Investigating Exploitation in College Women's Basketball

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Introduction

The passage of Title IX in 1972 led to a significant change in sports participating for women. According to Acosta and Carpenter (2014), there were only two and a half women's teams per school in the NCAA in 1970 and just 16,000 women playing college sports. According to Zimbalist (2001), the number of women playing college sports increased to more than 64,000 by 1977. So in just six years, participation increased by 400%!

Today, women don't just play college sports. Increasingly, these sports are generating significant revenue. Data from the Department of Education indicates that in 2015, women's college basketball generated more than $1 million in revenue at 255 different schools.

The NCAA (as it does in all college sports) restricts the earnings of women who participate in college sports. Labor economics suggest that compensation in restricted markets results in labor exploitation; where exploitation is defined as being paid a wage less than the worker's economic value (i.e. marginal revenue product).

Research Questions

According to the National Center for Education Statistics (as cited in Borghesi, 2015), an athletic scholarship for female athletes is valued at $23,872 per year. Because of NCAA rules, schools are not allowed to increase this compensation when the revenue the player generate increases. Therefore, if one can show that the revenue generated by the players exceeds the value of the athletic scholarship, then by the aforementioned definition of exploitation the women employed are indeed exploited.

This observation leads to the following research question:

RQ1: What percentage of participants in women's Division I college basketball generate more revenue than the compensation offered by the school?

Data and Methods

We propose two approaches to answering this question. The first builds on the work of Gerald Scully (1974). Scully's approach involved estimating two relationships.

First, a team's revenue is connected to teams wins (and additional explanatory factors). Then a team's wins are connected to a collection of player stats. These two models allow one to estimate both a player's contribution to team wins and the value of those wins into revenue. In sum, this approach gives us an empirical measure of a work's marginal revenue product.

Variations of this approach has been employed in a collection of studies across the past 40 years. With respect to college sports, exploitation has previously been examined in men's college basketball [see Brown (1994), Brown and Jewell (2004), and Lane, Nagle, and Netz (2012)], women's college basketball [see Brown and Jewell (2006)], college football [see Brown (1993), Brown and Jewell (2004), and Brown (2011)], and men's college hockey [see Kahane (2012)]. The Brown and Jewell (2006) study considers the monetary impact of acquiring future draftees into the WNBA. In other words, Brown and Jewell (2006) only consider how future professional players impact college revenue. This is quite different from what we propose.

Specifically, we will estimate two relationships. First we have measured the production of wins for each player who played Division I women's college basketball for the 2012-13 to 2015-16 season. This step -- which has already been completed -- follows the methodology laid forth in Berri (2008) and Berri and Schmidt (2010).

We will then connect team wins (from NCAA.org) to team revenue (collected from the Department of Education)
with the following model:

Revenue = f(Wins, Wins Lagged, Student Body Population, Conference and Year Fixed Effects)

To measure each player's MRP, we simply multiply each player's production of wins by the value of wins estimated from this revenue model. With an estimate of MRP in hand, we can then compare a player's MRP to the cost of attendance to estimate the percentage of players in women's college sports who are exploited.

We will not limit ourselves, though, to just the basic Scully (1974) approach. As Berri, Leeds, and von Allmen (2015) note, the standard Scully approach is flawed. Specifically, sports increasingly have revenue sources that are not tied to team wins. These "fixed" revenues will reduce the estimate of a player's MRP.

Consequently, we will also employ the approach offered in Berri (2018). This approach begins by noting that the NBA allocates 50% of its revenue to its players. It then looks at how much revenue each player would be paid if a school followed the NBA's practice. For example, in 2015 the Department of Education reports that the women's basketball team at the University of Tennessee generated $4.4 million in revenue. So, if the team allocated 50% to player compensation, the 12 players who played for the team would have been given $2.2 million; or about $183,000 per player. This is well beyond the cost of attending the University of Tennessee.

One could also argue -- as the Scully (1974) model proposes -- that players contribute to revenue by producing wins. Tennessee won 22 games in 2015-16, so each win was worth nearly $100,000. Because we can determine how many wins each player produced, we can also argue that Bashara Graves -- who produced 5.7 wins -- was worth $536,237 in 2015-16. By the definition of exploitation noted above, all five players are indeed exploited.

Findings/Contributions/ConclusionsThe proposed research adds to the literature of worker's exploitation in the NCAA and sports in general. We believe the proposed research will demonstrate that many female college athletes are no longer mere participants in college sports. Like men, they are now generating more economic value than they are being paid. So like men, many women in college sports are also exploited.