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Abstract: The National Collegiate Athletic Association's (NCAA) Division I Football Bowl Subdivision is divided into ten conferences. In the last few years there have been significant conference realignments as many schools have changed conferences. Using a novel dataset of football player recruitment from 2014-2023 at 118 different FBS university programs, we analyze the distribution of recruitment athletic talent across teams and conferences. While most larger universities in "Power Five" conferences recruit a similar number of five, four, and three-star recruits, we find that universities in the Southeastern Conference enjoy greater recruitment success, even after controlling for athletic program success. In comparison, we find that smaller universities in "Group of Five" conferences all are at a disadvantage, recruiting fewer highly rated players. Our analysis suggests that conference affiliation is one of the major drivers of talent recruitment. Such recruitment imbalances yield broader implications because football team has been found to be associated with broader university success in terms of the quality and quantity of student applications, admissions, and endowment.

JEL Codes: Z29, Z28, I20
Key Words: Sports, Football, Recruiting, NCAA, Collegiate Athletics, Competitive Balance

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Introduction

Every fall a new college football season begins. Tailgates and watch parties occur at many educational institutions in the United States as students, alumni, family, and fans come together to cheer their favorite teams. Teams compete in hopes of being able to play for something beyond the regular season, whether it be in a conference championship, a bowl game or a national championship. For these schools football serves as an amenity that may attract students to enroll at the university. Jacob et al. (2018) find that consumptive activities contribute to the amenity bundle at the university. A winning football team could serve as one of these consumptive amenities.

Since the 2014-2015 season, the top four teams have been able to compete for a national championship as a part of the College Football Playoff (CFP). During this period, six out of nine championships (67%) have been won by members of the Southeastern Conference (SEC). Before the CFP format was implemented, 42% of the national championships since the year 2000 had been awarded to a team in the SEC, compared to 17% to Atlantic Coast Conference (ACC) teams, 8% to Big Ten Conference (Big 10) teams, 8% to teams in the Big 12 Conference (Big 12), and 8% to members of the Pacific-12 Conference (Pac 12).

We posit that high-quality players generally want to play for the most successful teams, and so our primary hypothesis is that individual team success and conference affiliation are major components of talent recruitment. The conferences in our study include the SEC, Big 12, Big 10, Pac 12, and the ACC. These conferences are known as the Power Five Conferences. They primarily consist of flagship universities and tend to have the most revenues from media contracts. In addition, we study universities in the Group of Five Conferences, which consist of the American Athletic Conference (AAC), Conference U.S.A (C-USA), the Mid-American Conference (MAC), and the Mountain West and Sunbelt Conferences. The Group of Five

conferences consist primarily of regional, often smaller universities.

To investigate recruiting patterns across teams and conferences, we compile and empirically examine a novel dataset on the recruitment of high school athletes by college teams. The quality of these high school athletes is measured by the commonly used star rating system. Our analysis is based on a 1,171-observation panel dataset comprised of information on the annual recruiting classes for 118 of the 133 National Collegiate Athletic Association's (NCAA) Division I Football Bowl Subdivision (FBS) universities from 2014-2023. We estimate a series of negative binomial regression models to examine universities' recruiting class composition in terms of the number of five-star, four-star, and three-star recruits. The number of each star-ranked recruits in a given year is estimated as a function of conference affiliation, previous season win totals, participation and success in the CFP, finishing the season in the Top 25 of the Associated Press (AP) Poll, and head coach changes.

Recruiting success is positively correlated with on-field success of the team (Bergman & Logan, 2016; Langelett, 2003), and while strong athletic performance is important, especially to athletes, coaches, and fans, our research has broader implications. Studies have shown that on-field success translates to broader university success in terms of increased quality of applications and endowment (Caudill, Hourican, and Mixon, 2018; McEvoy, 2005), as well as in admissions and enrollment (Eggers, Groothuis, and Redding, 2021; McFarland, Groothuis and Guignet, 2024).

Even after controlling for individual team success, we find that conference affiliation is a major driver of talent recruitment. Larger universities in "Power Five" conferences, particularly in the SEC, can recruit a significantly greater number of highly skilled players. Such recruitment imbalances will likely be exacerbated given increased conference re-alignments and the NCAA's

recent decision to allow universities in Power Five conferences to directly provide monetary compensation to student athletes (Sullivan 2024).

Background and Literature Review

As Dumond, Lynch, and Platania (2008) outline, each college football recruiting cycle is full of lavish dinners, plane rides, and campus visits. Universities often go to great lengths to persuade athletes to play for them. This is not surprising given that recruiting success has been linked to on-field success (Bergman & Logan, 2016; Langlett, 2003). In addition, it has been found that media exposure, on-field success, Conference Affiliation, athlete proximity to university, and AP Poll finishes all have a positive effect on recruiting (Dumond, Lynch, and Platania, 2008; Harris, 2017).

For many recruits, athletic program resources can be a deciding factor when selecting a university and team to play for. As Leeds and Pham (2019) found, conference affiliation can be a major contributor/indicator to the availability of these athletic funds. For instance, they show that median athletic department budget for a Power Five school is $123 million, which is over three times more than a Group of Five school at $37 million. This disparity is also reflected in the salaries of football coaches. The median salary for a Group of Five head football coach is $800,000, which is less than a quarter of the median Power Five head coach salary. Undoubtedly, a university's revenue share from conference media contracts is just one of the ways in which its athletic department receives funding. Given the budget discrepancies, it should not come as a surprise that conference payouts are unequal as well. Members of the Atlantic Coast Conference receive an annual payout of $41.3 million per school, which is the lowest of all Power Five Conferences; while schools in the Big 10 receive $58.8 on average, which is the

highest. In comparison, the AAC disperses the highest annual payout amongst Group of Five Conferences at an average of $5.4 million per school. Universities in the MAC and Sun Belt Conferences see an annual average payout of just $2.1 million per school (Leeds and Pham 2019).

Mirabile and Witte (2017) offer additional insight into student athletes' decision-making process of what university to attend. They find that highly- or mid-rated recruits place more value on historical success of a program, the head coach, stadium capacity, facilities, and coaching expenditures. Low-rated recruits place more importance on academic considerations and recent, as opposed to historical, athletic program success. Furthermore, studies have founPhamPd that success of a school's basketball team can positively impact its football recruiting (Evans & Pitts, 2018).

Potential recruitment imbalances translate to more than just differences in the success of athletic programs. Studies have found a positive correlation between the achievements of a football program and the respective university's quality of student applications and endowment (Caudill, Hourican, & Mixon, 2018; McEvoy, 2005). Eggers, Groothuis, & Redding (2021) detail the effects of upsets and national championships and find that the number of applications and the number of students who enroll both increase with upsets and national championships. McFarland, Groothuis, & Guignet (2024) found that overall football season success attracts a greater number of student applications, particularly among universities in smaller Group-of-Five conferences.

Data

We compiled a novel panel dataset of annual recruiting classes for 118 FBS programs

from 2014-2023. Fifteen FPS universities were excluded from our analysis, including military service academies [1], universities who gained or lost FBS status during the study period[2], and all independent universities who are not affiliated with a conference.[3] These universities and potential recruits may be systematically different from the rest of the sample, and were excluded to avoid any potential biases.

The objective of this study is to examine the recruitment of athletes at Division I FBS schools in terms of three, four, and five-star recruits. "Stars" have become an increasingly popular way to describe high school athletes and their perceived quality. The more stars a student athlete has is a signal of their perceived skill and ability, and therefore the more valuable they are to a recruiting class. Five-star recruits are the most elite student athletes. Their skillset places them in a realm above and beyond their peers and as a result, five-star recruits are expected to significantly contribute to their chosen college program. Four-star recruits, while they still possess exceptional levels of athleticism and skill, are not considered to be of the same caliber as five-star athletes. Nonetheless, four-star recruits are very reliable athletes (fittingly referred to as "blue-chip"). Four-star athletes are still considered to be in the top of their recruiting class and are expected to excel in college. Three-star recruits are not considered to be on-par with the skill

[1] Army, Navy, and Air Force are service academies, recruits attend these institutions for reasons outside of sports. Furthermore, especially in the last few years, NFL Draft prospects from the academies have been subjected to changes in laws surrounding their ability to defer service requirements to pursue a professional football career. In 2019, the United States Congress passed a law that will "eventually eliminate the opportunity for military academy graduates to defer service requirements and pursue professional sports (Thamel, 2023).

[2] Old Dominion was excluded due to its FCS independent status in the year prior to the beginning of the study period (2014). Coastal Carolina, Liberty, Charlotte, James Madison, and Sam Houston, all joined the FBS as an independent or conference-affiliated program after 2014. Idaho left the Sun Belt Conference to join the Big Sky Conference of the NCAA's Football Championship Series (FCS) in 2017. The football program at the University of Alabama-Birmingham (UAB) was shut down following the 2014 season but was reinstated in 2017. Due to these programs not having seasons within the FBS throughout our study period, they were dropped from the study.

[3] Notre Dame and Massachusetts were excluded for all ten years as a result of being "Independents" for the entire period. BYU was excluded until 2023, when they joined the Big 12 Conference.

and athleticism of four- and five-star athletes. However, they are regarded as attractive recruits that could have an untapped potential that could be unlocked in college.

There are many "underrated" athletes that go on to have wildly successful college and professional careers. On the other side, not all higher star recruits live up to their high school hype. While imperfect, the system still shows a relatively strong correlation between star rating and athletic success; and as a result, it is widely used in the recruiting process and is a reasonable proxy for a prior assessment of student athletes' skills and potential on-field success.

The dataset was built using two sources: 247 Sports[4] and Sports Reference[5]. We use data from the popular college recruit database 247 Sports because it utilizes in-house rankings, as well as rankings from other major recruiting services, to create "composite" star ratings for each recruit in each year. As athletes commit to a specific university, they become a part of that university's recruiting class. From this database, we acquire university-level information on the composition of star ratings for each university's recruiting class for each year.

Sports Reference is known for its extensive collection of historical statistics. Sports Reference's College Football database contains vast amounts of study-relevant information regarding individual teams' win-loss records, conference championships, AP Poll team rankings, head coaches, and the CFP. Using these data sources, we compile a panel dataset of annual observations for 118 football programs over a ten-year period (2014-2023), yielding 1,171 team-by-year observations.

In Table 1, we define each of the key variables and report the sample means, standard deviations, minimums, and maximums. The mean total number of wins is 6.55 wins per season.

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[4] *247 Sports (2014-2023) – Composite Team Rankings, Accessed Mar 8, 2023* https://247sports.com/Season/2023-Football/CompositeTeamRankings/.

[5] *Sports Reference (2014-2023) – College Football (CFP), Accessed Mar 8, 2023* https://www.sports-reference.com/cfb/.

Only Clemson in 2018, Louisiana State University (LSU) in 2019, and Georgia in 2022 finished undefeated with the maximum of 15 wins in a single season. On the other hand, there were fifteen occurrences of teams finishing with zero wins for the year. From 2014-2023, regardless of whether the hire was on a full-time or interim basis, programs announced new head coaches 276 times. Typically, most programs experience no head coaching changes prior to a season. In any given year, there are twenty-five teams in the top twenty-five ranking, ten conference championships, four teams who participate in the championship playoffs, and one national champion.

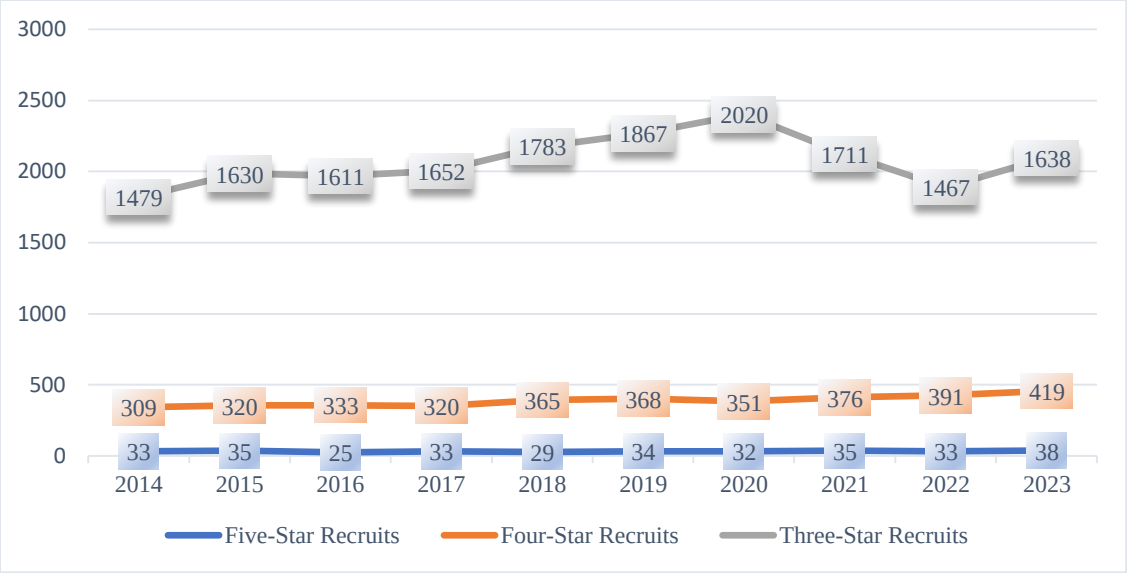
Table 1. Variable Definitions and Descriptive Statistics.

Variable	***Description***	***Means***	***Standard Deviation***	***Min***	***Max***
Total Wins	Number of wins in the season prior to recruiting class	6.55	3.121	0	15
Conference champion	Dummy variable designating conference champion in the season prior to recruiting class	0.094	0.381	0	1
Playoff participant	Dummy variable designating participation in the College Football Playoff in the season prior to recruiting class	0.028	0.166	0	1
National Champion	Dummy variable designating College Football Playoff National Champion in the season prior to recruiting class	0.007	0.081	0	1
Top 25	Dummy variable designating a finish in the season prior to recruiting class ranked in the AP Top 25 Poll	0.203	0.402	0	1
Coach Change	Number of changes in the head coach position prior to recruiting class	0.230	0.431	0	3
Five star	Five-star recruits	0.273	0.918	0	9
Four star	Four-star recruits	2.690	4.710	0	23
Three star	Three-star recruits	14.048	6.074	1	29

In terms of recruiting star ranked athletes, on average each team recruited approximately 0.2725 five-stars, 2.96 four-stars, and 14.05 three-stars per university (see Table 1). In their 2023 recruiting class, Alabama signed nine five-stars, and stands the only program to do so during the period. Alabama was also the only program to sign 23 four-stars, doing so in 2019. Florida Atlantic signed 28 three-stars in 2019. Understandably, due to sheer availability, it was not uncommon that a recruiting class did not have a single five-star recruit. We find that 87% of recruiting classes had no five-star recruits and 51% had no four-star recruits. Every recruiting class in our dataset had at least one three-star recruit.

Across the entire study period from 2014-2023, there were 327 five-star, 3,552 four-star, and 16,858 three-star recruits. On average per year, there were approximately 33 five-star, 355 four-star, and 1,686 three-star athletes per recruiting cycle. As shown in Figure 1, the number of recruits in each star-rank are relatively constant from year to year, especially for five-star recruits, which range from 25 to 38 recruits each year. The fact that the five-star recruits are so few highlights that they are truly the most elite athletes with the most potential to contribute to their team.

Figure 1: Number of Recruits by Annual Recruiting Cycle from 2014-2023.



Methods

To examine recruitment patterns and potential cross-conference imbalances, several sets of negative binomial regression models are estimated. We estimate negative binomial models to accommodate the fact that the data on the number of recruits are count data (i.e., non-negative integers), and to allow for potential over-dispersion in the data.[6] Our hypothesis is that even after controlling for athletic success at a school, conference affiliation and access to shared conference revenues increases the number of high-ranking student athletes that a university is able to recruit. We hypothesize that in a matching market the top schools with the most resources match with the athletes with the greatest perceived talent. To test our hypothesis we estimate a series of models where the dependent variable is either the number of five-star, four-star, or three-star recruits for university i in a given year t ($Recruits_{it}$).

[6] See Wooldridge (2010, page 736) for a summary of the tradeoffs between a negative binomial regression model and the more traditional Poisson model that is used to model count data. Negative binomial models are more appropriate when the data exhibits over-dispersion (i.e., the variance of the dependent variable conditional on the independent variables is greater than the mean). As a robustness check we used the Poisson regression technique, and the results remained the same.

We hypothesize that the number of recruits for each rank depends on three factors: conference affiliation ($\underline{X_i}$), the football team's success in the previous season ($\underline{Z_{it}}$), and any head coaching changes ($\underline{c_{it}}$). More formally, the negative binomial model to be estimated is of the form:

$$\underline{Recruits_{it} = exp(\gamma + X_i\beta + Z_{it-1}\Omega + \pi c_{it-1} + year_t\tau + \varepsilon_{it})} \quad (1)$$

where $Recruits_{it}$ is the expected number of recruits of the corresponding star rating, conditional on the independent variables; ε_{it} is an unobserved disturbance term; and γ, β, Ω, π, and τ are parameters to be estimated. The variable $year_t$ is a vector of year-specific indicators, and so τ flexibly controls for any broader year-to-year differences in recruitment. We estimate three specifications for each set of models, where for each set $Recruits_{it}$ denotes the number of five, four, or three-star recruits. The first specification in each set includes the vector X_{it}, which denotes conference fixed effects, and so estimates of the vector β capture cross-conference differences in recruiting relative to the SEC (the omitted category). Our main research question is whether there is a competitive imbalance across football conferences. We hypothesize that there is an imbalance, in favor of the SEC compared to other Power-Five conferences and to the Group of Five Conferences, who are hypothesized to attract the least talent. More formally, we hypothesize that $\beta < 1$ for five-star recruits, and that the cross-conference decrements may be more ambiguous for lower ranked four- and three-star recruits. The initial baseline model for each set of models includes only the conference fixed effects X_i.

Subsequent models within each set introduce measures of a football program's past success (Z_{it-1}). Such measures include the number of wins, whether team *i* won a conference championship title, and participation in the CFP, a CFP title, and finishing in the AP Top 25 Poll. In the third specification, we introduce c_{it-1}, which is a dummy variable that denotes whether

team *i* had a change in the head coach in the season for the preceding year.

Results

We estimate three sets of negative binomial regression models following equation (1), where for each set the dependent variable is either the number of five-star recruits (Table 2), four-star recruits (Table 3), or three-star recruits (Table 4). The results in all tables are reported as incidence rate ratios (IRR), which can be interpreted as a percent change by subtracting one. As such, an IRR of one represents no statistically significant effect, and the corresponding significance tests correspond to whether the IRR is statistically different from one.

In Table 2, we report the results of the number of five-star recruits. The model in column 1 includes only the conference fixed effects. The resulting percentage changes calculated from the IRRs is interpreted relative to the omitted SEC conference category. In comparison to a team in the SEC, a team in the Big 10, the Pac 12 and the ACC recruit about 70% less five-star recruits, while a Big 12 team recruits 79.3% (= 0.207-1) less recruits, on average. Group of Five schools – including the AAC, the C-USA, the MAC, the Mountain West and the Sun Belt – recruit about 100% (= 0.000-1) less five-star recruits in a given year, on average, compared to a SEC team, indicating these schools seldom, if ever, sign a five-star recruit. Given that there are only just over thirty-five-star recruits in any given year (see Figure 1) our results show that teams in the SEC tend to sign most five-star recruits.

In column 2 of Table 2, we add the athletic success measures and find that participating in the national playoffs and the number of overall wins are the best predictors of five-star recruitment the following year. For example, the number of wins corresponds to a roughly 21% (=1.210-1) increase in the number of five-star recruits. Making the four-team national

championship playoff increases the percentage of five-star recruits by 76% (=1.759-1), while conditional on that, winning the national championship is associated with a 54% (=0.45-1) decrease in the number of five-star recruits. Finally, in column 3 we add a dummy variable denoting whether there was head coach change and find a statistically insignificant effect.

Most importantly towards our main study objective, across all models the negative and statistically significant effects corresponding to the conference affiliation dummy variables indicate that teams in the SEC have a greater ability and success in recruiting five-star athletes, followed by other Power Five conferences (e.g., Big 12, Big 10, Pac 12, and ACC), and that smaller universities in the Group of Five conferences (e.g., MAC, Mountain West, Sunbelt) have little, if any, success in recruiting five-star players.

Table 2. Negative Binomial Regression Models of Five-Star Recruitment.

Five Star	**1**	**2**	**3**
BIG 12	0.207***	0.245***	0.245***
	(0.006)	(0.016)	(0.017)
BIG 10	0.306***	0.323***	0.320***
	(0.015)	(0.031)	(0.032)
PAC 12	0.285***	0.393***	0.394***
	(0.013)	(0.038)	(0.035)
ACC	0.286***	0.305***	0.296***
	(0.011)	(0.022)	(0.025)
AAC	0.009***	0.012***	0.012***
	(0.000)	(0.001)	(0.001)
C-USA	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
MAC	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Mountain West	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Sun Belt	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Number wins		1.210**	1.198*
		(0.114)	(0.115)

Conference Champ		1.461	1.488
		(0.364)	(0.380)
Playoff Team		1.759**	1.687***
		(0.455)	(0.339)
National Champ		0.459***	0.468***
		(0.120)	(0.118)
Top 25		2.081	2.087
		(0.989)	(0.994)
Coach Change			0.720
			(0.270)
Constant	1.110	0.211***	0.140**
	(0.095)	(0.677)	(0.088)
adj. R-sq	0.172	0.272	0.274

Note: All models include year fixed effects and are estimated based on a sample of n=1,171 school-by-year observations. Clustered standard errors by conference in parentheses. P-values correspond to test of null hypothesis that estimated incidence rate ratios (IRR) are equal to one (i.e., no effect): * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The constant is the baseline incident rate.

The results in Table 3 suggest that the other power five conferences, the Big 12, the Big 10, the Pac 12 and the ACC recruit about 50% less four-star recruits, compared to the SEC. We find that smaller schools that tend to be in the Group of Five conferences recruit between 97% and 100% less four-star recruits. This result is robust across the subsequent models in Table 3. When focusing on the athletic success variables in column 2 and 3, we find that teams that win the conference championship recruit about 19% more four-star recruits, and teams being ranked in the top 25 tend to recruit 44% more four-star recruits, all else constant. Conditional on those measures, however, a team winning the national championship is associated with recruiting 38% less four-star players. The number of previous season wins continues to have a significant positive association with the number of recruits, suggesting a 11.5% increase in the number of four-star recruits per win (=1.115-1). A head coaching change has no effect on the number of four-star recruits.

Table 3. Negative Binomial Regression Models of Four-Star Recruitment.

Four Star	**1**	**2**	**3**
BIG 12	0.459***	0.477***	0.476***
	(0.002)	(0.004)	(0.004)
BIG 10	0.516***	0.522***	0.521***
	(0.002)	(0.004)	(0.010)
PAC 12	0.500***	0.548***	0.547***
	(0.002)	(0.007)	(0.005)
ACC	0.423***	0.444***	0.444***
	(0.002)	(0.004)	(0.003)
AAC	0.034***	0.037***	0.037***
	(0.000)	(0.001)	(0.001)
C-USA	0.006***	0.009***	0.009***
	(0.000)	(0.000)	(0.000)
MAC	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)
Mountain West	0.013***	0.017***	0.017***
	(0.000)	(0.000)	(0.000)
Sun Belt	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)
Number wins		1.115***	1.115***
		(0.016)	(0.017)
Conference Champ		1.189*	1.190**
		(0.106)	(0.097)
Playoff Team		1.144	1.142
		(0.189)	(0.170)
National Champ		0.620***	0.620***
		(0.059)	(0.059)
Top 25		1.435***	1.435***
		(0.091)	(0.090)
Coach Change			0.986
			(0.123)
Constant	7.365***	2.419***	2.433***
	(0.437)	(0.404)	(0.417)
adj. R-sq	0.206	0.243	0.243

Note: All models include year fixed effects and are estimated based on a sample of n=1,171 school-by-year observations. Clustered standard errors by conference in parentheses. P-values correspond to test of null hypothesis that estimated incidence rate ratios (IRR) are equal to one (i.e., no effect): * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The constant is the baseline incident rate.

In table 4, we report the results of the models of the number of three-star recruits each

year, and find stark differences compared to the four-star and five-star models. Most notably, other Power Five conference schools are now shown to recruit more players, when focusing on three-star recruits, compared to their counterparts in the SEC: with the Big 12 and ACC schools recruiting 22% more three-star recruits, on average, and the Big 10 and Pac 12 recruiting about 28% more three-star recruits. Group of Five schools, however, still recruit fewer three-star athletes compared to the SEC (and other Power Five conference schools). Sun Belt teams recruit about 21% less three-star recruits and MAC schools recruit 16% less three-star recruits, compared to teams in the SEC. C-USA and the Mountain West Conference teams recruit 4% and 8% less three-star recruits, respectively, each year. The one exception to the continued decrement for Group of Five schools is that teams in the ACC tend to recruit about 20% more three-star recruits compared to an SEC team.

The three-star recruitment results in Table 4 again suggest that participating in the playoffs and being ranked in the top 25 teams are the strongest predictors of recruitment, in terms of performance measures, but the sign has flipped. In contrast to four- and five-star recruitment, three-star recruits are less likely to be asked and/or agree to join teams who went to the playoffs or were ranked in the top 25 in the previous season. We speculate that the reason is that many of the top recruiting spots have been filled with four- and five-star recruits, and/or it is possible that three-star recruits may opt to play for less high-profile teams where they can potentially get more playing time. Lastly, we find that when there is a head coaching change, teams recruit 5% less three-star recruits, all else constant.

Table 4. Negative Binomial Regression Models of Three-Star Recruitment.

Three Star	**1**	**3**	**4**
BIG 12	1.293***	1.268***	1.262***

	(0.002)	(0.004)	(0.006)
BIG 10	1.223***	1.203***	1.200***
	(0.002)	(0.003)	(0.004)
PAC 12	1.207***	1.169***	1.164***
	(0.002)	(0.005)	(0.006)
ACC	1.271***	1.220***	1.213***
	(0.001)	(0.007)	(0.007)
AAC	1.198***	1.132***	1.131***
	(0.007)	(0.007)	(0.007)
C-USA	0.919***	0.845***	0.843***
	(0.011)	(0.012)	(0.012)
MAC	0.836***	0.774***	0.767***
	(0.012)	(0.011)	(0.010)
Mountain West	0.960***	0.898***	0.895***
	(0.010)	(0.009)	(0.009)
Sun Belt	0.786***	0.724***	0.722***
	(0.012)	(0.011)	(0.011)
Number wins		1.008	1.007
		(0.008)	(0.008)
Conference Champ		1.035	1.037
		(0.033)	(0.034)
Playoff Team		0.515***	0.511***
		(0.077)	(0.076)
National Champ		0.860	0.860
		(0.161)	(0.161)
Top 25		0.848***	0.846***
		(0.038)	(0.038)
Coach Change			0.948*
			(0.028)
Constant	11.378***	12.023***	12.338***
	(1.126)	(1.832)	(1.895)
adj. R-sq	0.028	0.040	0.040

Note: All models include year fixed effects and are estimated based on a sample of n=1,171 school-by-year observations. Clustered standard errors by conference in parentheses. P-values correspond to test of null hypothesis that estimated incidence rate ratios (IRR) are equal to one (i.e., no effect): * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. The constant is the baseline incident rate.

Overall, our results show that both athletic success and conference affiliations influence the number of star ranked recruits on the roster, with the SEC schools dominating the recruitment of the most talented five-star and four-star student athletes.

Conclusion

Our analysis provides insights on the importance of football team success and conference affiliation to the recruiting of high-skilled student athletes to football teams among universities in the NCAA FBS. We find that the Southeastern Conference (SEC) recruits the most five-star and four-star recruits, even after controlling for team success at each individual university. In addition, we find that the remainder of the Power Five conferences tend to recruit the same amount of five-star, four-star, as well as three-star recruits, while the universities in Group of Five conferences, which tend to be smaller schools, are all at a disadvantage, recruiting fewer five-star, four-star and three-star players. Our analysis suggests that conference affiliation is one of the major drivers of talent recruitment, even after controlling for athletic success of the individual schools.

There has been substantial realignment in conferences across the FBS in recent years. For instance, the Big Ten and Atlantic Coast conferences have added schools from both the west and east coast to increase the television market and raise revenues to its member schools. The Southeastern Conference has added the University of Oklahoma and Texas for the same reason. The increased geographic coverage and greater revenues will likely increase teams' abilities to recruit higher-star recruits.

Such conference realignments, along with NCAA's recent decision to allow universities in Power Five conferences to directly provide financial compensation to student athletes will surely exacerbate the recruitment imbalances that we find in our study. The recruitment of higher-quality players translates to increased football program success (Bergman & Logan, 2016; Langelett, 2003), and that in turn is associated with the success of a university more broadly, in

terms of attracting endowments, higher quantities and quality of student applications, and student enrollment (Caudill, Hourican, & Mixon, 2018; McEvoy, 2005; Eggers, Groothuis, & Redding, 2021; McFarland, Groothuis, & Guignet, 2024). Further research is needed to help university administrators and NCAA officials understand the direct and indirect effects of decisions like providing incentives to student athletes and conference realignment.

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