Jordan Malak (SAIL Application – Question No. 14)

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**What Was James Harden’s Most “Worthful” Season?**

***(A Statistical Analysis and Discussion of Harden’s 2017-18 and 2018-19 NBA Seasons)***

Growing up in Houston, my two favorite Rockets were Yao Ming and James Harden. While Ming was a global icon in every sense of the phrase, very few would dispute the claim that Harden was by far the better player, both statistically and subjectively. During his near decade long stint in Houston (2012-2021), Harden was at the top of his game leading the NBA in scoring three times (and in assists once), making eight NBA All-Star teams, and earning six first team All-NBA Team honors (as well as third team honors in 2012-13). In 2018, Harden was named the NBA Most Valuable Player (MVP) in what most consider his greatest individual season. While his performance in 2017-18 secured him the MVP award (the now-named “Michael Jordan Trophy”), a question lingers as to whether that season was really Harden’s most valuable from a team perspective. In this RStudio-based analysis of what was truly his most valuable season to his team, I rely on Harden’s baseline careers statistics from <http://www.basketball-reference.com> and the Robust Algorithm (using) Player Tracking (and) On/Off Ratings (RAPTOR) index.[[1]](#footnote-1)

In 621 games across nine seasons with the Rockets (the most productive stretch of his career), Harden averaged 29.6 points per game (PPG), 7.7 assists per game (APG), and 6.0 rebounds per game (RPG) along with having a 44.3 field goal percentage (FG%) and a 36.2 three-point percentage (3P%). To analyze which specific season was actually Harden’s most valuable or worthful to his team, I applied the RAPTOR metric (which uses plus-minus statistics to measure how many points offensively or defensively a specific player contributes to their respective team over the course of an entire game) to Harden’s career statistics data frame. According to RAPTOR, Harden’s 2018-19 season was his most productive offensively. As depicted in Figure 1 below, Harden contributed his highest additional point output, approximately 9.6 additional points, to the Rockets average team offensive score. When factoring in his season-based RAPTOR additional defensive score (approximately 1.1 points as Harden is clearly more of an offensive juggernaut than defensive legend such as Kawhi Leonard), 2018-19 was certainly Harden’s most overall productive season overall as his presence on the floor increased the Rockets average team box score by slightly over 10.7 additional points per game.

Table

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Figure 1[[2]](#footnote-2)

Specifically, over the course of the 2018-19 NBA season, Harden averaged 36.1 PPG (his highest PPG average per specific season), 6.6 RPG (tied for his second highest RPG average per specific season), 10.8 field goals made (FGM) (his highest FGM average per specific season), 24.5 field goals attempted (FGA) (his highest FGA average per specific season), 4.8 three pointers made (3PM) (his highest 3PM average per specific season), 13.2 three pointers attempted (3PA) (his highest 3PA average per specific season) and an 87.9 free throw percentage (FT%) (his second highest FT% average per specific season). Accordingly, Harden had his career highest statistical averages in five key categories during the 2018-19 NBA campaign. Compared to his NBA MVP 2017-18 season, Harden improved on every game average category in 2018-19 with only the exceptions of assists per game (APG) and FG%.

With higher individual statistics and lower certain team-oriented stats (such as assists), some pundits would argue that the Rockets simply supported and played “around” Harden in the 2018-19 season and not with him as they did in the 2017-18 season when Harden earned his MVP trophy. To support this position, pundits point to Harden’s highest usage rate percentage (USG%) of his career during the 2018-19 NBA season. USG% is the percentage of team plays that a player was involved in that ended with a field goal attempt, free thrown attempt, or a turnover while the player was on the court (Bleacher Report).

Figure 2 represents Harden’s NBA career USG% by year. This RStudio-created line graph clearly shows that Harden’s USG% peaked at slightly over 40 percent during the 2018-19 season (actually 40.3 percent). Pundits quickly point out that this high USG% diminishes any contention that Harden’s 2018-19 statistical best season was in fact his finest “overall” season in the NBA.

Chart, line chart

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While pundits use Harden’s 40.3 percent USG% (in 2018-19) to bolster their position that he was a more valuable player to his team in 2017-18 than his statistically superior 2018-19 season, reliance solely on USG% is flawed. First, shooters, such as Harden, will always have a higher usage rate than players who don’t shoot as much (as shooting will likely result in a USG% measured outcome…field goal attempt, free throw attempt, or turnover). In 2012, Houston specifically signed Harden to score. To expect Harden to be closer to the league USG% average of 20 percent is not only unrealistic but would be contrary to what he was brought to Houston to do, shoot and score.

Additionally, Harden’s 2018-19 USG% was not that much greater than his USG% in other seasons. Specifically, Harden’s 40.3 percent USG% in 2018-19 was only approximately five (5) percentage points greater than his USG% in 2017-18, the season when he was named the NBA MVP. In fact, Harden’s USG% topped 30 percent every year from 2014 to 2020. Accordingly, one needs to ask the question if a 40.3 percent USG% was too high for Harden in 2018-19, why wasn’t an approximate 35 percent not too high in 2017-18?

Lastly, some of the game’s all-time greats, during their best and most valuable season, had a high USG%. The best example is Russell Westbrook. In the 2016-17 season, Westbrook set the current highest single season USG% at 41.65. It just so happens that Westbrook comfortably won the MVP that same year (over Harden). If Westbrook earned the 2016-17 MVP with a higher USG%, why should Harden’s 40.3 percent USG% in 2018-19 automatically relegate that season’s effort to “second best” (as some pundits argue).

Simply put, there is no clearcut and definitive answer as to what season, 2017-18 or 2018-19, was James Harden’s most valuable or “worthful” season. Harden unequivocally had his best statistical career season in 2018-19 when he was basically forced to carry the Rockets on his back all season because of constant teammate injuries (leading the team to first place in the Southwest Division before eventually losing to the Golden State Warriors in the Western Conference Playoff Semis). However, Harden was named the NBA MVP in 2017-18 after leading the Rockets to 65 regular season wins and finishing first in both the Southwest Division and Western Conference (ultimately being upset by the eventual NBA Champion Warriors in the Western Conference Finals). To me, because James Harden has never accomplished the ultimate team goal of winning the NBA Championship, his career best overall statistical season of 2018-19 is his most valuable or “worthful” season to date.

1. Denoted through Introducing RAPTOR, Our New Metric For The Modern NBA │FiveThirtyEight and its GitHub link nba-player-advanced-metrics/nba-data-historical.csv at master • fivethirtyeight│nba-player-advanced-metrics • GitHub [↑](#footnote-ref-1)
2. Note: For unknown technical reasons, each season produced two rows with identical statistics [↑](#footnote-ref-2)