SPORTS ECONOMICS

Lecture 6

Competitive Balance

Parity · Fans & Owners · Market Size · Measuring Balance · Policy

ROADMAP

What We Cover Today

01

SECTION 1

Why Balance Matters to Fans

What parity means, dynasties and attendance, the uncertainty of outcome hypothesis, and loss aversion.

02

SECTION 2

Owners, Market Size & Winning

When leagues intervene, how market size shapes success, and why big markets gain more from winning.

03

SECTION 3

Measuring Balance Within a Season

Standard deviation of win %, season length, and the idealized SD ratio.

04

SECTION 4

Measuring Balance Across Seasons

Between-season variation, concentration ratios, and the HHI.

05

SECTION 5

Attempts to Alter Competitive Balance

Revenue sharing, salary caps and luxury taxes, drafts, and scheduling.

Section 1

Why Balance Matters to Fans

COMPETITIVE BALANCE

What Do We Mean by Balance?

★ DEFINITION

Competitive balance

the degree of parity(equality) within a league.

IT CAN SHOW UP IN THREE DIFFERENT WAYS

EVERY SEASON

Close races

Most teams remain in contention late into the season, and the standings are tight.

BEST VS. WORST

A small gap

The difference between the best and the worst teams in the league is small.

YEAR TO YEAR

New winners

The championship changes hands often rather than going to the same team.

EXAMPLE · CHICAGO BEARS

A Complicated Relationship

Fans, owners, and the league each want something slightly different from competition.

THE FANS

Want to win, mostly

- No Bears fan enjoys losing to the Packers.
- But an occasional loss keeps the rivalry interesting.

THE OWNERS

Want to win, profitably

- The McCaskey family earns more when the Bears are successful.
- Fans want wins, so owners want to provide them.

THE LEAGUE

Wants uncertainty

- The NFL's product is a contest with an unknown result.
- If one team always wins, every team's product is worth less.

The tension: every owner wants to win, but a team does not need to win every game to be profitable, and the league as a whole depends on uncertainty of outcome.

EXAMPLE · A BLOWOUT AT FENWAY

Your Friend's First Game

A friend from Idaho with little exposure to pro sports joins you for Red Sox vs. Athletics.

ILLUSTRATIVE LINE SCORE

	1	2	3	4	5	6	7	8	9	R
Athletics	0	0	0	0	1	0	0	0	0	1
Red Sox	0	5	0	4	0	2	2	0	X	13

RED SOX FANS

Love the blowout

Their team scores big early and it continues. For a loyal fan, a guaranteed win is a great night out.

YOUR FRIEND

Bored by the 2nd inning

No rooting interest and no doubt about the result means the casual fan has nothing to enjoy.

THE FAN'S PERSPECTIVE

What Do Fans Actually Want?

SUSPENSE

An uncertain game is more interesting

A close game with an unknown result holds a fan's attention better than a guaranteed win.

VS

WINNING

But nobody wants to lose an upset

Given the choice, a fan will still prefer an easy win over a thrilling loss.

SO WHICH ONE WINS OUT?

History gives us a clue: when one team dominates for years, even fans have shown their displeasure by staying home.

WHEN ONE TEAM DOMINATES

Too Much of a Good Thing

FOOTBALL · 1946–1949

Cleveland Browns

47–4–3

regular-season record in the All-America Football Conference

The Browns won all four AAFC titles. They were so dominant that crowds fell, including at their own home games; the league folded after 1949.

BASEBALL · 1950–1958

New York Yankees

8 & 6

American League pennants and World Series titles in nine seasons

Attendance at Yankees home games fell, and so did attendance across the rest of the American League.

DATA · YANKEES DYNASTY

The Yankees Win, Attendance Falls

League champions and attendance, 1950–1958.

Year	AL champion	NL champion	Yankees attendance	AL attendance	NL attendance
1950	**Yankees**	Phillies	**2,081,380**	9,142,361	8,320,616
1951	**Yankees**	Giants	**1,950,107**	8,888,614	7,244,002
1952	**Yankees**	Dodgers	**1,629,665**	8,293,896	6,339,148
1953	**Yankees**	Dodgers	**1,531,811**	6,964,076	7,419,721
1954	Cleveland	Giants	**1,475,171**	7,922,364	8,013,519
1955	**Yankees**	Dodgers	**1,490,138**	8,942,971	7,674,412
1956	**Yankees**	Dodgers	**1,491,784**	7,893,683	8,649,567
1957	**Yankees**	Braves	**1,497,134**	8,169,218	8,819,601
1958	**Yankees**	Braves	**1,428,438**	7,296,034	10,164,596

YANKEES

−31%
home attendance

REST OF AL

−20%
total AL attendance

NL

+22%
total NL attendance

THEORY 1 OF 2

The Uncertainty of Outcome Hypothesis

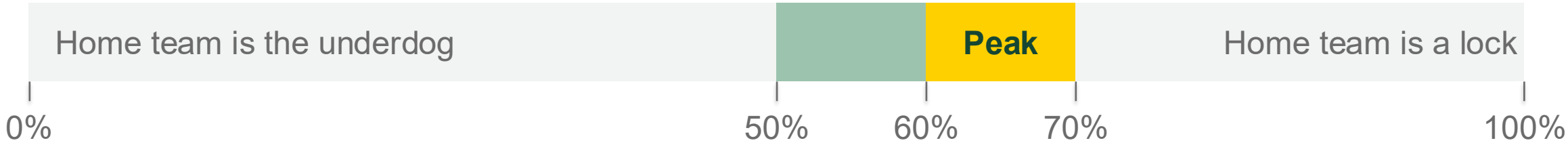
There are two main ways to evaluate whether, and how much, fans like competitive balance.

★ **DEFINITION**

Uncertainty of outcome hypothesis

fans enjoy games more when there is no guarantee that a team will win.

WHERE IS THE SWEET SPOT?
ATTENDANCE VS. THE HOME TEAM'S CHANCE OF WINNING



The evidence: fans are most likely to attend when the home team has a 60–70% chance of winning. They want to win, but not a sure thing.

THEORY 2 OF 2

Prospect Theory and Loss Aversion

Fans do not treat a win and a loss as mirror images.

★ **DEFINITION**

Prospect theory

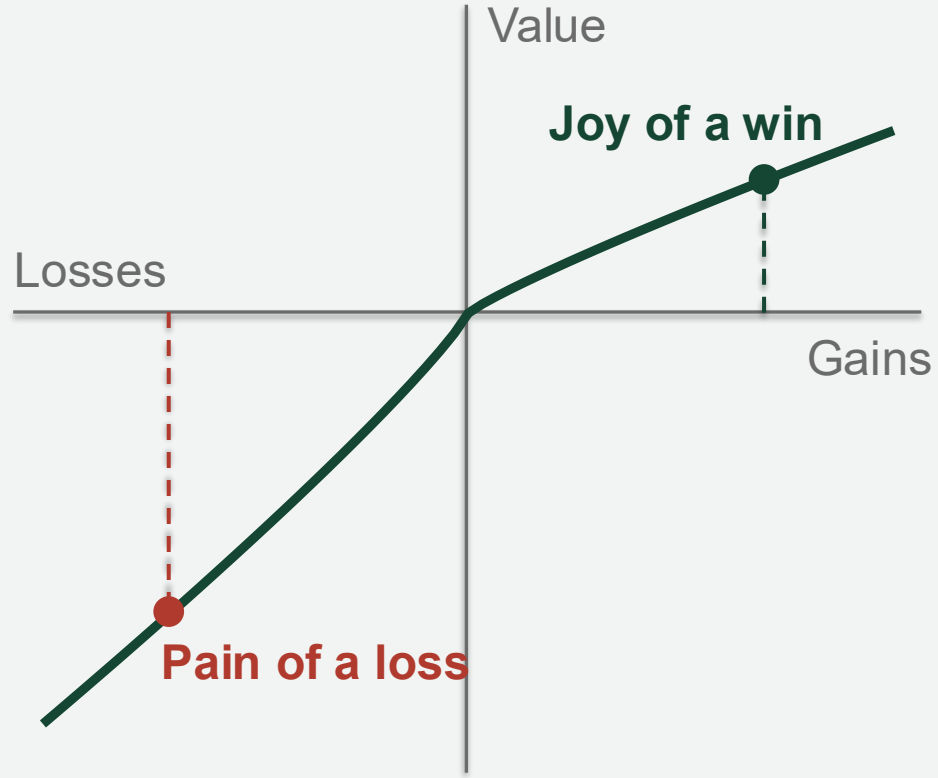
people evaluate gains and losses differently. Specifically, they exhibit loss aversion.

★ **DEFINITION**

Loss aversion

people weigh losses more heavily than equal-sized gains.

For a fan: the sting of a loss is bigger than the joy of an equally sized win.



The value function is steeper for losses than for gains.

PUTTING IT TOGETHER

Combining the Two Theories

Rank every outcome from the fan's point of view, from best (1) to worst (4).

	EXPECTED	UNEXPECTED
WIN	**2 Expected win** Good, but it was supposed to happen.	**1 Unexpected win** The best outcome: an upset in your favor.
LOSS	**3 Expected loss** Disappointing, but you saw it coming.	**4 Unexpected loss** The worst outcome, and it hurts most.

FOUR RULES

- Fans always prefer a win of any kind over a loss.
- Unexpected wins are better than expected wins.
- Unexpected losses are worse than expected losses.
- **Unexpected losses hurt more than unexpected wins help** (loss aversion).

Section 2

Owners, Market Size & Winning

THE OWNER'S PERSPECTIVE

Balance Matters Because Fans Matter

Competitive balance

Games, pennant, championship races stay uncertain.

→

Fan interest

Fans keep buying tickets and tuning in.

→

League revenue

Every team benefits from a healthy league.

EACH OWNER

- Would always rather win than lose.
- But is also concerned with the health of the league as a whole.

THE RISK

- If the same team always wins, it can alienate fans, and all teams suffer.
- Leagues can impose policies and rules to promote balance.

EXAMPLE · NASCAR

When Should a League Step In?

Intervention depends on how balanced the league is on its own.

NATURALLY BALANCED

No intervention needed

If many teams can win, the league can leave well enough alone.

A FEW TEAMS DOMINATE

The league steps in

If only a few teams are good and the rest lag far behind, the league needs rules to restore balance.

ONE OF THE MOST HANDS-ON LEAGUES

NASCAR's Cup Series

01 **Body rules**
Car bodies must match official specifications, so no car has an aerodynamic advantage.

02 **Engine rules**
Engines have to meet specific criteria.

03 **Post-race checks**
Some cars are retested at the end of the race to confirm they complied.

THE OWNER'S PERSPECTIVE

Two Reasons Leagues Intervene

Balance can break down on its own for two reasons.

1

REASON 1

Owner motivation

Some owners maximize wins; others maximize profits.

When owners pursue different goals, win-maximizers outspend the rest. Balance is thrown off, and all teams can suffer financially.

2

REASON 2

Market size

Even if every owner had the same goal, cities are not the same size.

The financial return to investing in players is bigger for teams in large cities (assuming no revenue sharing).

MARKET SIZE EFFECTS

Does Market Size Decide Who Wins?

Researchers disagree about how much market size affects competitive balance.

THREE MAIN SOURCES OF DISAGREEMENT

01

How to measure success

Win percentage? Playoff wins? Championships?

02

How to define market size

Population? Income? Payroll? Media revenue?

03

How to measure policy impact

Did a rule change balance, or would it have changed anyway?

The bottom line: depending on which measure of success and which measure of market size you use, you can reach very different conclusions.

MARKET SIZE EFFECTS

Same Question, Different Answers

MLB'S BLUE RIBBON PANEL (2000)

Market size matters

Market size	Payroll
Success	Playoff wins

FINDING

Teams with small payrolls rarely had success: 24 of 27 World Series winners had payrolls above the median.

BERRI, SCHMIDT & BROOK (2006)

Market size matters little

Market size	Varying measures
Success	Varying measures

FINDING

Team quality is not strongly related to a city's population or per capita income.

MARKET SIZE EFFECTS

A Moving Target: Defining Market Size

What counts as a “large market” has changed as the sources of team revenue have changed.

THEN

Gate revenue

- Market size was first defined by ticket revenue.
- But revenue was capped by arena size.
- So large cities didn’t necessarily have an advantage.

NOW

Regional sports networks

- Local TV deals became a major source of revenue.
- They are not limited by the number of seats.
- Teams in large markets could now earn far more than teams in small markets.

MARKET SIZE EFFECTS

Parity per Team, or Parity per Fan?

Competitive balance changes when you switch the viewpoint from the team to the fan.

THE ARGUMENT

- Teams in large markets have more fans than teams in small markets (NY Yankees vs. Milwaukee Brewers).
- If a league maximizes profit, large-market teams should win more often, because that makes the most fans happy.
- In a 30-team league, perfect parity means every team wins once every 30 years on average.

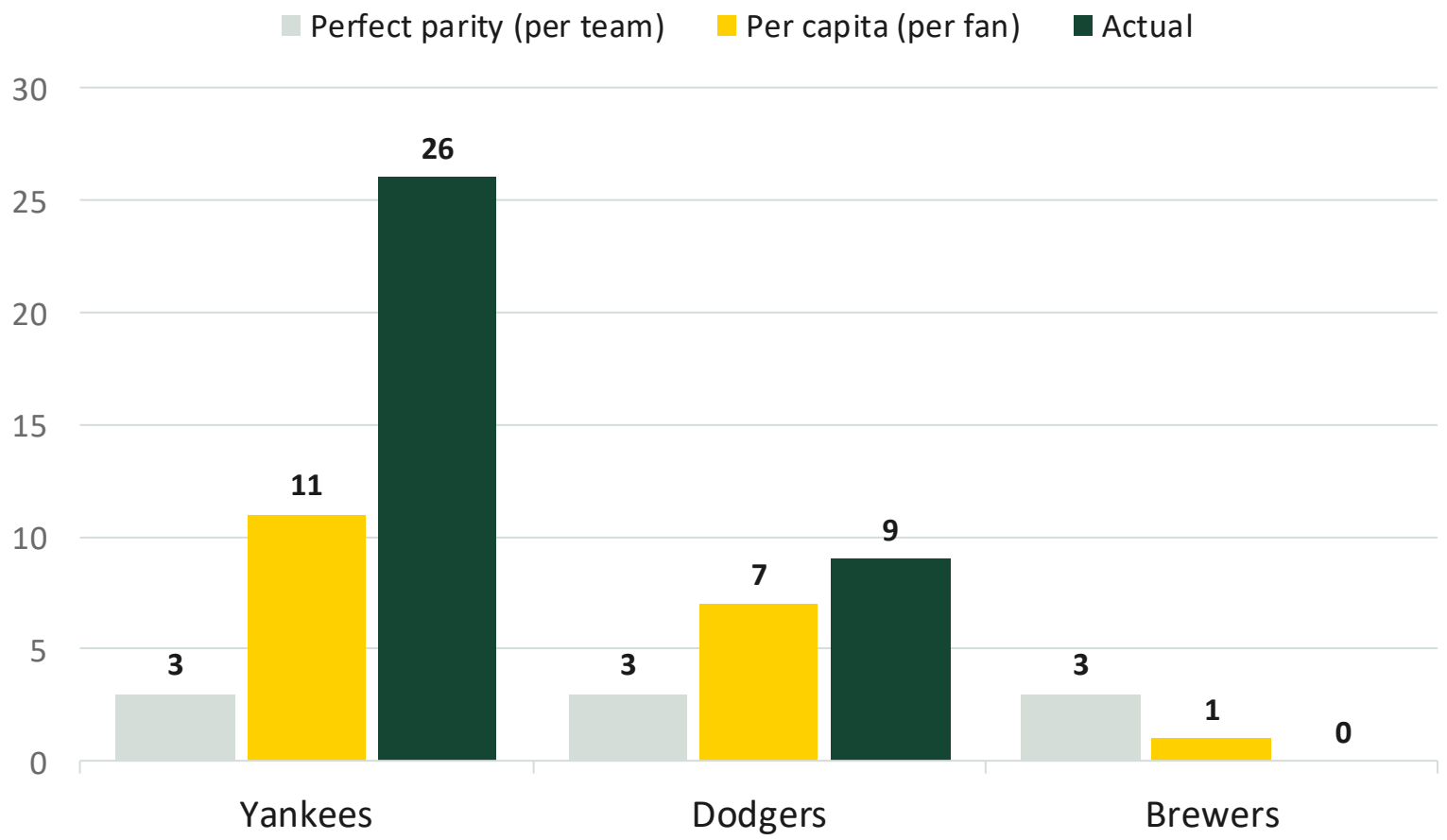
IF TITLES WERE ALLOCATED PER FAN INSTEAD

New York Yankees	9	one title every years
Los Angeles Dodgers	14	one title every years
Milwaukee Brewers	100	one title every years

DATA · WORLD SERIES, 1925–2025

Expected vs. Actual Championships

Titles each team would win over 100 World Series under two definitions of fairness, and what really happened.



THE YANKEES

26

titles, vs. 3 under parity and 11 per capita

They won more than twice what even a per-fan standard predicts. The Dodgers got close; the Brewers have never won.

THE MODEL

Why Big Markets Gain More from Winning

ASSUMPTIONS

1. **Two revenue sources**
   Each team earns revenue from gate sales and local media.
2. **Winning pays**
   Each team benefits from a higher win percentage.
3. **Diminishing marginal benefit**
   Extra wins add less and less revenue as win % approaches 100%.
4. **Bigger fan base**
   More wins create more revenue in large cities than in small ones.
5. **Same costs**
   Marginal cost of talent is equal for all teams.



EXAMPLE · THE MATH

Working Through the Numbers

MR is measured in $ millions per percentage point of win %. W = win % (in points).

Large market: $MR_L = 4.4 - 0.06W$
Small market: $MR_S = 3.2 - 0.06W$
Both teams: $MC = 0.8$

01 Large market: set MR = MC

$4.4 - 0.06W = 0.8 \rightarrow W = 60$

Wins 60% of its games (.600)

02 Small market: set MR = MC

$3.2 - 0.06W = 0.8 \rightarrow W = 40$

Wins 40% of its games (.400)

CHECK: WHAT IF BOTH TEAMS STOPPED AT .500?

Win %	MR large	MR small	MC
40	2.0	**0.8**	0.8
50	1.4	0.2	0.8
60	**0.8**	−0.4	0.8

At .500, the large-market team earns $1.4M from another point but pays only $0.8M, so it buys more talent.

Result: same costs, different markets, and a .600 vs. .400 league.

Section 3

Measuring Balance Within a Season

MEASURING BALANCE

Why Measure Competitive Balance?

The stakes are rising: as revenue sources shift and the sports industry grows, the financial consequences of unbalanced competition are becoming more severe.

TWO MAIN WAYS TO MEASURE IT

APPROACH 1

Team performance over a season

- Dispersion of winning percentage
- Within-season variation

APPROACH 2

Team performance across several seasons

- Concentration of championships
- Between-season variation

NEITHER IS BETTER

Use both for the full picture

- Fans and owners like tightly contested games.
- But fans also prefer lopsided wins over unexpected losses.

WITHIN-SEASON VARIATION

How Spread Out Are Winning Percentages?

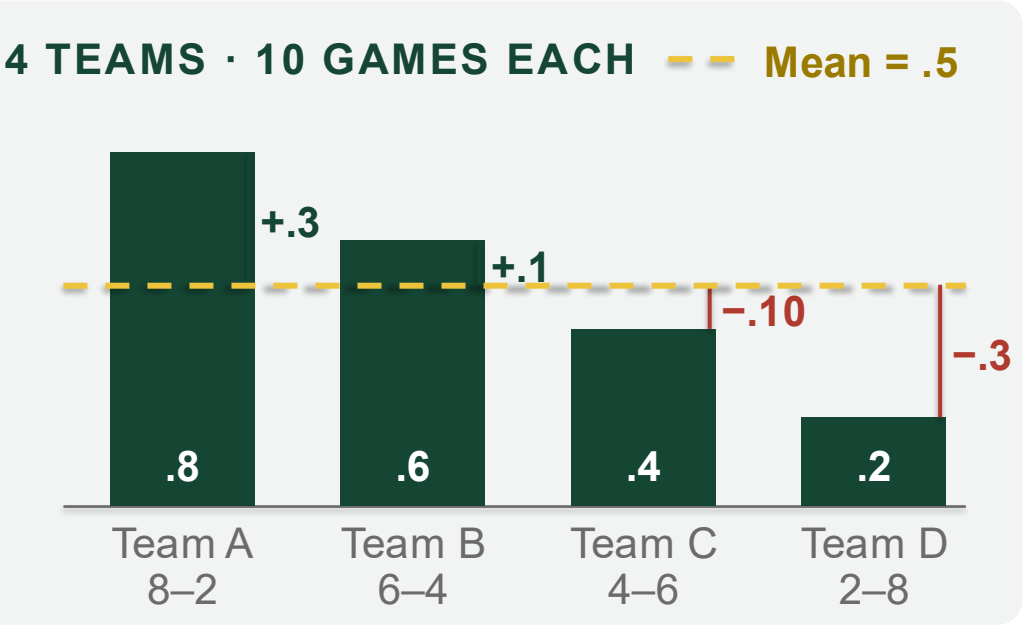
Within-season variation measures how even the competition is within a single season.

★ DEFINITION

Standard deviation

the distance of the typical observation from the population mean.

In sports: "How uneven are wins across the league on average?"



1. **Find the mean**
   $(.8 + .6 + .4 + .2) / 4 = .5$
2. **Measure each distance**
   +.3, +.1, −.1, −.3. Averaging these gives 0…
3. **Square to remove the signs**
   $(.09 + .01 + .01 + .09) / 4 = .05$
4. **Take the square root**
   $\sqrt{.05} = .224$

WITHIN-SEASON VARIATION

The Standard Deviation Formula

$$\sigma_{w,t} = \sqrt{\frac{\sum_{i=1}^{N}\left(\mathrm{WPCT}_{i,t} - 0.500\right)^2}{N}}$$

$\sigma_{w,t}$	the standard deviation of winning percentages in season t
$\mathrm{WPCT}_{i,t}$	the winning percentage of team i in season t
0.5	the mean winning percentage in any league
N	the number of teams in the league

READING IT

- The larger the standard deviation, the greater the dispersion of winning percentages.
- A perfectly even season (every team .500) gives σ = 0.

EXAMPLE · THE MATH

Practice: A Five-Team League

5 teams play 20 games each and finish with 15, 12, 10, 8, and 5 wins.

Team	Wins	WPCT	WPCT − .500	(WPCT − .500)²
Team A	15	.75	+.25	.0625
Team B	12	.60	+.10	.0100
Team C	10	.50	0	0
Team D	8	.40	−.10	.0100
Team E	5	.25	−.25	.0625
Sum			**0**	**.1450**

1 **Average the squares**

$.1450 / 5 = .0290$

2 **Take the square root**

$\sqrt{.0290} = .170$

RESULT

σ = .170

Less spread out than our 4-team league (σ = .224).

EXAMPLE · WNBA

WNBA: 2015 vs. 2025

Same formula, two seasons. The standard deviation shows which league was more spread out.

2015 · 12 TEAMS · 34 GAMES

Team	W	L	WPCT
New York Liberty	23	11	.676
Minnesota Lynx	22	12	.647
Chicago Sky	21	13	.618
Indiana Fever	20	14	.588
Phoenix Mercury	20	14	.588
Washington Mystics	18	16	.529
Tulsa Shock	18	16	.529
Atlanta Dream	15	19	.441
Connecticut Sun	15	19	.441
Los Angeles Sparks	14	20	.412
Seattle Storm	10	24	.294
San Antonio Stars	8	26	.235
Mean			**.500**
Standard deviation			**.133**

2025 · 13 TEAMS · 44 GAMES

Team	W	L	WPCT
Minnesota Lynx	34	10	.773
Las Vegas Aces	30	14	.682
Atlanta Dream	30	14	.682
Phoenix Mercury	27	17	.614
New York Liberty	27	17	.614
Indiana Fever	24	20	.545
Seattle Storm	23	21	.523
Golden State Valkyries	23	21	.523
Los Angeles Sparks	21	23	.477
Washington Mystics	16	28	.364
Connecticut Sun	11	33	.250
Chicago Sky	10	34	.227
Dallas Wings	10	34	.227
Mean			**.500**
Standard deviation			**.175**

LIMITATION

Standard Deviation Depends on Season Length

SHORT SEASONS

Even if a league were perfectly balanced, luck alone could leave some teams with many more wins than others in a short season.

LONG SEASONS

As seasons get longer, lucky winning and losing streaks even out, so the standard deviation shrinks.

Standard Deviation Across Leagues (2024-2025)

League	Season	Games	Actual σ
MLB	2024	162	**.076**
NFL	2024	17	**.215**
NBA	2024–25	82	**.160**
WNBA	2024	40	**.199**
NHL	2024–25	82	**.098**
MLS	2024	34	**.121**
EPL	2024–25	38	**.163**
La Liga	2024–25	38	**.153**

THE FIX

The Idealized Standard Deviation

To compare long and short seasons, compare each league to a perfectly balanced version of itself.

STEP 1 · THE BENCHMARK

$$\sigma_{ID} = \frac{0.5}{\sqrt{G}}$$

The SD we would expect if every team were equally good and each game were a coin flip. G = games per team.

STEP 2 · THE RATIO

$$R = \frac{\sigma_{w,t}}{\sigma_{ID}}$$

How many times larger the actual SD is than the ideal SD.

Reading the ratio: R = 1 means the league is as balanced as pure chance. The larger R is, the more out of balance the league is.

EXAMPLE · CALCULATION

NFL vs. MLB: Who Is Really More Balanced?

NFL · 2024 · 17 GAMES

Actual σ	.215
Ideal σ	$0.5 / \sqrt{17} = .121$
Ratio R	**.215 / .121 = 1.77**

MLB · 2024 · 162 GAMES

Actual σ	.076
Ideal σ	$0.5 / \sqrt{162} = .039$
Ratio R	**.076 / .039 = 1.93**

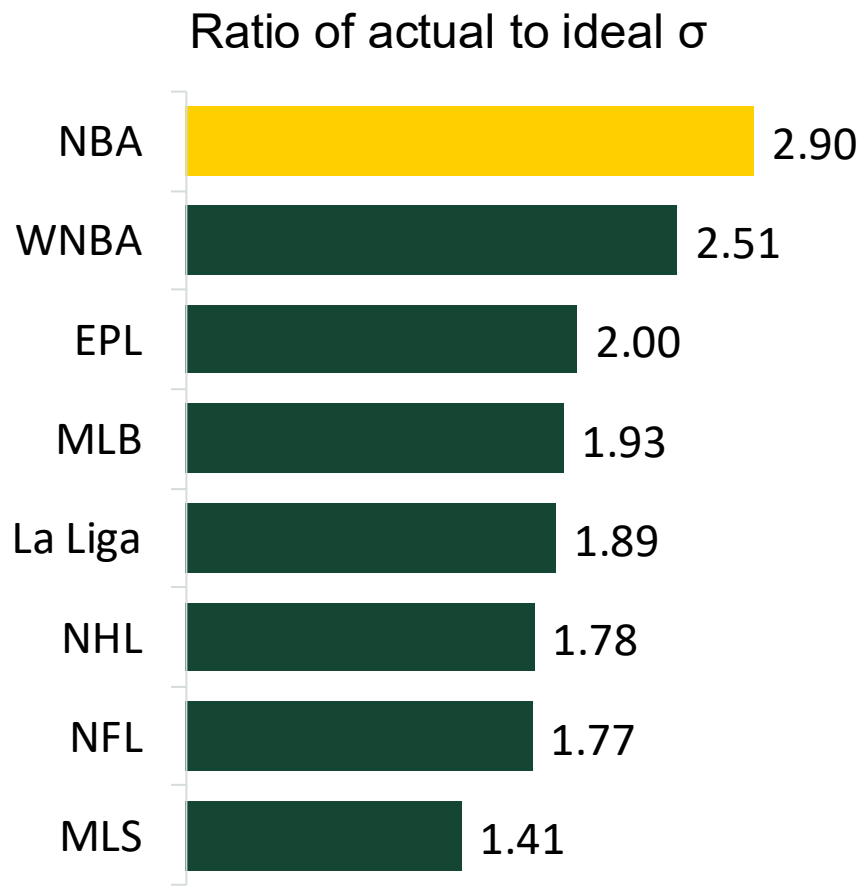
The twist: the NFL's raw σ is almost 3× MLB's, but once we adjust for season length, MLB (R = 1.93) is slightly less balanced than the NFL (R = 1.77).

DATA · DISPERSION OF WINNING PERCENTAGE

Which League Is Most Out of Balance?

Standard Deviation Across Leagues (2024-2025)

League	Season	Games	Actual σ	Ideal σ	Ratio
MLB	2024	162	.076	.039	**1.93**
NFL	2024	17	.215	.121	**1.77**
NBA	2024–25	82	.160	.055	**2.90**
WNBA	2024	40	.199	.079	**2.51**
NHL	2024–25	82	.098	.055	**1.78**
MLS	2024	34	.121	.086	**1.41**
EPL	2024–25	38	.163	.081	**2.00**
La Liga	2024–25	38	.153	.081	**1.89**



EXPLAINING THE NBA

Why Is the NBA So Unbalanced?

Berri, Schmidt, and Brook argue it comes down to one thing: height.

01

IN MOST SPORTS

You can train your way up

Skill, strength, and conditioning can be built through practice.

02

IN BASKETBALL

You can't train height

The pool of players who are extremely gifted and extremely tall is very small.

03

SMALL ROSTERS

One player matters more

With only five players on the court, a single star is a big share of the team.

NBA 2024–25

2.90

ratio of actual to ideal σ, the highest of the eight leagues

The result: a team lucky enough to land a player who checks both boxes (tall and gifted) gains an advantage that rivals can't easily match.

Section 4

Measuring Balance Across Seasons

BETWEEN-SEASON VARIATION

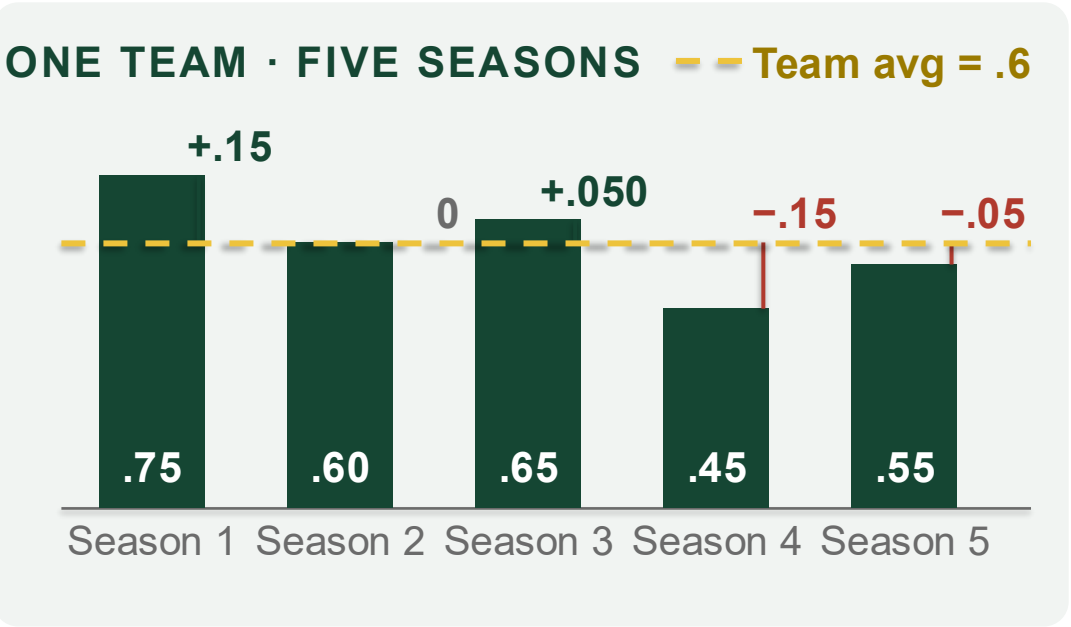
Does the Same Team Keep Winning?

Between-season variation, also called turnover or team-specific variation

★ DEFINITION

Between-season variation

how much a single team's winning percentage changes from one season to the next.



1. **Find the team's own average**
   (.75 + .60 + .65 + .45 + .55) / 5 = .6 Not .5 this time!
2. **Measure each season's distance**
   +.15, 0, +.05, −.15, −.05. Averaging these gives 0 again!
3. **Square to remove the signs**
   $(.0225 + 0 + .0025 + .0225 + .0025) / 5 = .01$
4. **Take the square root**
   $\sqrt{.01} = .1$

BETWEEN-SEASON VARIATION

The Between-Season Formula

$$\sigma_{w,i} = \sqrt{\frac{\sum_{t=1}^{T}\left(\mathrm{WPCT}_{i,t} - \overline{\mathrm{WPCT}}_{i}\right)^2}{T}}$$

$\sigma_{w,i}$	the SD of winning percentages for team i
$\mathrm{WPCT}_{i,t}$	team i's winning percentage in season t
$\overline{\mathrm{WPCT}}_{i}$	team i's average winning percentage over the T seasons
T	the total number of seasons

READING IT

- The larger σ is, the more a team's fortunes change from year to year.
- If a team finished with the same record every year, σ = 0.

EXAMPLE · THE MATH

Two Teams, Five Seasons

Both teams average .500, but their fans have very different experiences.

Season	Team A	A − .500	(A − .500)²	Team B
Season 1	.600	+.100	.010	.500
Season 2	.500	0	0	.500
Season 3	.700	+.200	.040	.500
Season 4	.400	−.100	.010	.500
Season 5	.300	−.200	.040	.500
Sum		**0**	**.100**	

TEAM A · UP AND DOWN

$$\sqrt{(.100 / 5)} = .141$$

Its record typically moves 14 points away from its average.

TEAM B · STEADY

$$\sigma = 0$$

The same .500 record every year: no variation at all.

LIMITATION

What Counts as “Balanced” Across Seasons?

Between-season variation has no standard benchmark to compare against.

We don’t know whether fans or owners care how much a team’s winning percentage varies across years, or how its position changes relative to other teams.

WOULD PATRIOTS FANS BE HAPPIER WITH…

OPTION A

Always good, never the best

A strong record every year, but finish second to the Jets every time.

Low variation.

or

OPTION B

Boom or bust

Winning the Lombardi Trophy once every few years, and finishing last in the others.

High variation.

CONCENTRATION OF CHAMPIONSHIPS

Who Wins the Title?

Another approach looks only at which teams win successive championships.

ONE EXTREME

The same team wins almost every year

- Picture the Canadiens winning the Stanley Cup nearly every season.
- The outcome is rarely in doubt.
- Other teams' winning percentages may not matter much.

THE OTHER EXTREME

A different team wins every year

- One can argue competition is balanced…
- …regardless of how uneven the regular-season records are.

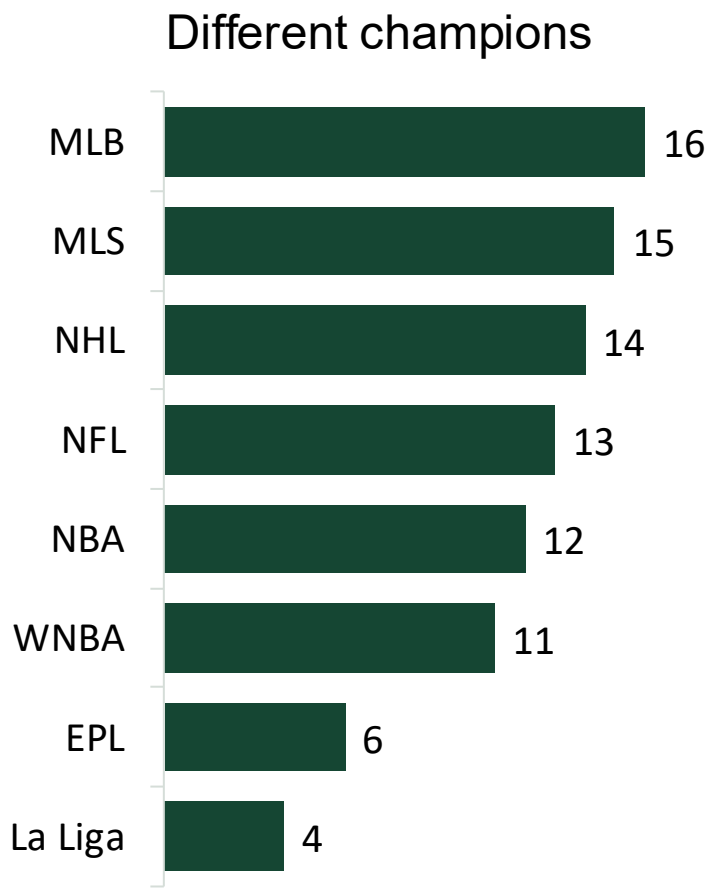
Similar to between-season variation, but it focuses only on championships rather than every team's record.

DATA · CHAMPIONSHIPS, 2000–2025

How Many Different Champions?

Championships Across Leagues (2000-2025)

League	Different champions	Most titles
NFL	**13**	Patriots (6), Chiefs (3), Five (2), Six (1)
NBA	**12**	Lakers (5), Spurs/Warriors (4), Heat (3), Celtics (2), Seven (1)
MLB	**16**	Red Sox (4), Dodgers/Giants (3), Two (2), Eleven (1)
NHL	**14**	Blackhawks/Penguins/Lightning (3), Five (2), Six teams (1)
WNBA	**11**	Storm/Lynx (4), Aces/Sparks/Mercury/Shock (3), Five (1)
MLS	**15**	LA (6), Columbus (3), Three teams (2), Ten (1)
EPL	**6**	Man City (8), Man Uni (7), Chelsea (5), Arsenal (2), Liverpool (2), Leicester (1)
La Liga	**4**	Barcelona (12), Real Madrid (9), Atl. Madrid(2), Valencia (2)



STATISTICAL MEASURES · 1 OF 2

The n-Firm Concentration Ratio

Counting champions is a start. Two more nuanced measures borrow tools from industrial economics.

★ DEFINITION

n-firm concentration ratio

the percentage of championships won over a period by the n most successful teams.

n can take on any value.

EXAMPLE · 20 CHAMPIONSHIPS

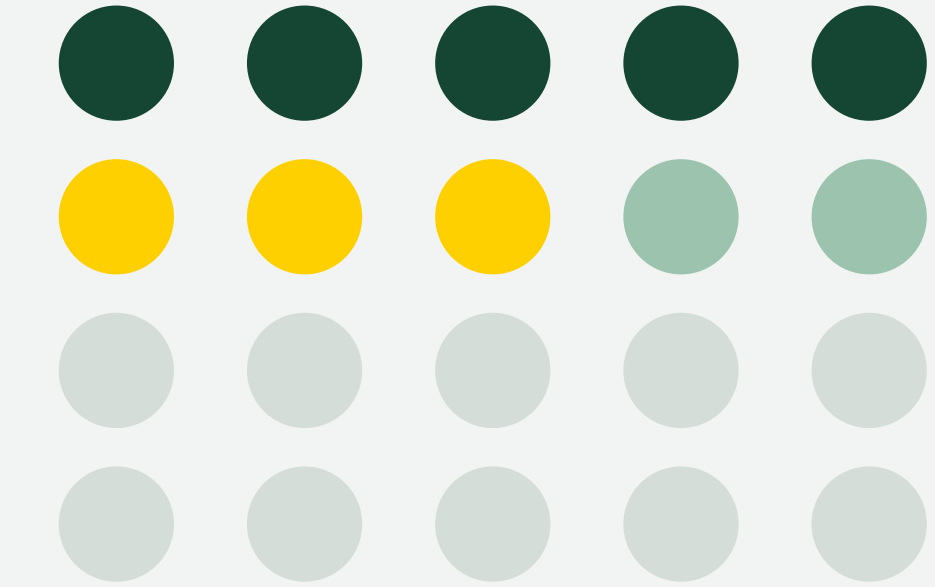
1-firm ratio

Top team won $5 \rightarrow 5 / 20 = .25$

3-firm ratio

Top three won $5 + 3 + 2 \rightarrow 10 / 20 = .50$

20 TITLES, ONE DOT EACH



STATISTICAL MEASURES · 2 OF 2

The Herfindahl-Hirschman Index (HHI)

A more complete measure that uses every team's share of titles, not just the top n.

$$HHI = \Sigma_i \left(c_i / T \right)^2$$

c_i	the number of championships team i won in the period
T	the total number of years (titles) in the period
Σ	add up the squared shares across all teams

HHI = 1: one team wins every title (perfect imbalance).

HHI = 1/T: a different team wins every year (the lowest possible).

EXAMPLE · 4 TEAMS, 10 SEASONS

Team	Titles	Share	Share²
Team A	5	5/10	.25
Team B	3	3/10	.09
Team C	2	2/10	.04
Team D	0	0/10	.00
HHI	**10**		**.38**

Here the lowest possible HHI is 1/10 = .10, so .38 shows a lot of concentration.

DATA · CHAMPIONSHIPS, 2000–2025

Concentration of Championships by League

Championships Across Leagues (2000-2025)

League	Titles	Champions	1-firm	3-firm	Min HHI	HHI
NFL	25	13	.24	.440	.040	**.114**
NBA	25	12	.20	.520	.040	**.123**
MLB	25	16	.16	.400	.040	**.085**
NHL	25	14	.12	.360	.040	**.085**
WNBA	25	11	.16	.440	.040	**.117**
MLS	25	15	.24	.440	.040	**.107**
EPL	25	6	.32	.800	.040	**.235**
La Liga	25	4	.48	.920	.040	**.373**



Section 5

Attempts to Alter Competitive Balance

POLICY TOOLS

Three Ways Leagues Promote Balance

Every major North American sports league has developed policies to promote competitive balance.

1

Revenue sharing

Limits the advantage of large-market teams.

SHRINKS THE REVENUE GAP

2

Salary caps & luxury taxes

Also limit large-market teams and impose costs on those that exceed the limits.

LIMITS SPENDING ON TALENT

3

Reverse-order drafts

Equalize competition by directing new talent to the weakest teams.

REDIRECTS INCOMING TALENT

REVENUE SHARING

How Each League Shares Revenue

As we saw in the league structure lecture, revenue sharing equalizes team profits. Each league does it differently.

NFL

EXTENSIVE

- Mainly through national broadcast revenue
- Gate revenue split 66/34

NBA

DIVERSE

- National TV and sponsorship revenue
- About 50% of team revenue goes to a common pool

MLB

DIVERSE, BUT LESS

- 48% of revenue to a common pool
- A portion of national media revenue
- Distributed based on market size

NHL

COMPLEX FORMULA

- Transfers from high-performing teams to low-performing teams

The key question: revenue sharing equalizes profits, but does it equalize wins?

REVENUE SHARING

Does Revenue Sharing Improve Balance?

The answer depends on what owners are trying to maximize.

PROFIT-MAXIMIZING OWNERS

No effect on balance

- Every team receives the same amount from the pool, whether it wins or loses.
- Sharing shrinks every team's payoff from winning, so the relative incentive to buy talent is unchanged.

WIN-MAXIMIZING OWNERS

Balance improves

- Small-market owners who want to win spend their extra revenue on talent.
- Money flows from large markets to small ones, and so do wins.

Recall our model: if both MR curves shrink by the same share, large-market teams still buy more wins than small-market teams.

REVENUE SHARING

A Paradox for League Profits

From the league's point of view, revenue sharing creates an awkward incentive.

01

Big markets win more

The central pool grows larger when large-market teams win more often.

→

02

The pool grows

A larger central pool means larger payments to every team.

→

03

All teams benefit

All teams have a financial interest in the success of large-market teams.

The problem: a policy meant to help small markets compete gives every owner, even small-market ones, a reason to want the Yankees to win.

SALARY CAPS

Salary Caps and Salary Floors

Limits on spending work alongside revenue sharing.

★ DEFINITION

Salary cap

a limit on how much a team can pay its players.

★ DEFINITION

Salary floor

the minimum a team has to spend on players.

THE CAP

Prevents any one team from collecting all the best talent.

THE FLOOR

Encourages low-spending teams to invest in talent.

Together, they squeeze payrolls toward the middle to encourage competitive balance. Of the major leagues, only MLB has no salary cap.

SALARY CAPS

Hard Caps vs. Soft Caps

The types of salary caps vary across leagues.

★ DEFINITION

Hard cap

an absolute limit with very few exceptions.

NFL NHL WNBA NWSL

★ DEFINITION

Soft cap

a limit with significant exceptions to the restrictions the cap imposes.

NBA MLS

SOFT CAPS IN PRACTICE

Exceptions to the Rule

NBA · THREE EXCEPTIONS

01 Mid-level exception
Each team can sign one player at about the average NBA salary, even if it puts the team over the cap.

02 Rookie exception
A team can sign a drafted rookie to his first contract, even if it puts the team over the cap.

03 Larry Bird exception
A team can re-sign players already on its roster, even if it puts the team over the cap.

The NBA also caps individual salaries according to a player's years of experience.

MLS · THE "BECKHAM RULE"

3

designated players per team

Each team can sign up to three designated players and pay them any amount, outside the normal limits of the cap.

LUXURY TAXES

Luxury Taxes: Paying to Go Over

★ DEFINITION

Luxury tax

a surcharge on teams whose payroll exceeds a certain amount. Most prevalent in the NBA and MLB.

MLB · THE COMPETITIVE BALANCE TAX

The rate rises for repeat offenders, and rises further as the excess grows.

20%	30%	50%
1st year over	2nd straight year	3rd+ straight year

WHERE DOES THE MONEY GO?

NBA Redistributed to the teams that did not pay the tax.

MLB Goes to player benefits and the Industry Growth Fund, not to other teams.

REVERSE-ORDER DRAFT

The Reverse-Order Draft

01 **Worst picks first**
The team with the worst record picks first, the second worst picks next, and so on.

02 **Best picks last**
The champion picks at the end of each round.

03 **Everyone else is free**
Players not chosen in the draft are free to sign with any team.

ORIGIN · NFL, 1934–36

A bidding war

In 1934, the Brooklyn Dodgers and Philadelphia Eagles fought over college star Stan Kostka, who signed for $5,000 ($125million today).

The fix: Eagles owner Bert Bell proposed a draft the next year. The first NFL draft was held in 1936.

REVERSE-ORDER DRAFT

Does the Draft Promote Balance?

In theory, yes: the best new talent goes to the worst teams. In practice, it depends on the teams.

WHEN IT WORKS

Win maximizers who can develop talent

- Teams must want to win, and be able to turn picks into good players.
- Even low draft picks can succeed if teams are good at finding and developing talent.

WHEN IT BACKFIRES

Rewarding failure

- Because the worst record earns the best pick, losing has a payoff.
- Teams may tank: lose on purpose to move up the draft order.

The irony: a policy designed to promote balance can worsen it if it encourages teams to stop trying to win.

BONUS · BALANCE THROUGH SCHEDULING

The NFL's Parity Schedule

Each team's schedule is determined in part by how it finished the previous season.

A TEAM'S 17 GAMES



6 · Division rivals
3 teams, twice each

4 · Same conference
All 4 teams in another division

4 · Other conference
All 4 teams in one division

3 · Same place
Based on last season

14 games: set by rotation, independent of last season

3 games: set by record

HOW THE LAST THREE WORK

A 1st-place team plays the 1st-place teams from the divisions it isn't otherwise scheduled to face. 2nd place plays 2nd place, and so on.

The effect: last year's best teams get a tougher schedule, and the worst teams get an easier one.