

# Updating The 40-20 Rule

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## Introduction

In sports, there are few things more entertaining than witnessing an upset or an underdog emerge victorious. Drama, tension, and the unexpected make for great theater. Many major sports have recent examples of underdogs coming out on top. The Washington Nationals winning the World Series, the St. Louis Blues winning the Stanley Cup, Leicester winning the Prem, Fairleigh Dickinson beating Purdue, etc. The NBA Playoffs have featured some underdog playoff runs, but most of them fall short of the championship. The last three NBA Finals have included three teams that were not expected to be there: the Heat in 2023, the Mavericks in 2024, and the Pacers in 2025. Unfortunately, for some reason or another, none of these teams closed out the playoffs with a ring. In a Best-of-7 series, the better team almost always wins. The NBA Playoffs are not a place for underdogs<sup>1</sup>. The 1990s were a time where many NBA dreams were crushed by the dominant Bulls dynasty. Their coach, Phil Jackson, coined a rule about NBA contenders: the 40-20 rule. It claims that true championship contenders are teams that win 40 games before losing 20 games. Given my preconceived notion about underdog stories rarely occurring in the NBA playoffs, I decided to take a deep dive into past NBA champions, evaluate the rule, and look at the exceptions.

## The Heart of A Champion

Among the 79 NBA champions, only 17 did not align with the 40-20 rule. That's 78.5% of teams, overwhelmingly in support of the rule. Bootstrapping also supported this. I tested the hypothesis that the rate of champions who meet the 40-20 criteria is equal to the rate of champions that do not meet the criteria. In 50,000 simulations, not one of the samples had a distribution that aligned with the null hypothesis. Phil Jackson's rule appears to be very on point.

As mentioned above, there are seventeen teams that did not meet the 40-20 rule who won the NBA Title. The most recent example is the 2020-21 Milwaukee Bucks. The Bucks were the first team in 15 years to win a title without meeting the rule. In fact, the Bucks were just the fourth team since 1980 to accomplish the feat.

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<sup>1</sup>Even a team like the 2011 Mavericks which is considered an underdog champion doesn't really fit the description. They were a 57-win squad with a fantastic coach centered around a Hall-of-Famer who is one of the greatest scorers ever, a Defensive Player of the Year in the paint, a Hall-of-Fame point guard, a fantastic scorer off the bench, and shooters everywhere. That Mavs team had two separate periods during the regular season in which they went 24-5 and 17-1. This team was for real.

Number of Title Winners Who Did Not Follow the 40-20 Rule

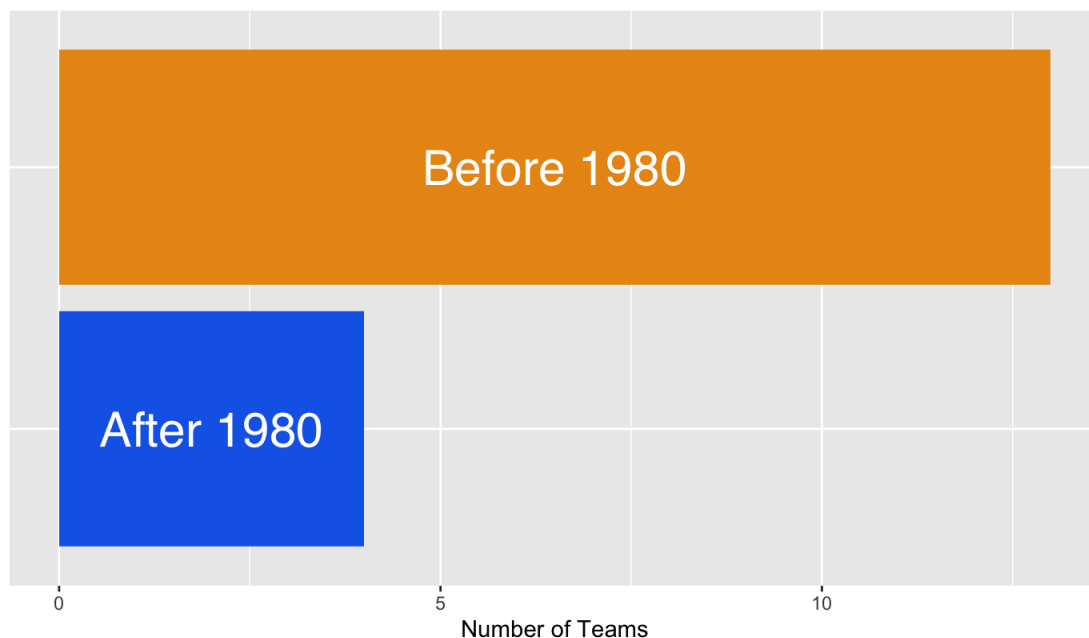


Figure 1: The Chronological Distribution of the 18 Exceptions

Decade	40s & 50s	1960s	1970s	1980s	1990s	2000s	2010s	2020s
Number of Teams	8	1	4	0	1	2	0	1

Table 1: Number of Exceptions to the Rule Grouped By Decade

Why has the phenomenon become extremely rare? I have a theory that is a more nuanced version of a popular notion. The NBA was a very different league in the mid-20th century. Although the graphic emphasizes the disparity before and after 1980, the table reveals that eight teams broke the rule in the 1940s and 1950s and nine broke the rule ever since 1960. That means eight exceptions in thirteen years versus nine exceptions in the following 66 years. There is a narrative that NBA players from the early days were "scrubs" compared to players today. Talent will shine regardless of era, but we can't kid ourselves. In the 1946-47 season, the league average  $FG\%$  was .279<sup>2</sup> and the average height was 6-foot-2<sup>3</sup>. Expansion leagues and teams certainly take some time to get off the ground and become established. Parity will be very high by default as the league slowly accumulates notoriety and then stars and elite teams will follow.

## The Storied Exceptions

Since 1980, all four exceptions have a unique story while paving their way to championship glory. The 1994-95 Rockets are the lowest seed to ever win an NBA Title, they have the third-lowest regular season winning percentage of any NBA champion, and the lowest net rating of any NBA champion—more on that later. They acquired Clyde Drexler and went under-.500 as a team after the acquisition, but they rallied through

<sup>2</sup>The league average  $FG\%$  didn't exceed 40% until the 1959-60 season

<sup>3</sup>Compared to 6-foot-7 today

the playoffs to win a title<sup>4</sup>.

The 2003-04 Pistons were another uniquely dominant team. They have the highest winning percentage and the most wins (54) among teams that did not meet the 40-20 rule. That's due to a late-season surge where Detroit entered the postseason winning 20 of their last 24 games. They played and won ugly on their way to arguably the least star-studded championship ever<sup>5</sup>.

The 2005-06 Heat were anchored by a possessed Dwyane Wade<sup>6</sup> who torched the Mavericks' perimeter defense so badly that people believe the series was rigged. They were 30-20 before an 18-3 burst propelled them to a 52-win finish.

The 2020-21 Bucks prevailed in a very strange set of circumstances. They featured one of those rosters that are "built for the playoffs," meaning a team that coasts through the regular season and flips a switch in the postseason. They played solid throughout the regular season and finished with a 3-seed. The Bucks survived a scare against Kevin Durant and the compromised Nets in the semis and then survived another scare against the Hawks while missing Giannis. Despite his knee bending the wrong way, Giannis returned in the Finals and dominated a la Wade in '06. That makes three out of four exceptions that featured superhuman individual performance (Olajuwon, Wade, and Antetokounmpo).

## 1999 Spurs

The 1999 Spurs are in a (not so) gray area; they played in a lockout-shortened season and went 37-13. That 74% winning percentage and pace would have easily pushed them to win 40 games first. The Spurs would have needed to go 2-7 in their next nine games to not qualify. If I treat the Spurs winning as a binomial variable where  $p = .74$  and  $n = 9$  games, the probability that the Spurs only win two games or less is 0.17%. That Spurs team ended the season 31-5, so the chances of losing seven of their next nine were close to impossible.

## Ratings

It's evident that Coach Jackson's rule is a strong litmus test for title contention, but there are many teams that slipped through the cracks. When discussing the 1995 Rockets, I pointed out that they won a title with the lowest ranked (11th-best) seasonal net rating in championship history. That is absurdly rare and very unlikely to happen again [2](#).

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<sup>4</sup>Such is the life when your center averages 33/10/5/3 in the postseason.

<sup>5</sup>The funny thing is it could've been over far sooner. In the second round, the Nets held a 3-2 series lead over the Pistons and had a chance to close out the series with Game 6 in New Jersey. They lost and then were defensively strangled in Game 7. Just one of the many "what could have been"s in playoff history.

<sup>6</sup>In the 2006 ECF, O'Neal and Wade combined to average 48.3 PPG on 63.5 FG% against the 64-win Pistons with the fifth-ranked defense. The Shaq-stopper was not in the office.

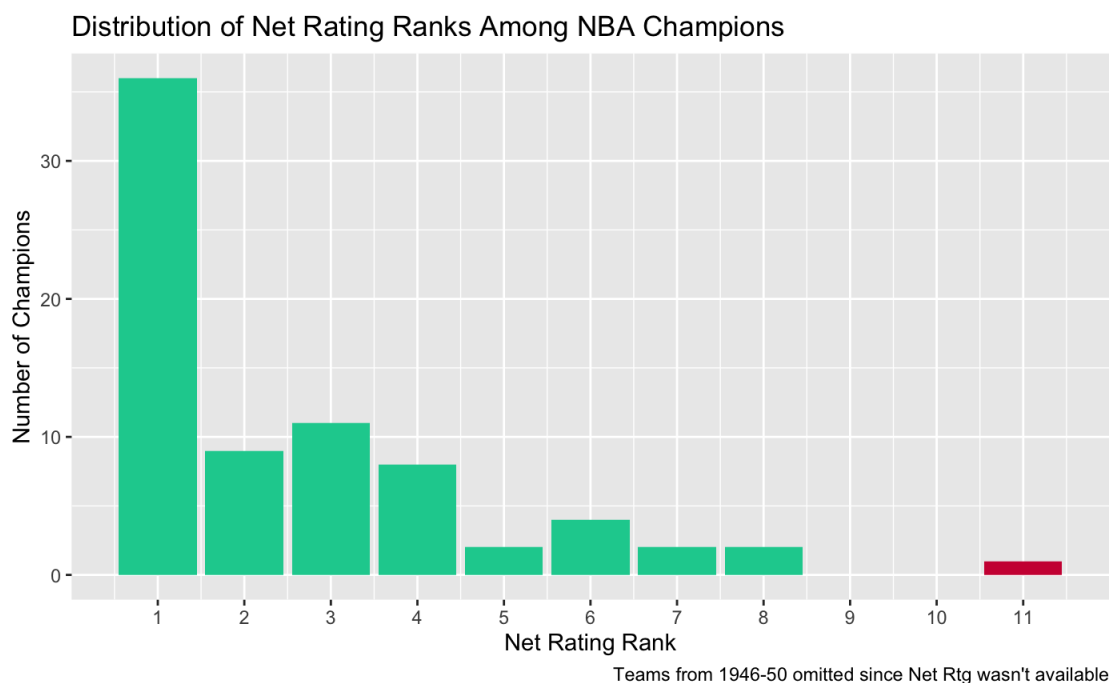


Figure 2

Only nine teams have won an NBA championship with a net rating below the top five in any given season. Net Rating was not available as a statistic until the 1950-51 due to the NBA's lack of tracking rebounds rendering *Basketball-Reference* unable to calculate possessions. Among those four teams:

- 1947 Warriors: 3rd in point differential (out of 11 teams)
- 1948 Bullets: 1st in point differential (8 teams)
- 1949 Lakers: 1st in point differential (12 teams)
- 1950 Lakers: 1st in point differential (17 teams)

All four of them finished top three in point differential, which is a fair substitute for net rating. The scale is not one-to-one given the much smaller league landscape, but the teams from 1948-50 were all first, dispelling any issues of percentiles.

Altogether, there are only four teams that have won an NBA title with a net rating that wasn't top-five along with not meeting the 40-20 rule. Two have already been mentioned (2006 Heat and 1995 Rockets) and the other two teams (Washington Bullets and Seattle Supersonics) traded NBA title wins in 1978 and 1979. The 1978 Bullets have the lowest winning percentage (53.7%) among champions in NBA history, winning just 44 of 82 games. They beat three 50-win teams en route to a thrilling seven-game series against the Sonics. The parity was quite high, so that record was still good enough for a third seed in the East.

## Conclusion

Among NBA title winners, there are a similar number of teams that won without following the 40-20 rule or with a net rating outside of the top three. 17 teams won

a championship without following the rule and 19 teams won a ring with a net rating ranked 4th or below. Only a few teams each season align with the 40-20 rule. Since 1989, when the NBA had 25 teams, there have been an average of 4.5 teams per season that follow the 40-20 rule, or about 15.3% of teams in a given season<sup>7</sup>. Jackson's rule is a strong indicator of a true title contender, but an additional condition about net rating casts a wider net to catch true contenders. I propose editing the rule to include having a net rating ranked within the top five: A true title contender wins 40 games before losing 20 games OR is ranked in the top five of net rating. Only four championsj-winning teams did not meet either of those criteria.

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<sup>7</sup>The highest single-season total of all time is eight teams in 1996-97.

## References

- [1] Wikipedia contributors. “40–20 rule.” *Wikipedia, The Free Encyclopedia*. Wikipedia, The Free Encyclopedia, 7 Jul. 2025. [link](#).
- [2] Statistics taken from *Basketball-Reference*.
- [3] Data visualization, manipulation and aggregation was done using R and Python’s Beautiful Soup and Pandas packages.