In October of 2018, Skyler Diggins-Smith -- an All-Star guard for the Dallas Wings of the Women's National Basketball Association (WNBA) -- announced she was pregnant. This means that Diggins-Smith may miss the 2019 season. It is natural to ask: will she be the same player when she returns for the 2020 campaign?

The Wings franchise has already experienced such an event. From 2012 to 2014, Glory Johnson was a very productive player for the Tulsa Shock (the Wings franchise was in Tulsa prior to the 2016 season). According to the methodology detailed previously in the academic literature (Berri, Schmidt, and Brook, 2006; Berri, 2008; Berri and Schmidt, 2010; and Berri and Krautmann, 2013), Johnson produced 9.7 wins across these three years. And her Wins Produced per 40 minutes played averaged 0.134. After becoming pregnant and giving birth, Johnson missed the 2015 season. When she returned in 2016, though, her productivity appeared to increase. From 2016 to 2018, Johnson's Wins Produced per 40 minutes was 0.142. In other words, it doesn't appear that giving birth had a negative impact on her performance.

Will pregnancy and childbirth have the same impact on Diggins-Smith? The answer to this question is not only important to Diggins-Smith, the Wings, and their fans; this subject also has implications beyond the sport of basketball. A gender pay gap exists inside and outside of sport. Often, this gap is partially explained by productivity (Flake, Dufur, Moore, 2013). But, the gap has not been completely explained. One clear application of this study is more informed decision-making about pay and perceived performance before and after childbirth for all mothers—not just those in the WNBA.

The purpose of this current examination is to analyze the impact of childbirth on player performance in the WNBA. By our current count, more than twenty women who played in the WNBA both before and after giving birth. We wish to know how that event impacted player productivity.

To answer that question, we measure the per-40 minute productivity (PROD40) of each WNBA player from 1997 to 2018. We then use this measurement as the dependent variable in a linear regression model that allows us to measure the impact of pregnancy on performance.

Beyond the control variable for women who have given birth, we also consider other factors (Darvin, Pegoraro, and Berri, 2016) that might alter a player's PROD40. That list includes the age of the player, the number of games the player plays, the productivity of a player's teammates, whether or not the player is on a new team and/or has a new coach, and the position played. This model specification will allow us to isolate the impact of childbirth from such factors as age, injury, and peer effects of the productivity of teammates. Early results suggest that pregnancy and childbirth do not have a negative impact on performance.