
Knicks like the underdog role


SEABISCUIT 5-3 UNDERDOG TODAY!

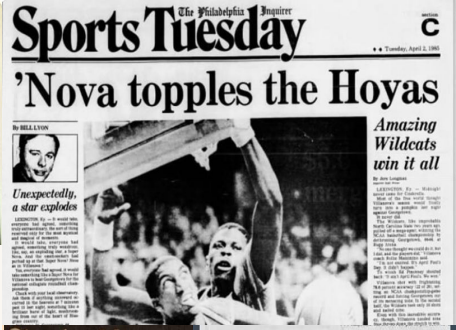
Chronicle Sporting Green Big Race on Again

Trojans Yet to Beat Allison; Dolman, Stoll Test Lame Legs

NAG'S TOE TROT


North Carolina State 'miracle'

Heart Attack Wolfpack crumbles Skywalkers


Sports Tuesday

'Nova topples the Hoyas

Amazing Wildcats win it all

Unexpectedly, a star explodes


Underdogs prove bookies wrong

Cup quotes

Report: RON SMITHSON
Pictures: DOUG AVENT

Dauid

Cleared


Charles Mingus Underdog"


Underdog Canes Trample Baylor; Curci Runs Wild

By JOHN GARCIA

Bill Sandin tackles Baylor's Beasley in the end zo

PHOTO CREDITS


Giant Underdog Enlists in Macy's Parade


U.S. hockey team stuns Soviets 4-3

Johnson, Eruzione key United States comeback


ENGLAND FALL TO U.S. AMATEURS

From JOHN THOMPSON


Underdog Jay County confident

Jay County

Jay County

Jay County

Topic

Does playing at home help teams win in the NBA?

Why does it matter?

- Key insight
  - Franchises
  - Analysts
  - Consumers

When two teams enter a game with similar Elo Ratings does the home team win more often?

Team Strength

Elo Ratings estimate each team's relative strength before the game

Game Location

Home or away may be associated with different outcomes

Data

NBA Elo Dataset · 1946–2015

126,314
Original game observations

63,138
Games Analyzed

Elo Difference

Pregame team strength comparison

Location

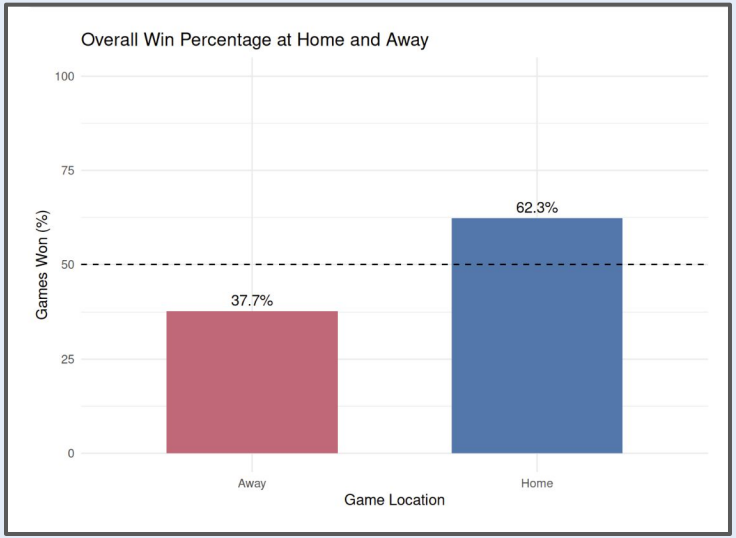
Home vs Away

Outcome

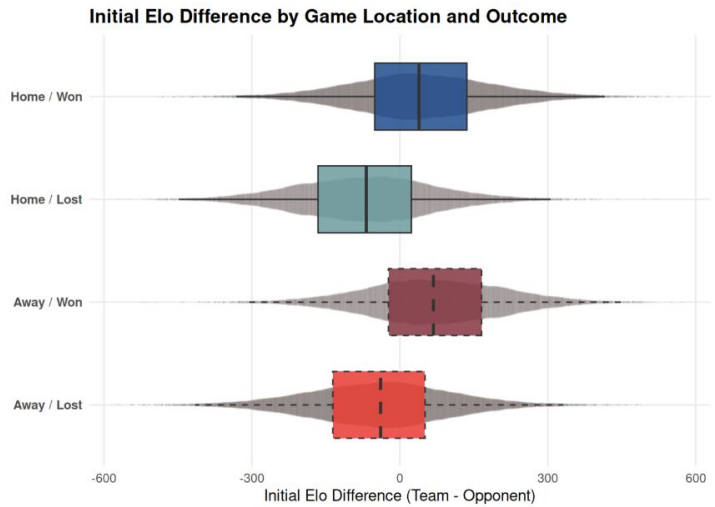
Win vs Loss

Data

- Home teams won 62.3% of their games
- Home win rate was 24.5 percentage points higher than away.
- Suggests a home court advantage, but does not account for team strength

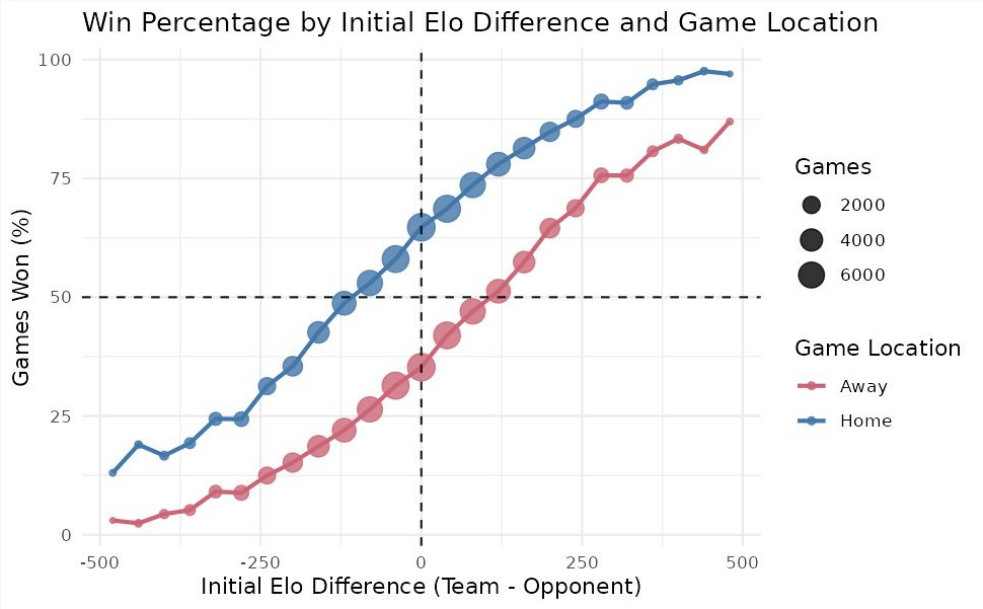


Data: Box Plot



Group	Sample Size	Mean	Median	IQR
Away/Lost	39305	-41.8	-38.9	186.9
Away/Won	23833	69.8	68.1	188.9
Home/lost	23833	-69.8	-68.1	188.9
Home/Won	39305	41.8	38.9	186.9

Data: Scatter Plot



Result 1:
Most games played at similar Elo ratings.

Result 2:
Initial Elo Difference = 0 -> **65% vs. 35%**

Result 3:
Win 50% threshold -> **-120 vs. +120**

Result 4:
Gap shrinks at extremes -> **30% to 19%**

Methodology:

- 40-point Elo bins to balance trend clarity and endpoint fluctuations
- Win percentages calculated separately by location
- Minimum 30 games per bin

Dimensions:

1. N. of games played (the circles).
2. Location (the color):
3. % game won (y-axis)
4. elo_difference (x-axis)

Conclusion/Limitations

- Teams with a higher pre game Elo ratio had a higher win rate
- Home teams won more at similar Elo differences
- Data is observational and cannot show causation
- Injuries are not accounted for, and the data ends in 2015.