Online Appendix

I. Data Sources and Description

Roster Data and Athlete Demographics

We collect roster data for each school and sport in our sample by scraping each school's athletics website in October 2018.[1] The format of the online rosters varies across schools, but the hometown and previous school(s) attended of each athlete is typically listed. Online Appendix Table OA.17 shows sample statistics on the number of athletes[2] observed with each characteristic and the number matched to specific cities/counties and public high schools. We note that match rates at each step of the process are similar between revenue and non-revenue sports.

We match athletes to a Census Designated Place (CDP) and county using fuzzy text matching on the hometown field in each athlete's roster entry. We also match by hand any listed hometowns that appear in the roster data 10 or more times but are not matched by the algorithm.[3] The hometown matching works well, as we are able to match 93.4% of athletes where a U.S. state is listed to a county or CDP. Additionally, the total fraction of athletes that are not matched to a state is consistent with NCAA data on foreign athlete share in our sample conferences.

The high school matching is more difficult. While most athletes have a previous school attended field in their roster entry, the formatting of the entry often does not indicate whether this is the athlete's high school, or a previous college attended. Many athletes also attended private high schools, prep schools, or sports academies prior to enrolling in college rather than public schools. We again attempt to match athletes with a previous school listed through fuzzy text matching. For each athlete, we only search over the set of public high schools in the county or counties of the athlete's hometown. Therefore, the sample of athletes matched to a high school is necessarily a subset of the athletes with a matched hometown. We impose these search restrictions for two reasons. First, this improves match quality by reducing false matches from high schools in the same state with a similar name. Second, our empirical strategy is to aggregate Census tract data to form school-level sociodemographic measures, so it is necessary for the athlete to have attended a public school in their assigned district for these measures to be relevant.

[1] An example is the Northwestern football team roster found here: https://nusports.com/sports/football/roster.

[2] The level of observation is technically athlete-sport as athletes that play multiple sports appear on the roster for each. Multi-sport athletes are rare, so we refer to the level as athlete for simplicity.

[3] This solves problems such as matching common alternative names, e.g. this matches all athletes with "Brooklyn, NY" listed as their hometown to the New York, NY CDP.

We perform several validation tests on the high school match. From a random sample of 500 matches, we find the false positive rate to be less than 3%. We also check for a correlation between local private high school enrollment shares and the match rate in our sample. Appendix Figure OA.6 shows the fraction of athletes matched by binned private school share in their home county from the ACS. This suggests private school enrollment explains a significant amount of the unmatched athletes. Our final analysis sample results in 29,556 athletes matched to a CDP/county, with 16,794 of these athletes matched to a public high school.[4]

We compute statistics on student demographics by merging Census data on these geographic variables. First, census demographic data was downloaded from Social Explorer to gather information on mean and median household income (in 2018 dollars), proportion of population of various races and ethnicities, proportion of the adult population at various education levels, and proportion of the population living in poverty. All variables, but for mean household income, come from the 2000 Census SF3 and SF1 files, imputed to 2010 census tract geographies. The mean household income variable is derived by dividing aggregate household income by the number of households, in a calculation done by Social Explorer. Just 0.7% of the observations in the census dataset are missing, which is due to data suppression.

The tract-level census data is then merged and aggregated to the school level. First, we merge to a school catchement area to tract crosswalk. 99.98% of schools have census information for at least one census tract in the catchement area, and 96.9% of schools have census information for all tracts. The dataset includes all schools that have census information for at least one tract. There are only two schools that don't match to the crosswalk file (accounting for the 0.02%), because census data was missing for all tracts in that school's catchment area. Each census variable is then collapsed to the school level, weighted by relevant total. For example, household income is weighted by number of households in the tract, whereas education level for adults over 25 is weighted by the total number of adults over 25 in the tract.

As a final step, the now school-level demographic information is merged to the athlete roster data for athletes matched to a public high school. Of the 16,794 matched to a public high school, we successfully merge on the school-level demographics for 15,184 (90.4%). The unmatched are a result of either schools missing from the crosswalk file because they were built after the crosswalk was created or because the school attendance zone data is unavailable, such as charter schools or a

[4] Clemson did not have previous school listed on any of the rosters, so the high school sample of schools comes from only 64 colleges.

school district with fully open enrollment. We also merge college demographic data to each athlete from the Opportunity Insights college-level datasets (Chetty et al. 2020). For each school, the mean and median parent's income is reported. We can then report these summary statistics for colleges in the Opportunity Insight data generally, and compare them to the average household income and median household income from the athlete to census merged data above as a way of comparing athlete-specific parent income to the school's typical student's parent's income. Data is inflation-adjusted to 2018 dollars (adjusted from 2015 dollars).

Athletic Department Finances

Our data on athletic department finances comes mainly from two sources: The College Athletics Financial Information database from the Knight Commission on Intercollegiate Athletics (Knight), and the U.S. Department of Education's Equity in Athletics Data Analysis (EADA) database. We also supplement this with data on total revenue, total spending, and institutional support from the USA Today NCAA Finances database, which is obtained through public records requests to schools.

Schools are required to report the EADA data to receive Title IV funding, so we observe this for all schools in our sample. We observe revenue and expenses separately for each sport, covering the 2005-2006 through 2018-2019 school years. Schools also report additional "non-sport" revenue and expenses that are not allocated to a specific sport, which complicates some of our analysis. While the granularity and comprehensiveness of this data is ideal for our analysis, there are data quality concerns (Dosh 2017). We address these concerns and our approaches for handling them in Section III.A.1 and Online Appendix Section II.

The Knight data covers only 46 of the 65 schools in our sample and covers the 2005-2006 through 2017-2018 school years. The Knight data is constructed as a synthesis of multiple data sources, but mainly comes from revenue and expense reports from public schools that are required to release financial statements. Therefore, these data provide the best information about school's financial constraints and budgeting. Unfortunately, the Knight data does not have sport-specific revenue and expenses, only school-year level aggregates for various categories.

II. Construction of Finances Analysis Sample

Sample and Variables

The EADA data covers academic years 2002-03 through 2018-19. We drop years prior to the 2005-2006 academic years due to data quality issues. We use the convention of our panel year referring to end of the academic year, so 2006 corresponds to the 2005-2006 academic year and the 2005 fall football season. 64 of the 65 schools in our sample are in the EADA data for every year in our sample. The exception is the University of Maryland, which does not report EADA or Knight data prior to 2009. Therefore, from the 65 school and 14 years in our sample, we observe 907 of a possible 910 school-year observations. From the EADA data, we observe revenue and expenses for each school-sport-year as well as revenue and expenses not allocated to a specific sport for each school-year. Additionally, the EADA data reports the dollar value of "athletics-related student aid" that athletes receive in scholarships at the school-year level.

The Knight data covers the years 2005-2018, which gives us 13 years that match up with our EADA panel. 45 of the 65 schools in our sample are covered by the Knight data in every year from 2006-2018, and the University of Maryland is present in the Knight data from 2009-2018. This gives 595 total observations in our Knight sample. The Knight data provides the best measure of total athletic department revenue and expenses, as well as several other revenue and expenditure categories. The revenue categories include ticket sales, donations, sponsorship and advertising, institutional support (student fees and general university/government funds), and a revenue category that includes NCAA and conference disbursements from postseason tournaments and TV contracts. The NCAA and conference disbursement variable is of particular interest for our empirical estimates of rent-sharing, as it accounts for a substantial amount of within-school variation in revenue. Both anecdotally and in the data, football and men's basketball appear to drive nearly all of these changes. The average of the NCAA and conference disbursement revenue category for schools in the Big Ten conference increased from $41.7 million in 2016-17 to $56.8 million in 2017-18. For the University of Michigan, this change was almost identical from $43.2 million to $58 over the same time. $51.1 million of this was from conference disbursements, with the significant increase attributed to new media rights deals for the conferences football and men's basketball games.[5] Appendix Table OA.19 shows that within-school changes in NCAA/Conference/Bowl/TV revenue

[5] Chengelis, Angelique S. "Michigan athletics projects $2.5M surplus." *The Detroit News*. June 21, 2018. https://www.detroitnews.com/story/sports/college/university-michigan/wolverines/2018/06/21/university-michigan-athletics-projects-2-5-million-budget-surplus/723113002/

are correlated with contemporaneous changes in football, men's basketball, and "non-sport revenue" in the EADA data but not with revenue for other sports. Appendix Table OA.20 shows that the pass-through to non-sport revenue reflects differences in accounting practice, likely regarding how television revenue from football and men's basketball is categorized.

On the expenditure side, the Knight data has variables on total compensation for coaches and administrators, spending on facilities, and total student aid for athletes. The next sections describe various steps we take to clean the raw data before arriving at our analysis samples.

Sport Level Revenue Imputation

The first issue with the EADA data is the prevalence of school-sport-year observations where revenue and expenses are exactly equal to each other, mostly for sports other than football and men's basketball. While it is theoretically possible that schools allocate spending to a sport to match its revenue and the true net income is zero, we find this implausible for several reasons. First, even if a sport is ex-ante budget neutral, revenue from ticket sales and various expenses like travel and medical care will vary over the course of the academic year. This makes it very unlikely that a sport is truly budget neutral ex-post. Second, the zero net income sports are concentrated in school-year observations that typically report zero net income for a majority of their non-FB/MBB sports. Of the 907 total EADA school-year observations, 137 have a sport with zero net income and 121 of these have eight or more sports with zero net income. This again suggests schools are misreporting revenue and/or expenses for these sports.[6]

The data suggests that net income is overstated in the years where net income is zero for these sports, and this is a result of revenue inflation rather than expense deflation. Appendix Figure OA.3 shows that the mass of school-sport-years at zero net income are in the right tail of the overall distribution of net income for these sports. Columns (4) and (5) of Appendix Table OA.18 show that occurrences of zero net income at the sport-level are not partially correlated with positive school-level shocks to revenue or profitability. Columns (1) - (3) of Appendix Table OA.18 show that at the sport-level, zero net income occurrences are partially correlated with large within-team increases in revenue and a nearly identical increase in net income, with virtually no change in

[6] Berri (2018) points out that the "Revenue Theory of Cost" would also be consistent with instances of exactly zero net income in absence of data manipulation. While this seems plausible ex ante for the athletic department as a whole, we find our explanation of data manipulation more plausible for specific sports ex post net income.

expenses. This suggests that zero net income observations reflect artificial revenue inflation, and this inflation is meaningful in percentage terms of the average revenue for these sports.

To address this problem, we delete and then impute sport-level revenue and net income for all observations where net income is exactly or nearly zero. Revenue is imputed for all school-sport-year observations for non-FB/MBB sports[7] where the absolute value of net income as a fraction of sport-level expenses is less than 0.02. As women's sports account for a majority of non-FB/MBB sports at most schools, we slightly broaden the criteria for imputation to capture data manipulation across multiple women's sports. We also impute revenue for women's sports where the absolute value of net income as a fraction of expenses is less than 0.1 and either total net income as a fraction of total expenses for all women's sports is also less than 0.1, or there are five or more women's sports in the school-year that have net income as a percentage of expenses less than 0.1. We exclude Stanford from these broader criteria, as their women's sports have net income around zero in almost every year of the data, implying it is not a result of manipulation.

For observations that meet the imputation criteria, the new imputed revenue and net income measures are created by the following procedure. First, we estimate separately for each sport s the regression

$$\ln\left(Rev_{jst}\right) = \alpha + \beta Impute_{jst} + \theta_j + \lambda_{jt} + \epsilon_{jst}$$

where j indexes schools, t indexes years, Rev_{jst} is school-sport-year revenue as reported in the EADA data, $Impute_{jst}$ is a dummy for meeting the imputation criteria, θ_j are school-fixed effects, and λ_{jt} are conference-year fixed effects. For observations that meet the imputation criteria, we then delete revenue and replace it with

$$ImputedRev_{jst} = \exp\left\{\ln\left(\widehat{Rev_{jst}}\right) - \hat{\beta}\right\}$$

where $\ln\left(\widehat{Rev_{jst}}\right)$ is predicted values and $\hat{\beta}$ is the OLS estimate from the above regression. Appendix Figure OA.4 shows the school-sport-year distribution of net income for non-FB/MBB sports after imputation. Sport-level net income and all school-level aggregate revenue and net income variables are then re-calculated using imputed sport-level revenue. School-level total revenue is not affected, as we make corresponding changes to the "non-sport" revenue of each school after every sport-level imputation. Overall, revenue is imputed for 9.6% of all school-sport-year observations.

[7] Zero net income for football and men's basketball is rare and appears to be in cases that understate true net income rather than overstate.

Baylor, Boston College, Rutgers, and West Virginia do not have a sufficient number of years where no sports meet the imputation criteria to be suitable for our imputation procedure and are dropped completely from any analysis using the EADA data. This leaves a total of 851 school-year observations in the EADA analysis sample.

III. Details on Player Compensation Data and Results

To construct average salaries, we use the total sport-specific revenue reported for football and men's basketball in the EADA data for the 61 schools in our main sample. As this does not include non-sport revenue, which often includes revenue that is generated by football or men's basketball activities (see Appendix Section II and Appendix Tables OA.19 and OA.20), we likely understate salaries at any given labor share of revenue. We assume some level of revenue sharing in all calculations, either between all Power 5 schools or within conferences. Specifically, the average salary in sport s for school i with number of players N^s is given by

$$\overline{w}_i{}^s = \frac{LaborShare * \sum_{j \in J} Rev_j^s}{N^s}$$

where J is the set of all schools in school i's revenue sharing arrangement. These results are shown for both overall and conference revenue sharing in Table 8.

For our results on the potential distribution of compensation, we use data on the distribution of salaries in the NFL and NBA. This data comes from spotrac.com and represents a real-time snapshot of active contracts in each league as of January 24, 2020. For each player under contract, we observe the total duration (in years) and total amount of salary (guaranteed and unguaranteed) owed over the course of the contract. We use the average annual value (total salary divided by duration) as our measure of salary for each player. The average number of players under contract per team is 66 in the NFL and 14 in the NBA. For all distributional results, we assume that college roster sizes adjust to be the same as the professional league of each sport. This not only eases the interpretation of the distributional results but is also a possible adjustment schools would make if limits on player compensation are lifted or relaxed (Sanderson and Siegfried 2015).

The main variable of interest from the professional salary data is the relative salary for each player, or the salary of each player divided by the average salary of all players in the league. We then estimate the distribution of college salaries by assuming an identical distribution of relative salaries as the professional league of each sport, with the distribution rescaled by adjusting the average salary to reflect college revenue levels. Figure 10 shows this distribution, assuming labor shares of 48.5 percent for football and 51 percent for basketball and full revenue sharing between all schools.

We also construct average salaries by position and playing contribution using the professional salary data, similar to Goff, Kim, and Wilson (2016). For these calculations, we assume that the starter at each position is the highest paid player on the team for that position. For positions with multiple starting players, we assume that the starters are the *M* highest paid players at the

position if there are typically *M* players at that position. To calculate average college salaries by position, we rescale every professional player's relative salary to reflect college revenue levels and take the average across each position-starter combination in each sport. We again assume labor shares equal to the professional league for each sport and full revenue sharing across schools. These results are shown in Table 9.

Finally, we compare our compensation estimates to the "book" value of the full cost-of-attendance scholarship football and men's basketball players currently receive at these schools. We infer these values indirectly. We observe total amount of athletics-related student aid for each school-year in the EADA data, and then estimate the number of full scholarship equivalent athletes each school has based on the menu of sports offered and the maximum number of full scholarship equivalents per sport allowed under NCAA rules. Summary statistics on these estimated scholarship values are shown in Appendix Table OA.16.

IV. NFL and NBA Collective Bargaining Agreements Excerpts

Below we include excerpts from the collective bargaining agreements of the NFL and NBA that describe the share of revenue designated for player salaries.

NFL

From Section 6(c)(ii) of the 2020 NFL-NFLPA Collective Bargaining Agreement:

"**Bands.** (A) If, in the 2020 League Year, the Player Cost Amount before application of the Stadium Credit is greater than 48.5% of Projected AR then the Player Cost Amount shall be reduced to 48.5% of Projected AR. If, in the 2020 League 96 Year, the Player Cost Amount is less than 47% of Projected AR, the Player Cost Amount shall be increased to 47% of Projected AR.
(B) If, in the 2021–2030 League Years, the Player Cost Amount before application of the Stadium Credit is greater than 48.5% of Projected AR then the Player Cost Amount shall be reduced to 48.5% of Projected AR. If, in any of these League Years, the Player Cost Amount is less than 48% of Projected AR, the Player Cost Amount shall be increased to 48% of Projected AR."

NBA

From Section 12(b)(3) of the 2017 NBA-NBPA Collective Bargaining Agreement:

"The Designated Share for each Salary Cap Year covered by the term of this Agreement shall equal fifty percent (50%) of BRI for such Salary Cap Year, provided that the Designated Share for a Salary Cap Year shall be increased or decreased in accordance with the following: (i) in the event that BRI for a Salary Cap Year exceeds the amount of BRI forecasted for such Salary Cap Year as set forth below, then the Designated Share for such Salary Cap Year shall equal fifty percent (50%) of the amount of BRI forecasted for such Salary Cap Year, plus sixty and one-half percent (60.5%) of the difference between the BRI for such Salary Cap Year and the BRI forecasted for such Salary Cap Year; and (ii) in the event that BRI forecasted for a Salary Cap Year as set forth below exceeds BRI for such Salary Cap Year, then the Designated Share for such Salary Cap Year shall equal fifty percent (50%) of the amount of BRI forecasted for such Salary Cap Year, less sixty and one-half percent (60.5%) of the difference between the BRI forecasted for such Salary Cap Year and BRI for such Salary Cap Year. Notwithstanding anything to the contrary in the foregoing, in no event shall the Designated Share for any Salary Cap Year be less than forty-nine percent (49%) of BRI or greater than fifty-one percent (51%) of BRI."

Online Appendix Table OA.1
Robustness of Rent-Sharing Elasticities

	Dependent Variable is Total Expenses for:			
	Football and Men's Basketball	Women's Sports and Other Men's Sports	Women's Sports	Other Men's Sports
	(1)	(2)	(3)	(4)
Panel A: **Baseline results in Table 2**				
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.820	0.416	0.410	0.424
	(0.093)	(0.074)	(0.080)	(0.099)
R^2	0.893	0.941	0.934	0.933
N	851	851	851	851
Panel B: **Add School-Specific Linear Time Trends**				
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.712	0.265	0.258	0.285
	(0.095)	(0.120)	(0.122)	(0.140)
R^2	0.937	0.963	0.959	0.957
N	851	851	851	851
Panel C: **Restrict to Subsample with Knight Data**				
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.862	0.474	0.478	0.458
	(0.112)	(0.083)	(0.100)	(0.110)
R^2	0.891	0.937	0.927	0.931
N	569	569	569	569
Panel D: **Drop non-sport revenue from right-hand side**				
Football and Men's Basketball Revenue	0.427	0.168	0.176	0.154
	(0.075)	(0.043)	(0.045)	(0.060)
R^2	0.864	0.930	0.923	0.925
N	851	851	851	851
Panel E: **Main sample using non-imputed data**				
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.680	0.345	0.354	0.327
	(0.078)	(0.061)	(0.065)	(0.091)
R^2	0.885	0.939	0.933	0.930
N	851	851	851	851
Panel F: **Drop all colleges with imputed data**				
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.695	0.292	0.284	0.324
	(0.087)	(0.102)	(0.095)	(0.141)
R^2	0.883	0.938	0.937	0.929
N	851	851	851	851
Panel G: **Include Baylor, WV, BC, Rutgers**				
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.809	0.360	0.367	0.338
	(0.086)	(0.079)	(0.080)	(0.108)
R^2	0.890	0.939	0.932	0.929
N	907	907	907	907

Notes: This table reports robustness of Table 3; the unit of observation is a school-year. All variables are included in logs so that the coefficients can be interpreted as elasticities. The standard errors are clustered by school and are reported in parentheses. Panel B includes school-specific linear time trends to main specification. Panel C restricts the sample to schools with additional variables on salaries and facilities spending. Thus, this panel reports rent-sharing elasticities for sub-sample in Table 4 that correspond to outcomes in Table 3. Panel D drops non-sport revenue from the right-hand side. Panel E uses the non-imputed expenses and revenue variables. Panel F adds back in the 4 schools that were dropped from main analysis sample because of questionable sport-level accounting data and our inability to impute sport-level revenue reliably for these schools. Se Data Appendix for more details on sport-level revenue imputation.

Online Appendix Table OA.2
Rent-Sharing Elasticities As Shares

Effect on each group's spending:	Football and Men's Basketball	Women's Sports and Other Men's Sports	Women's Sports	Other Men's Sports
	(1)	(2)	(3)	(4)
Panel A: OLS Estimates Including School Fixed Effects and Year Fixed Effects				
Effect of Football and Men's Basketball + Total Non-Sport Revenue on the Share of Football and Men's Basketball + Non-Sport Revenue	0.306	0.113	0.074	0.039
	(0.03)	(0.02)	(0.01)	(0.01)
Panel B: OLS Estimates Including School, Year, and Conference-by-Year Fixed Effects				
Effect of Football and Men's Basketball + Total Non-Sport Revenue on the Share of Football and Men's Basketball + Non-Sport Revenue	0.313	0.119	0.075	0.044
	(0.04)	(0.02)	(0.02)	(0.01)

Notes: Results from Table 3 are transformed by multiplying elasticities for each outcome by the ratio of share of Football and Men's Basketball spending to share of athletic department revenue for each school-year observation. Standard errors from the elasticity calculations are adjusted using the delta-method.

Online Appendix Table OA.3
Additional Rent-Sharing Elasticities:

Dependent Variable:	Salaries for Football Coaches	Salaries for Non-Football Coaches	Administrative Compensation	Facilities Spending	Institutional Support	Surplus
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: OLS Estimates Including School Fixed Effects and Year Fixed Effects						
Effect of Football and Men's Basketball + Total Non-Sport Revenue on the Share of Football and Men's Basketball + Non-Sport Revenue	0.03	0.03	0.09	0.20	-0.01	0.11
	(0.002)	(0.002)	(0.004)	(0.022)	(0.043)	(0.05)
Panel B: OLS Estimates Including School, Year, and Conference-by-Year Fixed Effects						
Effect of Football and Men's Basketball + Total Non-Sport Revenue on the Share of Football and Men's Basketball + Non-Sport Revenue	0.03	0.03	0.07	0.19	0.01	0.09
	(0.00)	(0.00)	(0.00)	(0.02)	(0.04)	(0.06)

Notes: Results from Table 4 are transformed in columns 1-5 by multiplying elasticities for each outcome by the average share of athletic department revenue of that outcome (in row 1 of each panel) and by the ratio of share of Football and Men's Basketball spending to share of athletic department revenue (in row 2 of each panel) for each school-year observation. Standard errors from the elasticity calculations are adjusted using the delta-method. Column 6 reports elasticity estimates on the surplus (total revenue/expenses from EADA dataset), using the same panel regressions used in Table 4.

Online Appendix Table OA.4
Robustness to Alternative Measurement of Expenses and Spending

Data Source:	EADA	Knight	Knight	Knight
Dependent Variable is Total Expenses for:	Football and Men's Basketball	Football	Total Spending - Total Football Spending	Total Spending - (Salaries for Non-Football Coaches and Administrative Personnel + Facilities Spending + Total Football Spending)
	(1)	(2)	(3)	(4)
Panel A: OLS Estimates Including School Fixed Effects and Year Fixed Effects				
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.820	0.694	0.531	0.418
	(0.093)	(0.084)	(0.107)	(0.158)
R^2	0.893	0.879	0.936	0.786
Panel B: OLS Estimates Including School, Year, and Conference-by-Year Fixed Effects				
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.839	0.676	0.502	0.434
	(0.102)	(0.105)	(0.131)	(0.204)
R^2	0.903	0.893	0.941	0.812

Notes: N = 851 for column (1) and N = 569 for the remaining columns, and the unit of observation is a school-year. All variables are included in logs so that the coefficients can be interpreted as elasticities. The sample covers 61 schools in "Power 5" conferences between 2006 and 2019. The standard errors are clustered by school and are reported in parentheses.

Online Appendix Table OA.5
Revenue and Expenses Share of Total Athletic Department Revenue

Salaries, Facilities Spending, and Total Institutional Support Share of (EADA) Total Athletic Department Revenue

[Panel C of Table 2 reproduced]

	Salaries for Football Coaches	Administrative Compensation	Facilities Spending	Total institutional Support
Average Share	0.073	0.179	0.218	0.063
Standard Deviation	(0.017)	(0.034)	(0.081)	(0.064)

Salaries, Facilities Spending, and Total Institutional Support Share of (Knight) Total Athletic Department Revenue

	Salaries for Football Coaches	Administrative Compensation	Facilities Spending	Total institutional Support
Average Share	0.070	0.172	0.206	0.061
Standard Deviation	(0.017)	(0.034)	(0.062)	(0.061)

Notes: This table reports average shares of total athletic depatment revenue are reported. The top panel reports the the shares of spending on coaches, administrative compensation, facilities spending, and institutional support as shares of total athletic department revenue from EADA. However, since these spending variables come from data from the Knight Commission, the bottom panel validates the average shares by showing the analogous shares using total athletic department revenue measures from the Knight Commission, rather than EADA.

Online Appendix Table OA.6
Instrumental Variables Estimates of Additional Rent-Sharing Elasticities

	Salaries for Football Coaches	Salaries for Non-Football Coaches	Administrative Compensation	Facilities Spending	Institutional Support
	(1)	(2)	(3)	(4)	(5)
Football and Men's Basketball Revenue + Total Non-Sport Revenue	0.818	0.309	0.683	1.472	-0.333
	(0.242)	(0.199)	(0.209)	(0.327)	(1.058)
First Stage F-statistic	37.34	37.34	37.34	37.34	37.34

Notes: N = 569 for all regressions, and the unit of observation is a school-year. All variables are included in logs so that the coefficients can be interpreted as elasticities. The sample covers 46 schools in "Power 5" conferences between 2006 and 2018. This table reports IV estimates using instrument in Table 6 for the outcomes reported in Table 4. The standard errors are clustered by school and are reported in parentheses.

Online Appendix Table OA.7
Instrumental Variables Estimates of Rent-Sharing Elasticities Across Sports
[Adding Conference-Year Fixed Effects to Table 5]

Dependent Variable:	[First Stage] Football and Men's Basketball Revenue + Total Non-Sport Revenue	Total Expenses for:			
		Football and Men's Basketball	Women's Sports and Other Men's Sports	Women's Sports	Other Men's Sports
	(1)	(2)	(3)	(4)	(5)
Football and Men's Basketball Revenue + Total Non-Sport Revenue		1.176	0.360	0.371	0.485
		(0.275)	(0.205)	(0.175)	(0.302)
Total revenue from conference payouts, football bowls, and TV contracts	0.214				
	(0.071)				
First Stage F-statistic	9.19				

Notes: N = 569 for all regressions, and the unit of observation is a school-year. All variables are included in logs so that the coefficients can be interpreted as elasticities. The sample covers 46 schools in "Power 5" conferences between 2006 and 2018. This table reports robustness of results in Table 6 to including conference-year fixed effets. Since the instrument is primarily capturing conference-year variation in bowl payments, conference payouts, and TV contracts, the first stage F-statistic is susbstantially reduced when including conference-year fixed effects in specification. The standard errors are clustered by school and are reported in parentheses.

Online Appendix Table OA.8
OLS and IV Estimates of Rent-Sharing Elasticities for Unversity of Utah Case Study

Dependent Variable:	[First Stage] Conference, Bowl, and TV Revenue	[First Stage] Football and Men's Basketball Revenue + Total Non-Sport Revenue	Total Expenses for: Football and Men's Basketball	Total Expenses for: Women's Sports and Other Men's Sports	Total Expenses for: Women's Sports	Total Expenses for: Other Men's Sports
	(1)	(1)	(1)	(2)	(3)	(4)
Panel A: OLS Estimates Including School Fixed Effects and Year Fixed Effects						
Utah x (Year $\geq$ 2012)	0.352	0.367	0.252	0.273	0.459	0.504
	(0.023)	(0.020)	(0.021)	(0.028)	(0.023)	(0.055)
First Stage F-statistic		336.72				
Panel B: IV Estimates Including School and Year Fixed Effects						
Football and Men's Basketball Revenue + Total Non-Sport Revenue			0.699	0.483	0.398	0.744
			(0.056)	(0.034)	(0.037)	(0.044)

Notes: This table reports OLS and IV estimates for the University of Utah Case Study analysis. The University of Utah moved from the Western Athletic Conference (not a "Power 5" conference) to the Pac-12 conference (one of the "Power 5" conferences) in 2012. All variables are included in logs so that the coefficients can be interpreted as elasticities. The standard errors are clustered by school and are reported in parentheses.

Online Appendix Table OA.9
OLS and IV Estimates of Additional Rent-Sharing Elasticities for Unversity of Utah Case Study

Dependent Variable:	[First Stage] Conference, Bowl, and TV Revenue	[First Stage] Football and Men's Basketball Revenue + Total Non-Sport Revenue	Dependent Variable: Salaries for All Coaches	Salaries for Football Coaches	Administrative Compensation	Facilities Spending
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: OLS Estimates Including School Fixed Effects and Year Fixed Effects						
Utah x (Year $\geq$ 2012)	0.352	0.367	0.257	0.177	0.146	0.273
	(0.023)	(0.020)	(0.030)	(0.019)	(0.019)	(0.022)
First Stage F-statistic		336.72				
Panel B: IV Estimates Including School and Year Fixed Effects						
Football and Men's Basketball Revenue + Total Non-Sport Revenue			0.686	0.740	1.250	1.372
			(0.048)	(0.062)	(0.071)	(0.130)

Notes: This table reports OLS and IV estimates for the University of Utah Case Study analysis. The University of Utah moved from the Western Athletic Conference (not a "Power 5" conference) to the Pac-12 conference (one of the "Power 5" conferences) in 2012. All variables are included in logs so that the coefficients can be interpreted as elasticities. The standard errors are clustered by school and are reported in parentheses.

Online Appendix Table OA.10
Census Summary Statistics

	Mean	Median	Standard Deviation
Income			
Median Household Income	59,385.38	53,680.34	34,123.60
Mean Household Income	84,477.62	74,587.48	40,682.55
Education			
Share with Grad School	0.09	0.06	0.08
Share with Bachelor's Degree	0.15	0.13	0.10
Share with Some College	0.27	0.27	0.08
Share with High School Degree	0.29	0.29	0.10
Share with Less than High School	0.20	0.17	0.14
Poverty Status			
Share in Poverty	0.13	0.10	0.12
Race/Ethnicity			
Share Black	0.13	0.03	0.22
Share White	0.75	0.85	0.26
Share Hispanic	0.13	0.04	0.21

Notes: This table lists summary statistics for all census variables reported in Table 7. The variables were pulled from Social Explorer 2000 Census on 2010 Geographies at the tract level for all census tracts in the US, and converted to 2018 dollars.

Online Appendix Table OA.11
Neighborhood Characteristics for Athletes Using Hometown (City) Instead of High School

Sample of Athletes:	All Athletes	Football and Men's Basketball	Women's Sports and Other Men's Sports	Women's Sports	Other Men's Sports
Income					
Median Household Income	61,250.43	54,789.78	65,667.85	66,846.54	63,208.37
Mean Household Income	94,152.98	82,872.45	98,180.08	98,527.17	96,720.64
Average Hometown Income Percentile	0.54	0.46	0.57	0.57	0.55
Share in 1st Quartile	0.12	0.17	0.10	0.10	0.11
Share in 2nd Quartile	0.30	0.37	0.27	0.27	0.28
Share in 3rd Quartile	0.24	0.23	0.25	0.25	0.25
Share in 4th Quartile	0.34	0.23	0.38	0.39	0.36
Education					
Share with Grad School	0.14	0.12	0.15	0.15	0.15
Share with Bachelor's Degree	0.23	0.20	0.24	0.24	0.23
Share with Some College	0.27	0.28	0.27	0.27	0.27
Share with High School Degree	0.24	0.26	0.23	0.23	0.23
Share with Less than High School	0.12	0.14	0.11	0.11	0.11
Poverty Status					
Share in Poverty	0.13	0.15	0.12	0.12	0.12
Race/Ethnicity					
Share Black	0.14	0.20	0.11	0.11	0.11
Share White	0.74	0.67	0.76	0.76	0.76
Share Hispanic	0.13	0.14	0.12	0.12	0.12
Observations					
Number of Schools	61	61	61	61	61
Number of Athlete-Sports	27,737	7,297	20,440	11,874	8,199

Notes: This table reports various statistics broken down by sport, using athlete-sport level data that combines the athlete's sport to census demographic information. The census information is linked through the athlete's hometown overlap with American Community Survey cities, and is aggregated to the hometown level. Students who play multiple sports are represented in multiple rows in the data - once for each sport. Column one reports statistics for all student-sports, while columns two through five report statistics just for Football/Men's Basketball, Non- Football/Men's Basketball Sports, Womens sports, and Men's non-Football/Men's Basketball sports. The first set of statistics reported reflect median and mean household income. The next set of statistics shows the share of students in each quartile of the overall US household income distribution, created from 2010 American Community Survey files. The next set of statistics shows the proportion of the population associated with each high school of various educational attainments and various race/ethnicities. Finally, we report the number of colleges represented in the sample, as well as the nubmer of athlete-sport rows. Income is reported in 2018 dollars.

Online Appendix Table OA.12

Mean parent income compared to matched athlete household income by school selectivity tier

	Mean Parent Income All Schools	Mean Parent Income Power-5 Schools	Tract-Matched Mean Income Athletes Only
Ivy Plus	453,394.58	517,865.17	137,043.16
Other elite schools	323,317.42	306,220.22	129,897.43
Highly selective	225,491.07	185,063.41	115,872.12
Selective	118,375.14	156,067.61	104,794.76
Nonselective Four-year not-fo	107,407.69		
Two-year not-for-profit	77,528.20		
Four-year for-profit	86,944.00		
Two-year for-profit	65,553.30		
All	112,702.37	197,374.07	112,272.45
Number of Schools	2,199	59	59

Notes: This table reports statistics from the roster data merged to Opportunity Insights data. In column 1, parent mean income from Opportunity Insights data is reported for all Opportunity Insights colleges. In column 2, the same parent mean income variable is reported for only those colleges that match to our dataset of Power-5 schools. In column 3, we report a different income variable: aggregated census tract level mean household income matched to the athletes. Note that Ohio State University is not accounted for in Opportunity Insights, which is why the total number of schools represented here is smaller. Income is reported in 2018 dollars.

Online Appendix Table OA.13

Median parent income compared to matched athlete household income by school selectivity tier

	Median Parent Income All Schools	Median Parent Income Power-5 Schools	Tract-Matched Median Income Athletes Only
Ivy Plus	183,484.10	181,330.41	84,304.12
Other elite schools	156,746.79	158,637.84	73,447.48
Highly selective	125,649.57	125,439.46	71,401.94
Selective	89,404.50	108,209.92	64,169.22
Nonselective Four-year not-fo	72,910.37		
Two-year not-for-profit	65,346.18		
Four-year for-profit	62,457.08		
Two-year for-profit	50,585.51		
All	78,058.22	114,513.41	67,121.87
Number of Schools	2,199	59	59

Notes: This table reports statistics from the roster data merged to Opportunity Insights data. In column 1, parent median income from Opportunity Insights data is reported for all Opportunity Insights colleges. In column 2, parent median income is reported for only those colleges that match to our dataset of Power-5 schools. In column 3, we report a different income variable: aggregated census tract level mean household income matched to the athletes. Note that Ohio State University is not accounted for in Opportunity Insights, which is why the total number of schools represented here is smaller. Income is reported in 2018 dollars.

Online Appendix Table OA.14
School Tier List

Name	Tier	Tier Number
Duke University	Ivy Plus	1
Stanford University	Ivy Plus	1
Northwestern University	Other elite schools (public and private)	2
University Of California, Los Angeles	Other elite schools (public and private)	2
University Of Miami	Other elite schools (public and private)	2
University Of North Carolina - Chapel Hill	Other elite schools (public and private)	2
University Of Notre Dame	Other elite schools (public and private)	2
University Of Southern California	Other elite schools (public and private)	2
University Of Virginia	Other elite schools (public and private)	2
Vanderbilt University	Other elite schools (public and private)	2
Wake Forest University	Other elite schools (public and private)	2
Georgia Institute Of Technology	Highly selective public	3
Syracuse University	Highly selective private	3
Texas AandM University	Highly selective public	3
Texas Christian University	Highly selective private	3
University Of California, Berkeley	Highly selective public	3
University Of Florida	Highly selective public	3
University Of Georgia	Highly selective public	3
University Of Illinois System	Highly selective public	3
University Of Maryland System (Except University College) An	Highly selective public	3
University Of Michigan - Ann Arbor	Highly selective public	3
University Of Minnesota System	Highly selective public	3
University Of Maryland System (Except University College) And Baltimore City Community College	Highly selective public	3
University Of Texas At Austin	Highly selective public	3
University Of Wisconsin System	Highly selective public	3
Virginia Polytechnic Institute and State University	Highly selective public	3
Arizona State And Northern Arizona University And University	Selective public	4
Auburn University	Selective public	4
Florida State University	Selective public	4
Indiana University System	Selective public	4
Iowa State University Of Science and Technology	Selective public	4
Kansas State University	Selective public	4
Louisiana State University System	Selective public	4
Michigan State University	Selective public	4
Mississippi State University	Selective public	4
North Carolina State University	Selective public	4
Oklahoma State University	Selective public	4
Oregon State University	Selective public	4
Pennsylvania State University	Selective public	4

Purdue University	Selective public	4
Texas Tech University	Selective public	4
University Of Alabama	Selective public	4
University Of Arkansas	Selective public	4
University Of Colorado System	Selective public	4
University Of Iowa	Selective public	4
University Of Kansas	Selective public	4
University Of Kentucky	Selective public	4
University Of Louisville	Selective public	4
University Of Mississippi	Selective public	4
University Of Missouri System And Missouri University Of Sci	Selective public	4
University Of Nebraska System	Selective public	4
University Of Oklahoma	Selective public	4
University Of Oregon	Selective public	4
University Of South Carolina System	Selective public	4
University Of Tennessee System	Selective public	4
University Of Utah	Selective public	4
University Of Washington System	Selective public	4
Washington State University	Selective public	4
University Of Utah	Selective public	4
University Of Washington System	Selective public	4
Washington State University	Selective public	4
West Virginia University, West Virginia University Institute	Selective public	4

Notes: This table shows the tier of each school in our matched roster to Opportunity Insights dataset.

Online Appendix Table OA.15
Athlete Race/Ethnicity in Revenue vs. Non-Revenue Sports

Panel A: Race/Ethnicity Shares for Revenue vs. Non-Revenue Sports

	Black (%)	White (%)	Other Race/Ethnicity (%)
Fotball and Men's Basketball	48.7	37.4	13.9
Other Sports	10.5	72.4	17.1
Total	19.6	64.0	16.4

Panel B: Share of Athletes in Revenue vs. Non-Revenue Sport by Race/Ethnicity

	Football or Men's Basketball (%)	Other Sport (%)
Black	59.3	40.7
White	13.9	86.1
Other Race/Ethnicity	20.2	79.8
Total	23.8	76.2

Notes: This table shows summary statistics of self-reported race/ethnicity of athletes for revenue and non-revenue sports. The data source is the NCAA Race and Gender Demographics Database from the 2016-2017 academic year. Sample is limited to athletes that are US residents and covers only the Power Five conferences. 99 percent of football and men's basketball players and 93 percent of other athletes are US residents. The full list of race/ethnicity groups in the NCAA demographics database are: "Black (Non-Hispanic)", "White (Non-Hispanic)", "Hispanic/Latino", "American Indian/Alaska Native", "Asian/Native Hawaiian/Pacific Islander", "Two or more races", and "Nonresident". "Nonresident" is excluded from the calculations above, and all categories except for the first two are grouped together in "Other Race/Ethnicity".

Online Appendix Table OA.16
Scholarship Values and Graduation Rates

Panel A: Full Cost-of-Attendance Scholarship Values

	Mean	Std. Dev.	Median	Min	Max	25th Pctile.	75th Pctile.
Overall	54,271	12,305	51,230	26,234	83,960	45,879	61,061
ACC	59,203	12,310	57,373	43,901	78,688	46,739	72,518
Big 12	49,975	18,242	44,617	26,234	83,960	39,548	60,159
Big Ten	54,656	10,223	52,314	42,639	74,517	46,952	61,061
Pac-12	51,930	10,923	50,936	36,057	73,950	43,967	56,452
SEC	52,469	8,502	48,989	43,548	70,576	45,734	60,478

Panel B: Graduation Rates (%)

	Football		Men's Basketball		All Athletes		Student Body
	GSR	FGR	GSR	FGR	GSR	FGR	FGR
Overall	81	64	83	44	89	70	78
ACC	82	67	87	51	91	72	85
Big 12	75	58	86	33	85	64	70
Big Ten	86	70	84	51	91	75	82
Pac-12	82	64	76	43	89	70	77
SEC	77	57	81	38	89	65	74

Notes: Panel A shows summary statistics on the reported value of full scholarships across all schools in the "Power Five" conferences. For each school, this is calculated as the total amount of athletics related student aid reported by the school in the EADA data, diveded by the estimated number of full scholarship equivalent athletes based on the school's menu of sports and NCAA limitations on scholarships per sport. These values reflect the 2018-19 school year and are in 2018 dollars. Panel B shows the average graduation rate across all "Power Five" schools for the 2012 entering cohort among athletes in football or men's basketball and the entire student body. "FGR" is the federal graduation rate, and is calculated equivalently between athletes and the general student body. "GSR" stands for Graduation Success Rate, which is an alternative graduation measure the NCAA publishes that excludes athletes who transfer but were in good academic standing.

Online Appendix Table OA.17
Hometown and High School Matching Statistics

	All Athletes	Football and Men's Basketbal	Other Sports
# Observed in Online Rosters	35,721	8,461	27,260
# with Hometown Scraped	35,014	8,427	26,587
# with Previous School Scraped	32,520	8,102	24,418
# with Hometown in United State	31,644	8,139	23,505
# with Hometown Matched	29,556	7,730	21,826
# with High School Matched	16,794	4,455	12,339

Notes: This table shows the number of athletes in the rosters data that remain in each step of the matching process to hometowns and high schools.

Online Appendix Table OA.18
Zero Net Income Diagnostic Regressions for Non-Revenue Sports

	Dependent Variable:				
	Net Income (team)	Revenue (team)	Expenses (team)	Revenue (school)	Net Income (School)
	(1)	(2)	(3)	(4)	(5)
1(Team Net Income = 0)	0.738	0.729	-0.009	-0.887	-1.958
	(0.049)	(0.054)	(0.022)	(0.340)	(0.281)
Dependent Variable Mean	-0.25	2.31	2.55	85.94	2.59

Notes: N = 13,265 for all regressions, and the unit of observation is a school-sport-year. All dependent variables are in millions of 2018 dollars. The sample includes only non-revenue sports and covers 61 schools in "Power 5" conferences between 2006 and 2019. Rutgers, Baylor, Boston College, and West Virginia are excluded from the sample, as they did not have sufficient variation in non-FB/MBB sport net income for our imputation procedure. Regression standard errors are shown in parentheses and are clustered by school-sport. The dependent variable mean is the mean conditional on a school-sport ever having zero net income but only for years where net income is not zero.

Online Appendix Table OA.19
Decomposition of NCAA/Conference/TV/Bowl Revenue by EADA Revenue Categories

	Dependent Variable: Revenue from						
	Total	Sports	Non-Sport	Football	Men's Basketball	Other Men's Sports	Women's Sports
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total revenue from conference payouts, football bowls, and TV contracts	0.711	0.532	0.179	0.440	0.102	-0.027	0.018
	(0.111)	(0.106)	(0.105)	(0.091)	(0.026)	(0.012)	(0.018)

Notes: N = 569 for all regressions, and the unit of observation is a school-year. All variables are in 2018 dollars and measured in levels. The sample includes only non-revenue sports and covers 46 schools from "Power 5" conferences in the Knight data between 2006 and 2018. Regression standard errors are shown in parentheses and are clustered by school. The dependent variable mean is the mean conditional on a school-sport ever having zero net income but only for years where net income is not zero. All regressions include school fixed effects and year fixed effects.

Online Appendix Table OA.20
Decomposition of NCAA/Conference/TV/Bowl Revenue: Heterogeneity by Non-Sport Revenue Share

	Dependent Variable: Revenue from						
	Total	Sports	Non-Sport	Football	Men's Basketball	Other Men's Sports	Women's Sports
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total revenue from conference payouts, football bowls, and TV contracts	0.714	0.869	-0.155	0.826	0.088	-0.036	-0.010
	(0.144)	(0.132)	(0.133)	(0.112)	(0.033)	(0.015)	(0.023)
* 2nd Quartile Non-Sport Share	0.086	-0.188	0.274	-0.261	0.015	0.019	0.040
	(0.109)	(0.101)	(0.101)	(0.085)	(0.025)	(0.011)	(0.017)
* 3rd Quartile Non-Sport Share	-0.087	-0.246	0.160	-0.250	0.007	-0.020	0.016
	(0.115)	(0.106)	(0.107)	(0.090)	(0.027)	(0.012)	(0.018)
* 4th Quartile Non-Sport Share	-0.084	-0.602	0.518	-0.645	0.016	0.009	0.019
	(0.111)	(0.102)	(0.103)	(0.086)	(0.026)	(0.011)	(0.017)

Notes: N = 569 for all regressions, and the unit of observation is a school-year. All variables are in 2018 dollars and measured in levels. The sample includes only non-revenue sports and covers 46 schools from "Power 5" conferences in the Knight data between 2006 and 2018. Regression standard errors are shown in parentheses and are clustered by school. The dependent variable mean is the mean conditional on a school-sport ever having zero net income but only for years where net income is not zero. All regressions include school fixed effects and year fixed effects. The main independent variable is interacted with dummies for quartile of school-level average of the share of EADA revenue that is categorized as “non-sport” across all years.

Online Appendix Table OA.21
Level and Growth of Main Variables in Rent-Sharing Analysis

	2008	2013	2018	% Change 2008-2018	% Change 2013-2018
Total Revenue	77.2	93.1	124.7	61%	34%
Rev. FB/MBB	50.3	61.5	80.4	60%	31%
Rev. FB/MBB/Non-Sport	72.6	86.7	117.7	62%	36%
Rev. NCAA/Conf/TV/Bowl	17.2	26.2	44.7	160%	71%
Net Income FB/MBB	27.0	30.8	37.3	38%	21%
Net Income All Other Sports	-12.8	-15.5	-21.8	71%	41%
Exp. All Other Sports	17.4	21.9	28.8	66%	32%
Exp. Non-Sport	29.4	34.8	43.8	49%	26%
Exp. Admin Comp	13.3	17.0	24.3	82%	42%
Exp. Coach Comp (all)	12.1	16.5	22.3	84%	36%
Exp. Coach Comp (football)	4.8	7.0	9.8	105%	40%
Exp. Facilities/Equipment	16.6	18.5	28.8	73%	56%

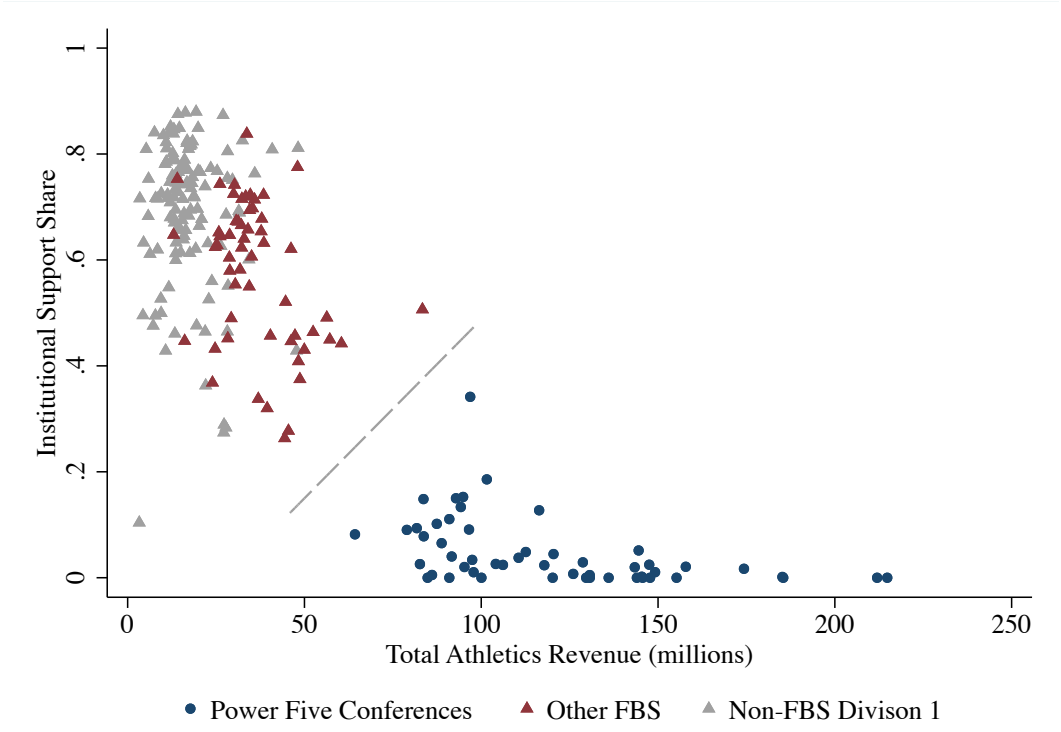
Notes: Table shows the mean across schools for each variable in the given year in millions of real 2018 dollars. The sample is Power Five schools as of 2018 that appear in both the EADA and Knight data.

Online Appendix Table OA.22
Comparison of Coach Salaries as Percentage of Revenue to Executives

Year	Mean football coach salary (salary + bonus + benefits)	Mean football coach salary as a percent of athletic department revenue	Mean athletic department revenue	Mean executive annual compensation (salary + bonus) for top 5 executives	Mean executive total compensation for top 5 executives (salary, bonus, other annual, total value of restricted stock granted, net value of stock options exercised, long-term incentive payouts, and all other total.)	Mean executive annual compensation for top 5 executives as a percent of revenue (salary + bonus)	Mean executive total compensation for top 5 executives as a percent of revenue (salary, bonus, other annual, total value of restricted stock granted, net value of stock options exercised, long-term incentive payouts, and all other total.)	Mean Compustat Revenue	Amount Paid to Top 5 Highest Paid Coaches Per Athletic Department Revenue	Fraction of Total Coach Spending (Salary + Potential Bonus) Paid to Top 5 Highest Paid Coaches	Amount Paid to Top 5 Highest Paid Coaches	Total Amount Paid to All Coaches (USA Today Source)
2006	3,987,264	5.91%	73,733,936	1,685,215	6,225,638	0.29%	0.61%	6,126,822,912				
2007	4,307,838	6.04%	73,731,592	1,450,445	5,755,070	0.27%	0.69%	5,838,329,344				
2008	4,776,733	6.15%	80,915,568	1,392,900	4,532,134	0.29%	0.67%	6,039,854,592				
2009	5,212,583	6.70%	79,307,744	1,440,490	4,215,977	0.58%	1.19%	5,573,585,408				
2010	5,613,854	6.66%	86,618,136	1,540,305	5,692,307	1.08%	1.41%	6,270,701,568				
2011	6,149,183	7.14%	87,287,784	1,561,692	6,128,038	0.50%	0.87%	6,953,820,672				
2012	6,393,837	7.17%	91,443,248	1,607,187	7,101,469	1.31%	1.67%	7,161,196,032				
2013	6,911,888	7.31%	96,408,088	1,629,154	7,682,134	0.99%	2.51%	7,404,322,816				
2014	7,429,330	7.35%	103,527,920	1,662,405	7,976,122	1.44%	2.90%	7,771,858,944	5.56%	77.05%	5,756,020	7,359,422
2015	8,252,533	7.67%	108,509,912	1,679,875	7,796,728	1.30%	1.90%	7,660,375,040	6.39%	80.01%	6,866,978	8,547,747
2016	8,512,856	7.54%	114,256,016	1,713,607	7,583,225	1.07%	1.76%	7,990,379,520	6.41%	77.13%	7,357,490	9,502,495
2017	8,963,475	7.50%	121,125,824	1,768,767	8,372,168	1.07%	1.41%	8,846,842,880	6.46%	77.46%	7,735,860	9,890,424
2018	9,637,868	7.74%	126,613,248	1,845,405	8,881,199	0.15%	0.51%	9,966,635,008	6.59%	75.00%	8,324,252	11,031,487
2019				1,882,326	9,141,676	0.13%	0.43%	10,835,464,192		74.99%	8,853,779	11,800,828

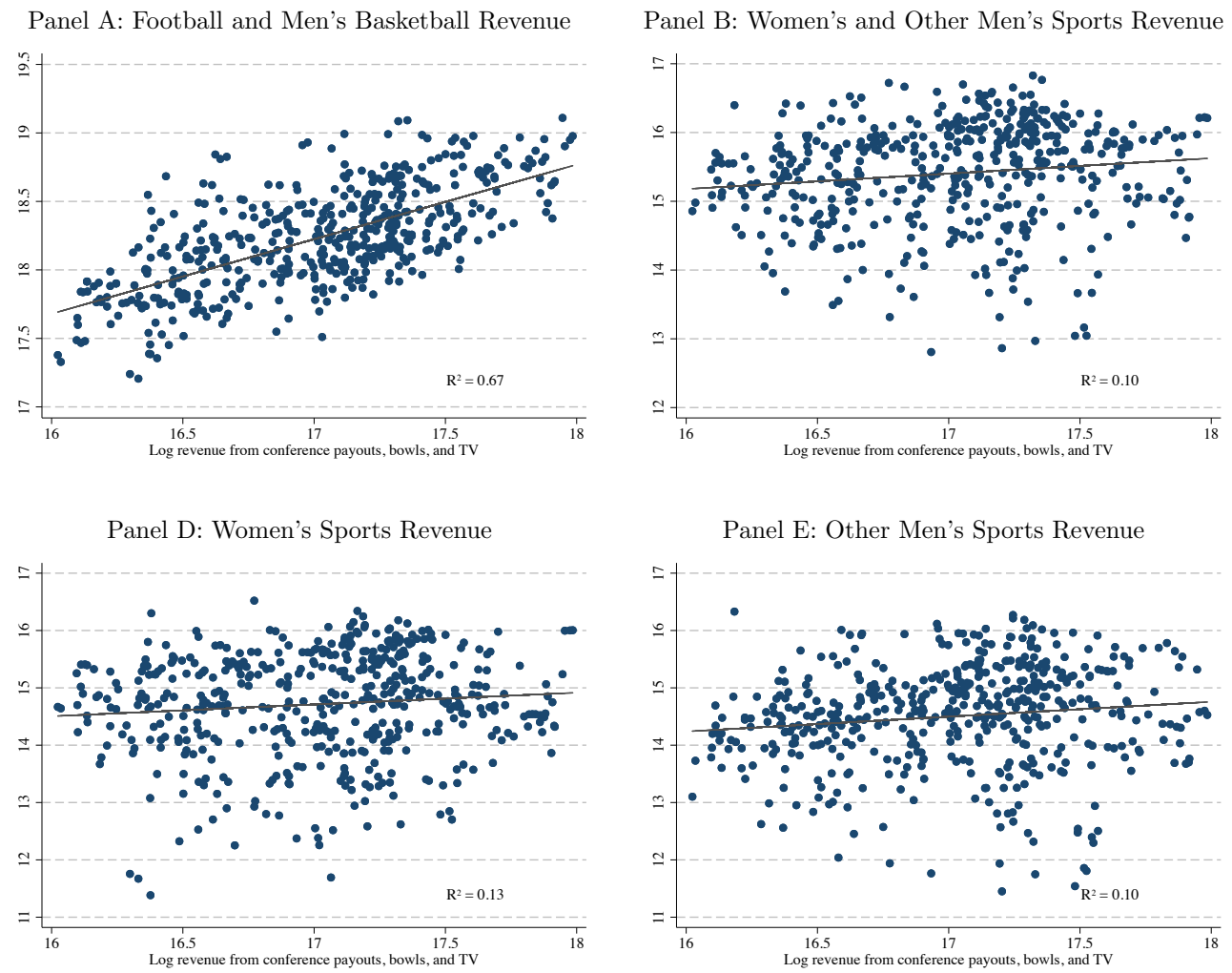
Notes: This table compares annual average salaries of football coaches to business executives. Column 1 reports annual footbal coach salaries from our sport finances data. Column 4 reports the total amount paid in salary and bonus for the top five most highly paid executives in the ExecuComp dataset. Column 5 reports the total compensation, including all forms of compensation beyond salary and bonus, for the top five most highly paid executives in the ExecuComp dataset. For better comparison between data on amounts paid to all football coaches and amounts paid to the top 5 highest paid executives, in column 9 we report the proportion of revenue paid to the top 5 highest paid coaches using coach salary data from USA Today.

Online Appendix Figure OA.1: Athletic Department Financing for NCAA Division 1 Schools, Separating Other FBS and Non-FBS Schools, 2018



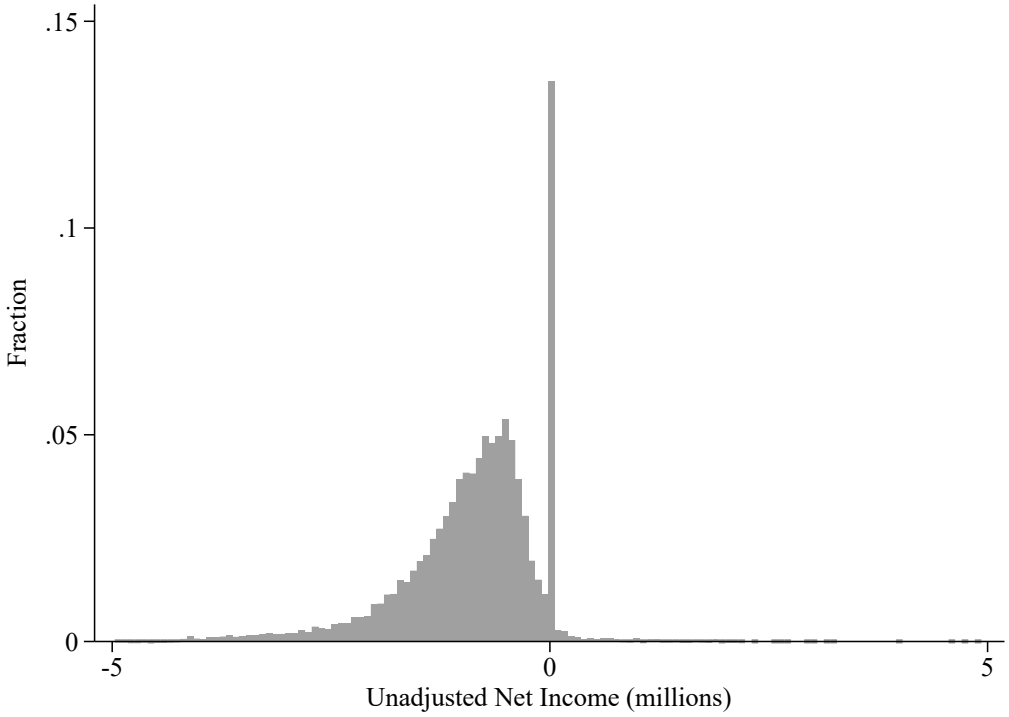
Notes: This figure reports an alternative version of Figure 2 that splits up the schools not in the Power Five athletic conferences into other FBS schools and non-FBS schools. This division is not highly correlated with k-means clustering, unlike the division based on Power Five conferences, which is perfectly correlated with k-means clustering algorithm (see Figure 1 for more details).

Online Appendix Figure OA.2: Evaluating Conference Payouts, Bowls, and TV Revenue Instrumental Variable



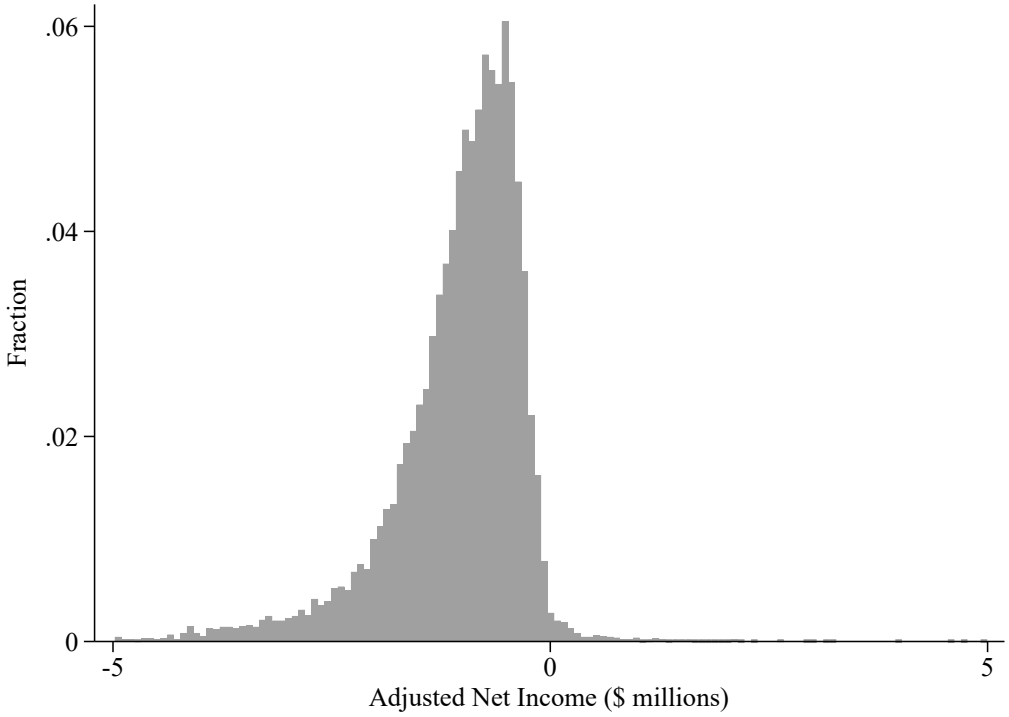
Notes: This figure reports the raw correlations between the conference payouts, bowls, and TV instrumental variable and each variable listed in each panel. All variables are included in logs. The correlation in Panel A is consistent with some sharing of revenue between the revene-generating sports (football and men's basketball) and non-sport revenue. The lack of correlation in Panels B/C/D supports interpretation that the instrument is orthogonal to other shocks that affect revenue to other supports. The data cover all schools in Power Five athletic conferences and cover 2006-2019 period. The sample is restricted to schools that do not change conferences during the sample period to limit the influence of outliers (these schools are included in all of the regression analysis).

Online Appendix Figure OA.3: Distribution of Unadjusted Sport-Level Net Income for Non-Revenue Sports



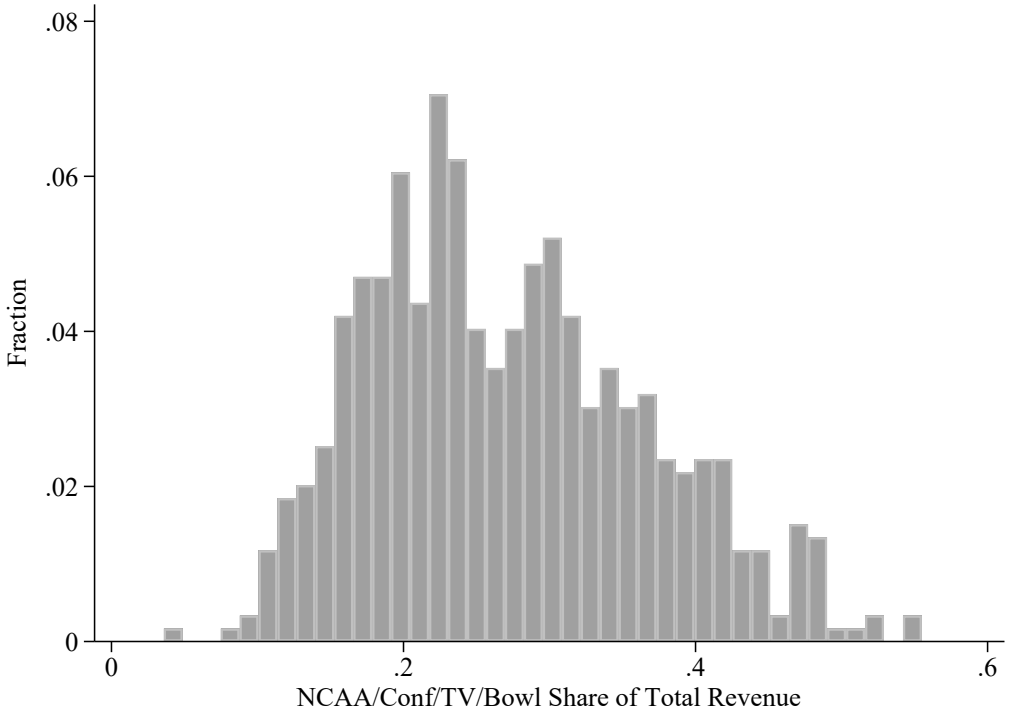
Notes: This figure shows the distribution of reported net income in the EADA data at the school-sport-year level. This covers the full sample of Power Five schools across the full sample period of 2006-2019 and all sports other than football and men's basketball. The x-axis is in millions of 2018 dollars. The bin width is $75,000.

Online Appendix Figure OA.4: Distribution of Post-Imputation Sport-Level Net Income for Non-Revenue Sports



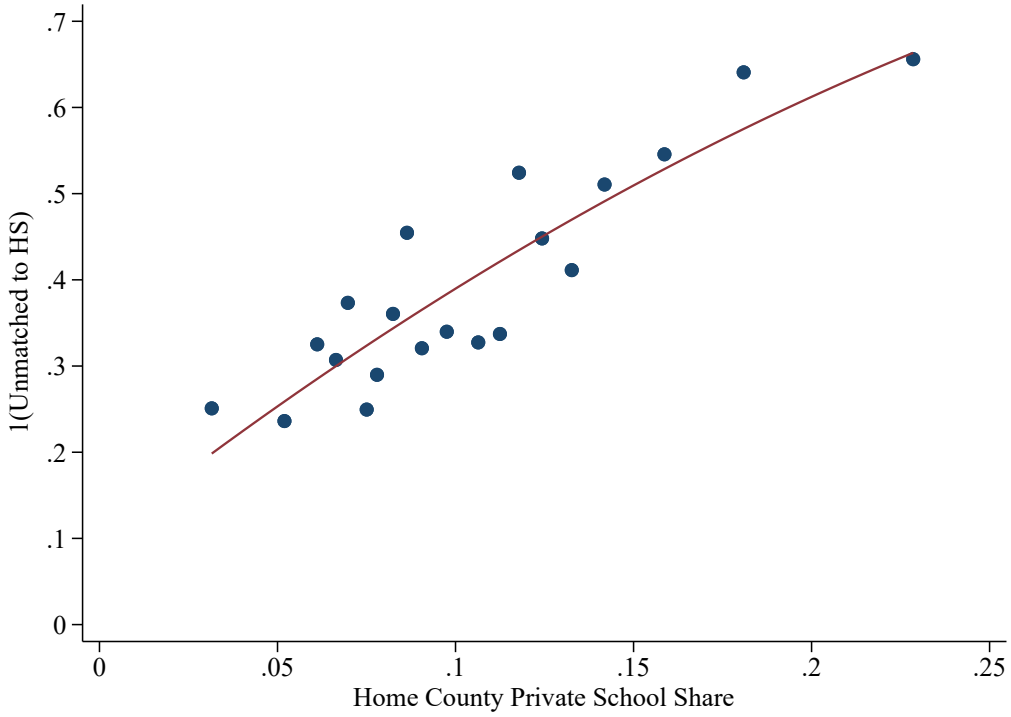
Notes: This figure shows the distribution of net income in the EADA data at the school-sport-year level after our revenue imputation procedure. This covers the full sample of Power Five schools across the full sample period of 2006-2019 and all sports other than football and men's basketball. The x-axis is in millions of 2018 dollars. The bin width is $75,000.

Online Appendix Figure OA.5: Instrument Share of Total Revenue



Notes: This figure plots the distribution of the share of total revenue (as measured in the Knight data) our instrument accounts for in the data. The unit of observation is a school-year. The sample covers all 46 Power Five schools in the Knight data and all years over the period 2006-2018.

Online Appendix Figure OA.6: Relationship Between High School Match Rate and Private High School Attendance



Notes: This figure shows a binned scatter plot of an indicator for whether an athlete is matched to a public high school in our matching process on the fraction of students that attended a private high school in the athlete's home county. The sample covers athletes that are matched to a home county and that have some information related to previous schools attended in their online roster entry. The variable for home county private school share comes from the 2017 5-Year American Community Survey, and is the fraction of 15-17 year old students that attend a private school in each county.