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**Abstract:**

It is well known that the NBA is a uniquely star-driven league, arguably more so than any other major professional team sport. This puts a special emphasis on the NBA Draft Lottery, which determines via a weighted random drawing which teams will get the first, second, and third overall pick in the upcoming draft. This has also lead to accusations of **tanking** – AKA losing games on purpose at the end of the season to improve your shot at a top 3 pick.

I wanted to check if tanking is a real, league-wide trend, which lead to me asking: *If tanking for picks was celebrated as much as winning a title, who wouldn’t do it?* The answer? **Teams without a first round draft pick.** Here I will examine if there are any performance differences between bad teams with a first round pick and bad teams without.

**Background:**

The earliest form of a weighted NBA draft lottery began in 1990. Non-playoff teams (11 at the time) were given a shot at the first, second, and third overall pick in the upcoming draft based on their season win-loss record. The team with the worst win-loss record in the previous season was given an 11/66 (16.67%) chance of winning, the 2nd worst 10/66, and so on, with the best non-playoff team given a 1/66 (1.52%) chance. After the first 3 picks were determined, the remaining teams selected in reverse order of their win-loss records.

This system changed following a 1993 draft lottery that saw the Orlando Magic winning the first overall pick despite having the best non-playoff record in the league. The new weighting system, introduced in 1994, gave a significantly better shot to the worst teams (25% for the worst record) and a lesser chance for better teams (.5% for the best non-playoff record). These weights have more-or-less stayed the same since 1994, with adjustments occurring as more franchises (and thus more lottery-eligible teams) were added to the league.

**The data:**

This study examines NBA game data from the 1989-90 season (when the weighted draft lottery was introduced) through the 2014-2015 season (753 team-seasons, 30,168 games in total). Each team-season has the following attributes:

1. End of season win/loss record and rank within the overall league standings
2. Win/loss record and rank at a specified midpoint in the season (I chose 28 games remaining, as that is typically near the trade deadline and also a reasonable amount of time for a team to move around in the standings)
3. “Rank change”, which is simply rank at end of season minus rank at season midpoint. For example, a value of 5 means that a team moved up 5 spots in the standings after the midpoint.
4. “Expected wins”, which guesses a team’s record based on their record at season midpoint. If a team wins half of their games prior to the midpoint, they are expected to win half after that. From here, I also derived “actual vs. expected”, which is how a team performed vs. their expectations (e.g. a team expected to win 50 games but wins only 47 is given -3)
5. Whether or not the team has possession of their upcoming first round draft pick after the season’s trade deadline. This ONLY counts if the team traded an **unprotected** pick or swap with another team, or if they lost it due to league violations. Basically, teams on this list have **no incentive whatsoever** to tank.
6. Whether a team is a “bad team” at the season midpoint (and thus more suited for tanking). I tried a few methods to obtain this cutoff point, but I settled on teams within **6 games of a bottom 5 record.** The team with the fifth worst record has a 29.2% chance of getting a top 3 pick, and this cutoff provided enough data to analyze.