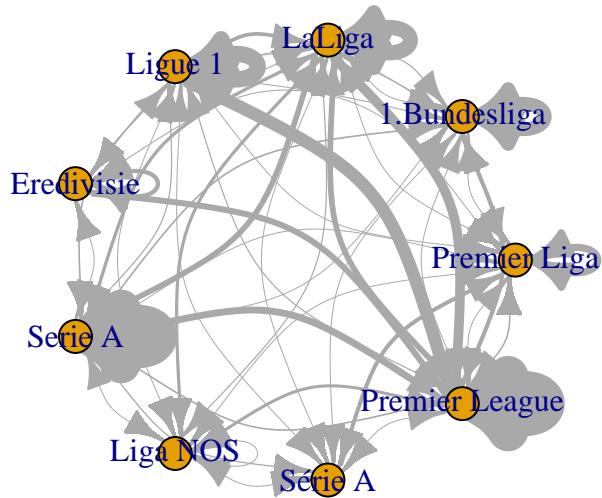


HW 5 - Network visualization

Narek Sahakyan

11/20/2019

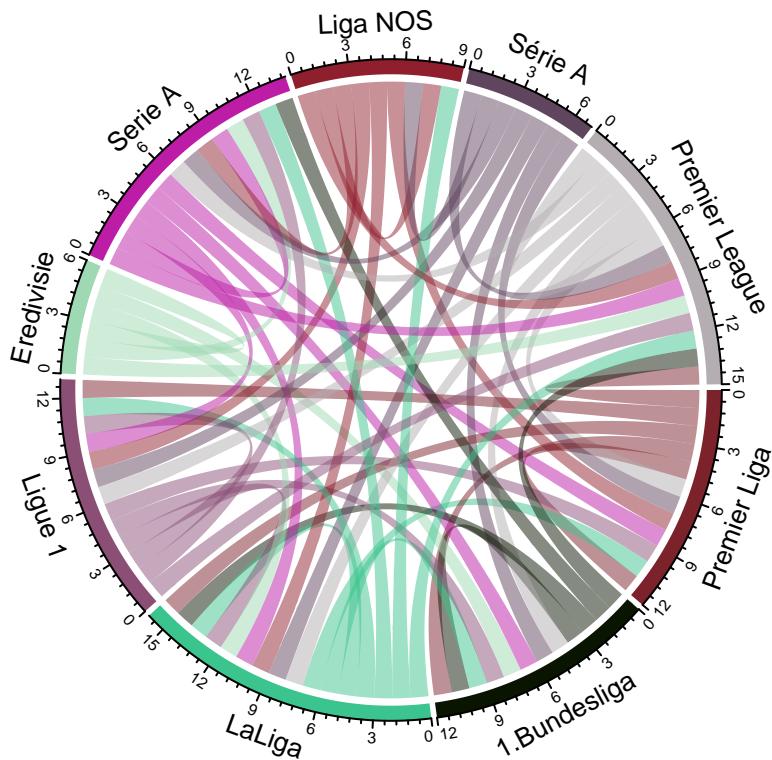
Dear Mr. Madoyan, I have decided to analyze the transfer market as a network. The data contains 4700 transfers from season 2000-2001 upto 2018-2019. As the number of teams is huge, I have decided to filter out the deals between the teams from top 10 leagues.



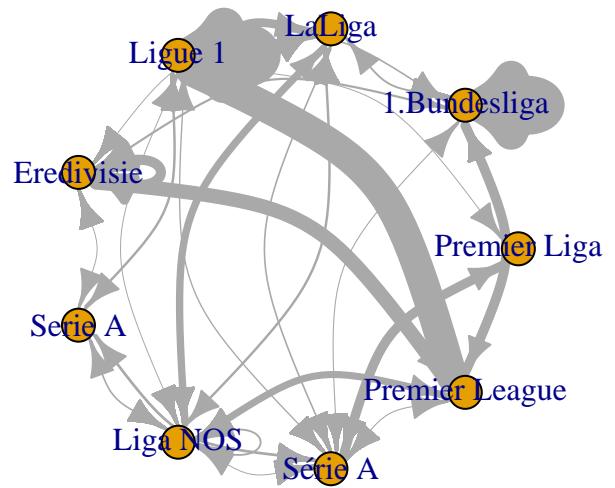
As we can see the top 5 leagues are stronlgy interconnected to each other, as most of the transfers take place between the teams from the top 5

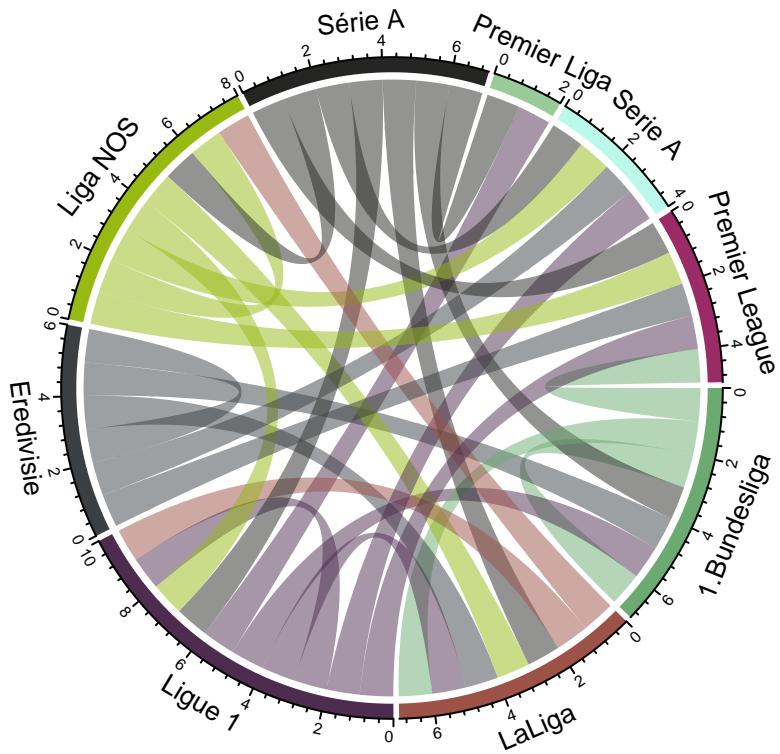
We can also see loops, meaning that many transfers take place in the same league

It is visible that Premier League teams are the most attracting as the majority of the trasnfers happen end up having a buyer club from the Premier League. The league also has high positions in terms of inside the league transfers, alongside with Seria A. Seria A and Premier League have higher number of inside league transfers in comparison with the other represenatives of the top 5(France, Spain, Germany)

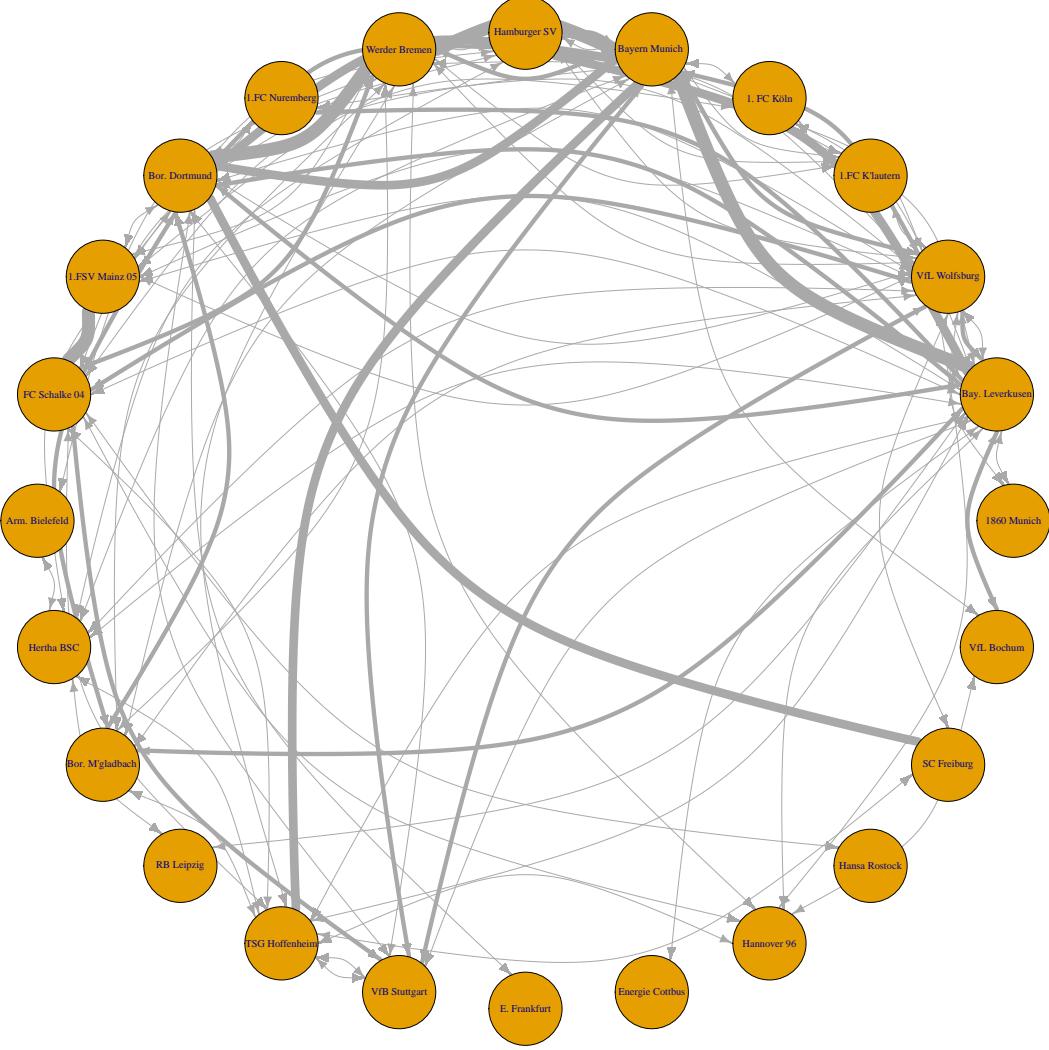


Almost the same picture is expressed in this visualization, however we can clearly notice that the teams from the non top 5 leagues such as Portugal(Liga Nos, Eredivise) mostly sell their players to top 5 leagues teams rather than buying them. Most of the incoming transfers are from non popular leagues such as the Brazilian league. I know that there are two teams in Portugues league that are experts in buying young Brazilian players and then selling them to top leagues. On the other side Ajax, one of the most famous teams of in the world in terms of its own academy. Following Ajax's principle most of the Eredivisie teams rise and sell their best players However, we can see that the Russian League has relatively higher number of incoming transfers in comparison with the noted countries. In my opinion the high salaries in Russian teams attract the players, or most of them are about to finish their career. As with the age, the abilities of the players seem to get worse, they often switch to weaker teams to gain more gaming practice or just make money

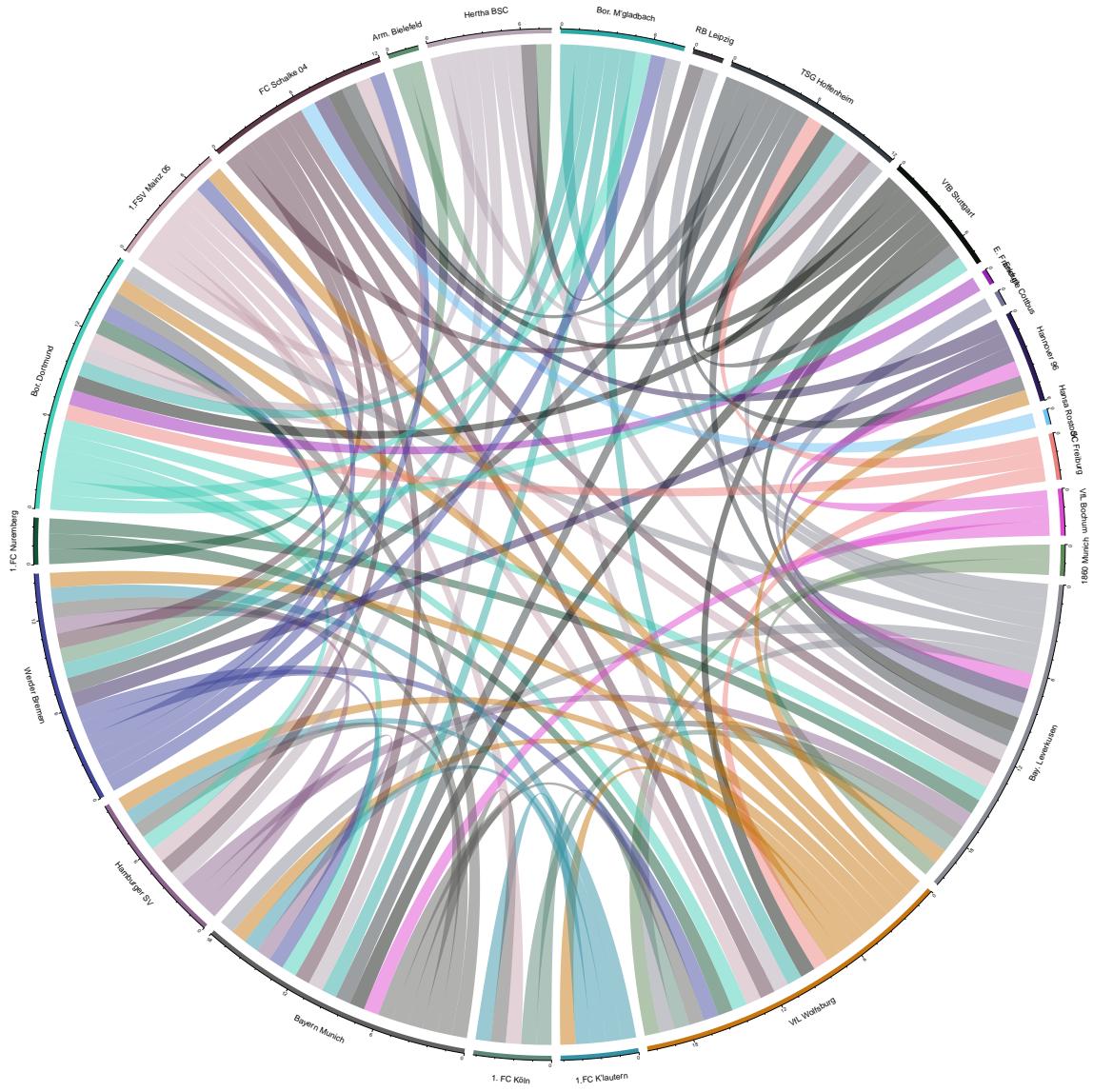




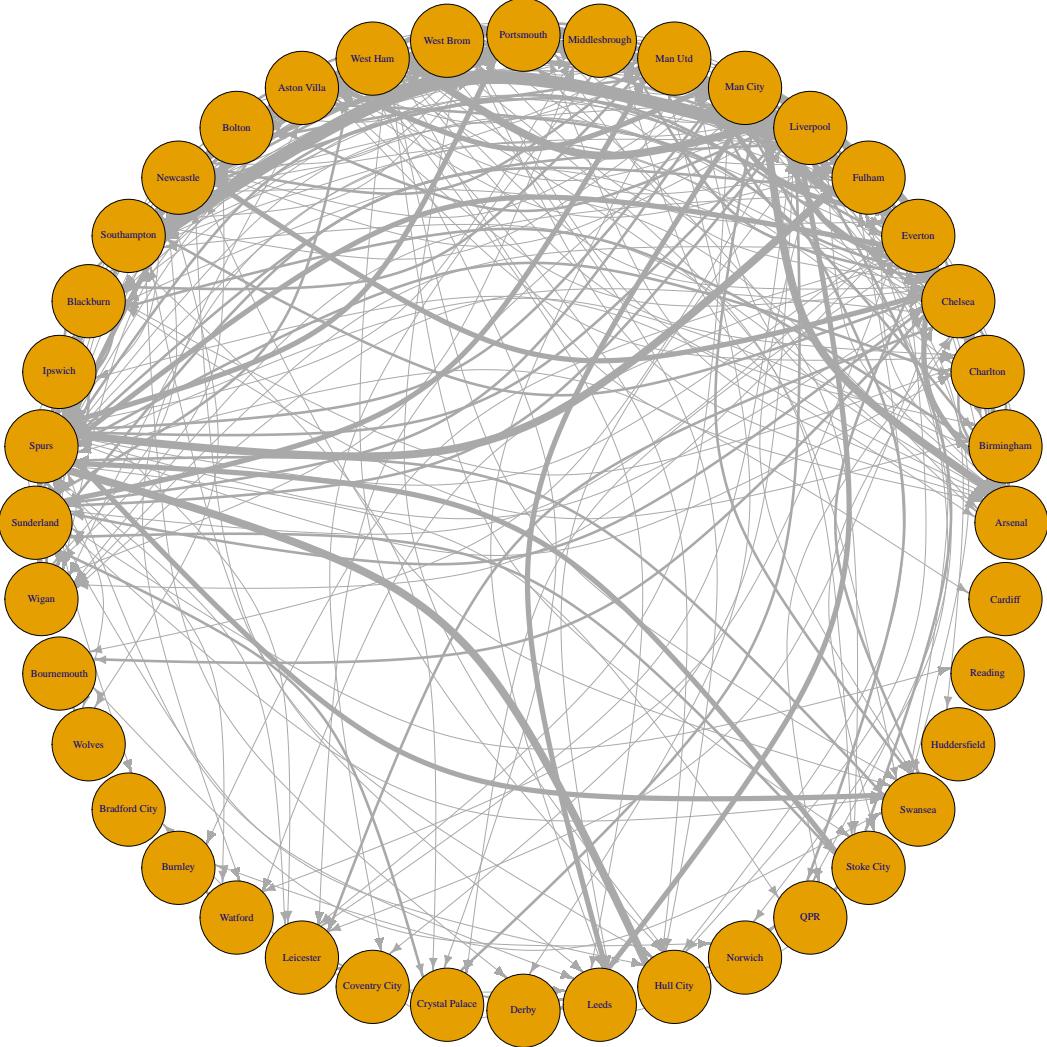
As expected the young players mostly tend to play in the top 5 leagues. We can see that the young players from the leagues in the lower part of the top 10(Russian, Netherlands) Join top teams from the top 5, We can clearly see that the Brazilian, Portuguese and Netherlands leagues are experts in selling young players, as they distribute players to almost every league. However we can see that some young players from top leagues join weaker leagues, sometimes this can be explained by loans to gain gaming practice as usually the number of incoming and outgoing between a top 5 and non-top 5 league is almost the same Now let's take the domestic transfers in Bundesliga and analyze the picture there.



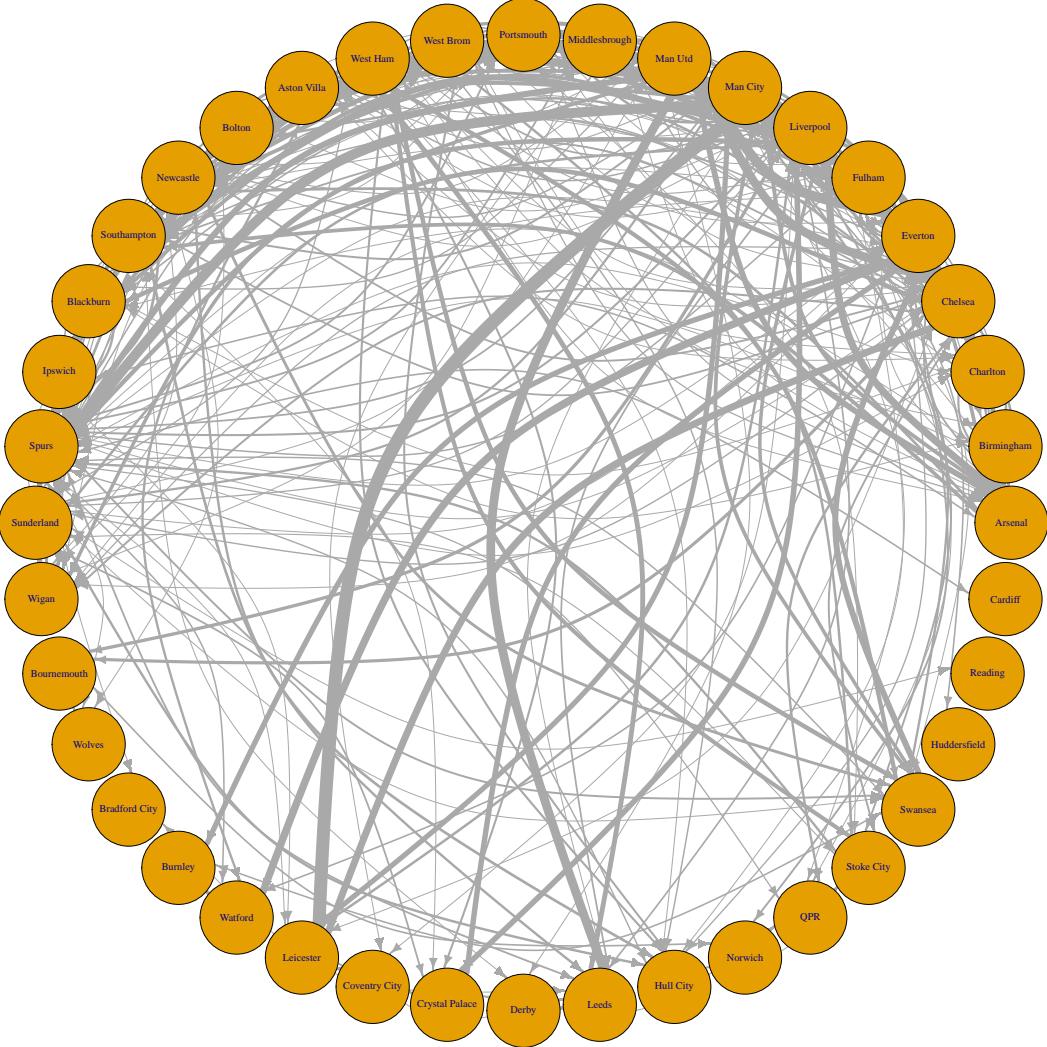
As we can see there are a few clubs, that are strongly interconnected to each other and many transfers take place among them. As in Germany, the most popular football clubs are Bayern Munich and Borussia Dortmund, almost all the players tend to play for one of them, but more often for Bayern Munich. It is interesting that Bayern Munich and Borussia Dortmund have strong connections with each other, although they are famous enemies. Almost all of the teams can be connected to Bayern Munich via common transfers.



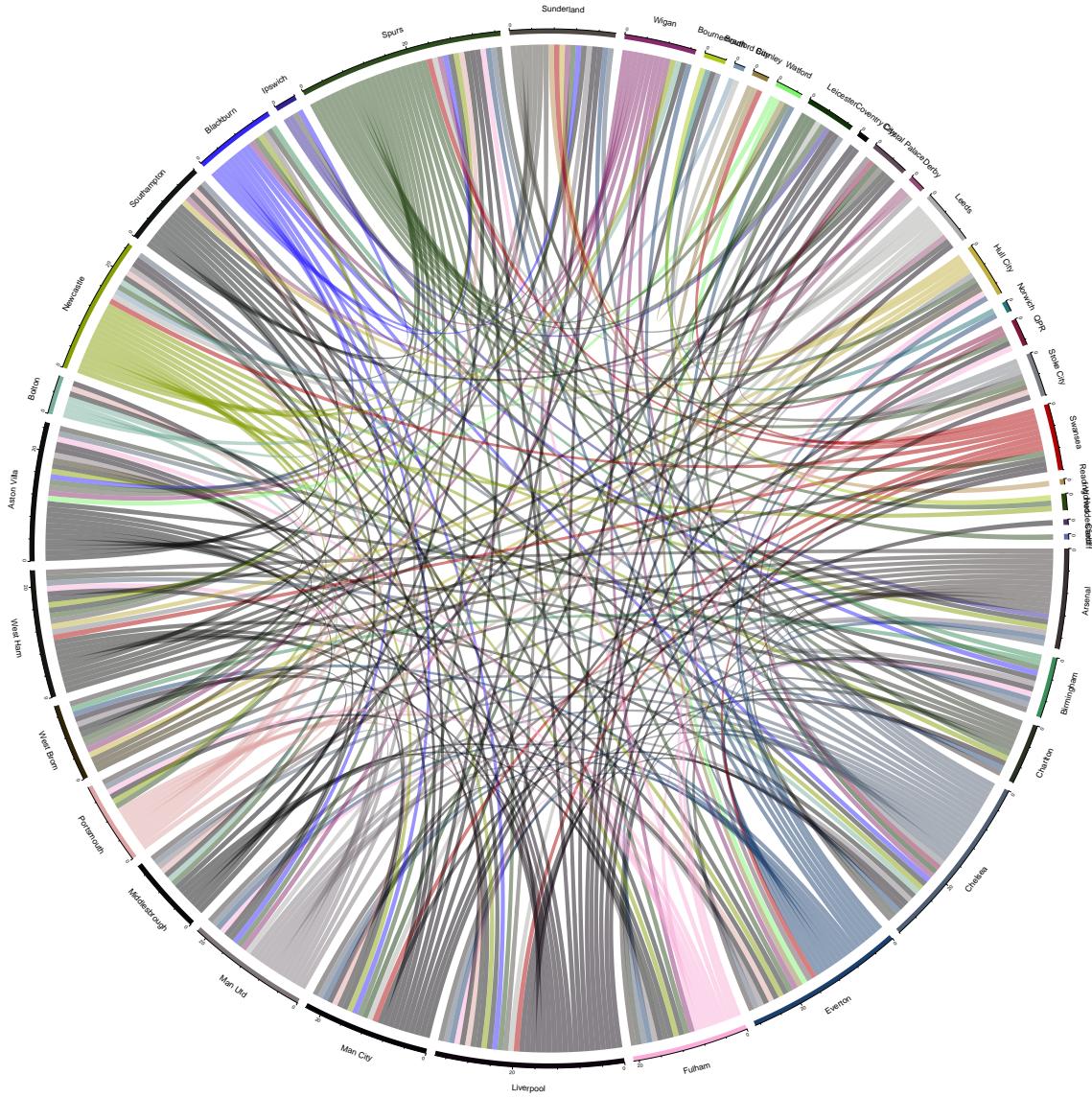
As expected, Bayern Munich and Borussia Dortmund more often buy rather than sell their players, whereas the other teams are used to sell more rather than buy. Now let's take a look at EPL domestic market.



We can see that in EPL, there are more dominating teams in the market, as most of the teams are connected to each other. It is visible that teams from the lower parts of the table usually do not make transfers among themselves, and most of the players leave these kind of teams (like Wigan, Bournemouth, Stoke City ...) to join teams from the higher standings. Now lets look at the mean transfer prices among EPL team's transfers.



As expected, the teams from the higher part of the standings, spend more on transfers rather than the ones from lower part of the table. It is interesting that teams like West Ham and Everton which usually take some places from 6th - 12th approximately, are among the top spenders of the league's domestic market.



The diagram shows, that most of the time players leave top-clubs(non top-clubs) to join non top-clubs(top-clubs). In order to gain gaming practice, which they do not get in top clubs due to their age or lost of skill(or to play for a better club where they can win more trophies, mostly young and promising players) and we can see rare amount transfers between two clubs that have the same class. For example transfer from Liverpool to Man City or transfer from Wigan to West Bromich