

Rahul Patel  
902949215

# Effect of homegrown players on professional sports teams

## Problem Description

For my project I will be looking at sports teams across the NFL and NBA's successes over the past 5 years. While several things change that could affect performance over the course of 5 seasons (coaching staff, injuries, stadiums etc.), I wanted to look at the correlation between whether a team can experience a large amount of success while having the majority of their players come from their respective drafts. Is it better for teams to hold onto the players they draft, or for teams to pursue big-contract, high-value targets in free agency? I will look at the percentage of each team's roster that played with the same organization the season before (and how many years they have been with the team) over the course of 5 seasons. Then I will look at that team's successes over the same 5 seasons. Even though I have a sample size from two different leagues the logic behind the correlation should be the same. I will, however, separate the data between the two to discern the two leagues.

## Data Source

Information about each team's win/loss record and information about the team history of the roster is available on available on the Player's Football Focus and LandofBasketball.com. I will also use [stats.nba.com](https://www.stats.nba.com).

## Method

I plan to have three variables (2 independent and 1 dependent). My dependent will be the win/loss ratio of the team for each season. My first independent variable will be the percentage of the roster that was drafted by the respective team. My second independent variable will be the number of total years the roster has been with the organization. I will then create two different graphs that should reflect a correlation between each independent and dependent variable and attempt to form a regression line. Each data point will reflect a season for an individual team. I will also create a separate graph for each league (NBA and the NFL) and then combine them at the end.