

Grace Coccagna

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Data 400

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The Economics of Giveaways: Analyzing MLB Attendance Trends

Through my advancement in the Data Analytics program at Dickinson College, I have explored the intersection of economics and data-driven decision-making. Building on my passion for baseball operations and its economic principles, this project aims to analyze the impact of promotional events, particularly giveaways, on MLB game attendance. My objective is to determine whether games featuring promotions, such as bobblehead nights or merchandise giveaways, consistently attract higher attendance compared to non-promotional games. By examining data from 2015 to 2018 for all 30 MLB teams, this study seeks to identify trends and provide insights to inform promotional strategies for teams and stadium managers.

From personal experience attending Orioles games at Camden Yards, I've observed that promotional events like Hawaiian shirt night often sell out quickly, while giveaways such as rally towels do not have the same effect. This observation has sparked my curiosity about whether similar trends exist across the entire league. One challenge I anticipate is the variation in the popularity of specific giveaways. To address this, I plan to categorize giveaways by type (e.g., bobbleheads, apparel, and novelty items) and evaluate their individual impacts on attendance. This categorization will provide a more nuanced understanding of which types of promotions are most effective.

The datasets for this project will include MLB game attendance data from Statista and official MLB archives, as well as promotional event schedules sourced from historical archives of team websites and sports news outlets. Since no publicly available dataset compiles promotional game information, I will need to manually enter this data, making the process more time-consuming but crucial for comprehensive analysis.

An Exploratory Data Analysis (EDA) will be conducted to identify trends in promotional events and their relationship with game attendance. I plan to explore several analytical techniques. First, regression analysis using multiple regression models will help isolate the impact of giveaways while accounting for other variables such as weather, day of the week, and opponent. Second, categorical analysis could evaluate the effectiveness of different types of giveaways on attendance. Additionally, a statistical test such as a t-test will be useful to compare attendance means for games with and without giveaways. Lastly, visualizations created using Python or Power BI will effectively communicate these findings.

This project is important for baseball teams, marketing departments, and stadium operations managers. Understanding the impact of giveaways on attendance can help teams optimize promotional strategies, ensuring resources are allocated to events that maximize fan engagement and revenue. Additionally, insights from this analysis can help ticket vendors and sponsors align their marketing efforts with game-day promotions.

While this project does not involve sensitive personal data, it will carefully consider the ethical implications of using historical promotional data and attendance records. Transparency in model assumptions and ethical data usage will be prioritized. The goal is to deliver actionable insights and a predictive model that highlights the relationship between promotional events and

game attendance, ultimately supporting better decision-making for key stakeholders in MLB operations.