for this. The first one is the level of experience the young players in the respective clubs do have. Stabæk and Bodø/Glimt which performed well did use many of young players 1-2 years in advance of the 2019-season. This is something which in many

cases do boost the performance of the young players because it gives them confidence and routine.

Another aspect which built on the continuity phenomenon is that teams sooner or later have to rebuild a team, partly or the whole baseline of the team. This is something which Rosenborg BK was in a starting phase of in the 2019-season. Several players which has served the team for many seasons are starting to get old and new players are coming in. This aspect is linked to the aspect of squad stability which are being discussed in the next paragraph.

Strømsgodset and Sarpsborg 08 recruited many new players in the transfer window in the summer, which explains the high number of included players in the match-day squads. Strømsgodset with the highest number in the league at 37 and Sarpsborg 08 with the second highest at 35. I find it interesting because both these clubs ended close to relegation when the season was over. Both clubs are showing bad sporting performances while they are having many different players in their match-day squads through the season.

To say that there is a correlation between this is possible in my opinion. It builds on the literature presented in the literature chapter from CIES Football Observatory (2018) where they define the correlation as *"the best performing teams have much more stable squads than the least competitive ones"* (Besson et al., 2018b, p. 27). This statement is linked more directly to transfers of new players before new season in general, but I will link the statement to players used in general because many of the Norwegian clubs are buying new players in the mid-season transfer window during the summer. Studies suggests that teams which recruits less players between seasons tend to have a positive effect on the sporting performances (Stirr Associates, 2018).

To give the statement above validity it is natural to look at the teams which had good season and their number of different players included in their match-day squads. All the teams which finished 1 – 6. used under 29,44 players through the season, which is the average for the league, expect for Molde FK. It's interesting that 5/6 teams at the top had less different players than the average for the rest of the league. Odds BK had only 23 different players in their 30 match squads. This is the lowest in the league, and they ended 4th after a good season. Kristiansund BK (6. Place) used 24 players, Viking (5. place) and

Bodø/Glimt (2. place) used 26. These teams had really good seasons and used few players, which gives a clear indicator of squad stability being a factor which with a sizeable high possibility, does boost the sporting performances. Beswick (2015, p. 120) presents findings in his research which underlines this. He presents that by not using to many new and different players over time, 3 mental and emotional aspects are less likely to be introduced to the players. The 3 are: "(1) tension from within (team chemistry, selection, and so on), (2) the opposition and (3) tension from external factors (media, family, and so on)" (Beswick, 2015, p. 120).

In order to perfectly understand the research results and findings, I will now present the limitations with the quantitative method used in this thesis. To expose these possible limitations in this thesis, it's natural to present the presented theory above in context with my research approach. Firstly, the lack of natural setting is an aspect which can be very essential in studies related to football. The gathered data in relation with the research questions are all completely based on the chosen factors which are considered for this thesis. Football is industry which see mixed personal feelings and choices behind actions being done in the clubs. This is actions which is being done in different levels in a club by different people, which may affect how the sporting performances. Football clubs may take some decisions in how to play or whom, which eventually may affect the research which are conducted in this thesis. The data which is gathered is precise, but underlying reasons are not present.

Another limitation for the research in this thesis is that some areas which are being examined may lack sufficient data to control the some of the findings. The Norwegian top division is not a football league which has a great number of researches conducted to it. Some literature parts presented to give validity to the data and assumptions being made are in some parts being underlined by theory and examples from other European leagues, not the Norwegian itself. Several parts of the thesis are being built on one particular source, CIES Football Observatory, which may give the thesis a lack of reliability. CIES is a well-trusted and reliable source in the football world.

SUM UP

This part will present direct answer as sum up on the research question together with the sub-questions.

Does age profile among Norwegian teams affect performance?

No, this study discovered that there is no age profile, in either directions, which affect the team performance alone in Eliteserien 2019.

Which impacts do the foreign players have on Norwegian local talents development?

The big increase of foreign players is affecting the opportunities for the local players very clearly.

Which impacts does the Academy Classification 2019 report have on homegrown players and youth development in Norwegian clubs?

The report can be seen as a catalysator for the teams to use young players and increase their focus on youth development, but it does not directly give the squads better young players as a effect.

How did the clubs in Eliteserien 2019 performing seen in context of the percentage of homegrown players in their squad?

Homegrown players alone are not a factor which affects a team performance.

How does other comparable leagues perform in terms of young squads?

The top division in Sweden and Denmark does not show any trends in how a team perform based on their age, which includes not showing any trends in how young teams perform.

How does the competition from other clubs in the league connected to internal player recruitment effect the quality of the young players in each squad?

7.0   Conclusion

This research aimed to identify if age profile among Norwegian teams affect the sporting performance. Based on a quantitative analysis used to gather and examine an empirical research, it can be concluded that there is no visible contextual relationship between sporting achievements and age/experience in Eliteserien 2019. The results indicate that football squads with a low average age in Norwegian elite football does not perform better than the older ones based on the aspect of age itself.

FURTHER RESEARCH: In this thesis the different data gathered and examined has been linked to whole squads of each football team in the top division in Norway. Another approach to possibly conduct in order to look at more precise findings, may be done in context of minutes played for each player involved in the league. It may also be interesting to map out the different average ages based on positions in the league in general and compare it to the average age of positions in the clubs.

It may also be interesting to do the same analysis done in this thesis for the season 2000 – 2018 as well, in order to find or not find trends, ant not only seeing the actual outcome of one season which this thesis did.

Another aspect which would have strengthen this thesis is to gather data on the quality of the players in Eliteserien to map out the quality of the young players. Further research may focus on gathering performances and ratings in order to map put how good the players are in the different Norwegian elite clubs.

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54