NCAA March Madness and Academic Peer Rankings

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Spring 2026

Abstract
Building on previous investigations of the relationship between athletic success and school quality, we analyze the effect of appearances, wins, and surprise "Cinderella" runs in the NCAA men's basketball tournament on the peer assessment score of the U.S. News and World Report's annual rankings. We find that reaching the Sweet Sixteen is associated with a peer score *increase* of 0.3 percent for National Universities, which is almost equal to the average *decline* witnessed by National Universities. Peer scores increase by 2.2 percent for National Liberal Arts Colleges earning a Sweet Sixteen birth, which is 6.1 times the average *decline* in our National Liberal Arts Colleges sample. Schools making a Cinderella run see a positive boost relative to non-Cinderella teams.

Keywords: Academic Rankings, Peer Rankings, Basketball Tournament, Cinderella Runs
JEL: Z2, I23, L83

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I. Introduction

The relationship between academics and athletics at four-year degree institutions is oft debated. Athletic programs are expensive to run, and the majority of athletic departments do not contribute positively, at least financially, to the university. Additionally, they put pressure on the student-athletes that rival those of professional athletes (Rotthoff and Sanbower, 2016). For these reasons, large athletic programs can be seen as detrimental to a university's educational mission. On the other hand, given the popularity of college athletics and commensurate media coverage, athletic programs can be the fastest way to draw national attention to the institution. Institutions can "tell their story" to a much wider audience, whether in short promotional spots highlighting the institution during televised games or in extensive, national press coverage of underdog teams when they make it big.

In 1939, one of the founding members of the Big Ten conference, and multiple-time Football champion of the Big Ten, the University of Chicago, cut its football program, worrying that it conflicted with the school's educational mission.[1] Jacob, McCall, and Stange (2018) find that most colleges are more like country clubs; they cater to consumption amenities such as student activities, sports, and dormitories, whereas only high-achieving students care about academic quality. Athletic success has been shown to be a windfall, allowing for increased applications and higher yields (see Pope

[1] The University of Chicago left the Big Ten completely in 1946, but brought football back in 1969 as a member of the NCAA's Division III which does not offer athletics scholarships.

and Pope, 2009 and Collier et al. 2020, both discussed in detail in the next section). This effect is known as the Flutie-Factor. However, the students attracted by these athletic successes do not always come from the most academically prepared group. Likewise, athletic malfeasance (the inverse of their successes) has a negative impact on student recruitment and no change in the academic preparation of students. The evidence shows that athletics brings national attention to the university and its potential students. However, given the tension between academics and athletics, it is far from settled as to how academic administrators view athletic success.

In a 2014 study Mulholland, Tomic, and Sholander found a Flutie-Factor for peer assessment scores – football success leads to higher peer assessment scores (peer academic rankings) in the U.S. News and World Report's (USNWR) annual *America's Best Colleges* rankings. This link between academic reputation, through peer assessment rankings, and college athletics is still relatively understudied. In Mulholland et al. (2014), football success was measured via AP and Coaches' Poll votes. An inherent limitation of this approach is that schools receiving votes in either of these are all large, well-known institutions. In this study, we expand their work beyond football – specifically focusing on basketball, where smaller, lesser-known schools more often appear on the national stage in the NCAA tournament. For smaller schools, athletics provide a chance to enter the national spotlight and draw attention to positive aspects of their institution in a way that is normally not achievable. If attention is truly beneficial, then we expect to see the effect of success to be most pronounced for the smallest schools, the ones that are least often in national news and are less well-known on average.

In our preferred specification, we find that National Universities and National Liberal Arts Colleges, witness an increase of 0.008 (about 0.3 percent of the mean), and 0.061 (about 2.1 percent of the mean), respectively, in their peer assessment score in the following edition of USNWR's *America's Best Colleges* when they make it to the Sweet Sixteen of the NCAA basketball tournament. Because the mean year-over-year change in peer scores is only -0.01 for both National Universities and Liberal Arts schools, reaching the Sweet Sixteen is associated with a peer score *increase* that is almost equal to the *decline* witnessed by the institutions in our sample for National Universities. The peer score increase witnessed by National Liberal Arts Colleges is 6.1 times the decline in our National Liberal Arts sample.

Regional Universities do not see any statistically significant change from Sweet Sixteen appearance but witness a 0.024 (0.9 percent of the mean) increase in their peer-assessment score when they make it to the final four of the NCAA basketball tournament. For Regional Universities, reaching the final four is associated with a peer score increase that is 4.8 times larger than the mean year-over-year *decrease (-0.005)* witnessed by Regional Universities. Our findings suggest that the "premium" from athletic performance is dramatically larger for the schools that are the less well-known.

We further investigate these results by conducting two event studies. The first constructs the mean peer assessment score change of those that make a Sweet Sixteen appearance (treated) minus the mean for those that do not (not treated). We find that the treated groups witness larger, positive increases (or smaller decreases) in their peer scores than schools that are not treated. Second, we analyze the experience of the eight

institutions who earn their first ever Sweet Sixteen appearance of our sample period. In the treatment year, six of these eight institutions witness an increase in their peer score. This is the largest number of annual increases witnessed by this group of schools. The other two schools witness no change. None of the schools witness a decline in the treatment year.

We then investigate how "Cinderella" runs in the NCAA's basketball tournament, found in Collier et al. (2020), affect peer assessment scores in the USNWR system. We find that Cinderella teams that make the NCAA tournament realize a 2.1 percent larger bump than their non-Cinderella competitors. We find this 2.1 percent bump for Cinderella teams that make the Sweet Sixteen relative to non-Cinderella Sweet Sixteen teams and a 3.3 percent bump for Cinderella teams that make the final four, again, relative to their non-Cinderella final four competitors.

The next section will look at the related literature, followed by a description of the data and methodology utilized in this study. The fourth section will discuss the results. Generally, we find that making the NCAA's March Madness basketball tournament does not increase peer assessment scores, however, a sweet-sixteen appearance in the tournament does. We also show that schools on a Cinderella run witness a higher peer assessment bump for an appearance in the opening round, the Sweet Sixteen, and the final four, relative to non-Cinderella schools at these same points in the tournament. In the last section, we conclude.

II. Related Literature

One of the earliest studies linking academics and athletics was by McCormick and Tinsley (1987). When looking at football performance, they find a positive link between athletic success and the SAT scores of enrolled students. A similar positive relationship between basketball tournament games and student SAT scores is reported by Mixon (1995). More recently, Mixon, Treviño, and Minto (2004) find a positive relationship between football win percentages and SAT scores, Segura and Willner (2018) show a positive association between median SAT scores and having a Division I football program, and Jacob, McCall, and Stange (2018) discover a large value that students place in amenities, including athletics, in the college search process. In a similar, but opposite vein, Caudill, Hourican, and Mixon (2018) note that cutting a university's football program correlates with lower incoming class quality (measured by ACT scores).

However, the evidence of relationship between academics and athletics is sometimes mixed. Bremmer and Kesselring (1993) find a non-significant but positive connection between athletic success and SAT scores. Likewise, Tucker and Amato (1993) did not find consistent support for basketball success boosting SAT scores (although they do support the idea that football success distributes higher-quality students towards those schools with successful programs). Later, when looking at a multiple-year sample of exclusively basketball schools, Tucker and Amato (2006) discovered a significantly positive relationship, but only in the years before the formation of the Bowl Championship Series (BCS).

Other papers have focused on the number of applicants and enrollments. Murphy and Trandel (1994) and Smith (2008) find a positive relationship between athletic success and the number of applications. Caudill, Hourican, and Mixon (2018) note that cutting a university's football program decreases the number of student applicants. Unexpected “Cinderella” runs, in the March Madness basketball tournament, have been shown to increase freshmen enrollments in Collier et al. (2020). Additionally, football upsets lead to an increase in applications in Eggers et al. (2021).

Athletic success also alters the composition of students. Pope and Pope (2009) find wins caused a greater response from lower-achieving students (based on SAT scores). In another Pope and Pope (2014) study, they expanded these results to find that students who were athletes, from out-of-state, Black, or male were the most likely to be affected by a winning sports season. They further discerned that SAT scores increased based on winning seasons, and this effect increases if the team continued to advance in postseason matches. Chung (2013) finds a similar response, finding a positive link between athletic success and SAT scores, but notes that lower-scoring students are influenced more.

Even donor behavior is linked to athletic success. Monks (2003) and Rhoads and Gerking (2000) both find that alumni respond positively to athletic success. Rhoads and Gerking (2000) also find that basketball sanctions are viewed negatively while appearances in football bowls are viewed positively. Additionally, Humphreys (2007) discovers a link between state appropriations and big-time football – fielding a successful big-time football team increases state appropriations to the institution.

There are also negative effects of sports on the academics of the institution. Both Lindo et al. (2012) and Hernández-Julián and Rotthoff (2014) discover that athletic success negatively impacts overall grades on campus. Athletic malfeasance also has a negative impact on the academic profile of a university. Eggers et al. (2019 and 2020), show that post season bowl bans in football, and post season tournament bans in basketball, decreased applications, admittances, and enrollment of freshman students. Groothuis, Eggers, and Parker (2019) reveal that mean test scores fall when a university's basketball program is placed on probation by the NCAA.

A newer strand of literature links athletic success with USNWR peer evaluation scores. This literature starts with Mulholland, et. al. (2014), who link football success and a school's USNWR peer assessment score. They find that an increase in Associated Press (AP) votes and being listed in the Coaches' poll for football increases peer rankings. Additionally, they find that FBS membership in football is positively related to the school's peer assessment scores. More recently, Cormier et. al (2023a and 2023b) both find mixed results on the impact of USNWR peer assessment scores after cases of athletic malfeasance.

Our study builds on this line of research by assessing the effects of postseason basketball performance in the NCAA's March Madness basketball tournament on a school's USNWR peer assessment score. Relative to Mulholland, et.al. (2014) we are able to include a wider set of institutions in our analysis, expanding our sample beyond National Universities. We also expand the data beyond only FBS schools, which are usually already well-known schools, covered in national media and receive AP and

Coaches Poll votes. Whereas smaller, less well-known, schools routinely make it to the NCAA basketball tournament, and then, and especially when they advance, receive considerable national coverage that is not the norm for these institutions. Thus, using basketball data allows us to estimate the effects for lesser-known institutions.

III. Data and Methodology

To assess whether a team's appearance and performance in the NCAA basketball tournament is associated with any change in a school's USNWR peer evaluations, we merge four data sources. Institutional characteristics, including their peer assessment score, come from the USNWR's Annual Collage ranking report. Additional institutional characteristics are provided by the Integrated Postsecondary Education Data System (IPEDS) data. We use Collier et al. (2020) as our definition and source of Cinderella runs in the NCAA tournament. Finally, we use the data from the 336 Division I basketball programs that are eligible to make the NCAA men's basketball tournament from 1998 to 2017. This includes schools from the biggest football conferences (known as the Football Bowl Subdivision, FBS), other schools with football (the Football Championship Subdivision, FCS), and those schools with no football programs (No Football Schools, NFS).

USNWR

College rankings have long been used by prospective students and college administrators as a source of information on institutional characteristics. One of the most widely used sources is the USNWR's annual *America's Best Colleges* rankings. For

the time period we investigate, these rankings are made up of multiple categories: Peer Assessment (25%), Student Selectivity (test scores, top of the class rankings, and acceptance rate, 15%), Graduation and retention Rate (20%), Faculty Resources (20%), Financial Resources (10%), Alumni Giving (5%), and Graduation Rate Performance (5%).

We utilize the peer assessment portion of this data to see if college leaders alter their assessment of peers' quality with their peers' appearance and performance in the NCAA basketball tournament. This portion of the ranking is completed through a survey, which is sent to each school that shares the ranking category of the institution in question. High-ranked administrators, typically presidents, provosts, admissions deans, or other comparable administrators, at peer institutions are asked to complete these surveys (Morse and Brooks, 2020). The responses are ranked from marginal (1) to distinguished (5), and they are allowed to say "don't know" for a school they are not comfortable ranking (which does not factor into the ranking).

However, it is important to note that peer assessment scores only come from peer institutions who are in the same USNWR peer category. For that reason, we separate the data (and all results) by the four different USNWR categories: National Universities, National Liberal Arts Colleges, Regional Universities, and Regional Colleges. Given that each group can only rank peer institutions within that group, this allows us to test these effects with the same group of reviewers across those schools and recognizes the error structure is unique for each category. Additionally, it allows us to see if the impact of these different peer groups leads to differing effects of making the tournament or a Cinderella run.

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 test if this measure also provides a link between athletic success and the school’s academic reputation as found in Mulholland, et.al. (2014), but this time with basketball performance.

IPEDS

The Delta Cost Project (DCP) has assembled panel data from the Integrated Postsecondary Education Data System (IPEDS) that allows researchers an easy way to look at, and control for, differing school characteristics. The National Center for Education Statistics administers IPEDS and, under the authority of the Higher Education Act of 1965, collects data on all institutions of higher education that participate in federal financial aid programs (National Center for Education Statistics, 2013). The data in the DCP contains detailed school-level controls, including the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

Timing

The NCAA basketball season begins in November and concludes with the NCAA tournament around the first week of April, spanning two calendar years. We classify each season according to the calendar year it begins. For example, the 2010 – 2011

season is assigned 2010.[2] The USNWR send out its survey to institutions in the spring with a due date in May or June. The USNWR then releases this information with their annual *America's Best Colleges* rankings edition in the fall. This edition is labeled for the next calendar year. Therefore, the 2010-2011, or 2010 basketball season is completed a month or two before the 2011 USNWR survey is due. The USNWR then release this information in their 2012 edition of the *America's Best Colleges* in the fall of 2011. To assess whether tournament appearance and performance is associated with a school's peer assessment score requires a two-year lag. For example, given our convention, we assess whether tournament appearance and performance in the 2010 season tournament is associated with peer assessment scores in the 2012 edition. Because institutional characteristics from the previous academic year are available to survey respondents, we lag our controls by one year.

Cinderella runs

If performance affects peer assessment, then surprise performances may be associated with larger responses in peer assessment. Cinderella runs are commonly thought of as surprise advancements through the NCAA's Division I Basketball Tournament by schools that are relatively unknown (at least basketball-wise) or low ranked. These Cinderella runs lead to instant fame, which generates considerable national-level publicity for the school. These surprise successes may also be interpreted as a sign of overall administrative quality. There are many possible ways to define a

[2] These are coded as season years, which is different from when the championship game is played. The 2010-2011 season is coded as 2010 in our data, even though the championship was played in April 2011 (and won by the University of Connecticut).

Cinderella run. To be consistent with the literature, we follow the Cinderella run definition identified by Collier et al. (2020). Their definition is based on winning relative to seedings. Given the efficiency of seedings reported in Caudill and Goodwin (2002) and Phillips, Caudill, and Mixon (2015), "Cinderella" runs are rare, thus garnering outsized media attention. Collier et al. define a Cinderella run as any team that wins at least 2 games in the tournament (excluding "play-in" games, which started in 2011), did not enter the tournament as a 1-seed or 2-seed, and was referred to in the media as a having a "Cinderella," "upset," "underdog," "surprise", "darling" or "sweetheart," run in the tournament. This gives Collier et al. 57 instances of Cinderella performances by 52 different teams. The list of schools used for our Cinderella runs can be seen in Table 1.

[Table 1]

Methodology

To measure the effect of the tournament appearance, performance, or a Cinderella run has on the peer ranking of a school we set up the following regressions:

$$peer_{igt} = \beta_0 + \beta_1 performance_{igt-2} + \tau_t + \theta_i + \sigma trend_t + \varepsilon_{igt} \quad (1)$$

$$peer_{igt} = \beta_0 + \beta_1 performance_{igt-2} + \tau_t + \theta_i + \sigma trend_t + \delta trend_{it} + \varepsilon_{igt} \quad (2)$$

$$peer_{igt} = \beta_0 + \beta_1 performance_{igt-2} + \tau_t + \theta_i + \sigma trend_t + \delta trend_{it} + \delta X_{it-1} + \varepsilon_{igt} \quad (3)$$

Where the variable of interest in the peer assessment score, *peer*, for each institution, *i*, in each peer group, *g*, in time, *t*. The performance of each school is measured by that particular school's appearance or performance in the NCAA tournament in the (t-2 – t-1) season. We include time-specific fixed effects, τ_t, and institution-specific fixed effects,

θ_i. In equation 2 we include an overall time trend. In equation 3 we add an institution-specific time trend. In some specifications we also control for the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate. All errors are clustered by institution.

[Table 2]

The summary statistics are presented in Table 2. With the 21,444 total observations, of which we have 4,332 observations in the National University category, 3,734 in the National Liberal Arts Colleges category, 9,279 in Regional Universities, and 4,099 Regional Colleges. We find that the mean peer assessment score is 2.967 for the National universities, 2.904 at the National Liberal Arts Colleges, 2.742 at the Regional Universities, and 2.773 Regional Colleges – with an overall range from 1.3 to 4.9. However, the change in peer scores is generally small, with the averages being between -0.005 to 0.020 per year – but the range of these score changes are from -1.6 to 1.3. Thus, when the peer assessment scores do change, their changes are quite small. When looking at the absolute value of change in scores, they are slightly larger at 0.087, or about a 3.2 percent change relative to the mean peer score. Within this data we find that 5.2 percent of the schools make the tournament, 1.25 percent win their first two NCAA tournament games to make the sweet sixteen, and 0.3 percent make the final four. Only 0.12 percent of observations are classified as teams with a Cinderella run. But note that no National Liberal Arts College or Regional Colleges have made it to the Final Four, the Championship game, or been named a Cinderella school, and no Regional

Universities have made it to the Championship game in the time period covered by our data.

IV. Results

Tournament Appearance and Performance

To assess the effect of NCAA tournament appearances on the peer assessment of schools, we first investigate how peer scores change when a team makes the tournament. Figure 1 reports the results from three specifications for each of the four school categories. In our preferred specification shown in the top left quadrant of Table 3, when clustering the standard errors by institution and accounting for year fixed effects, institution level fixed effects, the overall trend, institution specific trends, and institutional controls, an NCAA tournament appearance is associated with a peer assessment score that is 0.003 and -0.005 at National Universities and National Liberal Arts Colleges respectively. This change is 0.0001 at Regional Universities and -0.031 at Regional Colleges. None of these effects are statistically significant.

[Table 3 and Figure 1]

The top right quadrant of Table 3 and Figure 2 repeat this exercise for schools that win in the first two rounds of the NCAA tournament and make it into the round of sixteen, commonly known as the Sweet Sixteen. In our preferred specification shown in top right quadrant of Table 3, institutions classified as National Universities and National Liberal Arts Colleges that make it to the Sweet Sixteen witness higher peer scores in the following edition. Peer scores increase by 0.008 for National Universities and 0.061

points for National Liberal Arts Colleges when all controls are included. At the mean for National Universities, this results in a 0.3 percent (.008/2.967) increase in a school's peer assessment score. These Sweet Sixteen effects are much larger for National Liberal Arts Colleges who witness a 2.2 percent (0.61/2.773) increase in their scores. The result is more than seven times larger for National Liberal Arts Colleges than National Universities. While not a direct comparison, when comparing this to the effects of college football performance, Mulholland, et al. (2014) find that a one standard deviation increase in votes, or about 301 votes in the AP poll or 270 votes in Coaches' Poll, only raises a school's peer assessment score by 0.15 percent – thus both of these Sweet Sixteen results are much larger in magnitude.

[Figure 2]

Another way to assess the size of the effect is to note that the mean year-over-year change in peer scores is only -0.01 for both categories. Therefore, reaching the Sweet Sixteen is associated with a peer score *increase* that is almost equal to the *decline* witnessed by the institutions in our sample for National Universities. And a peer score increase witnessed by National Liberal Arts Colleges that is 6.1 times the decline in our National Liberal Arts sample. In comparison, when looking at the effects of college football performance, Mulholland, et. al. (2014) find that a one standard deviation increase in votes "raises a school's peer assessment score by about 0.004" (p.87), which is the overall average *decrease* in the change in peer scores for our entire sample. Therefore, reaching the NCAA basketball tournament's Sweet Sixteen has the same effect on peer scores for National Universities as a one standard deviation increase in

the number of votes in the final college football poll. For National Liberal Arts Colleges, reaching the Sweet Sixteen has 6.5 times the effect than one standard deviation increase in the number of votes in the final college football poll.

Because the mean change includes both increases and decreases, another way to assess magnitude is to compare our point estimates to the mean absolute value of the year-to-year change: which is 0.053 for National Universities and 0.079 for National Liberal Arts College. Using the mean of the absolute value of the year-to-year change in the peer assessment score, reaching the Sweet Sixteen is associated with an increase that is 15.1 percent of the absolute value of the mean year-to-year change in peer assessment scores. For National Liberal Arts Colleges the estimated effect is 7.7 times larger.

[Figure 3]

In bottom left quadrant of Table 3 and Figure 3, we look at the effect of teams making the Final Four. We find no evidence that making the Final Four or the Championship game impacts the peer assessment score for National Universities or Regional Colleges. No results are available for National Liberal Arts Colleges because none made it to the final four in our sample. However, there is a significant and positive effect on Regional Universities. Final Four appearances are associated with a 0.024 increase in peer review score for Regional Universities, which is 4.8 times larger than the average *decline* in peer review scores for this category.[3]

[3] A championship game appearance has no statistical effect. Our results for a championship game appearance are reported in the bottom right quadrant of Table 3.

Further Investigation of Timing of the Effect

One-time events, and particularly those such as a Sweet Sixteen appearance that happens on an annual basis, may or may not have any lasting effect on future peer assessment scores. To investigate whether an NCAA tournament appearance and performance has a lasting effect, we interact each of our tournament measures with a linear trend to see if the effect increases, is persistent, or decays over time. We report our findings in Table 4.

[Table 4]

When including these interacted trends, we find that the positive effect of making the tournament, for National Universities, is offset later. Whereas the impact of the National Liberal Arts Colleges and Regional Colleges is lasting. In this specification, the Sweet Sixteen effects found earlier become less precisely estimated, but there is also no evidence that these impacts decay over time.

We then investigate whether our findings are robust to the inclusion of lags and leads of NCAA tournament appearance and performance, to see whether the effect could be spurious or if they persist over time. Table 5 includes three leads after the most recent appearance (t-2) and three lags before the most recent appearance. The first three columns look at whether a tournament appearance for National Universities, at different times, are associated with higher peer scores. Without institution-specific trends and controls, column one shows a weakly significant effect at (t-4). These become statistically significant when institution specific trends are added and (t-4) become marginally significant again once controls are included. For National Liberal Arts

Colleges they are all positive and significant at (t-3), with some weak positive estimates for Regional Universities and insignificant results for the Regional Colleges (with some evidence that the schools who were making the tournament were trending upward before their tournament appearance).

[Tables 5 and 6]

When looking at Sweet Sixteen appearances (Table 6), we first find the leads (t and t+1) only matter, and are positive for t, and negative for (t+1), for National Liberal Arts Colleges. For Regional Colleges, lead t is negative and significant when institutional controls are not included, and lag (t-1) is positive and significant only when institution fixed effects and controls are not included. Coefficients on leads are insignificant at all other institution types in all specifications. This suggests that tournament appearances are exogenous to peer assessment scores for the schools outside the National Liberal Arts Colleges. That is, higher or lower peer assessment scores have no effect on tournament performance, say through attracting better or worse basketball players or coaches (although this may have been happening at National Liberal Arts Colleges). For all institution types we find some evidence that the survey year following the Sweet Sixteen appearance is associated with higher peer assessment scores of around 0.06.

For National Liberal Arts Colleges and Regional Colleges there is some evidence that the positive effects were in (t-3) and (t-5) for the National Liberal Arts Colleges and for Regional Colleges, who find strong results in (t-3) but negative and significant results in (t-4) (but not large enough in magnitude to offset the gains receive in (t-3), about one-third of the gain in that year is lost in (t-4)). This finding suggests that a Sweet

Sixteen appearance may positively affect the peer assessment scores for the following two survey years.

[Table 7]

We repeat this exercise for the final four game in Table 7. There is no evidence that a school making the final four is associated with any change in a school's peer score for National Universities and National Liberal Arts Colleges. Regional Universities see positive impact for all lags, but not for leads. This suggests that our Regional University results may be due to some pre-treatment effects thus lowering our confidence in the findings above. Regional Colleges see negative impacts at (t-4) and (t-5). We suspect this is likely due to the small number of Regional Colleges that ever make the final four.[4]

Further Investigation of Sweet Sixteen Effect

Our results suggest that National Universities, National Liberal Arts Colleges, and Regional Universities witness an increase in their peer assessment scores when they earn a Sweet Sixteen appearance. To assess whether our estimates are plausible, we construct an event study of the annual measure of the difference in the mean change in the peer score for institutions that earn a Sweet Sixteen birth relative to those that do not.[5] The calculation is the mean of those that make an appearance (treated) minus the mean for those that do not (not treated). Thus,

$$D_{j,t} = Average\ Peer\ Score\ Change\ for\ Treated_{j,t} - Average\ Peer\ Score\ Change\ for\ Not\ Treated_{j,t}$$

[4] Table 1 in the appendix show the non-results for the lag and lead estimation for making it to the championship.
[5] We thank an anonymous referee for this suggestion.

In Figure 4, we report the difference in the average peer score change for each type of institution, j, for each issue year, t. Figure 4 shows that the treated groups witness larger, positive increases (or smaller decreases) in their peer scores than schools that are not treated. For example, treated national universities witness a larger increase (or smaller decrease) in their peer scores in nine of the fifteen years. Treated regional universities witness a larger increase (or smaller decrease) than their non-treated peers in 12 years out of 15.

[Figure 4]

Another way to further assess this finding is to investigate how peer scores change for institutions earning their first ever Sweet Sixteen birth.[6] For the 15 years we observe, eight institutions earn their first ever Sweet Sixteen appearance. Figure 5 shows the annual change in the peer assessment score in each of the 5 years preceding the treatment year, the treatment year, and the 5 years following the treatment year for each of these eight institutions. In the treatment year, six of these eight institutions witness an increase in their peer score. This is the largest number of annual increases witnessed by this group of schools. The other two schools witness no change. None of the schools witness a decline in the treatment year. For the five years before and five years after the treatment year, there are only two years when none of these institutions witness a reduction in their peer score. Five years prior to the treatment year, four institutions witnessed a peer score increase, and four witnessed no change. In the fifth year after the treatment year, all eight institutions witnessed no change in their score.

[6] We would like to thank an anonymous referee for this excellent suggestion.

For each of the remaining eight years observed, one or more schools witness a decline in their peer score. In the four years before the treatment year, there are only two instances of a peer score increase, while we observe eight declines in the peer scores. In the four years after the treatment year, there are seven instances of peer score increases and eight instances of peer score declines. Overall, treatment is associated with an increase in peer score for six of the eight schools, and no peer score declines.

[Figure 5]

Cinderella Runs

We show that a Sweet Sixteen appearance results in higher peer assessment scores. If this effect is caused by increased notoriety and discussion in the press, a surprise Cinderella performance by an underdog may enhance this effect. Therefore, we investigate whether a team that is on a Cinderella run during the NCAA tournament witnesses a larger boost in their peer score relative to a non-Cinderella team that reaches the same round. All Tables include yearly fixed effects, institutional fixed effects, and an overall trend. Each table looks at the appearance alone, the Cinderella effect alone, both the appearance and Cinderella effect, and then both terms along with an appearance-Cinderella interaction. This interaction term will reveal whether a Cinderella run results in a larger peer assessment boost or not.

[Table 8]

We only find the effect for Final Four appearances for National Universities.[7] Regional Universities also show positive effect, but it is not statistically significant. For National Universities, we find that peer scores are .05 higher for Cinderella teams in the tournament than non-Cinderella tournament teams. For a school at the mean, this results in a 1.7 percent (.06/2.967) increase in a school's peer assessment score. Because the mean year-over-year change in peer scores is only -0.010, represents a peer score *increase* that is 5 times the mean year-over-year *decline* witnessed by the National Universities in our sample.

V. **Conclusion**

The link between athletic performance and academic quality has been studied in many different ways. This study connects two of these strands of literature. We find that making the tournament does not increase the peer assessment score when controlling for yearly fixed effects, institutional fixed effects, institutional specific trends, and controls. However, there is a positive and significant impact on a school's peer assessment score when they make it into the Sweet Sixteen. National Universities witness a 0.3 percent (.008/2.967) increase and National Liberal Arts Colleges witness a 2.2 percent (0.61/2.773) increase in their scores. Reaching the Sweet Sixteen is associated with a peer score *increase* that is almost equal to the average *decline* witnessed by the institutions in our sample for National Universities. These peer score

[7] We find no statistical relationship between being a Cinderella team and making an appearance in the tournament, reaching the sweet sixteen, or reaching the finals. The results of these estimations are reported in Tables 3-4 of the appendix.

increases by National Liberal Arts Colleges in the Sweet Sixteen are 6.1 times the decline in our National Liberal Arts sample. In comparison, when looking at the effects of college football performance, Mulholland, et. al. (2014) find that a one standard deviation increase in votes "raises a school's peer assessment score by about 0.004" (p.87), which is the overall average *decrease* in the change in peer scores for our entire sample. Therefore, reaching the NCAA basketball tournament's Sweet Sixteen has the same effect on peer scores for National Universities than a one standard deviation increase in the number of votes in the final college football poll. For National Liberal Arts Colleges, reaching the Sweet Sixteen has 6.5 times the effect than one standard deviation increase in the number of votes in the final college football poll.

Because the mean change includes both increases and decreases, another way to assess magnitude is to compare our point estimates to the mean absolute value of the year-to-year change: which is 0.053 for National Universities and 0.079 for National Liberal Arts College. Using the mean of the absolute value of the year-to-year change in the peer assessment score, reaching the Sweet Sixteen is associated with an increase that is 15.1 percent of the absolute value of the mean year-to-year change in peer assessment scores. For Liberal Arts Colleges the estimated effect is 7.7 times larger.

We then conduct two event studies. The first constructs the mean peer assessment score change of those that make an appearance (treated) minus the mean for those that do not (not treated). We find that the treated groups witness larger, positive increases (or smaller decreases) in their peer scores than schools that are not treated. Second, we analyze the experience of the eight institutions who earn their first

ever Sweet Sixteen appearance of our sample time period. In the treatment year, six of these eight institutions witness an increase in their peer score. This is the largest number of annual increases witnessed by this group of schools. The other two schools witness no change. None of the schools witness a decline in the treatment year. For the five years before and five years after the treatment year, there are only two years when none of these institutions witness a reduction in their peer score.

For Regional Universities, it is appearance in the Final Four that correlates with an increase that is 4.8 times larger than the mean year-over-year *decrease* in the peer review score. In comparison, when looking at the effects of college football performance, Mulholland, et. al. (2014) find that a one standard deviation increase in votes "raises a school's peer assessment score by about 0.004" (p.87). Therefore, reaching the NCAA basketball tournament's Sweet Sixteen has 3 times the effect on peer scores than a one standard deviation increase in the number of votes in the final college football poll.

All in all, we find that athletic success seems correlated with peers' opinion of the school, especially for lesser-known institutions, implying the benefit of athletics being in ability to bring outsized amount of attention to the institution.

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Figure 1: Tournament Appearance point estimates: various specifications

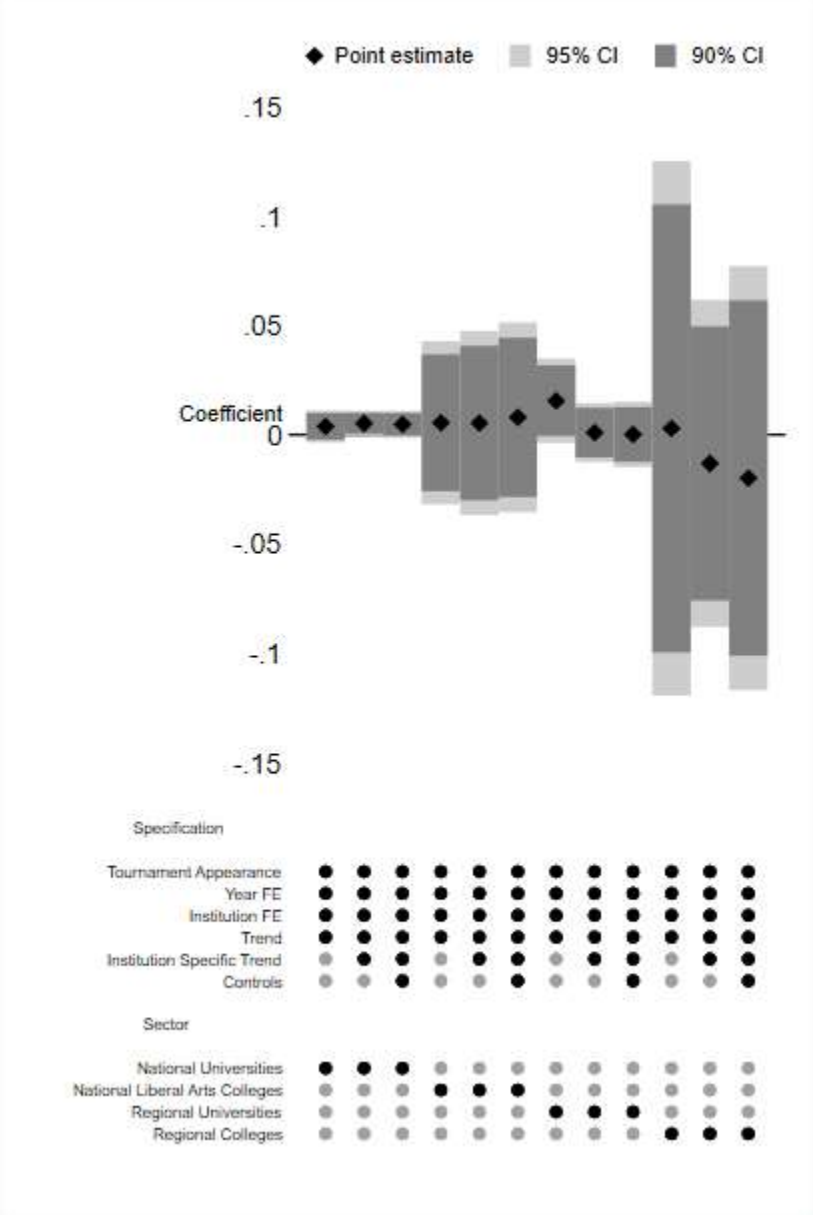

Figure 2: Sweet Sixteen Appearance point estimates: various specifications

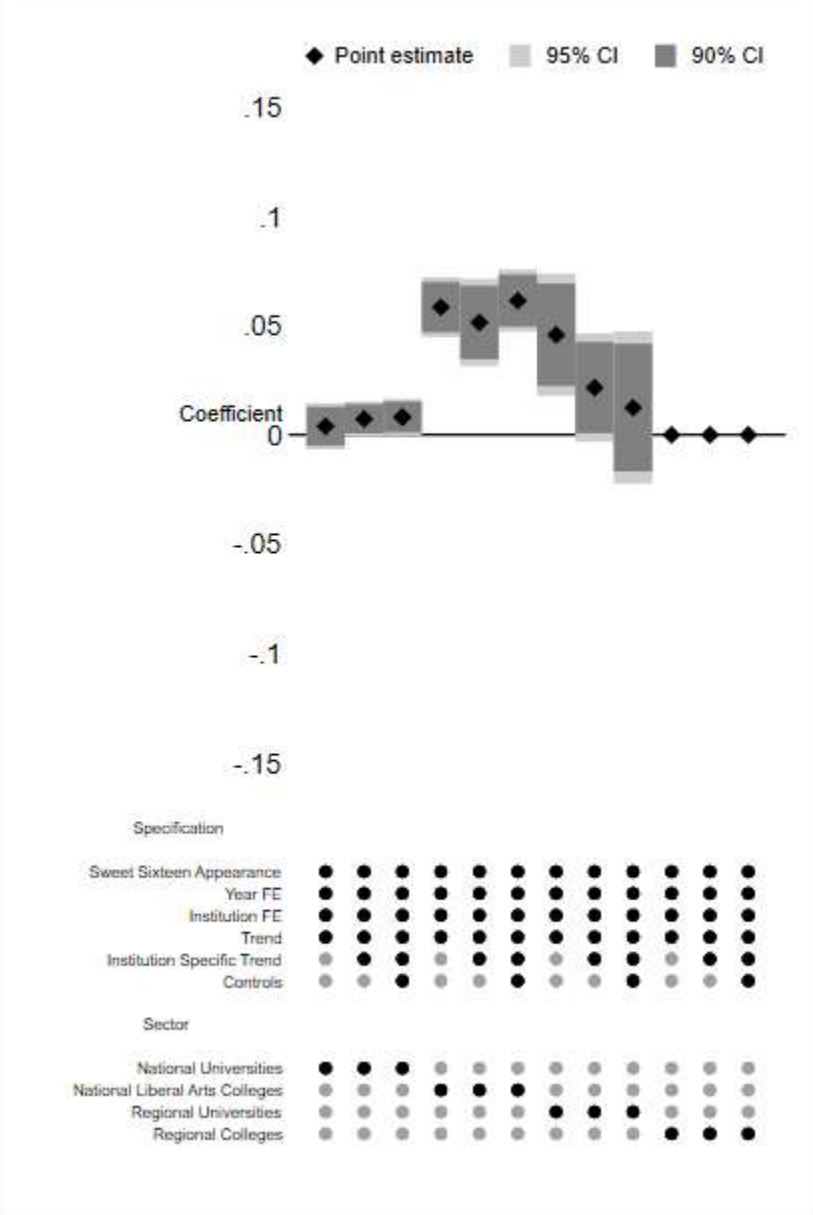

Figure 3: Final Four Appearance point estimates: various specifications

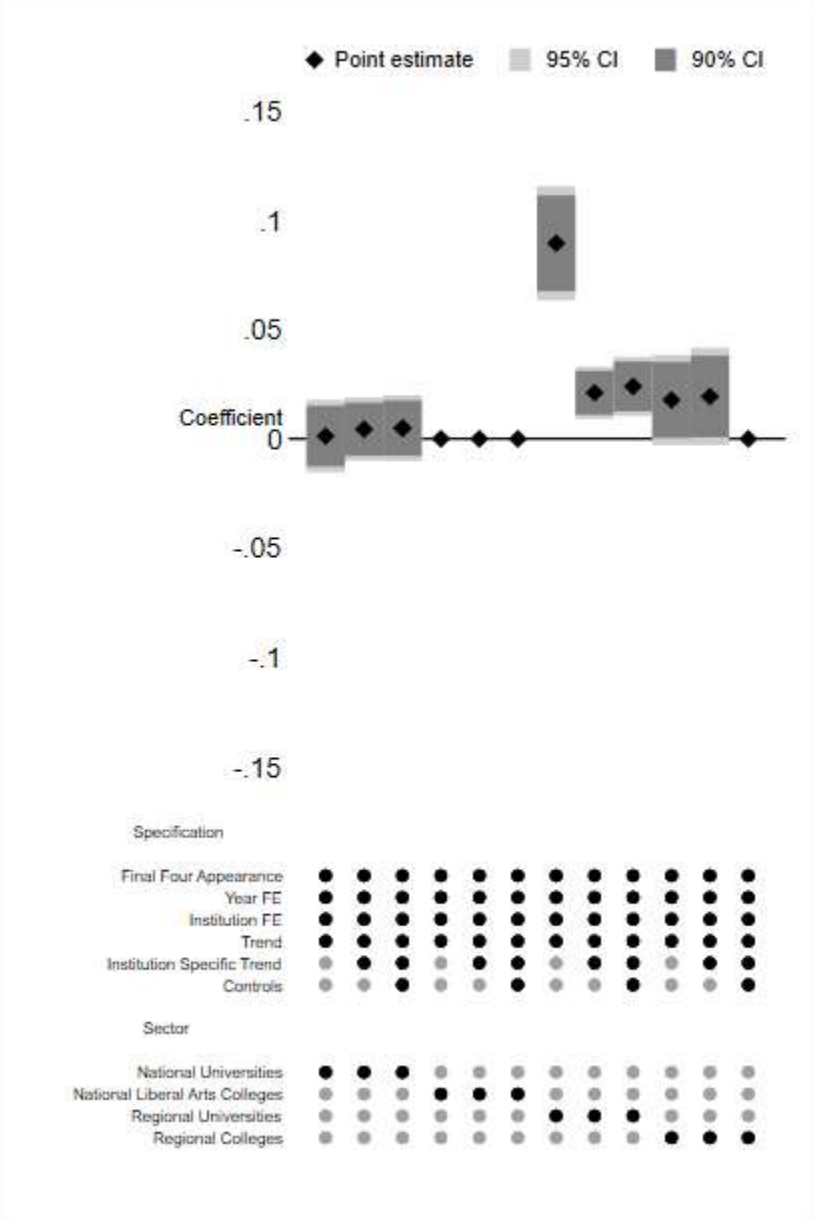

Figure 4: Difference in Peer Score Changes: Sweet Sixteen Appearance versus Not

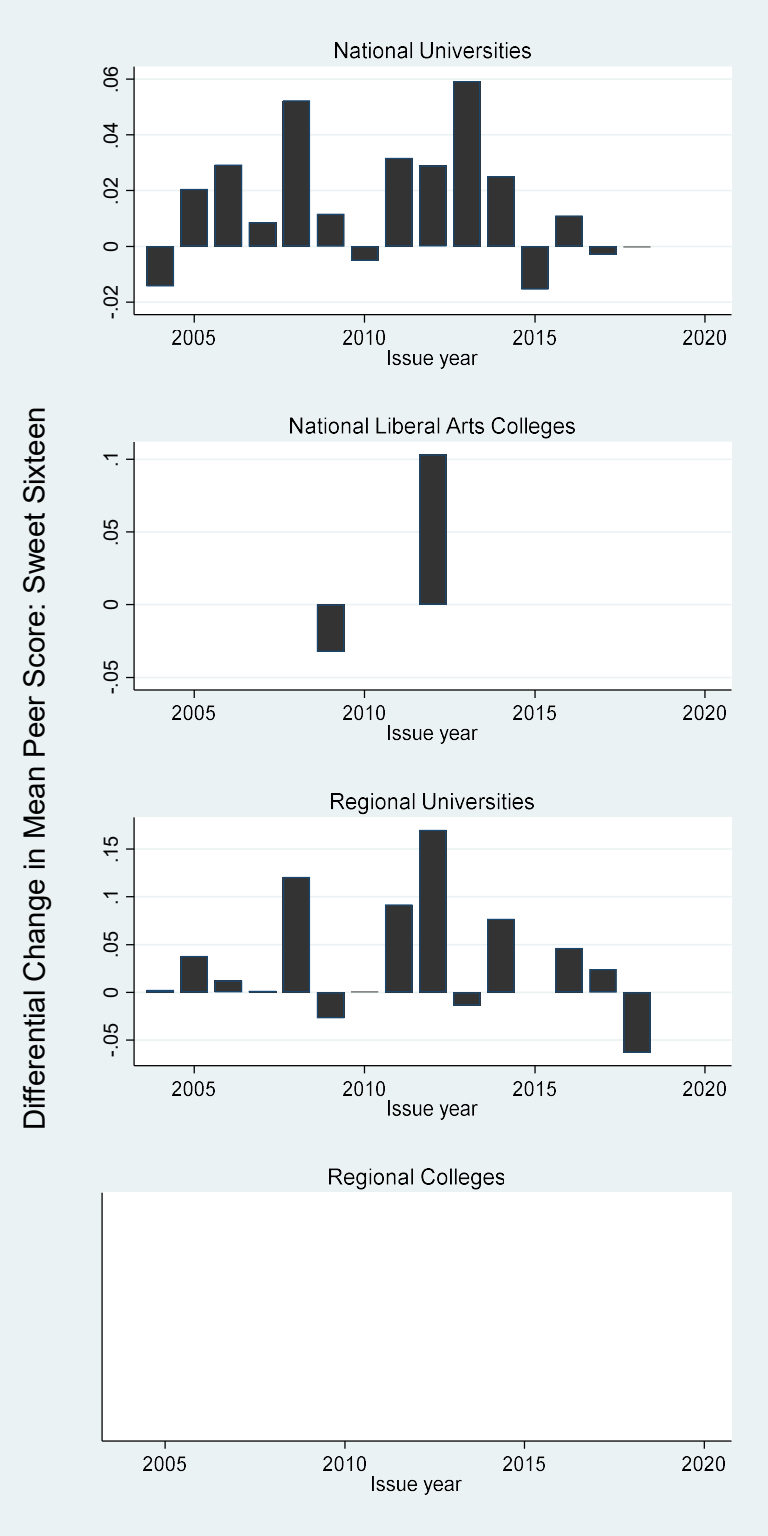

Figure 5: Change in Peer Score: First Sweet Sixteen Appearance

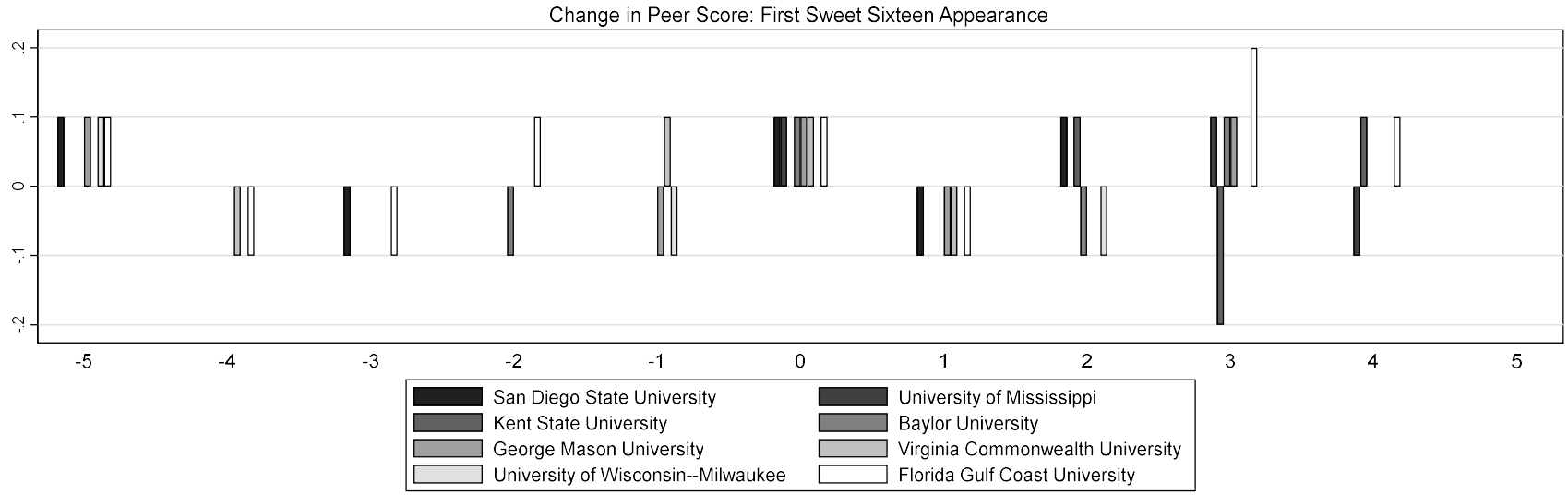

Table 1: Schools that are listed as “Cinderella” runs in Collier et al. (2020)

School	Tournament Outcome	Year	Initial Tournament Seed
Boston College	Sweet Sixteen	1985	11
Villanova University	Champion	1985	8
Cleveland State University	Sweet Sixteen	1986	14
Louisiana State University and Agricultural & Mechanical College	Final Four	1986	11
United States Naval Academy	Elite Eight	1986	7
Providence College	Final Four	1987	6
The University of Kansas	Champion	1988	6
University of Richmond	Sweet Sixteen	1988	13
Seton Hall University	Final Four	1989	3
University of Minnesota, Twin Cities Campus	Sweet Sixteen	1989	11
University of Virginia	Elite Eight	1989	5
Loyola Marymount University	Elite Eight	1990	11
Eastern Michigan University	Sweet Sixteen	1991	12
The University of Texas at El Paso	Sweet Sixteen	1992	9
The George Washington University	Sweet Sixteen	1993	12
Boston College	Elite Eight	1994	9
Marquette University	Sweet Sixteen	1994	6
The University of Tulsa	Sweet Sixteen	1994	12
University of Maryland, College Park	Sweet Sixteen	1994	10
The University of Tennessee at Chattanooga	Sweet Sixteen	1997	14
Valparaiso University	Sweet Sixteen	1998	13
Gonzaga University	Elite Eight	1999	10
Miami University	Sweet Sixteen	1999	10
Gonzaga University	Sweet Sixteen	2000	10
University of Wisconsin–Madison	Final Four	2000	8
Penn State University Park	Sweet Sixteen	2001	7
Indiana University Bloomington	Final Four	2002	5
Kent State University	Elite Eight	2002	10
Southern Illinois University Carbondale	Sweet Sixteen	2002	11
University of California, Los Angeles	Sweet Sixteen	2002	8
University of Missouri	Elite Eight	2002	12
Marquette University	Final Four	2003	3
The University of Alabama at Birmingham	Sweet Sixteen	2004	9
Vanderbilt University	Sweet Sixteen	2004	6
University of Louisville	Final Four	2005	4
West Virginia University	Elite Eight	2005	7
Bradley University	Sweet Sixteen	2006	13
George Mason University	Final Four	2006	11
Davidson College	Elite Eight	2008	10
The University of Arizona	Sweet Sixteen	2009	12
Butler University	Final Four	2010	5
Cornell University	Sweet Sixteen	2010	12
Saint Mary's College of California	Sweet Sixteen	2010	10
University of Northern Iowa	Sweet Sixteen	2010	9
Butler University	Final Four	2011	8
Virginia Commonwealth University	Final Four	2011	11

North Carolina State University	Sweet Sixteen	2012	11
Ohio University	Sweet Sixteen	2012	13
Xavier University	Sweet Sixteen	2012	10
Florida Gulf Coast University	Sweet Sixteen	2013	15
La Salle University	Sweet Sixteen	2013	13
Wichita State University	Final Four	2013	9
University of Dayton	Elite Eight	2014	11
Syracuse University	Final Four	2016	10
University of Michigan	Sweet Sixteen	2017	7
University of South Carolina	Final Four	2017	7
Xavier University	Elite Eight	2017	11

Table 2: Summary Statistics

	National Universities					National Liberal Arts Colleges				
VARIABLES	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Peer Assessment Score	4332	2.967	0.761	1.5	4.9	3734	2.904	0.726	1.3	4.8
Delta Peer Assessment Score	4323	-0.010	0.114	-1.4	0.40	3717	-0.011	0.157	-1.6	0.40
Abs. Delta Peer Assessment Score	4323	0.054	0.101	0	1.4	3717	0.079	0.135	0	1.6
NCAA tournament	4332	0.187	0.390	0	1	3734	0.012	0.108	0	1
Sweet Sixteen	4332	0.053	0.224	0	1	3734	0.002	0.040	0	1
Final Four	4332	0.013	0.115	0	1	3734	0.000	0.000	0	0
Champion	4332	0.003	0.057	0	1	3734	0.000	0.000	0	0
Cinderella	4332	0.004	0.061	0	1	3734	0.000	0.016	0	1
Acceptance Rate	4319	61.083	21.604	5	100	3675	60.129	20.373	4.53	100
Graduation Rate	4213	0.643	0.181	0	0.98	3624	0.669	0.185	0	1
ACT 75th percentile	4245	27.050	3.665	16	36	3519	27.019	3.761	11	35
Alumni Giving Rate	4238	14.561	10.295	0.2	67	3526	27.903	13.606	0.1	100
	Regional Universities					Regional Colleges				
VARIABLES	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Peer Assessment Score	9279	2.742	0.436	1.5	4.4	4099	2.773	0.460	1.3	4.7
Delta Peer Assessment Score	9251	-0.005	0.123	-1.1	1.3	4037	0.020	0.197	-0.8	1.3
Abs. Delta Peer Assessment Score	9251	0.079	0.094	0	1.3	4037	0.131	0.149	0	1.3
NCAA tournament	9279	0.028	0.165	0	1	4099	0.002	0.049	0	1
Sweet Sixteen	9279	0.003	0.059	0	1	4099	0.001	0.027	0	1
Final Four	9279	0.001	0.023	0	1	4099	0.000	0.016	0	1
Champion	9279	0.000	0.010	0	1	4099	0.000	0.000	0	0
Cinderella	9279	0.001	0.031	0	1	4099	0.000	0.000	0	0
Acceptance Rate	9100	70.162	15.527	1	100	3922	69.564	17.708	4	100
Graduation Rate	8934	0.512	0.145	0	1	3833	0.445	0.152	0	1
ACT 75th percentile	8708	23.631	2.635	15	35	3622	23.176	2.912	13	35
Alumni Giving Rate	8549	11.287	7.645	0	100	3457	15.092	9.726	0.1	64.7

Table 3: Tournament Appearance, Sweet Sixteen Appearance, Final Four Appearance, Championship Appearance and Peer Assessment Scores

	Tournament Appearance				Sweet Sixteen Appearance			
	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges
VARIABLES	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)
Appearance (t-2)	0.00286	-0.00497	0.000148	-0.0310	0.00813*	0.0614***	0.0125	
	(0.00316)	(0.0204)	(0.00761)	(0.0489)	(0.00428)	(0.00724)	(0.0178)	
Constant	2.910***	2.895***	2.779***	2.809***	2.910***	2.894***	2.779***	
	(0.0473)	(0.0671)	(0.0432)	(0.105)	(0.0475)	(0.0670)	(0.0431)	
Observations	3,964	3,198	7,609	2,824	3,964	3,198	7,609	
R-squared	0.996	0.992	0.969	0.930	0.996	0.992	0.969	
	Final Four Appearance				Championship Appearance			
	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges
VARIABLES	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)
Appearance (t-2)	0.00488		0.0240***		0.00488			
	(0.00766)		(0.00692)		(0.00766)			
Constant	2.909***	2.895***	2.779***	2.810***	2.909***	2.895***	2.779***	2.810***
	(0.0476)	(0.0670)	(0.0431)	(0.106)	(0.0476)	(0.0670)	(0.0431)	(0.106)
Observations	3,964	3,198	7,609	2,824	3,964	3,198	7,609	2,824
R-squared	0.996	0.992	0.969	0.930	0.996	0.992	0.969	0.930

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trend effects and institution specific controls, including the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

Table 4: Tournament Appearance, Sweet Sixteen Appearance, Final Four Appearance, Championship Appearance and Peer Assessment Scores with Trend Interaction

	Tournament Appearance				Sweet Sixteen Appearance			
	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges
VARIABLES	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)
Appearance (t-2)	-0.0168**	0.0592**	-0.0193	-0.155**	0.00187	0.00249	-0.00439	
	(0.00835)	(0.0230)	(0.0195)	(0.0701)	(0.0135)	(0.0390)	(0.0626)	
Appearance (t-2)*trend	0.00169***	-0.00540**	0.00166	0.0145	0.000554	0.00513	0.00150	
	(0.000627)	(0.00245)	(0.00166)	(0.0105)	(0.00111)	(0.00335)	(0.00478)	
Constant	2.909***	2.896***	2.779***	2.809***	2.910***	2.894***	2.779***	2.810***
	(0.0478)	(0.0670)	(0.0433)	(0.105)	(0.0477)	(0.0671)	(0.0431)	(0.106)
Observations	3,964	3,198	7,609	2,824	3,964	3,198	7,609	2,824
R-squared	0.996	0.992	0.969	0.930	0.996	0.992	0.969	0.930
	Final Four Appearance				Championship Appearance			
	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges
VARIABLES	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)
Appearance (t-2)	0.0154		0.000123		0.0320			
	(0.0237)		(0.0359)		(0.0571)			
Appearance (t-2)*trend	-0.000949		0.00176		-0.00339			
	(0.00231)		(0.00300)		(0.00475)			
Constant	2.909***	2.895***	2.779***	2.810***	2.908***	2.895***	2.779***	2.810***
	(0.0474)	(0.0670)	(0.0431)	(0.106)	(0.0475)	(0.0670)	(0.0431)	(0.106)
Observations	3,964	3,198	7,609	2,824	3,964	3,198	7,609	2,824
R-squared	0.996	0.992	0.969	0.930	0.996	0.992	0.969	0.930

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trend effects and institution specific controls, including the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

Table 5: Tournament Appearances: Time Periods

	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges
	(1)	(2)	(3)	(4)
VARIABLES	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)
NCAA tournament (t-5)	-0.00189	0.00575	0.0209*	-0.334***
	(0.00379)	(0.0149)	(0.0119)	(0.0848)
NCAA tournament (t-4)	0.00610*	0.0158	0.00641	0.0134
	(0.00326)	(0.0130)	(0.0139)	(0.0702)
NCAA tournament (t-3)	0.00168	0.0305**	0.0153*	0.0157
	(0.00318)	(0.0127)	(0.00810)	(0.0341)
NCAA tournament (t-2)	0.000683	-0.00614	0.0117	0.0563**
	(0.00334)	(0.0215)	(0.00883)	(0.0236)
NCAA tournament (t-1)	0.00124	0.00751	-0.00551	0.0438
	(0.00339)	(0.0134)	(0.00853)	(0.149)
NCAA tournament	-0.000566	0.0202*	0.00171	0.191***
	(0.00302)	(0.0105)	(0.00821)	(0.0630)
NCAA tournament (t+1)	-0.000885	-0.0152	0.00257	0.275*
	(0.00310)	(0.0182)	(0.00959)	(0.142)
Constant	2.605***	2.750***	2.542***	2.465***
	(0.0867)	(0.0935)	(0.0523)	(0.109)
Observations	3,964	3,198	7,609	2,824
R-squared	0.994	0.986	0.954	0.900

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trends, and institution controls. Institution specific controls include the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Sweet Sixteen Appearances: Time Periods

	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges
	(1)	(2)	(3)	(4)
VARIABLES	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)
Sweet Sixteen (t-5)	-0.00223	0.00492	0.00918	
	(0.00547)	(0.0102)	(0.0171)	
Sweet Sixteen (t-4)	0.00267	0.0446	-0.0180	-0.0451**
	(0.00543)	(0.0276)	(0.0188)	(0.0216)
Sweet Sixteen (t-3)	-0.00304	-0.00430	0.0306*	0.120***
	(0.00576)	(0.0163)	(0.0184)	(0.0184)
Sweet Sixteen (t-2)	0.00597	0.0697***	0.0260	
	(0.00523)	(0.00706)	(0.0192)	
Sweet Sixteen (t-1)	-0.00404	0.0359	0.00657	
	(0.00468)	(0.0296)	(0.0245)	
Sweet Sixteen (t)	-0.00374	0.0409*	-0.00206	
	(0.00578)	(0.0210)	(0.0216)	
Sweet Sixteen (t+1)	0.000265	-0.0375*	-0.0157	
	(0.00507)	(0.0207)	(0.0312)	
Constant	2.607***	2.750***	2.542***	2.473***
	(0.0875)	(0.0936)	(0.0526)	(0.109)
Observations	3,964	3,198	7,609	2,824
R-squared	0.994	0.986	0.954	0.899

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trends, and institution controls. Institution specific controls include the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Final Four Appearances: Time Periods

	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges
	(1)	(2)	(3)	(4)
VARIABLES	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)
Sweet Sixteen (t-5)	0.00162		0.0583**	-0.0750**
	(0.0107)		(0.0230)	(0.0316)
Sweet Sixteen (t-4)	-0.00440		0.113***	-0.120***
	(0.0105)		(0.0238)	(0.0184)
Sweet Sixteen (t-3)	-0.00299		0.0681***	
	(0.00982)		(0.0105)	
Sweet Sixteen (t-2)	0.00248		0.0818***	
	(0.00947)		(0.0139)	
Sweet Sixteen (t-1)	-0.00731		-0.0151	
	(0.00892)		(0.0330)	
Sweet Sixteen (t)	-0.00773		0.0357	
	(0.00824)		(0.0452)	
Sweet Sixteen (t+1)	0.00918		0.0680	
	(0.00971)		(0.0576)	
Constant	2.605***	2.753***	2.546***	2.473***
	(0.0877)	(0.0934)	(0.0522)	(0.109)
Observations	3,964	3,198	7,609	2,824
R-squared	0.994	0.986	0.954	0.899

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trends, and institution controls. Institution specific controls include the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

*** p<0.01, ** p<0.05, * p<0.1

Table 8 Final Four Appearances: Cinderella

	National Universities				National Liberal Arts Colleges				Regional Universities			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)
Final Four (t-2)	0.00488		0.00330	-0.00123					0.0235***		0.0209	0.0137***
	(0.00766)		(0.00754)	(0.00724)					(0.00684)		(0.0173)	(0.00457)
Cinderella (Collier et al.) (t-2)		0.0148	0.0138	-0.00225		0.0535***	0.0535***	0.0535***		0.0104	0.00508	0.00269
		(0.0112)	(0.0111)	(0.0103)		(0.00683)	(0.00683)	(0.00683)		(0.0291)	(0.0325)	(0.0378)
Final Four (t-2) * Cinderella (Collier et al.) (t-2)				0.0500**								0.0167
				(0.0231)								(0.0385)
Constant	2.909***	2.909***	2.909***	2.910***	2.876***	2.876***	2.876***	2.876***	2.769***	2.769***	2.769***	2.769***
	(0.0476)	(0.0476)	(0.0475)	(0.0475)	(0.0607)	(0.0607)	(0.0607)	(0.0607)	(0.0421)	(0.0421)	(0.0421)	(0.0421)
Observations	3,964	3,964	3,964	3,964	3,201	3,201	3,201	3,201	7,633	7,633	7,633	7,633
R-squared	0.996	0.996	0.996	0.996	0.992	0.992	0.992	0.992	0.969	0.969	0.969	0.969

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trends, and institution controls. Institution specific controls include the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

*** p<0.01, ** p<0.05, * p<0.1

Note: No Regional Colleges are included in the Cinderella list.

Appendix

Table 1: Championship Appearances: Time Periods

	National Universities	National Liberal Arts Colleges	Regional Universities	Regional Colleges
	(1)	(2)	(3)	(4)
VARIABLES	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)	Peer Assessment Score (t)
Sweet Sixteen (t-5)	0.0302			
	(0.0204)			
Sweet Sixteen (t-4)	0.0183			
	(0.0176)			
Sweet Sixteen (t-3)	-0.00203			
	(0.0158)			
Sweet Sixteen (t-2)	8.96e-05			
	(0.0218)			
Sweet Sixteen (t-1)	0.00451		0.00380	
	(0.0206)		(0.00534)	
Sweet Sixteen (t)	-0.0211		0.111***	
	(0.0186)		(0.00690)	
Sweet Sixteen (t+1)	-0.00453		0.0949***	
	(0.0193)		(0.00561)	
Constant	2.607***	2.753***	2.543***	2.472***
	(0.0874)	(0.0934)	(0.0528)	(0.109)
Observations	3,964	3,198	7,609	2,824
R-squared	0.994	0.986	0.954	0.899

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trends, and institution controls. Institution specific controls include the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

*** p<0.01, ** p<0.05, * p<0.1

Table 2 Tournament Appearances: Cinderella

	National Universities				National Liberal Arts Colleges				Regional Universities			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)
NCAA tournament (t-2)	0.00286		0.00249	0.00249	0.00331		-0.00650	-0.00650	0.000148		-0.000221	-0.000221
	(0.00316)		(0.00319)	(0.00319)	(0.00295)		(0.0208)	(0.0208)	(0.00761)		(0.00751)	(0.00751)
Cinderella (Collier et al.) (t-2)		0.0148	0.0135	0.0135		0.0538***	0.0576***	0.0576***		0.0108	0.0109	0.0109
		(0.0112)	(0.0114)	(0.0114)		(0.00689)	(0.0135)	(0.0135)		(0.0291)	(0.0285)	(0.0285)
NCAA tournament (t-2) * Cinderella (Collier et al.) (t-2)												
Constant	2.910***	2.909***	2.910***	2.910***	2.966***	2.895***	2.896***	2.896***	2.779***	2.779***	2.779***	2.779***
	(0.0473)	(0.0476)	(0.0473)	(0.0473)	(0.000551)	(0.0671)	(0.0671)	(0.0671)	(0.0432)	(0.0431)	(0.0432)	(0.0432)
Observations	3,964	3,964	3,964	3,964	4,332	3,198	3,198	3,198	7,609	7,609	7,609	7,609
R-squared	0.996	0.996	0.996	0.996	0.996	0.992	0.992	0.992	0.969	0.969	0.969	0.969

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trends, and institution controls. Institution specific controls include the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

*** p<0.01, ** p<0.05, * p<0.1

Note: No Regional Colleges are included in the Cinderella list.

Table 3: Sweet Sixteen Appearances: Cinderella

	National Universities				National Liberal Arts Colleges				Regional Universities			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)
Sweet Sixteen (t-2)	0.00813*		0.00715	0.00715	0.0614***		0.0692***	0.0692***	0.0125		0.0124	0.0124
	(0.00428)		(0.00455)	(0.00455)	(0.00724)		(0.00653)	(0.00653)	(0.0178)		(0.0195)	(0.0195)
Cinderella (Collier et al.)(t-2)		0.0148	0.00847	0.00847		0.0538***	-0.0154	-0.0154		0.0108	0.000101	0.000101
		(0.0112)	(0.0119)	(0.0119)		(0.00689)	(0.0100)	(0.0100)		(0.0291)	(0.0318)	(0.0318)
Sweet Sixteen (t-2) * Cinderella (Collier et al.) (t-2)												
Constant	2.910***	2.909***	2.910***	2.910***	2.894***	2.895***	2.894***	2.894***	2.779***	2.779***	2.779***	2.779***
	(0.0475)	(0.0476)	(0.0474)	(0.0474)	(0.0670)	(0.0671)	(0.0671)	(0.0671)	(0.0431)	(0.0431)	(0.0431)	(0.0431)
Observations	3,964	3,964	3,964	3,964	3,198	3,198	3,198	3,198	7,609	7,609	7,609	7,609
R-squared	0.996	0.996	0.996	0.996	0.992	0.992	0.992	0.992	0.969	0.969	0.969	0.969

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trends, and institution controls. Institution specific controls include the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

*** p<0.01, ** p<0.05, * p<0.1

Note: No Regional Colleges are included in the Cinderella list.

Table 4: Championship Appearances: Cinderella

	National Universities				National Liberal Arts Colleges				Regional Universities			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)	Peer Score (t)
Champion (t-2)	-0.00564		-0.00571	-0.00571								
	(0.0133)		(0.0134)	(0.0134)								
Cinderella (Collier et al.)(t-2)		0.0148	0.0148	0.0148		0.0535***	0.0535***	0.0535***		0.0104	0.0104	0.0104
		(0.0112)	(0.0112)	(0.0112)		(0.00683)	(0.00683)	(0.00683)		(0.0291)	(0.0291)	(0.0291)
Sweet Sixteen (t-2) * Cinderella (Collier et al.) (t-2)												
Constant	2.918***	2.918***	2.918***	2.918***	2.876***	2.876***	2.876***	2.876***	2.769***	2.769***	2.769***	2.769***
	(0.0470)	(0.0470)	(0.0470)	(0.0470)	(0.0607)	(0.0607)	(0.0607)	(0.0607)	(0.0421)	(0.0421)	(0.0421)	(0.0421)
Observations	3,966	3,966	3,966	3,966	3,201	3,201	3,201	3,201	7,633	7,633	7,633	7,633
R-squared	0.996	0.996	0.996	0.996	0.992	0.992	0.992	0.992	0.969	0.969	0.969	0.969

Robust standard errors are clustered by institution. All estimations include year and institution fixed effects, overall trend effects, institution specific trends, and institution controls. Institution specific controls include the acceptance rate, graduation rate, the 75th percentile ACT/SAT score, and the alumni giving rate.

*** p<0.01, ** p<0.05, * p<0.1

Note: No Regional Colleges are included in the Cinderella list.