AN EXPLORATION OF HOW BIG TEN CONFERENCE MEN'S AND WOMEN'S
BASKETBALL SEASON SUCCESS AND GAME ATTENDANCE INFLUENCES
ACADEMIC YEAR COLLEGE APPLICATION RATES

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AN EXPLORATION OF HOW BIG TEN CONFERENCE MEN'S AND WOMEN'S BASKETBALL SEASON SUCCESS AND GAME ATTENDANCE INFLUENCES ACADEMIC YEAR COLLEGE APPLICATION RATES

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Abstract

This thesis examines the relationship between college basketball performance and applicant numbers at Big Ten Universities from 2004 to 2022. Using panel data from university Common Data Sets and Big Ten Basketball statistic archives, regression analysis is used to investigate how various factors such as conference wins, overall team performance, and game attendance influence applicant numbers, separated by male, female, and total. The findings indicate that conference wins statistically impact male applicant numbers, suggesting that successful performances within the conference attract more male applicants at a rate of 1019.69 additional male applications for every in-conference win. Surprisingly, women's basketball data reveals unexpected trends, where each point scored against a basketball team decreased applicants by 22.11, and for every 100 individuals who attended an away game decreased the female application numbers by 13.52. These results show the complex relationship between college basketball success and applicant behavior. This research contributes to understanding the dynamics shaping college admissions, particularly in response to athletic achievements. By analyzing these relationships, the study opens an opportunity for future research on the broader impacts of sports performance on university recruitment strategies.

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Introduction

In 2023, the NCAA tournament captivated a staggering ten million viewers, with an astounding fifteen and a half billion dollars in bets (Statista Research Department & 7, 2023). As March Madness unfolds each year, whether one is a basketball aficionado or a novice to the game, the resonance of the term is nearly inescapable. The historical roots of collegiate basketball remain somewhat elusive, yet as early as 1892, both Geneva College and the University of Iowa boasted men's basketball teams (Naismith, 1996). Simultaneously, in that very decade, Smith College pioneered a women's basketball team (Aiello, 2022). Fast forward to 2023, there is now three hundred and fifty-one NCAA Division One basketball teams, catering to both men and women, that compete on the collegiate stage. Since 1939, the top 64 teams, following a rigorous regular season, vie for the coveted title of "March Madness' Champion. Preceding the triumph of the 2023 NCAA basketball season, a remarkable two million eight hundred and fifty-three thousand students engaged in the college application process in 2022. Within the academic realm, the arduous journey of college application and admissions is universally acknowledged. Given the prominence of sports as a tool for spreading university awareness, the hypothesis is that there is a potential correlation between on-court basketball success and the number of college applications received.

This thesis is of significant importance as it explores a critical juncture between sports success and the dynamics of higher education, specifically investigating how the success of Division I men's and women's college basketball seasons influences application rates during the academic year. This research acknowledges and endeavors to address

gender imbalances in sports coverage, understanding the potential downstream consequences for women's basketball programs and, subsequently, application rates for academic admission. By comprehensively exploring these aspects, this thesis not only enhances our understanding of the athletic dynamics at play but also presents an additional viewpoint on gender equality and the broader repercussions of collegiate sports success on the academic landscape.

The research methodology aims to comprehensively investigate the factors influencing the volume of college applications in relation to basketball success. Utilizing publicly accessible data from various sources including Big Ten Conference Website and University Common Data Sets the study focuses on manually curated data. Specifically, the data pertains to ten basketball teams that compete in the Big Ten Conference each year; this information will then be systematically structured into a multiple regression model. The objective is to unveil the intricate relationships between the independent variables associated with basketball success and the dependent variable: the number of college applicants.

The findings from the regression analysis conducted in this study display the relationship between college basketball team performance and university applicant numbers. Analyzing data spanning from 2004 to 2022 from universities within the Big Ten conference, the study investigated the impact of various basketball statistics on the total number of applicants, particularly focusing on male and female applicants. Surprisingly, while conference wins emerged as a significant predictor of male applicants with a statistically significant coefficient of 1019.69 that equates to that many male applicants applying per each in conference win. And points scored against the women's basketball

teams proved to be the most influential factor for female applicants with a coefficient of 22.10 and P value of 0.00, displaying that for every point scored against a team studied in this thesis twenty-two more women applied to one of those universities. Additionally, factors such as overall wins, losses, and average points scored played varying roles in influencing application numbers across genders. These findings highlight the connection between basketball success and university recruitment efforts, aiding in the understanding of the dynamics between applicant behavior in response to athletic performance.

This paper is organized as follows. Section II looks at what others have found in past research about college sports success, who applies to college, and the differences between men's and women's college basketball. Section III describes the data and how the research was conducted. Section IV shares results of success in Division I basketball relating to the number of students applying to a university. Finally, Section IV summarizes the main points and conclusions of this thesis.

Literature Review

This literature review dives into the intricate relationship between the success of Division I men's and women's basketball teams and the corresponding fluctuations in college application rates during the academic year. This exploration aims to provide a comprehensive understanding of the various dynamics at play in this intersection of collegiate sports and higher education pursuits. Commencing with an examination of the historical "Flutie effect," which is the phenomenon of heightened institutional visibility resulting from successful athletic programs, we subsequently navigate through key determinants influencing college applications, demographic considerations, SAT scores, and men's and women's college basketball. Additionally, considering the economic

underpinnings of Division I basketball, unraveling the broader financial implications that extend beyond the confines of the court. Each section within this literature review contributes towards collectively unraveling the sociodemographic and economic complexities linking Division I basketball success to academic year college application rates.

History of Flutie

The "Flutie Effect" refers to the phenomenon where a significant achievement or success in collegiate sports, leads to increased visibility, positive publicity, and heightened interest in a university. The term is derived from the impact created by Doug Flutie, a former quarterback at Boston College, known for his iconic "Hail Mary" pass in a game against the University of Miami in 1984. In the specific case of Doug Flutie and Boston College, his remarkable and unexpected success in that football game garnered widespread media attention and brought national acclaim to the university. Thus, in the two years following this win, applications to Boston College increased by a drastic 30 percent (Chung, 2013). The "Flutie Effect" suggests that this heightened visibility translated into various benefits for Boston College, including increased applications, enhanced fundraising, and a boost in overall institutional prestige. In 2007, Appalachian State University followed a similar fate, achieving an iconic upset victory against the University of Michigan by blocking a field goal in the final seconds of a game. The university experienced a 15% increase in applications in the year immediately following the upset, and this elevated number persisted through 2010 (Hansen, 2011). Aligning with the concept of "Flutie," (Toma and Cross 1998) examined the influence of securing an NCAA National Championship in football or men's basketball on the volume of applications received by a

university. The research revealed a favorable rise in the number of applications submitted to a school following a National Championship victory.

Applying to College Determinants

College education serves the opportunity to better the well-being of society, with well-educated citizens experiencing greater workforce productivity across the population, higher levels of civil participation, and lower poverty rates (Eunjong Ra, 2014). With that in mind and societal pressures to accomplish an undergraduate degree, many decisions go into a student's college selection process, including price, ranking, acceptance rate, location, academics, classes offered, living situations, etc. (Kinzie et al., 2004). The factors are vast and vary from student to student. In the twenty-first century, online access to information about universities is highly utilized. Aside from word-of-mouth influence, many young adults applying to schools are persuaded in their college application decision by the internet and media. In a study by Burdett (2013), it was found that in the college application process, Facebook was the most popular social media platform for use, followed by blogs. However, social media has evolved in the last decade, with many young adults in the college application process using Instagram and TikTok. One advertisement for colleges that has existed for many decades is the widely viewed and bet-on televised March Madness Tournament. According to Bremmer and Kesselring (1993), universities' "primary form of media exposure (and advertising) derives from a distinctly nonacademic enterprise - intercollegiate athletics," stating that "successful" athletic programs provide a university with cost-effective advertising which attracts more student applicants.

Demographics

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Within this exploration, the demographic composition of college applicants becomes a critical, independent variable, offering insights into application distribution based on the performance of state public university basketball teams. Chung's (2013) study, which examines the impact of sex and race on applicant trends, establishes a notable correlation between basketball success and application numbers. This foundational work sets the stage for understanding the broader economic implications of athletic achievement on higher education enrollment.

Turning attention to Division III basketball success, Nichols et al.'s (2020) comprehensive demographic survey of university athletes provides a valuable perspective on the intricate relationship between academic applications and basketball success. The findings, particularly regarding the variance in schools recruiting athletes, contribute to our understanding of the economic dynamics at play in the collegiate sports landscape.

Huffman's (2013) coaching-focused article, while also not exclusive to Division I, continues to broaden the scope into Divisions II and III, offering a comprehensive view of demographic considerations in collegiate-level sports. Pope & Pope's (2009) research unveils intriguing patterns within demographic subgroups, highlighting the heightened responsiveness of certain groups, such as Blacks, Hispanics, and individuals with a high school sports background, to sports success.

Burdett's (2013) investigation into internet-based resources in the application process expands the purview of this literature review. The inclusion of factors such as ethnicity, gender, first-generation student status, GPA, SAT scores, majors, original form, and demographics related to undeclared majors enriches our understanding of the

multifaceted nature of the relationship between basketball success and academic year college application rates.

By synthesizing these studies, this literature review aims to provide a comprehensive economic perspective on how Division I men's and women's college basketball success influences academic year college application rates, contributing to the evolving discourse in the fields of sports economics and college admissions marketing.

SAT scores

The Scholastic Assessment Test, commonly known as the SAT, has played a significant role in college admissions since its inception in 1926 (PBS, 2015). Defined by Princeton Review as a pivotal entrance exam utilized by most colleges and universities to inform admissions decisions, the SAT is a multiple-choice, pencil-and-paper test created and administered by the College Board. Previous scholarly research has explored the relationship between athletic success and SAT scores submitted to educational institutions.

Studies, such as the work by Pope & Pope (2008), have investigated the impact of football and basketball success on the number and range of SAT scores received by the most successful universities. Quantitative data from SAT score submissions established a positive correlation in applications to Division II Universities after athletic success (Castle and Kostelnik, 2011). A more recent 2018 paper, focusing specifically on basketball, also incorporated SAT scores into the examination of the application process (Eggers, Groothuis, and Redding, 2023). While these results will be considered in this thesis, a calculation of SAT score submissions will not be undertaken.

This decision is grounded in two primary considerations. Firstly, exclusive reliance on SAT scores overlooks the alternative testing option provided by the ACT. In 2023,

approximately 1.9 million graduating seniors took the SAT exam, while nearly 1.39 million students opted for the ACT (Arundel, 2023). Secondly, by the Fall of 2023, a significant shift occurred, with over 80% of universities no longer mandating the submission of testing scores (Nietzel, 2023). This shift is noteworthy given the broader impact of the COVID-19 pandemic on standardized testing. The lockdown measures led to a reduction in schools requiring test scores, and by 2023, the test itself underwent a transformation, offering the option to be taken in a monitored online setting.

Even preceding the pandemic, the past decade witnessed a growing number of universities joining the test-optional movement. This trend, coupled with the recent changes, underscores the evolving landscape of standardized testing in college admissions. Therefore, basing analyses solely on a now-limited submission of scores would not adequately represent the diverse array of applications in the contemporary educational landscape.

Men's vs Women's College Basketball

The disparities between men's and women's athletics have long been evident, permeating various levels from elementary-aged soccer games to high school fan sections, college games streamed, and even professional athletes' payment discrepancies. Collegiate basketball, unfortunately, is no exception to this gender imbalance. Since the enactment of Title IX legislation in 1972, women's basketball has witnessed an opportunity for growth, paralleling the increased interest in men's basketball that emerged in the seventies due to the expansion of athletics in public schools and heightened media attention (Haithcox, 2017).

Qualitative research by Haithcox (2017), involving interviews with players, coaches, and fans of women's basketball, has revealed key themes in conversations surrounding the sport. These themes include institutionalized masculinity, the influence of money on media attention, perceptions of femininity in female athletes, and the acquisition of life skills through participation in athletics. A quantitative study in 2009, focusing on media coverage—a factor known to influence application percentages, as noted by other researchers—by Ridinger found that the rate of media coverage did not grow in tandem with the increasing skill level of women's basketball. This discrepancy in media treatment has led to the devaluation of women's sports, as concluded by many researchers.

Adding complexity to the issue, Blinde et al. (1991) discovered that television labeling reinforced gender stereotypes, with the women's game being termed "women's basketball," while the men's game was simply called "basketball." This labeling contributes to the perception that the business behind the sport is primarily associated with male players dominating the court, despite the fact that both genders adhere to nearly identical rules, plays, and techniques and often engage in co-ed games (Walker & Sartore-Baldwin, 2013). A 2007 experiment assessing photographic coverage on the main page of ESPN.com further underscored the gender disparity, revealing that 68.7% (158) of the observations featured male athletes, while only 31.3% (72) featured female athletes (Ridinger, 2007).

This evident disparity in representation and airtime not only impacts the financial earnings of women in a basketball season but is also anticipated to have a downstream effect on application rates. The underrepresentation of women in media coverage perpetuates the gender-based undervaluation of women's sports, contributing to a cycle of

reduced financial opportunities and, consequently, a potentially diminished impact on academic year college application rates.

Economics of Division One basketball

In the fiscal year 2022, the NCAA reported a staggering revenue of $1.14 billion, with the March Madness tournament contributing approximately one billion to this substantial sum. Notably, the economic dynamics within this annual competition involve the distribution of funds among different conferences, with allocation contingent on individual schools' performances within their respective divisions, rather than being dictated by the NCAA (Parker, 2023).

Beyond the tournament's success, various economic considerations impact the financial prosperity of a sports team. Wedding and Redding's (2014) work underscore the significance of the scheduling process in maximizing revenue. Striking the right balance between the number of home and away games is crucial, and their research delves into how success becomes imperative. The revenue generated not only sustains the sports programs but also serves as a catalyst for broader institutional development and outreach efforts, influencing academic year college application rates.

Methodology

Empirical Strategy

The methodology employed in this study is a panel data set gathered from university Common Data Sets and Big Ten Basketball statistic archives. The dataset comprises a total of 4,680 observations, incorporating variables such as the number of male applicants, number of female applicants, other gender applicants, conference wins and losses, overall wins and losses, points for, points against, percentiles., number of games, field goals, field

goal attempts, rebounds, margins, and home, away and neutral games, number of attendees and average attendees of each team. Utilizing data spanning from 2004 through the Spring of 2022 provides a comprehensive representation of team's performances and their corresponding changes in applicants over time. The inclusion of these diverse variables establishes a foundation for subsequent statistical analysis and outcome interpretation. The empirical strategy aims to understand the impact of ten schools' basketball season success from 2003 to 2022 (independent) on the number of applicants received by a university. The equations below are employed to ascertain the correlations among these factors.

$$Men's\ Applications_{tc} = Men'sCW + Men'sCL + Men'sOW + Men'sOL + Men'sPF + Men'sPA + Men'sAvePF + Men'sAvePA + Men'sHG + Men'sHGA + Men'sAG + Men'sAGA \quad [1]$$

$$Women's\ Applications_{tc} = Women'sCW + Women'sCL + Women'sOW + Women'sOL + Women'sPF + Women'sPA + Women'sAvePF + Women'sAvePA + Women'sHG + Women'sHGA + Women'sAG + Women'sAGA \quad [2]$$

$$Total\ Application_{tc} = TotalCW + TotalCL + TotalOW + TotalOL + TotalPF + TotalPA + TotalAvePF + TotalAvePA + TotalHG + TotalHGA + TotalAG + TotalAGA \quad [3]$$

The Applicants being solved for in these equations are men, women, and total applicants summating men, women, and other gender between the falls of 2004 and 2022,

without including 2020 due to inconclusive data from the Covid-19 pandemic. Each variable in the equation is condensed down to the type of applicant being quantified (men, women, or total) and then an acronym for the basketball statistic utilized in finding the number of applicants. The variable "t" stands for time while "c" represents the team being observed. "CW" means conference wins, "CL" means conference losses while only observing the results for a team's season within the Big Ten Conference. "OW" and "OL" are then the overall wins and losses, so the games played outside of the conference in a wider competition pool of other Division 1 programs. "PF" is points for meaning every point scored in the season by one team and "PA" is points against, so the points scored on the team's defense. Therefore, "$AvePF$" and "$AvePA$" are the averages of those statistics for each team in each season to look at what is typical for one single game played. "HG" and "HGA" represent the number of home games and then the amount of home game attendees, quantifying how many people viewed the team's game in person. And "AG" and "AGA" are conversely the away games and away game attendance results.

Extensions to this research would include finding further data on how the school markets basketball success economically. I could not find this information, but it would be very interesting to see how the spending affects application rates. A limitation was conducting the data manually as was all Common Data Sets of colleges not being available. It would have given much more data if those two limitations did not arise in this thesis research.

Data

Background

The key independent variables in this data set are accumulated from the Big Ten Conference's website men's and women's archived seasonal statistics from 2004 through 2022 (*Big Ten Conference, 2024*). Specifically looking into conference summaries, team summaries, and game attendance data. The dependent variables are the ten schools' fall application numbers drawn from the annual Common Data Set's section C: First-time, first-year admission. Men's basketball statistics for the 2020 season were included in full detail on the Big Ten website due to the COVID-19 pandemic interfering with the season and cutting it short. Due to that, I will disregard men's basketball for that season, women's basketball stats, and fall 2020 application numbers. Then, resuming with the years 2021 and 2022 to see how the pandemic affected the independent and dependent data. Additionally, the Big Ten Conference has expanded into 14 schools, but I will only be looking into the statistics for 10 schools. There are eleven teams included since 2003 which eliminated Nebraska, Rutgers, and Maryland, which joined the conference later. Penn State is also not analyzed as their school's Common Data Set and application numbers could not be accessed at the time of this thesis.

Table 1. Summary Statistics: Applicants

Variable	Mean	Std. Deviation	Minimum	Maximum	Observations
Applications Men	17033.32	7290.58	7290.58	7290.58	180
Applications Women	16869.99	6335.55	6335.55	6335.55	180
Applications Other	4.35	15.89	15.89	15.89	180
Applications Total	33907.67	13218.57	13218.57	13218.57	180

Note: Summary statistics represent the mean, standard deviation, minimum, and maximum values for the number of applications received from men, women, and other genders. The total number of applications is also provided for reference. All statistics are based on a sample size of 180 applicants.

Table 2. Summary Statistics: Men

Variable	Mean	Std. Deviation	Minimum	Maximum	Observations
Men's Conference Wins	9.58	3.78	3.78	3.78	180

Table 2. Summary Statistics: Men

Variable	Mean	Std. Deviation	Minimum	Maximum	Observations
Men's Conference Losses	8.37	3.61	3.61	3.61	180
Men's Overall Wins	20.87	6.23	6.23	6.23	180
Men's Overall Losses	12.78	4.42	4.42	4.42	180
Men's Total Games	33.65	2.73	2.75	2.75	180
Men's Points For (PF)	2369.46	303.28	303.28	303.28	180
Men's Points Against (PA)	2188.71	196.03	196.03	196.03	180
Men's Average Points For (PF)	70.27	5.37	5.368	5.37	180
Men's Average Points Against (PA)	65.17	4.62	4.62	4.63	180
Men's Home Games	16.92	1.82	1.82	1.82	180
Men's Home Game Attendees	212280.30	77184.29	77184.29	77184.29	180
Men's Away Games	10.67	1.02	1.02	1.02	180
Men's Away Game Attendees	130325.60	34195.96	34195.96	34195.96	180

Note: Summary statistics provide an overview of various performance metrics for ten men's basketball within the Big Ten Conference between 2004 and 2022. The statistics include conference wins and losses, overall wins and losses, total games played, points scored (PF) and points against (PA), average points scored and against per game, number of home and away games, and respective attendee counts. All statistics are based on a sample size of 180 games.

Table 3. Summary Statistics: Women

Variable	Mean	Std. Deviation	Minimum	Maximum	Observations
Women's Conference Wins	8.21	3.87	3.87	3.87	180
Women's Conference Losses	8.62	3.80	3.80	3.80	180
Women's Overall Wins	18.52	6.38	6.38	6.38	180

	Mean	Std. Deviation	Minimum	Maximum	Observations
Women's Overall Losses	13.41	4.70	4.70	4.70	180
Women's Total Games	32.24	2.28	2.28	2.28	180
Women's Points For (PF)	2193.56	327.85	327.85	327.85	180
Women's Points Against (PA)	2077.66	206.02	206.02	206.02	180

Table 3. Summary Statistics: Women

Variable	Mean	Std. Deviation	Minimum	Maximum	Observations
Women's Average Points For (PF)	67.80	6.99	6.99	6.99	180
Women's Average Points Against (PA)	64.35	5.14	5.14	5.14	180
Women's Home Games	15.72	1.90	1.90	1.90	180
Women's Home Game Attendees	63574.39	36120.05	36120.05	36120.05	180
Women's Away Games	12.18	1.36	1.36	1.36	180
Women's Away Attendees	49457.32	9374.82	9374.82	9374.82	180

Note: Summary statistics provide an overview of various performance metrics for ten women's basketball within the Big Ten Conference between 2004 and 2022. The statistics include conference wins and losses, overall wins and losses, total games played, points scored (PF) and points against (PA), average points scored and against per game, number of home and away games, and respective attendee counts. All statistics are based on a sample size of 180 games.

Table 4. Summary Statistics: Total

Variable	Mean	Std. Deviation	Minimum	Maximum	Observations
Total Conference Wins	17.79	5.88	5.88	5.88	180
Total Conference Loses	16.99	5.70	5.70	5.70	180
Total Overall Wins	39.39	9.56	9.56	9.56	180
Total Overall Losses	26.18	7.07	7.07	7.07	180
Total Games	65.89	3.88	3.88	3.88	180
Total Points For (PF)	4563.01	520.92	520.92	520.92	180
Total Points Against (PA)	4266.37	327.77	327.77	327.77	180

Total Average Points For (PF)	138.07	10.74	10.74	10.74	180
Total Average Points Against (PA)	129.51	8.14	8.14	8.14	180
Total Home Games	32.64	3.03	3.03	3.03	180
Total Home Attendees	275854.70	92458.97	92458.97	92458.97	180
Total Away Games	22.85	1.67	1.67	1.67	180
Total Away Attendees	179782.90	37739.76	37739.76	37739.76	180

Notes: Summary statistics provide an overview of the total number of home and away games played across all teams, along with the corresponding attendee counts for home and away games. All statistics are based on a sample size of 180 games.

Conference Summary Data

The conference summary data for basketball provides a comprehensive overview of how teams within the Big Ten conference are performing throughout the season. This data includes key metrics such as win-loss records, points per game (PPG), points allowed per game (PAPG), field goal percentage (FG%), three-point percentage (3P%), free throw percentage (FT%), rebounds per game (RPG), assists per game (APG), turnovers per game (TPG), and margin of success. Conference summary data provides perspective on the performance of all teams within a specific basketball conference and how these teams compare to each other and the conference as a whole. This data is necessary for assessing the competitiveness of the conference and identifying trends, strengths, and weaknesses across multiple teams.

Team Summary Data

Team summary data provides a condensed recap of the performance of a single team. Allowing for an analysis of the team's performance trends, facilitating comparisons against opponents, historical data, or predefined benchmarks. While conference summary

data offers a broad view of conference-wide performance, team summary data provides a focused look on individual team performance. The data includes statistics such as win-loss records, points per game (PPG), points allowed per game (PAPG), field goal percentage (FG%), three-point percentage (3P%), free throw percentage (FT%), rebounds per game (RPG), assists per game (APG), turnovers per game (TPG), and margin. Analyzing team summary data allows analysts and fans to create strategies and predictions for future games and seasons.

Attendance Data

Attendance data for basketball quantifies the popularity and fan engagement of games within each conference. This data includes the number of games, attendees at home, away, and neutral games, and the averages for each team over the season. High attendance often indicates strong fan support and interest in the conference's teams, which can impact revenue streams, marketing strategies, and overall school interest. Analyzing attendance trends can help conferences understand the demographic of their fans, preferences, and regional popularity, allowing them to optimize scheduling, venue selection, and promotional efforts to grow their fan base. I am looking into it to see how over time it changes and if the more highly attended schools are receiving more applicants as I predict they would.

Applicant Data

To acquire applicant data, I looked into universities' annual Common Data Sets. The Common Data Set (CDS) is a standardized set of information voluntarily provided by colleges and universities in the United States. It includes data on admission, enrollment, financial aid, graduation rates, and more. The CDS promotes consistency in data reporting

across institutions, aiding prospective students, researchers, and policymakers in making informed decisions about higher education. I specifically looked at section C1: "Applications" in the CDS' to find how many males, females, and "other" students applied in the fall of each year observed. This data was used to look at individually but also find a sum of yearly applicants and see how that number varied each year in accordance with basketball statistics.

Results

Model Summary

The regression analysis performed in this thesis sought out predicting the rise in college applicants based on basketball statistics with independent variables including wins, losses, games played, points scored for and against, and game attendance. This result section presents an overview of the main findings derived from the regression coefficients and was done so through using Stata 17.0 (Stata Corp, 2021).

Table 5. The Impact of Men's and Women's Basketball Statistics between 2004 and 2022 on Big Ten University Applicants

Applicants	Men's	Women's	Total
Conference Wins	1019.69	1028.11	1277.19
	(341.94)	(439.15)	(-411.18)
Conference Losses	1045.61	1156.63	1715.11
	(480.92)	(478.24)	(548.42)
Overall Wins	1020.91	117.13	502.07
	(1179.69)	(299.34)	(474.55)
Overall Losses	1144.44	225.18	351.55
	(1445.53)	(234.46)	(450.45)
Total Games	305.91	-1785.28	-3410.43

	(4400.38)	(1855.21)	(2850.09)
Points For (PF)	-21.83	3.72	18.59
	(42.67)	(25.88)	(37.56)
Points Against (PA)	16.23	22.11	41.10

Table 5. The Impact of Men's and Women's Basketball Statistics between 2004 and 2022 on Big Ten University Applicants

Applicants	Men's	Women's	Total
Points Against (PA) (continued)	(50.11)	(5.49)	(11.57)
Average Points For (PF)	1020.72	230.00	-414.93
	(1410.17)	(823.54)	(1217.15)
Average Points Against (PA)	-482.62	-675.09	-1118.90
	(1675.60)	(213.60)	(417.11)
Home Games	-279.42	316.42	-242.97
	(344.70)	(275.52)	(363.48)
Home Attendees	-0.02	-0.03	-0.02
	(0.01)	(0.01)	(0.01)
Away Games	-204.39	64.17	117.64
	(615.24)	(376.86)	(651.82)
Away Attendees	-0.03	-0.14	-0.06
	(0.03)	(0.05)	(0.03)
Constant	-57040.29	27177.13	142432.00
	(142411.50)	(58859.19)	(176804.90)
Observations	180	180	180
R squared	0.26	0.32	0.35

Notes: The values presented in parentheses represent the standard error. The table illustrates the impact of men's and women's basketball statistics between 2004 and 2022 on Big Ten University applicants. Summary statistics include conference wins and losses, overall wins and losses, total games played, points scored (PF) and points against (PA), average points scored and against per game, number of home and away games, respective attendee counts, and the constant. All statistics are based on a sample size of 180 observations.

Male Applicants

The one variable that proved to be statistically significant in male applications was the number of conference wins, with a P value of 0.003. This indicates that successful performances within the conference attract more applicants. And with every 1 conference win achieved within the Big Ten Sector 1019.69 more males apply to those Universities. However, an increase in conference losses appeared to result in a similar number of male applicants with a value of 1045.61 but was found to be less statistically significant. It is potentially suggesting that even losses provide the opportunity for wider audience reach in viewership and expansion of marketing for the university to increase application numbers. Beyond conference play, overall wins, overall loses and average points for the teams positively impact application numbers, suggesting that visibility in games outside the conference, whether they be wins or losses, also attracts more male applicants. Yet, the total number of games played by men's basketball teams does not notably influence application numbers. Additionally, average points scored (Average Points For) demonstrate a positive impact on male application numbers, indicating that consistent high scoring averages may appeal to prospective students. The number of home games played by men's basketball teams, as well as attendance at both home and away games, does not significantly influence application numbers. These findings show the slim impact that basketball statistics had on male college applicants of Big Ten Universities in the given time frame aside from the positive, statistical significance that conference wins correlated with applications submitted by males.

Female Applicants

Interesting and unexpectedly, based on my hypothesis, the most significant variable in application numbers was points scored against specifically for women's basketball

teams. With a coefficient of 22.11 and P value of 0.00 this shows that for every point scored against a basketball team examined in this study approximately twenty-two more women applied to one of those universities. This could potentially be because some female basketball viewers enjoy high scoring games regardless of who is winning, and these games can still put a university in their college search and ultimately application process. And as addressed for male losses, still the potential for university marketing appears regardless of the game outcome. There may even be an opening to market in a way that benefits from a loss by making fun of the team itself or a certain play in the game. Another unexpected and significant variable is the number of away game attendees with a P value of 0.008 and a miniscule coefficient of -0.13. Therefore, if the number of away game attendees increase by one, the number of applications decrease by 0.13, and on a wider scale if 100 more people attend an away game consequentially the women's applications submitted decrease by 13.52. They are recorded to be fans of one team at an away game but could also be truthfully rooting for the home team at which they are attending the game which could lead to the decline in application numbers. This is such a small variable it is unclear why it would have such a great significance on the women's application process. Unlike men applying, average points against these basketball teams brought down the number of female applications received with each point dropping the number of applicants down by -675.0866 with statistical significance.

Ultimately, conference wins and losses both brought in hundreds of more applicants than overall wins and losses did and overall, the more games played in a season, thousands of less women applied.

Total Applicants

The total number of male, female, and other applicants at the Universities of Illinois, Indiana, Iowa, Michigan, Michigan State, Minnesota, Northwestern, Ohio State, Purdue and Wisconsin between the falls of 2004 and 2022 was the most statistically significant for both total conference wins and total conference losses. This is very interesting because when looking at the conference totals and observing both the wins and losses they are against the other universities in the data. For instance, when Illinois loses within their own conference that is still considered a win for another school observed such as Purdue, so although the loses result in more applicants than the wins it is still a high likelihood that it was a win for another school in the Big Ten conference that was observed in this thesis. Each total conference win was calculated to bring in 1277.19 additional applicants and each total conference loss equated to 1715.11 applicants. Although total basketball games played had no significance and a negative coefficient, the conference wins and loses imply that any outcome of a game played in conference has a positive correlation on any identifying gender of applicant. The other variable that showed some statistical significance in total applicants was, similarly to womans applicants, total average points against. I hypothesize for the same reason as previously touched on of the average points scored on these teams negatively impacting the school's likeability or interest of applying students and lessening the applicants by -1118.90. Furthermore, emphasizing this finding because the games lost did not have a negative result which could be because even if it was a loss, it could be a close game that drew applicants in due to a team's hard work or underdog fight, and points against could mean a much wider gap in scoring and embarrassing loss or statistical record.

Conclusion

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In conclusion, this study unravels the relationship between college basketball performance and applicant numbers within the competitive landscape of Big Ten Universities. The findings emphasized the significance of conference wins in driving male applicants, highlighting the role of intra-conference success in shaping university appeal. While other factors such as overall wins and losses also influence application numbers, it is the success within the conference that emerges as a statistically significant driver of male interest in these institutions. This suggests that the visibility and prestige associated with competitive performances within the conference play a crucial role in attracting prospective male students, potentially influencing their perceptions of academic and extracurricular opportunities offered by these universities.

Additionally, the study revealed unexpected trends in women's basketball, where points scored against, and away game attendance proved to be determinants of application numbers. The findings challenged the hypotheses and highlight the factors influencing female applicant behavior. While the exact mechanisms associated with these trends would require further exploration, the results suggest that aspects beyond traditional metrics of success, such as game attendance and competitiveness, may play a role in shaping female applicants' perceptions and decision process. This brings to light the importance of considering diverse factors and perspectives when analyzing the impact of sports performance on college admissions.

However, it is important to acknowledge the limitations of this study, including manual data collection and the unavailability of Common Data Sets for all universities. These constraints may have influenced the comprehensiveness of the analysis and limit the generalizability of the findings. Moving forward, future research should aim to overcome

these limitations by leveraging more comprehensive data sets and exploring additional dimensions, such as the economic implications of basketball success on university marketing strategies and financial outcomes. Or also considering lower performing and lesser-known universities than these large name ones. By addressing these limitations and building upon the findings gained from this study, researchers can continue to deepen their understanding of the factors influencing college application trends and their implications for universities and their prospective students.

The impact of this study on male and female applicants emphasizes the importance of recognizing and accommodating diverse preferences in university recruitment strategies. Beyond traditional metrics, such as conference wins for male applicants, the unexpected trends in women's basketball highlight the need for a comprehensive approach to understanding applicant behavior. University administrators must acknowledge the transformative potential of sports programing in attracting students, adapting marketing strategies to showcase the vast experiences offered on campus. By addressing the study's limitations and leveraging comprehensive data sets, future research can further clarify the implications of sports performance on college admissions, informing strategic decision-making to enhance institutional competitiveness as well as student engagement.

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