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The Effects of Postseason College Football Bowl Games on Recruiting: A Discontinuity-Based Approach

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Many colleges with National Collegitae Athletic Association (NCAA) Division I Football Bowl Subdivision (FBS) programs lose money by participating in postseason bowl games. Despite these losses, most colleges are eager to accept invites to play in bowl games on the premise that playing in these games brings increased attention and notoriety to their institution. In particular, football coaches often state playing in a bowl game positively impacts their ability to recruit future student-athletes. This study used regression discontinuity design to estimate whether bowl game participation affects recruiting class quality. Contrary to previous research, I found no statistically significant relationship between bowl game participation and reciting class quality.

Keywords: student-athlete recruitment, quantitative methods, college football bowl games

Postseason bowl games are one of the most iconic traditions in college football. Since the first bowl game was played in 1902, thousands of student-athletes have participated in the pageantry and spectacle of bowl games. For years, bowl game invites were given to only the most elite college football teams. According to Sportsreference.com, in 1970, there were only 11 bowl games, meaning only 22 of the 123 (17%) colleges in the National Collegiate Athletic Association (NCAA) University Division (currently called Division I) received invites to play in bowl games. In recent years, the number of bowl games has dramatically increased. After the 2022 – 2023 season, 42 bowl games were played. This meant 64% (84 of 131) colleges participating in the NCAA Football Bowl Subdivision (FBS) received invites to bowl games.

One of the more interesting facts about college football bowl games is many come with significant financial risk. Many colleges lose money by participating in postseason bowl games. The University of Connecticut, for example, reported a $1.8

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million loss from playing in the 2011 Fiesta Bowl (Malafronte, 2011). Auburn University lost $140,000 by participating in the Birmingham Bowl in 2021 (Crosby, 2022). Indiana University lost about $44,000 playing in the 2020 Gator Bowl (Blau, 2020). Around 70% of public FBS colleges reported postseason bowl game financial losses from 2015 – 2018 (Brook, 2022).

Bowl game participation is not mandated. Colleges can choose not to accept a bowl game invitation if the financial costs outweigh the benefits. Most colleges and athletics departments, however, cite the positive non-financial impact of bowl games as their reason for participation. College administrators believe participating in a bowl game can positively influence student admissions, donations, and the overall academic reputation of a college (Art & Science Group, 2011). Coaches believe participating in a postseason bowl game rewards student-athletes for their hard work during the season. Coaches also proclaim the extra practices teams can have in preparation for a bowl game can serve as a springboard for success in the next football season (Call, 2018; Hoover, 2022). Finally, coaches believe participating in a bowl game helps them in their ability to recruit high-level athletes to their football program (Schlabach, 2010; Vozza, 2008). Jay Hopson, former head football coach at the University of Southern Mississippi, stated "When you can go to bowl games, you get the opportunity to get that national recognition…It is a chance for recruits across the nation to see our program and that is something you cannot put a monetary value on" (Jackson, 2019, para. 5).

While many football coaches believe bowl game participation boosts recruiting, little statistical evidence supports this belief. Only one published, peer-reviewed article (Brook, 2022) has examined the relationship between bowl game participation and recruiting class quality. However, the Brooks' (2022) study uses a statistical methodology that only allows for estimating the correlation between bowl games and recruiting. The analysis presented in this paper sought to expand knowledge in this area by taking advantage of the NCAA bowl game eligibility rules and regression discontinuity to estimate the causal effect of bowl game participation on team recruiting quality. This study answered the following research question:

- Controlling for other factors, what is the impact of playing a postseason bowl game on recruiting class quality?

I hypothesized that playing in a postseason bowl game would positively impact recruiting class quality.

Literature Review

Research on College Football Recruiting

College football recruiting is a well-researched topic within sports economics. Much of this research can be put into two categories. First are studies exploring the impact of recruiting on football team success. Peer-reviewed studies from Herda et al. (2009), Caro (2012), Langelett (2003), Bergman and Logan (2016), and Dronyk-Trosper and Stitzel (2017) each looked to explore whether the quality of a college's recruiting class impacted football on-field team performance. Most of

these studies find a positive relationship between recruiting and team success. Herda et al. (2009) and Caro (2012) used Pearson product-moment correlations and found positive, statistically significant correlations between recruiting quality and team success. Langelett (2003) and Bergman and Logan (2016) used more advanced regression models and found evidence that a better recruiting class led to more on-field success. However, Dronyk-Trosper and Stitzel (2017) argue that much of the previous research finding a positive relationship between recruiting and team success is driven by misspecification in econometric modeling techniques. In their study of recruiting and football success, they found evidence that the positive effects of recruiting are mainly derived from the ability of a team to harness and improve the ability of recruits rather than the quality of recruits coming out of high school. Even with the findings of Dronyk-Trosper and Stitzel, the preponderance of evidence suggests recruiting higher-quality athletes leads to greater on-field success for college football teams.

The second category of studies examines the factors that influence the recruiting success of a football program. Dumond et al. (2008) and Mirabile and Witte (2017) each looked to econometrically model the factors that determine where a recruited football student-athlete chooses to enroll in college. In both studies, the student-athlete recruit was the primary unit of analysis. Each study found different variables that served as the primary predictor of a recruit's college decision. Dumond et al. (2008) found that geographic distance between the recruit and the college, a team's recent football success, and a team's conference affiliation were the primary determinants of where a recruit chose to attend college. Mirabile and Witte (2017) also found team success and conference affiliation were crucial in predicting where a recruit will enroll in college. Mirabile and Witte (2017) also identified that receiving a scholarship offer, attending a college's football camp, making an official visit, and having a family member who has attended the college in the past significantly predicted where a recruit enrolled.

Harris (2018) and Pitts and Evans (2016) examined factors that influence recruiting from an institutional perspective. These studies looked to model what factors determined the overall quality of a team's football recruiting class using the college as the primary unit of analysis. Harris found that conference championships, bowl game wins, being in the Southeastern Conference (SEC), and being under probation or sanctions from the NCAA significantly increased the share of top 100 football recruits a college enrolled in a given year. Pitts and Evans (2018) found several variables that correlated with the quality of a team's recruiting class, such as team on-field success, having a new coach, conference affiliation, athletic department revenues, and being banned from a bowl game.

In summary, the research above on college football recruiting offers an essential context for the analysis presented in this paper. Previous research establishes how recruiting is important for college football teams' on-field success. Teams that can recruit the best student-athletes tend to have more success on the field. Therefore, institutions would be expected to engage in activities they believe will help them recruit better student-athletes (such as participating in bowl games despite the possibility of losing money). Previous research also helps establish that specific team/

institutional characteristics predict a college's ability to field a higher-rated recruiting class. These findings helped in the identification of covariates for the empirical models used in this analysis.

Research on the Impact of Bowl Game Participation

Two recently published manuscripts have directly explored the role of college football bowl game participation in institutional outcomes. Curs et al. (2023) used fuzzy regression discontinuity to estimate the effect of bowl game participation on team academic and on-field success. The researchers used data from the 2003 – 2018 football seasons, a total of 1,958 team-year observations. Curs et al. (2023) found bowl game participation had no statistical impact on team retention rates, next year's team winning percentage, or next year's likelihood of a team participating in a bowl game. However, there was a small, but statistically significant, effect of bowl game participation on team eligibility rates and team academic progress rates. The Curs et al. (2023) paper offers an excellent model for how regression discontinuity can be used to estimate the causal impact of bowl game participation.

Brook (2022) estimated the correlation between bowl game appearances and team recruiting using OLS regression, using data from NCAA FBS universities between 2010 and 2018 and operationalizing recruiting quality using the Scouts college football recruiting index. The estimation model built by Brook (2022) included covariates to control for the quality of previous recruiting classes, athletic department financial resources, head coach experience, and the adoption of an early signing period for football recruits. Models also included fixed effects and clustered standard errors. The estimation showed going to a bowl game was associated with a statistically significant 10.9 point increase in the quality of a team's Scouts recruiting index score. However, this increase of 10.9 points was minimal, representing only about 1/14 of the average recruiting index score over the sample period. Despite the size of the relationship, these findings led Brook (2022) to argue that bowl game participation has positive spillover effects for a team and a university despite the potential for direct financial losses.

Brook (2022) and Curs et al. (2023) motivated the current study. As I noted earlier, the Brook (2022) study used an estimation strategy that only allows for estimating correlational effects. We cannot make causal claims about the impact of bowl games on recruiting from Brook's (2022) study. In addition, the fixed effect model used by Brook relies on within-institution variation in bowl game participation. However, given the competitive imbalance within college football, it is likely there was limited year-to-year variation in bowl game participation in the sample. Brook (2022) acknowledges this in the paper by noting 18 colleges in their study either went to a bowl game yearly or never went to a bowl in the nine seasons studied. Using a methodology similar to that used by Curs et al. (2023) to investigate the impact of bowl game participation on recruiting would be a valuable extension of knowledge on this topic. This study used the methodology proposed by Curs et al. (2023) to investigate the relationship discussed in Brook (2022).

Conceptual Framework

Based on findings from previous research and anecdotal comments from football coaches, I hypothesized that team recruiting quality would be better for colleges that experienced the bowl game treatment than colleges that did not. Two mechanisms likely drive this positive relationship: increased media exposure and signaling of team quality.

NCAA Division I FBS bowl games are typically announced in early December and played between mid-December and early January. Millions of spectators each year attend and watch these games on television. In 2019 - 2020, the 38 postseason bowl games averaged just over 5 million television viewers per game (College Football Foundation, 2020). Among these viewers are likely high school students being recruited by teams playing in bowl games. Playing in a bowl game increases a team's exposure to potential recruits. This exposure might be especially important because the bowl season (mid-December to early January) coincides with a 'dead period' according to the NCAA football recruiting calendar. During a dead period, it is not permissible for a college football program to make in-person recruiting contact or to permit official or unofficial visits by prospective student-athletes to the institution's campus.(NCAA, 2024) During this dead period, where contact with recruits is limited, bowl game participation gives colleges a mechanism to indirectly connect with and create awareness for their college among recruits (Smits, 2016). Thus, increased media exposure through bowl game participation might help a college recruit better student-athletes.

Bowl games might also signal the quality and success of a football program for recruits. Multiple studies have noted that team on-field success is important in determining where a recruit enrolls in college (Dumond et al., 2008; Peltier, 2016). Because bowl games are typically reserved for teams with the best on-field performance during the regular season, they indicate program success and upward trajectory. If two teams have similar regular season records, but one plays in a bowl game, recruits might believe the program playing in a bowl game is stronger and positioned for greater future success. This perception might positively impact the overall recruiting class quality for a program that goes to a bowl game.

Research Methods

This study used regression discontinuity to answer whether participation in a bowl game impacts recruiting class quality. Regression discontinuity is a quasi-experimental evaluation technique that measures the impact of an intervention or treatment by applying a treatment assignment mechanism based on a continuous eligibility index variable with a continuous distribution. This technique attempts to determine the causal impact of a program by taking advantage of the fact that access to the program in question is determined by an arbitrary cutoff that is exogenous to subjects (Imbens & Lemieux, 2008).

For this study, the treatment in question is playing in a postseason bowl game. Eligibility to play in a postseason bowl game is determined by a team's on-field success in the regular season. According to NCAA Bylaw 18.7.2.1:

> Postseason bowl games provide a national contest between deserving teams. A "deserving team" shall be defined as one that has won a number of games against FBS opponents that is equal to or greater than the number of overall losses (p. 18).

Most FBS colleges play 11 or 12 regular season football games against other FBS schools. Therefore, teams with six or more wins against FBS schools are considered "deserving" or "bowl-eligible" teams. For this study, having six or more regular season wins against FBS schools was the forcing variable.

With sharp regression discontinuity, the forcing Variable determines whether a subject gets the treatment in question 100% of the time. With college football, however, there is some non-compliance in bowl game participation around the eligibility cutoff. Some schools with less than six regular season wins against FBS opponents are given special exemptions to participate in a bowl game because some schools with six or more wins against FBS opponents decide not to participate. A fuzzy regression discontinuity design can be employed when an exogenous eligibility rule is highly correlated with the actual treatment status but does not fully explain the treatment (Lee & Lemieux, 2010). Fuzzy regression discontinuity uses a two-stage instrumental variables design to estimate the impact of a treatment. In stage one, actual treatment status is predicted based on eligibility to receive that treatment. In the second stage, an outcome variable of interest is estimated by the predicted treatment variable from the first stage estimation. For this study, the first stage analysis estimates bowl game participation as a function of total wins in a given regular season, an indicator of whether a team was bowl-eligible (the team had six or more wins against FBS competition), and a year-fixed effect:

$$Bowl_{it} = \alpha + \delta(Eligible)_{it} + \lambda f(\text{Wins}_{it}) + \delta_t + \varepsilon_{it} \quad (1)$$

The second stage predicts recruiting class quality (the outcome of interest) using predicted bowl game participation (from the first stage model), total wins in the regular season, and a year-fixed effect:

$$Recruiting\ class\ quality_{it+1} = \alpha + \beta(\widehat{Bowl})_{it} + \lambda f(Wins_{it}) + \delta_t + \varepsilon_{it} \quad (2)$$

The β coefficient within this second stage model can be interpreted as the causal impact of bowl game participation on recruiting class quality the following year.

As noted by Curs et al. (2023), the base models presented in equations (1) and (2) are capable of estimating the unbiased effect of bowl game participation on recruiting class quality without the inclusion of control variables. However, adding covariates to a model can increase the efficiency of regression discontinuity estimates (Angrist & Pischke, 2009). Therefore, a vector of team and institutional covariates (described below) predicted to correlate with a college football recruiting class quality were included in model estimates.

The sample for the study includes data from the 2010 -2011 through the 2019 - 2020 football seasons. The 2010 – 2011 season was selected as the first year for this study due to data availability. The first year that composite football team recruit-

ing class rating data were available was 2011 (after the 2010 – 2011 season). The 2019 – 2020 season was selected as the last year of the dataset because it was the last full college football season before the COVID-19 pandemic, which significantly altered bowl game participation in subsequent seasons. The number of teams in FBS changed during the period used in this study, from 120 in 2010 - 2011 to 130 in 2019 – 2020. After removing data from the U.S. Military Academies (these colleges were removed due to a lack of available data on football expenditures), the total number of team-year observations in this study was 1,232.

The dependent variable for this study was a college football team's recruiting class composite ranking score from 247Sports. 247Sports is an industry leader in college sports recruiting content. The company was founded in 2010 and is currently part of CBS Interactive's website platform. Each year, 247Sports calculates a composite rating of the quality of each FBS college's football recruiting class. This rating uses a Gaussian distribution model that weights the value of each recruit signed by a college based on the quality of that recruit. Using this model, the highest-rated recruit in a college's class is worth 100% of his rating value towards a college's overall team score, the second-highest-rated recruit is worth nearly 100% of his rating value, down to the last recruit who is worth a small fraction of his rating value. This formula ensures all commits contribute at least some value to the team's score without heavily rewarding teams with several more commitments than others (247Sports Staff, 2012). The formula returns a total recruiting points value for each college in a given year. In this dataset, points ranged from 45.41 to 323.87, with higher scores representing colleges with higher-quality recruiting classes. I used Python programming to scrape recruiting class scores for FBS colleges from the 247Sports website from 2011 – 2020.

I collected data from the College Football Sports Reference website to calculate the forcing Variable (bowl eligibility) for this study. The website provides game results and final season standings for every FBS college since 1869. An important feature of data from College Football Sports Reference is that it highlights games played against non-FBS colleges. Therefore, I was able to calculate the regular season record of FBS teams against FBS opponents. Teams with six or more wins against FBS opponents were identified as bowl eligible, while those with fewer than six wins were identified as not bowl eligible.

Four control variables were included in model estimations. First, I included a control for the number of college football national championships a team won since 2000. Previous research from Dumond et al. (2008), Mirabile and Witte (2017), Harris (2018), and Pitts and Evans (2016) note that a team history of on-field success is a significant predictor of recruiting class quality. I proxy a college's tradition of football success by counting their recent national championships. I obtained national championship data from College Football Sports Reference.

A second control variable was total football operating expenses during the season lagged by one year ($t - 1$). Colleges with greater direct investment in college football can likely spend more money recruiting student-athletes. News articles have noted the wide disparities in the amount of money spent on college football recruit-

ing (Chavanelle, 2021; Weiszer & Berkowitz, 2023). Spending more on recruiting is likely correlated with the quality of recruits secured by a college. I used total football operating expenses as a proxy for spending on football recruiting. I collected these data from the Equity in Athletics Data Analysis (EADA) database from the Office of Postsecondary Education of the U.S. Department of Education.

A third control variable used in this study was an indicator of whether there was a change in the head football coach at a college, lagged by one year. Pitts and Evans (2016) found a coaching change can have a significant impact on the quality of a college football recruiting class. Megargee (2021) also notes that coaching changes, which typically occur just before college football National Signing Day, can create disruption and uncertainty around recruiting. I used data from the Coaches Database website (https://www.coachesdatabase.com/) to identify whether a college experienced a football head coaching change in a given year.

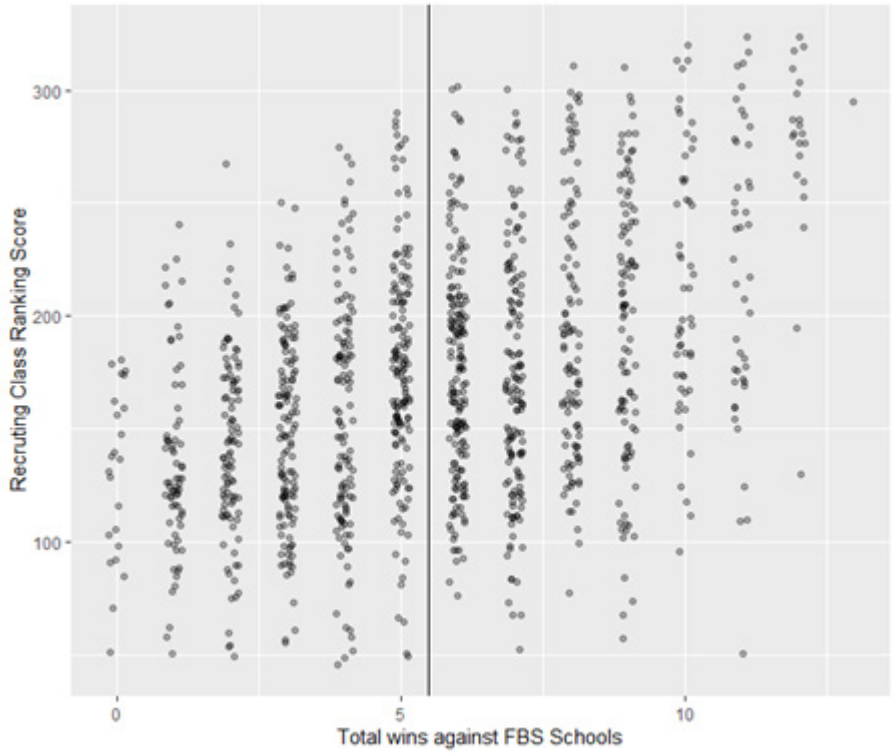
The final control variable in estimation models was an indicator of whether a team was a member of a Power 5 NCAA Conference (i.e., Atlantic Coast Conference, Big 12 Conference, Big Ten Conference, Pacific 10 Conference, or Southeastern Conference) during a season, lagged by one year. Harris (2018), Pitts and Evans (2016), and Christovich (2021) note that colleges in Power 5 conferences are typically able to recruit higher-rated student-athletes to their institutions. Given the financial resources, tradition, and national exposure from playing in a Power 5 conference, this indicator was expected to correlate with recruiting class quality. I obtained conference affiliation data from College Football Sports Reference.

Checking Assumptions of Regression Discontinuity Design

Two conceptual concerns are essential when considering the internal validity of a regression discontinuity design. First is continuity of the outcome-forcing variable relationship. To obtain a robust outcome from a regression discontinuity design, there must be evidence that there would be a smooth relationship between the outcome variable and forcing variable at the treatment cutoff value in the absence of the treatment. For this study, it would mean that in the absence of bowl game participation, there would be a smooth relationship between wins and recruiting class quality at the treatment cutoff of six wins. Without this continuity, there is concern that something other than the intervention is responsible for the observed treatment impact.

The continuity condition cannot be directly assessed. However, Schochet et al. (2010) suggest an indirect method of evaluating continuity using scatterplots of the outcome and forcing variables. Schochet et al. (2010) note the continuity standard can be satisfied if there is no graphical evidence of "an unexplainable discontinuity in the outcome-score relationship at score values other than at the cutoff value" (p. 6). Figure 1 displays a scatterplot of team wins and recruiting class ranking scores. This graph shows little evidence of discontinuity in the outcome-forcing variable relationship at values other than the bowl game treatment cutoff. Thus, I believe there is evidence this study satisfies the continuity criterion for regression discontinuity designs.

Figure 1: Scatterplot of forcing and outcome variable to check continuity standard of regression discontinuity designs

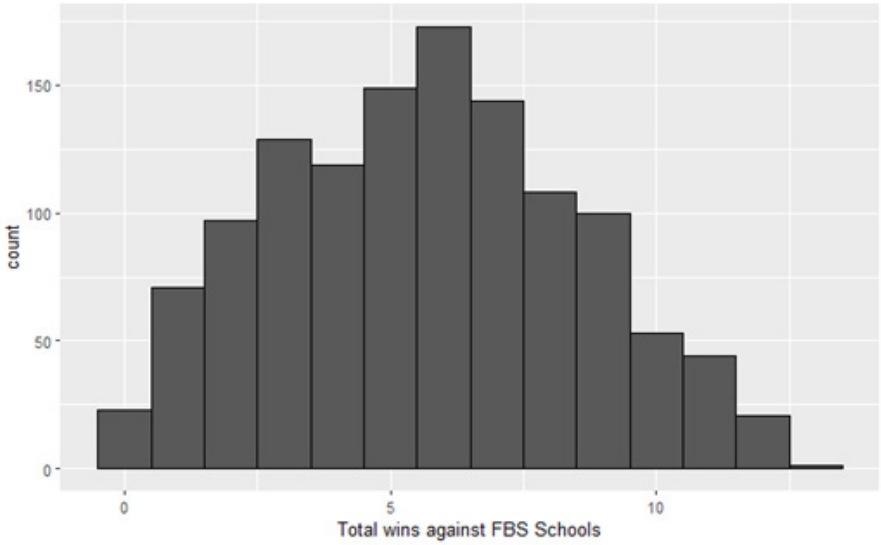


The second key condition for regression discontinuity designs is the integrity of the forcing variable. To produce unbiased estimates of effects using regression discontinuity, there should be no systematic manipulation of the forcing variable. For this study, if football teams just below the six-win cutoff put extra effort into winning games toward the end of the season in order to gain bowl eligibility, there could be some concern about manipulation of the forcing variable. However, teams near bowl eligibility putting extra effort into games do not guarantee they will reach the six wins needed. Other teams they are competing against also have incentives to put extra effort into late-season games, such as their own bowl eligibility or to qualify for a higher-profile bowl game. Therefore, like Curs et al. (2023), I argue the competitive nature of college football makes it difficult for teams around the bowl eligibility cutoff to independently manipulate their records in a way different than their ability to manipulate their record at any plan in the wins distribution.

To visually inspect the integrity of the forcing variable, McCrary (2008) and Curs et al. (2023) recommend examining the density of the running variable for clear signs of discontinuity around the treatment cutoff. Figure 2 presents a histogram of team wins against FBS competition for the sample used in this study. The distribu-

tion of wins against FBS teams appears normally distributed with no apparent discontinuities around the six-win bowl eligibility cutoff. This offers further evidence of the integrity of the forcing variable for this study.

Figure 2: Histogram of team wins against FBS competition



Findings

Figure 3 visually represents the need for fuzzy regression discontinuity for this study. Of 644 teams who were bowl eligible in a given season, 96% played in a postseason bowl game. Of the 588 teams not bowl eligible in a given season, 18.4% played in a bowl game. This shows some non-compliance with the bowl eligibility guidelines and, therefore, the need for fuzzy discontinuity. Descriptive statistics are presented in Table 1.

Figure 4 visually represents the potential relationship between bowl game participation and recruiting class quality. This figure shows a sharp discontinuity with local linear regression lines below and above the bowl game eligibility cutoff. The discontinuity at the bowl eligibility cutoff is the visual effect of the bowl game eligibility. At the discontinuity point, there is a slight drop in the recruiting class ranking score, suggesting the local intent-to-treat effect of going to bowl on recruiting might be negative. However, the 95% confidence intervals of the linear projects appear to slightly overlap. This visual suggests no significant relationship exists between bowl game eligibility and recruiting class quality.

The results of the fuzzy discontinuity presented in Table 2 confirmed bowl game participation did not impact recruiting success. In the fully specified model, the beta coefficient for bowl game participation was 2.39 with a standard error of 22.76. This can be interpreted as the local average treatment effect for treatment compliers.

In other words, the causal effect of going to a bowl game for colleges who complied with bowl eligibility rules was an increase in recruiting class rankings score of around 2.4 points. This was not significantly significant. As a sensitivity test, I also ran models that restricted the bandwidth of the assignment variable to colleges that won between 4 and 8 games in a season and colleges that won between 2 and 10 games in a given season. These findings are presented in columns 2 and 3 of Table 2. The beta coefficient for bowl game participation in each model was also not statistically significant. It did not appear bowl participation had a causal effect on the quality of a college football recruiting class in the following year.

Figure 3: Bowl game participation based on bowl eligibility status

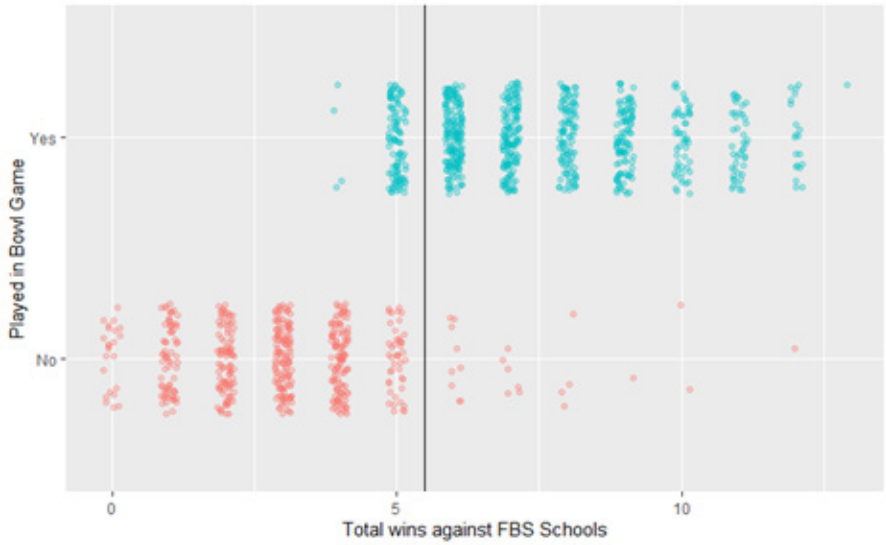


Table 1: Descriptive Statistics

Variable	Mean (SD)	Minimum	Maximum
Outcome Variable			
Recruiting Class Ranking Score	173.19 (57.18)	45.57	323.87
Forcing and Treatment Variables			
Wins against FBS Competition	5.65 (2.85)	0	13
Bowl Game Participation	.59 (.49)	0	1
Control Variables			
National Championships	.13 (.52)	0	5
Member of Power 5	.51 (.50)	0	1
Coaching Change	.19 (.40)	0	1
Football Expenditures in Millions ($)	18.51 (11.27)	2.95	69.71
Number of Observations	1,232		
Number of Colleges	129		

Figure 4: Visual representation of the effect of bowl game eligibility on recruiting class quality

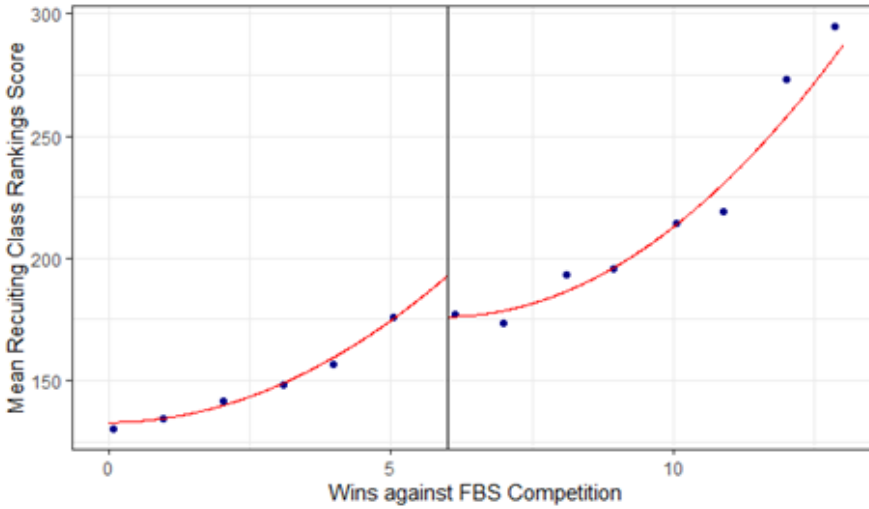


Table 2: Fuzzy regression discontinuity estimates of the effect of bowl games on recruiting

	Full Model	Full Model (bandwidth 4 – 8 wins)	Full Model (bandwidth 2 – 10 wins)
Bowl Participation	2.39 (22.76)	-10.95 (17.06)	2.80 (10.26)
Controls	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Observations	1232	693	1072
R-squared	.73	.72	.75

Note. Heteroskedasticity robust standard errors in parentheses, ***p < 0.001 **p < 0.01 *p < 0.5
Dependent Variable: Next year's recruiting class ranking score

Like Curs et al. (2023), I conducted a sensitivity analysis of the estimates in Table 2 by reestimating my regression discontinuity model with a quadratic functional form of the assignment variable. These findings are presented in Table 3. The inclusion of the quadratic term typically increased the treatment effect of bowl games on recruiting class quality, but the treatment effect remained insignificant.

Table 3: Fuzzy regression discontinuity estimates of the effect of bowl games on recruiting with quadratic functional form

	Full Model	Full Model (bandwidth 4 – 8 wins)	Full Model (bandwidth 2 – 10 wins)
Bowl Participation	2.54 (6.58)	17.33 (34.08)	4.12 (10.88)
Controls	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Quadratic Form	Yes	Yes	Yes
Observations	1232	693	1072
R-squared	.77	.73	.76

Note. Heteroskedasticity robust standard errors in parentheses, ***p < 0.001 **p < 0.01 *p < 0.5
Dependent Variable: Next year's recruiting class ranking score

Discussion

Participation in a postseason college football bowl game for many colleges and universities comes with financial risk. Many colleges incur financial losses when their football team accepts a bowl game invitation (Thelin, 2016). Despite this potential financial loss, most colleges are eager to participate in bowl games because they believe playing in them has positive non-financial benefits to a college or football program. In particular, many college football coaches believe playing in bowl games helps them in their ability to recruit high-level athletes to their football program. However, empirical evidence of a statistical relationship between bowl game participation and football recruiting class quality is limited. Only one published, peer-reviewed article (Brook, 2022) has examined the relationship between bowl game participation and recruiting class quality. This study aimed to expand knowledge in this area using regression discontinuity design to estimate the causal effect of bowl game participation on recruiting class quality.

While Brooks (2022) found a small, statistically significant correlation between bowl game participation and recruiting class quality, I found no evidence that going to a bowl game has a causal impact on recruiting class quality. Given the methodological rigor of this analysis relative to Brooks (2022), the findings from this study offer a more empirically valid estimation of bowl game effects on recruiting. Colleges should not expect positive spillover effects from bowl game participation in terms of the quality of their recruiting class.

I hypothesized bowl game participation, by increasing team exposure and signaling team quality, would positively impact athlete recruiting. This hypothesis was proven incorrect. One could speculate as to why this hypothesized relationship failed to manifest. Recruited student-athletes are exposed to much information about college football programs through recruiting packages and campus visits. Therefore, the extra exposure from playing in bowl games might do little to change recruits' overall

knowledge of a college football team. Because of their knowledge of college football teams, recruits also have many direct and indirect signals of program quality they can lean on to gauge team quality besides bowl games. This might limit the power of bowl games as a signal of a team's current or future quality for recruits.

It is important to note that interpretations of regression discontinuity designs are restricted to those subjects close to the policy treatment cutoff. Thus, the results of this study are valid for those teams with around six FBS regular season wins. Teams with an average regular season record (between 5 and 7 wins) are unlikely to be invited to play in (or would turn down invites to play in) bowl games with high payouts, such as the bowls associated with the New Year Six. These teams are, instead, more likely to get invited to bowl games that come with a higher risk of financial loss. Therefore, these findings are restricted largely to examining the impact of participation in lower tier bowl games on recruiting success. Extrapolating the findings to suggest that participating in a high visibility, high payout bowl game would have no impact of recruiting class quality would be beyond the scope of this study.

The results of this study will be helpful to college presidents, athletics directors, and coaches of teams around the bowl eligibility cutoff who are weighing the costs and benefits of accepting a bowl invite. Every institution has unique organizational and contextual circumstances that impact whether it is "worth it" to participate in a bowl game. When weighing this decision, the findings here will hopefully ensure the notion that playing in a bowl game helps student-athlete recruitment is dismissed from consideration. There is no viable evidence to support this idea. If you are a team with five or six wins that plays in a low payout bowl game that results in your college losing money, you should not expect to recoup these financial losses through the quality of your recruiting class.

The findings here do not suggest other positive spillover effects cannot come from bowl game participation. For example, Curs et al. (2023) found bowl game participation leads to positive academic outcomes for student-athletes. Future research should further explore how bowl game participation impacts student, team, and college outcomes. Using a methodology similar to the one used in this study, researchers could explore how bowl game participation affects future game attendance, applications or donations to a college, student-athlete transfer decisions, or other outcomes. The goal would be to create a large body of evidence administrators can use to determine the direct and indirect effects of playing in a bowl game.

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