

CHALLENGES OF NCAA RECLASSIFICATION

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INTRODUCTION

The 2012-13 season was NKU's first in NCAA (National Collegiate Athletic Association) Division I athletics. From the perspective of a student-athlete, it seemed that a majority of our teams struggled. Recent history suggests that at least one Division II school enters Division I each year. This project was designed to measure and monitor success of teams as they change into Division I athletics. The following research questions were considered:

1. How does performance after entry into Division I compare to prior performance?
2. At what point do teams first experience "success" after transferring to Division I?

DATA

This study examined five sports including Men's Basketball (MBB), Men's Soccer (MSoc), Baseball, Women's Basketball (WBB) and Women's Soccer (WSoc). These sports were chosen based on data availability and the perceived strength of their relationship to the reasons for changing divisions. Football was excluded since most transferring schools within the last 30 years didn't have a Football team.

The website <http://web1.ncaa.org/stats/StatsSrv/careersearch> was used as the main source of the research was deemed most reliable. Data that were not available from the main source were taken from the various schools' athletics websites. For the men's basketball data <http://www.sports-reference.com/cbb/schools/> was also used.

The schools chosen for data collection included the 40 most recent transferring schools who had a Men's Basketball team. The earliest transferring school in the data set was 1996. Data were collected for the other four sports provided they were offered at each school. There were 23 schools that didn't provide data for one of the sports. To increase sample size for NCAA tournament analysis data were collected for additional schools dated back to 1985.

DEFINING SUCCESS

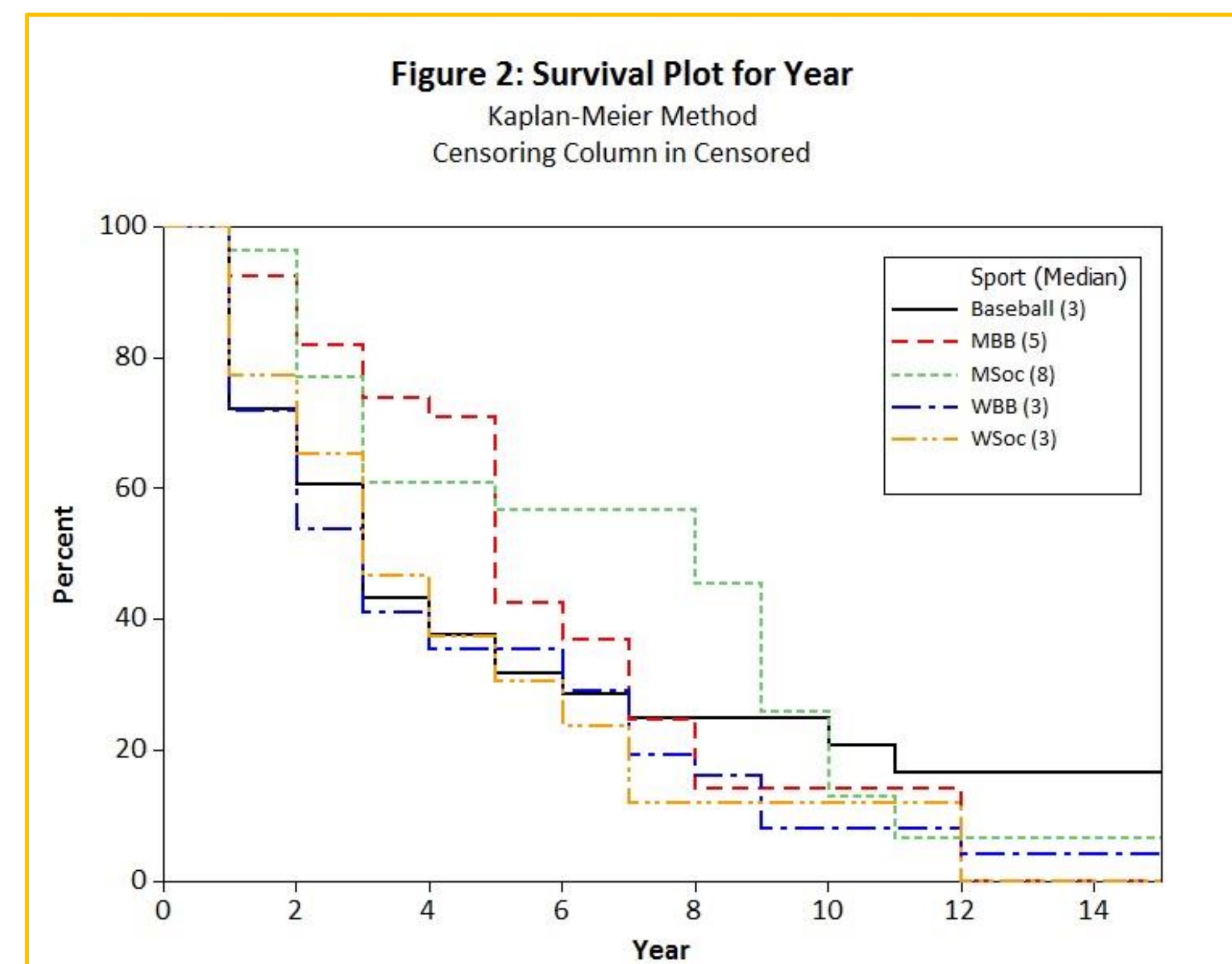
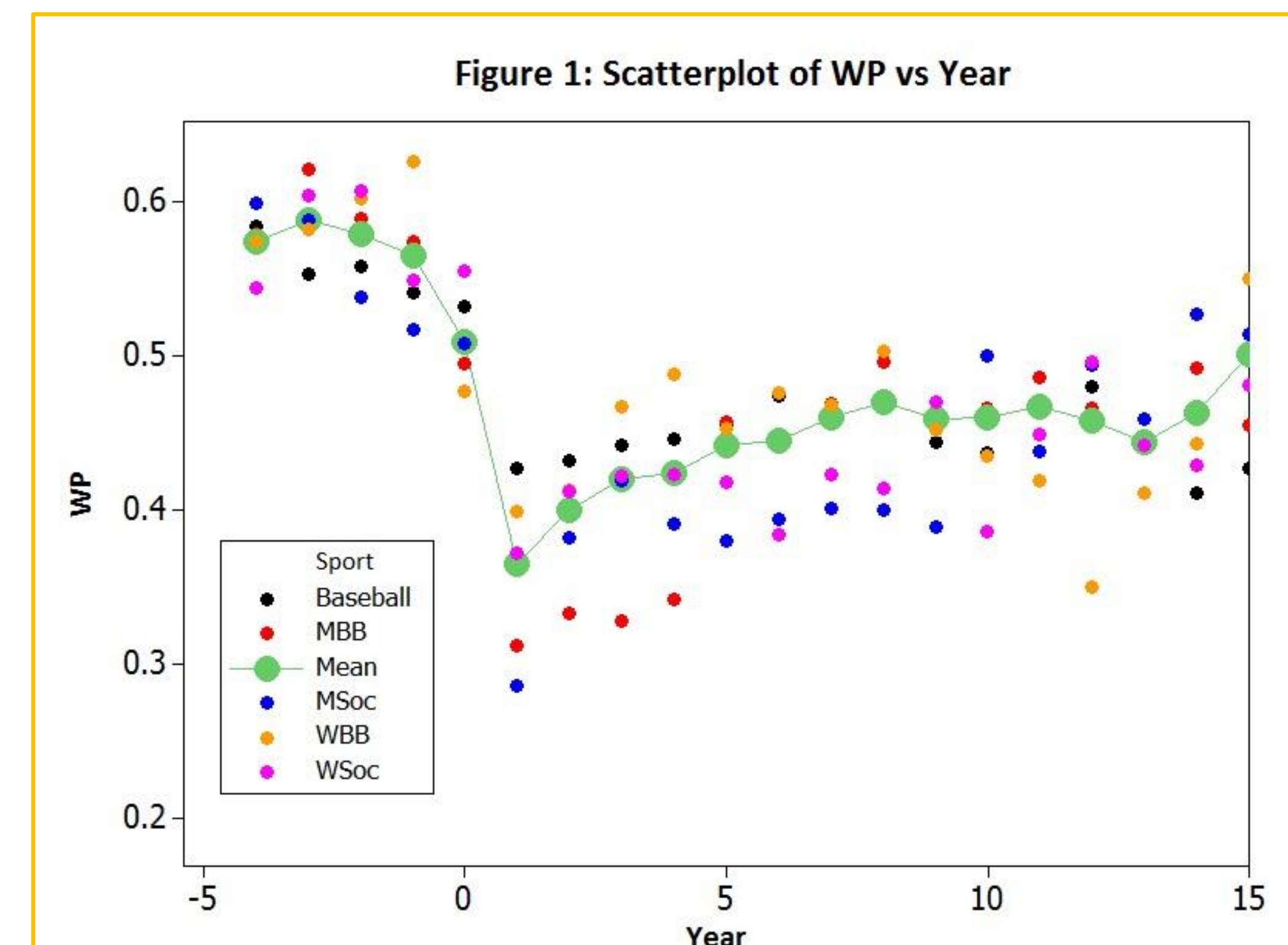
This study requires clear definition of "success". Prior to Division I, success might have constituted a NCAA tournament appearance or even winning a national competition. However, when schools transfer to Division I there is the 4 year probationary period during which schools cannot participate in post-season. For this reason, multiple measures of success were considered:

- **Winning Percentage:** total wins divided by games played in a season (including post-season appearance). In particular, looking at a win-loss record above 0.500 as a successful season.
- **Tournament Appearance/Win:** These variables were only considered for Men's basketball. Entry into the NCAA tournament was considered as one type of success (which would mean for the teams in the sample that they won their conference tournament). Winning a game within the NCAA tournament was also considered.

METHODS AND RESULTS

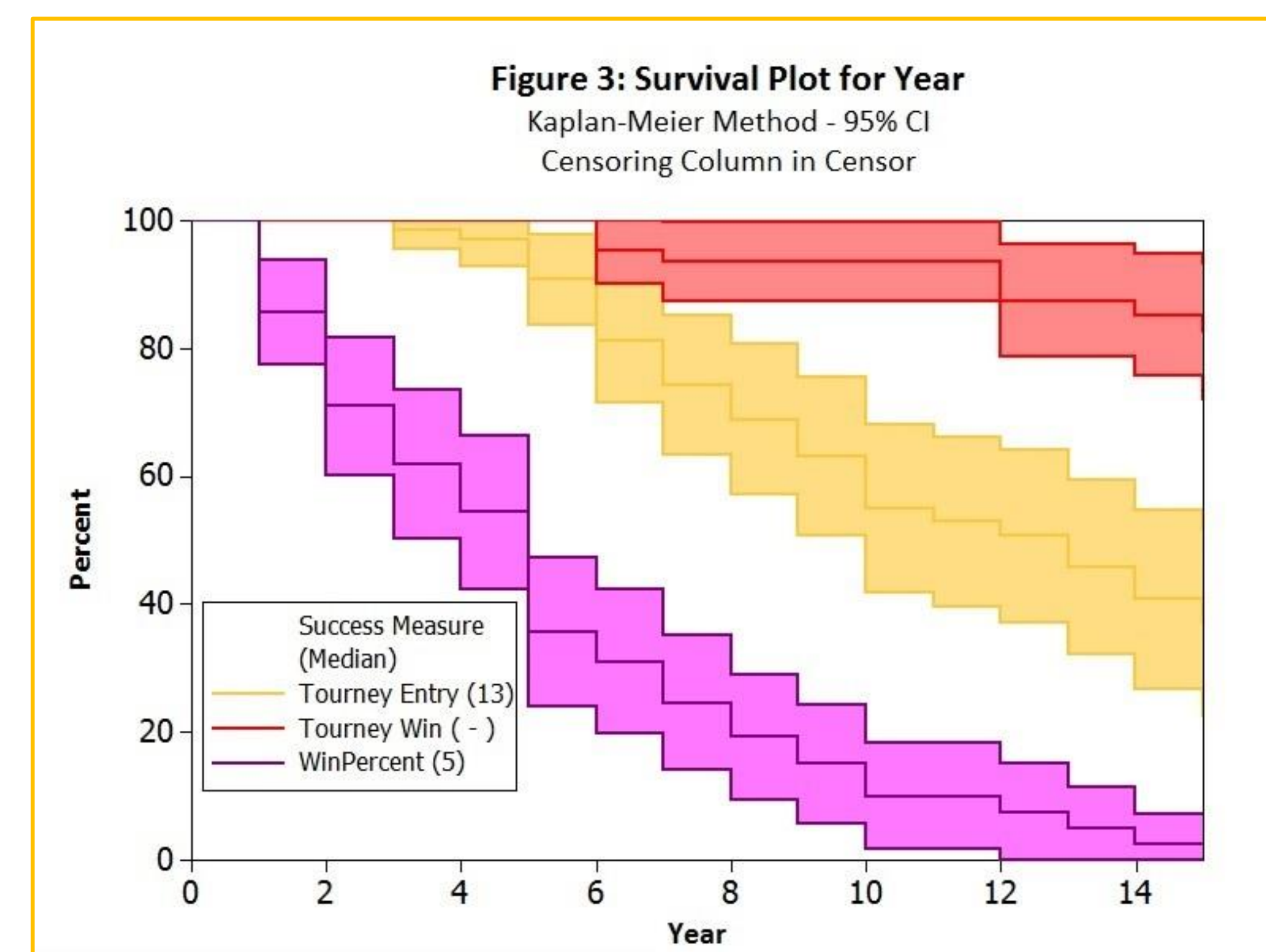
Data were analyzed using Repeated Measures Analysis of Variance and Survival Analysis. RM-ANOVA applies when considering winning percentages for the various sports across time. Survival Analysis is used to estimate the time to a team's first "success" after transferring to Division I.

Figure 1 illustrates mean winning percentages (by sport). RM-ANOVA, blocking on school and sport, indicated significant differences in average performance by year (p -value < 0.001). Subsequent Tukey comparisons indicated higher average performance prior to Division I classification. While there seems to be some recovery after the first few years, there is evidence to suggest that, on average, teams do not return to their pre-division I performance level within 15 years (p -value < 0.01).



Survival Analysis estimates the probability of continual lack of success by a specific time (or conversely the chance one will achieve a successful season by a specific year). Figure 2 shows the survival plot for winning percentage (where winning percentage greater than 50% would be considered successful). Estimated medians suggest that roughly half of all schools reach a winning percentage above 50% at some point prior their 6th year in Division I. There was no evidence of a difference among sports ($\chi^2 = 5.5$, p -value = 0.24).

Figure 3 shows a survival plot with confidence intervals specific to Men's Basketball. All three degrees of success are considered: winning percentage above 50%, making an NCAA tournament appearance, and winning an NCAA tournament game. Estimated medians suggest that it takes around 5 years for half of the schools to have achieved a winning percentage above 50% and around 13 years for half of the schools to have made an NCAA tournament appearance. By year 15, no more than 20% of these transferring schools would win an NCAA tournament game.



CONCLUSIONS

After analyzing the data we found the following:

- The results from ANOVA showed that there was a clear drop from the average winning percentage pre-Division I to the average winning percentage post-Division I. ANOVA also showed that within a 15 year period of being in Division I the average team does not return to the performance level they had pre-division I.
- The scatterplot in Figure 1 suggest that for the initial probation period Men's Basketball may struggle a little more than the other sports where as Baseball tend to have a slightly easier transition to Division I.
- The survival analysis showed that there was no evidence that any particular sport required greater time to achieve a yearly winning percentage above 50% after transitioning.
- The data can predict with 95% confidence that for a Men's Basketball team who have just transferred to Division I can expect to have between a 30% to 60% chance of making the NCAA tournament during their first 10 years. Likewise there is a 45% to 75% chance they will make the tournament by their 15th year in Division I.
- The survival analysis shows that even after being in Division I for 15 years there is only between a 5% and 20% chance that they will have won their first NCAA tournament game.

FUTURE IDEAS

Future studies of Division I transition might consider:

- What elements of Division II play are the best predictors of Division I success?
- Sample sizes were not as large as desired, due to availability of data. This study would likely benefit from additional data collection over the next 20+ years.
- Looking at different college sports other than the ones that were looked at.
- How much does money that a college or team contribute to how successful they are?

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