



Analysis of Revenues and Expenses of Basketball in the ACC

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Introduction/Motivation

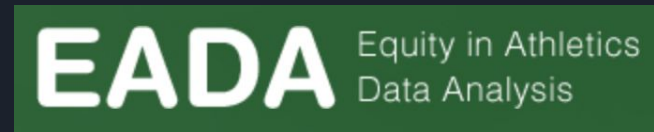
Research Question:

How do men's college basketball revenues and expenses compare to women's college basketball revenues and expenses?



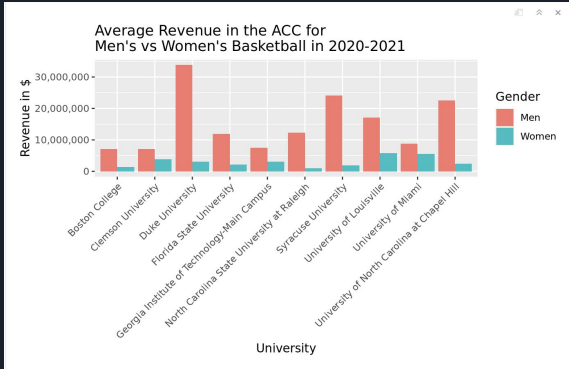
Data

- Every postsecondary institution that receives federal funding, and has intercollegiate sports programs, is required to report annual data on these programs.
- The dataset contains information for each team such as number of participants, annual expense, annual revenue, and coaches' salaries.

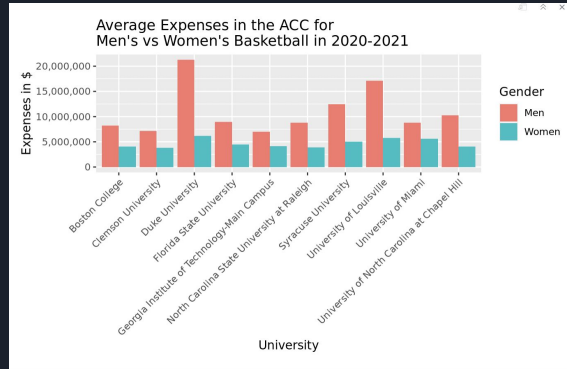


EDA Highlights

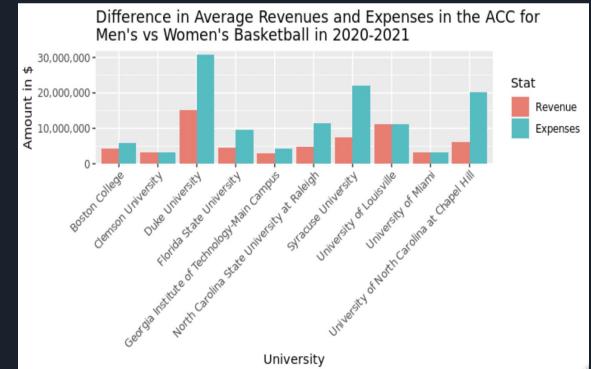
- We hypothesized that on average, men's revenue and expenses would outweigh women's revenue and expenses
- Initially observed that men's revenue and expenses outweighed women's
- Difference between revenue was greater than difference between expenses



Revenue



Expenses



Difference



Inference/Modeling

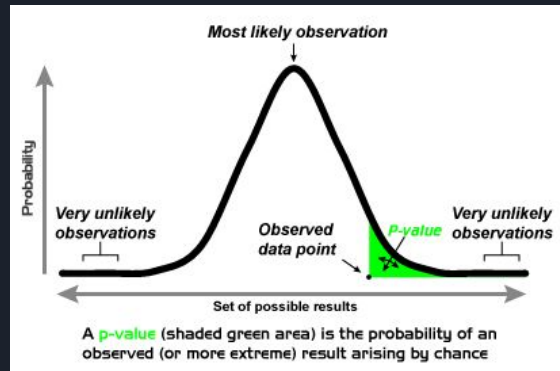
- Using a hypothesis test we analyzed the difference in men's and women's revenue.
- Using a second hypothesis test we analyzed the difference in men's and women's expenses.

$$\begin{aligned}H_o: \mu_{mrev} - \mu_{wrev} &= 0 \\ H_a: \mu_{mrev} - \mu_{wrev} &> 0\end{aligned}$$

$$\begin{aligned}H_o: \mu_{mexp} - \mu_{wexp} &= 0 \\ H_a: \mu_{mexp} - \mu_{wexp} &> 0\end{aligned}$$

Analysis

- In both tests, we obtained a p-value of <0.001 with an assumed alpha value of 0.05.
- We can reject the null hypothesis and have strong evidence to conclude the alternative hypothesis.
- We can conclude that on average, for basketball teams in the ACC
 - Men's revenue is greater than women's
 - Men's expenses are greater than women's



Conclusions/Future Work

- Given our analysis of this data we have upheld our hypothesis and concluded that on average, men's basketball teams in the ACC have higher revenues and expenses when compared to women's basketball teams in the ACC.
- Further research should be done to investigate exactly where these divides arise from.

