**Introduction:**

The English premier league is arguably the biggest league in the world in which the player transfers are vital to a club’s success both on and off the pitch. These long-term investments are often investigated and signed off on by the managers of the clubs and can either make or break a club.

This report aims at analyzing the presence of homophily in transfer decisions where managers may develop preferences towards certain players. These will be evaluated on the success of the signing and the success of the manager. In order to fathom this phenomenon, we will be taking a player’s fee as his expected performance and minutes played as his actual performance. Furthermore, we will be taking a manager’s average points per game as his performance indicator.

**Assumptions:**

- Did not take into account manager resignations, only managers for the summer transfer period

**Simulation:**

To detect homophily in the network, we computed and compared both observed and simulated values of the chance that managers choose players of the same nationality. Due to homophily, managers may buy more players of the same nationality than in a random scenario. To simulate the random scenario, we have run simulations of managers randomly picking up players in each transfer period with specific candidates in the market for 1000 times, where we take the average simulated probability. For the purpose of imitating real-world situation, we have set the following constraints:

* The candidates pool is based on the market in each transfer period;
* Every player is selected, and every manager at least choose one player;
* The number of manager’s selection is not higher than the maximum number of the club’s purchase across the years from 1997 to 2020.

By comparing the observed and average simulated value for each period and also for each manager in each period, we found that observed probability that managers choose players of the same nationality is higher than the simulated in most periods (most managers too), which indicates that managers are more likely to hire players of the same nationality. For robustness, t-test and chi-squared test are brought out to examine that the observed values are significantly higher than the simulated values in the sense of their means and distributions respectively.

Since The Premier League is based in England, we consider the potential geographic effect on the manager’s selecting decision. Also because the English managers have significant impact on the overall result, we take out the English managers and explore in the subset if the previous pattern persists.

**Conclusion:**

Overall, it was found that both a players and managers performance are negatively correlated with higher homophily measures. The extent to which homophily is present differs based on the strength of the team but the effects are similar for both. Lower placed team managers experience more homophily due to less buying power

**Literature Review:**

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