The Impact of Basketball Malfeasance on the University and its Rankings

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Abstract:

Collegiate sports have a profound impact on a university beyond athletics. Successful athletics have been shown to have a positive impact on the institution. Likewise, athletic malfeasance has been shown to negatively impact the university. We analyze tournament bans in Division I college basketball as a signal for university quality in rankings (U.S. News and World Report's peer rankings), student quality, and other university measures. We find evidence that following a postseason tournament ban, applications from students in the top ten percent of their high school class decrease, some evidence that academic test scores decrease, and some evidence that the amount of alumni donations decrease. These results suggest that an athletic department's malfeasance leads to a decline in university quality. We do, however, find that peer rankings from faculty administrators fall the year of the ban, only to increase slightly two years after sanctions for athletic malfeasance.

JEL Codes: Z2, I2
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The data that support the findings of this study are available from the corresponding author, Kurt Rotthoff, upon reasonable request. Any mistakes are our own.

Introduction

Athletic departments have spillover effects on other aspects of an academic institution. Although they typically operate as separate entities (frequently siloed from the academic side of the institution), the decisions made in athletic departments may impact the entire school. It is often said that the visibility of an athletic program serves as a signal of a university's quality to potential students, alumni, and peer institutions. The university itself has been argued to have a country club effect (Jacob et al., 2018), which includes university athletic departments.

There are many studies that show how an athletic department's successes lead to benefits throughout the university. For example, Pope and Pope (2009) found that winning a football or basketball national championship increases the quantity and quality of applicants to the school. Collier et al. (2020) showed that applications and freshman enrollments increase at schools that make unexpected "Cinderella" runs in the NCAA Basketball Tournament. Eggers et al. (2021) also found that unexpected wins or upsets in football increased applications and student quality. Finally, Mulholland et al. (2014) further concluded that in the U.S. News and World Report's (USNWR) *America's Best Colleges* rankings, administrators and faculty provided higher peer ratings to schools with higher-ranked football programs.

However, not all publicity from an athletics program is beneficial. Groothuis et al. (2019) found that mean SAT test scores of incoming freshmen decreased when a university's basketball program was placed on probation by the NCAA. Further, Eggers et al. (2019 and 2020) noted that when athletic malfeasance occurred within football or basketball programs it had a negative impact on the university.

Our study expands and merges these different lines of research to determine first if there is a broader, university-wide impact on signals from the management of the athletic department,

as measured through athletic malfeasance in Division I collegiate basketball, and second whether that impropriety impacts both student metrics and peer rankings from the USNWR's annual report. Generally, we find that student quality falls by various metrics following detected malfeasance, but surprisingly, peer-ranking scores from the USNWR remain the same, and actually rise slightly, after the postseason tournament ban has been served. Although this result was unexpected, this could occur because after the malfeasance is reported, the school might invest more time and money into ensuring no other improprieties occur across the university.

Related Literature

There is extensive literature examining the relationship between university athletics and academics. One of the early studies was McCormick and Tinsley (1987), who showed a positive relationship between SAT scores and athletic success when examining football performance. Mixon (1995) revealed a similar positive relationship between basketball tournament games and student SAT scores. Further, Mixon, Treviño, and Minto (2004) noted a positive association between football win percentages and SAT scores, while Segura and Willner (2018) found a positive connection between increases in median SAT scores and having a Division I football program.

Although studies have established positive links between the two, the relationship between athletics and academics is not always clear. Bremmer and Kesselring (1993) found a positive, but not significant, association between athletic success and SAT scores. Tucker and Amato (1993) did not find consistent support that basketball success provides a boost to SAT scores (although they do support the idea that football success distributes higher-quality students towards those schools with successful programs). Later, Tucker and Amato (2006) studied a

multi-year sample of basketball success, allowing for lags in freshmen SAT scores, and discovered significantly positive results – but these results only held for the first half of the time period, prior to the introduction of Bowl Championship Series (BCS) football.

When analyzing athletic success and academic quality, it is also important to look at how these successes impact the distribution of students. Both Pope and Pope (2009) and Chung (2013) found that wins led to a greater response from lower-achieving students (based on SAT scores). Chung (2013) also reported a positive link between athletic success and SAT scores but notes that lower-scoring students are impacted more. Pope and Pope (2014) later expanded this study and discerned that students who were athletes, attended the school from out-of-state, Black, or male were the most likely to be impacted by a winning sports season. They further determined that SAT scores increased based on winning seasons, and this effect increased if the team continued to advance in postseason matches.

Student application numbers have also been analyzed, first by Murphy and Trandel (1994). They found that a football team's winning record had a positive (and significant) impact on the number of applications received, however, the results were small in magnitude. Smith (2008) further found similar results but discerned that merit-based criteria had a larger impact on potential students than athletic-based criteria. McEvoy (2005) also determined a positive and significant relationship between applications and sports; however, he found that the primary driver of this increase in applications was football success. Additionally, Caudill, Hourican, and Mixon (2018) noted that cutting a university's football program contracts the student applicant pool and lowers incoming class quality (measured by ACT scores).

When looking at unexpected basketball success, Collier et al. (2020) found that "Cinderella" runs in the NCAA Basketball Tournament led to higher applications and freshman

enrollment numbers at schools making these unexpected runs. When looking at unexpected football success in a game identified as an upset, Eggers et al. (2021) showed that both winning teams and losing teams saw an increase in applications.

In one study examining basketball malfeasance at the University of Louisville, the authors examine how the school employed several image-repairing strategies on social media to combat the negative attention that the university received from the scandal. According to the study, the school received a high volume of support on social media, indicating that users were receptive to the university's attempt to reduce the offensiveness of the malfeasance (Frederick and Pegoraro 2018). Further, to help address issues of malfeasance in college basketball, the NCAA formed the Commission on College Basketball in 2017, following an FBI investigation into apparel companies allegedly bribing high school athletes to attend specific universities. Acknowledging potential violations of NCAA policies, this Commission later implemented new strategies and stricter oversight protocols to maintain the integrity of college basketball and avoid potential malfeasance issues in the future. (Fortunato 2020).

Additional studies have attempted to examine the relationship between donor behavior and university athletics. Studies have shown that alumni donations are more likely to occur if the alumni are satisfied with their undergraduate experience. Both Rhoads and Gerking (2000), and Monks (2003) have shown that alumni are more likely to positively respond to intercollegiate athletics successes, with Rhoads and Gerking demonstrating that events like football bowls are viewed positively with basketball sanctions viewed negatively. This study further concluded that non-alumni giving is not impacted by short-term athletic success or playoff games. Humphreys and Mondello (2007) discovered that both football bowl games and basketball tournament appearances are associated with increases in restricted giving at public institutions (but not

associated with increases in unrestricted giving). They further find that only basketball tournament appearances are associated with increases in restricted giving at private institutions. Alternatively, Humphreys (2006) analyzed state appropriations and big-time football teams, finding that football success increases these appropriations.

From another perspective, the impact of an athletic department at a university is not only felt by incoming students but also by current students as well. Both Lindo et al. (2012) and Hernández-Julián and Rotthoff (2014) discovered that athletic success negatively impacts overall grades on campus. In contrast, Tucker (2004) showed that football success increases graduation rates, while Mixon and Trevino (2005) also demonstrated that both freshman retention rates and graduation rates have a positive relationship with football success – however, he does not find any link between basketball success and graduation rates.

There is also a literature studying the links between athletic success and school rankings. Lovaglia and Lucas (2005) noted an association between a highly visible athletics program and increased university prestige in a survey of students at one institution. However, Fisher (2009), in a separate study, found inconclusive evidence linking rankings and on-the-field performance. It has also been noted that championships affect academic rankings, but otherwise, on-the-field improvement from a sports team does not appear to have an impact on these metrics (Cox and Roden, 2010).

Additional literature has focused on whether athletic malfeasance has an impact on the academic profile of a university. The results are mixed. Hughes and Shank (2008) found that schools struggle to recover from scandals within a short-term period. Conversely, Smith (2015) observed that sanctions such as the loss of scholarships imposed on either basketball or football programs have no impact on the institution in terms of applications. Eggers et al. (2019 and

2020), however, showed that more intense sanctions like the ones we consider (postseason bowl bans in football, and postseason tournament bans in basketball), decreased applications, admittances, and enrollment of freshman students. Chressanthis and Grimes (1993) also showed a negative enrollment yield correlated with sanctions applied to a school. Groothuis, Eggers, and Parker (2019) further revealed that mean SAT test scores of incoming freshmen fall when a university's basketball program is placed on probation by the NCAA.

These malfeasance studies focus on infractions that impact the school moderately or severely for a time; however, there are studies that look at more extreme sanctions, like the impact of the NCAA's Death Penalty on a school. Specifically, Lawson (2021), Rooney and Smith (2019), and Johnson and McCannon (2022) all look at the lasting impact of these types of major penalties (of which, none are included in our data).

Lastly, there is also literature examining the role of athletics on peer evaluation scores. Mulholland, Tomic, and Sholander (2014) observed the impact of football success on a school's USNWR peer assessment score. They found that an increase in Associated Press (A.P.) votes, and being listed in the Coaches' poll for football, increased peer rankings. Additionally, they noted that just being a member of the Football Bowl Series (FBS) also positively affected peer assessment scores. Our study merges these last two strands of the literature, athletic malfeasance and USNWR peer assessment scores, by analyzing these events in NCAA Division I Basketball schools.

Data

To test the effect of known athletic malfeasance at a university, as measured by NCAA men's basketball tournament bans, we use data from 336 Division I programs from 1998 to

2018. These are all the schools that are eligible for the NCAA postseason “March Madness” men’s basketball tournament. The data is similar to Mulholland, Tomic, and Sholander (2014) from the USNWR, including peer assessment scores. We utilize the rankings provided in the USNWR because this publication has been ranking colleges for many years, and first included a peer ranking system in 1998. Additionally, the USNWR reports data on students in the top decile of their high school class, freshman retention rates, university acceptance rates, alumni giving, and both ACT and SAT scores measured at the 75^{th} and the 25^{th} percentiles.

The use of a peer assessment score allows us to measure whether a given school’s peer institutions penalize that school when they undergo an adverse event, such as malfeasance within their athletic department. The ranking’s peer assessment portion is conducted by a survey, sent to schools that share the ranking category of the institution in question. These surveys are then completed by high-ranking administrators at the peer institutions, including presidents, provosts, admissions deans, or other individuals in comparable positions within the university (Morse and Brooks, 2020). These individuals are asked to respond regarding the "undergraduate academic programs on a scale from 1 (marginal) to 5 (distinguished)." If the respondent does not feel comfortable rating a school, they are asked to respond with “don't know,” which does not factor into the average of the ratings. The responses from the survey participants are then utilized for the USNWR ranking for that year.

USNWR emphasizes the importance of using peer rankings: “Academic reputation matters because it factors things that cannot easily be captured elsewhere. For example, an institution known for having innovative approaches to teaching may perform especially well on this indicator, whereas a school struggling to keep its accreditation will likely perform poorly”

(Morse and Brooks, 2020). We suggest this measure will also show an additional link between the athletic department outcomes and overall school quality.

USNWR evaluations are sent in the spring of each year; therefore, Mulholland, Tomic, and Sholander (2014) referenced the most recent sports year that had already occurred for the purposes of the survey. Following their study, we also utilize the rankings that are measured nearest to the USNWR survey, and all the schools with identified athletic infractions fall within the National Universities ranking in USNWR. This category is defined by USNWR as those institutions which offer broad undergraduate programs and graduate programs at both the masters and doctoral levels with higher levels of research.

During the 21-year period of our study, from 1998-2018, there were 21 schools that received a postseason tournament ban in men's basketball, and one school was sanctioned twice, for a total of 22 bans. These bans were obtained from the NCAA website – which identifies the schools sanctioned for basketball malfeasance and the reason for the ban. These sanctions were enforced as a ban against postseason tournament play resulting from violations of rules laid out in the NCAA Division I Manual. In table 1, we list the schools that received basketball bans and the reasons for the ban.

The types of malfeasance that may result in sanctions include, but are not limited to, recruiting violations, improperly paying student-athletes, academic fraud, and loss of institutional control. According to the NCAA rules, violations are handled in a four-stage manner as outlined by Barnhart (2012). Firstly, the NCAA investigates the infractions that they believe occurred. Secondly, the NCAA charges the athletic program with the violations. Thirdly, the Committee of Infractions (COI) of the NCAA conducts a hearing. Fourth and finally, the COI deliberates and can impose sanctions. However, it should be noted that any sanctions levied

against a university athletics program are completely within the discretion and purview of the NCAA. The NCAA's discretionary authority also includes the option not to pursue sanctions against an institution, or to issue harsher or more lenient sanctions against peer universities for similar violations. This apparent discrepancy in the sanctioning process has been highlighted by many scholars who have questioned or challenged how the NCAA has addressed certain high-profile cases dealing with athletic malfeasance (Marsh 2008 and Davis 2016).

[Tables 1]

The summary of each dependent variable we use is reported in table 2. In the first three rows, we report various measures of the peer rankings. Initially, we report the mean peer score for a school, which was 3.0, with a minimum of 1.4 and a maximum of 4.9. We further report the change in peer rankings between each year, finding very little difference in scores between years. This indicates that roughly the same number of schools increased, as well as decreased, peer rankings for a mean of 0.016. In absolute value terms, the mean change is still small and equal to 0.077, suggesting that a school's reputation as measured by peer rank only changes slightly each year.

[Table 2]

We further use two measures of alumni giving in our analysis. Our first measure indicates the percentage of alumni that donate to their alma mater in a given year. The mean percent giving is 15%, with a maximum of 100% and a minimum of 1.5% of alumni donating each year. Our second measure is the average amount that is given per alumni, with a mean of $95.29. This amount ranges from $1.00 to $292.00. These two measures can be used to test the Sanderson and Siegfried (2017) hypothesis that athletics may influence private donations.

We additionally use multiple measures of student success and academic quality in our analysis. Our first qualifying measure is the acceptance rate at a university, which measures the selectivity of the school. This measure is calculated by the number of students that are admitted to a school, divided by the number of students that applied to the institution. The mean acceptance rate for schools in our study is 65%, and this figure ranges between 2% and 100%.

We also measure the academic quality of incoming students by the percentage of high school graduates who were ranked in the top ten percent of their class. We find that the average percentage of students enrolling from the top ten percent of their high school class is 38% for all schools, and this figure ranges between 2% and 99%. This measure illustrates that student quality between universities varies widely.

We further measure the academic quality of students enrolling at a university by examining both the American College Testing (ACT) and the Scholastic Aptitude Test (SAT) scores of students, measured at the 25^{th} and 75^{th} percentile of their incoming class. The mean ACT test score of a 25^{th} percentile student is 20.7, and the mean test score of a 75^{th} percentile student is 25.8. An ACT test score of 21 is in the 57^{th} percentile of all test takers, while a score of 26 is in the 82^{nd} percentile of all test takers. The mean SAT test score of the 25^{th} percentile student is 1082, and an SAT score of 1038 is in the 56^{th} percentile of all test takers. At the 75^{th} percentile, the mean SAT test score is 1242, or in the 82^{nd} percentile of all test takers. Most schools reported either the ACT or SAT measures and only a few schools reported both measures. In our SAT sample, there are 222 schools and in the ACT sample, there are 162 schools. The SAT sample consisted of 13 schools that were banned from postseason tournaments, while the ACT sample consisted of 12 schools also banned from postseason tournaments.

The USNWR additionally reports an aggregate Student Selectivity ranking that ranges between 1 and 300, with 1 being the highest ranked school and 300 being the lowest ranked school. This measurement is a combination of the "math and evidence-based reading and writing portions of the SAT and the composite ACT scores", coupled with "high school class standing in the top 10%." In some years prior to 2019, this measurement has also included the acceptance rate of the institution (Morse, Brooks, and Mason, 2018). The average rank for this category is 83.2, with a minimum of 1 and a maximum of 300. In previous research, athletics has been shown to affect student quality; therefore, we use the student measures outlined above to determine if athletic malfeasance also subsequently affects student quality measures.

Lastly, there are some schools on this list of postseason bans that are not likely to make the postseason tournament. Given that some of these schools do not often make the tournament, getting a postseason tournament ban may not be a real penalty (and thus unlikely to have any real impact on the metrics we are measuring). To provide additional insights and as a robustness check (which we integrate into the tables in the next section), we use a subjective measure of excluding the schools that are not likely to make the tournament each year. We then see if removing the schools with a low likelihood of making the tournament changes the overall estimates (labeled as the *Subset*). The subset of schools includes all those listed in Table 1 excluding St. Bonaventure, Southern Miss, UCF, SMU, and Gardner Webb. Since these schools have infrequent tournament appearances, we hypothesize that excluding these institutions from the subset will strengthen our results from the schools that feel the impact of a postseason penalty most acutely.

Methods and Results

To identify the years that resulted in a postseason tournament ban, we set up a dummy variable equal to one if a school received an NCAA postseason ban. In our analysis, we include a dummy variable equal to one the year of the tournament ban to measure the influence of the detected malfeasance and any subsequent postseason ban on the various dependent variables tested. We also include one lead variable the year before the tournament ban and two lag variables after the ban to measure if the detected malfeasance has an impact before the actual ban (these events are often announced before the ban occurs, so the impact on the school could start before the actual ban) or have a lasting effect on the university after the ban.

The model we estimate is:

$$Y_{it} = \beta_1 Ban_{t-1} + \beta_2 Ban_t + \beta_3 Ban_{t+1} + \beta_4 Ban_{t+2} + \gamma U + \delta Y + \varepsilon$$

We use a fixed effect regression technique to control for differences between universities and over time. The university fixed effect, *U,* controls for all university characteristics that are time-invariant, including whether the school is religious, private, or public. The year fixed effects, *Y*, control for changing demographics of students and macroeconomic conditions that change over time. Additionally, we do not include control variables for university quality that changes over time, because our hypothesis suggests that athletic malfeasance serves as a signal for university quality and are thus endogenous.

Lastly, we do this both for the full sample and the subset of schools as a robustness check. For the full sample, all schools in table 1 are included. For the subset we use an objective measure to find the schools that are not likely to make the tournament on a consistent basis (if a team was not going to make the postseason tournament, then receiving a postseason tournament ban is not really a penalty). As such, if schools that are not likely to make the postseason tournament are included in the regression estimating the impact of a penalty, which would not

really be a penalty to them, we would expect biased estimates towards more insignificant results. This means that potentially more significant results could be measured at the schools that would be impacted by a postseason ban. So as a robustness check, we have columns with a subset of this data excluding St. Bonaventure, Southern Miss, UCF, SMU, and Gardner Webb.

[Table 3]

In table 3, we report the results of athletic malfeasance on the USNWR peer ranking. In columns one and two, we report the effect on the yearly change in peer score. Column one includes only the bans with one lead and two lags, as well as school and year fixed effects. In column two, we add school control variables, which include the percent of alumni giving, the amount of alumni giving, percent of freshman from the top ten percent of their class, acceptance rate, freshman retention, and student selectivity rank. Surprisingly, we find that a change in peer rankings is unaffected by the tournament ban, suggesting that presidents, provosts, and admission officers do not take athletic malfeasance into account when ranking their peer institutions.

However, when looking at the subset of schools in columns three and four (again, these exclude St. Bonaventure, Southern Miss, UCF, SMU, and Gardner Webb) we find that when controlling for school fixed effects, yearly effects, and school controls, there is a positive and significant (at the five percent level) impact of the tournament ban on peer assessment scores. In this subset, scores fall by 0.025 the year of the ban, but subsequently increase by 0.045 two years after the ban (offsetting the loss the year of the ban). Therefore, while a post season ban seems to negatively impact these schools, the effect of that event appears to be short-lived.

[Table 4]

In table 4, we report the effects of malfeasance on alumni giving. Overall, we find no economically or statistically significant change in the percentage of alumni who donate annually to their university after athletic malfeasance is detected at a school. We do, however, find that the average amount donated to a university decreases by $9.60 the year before the ban, decreases by $12.80 the year of the tournament ban, decreases by $13.00 the year after the ban, and decreases by $11.40 the second year after the ban. Although none of these results are individually statistically significant, all the coefficients are jointly statistically significant. In terms of magnitudes, comparing the average giving of $100 a year to our coefficients, we find that postseason bans lead to a 10% to 13% decrease in alumni giving in the years around a tournament ban. Note that these magnitudes are higher with the full sample than they are with the subset, showing that although there is no real penalty to a school that would not have made the tournament – their donor base does not agree, and penalizes that school more than the institutions that face a true postseason penalty.

[Table 5]

Acceptance rates and freshman retention rates are presented in table 5. We find that university acceptance rates and freshman retention rates are unchanged by a tournament ban when including all schools. However, when looking at the subset of schools, we find a significant negative impact on freshman retention rates the year leading up to the ban and the year of the ban. Typically these sanctions are announced before they occur, and it appears students notice the ban in the following year, leading the school's freshman retention rate to fall.

[Tables 6]

In tables 6, 7, and 8, we report the influence of postseason bans on student academic quality. In table 6, we report the influence of tournament bans on the percent of students from the

top ten percent of their high school class and the USNWR Student Selectivity Rank. We find that a tournament ban lowers the amount of top academically performing students at a university by 4.4% the year before the ban, by 3.5% the year of the ban, by 2.7% the year after the ban, and 2.3% two years after the ban, as measured by being in the top 10% of their high school class. In terms of magnitude, this is an 11% reduction the year before the ban and diminishes over time to 6% reduction two years after the ban evaluated at the mean of 38.5%. Additionally, we find the USNWR selectivity rank goes up by 8.1 the year before the tournament ban and 9.9 the year of the ban, indicating a lower rank on a scale from 1 being the highest to 300 being the lowest. When analyzing the subset of the data, we continue to find a marginally bigger impact on all of the above results.

[Tables 7 and 8]

With the data that have SAT scores available (table 7), we find no statistically significant changes in test scores at either the 75th or 25th percentile. Although the data, which includes the SAT and or ACT schools, have essentially the same number of sanctioned schools, the SAT subset is a larger sample, incidentally, a smaller percentage of schools are sanctioned in this subset. When analyzing the subset of universities that report ACT test scores (table 8), we find that a tournament ban lowers students' test scores in the 75th percentile by -0.451 when evaluated at the mean of 26, a decrease of 1 unit moves from the 82nd percentile to the 78th percentile of overall test-takers. When looking at the subset of schools that face a true postseason penalty, this magnitude doubles and becomes significant at the one percent level. We further find that a tournament ban lowers students' test scores in the 25th percentile by -0.638 the year of the ban. When evaluated at the mean of 21, a decrease of 1 unit moves from the 58th percentile to the 51st percentile of overall test-takers. Lastly, we find that a tournament ban decreases students' test

scores in the 25th percentile by about 0.34 two years after the ban. Again, these magnitudes and statistical significance are larger and more significant within the subset of schools facing a true tournament ban, suggesting that athletic malfeasance has a great effect on the schools that are more likely to make the tournament.

Ultimately, we find that the overall effects of athletic malfeasance are that the academic quality of students falls, average alumni giving decreases, and student selectivity rankings get worse (the number goes up). When looking specifically at the subset of schools that face a true postseason penalty, their peer rankings are also negatively affected (although only temporarily). However, the schools that do not face a true postseason penalty, because they were unlikely to make the tournament, see smaller student-level impacts, but a larger negative donation impact.

Conclusion

Our study demonstrates that an NCAA postseason men's basketball tournament ban reduces the academic quality of students opting to attend the sanctioned university and reduces the amount of alumni giving at the school. Given the negative media attention surrounding a postseason ban, these events may serve as a signal to prospective students and alumni regarding the current quality of the university. These statistics show that malfeasance in college athletics can have significant detrimental effects on non-athlete students, and the university as a whole. Our findings add further support to the theory that university athletics are indeed an amenity or a signal that students use in their college choice decision. Our results suggest an Anti-Flutie effect exists for students and alumni following detected athletic malfeasance at a university.

Although athletic malfeasance negatively affects students and alumni, there is very little impact on peer schools as demonstrated by the USNWR peer rankings (with a slightly lower

rank the year of the ban, which then increases again two years after the ban). This outcome could show that the sanctioned university, and its administration, are willing to penalize bad behaviors, then learn from those behaviors after the event occurs.

When limiting the sample to the schools that have a high likelihood of making the postseason tournament, by excluding schools not likely to make the postseason – in which a postseason ban has little effect on their program, we find that the results are strengthened. Changes in peer rankings are significant, as freshman retention rates fall at schools that feel the effect of the sanction. Additionally, the number of freshmen in the top 10 percent of the class, a selectivity measure at these schools, gets worse. Further, students scoring in the75^{th} and 25^{th} percentile of ACT scores falls as well. However, we do find that all schools see a decrease in donations from the event, but these donations appear to fall more at schools that do not actually have a real effect from the postseason ban (the excluded schools).

Our research also helps to answer the question posed by Sanderson and Siegfried (2018) "How have over 100 of the top 128 athletics departments persuaded their university presidents and trustees to continue devoting scarce general funding to intercollegiate sports? When these institutions incur financial losses on athletics, universities seem to double down, spending even more on salaries for coaches and improving physical facilities, rather than viewing losses as a signal to redeploy assets and efforts." Sanderson and Siegfried offer three answers to the above question: first, intercollegiate athletics might attract greater appropriations from state legislators; second, intercollegiate athletics may boost private donations; and third, high-profile sports programs, like other campus amenities, may attract more applicants and thus additional enrollment. Ultimately, collegiate sports are an exceptionally visible aspect of a university and

athletic malfeasance, culminating in a highly publicized men's basketball tournament ban, can have detrimental ramifications on an institution's overall academic profile.

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Table 1: List of NCAA Men's Basketball Tournament Bans

Season	University	Year of Ban	Reason for Ban
1999-2000	University of Minnesota	2000	Academic Fraud Self-Imposed Ban
2000-01	New Mexico State University	2001	Academic Fraud, Unethical Conduct, Recruiting Violations Self-Imposed Ban
2000-01	University of Nevada Las Vegas	2001	Improper Recruiting Inducements, Extra Benefits, Unethical Conduct, Failure to Monitor NOT Self-Imposed Ban, Upheld on Appeal
2002-03	Fresno State University	2003	Academic Fraud Self-Imposed Ban
2002-03	University of Georgia	2003	Academic Fraud, Unethical Conduct, Improper Benefits Self-Imposed Ban
2002-03	University of Michigan	2003	Improper Benefits, Gambling Self-Imposed Ban
2002-03	St. Bonaventure	2003	Eligibility Violations, Lack of Institutional Control, Unethical Conduct Conference-Imposed Ban
2003-04	Baylor University	2004	Lack of Institutional Control, Unethical Conduct Self-Imposed Ban
2003-04	Gardner-Webb University	2004	Lack of Institutional Control, Eligibility Violations, Extra Benefits, Unethical Conduct NOT Self-Imposed Ban
2004-05	The Ohio State University	2005	Improper Benefits, Impermissible Academic Assistance, Failure to Monitor Self-Imposed Ban
2005-06	Fresno State University	2006	Recruiting Violations Self-Imposed Ban
2004-05	St.John's (New York)	2005	Impermissible Benefits Self-Imposed Ban (This school is not included in our sample)

2009-10	University of Southern California	2010	Improper Benefits Self-Imposed Ban
2012-13	Texas Southern University	2013	Lack of Institutional Control, Academic Improprieties, Eligibility Violations, Repeat Offender Status NOT Self-Imposed Ban
2012-13	University of Central Florida	2013	Recruiting Violations, Benefits Violations, Unethical Conduct, Lack of Institutional Control NOT Self-Imposed Ban
2014-15	University of Arkansas	2015	Eligibility Violations, Academic Eligibility Issues NOT Self-Imposed Ban
2014-15	Syracuse University	2015	Lack of Institutional Control, Academic Fraud, Extra Benefits, Booster Activity Violations, Failure to Follow Drug Test Regulations Self-Imposed Ban
2014-15	University of Southern Mississippi	2015	Academic Fraud, Falsifying Documents, Failure to Monitor Self-Imposed Ban
2015-16	University of Southern Mississippi	2016	Academic Fraud, Falsifying Documents, Failure to Monitor Self-Imposed Ban
2015-16	University of Missouri Columbia	2016	Failure to Monitor Program, Impermissible Benefits Self-Imposed Ban
2015-16	Southern Methodist University	2016	Academic Fraud, Unethical Conduct NOT Self-Imposed Ban
2015-16	Louisville	2016	Sex Scandal Self-imposed Ban

Table 2: Summary Statistics

	Mean (Standard Deviation)	Minimum	Maximum
Peer Ranking	3.022 (0.634)	1.4	4.9
Change in Peer Ranking	0.016 (0.126)	-1.4	1.3
Absolute Value Change in Peer Ranking	0.077 (0.110)	0	1.4
Percent Alumni Giving	14.78% (10.75)	2%	100%
Amount Alumni Giving	$95.287 (67.036)	$1	$292
Acceptance Rate	64.789% (21.834)	1%	100%
Freshman Retention	80.96% (8.499)	44%	99%
Student Selectivity Rank	83.193 (62.976)	1	300
Freshman Top 10%	38.503% (24.614)	2%	99%
ACT Test 25th Percentile	20.655 (3.002)	13	35
ACT Test 75th Percentile	25.790 (3.021)	16	35
SAT Test 25th Percentile	1038.144 (141.478)	1082	1460
SAT Test 75th Percentile	1242.336 (132.619)	1242	1600

Table 3: Peer Effects

Variable	Change in Peer Rank All Bans	Change in Peer Rank All Bans	Change in Peer Rank Subset	Change in Peer Rank Subset
Lead: Tournament Ban	0.025 (0.022)	0.023 (0.029)	0.023 (0.029)	-0.001 (0.033)
Tournament Ban	-0.004 (0.17)	-0.008 (0.021)	-0.008 (0.21)	-0.025** (0.012)
Lag: Tournament Ban	-0.070 (0.049)	-0.081 (0.062)	-0.081 (0.062)	-0.022 (0.027)
Lag2 Tournament Ban	0.035 (0.023)	0.021 (0.023)	0.021 (0.024)	0.045** (0.021)
Constant	0.035** (0.006)	0.34** (0.006)	0.034** (0.006)	-0.051 (0.087)
School fixed Effects	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes
School Control Variables	No	Yes	No	Yes
R-sq Within Between Overall	 0.027 0.023 0.025	 0.026 0.015 0.024	 0.026 0.018 0.024	 0.029 0.001 0.014

All Ban Schools=335 Subset Ban Schools=331 Years=20
(clustered standard error in parentheses)
*significant at the 90% level. **significant at the 95% level.

Table 4: University Effects

Variable	Percent Alumni Giving All Bans	Percent Alumni Giving Subset	Amount Alumni Giving All Bans	Amount Alumni Giving Subset
Lead: Tournament Ban	1.004 (1.170)	0.850 (1.430)	-9.614 (10.719)	-4.682 (10.719)
Tournament Ban	1.547 (1.131)	1.378 (1.492)	-12.807 (8.648)	-5.663 (9.486)
Lag: Tournament Ban	1.879 (1.230)	1.958 (1.649)	-13.001 (9.694)	-6.781 (10.202)
Lag2 Tournament Ban	1.130 (1.019)	1.131 (1.336)	-11.423 (7.755)	-7.725 (8.717)
Constant	17.994** (0.428)	18.048** (0.429)	100.423** (2.973)	100.909** (2.9992)
School fixed Effects	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes
R-sq Within Between Overall	 0.238 0.023 0.038	 0.242 0.024 0.038	 0.018 0.023 0.001	 0.017 0.053 0.001

All Ban Schools=335 Subset Ban Schools=331 Years=21
(clustered standard error in parentheses)
*significant at the 90% level. **significant at the 95% level.

Table 5: University Effects

Variable	Acceptance Rate All Bans	Acceptance Rate Subset	Freshman Retention Rate All Bans	Freshman Retention Rate Subset
Lead: Tournament Ban	1.175 (2.265)	0.657 (2.457)	-0.708 (0.762)	-1.747** (0.824)
Tournament Ban	1.509 (2.587)	0.934 (3.301)	-0.287 (0.516)	-0.999** (0.469)
Lag: Tournament Ban	-0.299 (2.264)	-0.332 (3.010)	-0.046 (0.571)	-0.502 (0.596)
Lag2 Tournament Ban	1.853 (1.848)	2.521 (2.314)	0.054 (0.605)	0.380 (0.623)
Constant	71.776** (0.723)	71.777** (0.725)	79.340** (0.185)	79.410** (0.186)
School fixed Effects	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes
R-sq Within Between Overall	 0.154 0.004 0.023	 0.152 0.004 0.021	 0.133 0.003 0.006	 0.131 0.000 0.006

All Ban Schools=335 Subset Ban Schools=331 Years=21
(clustered standard error in parentheses)
*significant at the 90% level. **significant at the 95% level.

Table 6: Student Academic Quality Effects

Variable	Freshmen Top 10 Percent All Bans	Freshmen Top 10 Percent Subset	Student Selectivity Rank All Bans	Student Selectivity Rank Subset
Lead: Tournament Ban	-4.425** (1.750)	-4.829** (2.460)	8.101* (5.325)	12.451** (4.286)
Tournament Ban	-3.470** (1.437)	-3.453** (2.042)	9.916** (4.848)	16.264** (5.192)
Lag: Tournament Ban	-2.665** (1.270)	-3.237* (1.883)	7.876 (5.389)	17.365** (4.364)
Lag2 Tournament Ban	-2.306* (1.388)	-1.999 (1.879)	5.056 (4.798)	10.903** (5.018)
Constant	31.201** (0.507)	31.211** (0.509)	93.747** (2.603)	93.596** (2.609)
School fixed Effects	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes
R-sq				
Within	0.081	0.083	0.024	0.024
Between	0.016	0.019	0.000	0.001
Overall	0.000	0.000	0.003	0.002

All Ban Schools=335 Subset Ban Schools=331 Years=21
(clustered standard error in parentheses)
*significant at the 90% level. **significant at the 95% level.

Table 7: Student Academic SAT Test Score Effects

Variable	SAT Test 75th Percentile All Bans	SAT Test 75th Percentile Subset	SAT Test 25th Percentile All Bans	SAT Test 25th Percentile Subset
Lead: Tournament Ban	9.706 (8.902)	8.130 (12.308)	3.194 (8.348)	-1.397 (10.957)
Tournament Ban	13.055 (8.042)	11.947 (12.170)	1.872 (10.473)	-1.501 (14.457)
Lag: Tournament Ban	8.942 (7.964)	7.561 (11.580)	4.895 (6.761)	2.349 (9.685)
Lag2 Tournament Ban	5.821 (5.197)	4.445 (7.149)	1.677 (3.570)	-0.450 (4.748)
Constant	1225.885** (3.568)	1226.035** (3.593)	1020.29** (3.570)	1020.40** (3.439)
School fixed Effects	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes
R-sq Within Between Overall	 0.103 0.033 0.002	 0.102 0.034 0.001	 0.103 0.030 0.002	 0.103 0.030 0.002

For SAT specifications: All Ban Schools=222 Subset Ban Schools=219 Years=21
(clustered standard error in parentheses)
*significant at the 90% level. **significant at the 95% level.

Table 8: Student Academic Test ACT Score Effects

Variable	ACT Test 75th Percentile All Bans	ACT Test 75th Percentile Subset	ACT Test 25th Percentile All Bans	ACT Test 25th Percentile Subset
Lead: Tournament Ban	-0.565 (0.427)	-1.121** (0.291)	-0.401 (0.288)	-0.736** (0.302)
Tournament Ban	-0.451* (0.272)	-0.954** (0.095)	-0.638** (0.286)	-1.036** (0.279)
Lag: Tournament Ban	-0.182 (0.347)	-0.752** (0.193)	-0.312 (0.275)	-0.603* (0.341)
Lag2 Tournament Ban	-0.486 (0.410)	-1.059** (0.152)	-0.336** (0.254)	-0.509** (0.151)
Constant	25.237** (0.478)	25.241** (0.122)	19.843** (0.147)	19.848** (0.147)
School fixed Effects	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes
R-sq Within Between Overall	 0.257 0.202 0.042	 0.260 0.174 0.036	 0.259 0.231 0.048	 0.260 0.201 0.043

For ACT specifications: All Ban Schools=162 Subset Ban Schools =159 Years=21
(clustered standard error in parentheses)
*significant at the 90% level. **significant at the 95% level.