Coaching Women - Is it only a Job for Men? An Economic Analysis of Coaching Productivity in NCAA Division I Women’s Basketball

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The passing of Title IX in the 1970s has provided female athletes with greater opportunities for participation in the United States interscholastic and intercollegiate system (Acosta & Carpenter, 2014) but despite increased sport participation opportunities for girls and women, they are underrepresented in all facets of leadership at all levels of sport (Acosta & Carpenter, 2014; International Working Group on Women and Sport, 2012; Lapchick, 2014; Smith & Wrynn, 2013). An unexpected result of Title IX, especially at the intercollegiate level, has been the decrease in the proportion of females serving as coaches of women's teams (Acosta & Carpenter, 2014). This dramatic decline in the number of females coaching women's intercollegiate sports in the United States since the passage of Title IX has been well documented (Acosta & Carpenter, 2014). Some of the more recent nationwide figures indicate that at the intercollegiate level, women comprise approximately 43.4% of women’s teams have a female head coach positions compared to over 90% before Title IX (Acosta & Carpenter, 2014).

Background and Research Questions

There are perhaps three possible explanations that lead to the lower representation of women in the collegiate coaching ranks. First, the lower representation could be on the demand side due to a lack of interest in coaching by women for various reasons, including work-home life balance (e.g. Rhode & Walker, 2008; Dixon & Bruening, 2005; Inglis et al., 2000). Second, the supply side of the market can be affected by discrimination against women. This discrimination can come from employers (e.g. Humphreys, 2000; Brooks & Foster, 2010), from co-workers (e.g. Shaw, 2006) and from role discrimination that discourages women from entering the coaching profession (e.g. Aicher & Sagas, 2009; Hoffman, 2011) or from coaching men’s sports (e.g. Walker & Sartore-Baldwin, 2013). The third explanation for the decrease in female coaching after Title IX could be that men are systematically more productive than women when coaches of both genders receive the same set of resources (e.g. von Allmen, 2013).

In his work von Allmen (2013) investigated this third explanation in the context of NCAA Softball and found that male and female softball coaches do not perform differently, providing substantial evidence that female coaches are equally skilled as their male counterparts. Therefore we propose to extend the work of von Allmen (2013) and to investigate productivity differences as a potential source of differential demand from two perspectives in the context of NCAA Division I Women’s Basketball.

RQ1: Given an equal set of resources (e.g. funding, history), are male coaches in Division I Women’s Basketball more productive then female coaches?

Secondly, we propose to add to the literature by investigating the impact of coaches on the productivity of individual players and on team performance with a consideration for any difference by gender of the coach. Previous studies have investigated the impact of the coach on player performance in the NBA (Berri, Leeds, Leeds, Mondello, 2009), finding that most of the coaches did not have a statistically significant impact on player performance relative to a generic coach, concluding "that most coaches in the NBA are more than the ‘principal clerks’ that Adam Smith claimed managers were more than 200 years ago" (p. 92). Building on the model developed by Berri, et al., (2009), a similar model with the addition of a gender variable will be constructed for the NCAA Women’s Basketball data set. The model developed will answer the following question:

RQ2: What impact do coaches (with consideration for gender) have on the performance of their players?

Data and Method

To answer RQ1, we will utilize the data collected to estimate the following model [adapted from von Allmen (2013)]:
RPI = f(SHAREEXP, WS10, GENDER)

Where:

RPI = Rating Percentage Index.
This is an index that considers both winning percentage and strength of schedule.

SHAREEXP = ratio of expenditures of each program to the expenses of all programs in the sample
WS10 = Number of NCAA appearances over the previous 10 years
GENDER == dummy variable for gender of coach, 1 = female, 0 = male

As for RQ2, we currently have a data set containing three years (2012-13, 2013-14 and 2014-15) of NCAA Women's Basketball data for a total of 1,000 observations at the team level and over 12,000 player observations. A fourth year of data (2015-2016 season) will be added and analyzed before the 2016 NASSM conference. This data set will allow us to estimate how coaches impact the productivity of individual players. To answer RQ2, the following model adapted from Berri et al., (2009) will be used

PPM = f(PPMIN(-1), Class, GP, MGM, TMPROD, Coach, Gender, Conference)

Where:

PPM = Productivity per minute [measured following (Berri (2008), Berri and Schmidt (2010)]
Class = Whether a player is freshmen, sophomore, junior, or senior
GP = Games played
MGM = Minutes per game
TMPROD = Productivity of teammates
GENDER = Dummy variable for gender of coach
CONF = Dummy variable for conference

Findings/Contributions/Conclusions
The proposed research has many potential implications for scholars and practitioners. This investigation into coaches' productivity and their impact on player performance through a gender lens will provide insight into dealing with the decline in females coaching women's intercollegiate sports. The proposed research intends to further this area of research for scholars and subsequently assist the NCAA institutions in assessing the performance of coaches of women's sport and inform decisions around future coaching hiring decisions with a focus reversing the declining trend of female coaching hires.

References


