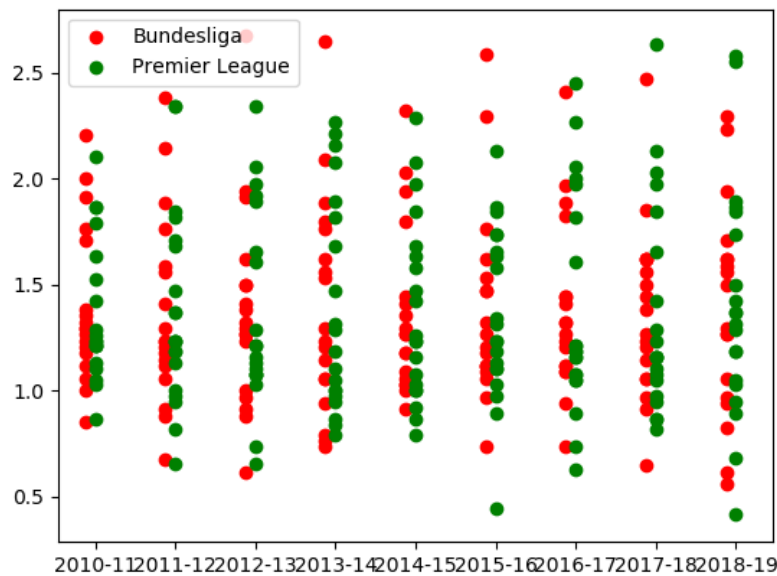# Problem Set #6

Econ 815

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For this assignment I am attempting to compare the competitive nature of two soccer leagues in Europe, the Bundesliga in Germany and the Premier League in England. While this doesn't have anything to do with my research, it is something that I've passionately argued about with strangers over the Internet (and ended up wasting a good deal of time). My approach to do so is to scrape the final league standings of seasons running from 2010-11 to 2018-19, and create a visual that shows the spread of points across the two leagues.

I used the Beautiful Soup package to obtain the league tables and stored them as dictionaries - this step is very similar to what was done in class. The structure of the webpages over time wasn't consistent so I had to account for this while looping over each year. Unfortunately, I wasn't able to find a less mechanical method and had to go through each page to see which position the league table actually occurred in with respect to other tables on the webpage. After obtaining each league table, I computed the average points earned per game since the number of games played in each of the leagues is different (34 per team per season in the Bundesliga, 38 in the Premier League). Having obtained the data in the required form, I plotted it as a scatter plot where the horizontal axis represents time and the vertical axis represents the average number of points. The points for one of the leagues is perturbed slightly to make it easier to view the plot and draw some insights. The plot is shown in Figure 1.

Figure 1: Average points across the two leagues for seasons 2010-11 through 2018-19

The insights that I draw from Figure 1 are as follows. First, the gap between the top one/two sides and the rest in the Bundesliga is often much larger than in the Premier League – this reiterates a common belief that the Bundesliga is extremely top heavy, which ends up making the league "boring". Second, in the earlier half of this decade, the average points earned by the next few teams was actually higher in the Bundesliga than the Premier League. This trend seems to be switching in favor of the Premier League as teams placed approximately 3-6 are outperforming their contemporaries in the Bundesliga. While this does seem somewhat bleak in terms of the "entertainment factor" of the Bundesliga, it is worth noting that the mass of teams in this second bracket is larger than in the Premier League. This can be seen by noting that the concentration of red points after the top 2 is much higher than that of the green points. Third, European leagues have a relegation system in which the bottom three clubs get demoted to a lower division, which can have significant impacts on a club's finances. The battle to survive relegation seems a lot tighter in the Bundesliga than in the Premier League in more recent years. The Premier League fairly consistently has the bottom two performing atrociously. On the other hand, the Bundesliga has a lot more teams battling to survive in the league.

My aim by going through this exercise was to show that although the Bundesliga is indeed very top heavy, the gap between teams ranked third through eighteenth is less than in the Premier League. The battle for qualification to continental tournaments (earned by finishing in the top six) seems to be more heavily contested in the Bundesliga. Further, the fight to stay in the league also seems a lot tighter in the Bundesliga.

While these results might seem insignificant, I think it does provide insights on how the Bundesliga could attempt to market itself better. The league can gain from promoting the fact that the battles for European qualification and relegation can be extremely tight, a factor that could help in gaining more fans. This in turn could help with larger television deals which hopefully leads to more money at German clubs' disposal.