What is Luck: An Analysis of Shaka Smart-Era Texas

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Background:

Shaka Smart was hired by the Texas Longhorns in 2015 following the dismissal previous coach Rick Barnes after Barnes failed to advance past the round of 32 in March Madness in six consecutive seasons. Shaka Smart had taken VCU, a school not known for attracting top-tier recruits, to the Final Four in 2011. The expectation for Smart at Texas is that he would usher in a new era of success, and then-Texas Athletic Director Steve Patterson expressed full faith in Smart. Patterson was relieved from his duties three months after Smart's hiring. Since becoming the coach of The University of Texas Men's Basketball team, Shaka Smart has a 71-66 record, including an 33-45 record in BigXII play (including conf. tournament). At the end of his fourth season, Shaka Smart's greatest achievement as Head Coach of the Longhorns was an NIT championship at the end of the 2018-2019 season. Before Smart's tenure as head coach of the Longhorns, Texas Men's Basketball had only missed March Madness twice in the previous 26 seasons, making each of Shaka's two tournament-misses even more disappointing. Smart fares well on the recruiting trail, as he has enticed NBA prospects Mohamed Bamba and Jaxson Hayes to spend their one-year college careers on the Forty-Acres.

The table below shows how the Longhorn's ranked amongst 353 qualifying teams in offensive and defensive efficiencies, adjusted for opponent, as well as in luck (a metric created by KenPom.com to measure the difference in expected wins based on efficiency rankings and actual wins).

	2016	2017	2018	2019
Offensive Efficiency	49	177	88	31
Defensive Efficiency	40	21	12	28
Luck	118	348	263	334

As you can see, Texas always sports a highly competitive defense and with the exception of 2017, also produces an efficient offense. The particularly striking numbers on this chart relate to Texas' luck. In 2016, Texas finished with a 20-13 record, earning a 6-seed in March Madness and landing Smart a contract extension. In the following three seasons, Texas has put together a 51-53 record, missing the tournament twice. According to KenPom.com, much of this can be attributed to poor offense and exceedingly poor "luck".

Another possible explanation is that Texas excels in keeping games close until the end, then fails to close teams out. In "Close" games, which in this paper will refer to games in which the score was within 10 points with 3 minutes or less remaining in regulation, Texas holds a 37-51 record. In "Crunch Time" games, which in this paper will refer to games in which the score was within 5 points with under a minute remaining, Texas has a 27-37 record. The goal of this paper is to look deeper into these close games to try and uncover why the Longhorns often fail to close out late in games. The key questions to be answered are:

1. What key statistics, if any, change in close and crunch-time games that may indicate the root of Texas' problems?
2. Do specific players tend to have a certain impact late in games?

Methodology:

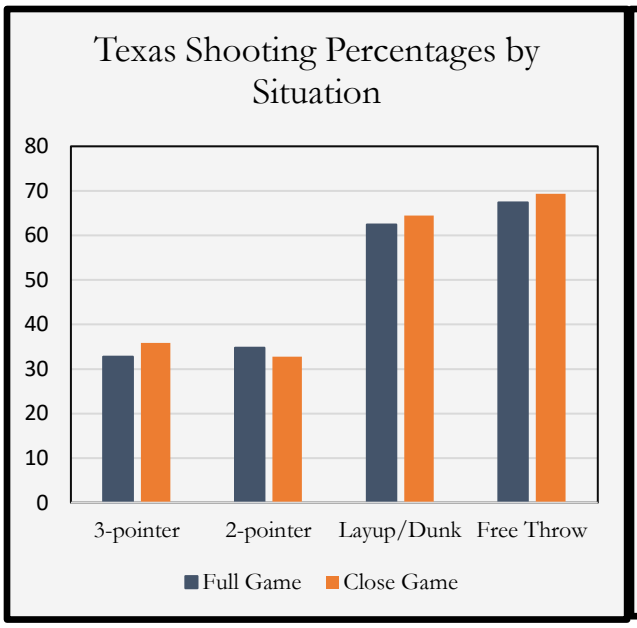
Many local news sites, such as Austin-American Statesman, the Dallas News, and the Houston Chronicle, have all given their spin on what has caused the Longhorns to tumble down the ranks of the BigXII. For the most part, they take a non-analytical approach, claiming that Smart is a fish-out-of-water in the hyper-competitive BigXII. The pundits who claim to take a more analytical approach claim that Texas' offense is not suited to the high-scoring action of the Big12. To answer these questions, I decided to take a more analytical approach. To start, I created a web-scraper to pull play-by-play data from ESPN.com. The scraper pulled out the time stamp, current score, and play "text" for each of the 42,283 events that have occurred under Smart's tenure. Then, using the text, I compiled a dataset that captures the events happening at each moment. For example, one event may be "20:00 Kerwin Roach made three-point jumper, assisted by Matt Coleman." The row in the dataset would show this event split into the timestamp in seconds remaining, the player(s) involved, and the type and result of the play. Splitting up Shaka's entire tenure in this manner allowed me to isolate several important statistics by the time of the game in which they occurred. As such, I could split Texas' shooting percentages, turnovers, efficiencies by wins, losses, "close", and "crunch-time" games; and more specifically, split by the time in those games. Efficiencies were computed using an approximate measure of possessions, calculated by adding all attempted field goals and turnovers, adding free throws attempted, divided by two, and subtracting offensive rebounds. While this method is imperfect, I measured it against KenPom.com's efficiency statistics, and the crudely created model always underestimated offensive efficiencies by two to three points per 100 possessions. While this difference is non-ignorable, it was consistent enough that the crudely-calculated efficiencies were usable in analysis.

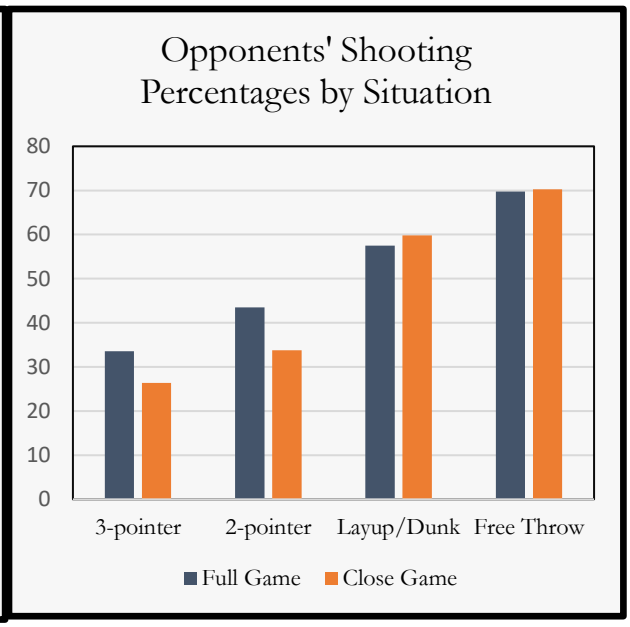
Analysis:

As evidenced earlier, Texas generally struggles in games that remain within single-digits with three or fewer minutes remaining. A primary factor in this are the changes in Texas' offensive and defensive efficiencies, which change drastically in these close situations. Below you can see that Texas' offensive efficiency skyrockets in close-game situations, while the Longhorns otherwise mighty defense begins to struggle.

	General	Close Games
Offensive Efficiency	100.6	115.7
Defensive Efficiency	98.0	111.1

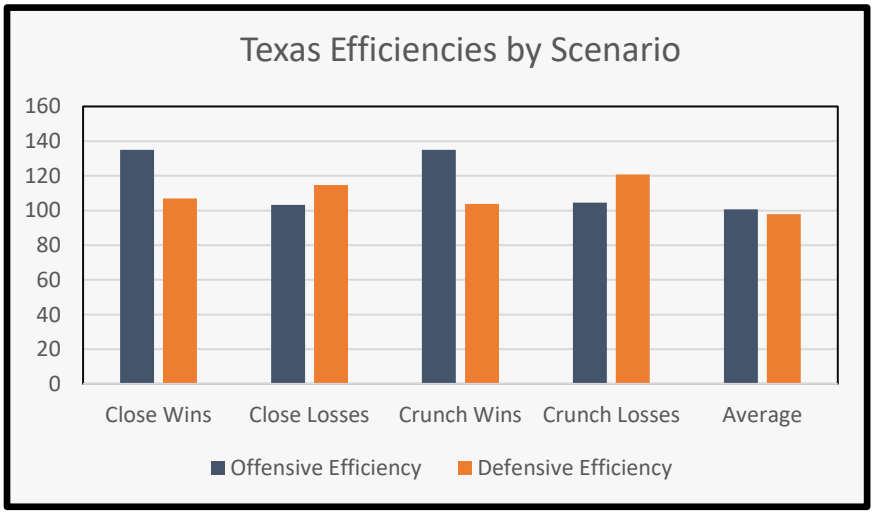
The charts below show the Longhorns' and their opponents' shooting percentages in full games against their percentages in "close" game situations. As you can see by these charts, shooting percentages do not appear to be the driving force behind Texas' close losses, as the Longhorns actually shoot slightly higher percentages in most categories in close-game situations than in general. Another thing to note in these charts is that opponents tend to struggle greatly on all jump-shots during close game situations, which brings into question why the Longhorns' defensive efficiency jumps so greatly.





The explanation for this discrepancy lies not in the selection of shots or the percentage, but in the quantity of shots taken by each team. Over Smart's four seasons, Texas has lost the battle on the offensive glass, corralling only 72 offensive rebounds compared to opponents' 101 during the final three minutes of close games. These second-chance opportunities allow opponents to take quality shots as the Texas defense scrambles to regain defensive position.

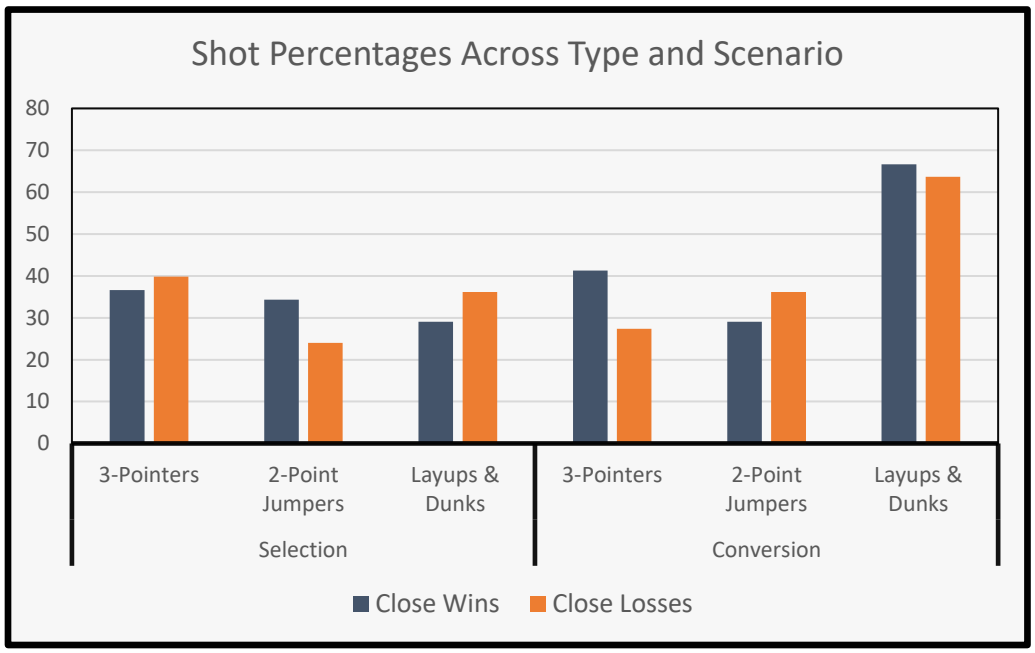
While an offensive rebounding deficit provides some explanation as to how the Longhorns tend to fail in close games, that was not the whole story. After splitting the data into games which Texas would ultimately win and games which Texas would ultimately lose, the real struggle of the Longhorns revealed itself. Below you can see that, while Texas' defense tends to struggle in losses, the difference-maker in close games is the offense. In close wins and in crunch wins, Texas managed a stunning 135 offensive efficiency, while in close losses and crunch losses, the 'Horns offense was much more easily contained, touting an offensive efficiency of 103 and 104, respectively. More shocking are the net efficiency ratings shown in the table above. In the 37 close wins (27 of which were crunch wins) under



Scenario	Net Efficiency Rating
Close Wins	28.08
Close Losses	-11.5
Crunch Wins	31.09
Crunch Losses	-16.41
Average	2.62

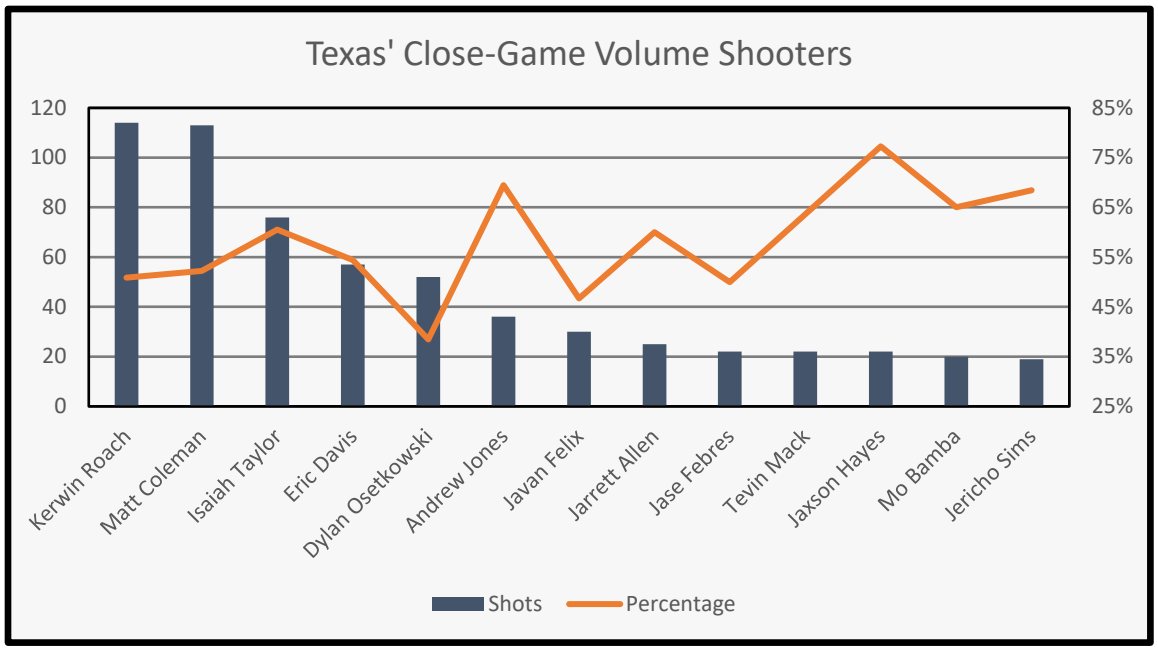
Coach Smart, Texas outscore opponents by 28 points per 100 possessions, good for 7th in Division-I basketball last season, just better than the University of North Carolina. In the 51 close losses (37 of which were crunch losses), Texas was outscored by 11.5 points per 100 possessions, which would have ranked 303rd in Division-I, just better than North Carolina Central University.

The root causes of this disparity in net efficiency can be found in nearly every aspect of Texas' offensive game. One obvious, yet nonetheless startling fact is the difference in shooting percentages in these two situations. There are several noticeable trends in the chart below. Arguably the most stunning is the disparity in 3-pt conversion percentage. In close wins, Texas shoots an uncanny 41.3%



from behind the arc, while only shooting a paltry 27.4% from three in close losses. Also of note, only 24% of Texas shot attempts in close losses are layups or dunks, compared to over 33% in close wins. To summarize this chart, the expected point-yield of a shot in a close win is 1.041, while the expected point-yield of a shot in a close loss is 0.961.

Finally, an analysis of different plays split into the player who completed the action of the play gives a more clear idea of specifically who the Longhorn offense relies upon, and who it should rely upon, when it matters most. The chart below shows the 12 shooters who have taken the most shots for the Longhorns in the final 3 minutes of close games under Smart's tenure as head coach and their shot percentage in that scenario. The shooter with the fewest attempts on the chart has just fewer than twenty shot attempts. A major trend that shows from this chart is that, unsurprisingly, guards take the lion's share of the shots in the final three minutes, with the top-4 highest volume shooters being guards. Next, a factor that often gets omitted in analysis of the Smart-era Longhorns is that star guard Andrew Jones was diagnosed with Leukemia in the middle of his sophomore season (2018). Prior to his diagnosis, Jones was the Longhorns' best guard in terms of clutch shooting, shooting over 65% on his 36 attempts. Another factor in the Longhorns' clutch woes is that, despite having NBA-caliber big men nearly every season, Texas rarely entrusts them to shoot in the closing minutes of games.



NBA first-round picks Mo Bamba and Jarrett Allen took a combined 45 shots in their combined two years, while Eric Davis, who no longer plays basketball, took 57 such shots. While Bamba and Allen were not known for their shot-creation abilities, they were both capable as playmakers. Potential NBA lottery pick Jaxson Hayes, despite touting a sterling 78% field goal percentage, shot only 22 times in the closing minutes of close games.

Conclusions:

To summarize these findings, it appears as though Texas has endured a mixture of hard-times, inconsistency, and poor decision-making. Shaka's Longhorns squads always field an angry, if not dominant defense, as evidenced by their constant top-20 finishes in defensive efficiency. A key issue may be the lack of knowledge on how to properly use talented big men. Shaka's VCU teams always featured a squad of at least four talented, hard-working guards that he could employ to run his aggressive "havoc" defense. When the opponent started to wear down, Shaka's guards could then attack the tired defense and make plays. Next season, the Longhorns will add 5-star, 7-foot center Will Baker as well as 4-star center Kai Jones into the mix, with only one guard, 6-foot 5-inch shooting guard Donovan Williams. If Shaka is to be successful at Texas, he must learn how to take advantage of dominant 5s in the closing minutes of games. While losing the team's undeniable spiritual and scoring leader in 2018 proved to be a tough blow, the Longhorns still made the NCAA tournament that season, ultimately falling to Nevada in the first round. If Shaka is able to find effective ways to use his bigs, then he may have a chance at steadying Texas' wild inconsistency late in close games and find a way to get the Longhorns back to dancing in March.