NBA 3PT ANALYSIS

For basketball fans and analysts curious about the progression of the three-point shot in the NBA

HOW HAS THE THREE-POINT SHOT DEVELOPED IN THE PAST 10 YEARS?

Our goal is to examine and analyze the growth of the three-point shot over the last 10 years. We looked at three-point attempts, three-point percentage, wins & losses, and shot frequency to see how much the game of basketball has changed in the NBA. We want to analyze the overall effectiveness of the three-point shot on team performance.

In basketball, a **three-point attempt** is an attempt to make a field goal (basket) from outside the three-point line. A **three-point make** is a successful attempt in doing so.

A TRANSFORMING OFFENSE

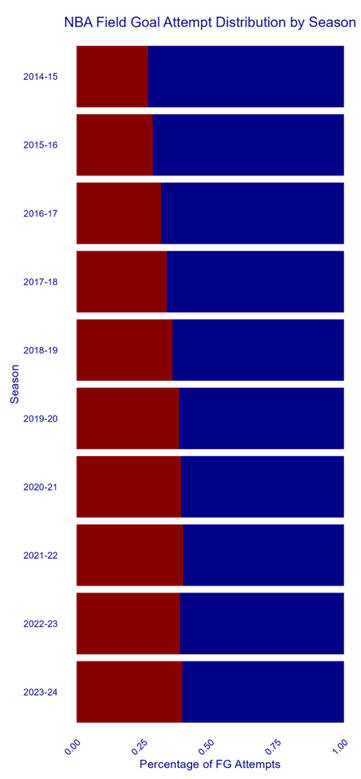
HOW ANALYTICS REVOLUTIONIZED THE NBA'S THREE-POINT SURGE

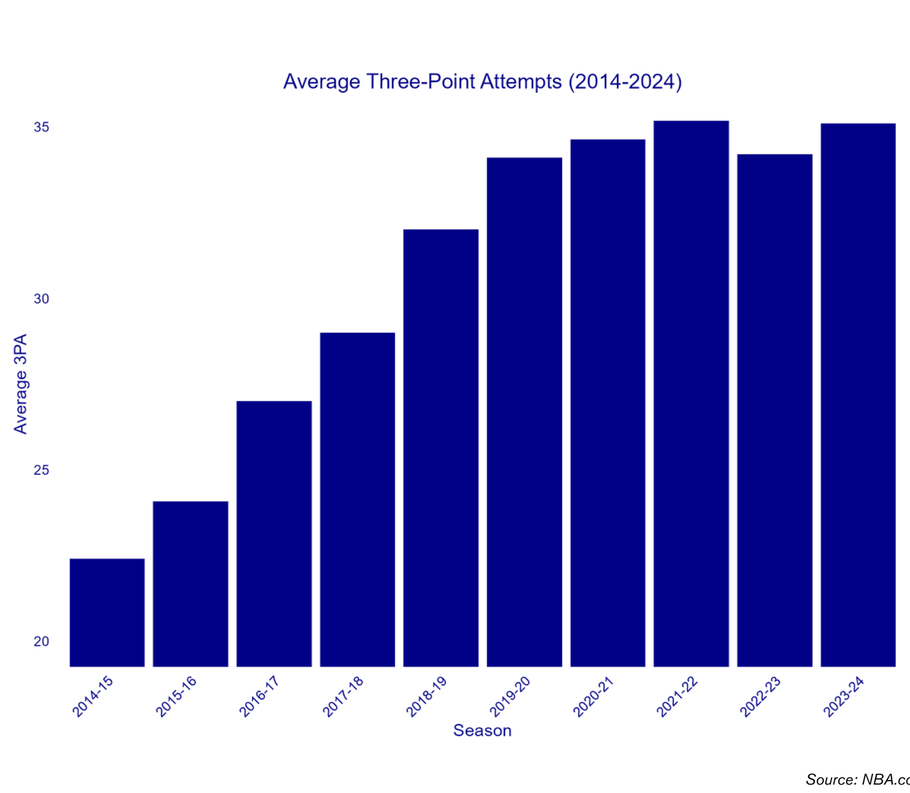
In 2010, NBA players made 48.6% of their two-point shots and 35.8% of their three-point shots. With the rise of advanced analytics basketball data analysts realized that the average two-point shot was worth roughly 0.972 points and the average three-point shot was worth 1.074, which transcended the game of basketball.

The first graph on the right notes the total percentage of two-point and three-point shots taken over the course of 10 years. As you can see the three-point shot has steadily increased over time.

The second graph shows the league average three-point attempts per game steadily rising from 22 in the 2014-15 season to 35 by the 2018-19 season. By 2024, the average 3PA is at it's highest point (35), making the shot a focal point of teams offenses.

This establishes that three-point shooting has become a central part of the game. Teams now focus on spacing and quicker possessions rather than traditional play.

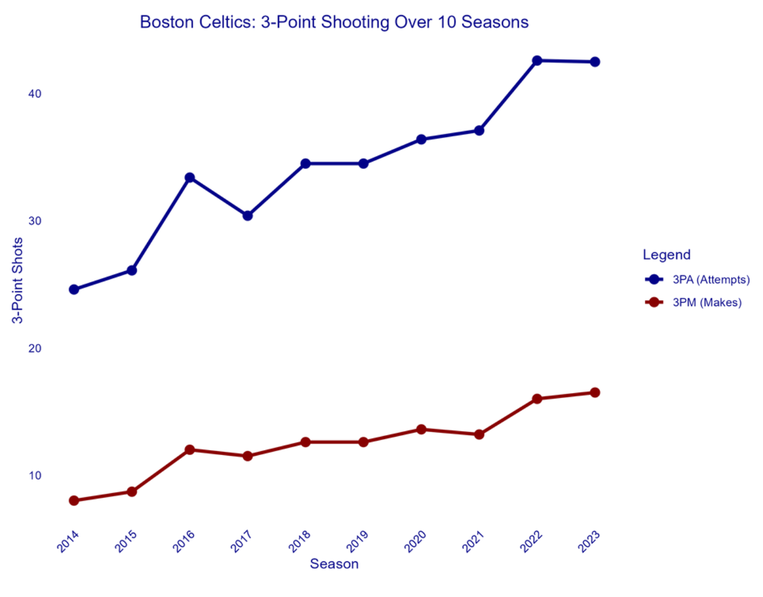




Source: NBA.com

A DEEPER LOOK

*The NBA regular season consists of 82 regular season games and playoffs are not taken into account.



BOSTON'S JOURNEY: RISING TRENDS, WIDENING GAPS

To analyze the rise of the three-pointer on a smaller scale, we decided to take a closer look at the most recent champions, the Boston Celtics. We found that there was a consistent upward trend for both three-point attempts and three-point makes over time during the regular season. However, the gap between the two variables has widened over time as "makes" has not increased nearly as much as "attempts".

This could be attributed to multiple things such as defensive adjustments, the quality of shots taken, or even a maximized skill plateau.

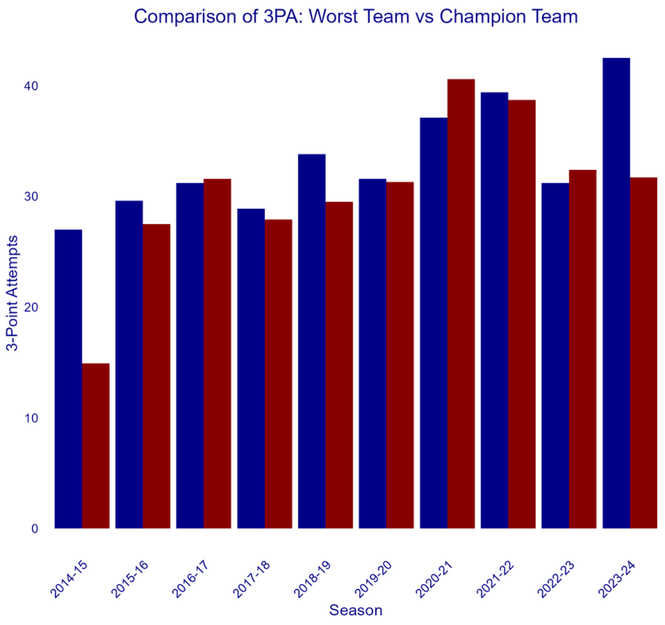
LEAGUE'S BEST VS. WORST

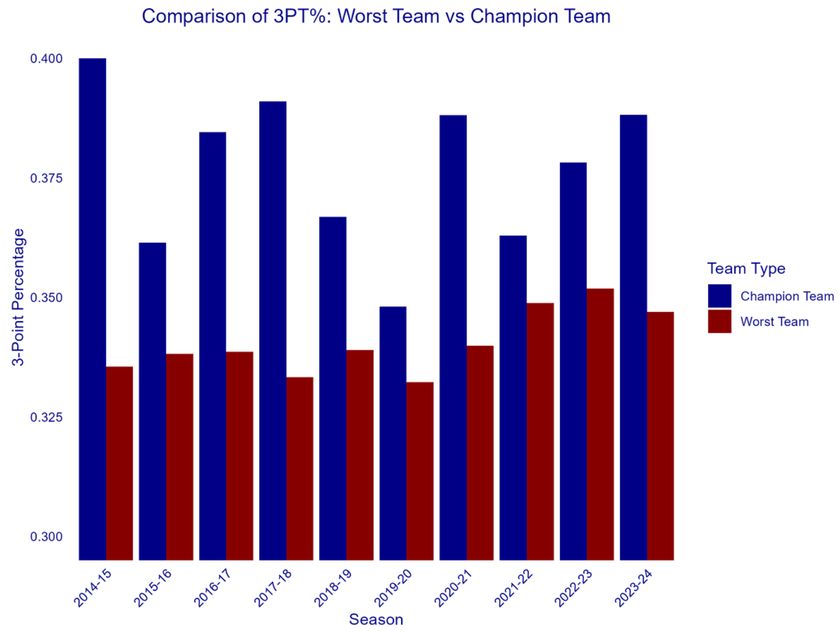
*NBA Champion is determined by the NBA playoffs following the regular season. A team must win four best-of-seven series in a row to be crowned champions. The worst team is defined by record.

EFFICIENCY VS. VOLUME

Now that we have seen the progression of the three-point shot over the last ten years, we wanted to compare the three-point disparities between the NBA champion (won playoffs) with the team holding the worst record over the years. We examined the difference in both three-point attempts and percentage between the teams over the last ten years.

Whereas we did not see a significant disparity of attempts between the teams (as the entire league adopted the three-point shot), we saw a massive difference in three-point efficiency each year, indicating that three-point percentage has a drastic impact on team performance and success in both the regular season and playoffs.





OUR FINDINGS

Our findings indicate that the league average number of three-point shots attempted has increased nearly every season. We have also found that despite all teams attempting more three pointers, teams that are efficient from beyond the arc tend to find more success than teams that can't shoot. If a team aims to win a championship, three-point shooting is a pivotal area they must focus on.

In the 2024-25 season, a total of *18 NBA teams have a three-point shot frequency of over 40%*, with the Boston Celtics shooting an astounding 56.5% of their shots from three. The three is here to stay.

Source: NBA.com