The economic geography of football teams' performance:

Empirical evidence from Italy

Samuel De Santis, S4064771

Supervisor: Dimitris Ballas

Master: Economic Geography

Faculty of Spatial Sciences - University of Groningen

Abstract: This thesis aims to explore the relationship between geographical location and the performance of the Italian professional football teams. Building on existing work on agglomeration and football performance, and employing a panel dataset of twenty- three football teams across eleven seasons, this analysis investigates if football clubs located in the greatest Italian provinces have more chances to finish in the first seven places of the Serie A. The results indicate that teams in the largest provinces are more successful due to the ability to attract highly-valued foreign players and benefit from a big potential market to generate substantial income from sponsorship and television rights.

Keywords: Italian football, football labour market, football performance, agglomeration economies

Table of contents

1.Introduction

One of the main topics in economic geography is the relationship between firms' location and economic performance. Following the work of Krugman (1991) and Porter (1998), the role of location on firms' success became a central topic of discussion in local, regional, and national economic policy debates. However, the benefits of geographical location are not fully understood. Smith (1776) and Marshall (1890) were among the first researchers in recognizing that firms and business sectors benefit from co-location in urban areas. Some benefits associated with agglomeration are simply the results of a high population density. In other cases, the advantages of urban location are more complex to analyse and might accrue to easy access to a highly specialized labour force, common suppliers, low transport costs, or local knowledge spillovers. With annual revenues of roughly 2.5 billion among the 20 Serie A football clubs (Deloitte, 2020) the Italian professional football is an industry for which it is worth exploring the effect of location on football success. In other business sectors, it is potentially challenging to assess if companies locate in successful places, or places are more successful since companies move there. The lack of mobility of football clubs removes this endogeneity problem (Doran et al. 2018). Soccer teams rarely move from their place of foundation, meaning that there is an unchanging landscape of teams across time which helps to analyse the effect of location as a driver of success (Jones et al. 2019). In football, like other sectors, teams engage in strong competition by using resources (players, coaches, marketing skills, strategic capabilities) to outperform rivals on the field. Achieving success might in turn increase brand awareness and future investments, hence fostering the potential of further victories (Jones et al. 2019). The thesis is organized as follows: the first section addresses the main agglomeration advantages discussed in previous literature and how those benefits are related to the sport's industry. The second section discusses measuring football success taking into account final positions in professional football leagues. Then, a panel logistic regression analysis is performed where it is addressed if teams located in the largest provinces have higher chances to finish in the first seven places of the Serie A table. The regression analysis is performed including other important control variables that might be relevant to explain football performance. Subsequently, it is discussed the importance of population density and urban agglomeration effect to attract income from sponsorship and television rights, two important sources of revenue for football teams. Finally, the thesis addresses policy implications in football with particular attention on the Super League reform which sparked heated debates among club owners and politicians.

2. Scientific and societal relevance

Football is commonly known as the most popular sport in the world counting around two hundred million active players (Hoffman et al. 2002). In 2018 around 3.5 billion people watched the FIFA World Cup in Russia according to data published by the FIFA Organization (calcio e finanza, 2018). Although football in the last decades has developed in a global and multimillionaire industry the local and national dimension still seems to play a relevant role in the success of teams (Castellanos et al. 2007). It is noticeable that within football leagues few clubs enjoy more success over time at the expense of other teams. In this regard, the location of the team might be an explanatory factor in determining a strong or poor football performance. The high popularity of football in Italy makes it interesting to analyze the determinants of soccer success. Football in Italy has a long-standing tradition as the Italian national team gained four World cup titles, only one less than Brazil, the most successful nation in history (Statista, 2020). Moreover, the Italian Serie A experienced considerable growth in revenues from 2009/2010 to 2018/2019 confirming economic stability over a long-time period (Statista, 2020). This work is a scientific contribution to the sports economics literature as is building on the study by Jones et al. (2019) arguing how the English Premier League urban scale affects clubs' relative performance. The paper by Jones et al. (2019) explicitly suggested testing the effect of urban scale on football relative performance in other major European leagues. Following this query, this thesis represents an additional analysis into a novel body of scientific literature by exploring the determinants of success in professional Italian football.

3. The advantages of urban scales for firms' performance

3.1 The benefits of urbanization

Companies across sectors might benefit from agglomeration in different ways. McCann (2013) identified three main mechanisms of agglomeration to explain the reasons leading firms to cluster in space. First of all, companies located in urban agglomerated areas have easier access to specialist inputs than firms in dispersed areas. Empirical evidence showed that proximity facilitates linkages among companies. Relevant examples are areas such as Wall Street and the city of London hosting a large number of legal and software firms that provide specialist services to the financial sector (McCann, 2013). The presence of such firms is an advantage for financial companies located within the area as they have immediate access to the needed input. Moreover, since financial firms are located in close proximity, the costs of the input are spread across the participants. Some papers highlighted that agglomeration of companies in the same industries facilitates input procurement and minimises the degree of vertical integration within firms (Cainelli et al. 2012; Helsey et al.

2007; Brookfield, 2008). In industrial clusters, a company relies on complementary firms located in the same area to buy inputs instead of owing the control of the production process. Access to a local specialist transport network is another type of input that might encourage agglomeration (Krugman, 1991; Konishi, 2000). Infrastructures strengthen the relationship among firms, in particular in large urban areas. For instance, in London, a wide-band fibre-optic cable system allows the flow of data between financial institutions facilitating the exchange of information (McCann, 2013). Access to this cable is only possible through location in the city and the costs of the infrastructure are shared across the industries in the cluster. As a result, it is assumed that more firms will join the cluster and the total costs of the local input will fall. However, input sharing is not the only mechanism regarding agglomeration. Ellison et al. (2010) concluded that is the most important although the results might vary across different industries. The second mechanism of spatial proximity is the benefit deriving from knowledge spillovers. Employees working in an urban cluster can easily communicate with other employees of other companies in the same area. Knowledge spillovers are powerful instruments for the exchange of tacit knowledge concerning new products, technologies or market trends (McCann, 2013). Such information is usually transferred through informal meetings, and proximity facilitates the availability of social contacts. A real-life example of an exchange of tacit knowledge is the Silicon Valley in the San Francisco Bay Area. This area hosts the most important high-tech companies in the world such as Google, Apple, Linkedin, and Facebook. The mutual connections and proximity among high technology-firms in Silicon Valley allow a constant exchange of ideas between employees who can easily communicate on a daily basis. As it was argued in previous studies, a context with a large amount of knowledge will generate innovations and new entrepreneurial activities increasing the competitiveness and productivity of specific areas (Audretsch et al. 2007; Audretsch et al. 1996; Autant-Bernard et al. 2011). If the distance between potential innovative companies increases it is expected that the benefit of spillovers will decline over time. The negative effect of long distances on knowledge spillovers was found in Kezeki et al. (2020) and Rosenthal et al. (2001) arguing that for the knowledge-intensive business sector local concentration is key for the exchange of tacit information. It is also debatable in previous studies if knowledge spreads easily in diverse or specialized business sectors. The debate is based on Marshall who highlighted that knowledge spillovers arise in a context of industrial specialization, while Jacobs argued that complementary knowledge across diverse companies facilitates experimentation and innovation (Marshall, 1890; Jacobs, 1960 in Van der Panne, 2004). Empirical studies pointed out that both specialization and diversification might matter in supporting knowledge flows. For instance, Paci et al. (1999) in a research across 85 industrial and 784 Italian Local Labour Systems identified that diversification and specialization are not necessarily opposed

in facilitating knowledge spillovers although a diverse setting is more relevant in high-tech sectors or metropolitan areas. In the same line of reasoning Shefer et al. (1998) also explained the positive impact of both specialization and diversification on the rate of innovation despite the positive influence is more notable in high-technology ramifications (ex. Electronics). Other relevant findings are more in line with Jacobs's theories underlining that diversification instead of specialization is the main determinant of economic innovation (Feldman et al. 1999; Van Oort, 2002). However, knowledge spillovers is not an evident mechanism in all sectors. Despite geographical proximity, companies might be reluctant to share knowledge and work on their own. A case study highlighting this phenomenon is analysed in Klosterman et al. (2008) finding that in Amsterdam and Rotterdam architectural firms are not willing to collaborate due to the intention to protect each other's design. This shows that despite agglomeration knowledge spillovers might not occur, altogether with the benefits discussed above. The third mechanism of agglomeration is the connection with a specialized local labour pool. Most of the time, knowledge-intensive companies need to hire highly skilled workers and the search for those types of employees may be expensive and time-consuming. However, if firms are located close to a large pool of labour they will have immediate access to the specialist workforce and they will expand more rapidly (McCann, 2013; Jofre-Monsey et al. 2011; Ellison et al. 2010). The presence of workers with specific skills and human capital facilitates the development of new entrepreneurial activities in the cluster and may encourage other entrepreneurs to locate in the area (Glaeser et al. 2009). The proximity to workers with the right skills and education is also beneficial for employers in terms of saving resources in training on the job. The relationship between cost-saving in training and accessibility to highly-skilled workers is clearly explained by Kim (1990) highlighting how companies in big cities benefit from accessibility to a highly-educated labour market due to the low costs in training employees. A specific skilled local labour pool is a characteristic of economies of localization meaning that the benefits of agglomeration belong to a group of firms and workers in the same business sector. The computer cluster of Silicon Valley is a perfect example of economies of localization. Fallick et al. (2006) and Saxenian (1994) focusing on Silicon Valley assessed that labour mobility is high in the area since the similarities across firms allow workers to allocate their skills in different companies. The advantage of labour mobility within a context of economies of localization is that it facilitates the process of sectoral innovation (Fallick et al. 2006). On the other hand, economies of urbanization indicate a context of agglomeration providing advantages across different industrial sectors. For example, in order for other software activities to cluster in Silicon Valley people who live and work in the area require financial, real estate, retail, or educational services and as a consequence, new employees are needed in those sectors (McCann, 2013). The clustering of urbanization economies

increases with the size of the home market, thus companies in larger urban areas should be more productive than firms in peripheral areas. Labour mobility may occur more in economies of localization like Silicon Valley due to the complementarity of firms in the cluster. Both urbanization and localization economies enhance economic growth although many empirical studies support the benefits of diversity over specialization (McCann, 2013).

3.2 Agglomeration factors in sport

The analysis of the main mechanisms of agglomeration leads to reflections on how agglomeration factors are shaping the sport's industry. According to previous empirical studies, the answer varies across different sports. For instance, in the motorsport racing agglomeration in the UK East Midlands, geographical proximity is key for intra-firm relationships in sharing hard inputs and technologies (Henry et al. 2001). Strong mutual relationships among race car industries in trading technical input are also described in Driessen et al. (2017) arguing that the advantages of proximity for race-car firms in North Carolina outweigh the disadvantages of high-income taxes. On the other hand, low-income taxes prevailed in the location decision of golfers (Driessen et al. 2017). In the football industry, the most relevant exchanges of input are human resources like managers, players, and talent scouts. Unlike other businesses and industrial clusters, the need to share hard technical inputs is absent in football. This then removes the relevance of football clubs to share technologies within close geographical locations (Jones et al. 2019). In a globalized football, knowledge spillovers between football clubs are likely to occur in a national or international dimension. Relevant examples are the transfer of football tactics or training methods when a manager moves teams often between countries (Jones et al. 2019). For instance, the Italian manager of A.C Milan Arrigo Sacchi has brought in Italy in the late 1980s a revolutionary football philosophy called "Total Football" based on pressing and ball possession that was adopted in the 1970s by the Dutch national team. Subsequently, this successful football strategy was developed by Josep Guardiola during his coaching at Barcelona from 2008 to 2012. The international nature of knowledge spillovers in soccer shows that the local dimension is less relevant for the exchange of information contrary to what other empirical researchers have found (Kezeki et al. 2020; Rosenthal et al. 2001). However, geographical location still plays a significant role in football despite the lack of intra-firm relationships in trading technological input and the dominance of transnational over local knowledge spillovers. Soccer teams located in urban areas with a larger population may experience more success over time than clubs located in smaller conurbations (Jones et al. 2019). This is in line with Gordon et al. (2005) and Markusen (1996) testing that firms in urban contexts are more

productive simply because they are established in more populous areas. It is assumed that in soccer like in North American baseball (Mills et al. 2016) teams in the largest population centers maximize revenues from television broadcast due to their high catchment area. This implies that the size of the population of the team's area might be an important criterion to acquire viewership and then income from television. The positive effect of population size on football success was also found by Walker (1986) arguing that population size has a positive influence on a team's finishing position and attendances favouring football clubs in big cities. Moreover, Castellanos et al. (2007) pointed out that population size is a reliable variable to proxy the market potential demand of a team. However, football clubs capture demand outside the conurbations they belong to. Despite that, Dobson et al. (2001) suggested that teams with a greater internal market also have a larger potential external market, justifying that considering the population size of the team's conurbation is appropriate to assess football success. Besides, more populous areas can count on a greater pool of potential footballers and thus are expected to be more successful in football (Hoffman et al. 2002). Nevertheless, the labour force is far from being only local in soccer. The increasing global dimension of football has led to the high mobility of players across the world. In this regard, urban locations may matter to attract young foreign talents or the very best football players of the world. It might be that certain places can attract high-quality and choosy labour and then increase the possibilities of success over time (Jones et al. 2019).

4. Data and Methodology

4.1 Measuring football success

To begin with the empirical analysis, the research attempts to replicate what Jones et al. (2019) did to assess the performance of the English football teams. The two researchers measured success as teams' finishing position in the whole English football league (92 clubs in four divisions) averaging their results as an indicator of success over 22 seasons. Moreover, they include teams that appeared in the English Premier League at least once as this shows the ability to compete at the highest level of the English professional football by paying higher wages and attract investments at the highest level (Jones et al. 2019). The approach they used is called ordinal ranking for measuring football performance and works as follows: a club winning the Premier League each year will have the best possible score of 1, and greater scores indicate poorer performance on the field. Following the ordinal ranking, this research includes teams that participated in the first and second division of the professional Italian football: Serie A and Serie B respectively. Serie A counts for 20 teams while Serie B counts for 22 teams. In total 42 positions are considered. Their final positions are calculated throughout 11 seasons, from 2009/2010 to 2019/2020. In total 42 positions are considered. For

example, a team finishing 1st will have the best possible score of 1 and a team finishing at the end of the Serie B table will have the worst score of 42. However, there are methodological limitations to discuss in using the ordinal ranking of performance. As Jones et al. (2019) argued with the ordinal ranking we lose data on the distance among competitors in terms of points. This could be not that relevant since prize money and qualification to European competitions are determined on clubs' final position regardless the number of points (Jones et al. 2019). Moreover, the difference with Jones et al. (2019) methodology is that this analysis considers only teams that showed up at least once in Serie A and never dropped in the third or fourth divisions. For instance, a team that played at least once in Serie A but experienced relegation until the third or fourth divisions from 2009/10 until 2019/2020 will not be included in the study. On the other hand, a team playing in Serie A that was relegated only until the Serie B will be included. This methodological choice is based on the fact that the ordinal ranking is hardly applicable for the third and fourth divisions of the Italian football. The number of teams in the four divisions of English professional football remained constant over time: 20 teams in the Premier League, 24 teams in the Championship, 24 teams in League One, and 24 teams in League Two. With this consistency, it is easy to apply the ordinal ranking methodology. On the other hand, in the Italian professional football, the third and the fourth divisions are divided into groups, and the number of teams has changed from 2009/2010 until 2019/2020. For instance, the third division is divided into three groups: A, B, and C. Following the ordinal ranking, it would be difficult to classify each group. Finishing fifth in group A might be not the same as finishing fifth in group B since group A could be more valuable than group B or the other way around. Due to these methodological complications, final positions in the third and fourth divisions will be excluded. However, during the period of the analysis, a few football teams that participated at least once in Serie A were relegated to the third or fourth division due to financial bankruptcy instead of poor performance on the field. Those clubs are included in the study since the relegation in the lower leagues was not related to sportive performance and a financial crisis can be considered an unexpected event. The teams that experienced financial constraints from 2009 to 2020 are Bari, Cesena, Parma, and Palermo. Therefore, the performance of Bari, Parma, and Cesena are calculated over nine seasons instead of eleven since for two seasons they were out of Serie A and B due to economic failures while Palermo was out of the highest leagues for one season, and its final positions are assessed in ten seasons. Following the criteria highlighted above 23 teams are analysed. Table 1 below shows the urban population and average finishing position of the 23 teams.

Table 1. Average finishing position and urban population.

Avg Population 2009/10-2019/20	Clubs	Average finishing position, 2009/ 10–2019/20
168,581-500,000	4	19.86
501,000-1,000,000	7	14.19
1,001,000-1,500,000	5	19.59
> 1,500,000	7	5.79

It is noticeable that teams in the largest conurbation of more than 1.5 million people have the best average performance while teams in the smallest provinces show the worst average finishing position. (For details on averaging finishing position and urban scale for each team see table 4 in Appendix A.1). The analysis outlined in table 1 followed Jones et al. (2019) research and although modest in nature provides a first impression on urban scale and averaging finishing position of Italian football teams. However, this methodology does not control for other determinants that might influence football success. Therefore, in the next section a panel logistic regression analysis is presented.

5. Panel logistic regression analysis

The regression analysis employs a panel dataset of 23 teams across 11 football seasons. The logistic analysis aims to answer the following research questions:

Do football teams located in the largest provinces have higher chances to finish in the first seven places of the Serie A?

To what extent determinants of football success related to location factors are identifiable?

The choice to set the first seven places as a strong performance is based on the fact that in the Italian Serie A the teams finishing between 1st and 7th gain the qualification at the European competitions: Champions League and Europa League. The qualification at the European tournaments is considered as a remarkable result since it increases the popularity of the teams around the world and improves economic and financial performance. The final positions of football teams across years are taken from official soccer websites (worldfootball.net, 2021; transfermarkt, 2021). Baltagi (2021) highlighted the main advantages of using panel data:

- Controlling for individual heterogeneity
- Panel data provide more informative data and variability, less collinearity among the variables and more efficiency
- Panel dataset allows studying the dynamics of adjustment.

For example, in a panel dataset, it is shown whether a team had a finishing position of 3rd in 2010 or 7th in 2012 or the number of times a club has changed manager each year. The table below provides a summary and descriptive statistics of the variables.

Table 2. Summary statistics for all the variables included in the analysis

(a) Descriptive statistics for panel and time variables					
Variable:	N	Min.	Max.	St. dev.	.
Team	246	1	23	6.65	
Year	246	1	11	3.17	
(a) Descriptive statistics for continuous variables					
Variable:	N	Min.	Max.	St. dev.	
Managerial change	246	0	8	3.53	
(b) Descriptive statistics for the categorical variables					
Variable:		Frequency	Percent	Percent for variables by categories of: final position (0 = finishing lower than seven/ 1 = finishing between one and seven)	
Final position (0 = finishing lower than seven; 1 = finishing between one and seven)		253	100		
Finishing lower than seven		176	69.5		
Finishing between one and seven		77	30.4		
POPULATION CONURBATION (ref: > 1,500,000)					
168,581-500,000		40	16.26	97.50% / 2.50%	
501,000-1,000,000		72	29.27	88.89% /11.11%	
1,001,000-1,500,000		57	23.17	85.96%/14.04%	
>1,500,000		77	31.30	22.08%/77.92%	

(Continues)

Average attendance (ref: < 20,000)	246	100	
< 20,000	139	56.5	92.81% / 7.19%
>20,000	107	43.5	37.38% / 62.62%
Foreign players expenditures (ref: 0-50mil)	246	100	
0,50 mil	209	84.96	78.47% / 21.53%
>50 mil	37	15.04	13.51% / 86.49%
Derby (ref: no)	246	100	
no	153	62.70	88.89% / 11.11%
yes	91	37.30	34.07% / 65.93%
Ownership (ref: Domestic)	246	100	
Domestic	221	84.84	72.40% / 27.60%
Foreign	25	10.16	36% / 64%
Type of province (ref: Urban)	246	100	
Urban	120	48.78	43.33% /56.67%
Intermediate	104	42.28	94.23% /5.67%
Rural	22	8.94	86.36% / 13.64%

As a first step when working with panel data it is necessary to set the panel and time variable. In this analysis, Team is the panel variable while Year is the time variable. It was necessary to destring those variables as Stata does not treat string variables.

5.1 Dependent variable

The second step is transforming the dependent variable final position into a binary dependent variable. To do so, the new variable final position takes the value of 1 if a team finished between the 1st and 7th place, and the value of 0 if a team finished lower than 7th.

5.2 Independent variables

● The first explanatory variable population province is a proxy of urbanization. As already discussed in section 3 empirical evidence suggested that firms located in more populated areas are more productive than firms in peripheral locations (Gordon et al. 2005; Markusen, 1996). This was also confirmed in the sport's industry as Mills et al. (2016), Walker (1986) and Castellanos et al. (2007) have suggested. Based on these findings the variable population province aims at testing if a population effect is present in the Italian professional football. The Italian provinces belong to the NUTS 3 level regulated by the European Union to subdivide countries for statistical purposes (ec.europa.eu, 2021). According to the EU, the NUTS 3 level is the smallest territorial unit to geographically divide Italy. The 23 teams fall into 17 Provinces (Province in Italian). The variable is transformed into a categorical variable called population conurbation containing four sub-categories: 1) 168,581-500,000 inhabitants 2) 501,000-1,000,000 inhabitants 3) 1,001,000-1,500,000 inhabitants 4) > 1,500,000 inhabitants. It is expected that teams located in conurbation one two and three have lower chances to finish between 1st and 7th than teams located in the largest

conurbation > 1,500,000 which is the reference category. Data on population from 2010 to 2020 are extracted from ISTAT, the Italian statistics official website (Istat, 2021).

● The independent variable type of province indicates if a team falls in a rural, urban, or intermediate province according to the new urban-rural typology for NUTS 3 regions (ec.europa.eu, 2018).

According to this classification rural, urban, or intermediate provinces are defined as follows:

● Predominantly urban regions if the total population is less than 20% of the total population (ec.europa.eu, 2018).

● Intermediate regions: the rural population between 20% and 50 % of the total population (ec.europa.eu, 2018).

● Predominantly rural regions: the rural population is 50% or more than the total population (ec.europa.eu, 2018).

Academic researchers argued how urban-rural disparity in terms of firms' productivity is a widespread phenomenon (Angotti, 2012; Rikers et al. 2010; Krugman, 1998; Matsuyama, 1991; Fujita et al. 2001). Firms in agglomerated areas might benefit from knowledge spillovers, easy access to specialized labour, infrastructures and material inputs. Therefore, this analysis tests if also in the football industry teams in urban areas have higher success than teams in intermediate or rural locations.

● The variable average attendance indicates the average number of fans joining the stadium each year. It is intuitive to assume that teams with the highest average attendance enjoy more success due to a larger fan base. However, as Doran et al. (2018) pointed out attendance is limited by stadium capacity and thus, it can be argued that is a less reliable measure of success than population per province. Nevertheless, the variable will enter the model as categorical.

● The variable foreign player acquisition captures the total amount of money a team has spent in buying foreign players. The role of foreign players for the success of football teams became more relevant due to the introduction of the Bosman verdict rule in 1995 as the international mobility of footballers increased considerably (Frick, 2007; Kesenne, 2007; Littlewood et al. 2011). Therefore, in a global labour market, it is expected that teams able to afford and attract the best foreign players experience more success. This variable will also be transformed categorically with the value of 0 for expenditures in foreign players less than 50 mil. of euros and the value of 1 for expenditures up to

201 mil. of euros. Data on foreign players' expenditures are available on transfermarkt.it, a large database containing transfer fees, players' values, scores and football results of the top-five European soccer leagues (transfermarkt, 2021). The data are available for the whole study period.

● Football performance might also be explained by the number of coaches that a team has changed over time. Doran et al. (2018) highlighted that in the English Premier League the higher the managerial changes the less is the football performance across years. The variable managerial change will assess if in the Italian Serie A as in the English Premier League changing manager frequently equals to poor performance.

● The model will also test if the type of football ownership (domestic or foreign) is associated with performance. Although the studies on this variable are limited, Jones et al. (2019) argued that in the English Premier League the teams in the largest conurbation are more likely to be purchased by wealthy foreign investors, and then increasing the chances of success. The variable ownership is binary taking the value of 1 if the team is domestically owned and 0 if the owner is foreign.

● Finally, the binary variable derby indicates if a team has a city football rival. Plenty of empirical evidence suggested that local competition provide a competitive advantage for firms in different ways and in different sectors (Cainelli et al. 2012; Henry et al. 2001; Rosenthal et al. 2001; Porter et al. 1998; Combes et al. 2011). It might be figured out that local competition in football encourages clubs to perform strongly while clubs that do not have a competitor nearby could be less motivated to produce a high performance on the field.

5.3 Empirical results

Table 3. Odds ratio of finishing between the first seven places of Serie A

Random effect	Model 1	Model 2	
Variables	OR	OR	
POPULATION CONURBATION (ref > 1,500,000)			
168,581-500,000	0.023*	0.033*	
	(1.411)	(1.473)	
501,000-1,000,000	0.074*	0.092*	
	(0.675)	(0.709)	
1,001,000-1,500,000	0.136*	0.292*	
	(0.941)	(0.924)	
Average attendance (ref < 20,000)			
>20,000	11.275*	7.793*	
	(0.634)	(0.592)	
Managerial change	0.417*	0.449*	
	(0.261)	(0.255)	

Foreign players expenditures (ref >50 million)		
0-50 million	0.701*	0.195*
	(0.716)	(0.724)
Derby (ref no)		
Yes	0.25	
	(1.018)	
Ownership (ref Domestic)		
Foreign	0.127	
	(0.766)	
Type of province (ref Urban)		
Rural	0.142*	0.204*
	(1.130)	(1.155)
Intermediate	0.390*	0.264*
	(0.855)	(0.733)
Constant	2.7454	1.5796
Wald chi(2)10	58.80	
Wald chi(2) 8		53.76
Log likelihood	-68.801532	-69.845045
LR test 2.087		

Notes: Standard errors are noted in parentheses under the OR = odds ratio

p < 0.05 *

Model 1 outlined above presents the results as the odds ratio of finishing in the first seven places of the Italian Serie A. Compared to teams in the largest conurbation of >1,500,000, the odds for teams in the conurbation 168,581-500,000 to finish in the first seven places are 0.023. The odds for teams in the conurbation 501,000-1,000,000 and 1,001,000-1,500,000 are 0.074 and 0.136 respectively. This means that teams in the smaller conurbations are less likely to finish in the first seven places than teams in the largest conurbations. The results are in line with other studies concerning the effect of population size on performance in the sports industry (Mills et al. 2016; Walker, 1986; Castellanos et al. 2007). Average attendance shows a positive and statistically significant association of finishing in the first seven places. The odds for teams with an average attendance >20,000 fans to finish in the first seven places are 11.275 larger than teams with an average attendance of fewer than 20,000 fans. Interestingly to note, managerial change outlines a negative and statistically significant association of finishing in the first seven places. As managerial change increases by one, the odds of finishing in the first seven places are 0.417 lower. This is in line with the findings of Doran et al. (2019) arguing that higher managerial changes decrease the chances of success of English football teams. Moreover, compared to teams that spend more than 50 million euros on foreign players the odds for teams that spend less than 50 million are 0.701. This suggests that football teams that struggle to afford and attract valuable foreign players have lower chances of success than teams able to afford those players. Therefore, the variable foreign players expenditures showed that international footballers have a primary role in the success of soccer teams as Frick,

(2007), Kesenne, (2007), and Littlewood et al. (2011) argued in previous studies. Moreover, it assessed that diversity among employees is key to achieve firm's success as already highlighted by relevant researches (Jacobs, 1969; Feldman et al. 1999; Van Oort, 2002). Besides, teams located in rural and intermediate conurbations are less likely to finish in the first seven places than teams in urban conurbations (OR: 0.142 and 0.390 respectively) supporting relevant findings concerning differences in firms' performance between urban and rural contexts (Rikers et al. 2010; Krugman, 1998; Matsuyama, 1991). No statistically significant association for the variable derby and ownership was found. Having a local competitor playing in the same stadium is not statistically significantly associated with lower or greater football success. The debate of the advantages of firm proximity focuses on interactions between companies, either commercially or in other complex ways (Cainelli et al. 2012; Henry et al. 2001; Rosenthal et al. 2001). These potential interactions for football teams are limited, so a cluster of teams in the same city does not lead to the creation of shared city-level supply chains (Jones et al. 2019). Thus, local benefits of agglomeration such as knowledge spillovers or the exchange of specialized inputs within close geographical space are limited in the football industry and are unlikely to explain clubs' performance (Jones et al. 2019). Many key inputs are produced internationally, for example, the innovative hybrid artificial pitches launched by Desso of the Netherlands and used by English professional football teams as well as the Green Bay Packers (American football) and Wales rugby teams (Desso Sports Systems, 2015). Moreover, specialized doctors in treating injuries have players come to them instead of being located close to the location of the team (Bonham, 2009). Finally, the type of ownership (foreign or domestic) is not a statistically significant determinant of success in the Italian football. In the EPL was argued how football clubs in big urban areas are more capable and perhaps willing to attract foreign investors (Jones et al. 2019). However, concerning the Italian professional football, a significant association between type of ownership and chances to finish in the first seventh places is not shown in regression. Model 2 in Table 3 presents the regression results excluding the insignificant variables: derby and ownership. The reasoning beyond this is to check if the complex model specification with all the variables included fits the data significantly better compared to the simpler model without the insignificant variables: derby and ownership. The log-likelihood ratio test allows a comparison between different model specifications. As it is shown in table 3 the LR test gives a result of 2.087. Between the two models, the number of degrees of freedom changed from 10 to 8. The degrees of freedom are shown next to the Wald chi2 in table 3. According to the chi-square distribution table, a p-value of 0.05 with two degrees of freedom is achieved at a minimum value of 5.991. Since the LR test gives a result of 2.087, it is assessed that the increase in the log-likelihood when adding derby and Ownership as additional variables is not statistically

significant at the 5% level. Therefore, model 2 without the insignificant variables fits the data significantly better than model 1 with all the variables included. In model 2 we can also notice small changes in the odds ratio. Compared to teams in the greatest conurbation (ref. >1,500,000) the odds ratio for football clubs located in the smallest conurbation 168,581-500,000 to finish in the first seven places is 0.033. The odds for teams in the conurbation 501,000-1,000,000 and 1,001,000-1,500,000 are 0.092 and 0.292 respectively. Despite the slight variations in the odds ratio, it is confirmed that football teams in the smaller conurbations have lower chances to finish in the first seven places than teams in the largest conurbation (> 1,500,000). Moreover, the odds for teams with an average attendance > 20,000 of finishing between 1 and 7 are 7.793 larger than teams whose attendance is < 20,000. Managerial change in model 2 also confirms a negative and statistically significant association of finishing in the first seven places. Compared to teams that spend more than 50 million euros on foreign players the odds for teams that spend less than 50 million euros on foreign players are 0.195. Teams in rural and intermediate conurbations are less likely to finish between 1 and 7 (OR 0.204 and 0.264 respectively). As well as in model 1, model 2 does not show a statistically significant association for the variables derby and ownership.

6. Distribution of television rights in the Italian professional football

Having assessed that teams in larger provinces have more chances to finish in the first seven places of the Serie A table, this section will attempt to identify the reasons beyond that. It is intuitive to assume that football clubs located in large conurbations are more likely to generate income and then increase the probabilities of success over time. One of the main sources of income among clubs is the revenues from television rights. The income that clubs gain from television allows to better understand the economic disparities among teams (football benchmark, 2017). The distribution criteria of television rights differ among European football leagues. Figure 1 shows that the Italian Serie A has the lowest percentage of equally distributed television rights among the major European Leagues (football benchmark, 2017).

Figure 1. Distribution method of domestic broadcasting revenues among the top 5 European leagues
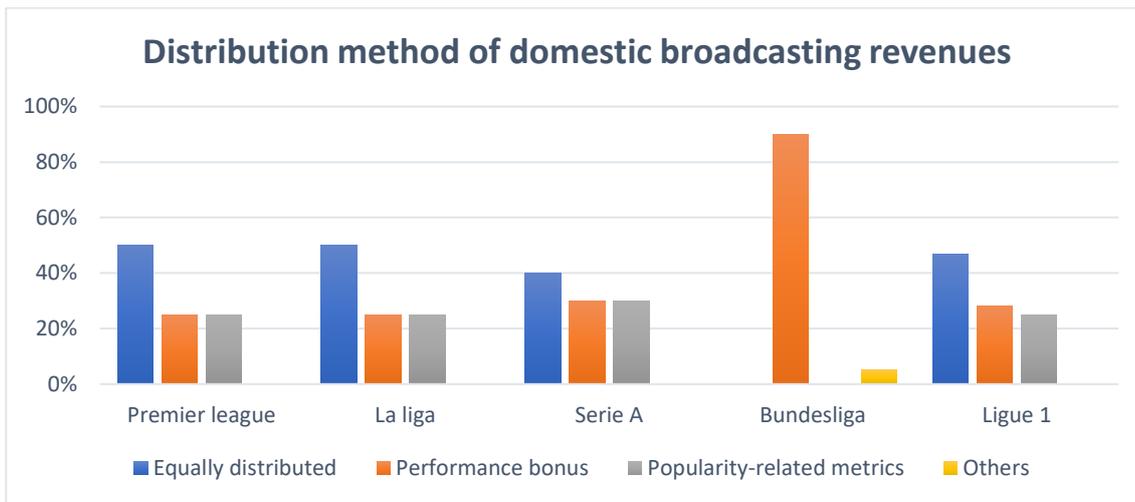
Source: Own elaboration based on KPMG Football benchmark research

Notes: Premier League is the only competition exclusively considering the ongoing season for the allocation of merit payments

23% of domestic Bundesliga broadcasting revenue is allocating on the basis of a common ranking including clubs of Bundesliga and Bundesliga 2

The most dominant criteria in Serie A to distribute economic resources from television broadcasts are based on past performance and popularity, criteria that are slightly less relevant in the other European football leagues. Figure 2 shows the five teams that earned the most and the less from television rights in the season 2017/2018. It is noticeable that the gap from TV revenues among the top five and bottom five teams is considerable. This is the result of an unbalanced method of distribution that provides a considerable advantage to clubs located in large urban areas[1]. Under the current system, the income from TV rights of Juventus is roughly thirteen times larger than Spal broadcasting revenues (see table 5 in Appendix A.2 for more details on Serie A clubs' revenues of the season 2017/2018).

---

[1] Distribution of TV rights in Serie A account for 40 % equally distributed, 30% catchment area (population per club), 10 % history, 15% results previous five seasons, 5% results in the last season.

Figure 2: Top and bottom five Italian teams in terms of earnings from television rights

* figures in millions of euro
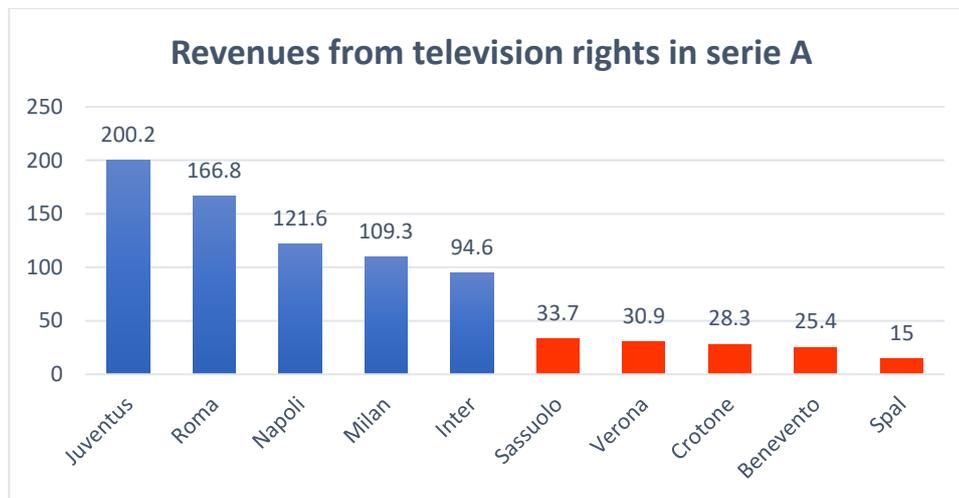
Source: Own elaboration based on La gazzetta dello sport (2019)

The fact that urban size matters in the Italian Serie A to generate more income from TV rights it's a unique characteristic of the Italian professional football league. For instance, the English Premier League is often cited as the most equitable in sharing TV rights due to a balanced system of distribution (Jones et al. 2019; football benchmark, 2017). Unlike Serie A the merit criteria in the EPL only consider the results in the ongoing season, and the financial standing of a club (facility fees) is defined as the number of times a team is broadcasted rather than criteria like viewership figures or catchment area[2] (football benchmark, 2017). Moreover, the EPL shares equally international broadcast revenues among football clubs aiming at minimizing the differences in revenues from TV among teams. Figure 3 provides a similar picture of Figure 2 by taking into account the five English teams that gain the most and least from television. It is noticeable that the difference between Liverpool and Stoke City is much smaller than Juventus over Spal in terms of revenues. Moreover, the bottom five teams exceed one hundred million of broadcasting revenues. (see table 6 in Appendix A.3 for EPL clubs' revenues for the season 2017/2018).

---

[2] In the EPL distribution of TV rights account for 50% equally distributed, 25% facility fees, 25% last season results.

Figure 3: Top and bottom five English teams in terms of earnings from television rights

*values are in millions of euro
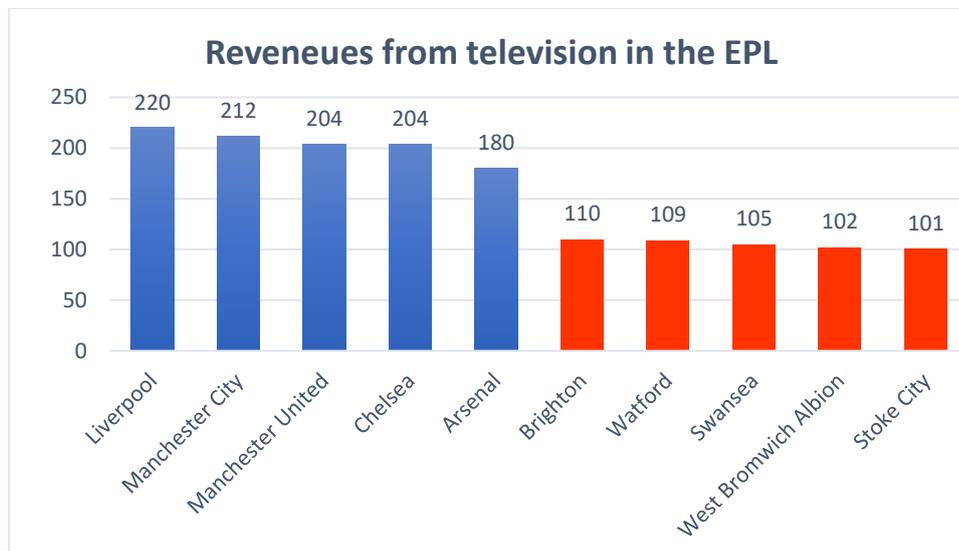
Source: own elaboration based on Conn (2019)

The comparison with the EPL allows understanding that a fair distribution of television rights in England helps to relax the link between location and broadcasting revenues allowing smaller teams to have access to relevant economic resources (Jones et al. 2019). On the other hand, the Italian Serie A still shows remarkable disparities and criteria like catchment area and past performance benefit considerably clubs in larger conurbations.

## 7. Sponsorship in professional football

Besides television rights, football teams generate substantial income from sponsorship deals. An analysis of sport business management has estimated that the total shirt value of professional teams in Serie A during the season 2018/2019 was 134 million euros (Sport business management, 2018). Empirical evidence suggested how sponsorship in sport is a relevant part of the overall marketing and a communication mix of professional teams (Amis et al. 1999). It was also studied how during a football game the sponsor placed on shirt players spark emotions among the audience and intention to purchase a specific product (Chanavat et al. 2009). The relevance of sponsorship in professional sports grew considerably with the increase of broadcasting. With streaming coverage sponsoring matches can offer greater visibility for brands (Deloitte, 2019). Sports fans also tend to be more loyal than the arts-performing audience. It was found that for performing arts audience around 8.5 % of the audience attend the events six or more times a year while for professional sport the number increased to 22.2 % and for soccer tops 33.3% (Deloitte, 2019). This means that sports

fans are more loyal and tend to be more inclined to notice the brand advertising (Bloxsome et al. 2011). Nowadays, globalisation is considerably changing the face of sponsorship in football. As professional football has become a global entertainment industry it is attracting luxury lifestyle and brand components (football benchmark, 2020). The most iconic case of this trend is Paris Saint Germain. The team from the French capital agreed for a 25 million with the Jordan brand in 2019 capitalising brand synergies by engaging new customers and fans from not only within football but from the world of fashion and other sports (football benchmark, 2020). Globalization and digitalization have allowed clubs and sponsor brands to reach customers not only at the stadium. For instance, the fan base of the top European teams is dominated by supporters around the world, and it is not surprising to see a young boy walking the streets of Mumbai wearing a Liverpool or Real Madrid shirt (football benchmark, 2020). Social media channels have also contributed remarkably to the already popularity of football. New media channels have made football more accessible to a huge audience at a lower cost (football benchmark, 2020). Therefore, football teams have transformed from sports entities into leisure and media corporations competing for the leisure time of their fans and creating profitable commercial opportunities for leading global sponsorship brands (football benchmark, 2020). Figure 4 and figure 5 respectively show the top seven Serie A teams by jersey value and their brands. It is noticeable that the seven teams earning the most from sponsorship rely on both local and global sources of sponsorship. Profitable firms in large conurbations can support the local football team more. This is the case of Inter which is sponsored by the big automotive company Pirelli located in Milan with total revenues of 4.3 billion in 2020 (calcio e finanza, 2020). Napoli football club also counts on domestic firms as the main partners are Lete, Kimbo and Garofalo. However, as discussed above globalization has led to a remarkable increase in international sources of sponsorship. The main sponsor of football teams is not necessarily related to local companies as international brands strive to find an agreement with big clubs in large urban areas to increase their brands' visibility. For example, the American automotive company named Jeep is the main partner of Juventus altogether with Cygames, a relevant gaming firm from Japan. Moreover, Roma and Milan are sponsored by luxury flight companies, Qatar Airways, and Fly Emirates respectively. It seems that although the source of sponsorship is not only local, the location of the team still matters to attract profitable global brands that seek to capitalize on commercial opportunities in large urban areas. Surprisingly, the small team Sassuolo located in Northern Italy generates substantial revenues from sponsorship. This happens since Sassuolo can counts on an advantageous self-sponsorship as the Mapei brand is owned by Giorgio Squinzi who at the same time is the owner of the team (calcio e finanza, 2020). A family sponsor means having

total control over the sponsorship deal which allows a small team like Sassuolo to generate a remarkable income despite the limited fan base of the club.

Figure 4: Top 7 Serie A teams by jersey value in 2018/2019 and main sponsors
* values in millions of euro
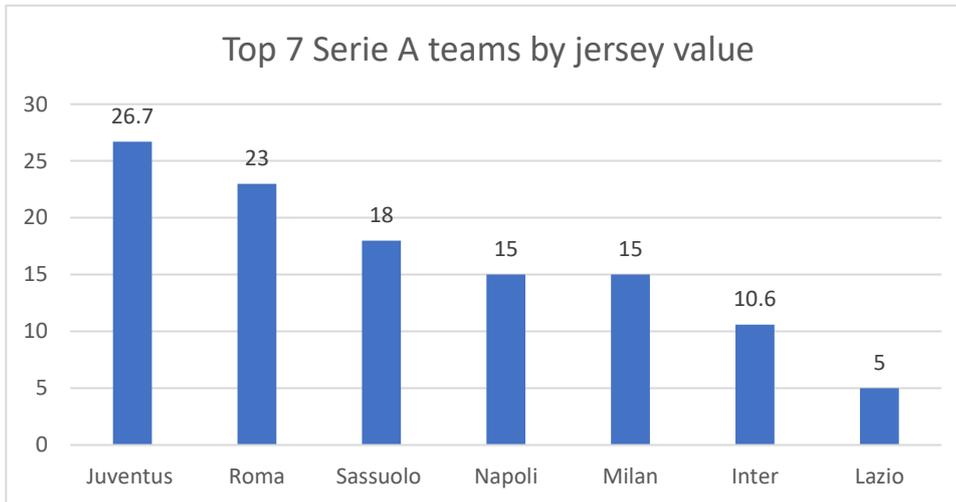
Source: Sport business management (2019)

Figure 5: Most valuable sponsor brands in Serie A

Source: Sport business management (2019)

8.The labour market in the Italian Serie A

Attracting highly skilled labour is one of the main challenges for firms in different industries. Football is not an exception as football teams seek to hire the best professional players to increase the chances of competitiveness and sporting success. Economic studies have only recently switched the attention on the football labour market. The approval of the Bosman verdict in 1995 was a turning point for football as the freedom of football players to move between clubs increased

considerably, and the football labour market became more global (Frick, 2007; Kesenne, 2007; Littlewood et al. 2011). As Jones et al. (2019) pointed out in a global labour market the ability of football clubs in agglomerated areas to attract the very best players is a determinant of football success in England. Regarding the Italian professional football, the logistic regression has shown that teams able to spend more money on foreign football players have higher chances to finish in the first seven places. Figure 6 below highlights that football clubs with the greatest foreign expenditures between 2009/2010 and 2019/2020 are located in the largest provinces. Those clubs also had the best average performance from 2009/2010 to 2019/2020.

Figure 6: Foreign players expenditures and avg finishing position by top five clubs

*expenditure values in millions of euros
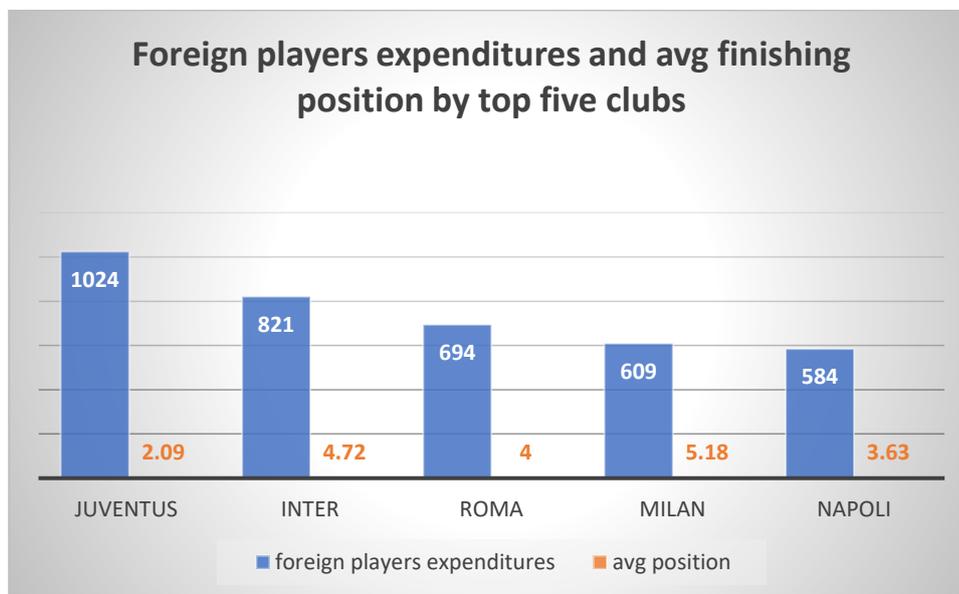
Source: own elaboration based on transfermarkt (2021)

Therefore, it is worth exploring which pull factors attract top players to move to the most successful conurbations. Plenty of empirical evidence argued that wages are higher in urban areas and big cities attract elite workers due to the greater salaries they can offer (Echeverri-Carrol et al. 2011, Wheaton et al. 2002). The gap in wages is also evident in the Italian football where teams in large conurbations can offer higher wages than clubs in smaller areas and then attract the top footballers. Data on the Serie A season 2018/2019 shows that teams in dense urban areas have the highest payroll in the football league (calcionews 24, 2018). While Della Torre et al. (2018) assessed that the wages disparities in football are not related to players' nationalities, other findings highlighted a positive correlation between the value of broadcast rights and players' income (Frick, 2007;

Buraimo et al. 2006; Simmons, 2007). The growth of revenues from Tv rights led to a remarkable increase in salaries in the football industry. However, as already assessed previously, in Serie A only teams in large urban areas generate significant revenues from television due to the ability to capture a large audience. As a consequence, the wage gap between teams in urban areas and peripheral areas has increased dramatically. This explains that clubs in agglomerated areas can increase wages due to high revenues from TV rights and attract elite foreign players while peripheral football teams must limit salaries as their earnings from broadcasting are limited. Nevertheless, high wages are not the only incentive for professional football players in choosing a team. Previous researches on professional athletes showed that the desire of winning trophies or competing at the highest level is an important intrinsic motivation in professional sports (Mallet, 2004, Vallarend et al. 1999). Italian teams located in large urban areas are more likely to win domestic trophies and play in international competitions and perhaps, for this reason, are more attractive to footballers. Moreover, elite players might want to move to a team due to the specific characteristics of its city. This is the example of London which attracts the best players as it can offer an attractive lifestyle and high-quality amenities (Jones et al. 2019, City monitor, 2016). As in the EPL in Italy amenity-rich places like Turin, Rome and Milan have always been attractive for elite foreign football players. As a result, the teams in those cities have achieved and will continue to achieve success on the pitch. For instance, the Portuguese star Cristiano Ronaldo talking in an interview about his move to Juventus has said that the city of Turin was appealing for him due to the wide offer of services for himself and his family (Corriere, 2018). Moreover, cosmopolitan cities might be very attractive for foreign players. For instance, the Chilean footballer Alexis Sanchez revealed that the presence of a large Chilean community in London was an important pull factor in its transfer to Arsenal (City monitor, 2016). Similarly, in the Italian Serie A, Argentinian and Brazilian players valued the high tolerance of the city of Milan in their transfer to the football clubs Inter and Milan and the proximity to other players of the same nationalities. As Florida (2002) argued, cosmopolitan and vibrant cities attract highly talented people, and in the context of the research presented in this thesis this would include elite footballers who might tend to prefer moving to large urban areas. The high presence of foreign players in the professional Italian football teams spurs a reflection on the role of a local labour pooling of skilled players. If a team can count on an excellent football academy located nearby it should be easy to train and access local skilled footballers. However, as an analysis of ESPN (2018) revealed it does not seem to make a big difference as clubs only in limited cases rely on local players. The high mobility of labour in the football industry suggests that attracting highly-valued foreign players is much more relevant than

only relying on local football academies. In this context, specific characteristics of locations might be a determinant pull factor in attracting a highly-skilled foreign labour force.

9. Foreign Investments in Serie A

European football clubs have been considerably fostering the attention of foreign investors in recent years (football benchmark, 2020). In modern football owners of clubs are not only interested in increasing teams' sportive performance. Following Bull et al. (2020) in figure 7 the key motivations behind buying a professional football club reflect the entrepreneurial orientation of club owners. Political and global owners usually show interest in the football industry to create strategic and economic capital respectively, while local and support owners aim at generating cultural and social capital (Bull et al. 2021). Political and global ownerships are increasingly common in football. Football is often seen as a tool to grow the brand and public image of individuals or companies. Relevant examples of political ownership are Manchester City and Paris Saint Germain since they are considered as ambassadors for the countries of their owners, Qatar and United Arab Emirates (football benchmark, 2020). Although foreign investments in the football industry are increasing in Europe, the EPL is the football league where global ownership is most common. Jones et al. (2019) analysed that a large share of clubs is owned by international investors and that clubs located in large urban areas are more likely to attract foreign investments. Although it is inappropriate to draw hasty conclusions, it can be assumed that international football owners tend to invest in teams located in large urban areas due to more visibility and probability of success in promoting their public image or entrepreneurial activities. An example is the Glazer family owner of Manchester United that according to football benchmark (2020) has invested in the club due to the favourable location and already popularity of the team. Those two factors have contributed to reinforcing the public image and businesses of the Glazer family around the world. A similar example in the Italian Serie A is the owner of A.C Milan Silvio Berlusconi who used the name of the football club to promote his political campaign and his mass media companies.

Figure 7: Key motivations behind buying a professional football club

Source: Bull et al. (2021)

Unlike the EPL, foreign ownership in the Italian football league is still a developing trend. The regression analysis has shown that domestic or foreign ownerships have no statistically significant effect on the likelihood of teams to finish in the first seven places. Despite of the huge popularity of the Italian football and its glorious history, the Italian Serie A is struggling in attracting foreign capital. At the moment only five (Bologna, Fiorentina, Roma, Inter, and Milan) out of twenty clubs are owned by foreign investors while the majority of teams are managed by local families (football benchmark, 2020). Italian football presidents are mainly the fans of the teams they own or have strong ties to the community reflecting what Bull et al. (2021) called local and support ownership. In the Italian football domestic owners are traditionally more appreciated by the fans who tend to consider local owners more interested in the performance and survival of the teams than foreign investors (O'Brein, 2013). However, in the Italian's football history national ownership in many cases has led to remarkable economic failures. For instance, teams like Lazio, Roma, Siena, Palermo, Fiorentina, and Perugia suffered from mismanagement by risking in multiple cases financial bankruptcy (O'Brein, 2013). The lesson to learn from previous Italian experiences is that in football like other industries there are efficient and inefficient presidents regardless nationalities. Italian owners might be capable to manage a football team like foreign investors as long as they show competencies and knowledge in the football business. Moreover, as football has increased its global popularity foreign owners could better understand the commercial dynamics of modern football. This is in line with other researchers assessing that in Italy foreign ownership in the service sectors improves a firm's performance in terms of profitability (Bentivogli et al. 2017). However, the low percentage of foreign ownership makes difficult to establish if urban size matter to attract foreign capitals in the Italian football industry. A foreign owner might be also willing to invest in a small-medium market team due to its culture and tradition like Bologna and Fiorentina. Foreign

investors of Bologna and Fiorentina have shown a strong interest to redevelop football stadiums and boost match day attendances since the Italian football has the lowest average stadium utilization rate among the top-five European leagues (football benchmark, 2020). If the stadium redevelopment plan by foreign owners will be successful other foreign investments might flow in the Serie A by fostering innovation and modernization in the Italian professional football.

10. Policy implications

This section discusses the potential impact of the European Super League (ESL) reform on the football industry. On the 18th of April was officialised the introduction of the European Super League, a new European tournament intending to replace the existing Uefa Champions League. The announcement was an earthquake for football all over the world, sparking heated discussion among fans, football owners, and politicians. The European Super League was originally founded by twelve major European clubs. Figure 8 provides an overview of the twelve founding clubs.

Figure 8: European Super League founding clubs

Source: Udinese blog, (2021)

The names of the clubs from bottom left to bottom right are: Liverpool, Barcelona, Tottenham, Milan, Chelsea, Real Madrid, Atletico Madrid, Manchester United, Manchester City, Juventus, Arsenal, and Inter. In addition to those twelve clubs Bayern Munich, Borussia Dortmund, and Paris Saint Germain might also join, eventually bringing at fifteen the total amount of founding clubs. The main news about the Super League reform regards the qualification criteria for the tournament. In the current Champions League football clubs obtain the qualification from their respective domestic leagues. For example, in the Italian Serie A, the teams finishing in the first fourth places will play in the Champions League the following season. On the other hand, in the new Super League, the founding clubs automatically gain the right to participate regardless of their final position in the domestic league at the end of the season. This means that only the twelve founding

clubs will perform each year in the Super League by monopolizing the tournament. There are two main reasons beyond the birth of the Super League:

● Top European football clubs are facing huge economic losses and high amounts of debts, which have been further magnified by the coronavirus pandemic (football benchmark, 2021). Figure 9 below shows that among the twelve funding ESL clubs only Chelsea revealed no financial debt as of June 2020.

Figure 9: ESL participants by net financial debts
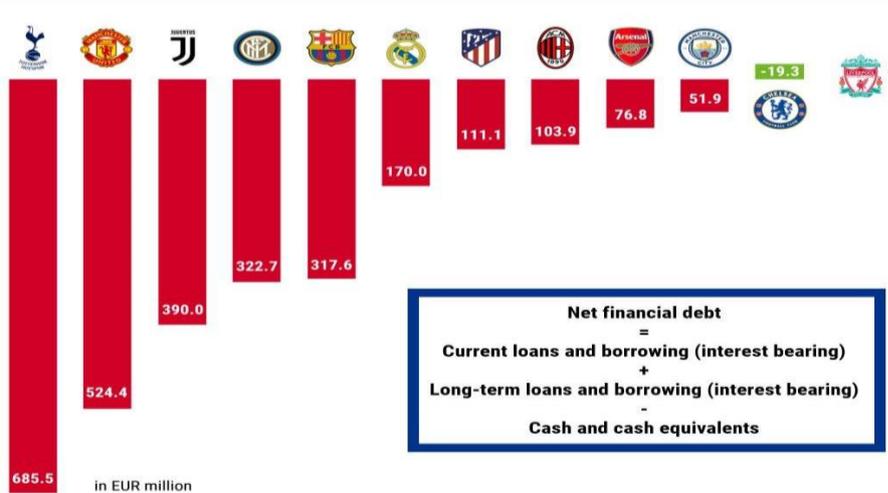
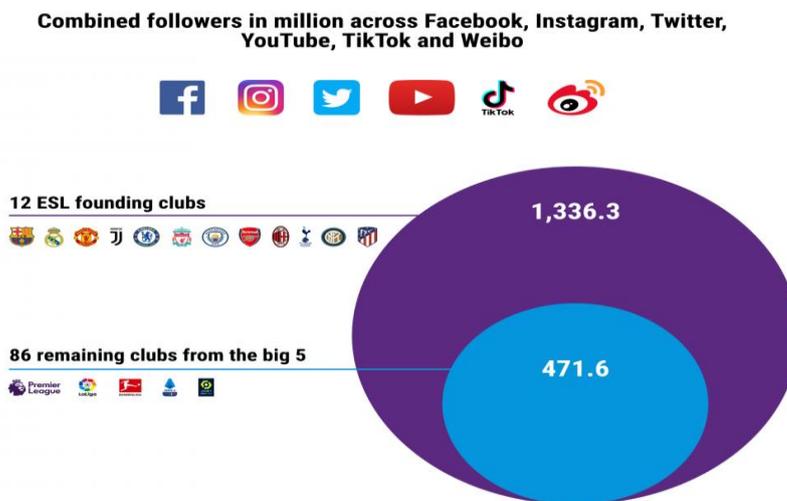Source: KPMG football benchmark (2021)

*Liverpool have not disclosed their financial for 19/20

The main partner of the ESL is JP Morgan a global leader in financial services offering solutions to the world's most important corporations, governments, and institutions (JP Morgan, 2021). JP Morgan will finance with 3.5 billion euros the start of the ESL through a credit line guaranteed by the future revenues of the new competition while offering the European football system a share of mutuality higher than the currently made available by Uefa (calcio e finanza, 2021). Moreover, JP Morgan promises to pour into the system a minimum amount of at least 10 billion euros over a time horizon of 23 years: 434.78 million euros a year, against the 161 million redistributed annually by UEFA (calcio e finanza, 2021). Under these conditions, the twelve funding clubs can generate unprecedented revenues and recover from their massive financial debts.

● During an interview at Goal.com, the club owner of Real Madrid Florentino Perez argued that the current Champions League is losing interest among fans all over the world due to poor quality

matches, especially in the group phase of the tournament (Goal, 2021). According to Perez, the solution is to propose mid-week top matches that fans can enjoy. The Spanish owner highlighted that the attraction of football is given by the matches between the top clubs as their global popularity is far larger than smaller European clubs. Moreover, proposing more challenging matches is the only way to generate substantial income from television rights. Figure 10 below supports the argument of Florentino Perez regarding the huge popularity of the twelve ESL founding clubs.

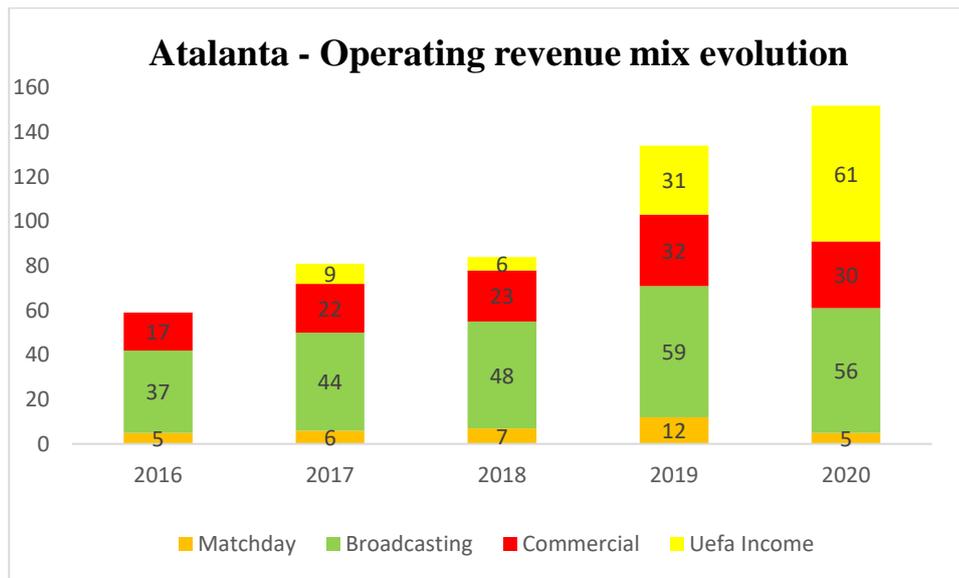Figure 10: ESL participants: popularity on social media channels

Source: KPMG football benchmark, (2021)

Combining followers across six social networks the twelve founding clubs reach 1.33 billion followers. By contrast, the eighty-six remaining clubs from the top 5 European leagues only have 471.6 million followers. Fostering competition among the top twelve European clubs might create a more valuable European football product although less followed teams will not have any chances to increase their visibility in the European football landscape. Therefore, it is worth exploring what damaged the ESL might cause to smaller clubs and the potential negative impact on domestic leagues. As we analysed in previous sections Italian teams located in more populous provinces have greater chances to finish in the first seven places of the Serie A than teams located in less peripheral areas. It was assessed that the possible reason lies in the obstacles in generating large revenues from television rights and sponsorship. Moreover, the unfavourable location in attracting highly skilled foreign players might also play a role. In the current system, it seems that small clubs are excluded from the competition. However, football shows notable stories of small teams that achieved greater

success despite limited economic resources. In this regard, Atalanta football club is a remarkable example. The team from Bergamo in Northern Italy grew from being a mid-size club into becoming a football elite in the past five years (football benchmark, 2021). As figure 11 shows, the revenues of Atalanta increased remarkably from 59 million in 2016 to 152 million in 2020.

Figure 11: Atalanta operating revenues mix evolution

Atalanta - Operating revenue mix evolution

Year	Matchday	Broadcasting	Commercial	Uefa Income
2016	5	37	17	
2017	6	44	22	9
2018	7	48	23	6
2019	12	59	32	31
2020	5	56	30	61

Source: football benchmark, (2021)

The income rise of Atalanta is mainly due to the participation in international competitions such as the Europa League and the Champions League which generated 61 million in 2020 (football benchmark, 2021) account for a 40% share in the club's overall income. The qualification at the European tournaments for Atalanta derived from a 7th place and two consecutive 3rd places in the Serie A. In 2020 Atalanta only stopped its journey in the Uefa Champions League at the quarter of final against Paris Saint Germain and in 2021 they were beaten in the late sixteen by Real Madrid. Despite not being a top club, Atalanta overperformed in the last five years competing strongly with huge football teams both in the Serie A and in the Champions League. Similarly, Leicester City in the Premier League has generated 92.5£ million in 2016/2017 for having reached the quarter of final of the Champions League (business-live.co.uk, 2021). However, as already argued, with the introduction of the Super League only twelve teams will play permanently in the competition by excluding the leftover clubs from the tournament. As a result, clubs like Atalanta and Leicester City will no longer be able to generate income from European games losing a large share of revenues. The distribution of broadcasting revenues might also experience significant changes after the

introduction of the Super League. As already assessed in previous sections the income distribution from television rights is largely unequal in Serie A as criteria like catchment area strongly benefit teams in large urban centers. The Super League will challenge the primacy of the national leagues which risk becoming secondary competitions with less appeal. Football teams might be tempted to focus their performances on the Super League due to the strong incentives related to it by devaluating the respective domestic competitions. As a consequence, domestic televisions revenues might decline, threatening the smaller clubs that already receive a small share of broadcasting income (forbes, 2021; abc.net.au, 2021). Therefore, due to top European clubs will monopolize the European tournament and the potential decline of domestic television revenues, the Super League could obstacle small-medium teams to reduce the gap with big traditional football clubs and it will contribute to increasing the already existing inequalities in professional football. To better understand the potential negative impact of the Super League on the Italian profession football we can look back at the results of the regression analysis. The variable average attendance showed that teams with a modest number of supporters at the stadium have lower chances to finish between one and seven than clubs with a greater stadium's support. As the Super League will likely capture the attention of most fans, domestic matches will likely experience a decline in stadium attendance by hitting especially small clubs that already struggle to attract fans at the stadium. Moreover, the variable foreign players' expenditures is a predictor of success in the Italian football. Top clubs might use the large income they receive from JP Morgan to increment the already large expenditures in acquiring the best footballers in the international market by increasing even more the chances to finish in the first seven places. However, if top clubs face economic constraints the football system might lose appeal. The whole system today is still financed by the revenues generated thanks to the big clubs and their large fan base. Even a model team like Atalanta would struggle without the income produced by top clubs. Based on an analysis carried out by Calcio e Finanza (2021) on the last three financial statements of Atalanta controlled by the Percassi family, it emerges that the market transactions carried out over time with Juventus, Inter, and Milan (the three Italian founding clubs of the Super League) have allowed the Bergamo club to close the last three years in profit. Atalanta is well-known for its ability to generate revenues from player disposal which means buying young talented footballers at a relatively low price and after few years selling them to top clubs at double or triple the value. These market transactions with bigger teams allow Atalanta to strengthen its financial statement each year. However, top teams might reduce their expenditures in buying players to clubs like Atalanta if their financial losses persist. The money that JP Morgan promised to flow into the football industry could support top clubs to recover from their debts, and then increasing market transactions to small teams. Therefore, it is relevant to highlight

that although the Super League might hit small clubs there are also potential benefits to assess as the stability of big traditional teams is key to preserve a valuable football product.

11. Conclusion and discussion

Building on Jones et al. (2019) this thesis aimed to establish a link between location and the performance of the Italian professional football teams. Employing a panel dataset of 23 teams over 11 seasons it was found that controlling for different determinants of football success teams in larger conurbations show higher odds ratio of finishing in the first seven places of the Serie A. The analysis revealed that in Serie A the distribution criteria of revenues from televisions play a significant role in explaining the economic inequalities and performances among football clubs since teams with greater catchment areas generate considerably more income from television rights. This finding contrasts what Jones et al. (2019) highlighted within the context of the English Premier League where a much more equal system of distribution allows small teams to receive a large share of revenues from television. To understand the role of location this thesis also looked into the income from sponsorship assessing that both local and global big brands tend to place their name on the shirt of teams located in the largest conurbations due to their greater visibility and fan base. Similar to what Jones et al. (2019) argued, specific characteristics of cities are relevant factors to attract highly skilled foreign players in Serie A as footballers with foreign nationalities are more likely to move to cosmopolitan places and international hubs feeding the success of the teams located there. However, the analysis only includes one country while it would be worth performing the same regression concerning other European football leagues. The analysis could also be improved by adding more variables. For example, Hoffman et al. (2002) assessing nations' success at the FIFA World Cup 2002 argued that GDP per capita and specific cultural traits explain performance in international competitions. It was found out that eight of the top ten countries in the FIFA ranking shared some cultural factors such as speaking a Romanic language and having a Catholic majority. The argument was that underlying cultural factors of Latin countries support the great popularity of men's football participation (Hoffman, 2002). Nevertheless, it might be challenging to use these cultural traits to predict domestic football success. The use of GIS could be also employed to better estimates the distance between clubs. The regression showed that having a local competitor in the same city does not foster performance. By using point data GIS would better show the total distance between all teams, and perhaps figure out that teams with a strong competitor in the neighbouring region perform relatively better than clubs without an interregional rival. In this way, GIS would provide a more precise measure of proximity by taking into account that a football rival is not necessarily located within the same city. Moreover, the thesis attempted to

assess the implication of the logistic regression results concerning the new European Super League. It was argued that the ESL might enlarge the inequalities in football as top European teams will generate unprecedented revenues to strengthen their position at the top. However, the economic constraints of top teams could also affect small-medium size clubs like Atalanta that likely will not be able to sell players at a high price to big clubs. Following the scepticism of fans and politicians, the idea of the Super League has temporarily vanished although it might be reintroduced later on. In case of reintroduction, it will be interesting to assess if the ESL only reinforces the already existing power of top teams or if it will also be beneficial for small-medium size clubs. Certainly, the whole football system needs to recover from massive financial debts which have been further amplified by the current pandemic, and finding a sustainable solution to guarantee a competitive balance among leagues will be the next challenge for the coming years.

References

Abc.net.au. (2021). *Angry broadcasters condemn breakaway Super League plan*. [online] Available at: <https://www.abc.net.au/news/2021-04-20/angry-broadcasters-condemn-breakaway-super-league-plan/100080702> [Accessed 4 August 2021].

Amis, J., Slack, T. and Berrett, T. (1999). Sport Sponsorship As Distinctive Competence. *European Journal Of Marketing*, 33(3/4), pp. 250–272.

Angotti, T. (2012). The Urban–rural Divide and Food Sovereignty in India. *Journal of Developing Societies*, 28(4), pp. 379–402.

Audretsch, D. B. and Feldman, M. P. (1996). R&d Spillovers and the Geography of Innovation and Production. *The American Economic Review*, 86(3), pp. 630–640.

Audretsch, D. B. and Keilbach, M. (2007). The Theory of Knowledge Spillover Entrepreneurship. *Journal of Management Studies*, 44(7), pp. 1242–1254.

Autant-Bernard, C., Guironnet, J.-P. and Massard, N. (2011). Agglomeration and Social Return to R&d: Evidence from French Plant Productivity Changes. *International Journal of Production Economics*, 132(1), pp. 34–42.

Baltagi, B. H. (2021). Econometric analysis of panel data. 6th edn. Cham: Springer (Springer Texts in Business and Economics).

Bentivogli, C. and Mirenda, L. (2017). Foreign Ownership and Performance: Evidence from Italian Firms. *International journal of the economics of business*, 24(3), pp. 251–273.

Bloxsome, E., Voges, K., and Pope, N. (2011). Sport Sponsorship: Appeal and Risks.

Bonham, S. (2009). Arsenal's Robin Van Persie to soothe ankle pains with placenta massage. The Guardian.

Brookfield, J. (2008). Firm Clustering and Specialization: A Study of Taiwan's Machine Tool Industry. *Small Business Economics*, 30(4), pp. 405–422.

Bull, M. and Whittam, G. (2021). Sustainable Value Creation? Entrepreneurial Orientations in the Football Industry. *International journal of entrepreneurial behaviour & research*, 27(1), pp. 27–44.

Buraimo, B., Forrest, D. and Simmons, R. (2007). Freedom of Entry, Market Size, and Competitive Outcome: Evidence from English Soccer. *Southern Economic Journal*, 74(1), pp. 204–213.

Business-live.co.uk. (2021). *The impact European Super League could have on other clubs*. [online] Available at: <https://www.business-live.co.uk/retail-consumer/huge-impact-european-super-league-20417810> [Accessed 4 August 2021].

Cainelli, G., and Iacobucci, D. (2012). Agglomeration, related variety, and vertical integration. *Economic Geography*, 88, 255–277.

Calcio e Finanza. (2018). *L'audience di Russia 2018: oltre 3,5 miliardi di telespettatori per i Mondiali | Calcio e Finanza*. [online] Available at: <https://www.calcioefinanza.it/2018/12/21/laudience-di-russia-2018-oltre-35-miliardi-di-telespettatori-per-mondiali/> [Accessed 30 June 2021].

Calcio e Finanza. (2020). *Dalla Juve alla Lazio: i ricavi da sponsor di maglia | Calcio e Finanza*. [online] Available at: <https://www.calcioefinanza.it/2020/11/24/classifica-ricavi-sponsor-di-maglia-juve-milan-inter/> [Accessed 3 August 2021].

Calcio e Finanza. (2020). *Sassuolo, Mapei e lo sponsor da 150 milioni | Calcio e Finanza*. [online] Available at: <https://www.calcioefinanza.it/2020/11/24/ricavi-sassuolo-mapei-sponsor/> [Accessed 3 August 2021].

Calcio e Finanza. (2021). *Dopo la Superlega: il calcio alla sfida della sostenibilità | Calcio e Finanza*. [online] Available at: <https://www.calcioefinanza.it/2021/05/01/dopo-la-superlega-il-calcio-alla-sfida-della-sostenibilita/> [Accessed 4 August 2021].

Calcio News 24. (2018). *Perché il monte ingaggi della Serie A è sensibilmente aumentato*. [online] Available at: <https://www.calcionews24.com/monte-ingaggi-serie-a-2018-2019/> [Accessed 3 August 2021].

Castellanos P.G., Jesús A. D. C, and José M. S. (2007). The economic geography of football success: empirical evidence from european cities. *Rivista di Diritto ed Economia dello Sport, Centro di diritto e business dello Sport*, vol. 3(2), pages 67-88

Chanavat, N., Martinent, G. and Ferrand, A. (2009). Sponsor and Sponsees Interactions: Effects on Consumers' Perceptions of Brand Image, Brand Attachment, and Purchasing Intention. *Journal of Sport Management*, 23(5), pp. 644–670.

City Monitor. (2016). *The London effect: Why the capital's football teams are increasingly dominating the Premier League - City Monitor*. [online] Available at: <https://citymonitor.ai/horizons/london-effect-why-capitals-football-teams-are-increasingly-dominating-premier-league-1752> [Accessed 3 August 2021].

Combes, P.P. and Duranton, G. (2006). Labour Pooling, Labour Poaching, and Spatial Clustering. *Regional Science and Urban Economics*, 36(1), pp. 1–28.

Conn, D. (2019). Premier league finances: The full club-by-club breakdown and verdict. The Guardian.

Corriere. (2018) *Cosa fa a Torino nel tempo libero CR7? Ristoranti, gite: ecco i suoi luoghi segreti*. [online] Corriere della Sera. Available at: <https://www.corriere.it/sport/cards/che-cosa-fa-cristiano-ronaldo-torino-tempo-libero-palestra-ristoranti-pizzerie-gite-tutti-segreti-cr7-sabaudo/pizzeria.shtml> [Accessed 3 August 2021].

Della Torre, E., Giangreco, A., Legeais, W., Vakkayil, J. (2018). Do Italians Really Do It Better? Evidence of Migrant Pay Disparities in the Top Italian Football League. *European Management Review*, 15(1), pp. 121–136.

Deloitte, (2019). [online] Available at: <https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/sports-consulting/lu-sponsoring-sports-today-digital-age.pdf> [Accessed 3 August 2021].

Deloitte Italia, (2020). *Annual Review Football Finance 2020 | Deloitte Italy | Finance*. [online] Available at: <https://www2.deloitte.com/it/it/pages/finance/articles/annual-review-football-finance-2020---deloitte-italy---finance.html> [Accessed 30 June 2021].

Desso Sports Systems. (2015). Reference locations [Online]. Retrieved from http://references.dessosports.com.

Dobson, S. and Goddard, J. A. (2011) *The economics of football*. 2nd edn. Cambridge: Cambridge University Press.

Doran, J., and Jordan, D. (2018). The effect of geographical proximity and rivalry on performance: Evidence from the English football league. *Regional Studies*, 52, 1559–1569.

Driessen G.A and Sheffrin S.M. (2017). Agglomeration, Tax Differentials, and the Mobility of Professional Athletes. *Public Finance Review*, 45(2), pp. 283–302.

Ec.europa.eu. (2018). *Archive: Urban-rural typology - Statistics Explained*. [online] Available at: <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Urban-rural_typology> [Accessed 2 August 2021].

Ec.europa.eu. (2021). *NUTS Maps - NUTS - Nomenclature of territorial units for statistics - Eurostat*. [online] Available at: <https://ec.europa.eu/eurostat/web/nuts/nuts-maps> [Accessed 2 August 2021].

Echeverri-Carroll, E. L. and Ayala, S. G. (2011). Urban Wages: Does City Size Matter? *Urban Studies*, 48(2), pp. 253–271.

Ellison, G., Glaeser, E. L. and Kerr, W. R. (2010). What Causes Industry Agglomeration? Evidence from Coagglomeration Patterns. *The American Economic Review*, 100(3), pp. 1195–1213.

ESPN. (2018). *Football hot spots: Where do players come from?* [online] ESPN.com. Available at: <https://www.espn.com/soccer/blog/marcottis-musings/62/post/3501961/where-are-players-produced-in-the-countries-of-europes-biggest-leagues> [Accessed 3 August 2021].

Fallick, B., Fleischman, C. A. and Rebitzer, J. B. (2006). Job-Hopping in Silicon Valley: Some Evidence Concerning the Microfoundations of a High-Technology Cluster. *The Review of Economics and Statistics*, 88(3), pp. 472–481.

Feldman M.P., Audretsch D.B. (1999). Innovation in cities: science-based diversity, specialization and localized competition. *European Economic Review* 43: 409–429.

Florida, R. L. (2002). The rise of the creative class: And how it's transforming work, leisure, community and everyday life. New York, NY: Basic Books.

Footballbenchmark.com. (2017). *Football Benchmark - Broadcasting revenue distribution: Fine-tuning the balance*. [online] Available at: <https://www.footballbenchmark.com/library/broadcasting_revenue_distribution> [Accessed 2 August 2021].

Footballbenchmark.com. (2020). *Football Benchmark - Foreign investors in European football — can Italy become the next preferred target?* [online] Available at: <https://www.footballbenchmark.com/library/foreign_investors_in_european_football_can_italy_become_the_next_preferred_target> [Accessed 4 August 2021].

Footballbenchmark.com. (2020). *Football Benchmark - Key motivations behind buying a professional football club*. [online] Available at: <https://www.footballbenchmark.com/library/key_motivations_behind_buying_a_professional_football_clubs> [Accessed 4 August 2021].

Footballbenchmark.com. (2020). *Football Benchmark - The changing face of football sponsorship – key trends*. [online] Available at: <https://footballbenchmark.com/library/the_changing_face_of_football_sponsorship_key_trends> [Accessed 3 August 2021].

Footballbenchmark.com. (2021). *Football Benchmark - Atalanta's rise to football's elite*. [online] Available at: <https://footballbenchmark.com/library/atalanta_s_rise_to_football_s_elite> [Accessed 4 August 2021].

Footballbenchmark.com. (2021). *Football Benchmark - Road to the European Super League: the revolution of football's power clubs*. [online] Available at: <https://footballbenchmark.com/library/road_to_the_european_super_league_the_revolution_of_football_s_power_clubs> [Accessed 4 August 2021].

Footballbenchmark.com. (2021). *Football Benchmark - What is next? – Football after Super League turmoil*. [online] Available at: <https://footballbenchmark.com/library/what_is_next_football_after_super_league_turmoil> [Accessed 4 August 2021].

Forbes. (2021). *Will Streaming Help European Super League Deliver Its Soccer Revolution?* [online] Forbes. Available at: <https://www.forbes.com/sites/stevemccaskill/2021/04/20/will-streaming-help-european-super-league-deliver-its-soccer-revolution/> [Accessed 4 August 2021].

Frick, B. (2007). The Football Players' Labor Market: Empirical Evidence from the Major European Leagues. *Scottish Journal of Political Economy*, 54(3), pp. 422–446.

Fujita, M., Krugman, P. R. and Venables, A. J. (2001). *The spatial economy: cities, regions, and international trade*. Cambridge, Mass.: MIT Press.

Glaeser, E. and Kerr, W. (2009). Local Industrial Conditions and Entrepreneurship: How Much of the Spatial Distribution Can We Explain? *Journal of Economics and Management Strategy*, 18(3), pp. 623–663.

Goal.com. (2021). *Florentino Perez sulla Superlega: "La soluzione che salverà il calcio" | Goal.com*. [online] Available at: <https://www.goal.com/it/notizie/florentino-perez-sulla-superlega-la-soluzione-alla-pessima/1tzmxhfwp0emd1na9yrnny1nh8> [Accessed 4 August 2021].

Gordon, I. R., & McCann, P. (2005). Innovation, agglomeration, and regional development. Journal of Economic Geography, 5, 523–543.

Helsley, R. W. and Strange, W. C. (2007). Agglomeration, Opportunism, and the Organization of Production. *Journal of Urban Economics*, 62(1), pp. 55–75.

Henry, N., and Pinch, S. (2001). Neo-Marshallian nodes, institutional thickness, and Britain's Motor sport valley: Thick or thin? Environment and Planning A, 33, 1169–1184.

Hoffmann, R., Ging, L. C. and Ramasamy, B. (2002). The Socio-Economic Determinants of International Soccer Performance, *Journal of Applied Economics*, 5(2), pp. 253–272.

Istat.it. (2021). *Popolazione residente ricostruita - Anni 2002-2019*. [online] Available at: <http://dati.istat.it/Index.aspx?DataSetCode=DCIS_RICPOPRES2011#> [Accessed 2 August 2021].

Jacobs J. (1969). The economy of cities. Random House, New York.

Jofre-Monseny, J., Marín-López, R. and Viladecans-Marsal, E. (2011). The Mechanisms of Agglomeration: Evidence from the Effect of Inter-Industry Relations on the Location of New Firms. *Journal of Urban Economics*, 70(2-3), pp. 61–74.

Jones., C. and Jordan., D. (2019). Agglomeration, urbanization and competitive performance: the natural experiment of English football, *Regional Studies*, Regional Science, 6:1, 421-438.

JP Morgan.com. (2021). *J.P. Morgan Italy | About us*. [online] Available at: <https://www.jpmorgan.com/IT/en/about-us> [Accessed 4 August 2021].

Kekezi, O. and Klaesson, J. (2020). Agglomeration and Innovation of Knowledge Intensive Business Services. *Industry and Innovation*, 27(5), pp. 538–561.

Kesenne, S. (2007). The Peculiar International Economics of Professional Football in Europe. *Scottish Journal of Political Economy*, 54(3), pp. 388–399.

Kim, S. (1990). Labor Heterogeneity, Wage Bargaining, and Agglomeration Economies. *Journal of Urban Economics*, 28(2), pp. 160–177.

Kloosterman, R. C. (2008). Walls and Bridges: Knowledge Spillover between 'superdutch' Architectural Firms. *Journal of Economic Geography*, 8(4), pp. 545–563.

Konishi, H. (2000). Formation of hub cities: Transportation cost advantage and population agglomeration. *Journal of Urban Economics*, 48, 1–28.

Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, 99, 483–49.

Krugman, P. (1998). What's New About the New Economic Geography? *Oxford Review of Economic Policy*, 14(2), pp. 7–17.

La Gazzetta dello Sport - Tutto il rosa della vita (2019). *I conti dei club: una Serie A da profondo rosso. Guarda l'infografica*. [online] Available at: <https://www.gazzetta.it/Calcio/19-03-2019/i-conti-club-serie-a-scopriteli-nell-infografica-interattiva-33047994791.shtml> [Accessed 2 August 2021].

Littlewood, M., Mullen, C. and Richardson, D. (2011). Football Labour Migration: An Examination of the Player Recruitment Strategies of the 'big Five' European Football Leagues 2004-5 to 2008-9. *Soccer & Society*, 12(6), pp. 788–805.

Mallett, C. J. and Hanrahan, S. J. (2004). Elite Athletes: Why Does the 'fire' Burn so Brightly? *Psychology of Sport & Exercise*, 5(2), pp. 183–200.

Markusen, A. (1996). Sticky places in slippery space: A typology of industrial districts. *Economic Geography*, 72, 293–313.

Marshall A. (1890). Principles of economics. Macmillan, London.

Matsuyama, K. (1991). Increasing Returns, Industrialization, and Indeterminacy of Equilibrium. *The Quarterly Journal of Economics*, 106(2), pp. 617–650.

McCann, P. (2013). Modern Urban and Regional Economics, Second Edition, Oxford University Press, Oxford.

Mills, B. M., Mondello, M. and Tainsky, S. (2016). Competition in Shared Markets and Major League Baseball Broadcast Viewership. *Applied economics*, 48(32), pp. 3020–3032.

O'Brien, C. (2013). *Are International Owners Bad for Italian Football?* [online] Bleacher Report. Available at: <https://bleacherreport.com/articles/1903755-are-international-owners-hurting-the-development-of-italian-football> [Accessed 4 August 2021].

Paci, R and Usai S. (1999). Externalities, knowledge spillovers and the spatial distribution of innovation. *Geojournal* 49: 381–390.

Porter, M. E. (1998). Clusters and the new economics of competition (Vol. 76). Boston, MA: Harvard Business Review.

Rijkers, B., Söderbom Måns and Loening, J. L. (2010). A Rural-Urban Comparison of Manufacturing Enterprise Performance in Ethiopia. *World Development*, 38(9), pp. 1278–1296.

Rosenthal, S. S. and Strange, W. C. (2001). The Determinants of Agglomeration. *Journal of Urban Economics*, 50(2), pp. 191–229.

Saxenian, A. (1994). Regional Advantage: Culture and Competition in Silicon Valley and Route 128, Cambridge, MA: Harvard University Press.

Shefer D, Frenkel A. (1998). Local milieu and innovations: some empirical results. *Annals of Regional Science* 32: 185–200.

Simmons, R. (2007). Overpaid Athletes? Comparing American and European Football. *WorkingUSA*, 10(4), pp. 457–471.

Smith, A. (1776). An inquiry into the wealth of nations. London: Strahan and Cadell.

Sport Business Management, (2018). Available at: <https://www.sportbusinessmanagement.it/2018/11/gli-investimenti-sulle-maglie-di-serie-a-e-premier-league.html> [Accessed 3 August 2021].

Statista, (2020). *'Big Five' European football leagues revenue 1996-2021 | Statista*. [online] Available at: <https://www.statista.com/statistics/261218/big-five-european-soccer-leagues-revenue/> [Accessed 30 June 2021].

Statista, (2020). *Soccer World Cup titles by country 1930-2018 | Statista*. [online] Available at: <https://www.statista.com/statistics/266464/number-of-world-cup-titles-won-by-country-since-1930/> [Accessed 30 June 2021].
Transfermarkt.it. (2021). *Calcio e Mercato*. [online] Available at: <https://www.transfermarkt.it/> [Accessed 2 August 2021].

 Udineseblog.it. (2021). *Superlega, Laghrari:"Può partire tra cinque mesi" | Udinese Blog*. [online] Available at: <https://www.udineseblog.it/articolo/internazionali/superlega,-laghraripuo-partire-tra-cinque-mesi/28/240795> [Accessed 4 August 2021].

Vallerand, R., and Losier, G. (1999). An integrative analysis of intrinsic and extrinsic motivation in sport, *Journal of Applied Sport Psychology*. 11:1, 142-169.

Van der Panne, G. (2004). Agglomeration Externalities: Marshall Versus Jacobs. *Journal of Evolutionary Economics*, 14(5), pp. 593–604.

Van Oort, F. (2002). Innovation and agglomeration economies in the Netherlands. *Journal of Economic and Social Geography* 93(3): 344–360.

Walker, B. (1986). The Demand for Professional League Football and the Success of Football League Teams: Some City Size Effects. *Urban Studies*, 23(3), pp. 209–219.

Wheaton, W. C. and Lewis, M. J. (2002). Urban Wages and Labour Market Agglomeration. *Journal of Urban Economics*, 51(3), pp. 542–562.

Worldfootball.net. (2021). *worldfootball.net*. [online] Available at: <https://www.worldfootball.net> [Accessed 2 August 2021].

Appendix A.1

Table 4. Serie A average finishing position 2009/2020 and urban scale

Club	Average finishing position, 2009/2010-2019/2020	Urban area Nuts 3 (Province)	Avg Population of the province,2009/2020 (thousands)
Inter	4.72	Milano	3166
Milan	5.18	Milano	3166
Juventus	2.09	Torino	2265
Torino	14.54	Torino	2265
Roma	4	Roma	4178
Lazio	6.36	Roma	4178
Genoa	13.27	Genova	851
Sampdoria	12.72	Genova	851
Chievo	14.45	Verona	915
Fiorentina	8.36	Firenze	998
Empoli	22.9	Firenze	998
Crotone	26.9	Crotone	171
Atalanta	11.27	Bergamo	1100
Bari	26.22	Bari	1252
Bologna	14.91	Bologna	1000
Brescia	28.36	Brescia	1250
Cagliari	15.09	Cagliari	425
Cesena	25.11	Cesena	393
Napoli	3.63	Napoli	3068
Palermo	17.2	Palermo	1135
Parma	12.33	Parma	442
Sassuolo	60.1	Modena	707
Udinese	11.27	Udine	534

Appendix A.2

Table 5: Summary accounts of Serie A teams, 2017/2018 (millions)

Teams	Ownership	Stadium attendance	Television and broadcasting	Other income	Net profit of the year	Net debt
Juventus	Domestic	60.5	200.2	150	-19.2	458.1
Milan	Foreign	35.3	109.3	75.2	-126	423
Inter	Foreign	35.5	94.6	167.2	-17.8	814.7
Roma	Foreign	39	166.8	51.2	-25.7	396.2
Lazio	Domestic	12.2	85.1	31.9	37.3	84.6
Napoli	Domestic	19.1	121.6	44.7	-6.4	77.9
Fiorentina	Foreign	7.2	61.2	31.9	37.1	-12.7
Torino	Domestic	5	52.3	17.9	37.2	-23
Sampdoria	Domestic	4.6	42.3	29	9.3	42.8
Genoa	Domestic	4.7	37.5	20.5	-11.7	69.5
Bologna	Foreign	5.3	36.1	23.9	-4.8	77.3
Udinese	Domestic	6.3	38	17.4	-15.1	56
Atalanta	Domestic	7.3	53.3	40.4	26.7	46.6
Chievo	Domestic	2.1	33.7	11.7	0.3	53
Cagliari	Domestic	4.4	35.6	17.8	2.2	11
Verona	Domestic	4.1	30.9	6	-0.7	6.2
Spal	Domestic	3	15	8.2	-1.5	6.3
Benevento	Domestic	4.7	25.4	6.5	-17.1	26.1
Crotone	Domestic	4	28.3	5.8	1.1	1.2
Sassuolo	Domestic	3.8	33.7	36.9	4.1	31.4
Total		268.1	1361.9	794.1	-90.7	2646.2

Appendix A.3

Table 6: Summary accounts of English Premier League (EPL) teams, 2017/2018 (millions)

Teams	Ownership	Stadium attendance	Television and broadcasting	Other income	Net profit of the year before tax	Net debt
Arsenal	Foreign	99	180	150	70	15
Bournemouth	Foreign	5	119	9.5	-11	No stated
Brighton & Hove Albion	Domestic	19	110	11	12	Not stated
Burnley	Foreign	6	122	12	45	Not stated
Chelsea	Foreign	74	204	170	30	Not stated

Crystal palace	Hybrid	11	121	18	-36	Not stated
Everton	Foreign	16	130	43	-13	66
Huddersfield Town	Domestic	5	110	10	30	Not stated
Leicester City	Foreign	13	124	22	2	Not stated
Liverpool	Foreign	81	220	154	125	Not stated
Manchester City	Foreign	57	212	232	10	Not stated
Manchester United	Foreign	110	204	276	26	254
Newcastle United	Domestic	24	126	28	23	144
Southampton	Foreign	19	117	17	35	20
Stoke City	Domestic	8	101	18	-30	Not stated
Swansea	Hybrid	7	105	16	-3	Not stated
Tottenham	Domestic	71	148	162	139	366
Watford	Foreign	8	109	12	-32	Not stated
West Bromwich Albion	Foreign	7	102	16	-7	Not stated
West Ham United	Domestic	25	119	32	18	35
Total		665	2783	1408.5	433	