

Winning at Home? A Comparative Study of Home Advantage in U.S. Major Leagues

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Abstract

This study comparatively investigates the presence and impact of home advantage across the four major professional sports leagues: the NBA, NHL, MLB, and NFL, using data from the most recent season. Statistical analyses, including Z-tests for population proportions and T-tests for paired samples, revealed that the extent of home advantage varies across these sports. A strong home advantage was found in the NBA and NHL, a moderate effect in the MLB, and minimal to none in the NFL. To understand these differences, we explored potential contributing factors through regression analysis and factor evaluation. Results indicate that fan influence plays a significant role in the NBA and NHL, while in the MLB, travel fatigue emerged as a key factor—despite NBA and NHL teams covering longer travel distances overall—suggesting that game scheduling has a critical impact. Little to no effect of home court advantage is observed in the NFL.

