No Such Thing as Free

The Sustained Decline of Russell Westbrook's Free Throw Shooting

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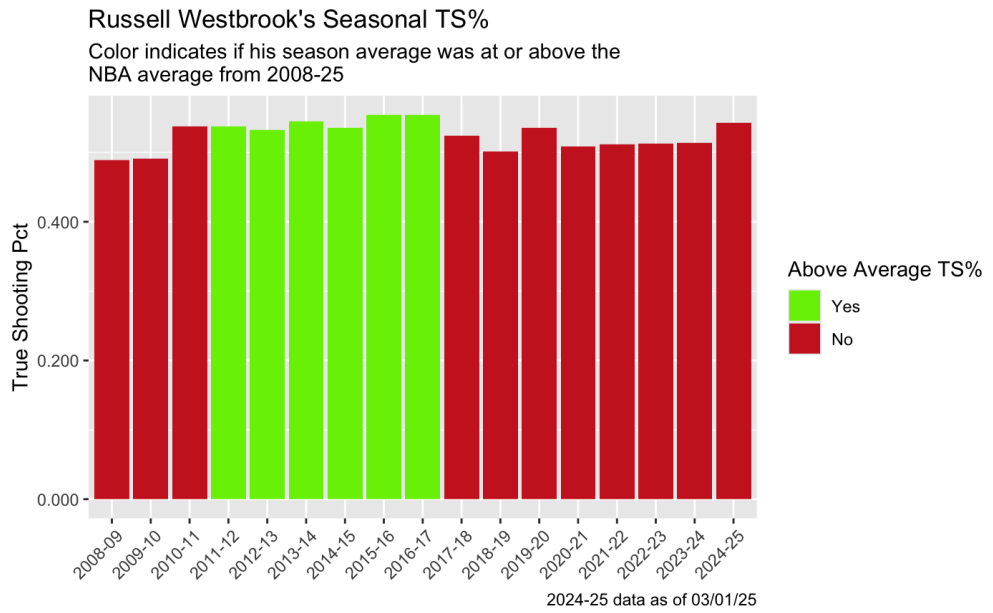
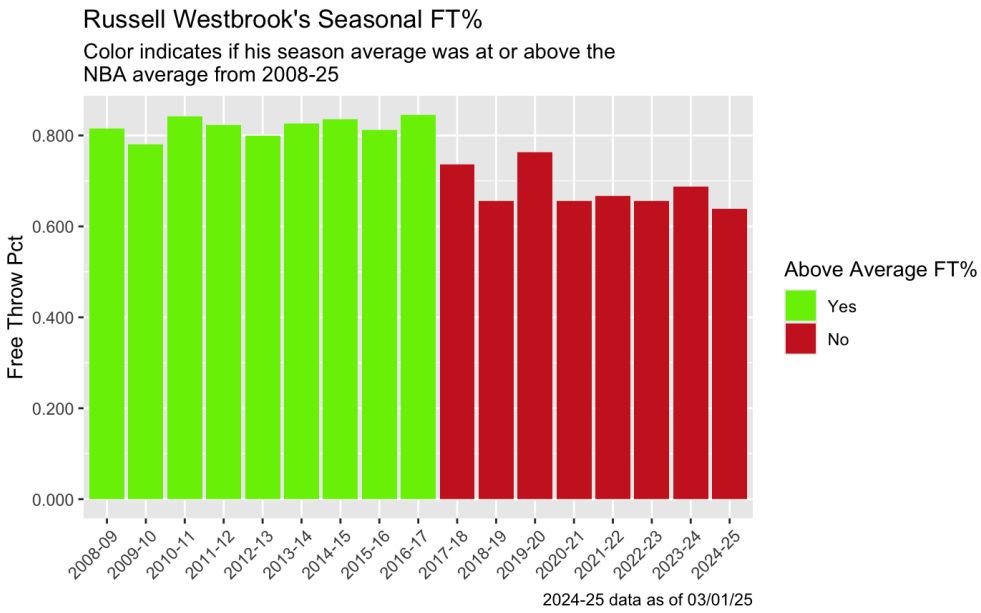
Russell Westbrook is currently having his worst free throw shooting season in the NBA. While he has never been a paragon of efficiency, his free throw percentage being closer to 60 than 70 is a new development. His percentage is now fourth-lowest in the NBA among qualified players; the next lowest percentage by a point guard is 72.8% by CJ McCollum. While this is not ideal, it's not exactly new. Westbrook's free throw shooting has been in decline for nearly a decade, and this season is a continuation of that trend. Let's take a deep dive into this decline, as well as why this could be happening.

It Wasn't Always Like This

To get an idea of how Russ's efficiency (both overall and at the stripe) has changed over the years, here are two graphs that display Russ's season-to-season true shooting and free throw percentages while also highlighting if those percentages were above the league average that season.



*All statistics will be as of March 1, 2025



Russ's shooting efficiency was below average until the 2011-12 season, and it remained average to above average until the 2017-18 season and beyond, and it has never again reached or cleared the 100 TS+ threshold. His free throw shooting was excellent until the 2017-18 season, where it has fallen below average and well below Russ's own standards.

For true shooting, I was curious if the fall below league average is due to the league's growing emphasis on optimizing possessions or if his true shooting has truly gotten worse since the 2016-17 season.

Statistical analysis

In this section, I will be testing Russ's true shooting and free throw shooting percentages from 2008-17 to 2017-25. Obviously, this is comparing nine seasons to eight, so to keep it balanced, I made an artificial data point to add to the 2017-25 sample: simply the median of the shooting percentages from the eight seasons. Now it's nine figures being compared to nine, and I was able to compose a Mann-Whitney-Wilcox rank sum statistic for both true shooting, and for the sake of showing what an unquestioned drop off looks like, free throw shooting.

TS%
H_o: true shooting pct from 2008-17 = true shooting pct from 2017-25
H_a: true shooting pct from 2008-17 > true shooting pct from 2017-25
$W = 102.5$ (some ties present)
p-value = .0807
Fail to reject H_o at .0470 significance level (when W = 105)

FT%
H_o: free throw pct from 2008-17 = free throw pct from 2017-25
H_a: free throw pct from 2008-17 > free throw pct from 2017-25
$W = 126$

p-value = .0000205
Reject H_o

True Shooting is very, very close to being rejected. If we chose say W = 100 or W = 101 for the critical value needed for rejection, which leads to natural levels of around .1 significance, then we could reject Ho for true shooting as well.

The free throw shooting hypothesis test was a formality because just looking at the graph shows how severely and definitively Westbrook's free throw shooting has cratered.

Possible Explanations

So what happened to explain this? While doing video research, I found two sets of sources. The first was a collection of three videos containing footage of Westbrook shooting free throws to document any present mechanical differences.

- 2017 free throws (game vs DEN)
- 2009 free throws (game vs MIA)
- 2025 free throws (game vs OKC)

There is nothing very different mechanically, but here are my notes:

- 2009 - He bends his knees a lot more, creating a mechanism relying on his whole body to generate power.
- 2017 - There's a slight knee bend and a fluid-looking motion without the involvement of the legs. This is an abstract description, but he simply looks very comfortable in this clip.
- 2025 - It looks nearly identical to 2017, but there is more of a knee bend.
- He has a new pre-shot routine in the 2025 clip: holding the ball on his left side on his hip and taking a deep breath. Compared to 2017 clip: holding the ball in the shot position on his right side and taking a deep breath.

I can not attribute the issue since there are not heavy differences in Westbrook's mechanics, so what's going on?

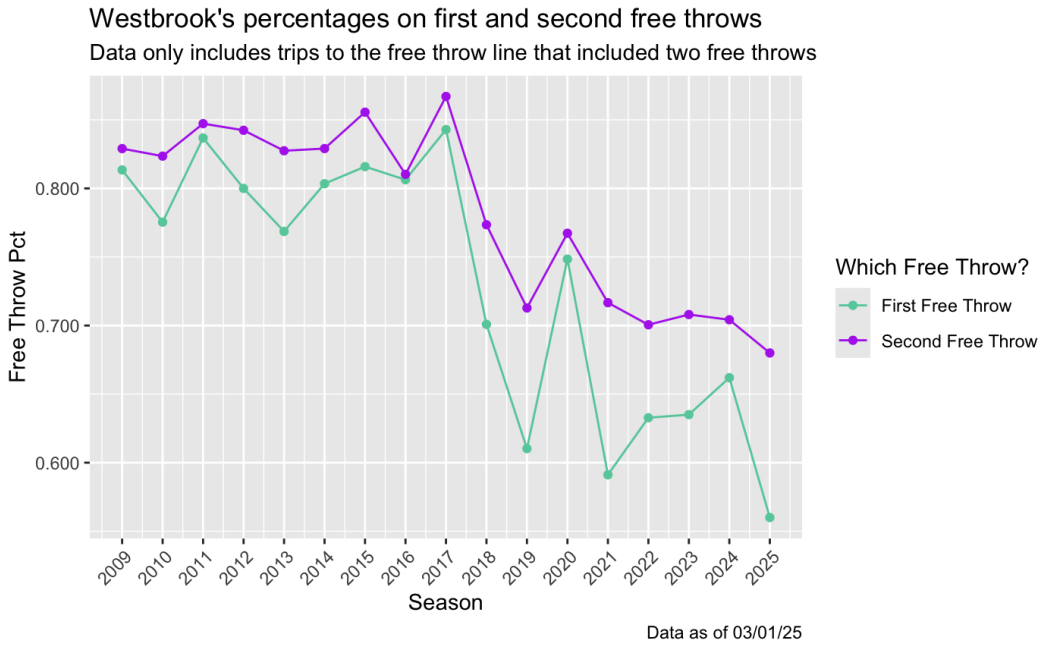
New Rules

The second source was a video from YouTuber Andy Hoops back in 2021, and it presented many insightful points about Westbrook's free throw decline, along with a theory I conducted research on.

First, there was a rule change in the 2017 NBA offseason that prevented players from trotting beyond the three-point line between free throws. This did not affect the amount of time he can take between free throws, but it has certainly forced Russ to change his routine that he said he's had since high school. Westbrook would walk back in the direction of half court after shooting his first free throw, and he was forced to alter that routine by curtailing how far he walks [1]. As Andy says, Westbrook is a

rhythm player, and this rule disrupted the rhythm he had accumulated over the span of a decade plus.

Later in the video, Andy theorizes that Westbrook should still be a proficient free throw shooter on the first of two attempts, since those attempts should be unaffected by the rule change. He wanted to analyze a dataset that described how Russ shoots during the first and second attempts. There wasn't such a dataset available so I made my own using Basketball Reference's play-by-play data and the Beautiful Soup package for website scraping. This chart shows how Russ's free throw percentage fluctuates whether it's the first or second of two attempts from season to season.



Quick statistical analysis

This is a Mann-Whitley-Wilcox test of Russ's first free throw percentage vs. second free throw percentage in the seasons since the rule change.

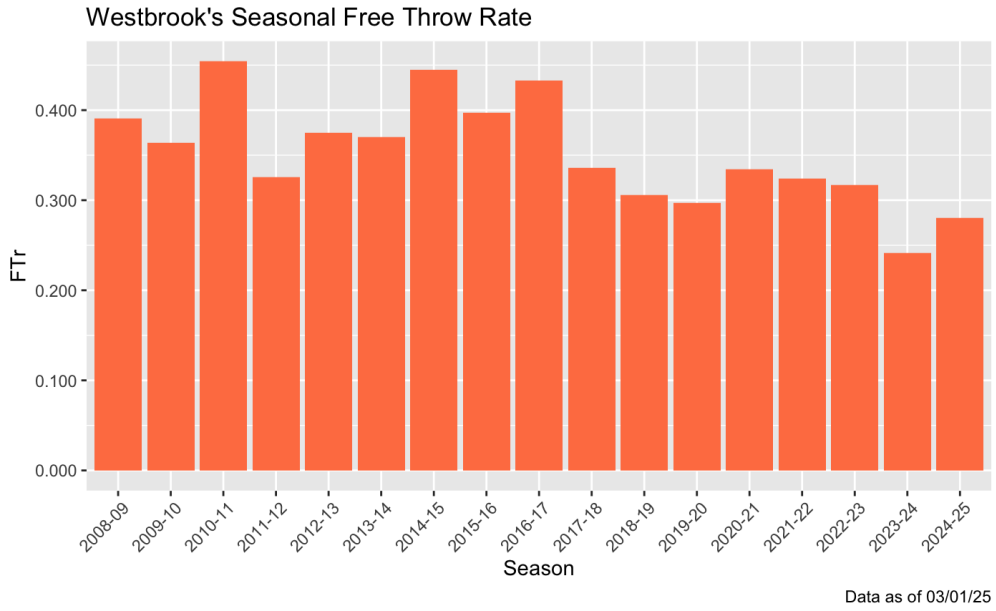
H_o: first FT% from 2017-25 = second FT% from 2017-25
H_a: first FT% from 2017-25 $\neq$ second FT% from 2017-25
$W = 92$
p-value = .0052
Reject H_o

As expected.

Interesting, so Russ's second free throw has better shooting splits for every single season of his career, but the slight gap became a wide chasm after the 2017 rule change when his overall free throw shooting got worse. This is odd since the new rule would affect his second attempt more than the first if we are to believe that disrupted rhythm is the culprit for his lower percentages. Westbrook's first-of-two free throw percentage has reached a career low of below 60%. That rule change is not applicable for the first attempt, so this is truly baffling.

Final Remarks

Westbrook's career worst free throw shooting is, in all ways, fascinating. The first possible explanation, a shooting mechanical error, is not visibly apparent; the second possible explanation, the rule change, did not quite align with the data findings. So what is causing this ever-worsening decline? It is cheap to speculate if a player is struggling with confidence or the yips, and I don't believe Westbrook has ever struggled with confidence. Andy's point about rhythm could also be applied to Westbrook's frequency of drawing fouls. As he points out, Russ's free throw rate (free throw attempts / field goal attempts) has decreased as he has gotten older, but the drop off is not that severe.



Again, there is no decline sharp enough to chalk this up to a lack of free throw rhythm. Using Andy's point about the new free throw rule, it truly could be as simple as Westbrook being forced to change his routine and being unable to completely adapt and get comfortable at the free throw line.

References

[1] "The Curious Case of Russell Westbrook's Free Throws." YouTube, uploaded by Andy Hoops, 4 December 2021, URL.

[2] Data is taken from Basketball Reference and *NBA.com*.

[3] Data manipulation is done in R.

[4] The first and second free throw dataset was aggregated using the Beautiful Soup and Pandas packages in Python.