

Behavioral Biases in Competitive Settings: Evidence of Loss Aversion, Projection Bias, and Managerial Lessons from Major League Baseball

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Abstract

This study tests whether fundamental behavioral biases persist in high-stakes professional settings. Using pitch-by-pitch data from over 2.3 million MLB swings, I show that batters exhibit loss aversion: when close to a walk, they swing more conservatively, consistent with risk aversion in the gain domain. I also document projection bias under two-strike situations. Left-handed batters facing right-handed pitchers swing more aggressively, reflecting risk-taking in favorable matchups, whereas right-handed batters facing left-handed pitchers swing less despite holding an objective advantage. These asymmetric responses reveal that while loss aversion universally shapes swing decisions, projection bias selectively distorts behavior depending on matchup salience and rarity. The findings demonstrate that even under intense competition, biases endure, suggesting broader managerial implications: organizations must recognize and mitigate decision biases in high-pressure environments to optimize strategy, resource allocation, and performance evaluation.