

## Analyzing NBA Draft Performance Since 2012

The draft is a crucial piece to success in the NBA. It's how bad teams rebuild and how championship teams remain at that high level. Throughout the course of history, there have been certain picks that have completely changed the trajectory of a team. Some of them are early picks, such as when the Cavaliers took LeBron James first overall in the 2003 draft, a pick that would make their win total jump from 17 wins to 35 wins the next year. Other memorable picks are late first or second round picks, where teams have found diamonds in the rough. Perhaps most notably, back to back MVP Nikola Jokic was taken by the Nuggets 41st overall in the 2014 draft, and is one of the most statistically efficient players of all time.

In this analysis, I looked at every pick from 10 drafts, 2012- 2021 (the 2022 draft was not used since players do not have a full season completed yet), and created a metric rating for each player. This was then multiplied by a pick multiplier to create a comprehensive rating for each pick in the draft. The goal was to determine overall team draft performance, and which draft picks since 2012 have been the best.

### How were ratings determined?

The metric used to rate players was Value Over Replacement Player (VORP). VORP is an estimate of how much a player contributes to their team in comparison to a replacement level player. The definition basketballreference.com gives for VORP is "A box score estimate of points per 100 TEAM possessions that a player contributed to a replacement level (-2.0) player, translated to an average team and prorated into an 82 game season." Essentially, VORP is telling us how much better this player is than an average NBA replacement player.

Other metrics I considered using were Win Shares (WS) and Box Plus/Minus (BPM) but ultimately decided to use only VORP. Win shares is a cumulative number of estimated wins contributed by a player, so players drafted in 2012 will naturally have a much higher WS since they have more games played. I could have used WS/48 to account for win shares per 48 minutes played but players with small sample sizes of minutes played often have WS/48 ratings that don't match their performance.

Players' VORP ratings were then multiplied by a multiplier to account for where the pick was selected in the draft. The multiplier used was  $\frac{\text{Pick \#}}{60}$ . A player taken in the middle of the

first round would have a multiplier of 0.25, a player taken in the middle of the second round would have a multiplier of 0.75, and the last selected player would have a multiplier of 1 etc.

### Possible Sources of Error

Before looking at the data, I want to identify a few possible instances where this data may not accurately represent the quality of a draft pick

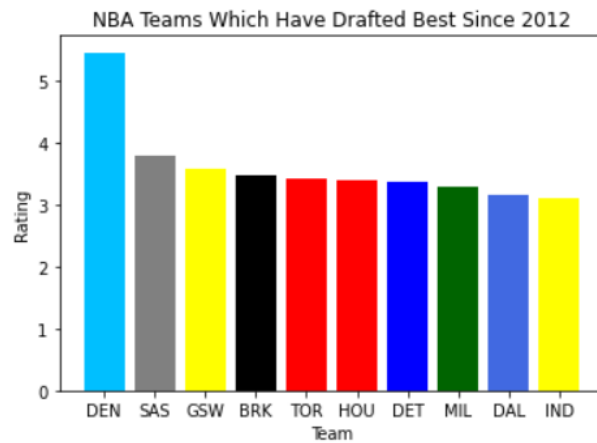
#### *1.) The pick was traded before the selection was made*

Draft night is often filled with many trades, and many times the pick is traded during the draft but before the pick is made. In this scenario, one team is essentially picking for the other team, so the team receiving the pick is telling the other team who to draft, but the player is not officially traded until trades are processed after the draft. This leads to some error in evaluating teams draft performance as the team drafting the player is not always the one making the selection

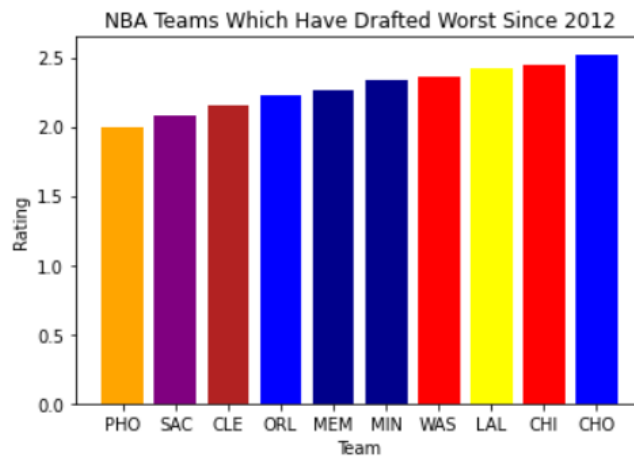
#### *2.) One draft class is weaker than another*

The ratings calculated are not rating a pick in regards to who was on the draft board, but rather in regards where in the draft the pick occurred. One pick may be rated higher even if the team is passing up on higher quality players. For example, if the 2017 draft class was much stronger than the 2018 draft class, the 3rd overall pick in 2017 may have a higher rating but be a worse pick in comparison to who was on the draft board than the 3rd overall pick in 2018.

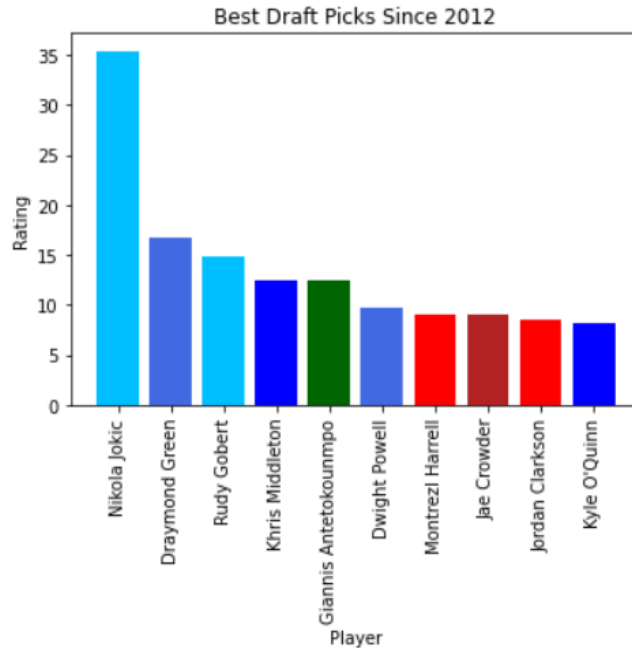
### What did the data show?



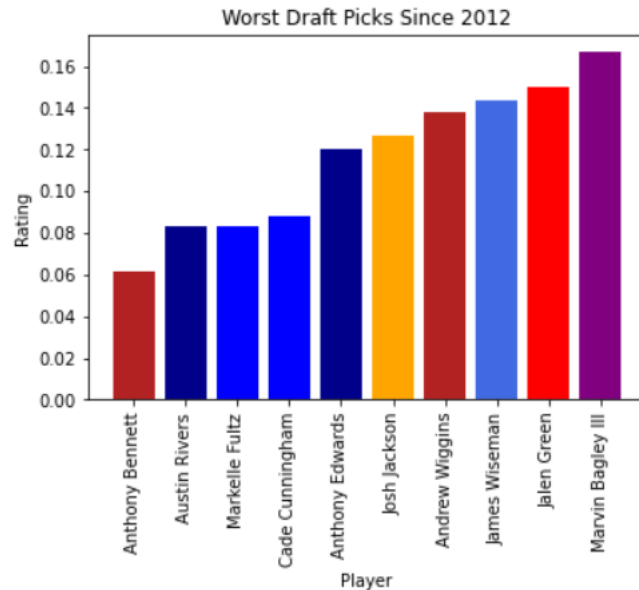
The best drafting team of the last 10 years is the Denver Nuggets. This comes as no surprise, as they selected Nikola Jokic in the second round who has the highest VORP of any player from these 10 classes. The Nuggets are followed by two teams who were consistently atop the Western Conference during this period in the Spurs and Warriors.



The worst drafting team of the last 10 years is the Phoenix Suns, this is somewhat expected, as they have missed on a number of lottery picks which kept them as a lottery team for most of the 2010s. They selected players such as Kendall Marshall, Alex Len, Dragan Bender, Josh Jackson, and Jarrett Culver in the lottery who turned out to be below average players. The Suns are followed by the Kings, Cavaliers, and Magic. The Kings have not seen the playoffs since 2006, and their poor drafting is a large part why.



When looking at the best draft picks since 2012, Nikola Jokic towers above all others. Taken at 41st overall, the 2 time MVP has one of the highest VORP ratings ever across all players. Jokic is followed by 2016-2017 Defensive Player of the Year Draymond Green who was taken 35th overall by the Warriors. 2 time MVP Giannis Antetokounmpo was rated as the fifth best pick, taken 15th overall by the Bucks in 2013. The second half of the top ten includes efficient role players who were taken in the second round such as Dwight Powell, Montrezl Harrell, Jae Crowder, Jordan Clarkson, and Kyle O'Quinn.



Anthony Bennett was a surprising pick at number one overall in the 2013 draft and his short NBA career leaves him rated as the worst draft pick of the last decade. The top 10 is partially comprised of lottery picks that did not live up to expectations like Bennett, Austin Rivers and Josh Jackson. The remaining half of the worst ten draft picks includes recent top picks who have yet to prove themselves such as Markelle Fultz, Cade Cunningham, and James Wiseman.

### How does draft performance affect overall team success?

When looking at the results of this analysis, it is evident that championship teams are indeed built through the draft. The ten best drafting teams have won a combined 7 of the last 10 championships. The only two teams from the ten worst drafting teams to win a championship since 2013 are the 2015-2016 Cavaliers, and 2019-2020 Lakers, both of which were led by LeBron James (Acquired in free agency in both cases, not through draft). Championship teams are built on draft night.

Draft data is via [basketballreference.com](https://www.basketballreference.com)

Data as of 12/15/2022