

## FACTORS THAT IMPACT COMPENSATION OF NCAA HEAD BASKETBALL COACHES

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### Abstract

To show junior, senior, and graduate economics students that topics for course projects can arise in their every-day reading, this study examines the compensation of relatively successful coaches: Division I men's basketball coaches whose teams appeared in the 2011, '12, or '13 NCAA Tournaments. Salary is hypothesized as a function of coach specific characteristics as well as the college's conference affiliation. Head coaching characteristics include: experience measured as years at current school; the winning percentage at current school, previous college head-coach experience, NCAA tournament winning percentage, and NCAA championships won. Other characteristics considered are the coach's race and his current school's BCS or non-BCS conference affiliation. The regression results verify that experience at both current and previous school(s), plus NCAA winning percentage and NCAA championships won, measure job performance and are positively related to compensation.

**Key Words:** compensation, NCAA Basketball Tournament, BCS conference, race

**JEL Classification:** J33, L83

### Introduction

This paper focuses on regression analysis to explain a college basketball head coach's compensation in order to show junior, senior, and graduate economics students that topics for course projects occur through their every-day reading. Dr. Leila Pratt, a co-author of this project, discovered the basic data set used while reading USA Today.<sup>4</sup> Daily reading such as USA Today, other newspapers, and casual and professional reading can regularly provide data for course studies. By using basic descriptive statistics (see Table 1 and related discussion), which are covered for most economics majors in their sophomore statistics course, or regression analysis (Table 2 and thereafter), likely covered in a junior or senior course, a student can posit and test interesting business and economic relationships for any data set. We use basic data to consider factors impacting a college head-basketball coach's compensation.

College coaches preach the importance and values of competition, asserting that playing and playing time are rewards for productivity. Few people question this. So, we ask the related question: Is a head-basketball coach rewarded based on his coaching productivity?

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<sup>4</sup> USA Today continues to publish this data each spring for head college basketball coaches and now likewise for head and assistant college football coaches.

Each college basketball season concludes with the annual NCAA (National Collegiate Athletic Association) Men's Basketball Tournament. This spectacle depends on both players and coaches, among others. Though the players earn no explicit income, each receives a scholarship that covers tuition, room, board and other school related expenses plus the free coaching, training, and use of the school's facilities. Each also gains the value of a four-year college degree, provided he graduates, or for a few, the value of a master's degree.<sup>5</sup> These benefits taken together are likely worth \$200,000 or more. On the other hand, the coaches of teams invited to the 2011 through 2013 tournaments earned an average annual salary of \$1,375,270 with a range of \$85,000 to \$7,500,000. Their average pay (salary plus bonus) was \$1,678,710 with a range of \$94,792 to \$8,075,000 (see Table 1). The financial arrangements underlying these compensation figures are not considered here. Our focus is to determine the statistical linkage between easily quantified performance factors and compensation for the head coaches included in our data set.

The head coach (hereafter, coach) manages, plans, recruits, organizes, and coordinates in-game as well as overall strategy. Like Kahn (1993) and Humphreys (2000), we focus on a coach's human capital as a determinant of a team's success under his tutelage and thus a determinant of his compensation.

The present study uses cross-section and time-series data published by USA Today for men's basketball coaches whose teams appeared in the 2011, 2012, or 2013 NCAA Tournaments.<sup>6</sup> In particular, a coach's compensation is hypothesized as a function of a set of individual characteristics, mostly based on competitive success, plus the conference affiliation of his school.

Brook and Foster (2010) examined several variables related to the salaries of NCAA basketball coaches. While their focus was on gender differences in salaries, they also evaluated coaching salaries of men's teams. They concluded that a coach's career winning percentage was a statistically significant factor (at the 99% level) in predicting salary. In addition, the team's strength of schedule and whether the team played in a BCS or Power-Five (hereafter, BCS) conference were also found to be important. We include the coach's winning percentage at his current school and a dummy for BCS conference affiliation in our analysis. We expect to find similar results.

Brook and Foster also examined different revenue sources (ticket sales, contributions, concessions, etc.). While this is outside the scope of our research, it is interesting to note that they also found that contributions and ticket sales were statistically significant for men's basketball teams, although not for women's teams. This would seem to place a premium on a team's winning record, particularly for men's teams, as winning stimulates ticket sales and alumni contributions. Thus, we expect a positive relationship between a coach's winning percentage and his compensation.

Kahn (2006) specifically examined the effect of race on a coach's salary, but limited his scope to the NBA. Still, as many NBA coaches either played or coached in the NCAA (both variables Kahn included), we find his results to be relevant to our analysis of NCAA coaches with respect to the race variable. While many of the human capital variables are similar for NBA coaches and NCAA coaches, we cannot overlook the fact that NBA teams are comprised of paid players. Kahn controls for differences in expected player quality by including the log of the teams'

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<sup>5</sup>According to the Institute for Diversity and Ethics in Sport, the 68 teams invited in 2012 had a 67% graduation rate versus a 66% rate for teams invited in 2011.

<sup>6</sup>The Tournament concludes each college basketball season with a team earning a bid (invitation) based on winning its conference or conference tournament or being invited based on its winning record, strength of schedule and other factors.

payroll as compared to the League average. As that is not possible in the NCAA – by regulation college players may not be paid - we attempt to control for this by including a dummy variable related to the school's conference affiliation. Our expectation is that BCS level schools have advantages in recruiting more talented players than do lower level schools.

Ultimately, Kahn finds that while white coaches in the NBA have higher average salaries than black coaches, he also finds that they have more previous coaching experience at either the NCAA or NBA level, and that teams with white coaches have better records and a relatively higher payroll than NBA teams with black coaches. Still, when the human capital variables are controlled for, he finds no significant difference in pay between black and white coaches. We hope to find similar results at the NCAA level.

## Data & Results

Data on a coach's compensation, the year he was hired at his present school, his record at his present school, career record, NCAA record and the school's conference affiliation were obtained from USA Today for each team that participated in the 2011-2013 NCAA Tournaments (Schnaars & DeRamus, 2012).<sup>7</sup> A coach and team are in the data set only in the year(s) invited into the tournament. Specifically, 52 coaches appear in our data once; 35 appear twice ( $35 \times 2 = 70$ ); and 20 appear all three years ( $20 \times 3 = 60$ ) for a total of 182 observations. Similarly, 53 schools appear in the data once; 30 appear twice ( $30 \times 2 = 60$ ); and 23 appear three times ( $23 \times 3 = 69$ ).<sup>8</sup> Thus, our results apply only to proven high-performing coaches.<sup>9</sup>

Whether or not a coach has won a NCAA championship as head coach was obtained from Division I Men's Basketball Championship History at NCAA.com.

Data reported by USA Today include salary, bonus, and outside earnings. Because the institution has little or no control over outside income, our estimations use salary (SALARY) or salary plus bonus (PAY).<sup>10</sup> Several variables that measure a coach's human capital or might otherwise explain differences in salary or earnings are constructed from the data. For the explanatory variables to represent a coach's competitive history and human capital entering a given basketball season, each variable is constructed annually for a coach, hence, the variable values change for a coach who appears multiple times in the data. Explanatory variables included are: PSWINS: The coach's winning percentage as head coach at his present school. This variable is calculated as present school wins divided by present school wins plus losses.<sup>11</sup> PNWINS: The coach's career head coaching NCAA tournament games winning percentage – calculated in the same manner as PSWINS.

<sup>7</sup> Compensation data is absent for 18 of the schools: Boston University, BYU, Creighton, Hampton, Harvard, Iona, Lehigh, Long Island, Miami, Princeton, St. John's, Saint Louis, Saint Peter's, Southern California, Southern University, Valparaiso, Wofford, and Xavier – all private institutions which maintain confidentiality. We give special thanks to the dedicated data gathering by Holly Higgins and Ernest Retzer.

<sup>8</sup> The 23 coaches included in each year of the data provide too few observations to model and expect statistically significant results.

<sup>9</sup> Indeed, 10 coaches in our data account for 22 of the 30 NCAA Tournament championships beginning with 1989. The authors have failed to find a similar extensive data set for college basketball coaches – we did find salary data for one conference for one year.

<sup>10</sup> Earlier versions of this paper included the variable Earnings, salary plus bonus plus additional compensation. Given that the ease or difficulty as well as criteria for earning the additional compensation are unknown, we have ceased using it.

<sup>11</sup> It should be noted that the percentage data means (Table 1) for PNCAAW, PSWINS, and PCWINS are calculated as the average of the coaches' winning percentages; for example, a coach such as Duke's Mike Krzyzewski NCAA tournament record (88-26), 77%, when averaged with a coach who appeared once and lost, 0%, is 39%.

**DNCAAC:** A dummy variable that equals 1 if the coach has won one or more NCAA tournament championships or 0 otherwise. So few coaches have won this tournament more than once that just winning the championship seems a more appropriate statistical distinction than is the number of times a championship was won. Care should be taken with this variable. Its correct interpretation is the percentage of coaches appearing in the data who have won an NCAA tournament – recognize that a coach such as Mike Krzyzewski who has won the tournament and others appear in the data set multiple times and therefore are counted multiple times. Only two coaches with a tenure of between 0 and 6 years at their current school have won NCAA championships: Uniquely both won it at the University of Kentucky; they are John Calipari who currently is the University of Kentucky coach, and Tubby Smith who coached at the Kentucky and at the University of Minnesota during the 2011 – 2013 seasons.

**BCS:** A dummy variable for a BCS conference schools. These conferences include: Atlantic Coast Conference (ACC), Big 12 Conference (BIG12), Big East Conference (BIGEAST), Big 10 Conference (BIG10), Pacific Athletic Conference (PAC12), and Southeastern Conference (SEC).<sup>12</sup> BCS conferences schools are the heavyweights of NCAA Division-I schools. They hold large television contracts for both football and men’s basketball, are perceived to compete at a higher level, and have better training facilities.

**MID:** A dummy variable for high mid-major conference schools. These conferences include: Conference USA, Mid-American Athletic Conference, Mountain West Athletic Conference and Sun Belt Athletic Conference. These conferences are generally included in this group because they have a significant number of teams that usually qualify for the NCAA tournament or teams from these conferences have generally been successful in the NCAA tournament. Of these conferences, the Mountain West has historically been the most successful.<sup>13</sup>

The previous variables should measure a coach’s success in competition and the quality of his human capital. In addition, several dummy variables to control for the race of the head coach and for inter-year effects are included:

**RACE:** A dummy variable that equals 1 if the head coach is black; 0 if otherwise. As with the variable DNCAAC the correct interpretation of this variable is the percentage of coaches in the data set who are black. This variable and its coefficient likely are affected by a combination of: the relatively few black head coach observations in the data set (18 out of 182 observations but only 13 different individuals) and the tenure distribution among these coaches in the data set. Among the 18 counted black coaches in the data set, 13 are at BCS schools and 5 at non-BCS schools. Tenure at their current institutions ranges from 0 to 9 years. This group of coaches had previous head coaching experience ranging from 0 to 22 years. The two longest tenured coaches,

<sup>12</sup> Schools participating in at least one of the 2011-13 NCAA Basketball Tournaments according to BCS conference affiliation are: ACC: Clemson, Duke, Florida State, North Carolina State, UNC, Virginia; Big 12: Baylor, Iowa State, Kansas State, Kansas, Missouri, Oklahoma, Oklahoma State, Texas, Texas A & M; Big East: Cincinnati, Georgetown, Louisville, Marquette, Notre Dame, Pittsburgh, South Florida, Syracuse, Villanova, West Virginia; Big 10: Illinois, Indiana, Michigan, Michigan State, Minnesota, Ohio State, Penn State, Purdue, Wisconsin; Pacific 12: Arizona, California, Colorado, Oregon, UCLA, Washington; and SEC: Alabama, Florida, Georgia, Kentucky, Mississippi, Missouri, Tennessee, Vanderbilt. Again, earlier versions of this paper identified schools by conference affiliation; however, that showed a similarity of result among BCS schools versus non-BCS schools hence the use herein of BCS versus MID-major conference schools versus all others.

<sup>13</sup> Schools from mid-level conferences that participated in at least one of the 2011-13 NCAA Basketball Tournaments include: CUSA: University of Alabama Birmingham, University of Southern Mississippi, University of Memphis; MAC: Akron; MWC: San Diego State, University of Nevada Las Vegas, Colorado State University, University of New Mexico, Boise State University; Sun Belt: Western Kentucky University, Middle Tennessee State University, University of Arkansas Little Rock.

Cy Alexander and Tubby Smith, followed vastly different career paths over roughly the same period. Alexander began his head-coaching career in 1987 at South Carolina State University, moved to Tennessee State University in 2003, and is currently a head coach at North Carolina A & T. These schools are historically black colleges in conferences ranked near the bottom of all NCCA Division I schools and typically compensate faculty and staff well below the perceived market rate. Smith began his head-coaching career at Tulsa in 1991 and then moved to BCS schools University of Georgia (1995-1997), University of Kentucky (1997-2007) and University of Minnesota (2007-2013).

TENURE: number of years as head coach at current school.<sup>14</sup>

SQ TENURE: TENURE squared.

YROTH: The number of years of head-coaching experience an individual had prior to taking his current job.<sup>15</sup>

YR2011: 1 for observations from the 2010-2011 season; 0 otherwise.

YR2012: 1 for observations from the 2011-2012 season; 0 otherwise.

IN2: 1 for a coach who went to the Tournament two of the three years; 0 otherwise.

IN3: 1 for a coach who went to the Tournament each of the three years; 0 otherwise.

The dummy variable coefficients YR11 and YR12 should be interpreted as the percentage increase or decrease in compensation from the 2010-2011 (YR2011) or from the 2011-2012 (YR2012) season compared to the 2012-2013 -- not from the 2012-2013 season back to 2011-2012 and then back to 2010-2011.

The expectation is that each of the above explanatory variables will show a positive relationship with Salary or Pay, except Race which is expected to have a negative relationship with Salary or Pay. In a performance-focused environment, wins measures, including DNCAA, ought to be positive; conference hierarchy should drive the BCS and MID variables positive, with BCS having a substantially higher impact than MID. Only the dummy year variables ought to be negative due to being backward measures of compensation inflation. The same logic implies that YR11 will be a larger negative than YR12.

<sup>14</sup> We expect that the importance and value of previous head coaching performance wanes relative to current school performance, especially following the initial contract. A Chow test between the 104 observations for coaches with 0 – 6 years of tenure and the 78 observations for those with more years of tenure yields for SALARY an  $F(9,164) = 3.3716$  with  $p\text{-value} = 0.0008$ , and for PAY  $F(9, 164) = 4.1317$  with  $p\text{-value} = 0.0001$ . Thus, the null hypothesis that the wage equation is the same for the two tenure groups is rejected at the 1% significance level. The classical method of handling experience at the current school is inclusion of variables for years of experience at the school and its square.

<sup>15</sup> Other variables such as the coach's winning percentage at previous schools and dummy variables for 1-3, 4-7, 8-14 and 15 plus years head-coaching experience prior to taking his current job similar to YROTH were tried. Additionally, two other variables considered were RPI (Rating Percentage Index), and SOS (Strength of Schedule). SOS measures the difficulty of a team's schedule based on the won/loss record of its opponents. RPI is a measurement used to rank a team. It is based on a team's won/loss record and its SOS; it is a tool used in the NCAA Tournament selection process. Although both were considered, either for the previous season (lagged one year) or for the current season, neither was statistically significant in any of the regressions. None of the regressions with these explanatory variables explained more than an additional 2% of the variance and these variables were generally statistically insignificant. Hence, we focus on regression results using the YROTH variable to account for prior head-coaching experience. These other regression results are available upon request.

## Statistical Analysis

Table 1  
Summary Statistics Total Sample (N = 182)

Variable	Mean	Std. Dev.	Minimum	Maximum
SALARY	\$1,375,270	\$1,239,300	\$85,000	\$7,500,000
PAY	\$1,678,710	\$1,384,010	\$94,792	\$8,075,000
PSWINS	58.47%	20.36%	0.00%	92.11%
PNWINS	38.47%	28.05%	0.00%	83.33%
RACE	0.10	0.31	0.00	1.00
TENURE	7.25	6.95	0.00	36.00
DNCAA	0.15	0.36	0.00	1.00
BCS	0.52	0.50	0.00	1.00
MID	0.12	0.33	0.00	1.00
RACE	0.10	0.31	0.00	1.00
IN2	0.33	0.47	0.00	1.00
IN3	0.38	0.49	0.00	1.00
YROTH	6.50	7.18	0.00	26.00

Table 1 provides summary statistics for the dataset. For an individual coach, some of these variables have minimum values of zero indicating one of the following: the coach was in his initial season as a head coach at that school, had no previous school head-coach experience, had no prior NCAA tournament record, had no NCAA Tournament championship, or was not at a BCS or MID school.

The information presented in Table 1 leads to several observations:

- A head coach who maintains a seasonal record of winning 75% or more of all games played is exceptional.
- A head coach's tenure at a school averages just over seven years and to remain at a school more than 15 years is exceptional. The dataset includes 104 coaches who were at their current school six years or less versus 78 whose tenure exceeded six years.
- 13% of coaches with less than seven years tenure are black, versus 6% of coaches with more than seven years tenure. This may reflect an increase in opportunities for blacks to become head-coaches.
- Longer tenure (7+ years) increases the likelihood of winning an NCAA basketball championship. Only two of the coaches with less than six years as the head coach at a school have won an NCAA basketball championship, while 32% of coaches with seven-plus years

have won a championship.<sup>16</sup> This general result suggests the importance of the coach recruiting ‘his players’ and instilling ‘his style of play’ or of coaching highly rated players. Two coaches, Mike Krzyzewski (Duke University: 1991, 1992, 2001 and 2010) and Roy Williams (University of North Carolina: 2005 and 2009), in the data set have won multiple NCAA championships.

- The NCAA tournament winning percentage for coaches who remain at a school longer than six years is 49%, versus a NCAA tournament winning percentage of 30% for those with a tenure of less than six years. That the longer-term record approaches 50% is expected; the tournament is single elimination (winner continues to next game and loser is out of the tournament) so that every win is matched by a defeat. Single elimination also accounts for the variable PNWINS being less than 50%.

Following standard techniques, we estimate the semi-log regression equation:

$$\ln(\text{SAL or PAY}) = B_0 + B_1X_{1j} + B_2X_{2j} \dots B_NX_{Nj}.$$

The results for these regressions are presented in Table 2.<sup>17</sup> The number of asterisks following the coefficient estimate indicates the one-tailed level of statistical significance: one asterisk represents the 10% significance, two asterisks represent the 5% level, and three asterisks represent the 1% level.<sup>18</sup>

A perusal of Table 2 shows similar results for the coefficient estimates including their sign, standard errors, and statistical significance. Each coefficient sign is as expected except for the minus sign on TENURE. The exceptions for significance are DNCAA which is insignificant for SALARY but significant at the 5% level for PAY; TENURE which is significant for SALARY at the 10% level but significant for PAY at the 1% level; and SQ. TENURE which is significant for PAY at the 5% level and not significant for SALARY. A possible explanation for these differences is that a head coach’s initial compensation includes performance incentives as bonuses captured by PAY (Salary plus bonus) and not by SALARY alone. The negative sign on TENURE may reflect that once a coach attains a position at a BCS school there is no higher level in college basketball leaving only the few head-coach positions in the NBA with equal or higher compensation, so he remains at the school long term. Note that Race is negative and insignificant for both SALARY and PAY. We doubt that this negative sign is due to a “traditional” view of race; rather, after reviewing the black coaches in the data, we believe the negative sign is likely due to the presence of several quite successful black coaches such as Cy Alexander who have remained at traditional black colleges where compensation is low.

<sup>16</sup> The two are John Calipari currently at the University of Kentucky, who previous to winning the Tournament had been head coach for eight years at the University of Massachusetts, nine years at the University of Memphis, and three years at the University of Kentucky; and Tubby Smith, who won the championship in his first season as head coach at the University of Kentucky, previously head coach for four years at the University of Tulsa and for two years at the University of Georgia.

<sup>17</sup> The regression coefficients multiplied by 100 measure the percentage change in the dependent variable, SAL or PAY, from a unit change in  $X_{ij}$  holding all other variables constant. For example, the coefficient for PSWINS (Table 2 [Salary All]) equals 0.011; this indicates that a one percent increase in a coach’s school winning percentage will increase his pay by 1.10%.

<sup>18</sup> Students should again note that our regression analysis relies solely upon tools learned in a first semester regression course.

Table 2  
**REGRESSION RESULTS FOR NCAA TOURNAMENTS 2011-2013**

Variable	Dependent Variable: SALARY				Dependent Variable: PAY			
	Coef.	Std. Error	t- Ratio	Signif.	Coef.	Std. Error	t- Ratio	Signif.
CONSTANT	12.00	0.14	86.03	***	12.46	0.14	86.85	***
PSWINS	1.19	0.23	5.26	***	1.10	0.23	4.72	***
PNWINS	0.66	0.19	3.54	***	0.67	0.19	3.48	***
DNCAA	0.22	0.14	1.56		0.31	0.14	2.17	**
RACE	-0.19	0.12	-1.57		-0.12	0.13	-0.93	
BCS	1.14	0.10	11.81	***	1.19	0.10	11.69	***
MID	0.29	0.13	2.29	**	0.49	0.13	3.77	***
TENURE	-0.03	0.02	-1.72	*	-0.05	0.02	-3.36	***
SQ. TENURE	0.00	0.00	1.19		0.00	0.00	2.08	**
YR11	-0.22	0.09	-2.46	**	-0.26	0.09	-2.86	***
YR12	-0.01	0.09	-0.10		-0.08	0.09	-0.87	
IN2	0.11	0.10	1.05		0.16	0.10	1.57	
IN3	0.37	0.11	3.50	***	0.30	0.11	2.75	***
YROTH	0.02	0.01	3.35	***	0.01	0.01	2.27	**
R-squared		0.80				0.77		
Adj. R-squared		0.78				0.75		
F (13, 168)		50.81				43.52		
Critical t-values:		1.27 at 10%				1.65 at 5%		2.35 at 1%

Wins at current school, PSWINS, and being the head coach at a BCS conference school have the largest coefficient impact on a head coach's compensation, while also significant at the 1% level. Indeed, together these two coefficients have a larger impact than that of the other variables combined. In magnitude of importance (coefficient estimate), these are followed by success in the Tournament itself, PNWINS, continuous success measured by being in the Tournament all three years, IN3, and MID – if you are not at a BCS school your next best option is to be at a MID school. Of course, this latter factor plays prominently in moving up from a MID school to head coach at a BCS school. That IN3 is, and IN2 is not, highly significant reflects the difficulty of taking a school annually, even for three years, to the Tournament – good fortune or good to outstanding players recruited and developed under the previous head coach may work for one or two tournament appearances in three years; but, not for being invited annually for three years.

MID shows the largest difference in coefficient estimates between the regressions - among the statistically significant variables - with the PAY coefficient almost twice that for SALARY. A possible explanation may be that MID schools use bonuses to reward and retain a coach who has an exceptionally good year or two from moving up to a BCS school. There were two coaches, John Pastner at Memphis and Steve Fisher at San Diego State, from MID schools that took a school all three years to the Tournament.

Though the variables TENURE, SQ. TENURED (except for SALARY), and YROTH are significant, their coefficients are quite small, providing little impact on compensation dollars.

For both SALARY and PAY the dummy variables YR11 and YR12, which represent, respectively, two years and one year prior to the 2012-13 season, show negative coefficients as should be expected with the expected larger coefficient for YR11, statistically significant at the 5% level for SALARY and 1% level for PAY. However, the relative magnitude of the coefficients – YR11 ranging between 0.22 and 0.26 versus YR12 ranging between 0.01 and 0.08 seems off, since the coefficients should reflect annual compensation inflation. The explanation for the different significance results may be the presence and non-presence of coaches among the years.

Lastly, the R-squared and adjusted R-squared results show that production-focused measures explain 75% to 80%, a substantial proportion, of the variation in compensation for highly successful college basketball coaches.

## Conclusion

A human capital model for NCAA head-basketball coaches explains 75% to 80% of the variation in salary or pay among coaches participating in the NCAA Basketball Tournament during the three seasons ending 2011-2013. Since 55 of the coaches appear in the data for two or three of the three years of data, the data represent successful coaches more so than all coaches.

The results also show that the move to head coach at a BCS school is rewarded with an approximate doubling of compensation from a non-BCS or non-MID level conference school; the compensation boost for moving up to a MID-level conference school is 30% or more. Having won an NCAA Tournament Championship provides approximately a 20% to 30% boost to salary or pay; of course, only one coach per season does so, making this more a hope for good fortune from a one-time boost. Our results suggest that a coach can raise his compensation by increasing his long-term winning percentage at his current school or in the NCAA tournament, but achieving either of these becomes increasingly difficult with more years at a school.

Lastly, students are reminded that their daily reading can provide useful data upon which to base an economics or statistics course paper relying solely upon analysis learned in their first statistics course or first econometrics course.

## References:

- Brook, Stacey and Foster, Sarah. 2010. "Does Gender Affect Compensation Among NCAA Basketball Coaches?" *International Journal of Sport Finance*, 5: 96-106.
- Humphreys, Brad R. 2000. "Equal Pay on the Hardwood: The Earnings Gap Between Male and Female NCAA Division I Basketball Coaches." *Journal of Sports Economics*, 1(3): 299-307.
- Lapchick, Richard (Director) 2012. "Keeping Score When It Counts." *Institute for Diversity and Ethics in Sport*.
- Kahn, Lawrence M. 1993. "Managerial Quality, Team Success and Individual Player Performance in Major League Baseball." *Industrial & Labor Relations Review*, 46(3): 531-547.
- Kahn, Lawrence M. 2006. "Race, Performance, Pay, and Retention among National Basketball Association Head Coaches." *Journal of Sports Economics*, 7(2): 119-149.
- NCAA.com. Division I Men's Basketball Championship History.
- Schnaars, Christopher and DeRamus, Kristin. 2012. "College Basketball Coaches' Salaries, 2011-2012." *USA TODAY*.
- Harper, Shaun R., 2015. "Black College Football and Basketball Players are the Most Powerful People of Color on Campus." *The Washington Post*, November 11.

Ryan, Shannon. 2016. "With the Number of Black Head Coaches Down, NCAA Needs Its Own Rooney Rule." *Chicago Tribune*, January 18.