

# Full Cost-of-Attendance Scholarships and College Choice: Evidence From NCAA Football

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## Abstract

In 2015, the National Collegiate Athletic Association Division I schools were permitted to cover the “full cost of attendance” as a part of athletic scholarships for the first time, which allowed schools to provide modest living stipends to its athletes. Differences in cost-of-attendance allotments across schools have the potential to affect the allocation of talent, with higher stipends attracting better student-athletes. Using recently published cost-of-attendance data, we estimate the impact of cost-of-attendance allowances on college football recruiting. Estimates reveal that cost-of-attendance scholarship allowances were positively associated with football recruiting quality immediately following their implementation, indicating that the modest differences in stipends swayed student-athletes’ college choice.

## Keywords

student financial aid, higher education, student-athletes, NCAA, competition, college football

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In the winner-take-all environment of athletic competition, in which success is defined only in relation to the competition, there is no natural stopping point to spending. There will always be ways to spend more money that will increase the chance of coming out ahead. Central to the ability to win is recruiting high-value athletes. In carrying out this all-important function, the imperative to win makes it logical to push to the limit whatever rules exist.

—Charles T. Clotfelter, *Big-Time Sports in American Universities* (2011, p. 21)

In January 2015, the National Collegiate Athletic Association (NCAA)'s "autonomy group"—a leadership council composed of the "Power Five" major athletic conferences, Atlantic Coast Conference (ACC), Big Ten, Big 12, Pac-12, and Southeastern Conference (SEC), plus Notre Dame—voted to allow member schools to cover up to the "full cost of attendance" as a part of athletic scholarships. This vote resulted in a major change in the way that NCAA Division I schools can award athletic scholarships. Previously, schools were limited to covering only a basic scholarship that included tuition and fees, room and board, and books and supplies. Beginning August 1, 2015, schools were able to provide additional scholarship aid for transportation and other expenses. According to the NCAA Bylaw 15.02.2, the cost of attendance is to be "calculated by an institutional financial aid office, using federal regulations, that includes the total cost of tuition and fees, room and board, books and supplies, transportation, and other expenses related to attendance at the institution." In short, cost of attendance is a measure of the cost of living estimate for students attending the institution. Federal financial aid guidelines give significant latitude to each school in determining its own cost-of-attendance calculation; however, cost-of-attendance amounts must be calculated as they are for all students (not just scholarship athletes) at the university (NCAA, 2015, p. 118).

Because schools have autonomy in determining their own costs of attendance, and the guidelines for doing so are vague, there exists an opportunity for universities seeking to boost their college football programs to manipulate cost-of-attendance allowances to assist in recruiting superior college athletes. College football is a lucrative business for top NCAA Division I schools, with the top 20 teams generating US\$1.42 billion in revenue for the 2013–2014 season, with the five highest grossing schools garnering over US\$100 million each. Financial pressure for success is strong; for example, the University of Florida's failure to appear in a bowl game in 2013 cost the school a reported US\$2 million (C. Smith, 2014). Similarly, coaches, athletic directors, and college presidents face pressures from students, alumni, fans, and politicians to produce winning teams. Since the adoption of its "Sanity Code" in 1948, the NCAA has enforced strict rules on amateurism among college athletes. While amateurism restrictions have softened by a small amount over time, from the middle of the 20th century until 2015, remuneration to college athletes has been restricted to basic athletic scholarships (R. A. Smith, 1993). Therefore, win-seeking college athletic programs have been limited to compete for talent using nonpecuniary rewards to attract recruits. Colleges have used practice facilities, living

amenities, academic and athletic reputations, access to elite coaches, and so on, to entice potential top athletes. Therefore, even small differences in relatively modest compensation for playing football under the guise of “cost of attendance” may influence college athletes’ school choices.

Since the approval of the additional cost-of-attendance stipend was approved, three databases of schools’ cost-of-attendance allowances have been published. These three data sets provide the opportunity to estimate the impact of differences in allowances across schools on recruiting for the 2015 NCAA Division I college football season, the first year this practice was permitted. In this study, we use these data to estimate the relationship between cost-of-attendance stipend differences across Division I Football Bowl Subdivision (FBS) schools and recruiting success. We find a strong relationship between cost-of-attendance allowances and recruiting success that is robust across multiple specifications and consistent across all data sources. The second section presents the data and estimation strategy. The third section presents the results. The fourth section concludes the article with a discussion of our findings.

## Data and Empirical Methods

Our analysis focuses on a simple and straightforward estimate of the relationship between cost-of-attendance stipends and Division I college football recruiting for the 2015 football season. Equation 1 reports the estimation model, which we estimate using ordinary least squares regression.

$$\begin{aligned} \text{Recruiting ranking}_{s2015} = & \beta_1 \text{ cost-of-attendance allowance}_{s2015} \\ & + \beta_2 \text{ recruiting ranking}_{s2014} + \theta \mathbf{X}_{s2015} + \eta \mathbf{N}_{s2010-2104} \\ & + \alpha + \varepsilon. \end{aligned} \tag{1}$$

Recruiting ranking is the ranking of the freshman recruiting class for each school(s) by Rivals.com (2015), a well-known and widely respected public high school scouting provider. While recruiting rankings are somewhat subjective, past empirical analyses indicate that recruiting rankings are an established meaningful proxy of recruiting class quality and correlate with performance (Caro, 2012; Langelett, 2003; Pitts & Evans, 2016).<sup>1</sup> The recruiting ranking for schools in year 2015 serves as the dependent variable as a measure of that school’s recruiting class quality for that year. The year 2015 is the first year in which colleges could use cost-of-living stipends to attract students. We also include 2014 Recruit Ranking as an independent variable to control for a school’s ability to recruit prior to the introduction of a stipend. Schools which attracted good recruits in 2014 were likely to have been similarly successful in 2015, even without a stipend. A simple univariate regression estimate of the previous year’s ranking on the 2015 ranking explains

almost 84% of the variance and the coefficient estimate is .98. One potential criticism of using this variable as a control is that previous recruits may have been able to foresee the addition of a stipend in 2014, and therefore the 2014 rankings are biased as such. However, the cost-of-attendance rule changes came about rather suddenly in January 2015, after the 2014–2015 season had concluded. Furthermore, even if the rule change had been speculated about in advance, schools were not able to promise full cost-of-attendance scholarships for at least one additional year. While a 2014 recruit might have assigned a positive probability to receiving a stipend in 2015, there existed no history to generate an expectation of how much such an award might be or how stipends would vary among competing programs.

The Cost-of-Attendance Allowance is one of three amounts reported by *CBS Sports*, *USA Today*, or *The Chronicle for Higher Education*. In April 2015, *The Chronicle of Higher Education* published the first list of financial-aid allowances for the 65 wealthiest NCAA institutions (Wolverton & Kambhampati, 2015). In August 2015, *CBS Sports* published a survey of all 129 FBS schools (Solomon, 2015) and *USA Today* published a survey of schools cost-of-attendance adjustments for 90 Division I schools, not all of whom field a football team at the Division I level (Berkowitz & Kreighbaum, 2015). Each database is based off surveys of schools and additional research to determine the potential amount of the stipends. In some cases, schools did not respond, responded with a range, or provided an uncertain amount; thus, there is no complete database of allowances for all Division I FBS institutions. Inspection of the data reveals much agreement with some disagreement where multiple data sets record an observation for a school; we expect this is likely due to different schools' self-reported responses and the changing of stipend allowances over the recruiting period. The databases also differ slightly in focus. Rather than determining which database might be superior, we estimated models using each database separately and in combination. It is also important to note that the data do not provide information as to how many players in a recruiting class receive the full cost-of-attendance amount or any amount less than that. Schools are not required to cover the full cost-of-attendance, and schools may offer none or only partial coverage of this amount. Schools may calculate lower cost of attendance for in-state students. When a range was provided, we included the highest amount in order to capture the maximum amount a school could use to entice top recruits to commit to its program. For the combined sample, we used the highest reported stipend payment of any database, for the same reason. Given the strong financial and political returns to winning at top FBS schools, we expect that most top-tier programs offer full cost-of-attendance scholarships to most, if not all, of its scholarship football players. Combining the data into a single dependent variable has the advantage of including observations unique to a single database, and no database perfectly overlapped the other databases. In an environment where schools are not completely forthcoming with information, gathering data from different sources expands the sample size for a more comprehensive estimate. In any event, as reported in the results below,

the estimated relationship between recruiting quality and stipend payments is consistent across all databases, separately and combined.

$X$  is a vector of conference indicator variables to control for the impact of unique conference characteristics on recruiting, with the SEC omitted to serve as a reference. Conferences have strong identities relating to geography, playing quality, and traditions that are important to college football players. For example, a student may want to play for an SEC school and thus may favor SEC offers from lower quality football teams within that conference over offers to play for a higher quality program in another conference.

$N$  is a vector of nonpecuniary factors that have been demonstrated to play a role in recruiting in the past, with all but one variable based on the school's experience over the preceding 5 years. Several researchers have examined the effectiveness of nonpecuniary factors on recruiting (e.g., Huffman & Cooper, 2012; Klenosky et al., 2001; Pitts & Evans, 2016; Treadway et al., 2014). Motivated by this literature, we chose variables to control for factors deemed to be influential on recruiting in the past. We include the college football team's winning percentage, number of conference championships, and number of top 25 finishes to estimate the impact of past team performance on attracting better players. We include average football revenues to capture the resources available to put into the football program that may attract recruits, such as the construction of high-end facilities, elite support personnel and coaches, and other amenities. Sanderson and Siegfried (2015) describe these assets as "complementary inputs" that are offered in lieu of direct compensation due to the severe restriction of payments to athletes. We expect academic quality to be a positive factor in recruiting, as it affects the value of the college degree that may be awarded by the school; thus, we include the entering freshman SAT Math scores to proxy for perceived academic quality of the institution. Lastly, we include the college head football coaching experience of the coach at the school. A more experienced coach has a history of demonstrated success that may attract recruits as well as the knowledge of how to recruit players.

$\alpha$  is a constant term,  $\beta$ s are coefficient estimates for individual variables,  $\theta$  is a vector of coefficient estimates for conference indicator variables,  $\eta$  is a vector of coefficient estimates of the nonpecuniary recruiting variables, and  $\epsilon$  is a random error term.

Table 1 reports the summary statistics for non-cost-of-attendance variables. Table 2 reports descriptive statistics for cost-of-attendance by conference, Power Five classification, data source, and in total. Not surprisingly, Power Five conferences have a higher mean stipend than non-Power Five conferences by approximately US\$1,000. The standard deviation of the Power Five is also much tighter: US\$1,071 compared to US\$1,954, and the difference between the greatest and smallest stipends is tighter among the Power Five. However, several non-Power Five schools have competitive cost-of-attendance scholarships, including the high scholarship for the sample (Cincinnati, US\$7,018, as reported by *USA Today*). In particular, the American Athletic Conference has a higher minimum, median, mean,

**Table 1.** Summary Statistics.

Variable	N	Mean	SD	Min	Max
2015 Recruiting ranking	113	59.69	36.84	1	129
2014 Recruiting ranking	113	58.16	34.29	1	123
School win %	113	52.33%	17.32%	13.87%	88.32%
School conference championships	113	0.60	0.95	0	3
School top 25 finishes	113	1.10	1.45	0	5
Football revenues (in millions)	113	US\$27.18	US\$22.25	US\$3.37	US\$108.56
SAT (freshman math)	113	646	63	510	786
Coaching experience	113	7.12	6.17	0	28

Note. Sample excludes service academies (Air Force, Army, and Navy). Fourteen additional Division I FBS schools were not included due to lack of data regarding cost-of-attendance allowance or recruiting ranking: Appalachian State, Central Michigan, Charlotte, Georgia Southern, Georgia State, Kent State, Louisiana-Lafayette, Middle Tennessee, Old Dominion, Rice, Troy, UAB, and Western Michigan. SD = standard deviation.

**Table 2.** Cost-of-Attendance Stipends by College Football Athletic Conference.

Conference	N	Min	Median	Mean	Max	SD	Max-Min
American Athletic Conference (AAC)	11	US\$2,500	US\$4,376	US\$4,235	US\$7,018	US\$1,452	US\$4,518
Atlantic Coast Conference (ACC)	14	US\$1,400	US\$3,400	US\$3,396	US\$6,018	US\$1,316	US\$4,618
Big 10	14	US\$2,354	US\$3,552	US\$3,651	US\$4,916	US\$866	US\$2,562
Big 12	10	US\$2,700	US\$4,263	US\$4,071	US\$5,100	US\$790	US\$2,400
Conference USA	12	US\$0	US\$1,000	US\$1,843	US\$6,060	US\$2,138	US\$6,060
Independent	2	US\$2,200	US\$3,350	US\$2,233	US\$4,500	US\$1,626	US\$2,300
Mid-American	11	US\$0	US\$3,177	US\$3,076	US\$4,486	US\$901	US\$2,886
Mountain West	10	US\$0	US\$3,720	US\$3,482	US\$5,486	US\$1,338	US\$5,486
Pac-12	12	US\$2,151	US\$3,521	US\$3,591	US\$5,941	US\$1,162	US\$3,790
Sun Belt	9	US\$0	US\$0	US\$1,052	US\$5,470	US\$2,120	US\$5,470
Southeastern (SEC)	14	US\$2,780	US\$4,246	US\$4,363	US\$5,666	US\$871	US\$2,886
Power Five	65	US\$1,400	US\$3,062	US\$3,780	US\$6,018	US\$1,071	US\$4,618
Non-Power Five	54	US\$0	US\$3,249	US\$2,810	US\$7,018	US\$1,954	US\$7,018
CBS Sports	112	US\$0	US\$3,586	US\$3,265	US\$6,082	US\$1,645	US\$6,082
USA Today	83	US\$0	US\$3,500	US\$3,178	US\$7,018	US\$1,631	US\$7,018
Chronicle	65	US\$1,400	US\$2,892	US\$3,148	US\$5,666	US\$1,060	US\$4,266
Total	119	US\$0	US\$3,574	US\$3,340	US\$7,018	US\$1,604	US\$7,018

Note. Schools not included: Air Force, Army, Central Michigan, Kent State, Louisiana-Lafayette, Middle Tennessee, Navy, Rice, Troy, and Western Michigan. Conference and total statistics are based on combined sample. SD = standard deviation.

and maximum stipend than Power Five members ACC, Big 10, and Pac-12; and only the SEC has a higher mean stipend. When it comes to cost-of-attendance support, the American Athletic Conference is every bit the contributor as Power Five members, at least from the perspective of the amount schools are permitted to allot to their athletes by their own guidelines.

## Results

We estimate two sets of models, a simple base specification and a full specification with more explicit control variables. We employ this strategy to ensure that any estimated effect is not an artifact of interactions of many variables included in the estimates. The first set, reported in Table 3, includes only the 2014 Recruiting Ranking and conference dummy variables. The second set, reported in Table 4, includes the base model plus the variables in vector N. The tables report the coefficient estimates along with robust standard errors that correct for detected heteroscedasticity. Variance inflation factors indicate that multicollinearity is not present.

Estimates indicate that each US\$1,000 in a school's cost-of-attendance allowance improves its recruiting ranking between 2.07 and 4.35 spots (note on interpreting regression coefficients: a higher ranking means a lower ordinal number, therefore a negative coefficient signals improvement). Another way to interpret the estimates is that every US\$230–US\$483 increase in cost of attendance is associated with a one-spot improvement in the recruiting ranking. The effect lies within a wide range, but even at the low end of the estimates the impact on the rankings is meaningful: A one standard deviation difference in cost of attendance (US\$1,604) is associated with approximately a three-spot difference in the recruiting ranking. For illustration, Tennessee's 2015 fifth-ranked recruiting class of 29 commits (including four 5-star, thirteen 4-star, and eleven 3-star commits) is three spots higher than Louisiana State University's (LSU) class of 25 commits (including four 5-star, eight 4-star, and eight 3-star commits). At the high end of the estimates, a one standard deviation difference in cost of attendance is associated with a seven-spot difference in the recruiting ranking.

Although the data sources differ in reported amounts across schools, the regression estimates are more alike than different. Table 5 presents a correlation matrix of the data by source, which shows a high correlation between reported costs of attendance. The *CBS Sports* and *USA Today* data are the most similar: This is not surprising, given that they both sought large samples of data around the same time. One reason the Chronicle data are relatively less correlated with the other data set is that its data were gathered at a much earlier date, and several schools adjusted their cost-of-attendance amounts since the initial publication of the data (New, 2015).

The regression estimates show a weaker cost-of-attendance effect in the CBS Sports data relative to the other sources. The inclusion of explicit controls that account for nonpecuniary impacts of recruiting dampen the stipend effect, but even

**Table 3.** Estimate of the Impact of Cost-of-Attendance Stipends on Recruiting Ranking (Basic).

Variable	Combined	CBS Sports	USA Today	Chronicle
Cost-of-attendance allowance	-0.00286 (3.19)**	-0.00265 (3.01)**	-0.00435 (4.82)**	-0.00314 (2.35)*
2014 Recruiting ranking	0.71501 (9.25)**	0.69912 (8.30)**	0.81865 (8.80)**	0.81241 (10.69)**
AAC	21.82189 (3.28)**	22.23698 (3.04)**	17.67695 (2.24)*	
ACC	2.81819 (0.76)	-0.92539 (0.25)	-0.95504 (0.24)	0.65685 (0.17)
Big 10	3.49232 (0.95)	4.73847 (1.17)	0.43749 (0.12)	0.02496 (0.01)
Big 12	4.76885 (1.11)	4.36976 (0.93)	1.87054 (0.35)	3.86426 (0.91)
Conference USA	12.84132 (1.81)	14.806 (1.95)	-13.8257 (0.91)	
Independent	1.34631 (0.16)	2.22793 (0.26)	-4.93353 (0.62)	-7.68955 (2.40)*
MAC	21.76048 (2.72)**	23.05064 (2.62)*	10.95478 (1.19)	
MWC	28.40968 (3.21)**	29.9611 (3.16)**	14.37087 (1.38)	
Pac-12	-0.96188 (0.22)	-0.71908 (0.16)	-7.19947 (1.62)	-3.61638 (0.86)
Sun Belt	16.06293 (1.88)	18.26616 (1.95)	0.09572 (0.01)	
Constant	18.28967 (4.00)**	17.34037 (3.76)**	24.81225 (4.81)**	15.87494 (2.75)**
Observations	113	106	79	65
Adjusted R <sup>2</sup>	.86	.86	.85	.74
US\$/ranking position	US\$350	US\$377	US\$230	US\$318

Note. Robust t-statistics are given in parentheses. AAC = American Athletic Conference; ACC = Atlantic Coast Conference; MAC = Mid-American; MWC = Mountain West.

\* $p < .05$ . \*\* $p < .01$ .



**Table 4.** Estimate of the Impact of Cost-of-Attendance Stipends on Recruiting Ranking (Full).

Variable	Combined	CBS Sports	USA Today	Chronicle
Cost-of-attendance allowance	-0.00243 (2.82)**	-0.00207 (2.33)*	-0.00342 (2.76)**	-0.00300 (2.14)*
2014 Recruiting ranking	0.49061 (4.70)**	0.46519 (4.12)**	0.56603 (4.05)**	0.60018 (6.09)**
School win%	-0.25846 (1.92)	-0.2707 (1.99)*	-0.15741 (1.03)	-0.40014 (2.23)*
School conference championships	-2.05411 (0.98)	-2.67131 (1.29)	-2.34479 (0.98)	0.68088 (0.30)
School top 25	0.63397 (0.41)	0.99647 (0.63)	-0.07465 (0.04)	0.93043 (0.45)
Revenues	-0.16889 (2.03)*	-0.15305 (1.67)	-0.20335 (2.39)*	-0.05203 (0.61)
SAT scores	-0.039 (1.27)	-0.04852 (1.34)	-0.02057 (0.67)	-0.03563 (1.31)
Coach experience	-0.30775 (1.74)	-0.27194 (1.50)	-0.36833 (1.95)	-0.05408 (0.26)
AAC	25.20355 (3.57)**	28.07194 (3.51)**	19.42791 (2.50)*	
ACC	3.81401 (0.83)	1.69048 (0.34)	0.03877 (0.01)	3.23827 (0.69)
Big 10	9.17918 (2.14)*	11.73241 (2.32)*	5.21943 (1.22)	5.68274 (1.38)
Big 12	7.34168 (1.79)	7.56304 (1.74)	4.93435 (1.01)	5.66247 (1.30)
Conference USA	15.85639 (2.11)*	19.77752 (2.45)*	-3.51425 (0.24)	
Independent	10.48512 (1.24)	12.97909 (1.38)	3.21698 (0.39)	0.35087 (0.08)
MAC	26.96791 (3.21)**	30.78118 (3.40)**	18.29129 (1.94)	
MWC	31.94293 (3.31)**	35.66394 (3.51)**	21.72522 (1.56)	
Pac-12	-0.49106 (0.11)	1.22377 (0.24)	-5.46129 (1.17)	-1.31736 (0.29)
Sun Belt	19.31 (2.26)*	23.64112 (2.59)*	8.53962 (0.81)	
Constant	73.03638 (3.72)**	76.5637 (3.54)**	63.11808 (2.97)**	67.739 (3.50)**
Observations	113	106	79	65
Adjusted R <sup>2</sup>	.87	.88	.86	.77
US\$/ranking position	US\$412	US\$483	US\$292	US\$333

Note. Robust t-statistics are given in parentheses. AAC = American Athletic Conference; ACC = Atlantic Coast Conference; MAC = Mid-American; MWC = Mountain West.

\*p < .05. \*\*p < .01

**Table 5.** Correlation of Data Sources.

	<i>CBS Sports</i>	<i>USA Today</i>	<i>Chronicle</i>
<i>CBS Sports</i>	1		
<i>USA Today</i>	0.90	1	
<i>Chronicle</i>	0.61	0.66	1

at its weakest estimated relationship, the effect remains meaningful and statistically significant. We also estimated specifications that employed various permutations of other potential control variables that we do not report in this article, but the estimated coefficients for cost of attendance were not meaningfully different from what we have reported here. The estimates are robust and not particularly sensitive to the choice of control variables.

## Discussion and Conclusion

Estimates of the impact of cost-of-attendance allowances on college football recruiting indicate that allotment differences are associated with recruiting quality. The estimates are statistically significant and robust across multiple specifications. Our findings are no doubt already old news to active participants in the recruiting game. That student-athletes are motivated by monetary incentives is not surprising. That cost-of-attendance allowances are correlated with college choices for athletes indicates that the estimates are not solely based on costs of living and represent a likely avenue for manipulation. While this study focused on the impact of FBS schools, the pressure is not just limited to top programs. In the lower tier Football Championship Subdivision, Liberty, North Dakota, and North Dakota State have all announced their intention to cover the full cost of attendance as a part of athletic scholarships (Associated Press, 2015).

Although the findings of this study indicate that cost-of-attendance stipends did impact recruiting, no attempt to manipulate the process is needed to explain the differences across schools. It is possible that innocent differences in cost-of-attendance stipends could be affecting college choice among athletes. However, the explicit words of and behavior participants in the recruiting process indicate that manipulation is taking place. Former University of Georgia Head Football Coach Mark Richt praised his university's administration for improving the school's cost-of-attendance during an alumni rally stating, "We've been very creative in getting our number to a good spot" (Emerson, 2015).<sup>2</sup> University of Alabama's Head Football Coach Nick Saban publicly expressed concern that institution-determined cost-of-attendance amounts could affect recruiting, "I think some people have manipulated their numbers because they've significantly changed from last year to this year, and that's not the spirit of the rule." Soon after he voiced his concerns, Alabama increased its cost-of-attendance estimate by 39% to a level more in line

with top conference rivals (Casagrande, 2015). We anticipate further manipulation of cost-of-attendance figures by colleges in order to attract top talent to improve winning and increase revenue, because it appears to be an effective strategy.

While the desire to reward student-athletes for contributing significant labor inputs to a product that generates significant revenue to universities is laudable, this form of compensation has external effects that distort the higher education market. Cost-of-attendance increases apply to all students at the university, not just to athletes; therefore, a consequence of this manipulation is that higher allowances have the potential to raise the scholarship costs to nonathletes and permit students to take on more student loan debt. That the desire to win football games is the impetus for the increase, rather than student need, is inconsistent with the motivation for determining the cost-of-attendance figure.

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### Notes

1. In 2015, the correlation between recruiting ranking and winning percentage was  $-.42$ . The correlation is statistically significant ( $p < .01$ ) and quite strong considering that the ranking represents one recruiting class of the least experienced members of the team.
2. Mark Richt would lose his job as coach at the conclusion of the 2015 season, after a regular season record of nine wins and three losses. His career winning percentage during 15 seasons as the head football coach was 74%. Despite his consistent record of winning, the expectations were higher than what he produced. The move highlights the pressure top college football programs face.

### References

- Associated Press. (2015, September 2). UND joins NDSU in paying stipends for scholarship players. *USA Today*. Retrieved from <http://www.usatoday.com/story/sports/ncaaf/2015/09/02/und-joins-nds-u-in-paying-cost-of-attendance-for-all-sports/71609024/>
- Berkowitz, S., & Kreighbaum, A. (2015, August 22). Cincinnati athletes lead in benefit boost from cost of attendance. *USA Today*. Retrieved from <http://www.usatoday.com/story/sports/college/2015/08/20/ncaa-cost-attendance-cincinnati-bearcats/32062729/>
- Caro, C. A. (2012). College football success: The relationship between recruiting and winning. *International Journal of Sports Science & Coaching*, 7, 139–152.

- Casagrande, M. (2015, July 28). How Alabama's cost-of-attendance scholarship jumped 39 percent. *AL.com*. Retrieved from [http://www.al.com/alabamafootball/index.ssf/2015/07/how\\_alabamas\\_cost-of-attendanc.html](http://www.al.com/alabamafootball/index.ssf/2015/07/how_alabamas_cost-of-attendanc.html)
- Clotfelter, C. T. (2011). *Big-time sports in American universities*. New York, NY: Cambridge University Press.
- Emerson, S. (2015, July 29). Georgia quietly increased its cost-of-attendance figure. *Atlanta Journal-Constitution*. Retrieved from <http://ugasports.blog.ajc.com/2015/07/29/georgia-quietly-increased-its-cost-of-attendance-figure/>
- Huffman, L. T., & Cooper, C. G. (2012). I'm taking my talents to . . . An examination of hometown socio-economic status on the college-choice factors of football student-athletes at a southeastern university. *Journal of Issues in Intercollegiate Athletics*, 5, 225–246.
- Klenosky, D. B., Templin, T. J., & Troutman, J. A. (2001). Recruiting student athletes: A means-end investigation of school-choice decision making. *Journal of Sport Management*, 15, 95–106.
- Langelett, G. (2003). The relationship between recruiting and team performance in Division 1A college football. *Journal of Sports Economics*, 4, 240–245.
- National Collegiate Athletic Association. (2015). *NCAA 2015–2016 Division I manual: Abridged sport-specific manual, football*. Indianapolis: The National Collegiate Athletic Association.
- New, J. (2015, August 12). More Money . . . If You Can Play Ball. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2015/08/12/colleges-inflate-full-cost-attendance-numbers-increasing-stipends-athletes>
- Pitts, J. D., & Evans, B. (2016). The role of conference externalities and other factors in determining the annual recruiting ranking of Football Bowl Subdivision (FBS) teams. *Applied Economics*, 48, 3164–3174.
- Rivals.com. (2015). *2015 team rankings*. Retrieved from <http://sports.yahoo.com/footballrecruiting/football/recruiting/teamrank/2015/all/all>
- Sanderson, A. R., & Siegfried, J. J. (2015). The case for paying college athletes. *Journal of Economic Perspectives*, 29, 115–138.
- Smith, C. (2014, December 22). College football's most valuable teams 2014. *Forbes.com*. Retrieved from <http://www.forbes.com/sites/chris-smith/2014/12/22/college-football-most-valuable-teams-2014/>
- Smith, R. A. (1993). History of amateurism in men's intercollegiate athletics: The continuance of a 19th-century anachronism in America. *Quest*, 45, 430–447.
- Solomon, J. (2015, August 20). 2015-16 CBS Sports FBS college football cost of attendance database. *CBS Sports*. Retrieved from <http://www.cbssports.com/collegefootball/writer/jon-solomon/25275374/-16-cbs-sports-fbs-college-football-cost-of-attendance-database>
- Treadway, D. C., Adams, G., Hanes, T. J., Perrewé, P. L., Magnusen, M. J., & Ferris, G. R. (2014). The roles of recruiter political skill and performance resource leveraging in NCAA football recruitment effectiveness. *Journal of Management*, 40, 1607–1626.
- Wolverton, B., & Kambhampati, S. (2015, April 9). At least 15 athletics programs to offer more than \$4,000 in extra aid to athletes. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/At-Least-15-Athletics-Programs/229229?hootPostID=a21861dd31ff9e2df39fe9bf0734e411>

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