

To what extent does payroll spending influence team performance in Major League Baseball compared to salary-capped leagues such as the NFL?

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# Subject, motivation, and research question

The professional sports labour-market context: in Major League Baseball (MLB) teams face no hard salary cap, while in National Football League (NFL) a salary cap is enforced (\$279.2 M per team).

Motivation: We wanted to investigate if higher payrolls translate into better performance. In other words, does the salary-cap structure in the NFL reduce the influence of spending on success?

This provides insight for front offices on ROI, and for league regulators on competitive balance.

To what extent does payroll spending influence team performance in MLB compared to a salary-capped league such as the NFL?

# Data set and data processing

- We plan to take team payroll data over the last 15 years in the MLB, and build a model that relates spending to expected win percentage.
- We will then create a similar model for the NFL, independently, and see if there is more or less deviation.

Note: due to the NFL's salary cap, deviation from the mean payroll is much less than in the MLB. We will address this in the project as well.

# Outcome variables and hypothesis to be tested

- Outcome Variables
  - Primary
    - Regular Season Win Percentage
    - Playoff Qualification
  - Secondary
    - Playoff Success
- Hypothesis
  - Null Hypothesis: There is no difference in the strength of the positive relationship between payroll spending and regular season win percentage with salary capped leagues to non capped.
  - Alternative Hypothesis: The positive correlation between payroll spending and regular season win percentage is significantly stronger with non-capped leagues than salary capped.