

HAVE NBA TEAMS IMPROVED IN CHOOSING DRAFT PICKS?

Examining Selection Accuracy in the Age of Advanced Sports Analytics



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QUESTION FORMULATION

Throughout the entire modern era of basketball which started in 1979, NBA teams have constantly sought out better ways to evaluate player performance. Driven by baseball's "Moneyball" movement, NBA teams began implementing advanced sports analytics in the early 2000s to optimize their draft selections and team rosters. **In the age of advanced sports analytics, have NBA teams improved their draft pick selection accuracy?**



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METRIC SELECTION

All-in-One Performance Metrics Considered

BPM **RPM** **PER** **EPM**
 Box Plus/Minus Real Plus/Minus Player Efficiency Rating Estimated Plus/Minus

Why BPM?

- BPM accurately represents a player's performance and is available for 1979-2019.
- BPM incorporates box score performance, team performance, and player position to rate a player's total contribution while on the court.



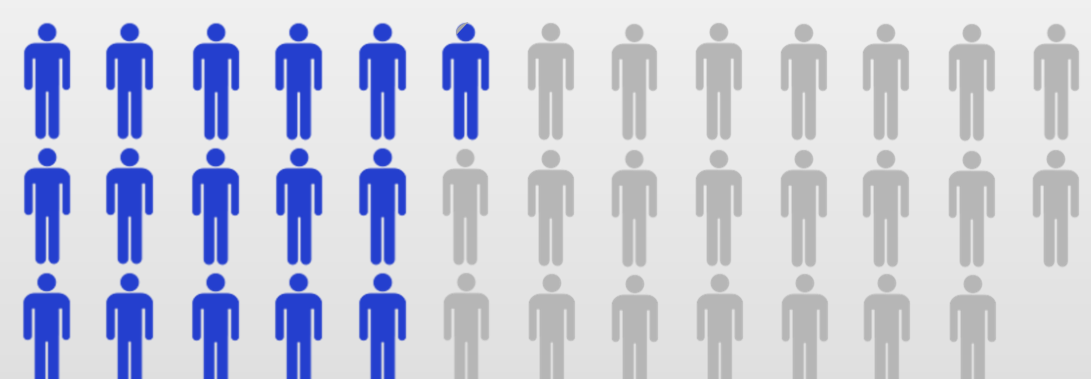
3

DATA FILTRATION

Steps to Ensure Impartial Player Comparison

Filtered out players with less than a full season (82 Career Games)

Each person represents 100 NBA drafted players (3,802 total players)



♀ = player with 82 or more career games (1,593 total players) ♂ = player with less than 82 career games (2,209 total players)

Eliminating players introduced unequal group sizes across draft years. Implemented Linear Regression to compensate for variability in group sizes of different draft years. Used the Pearson Correlation Coefficient (r) to objectively compare draft years.



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ACCURACY MEASUREMENT

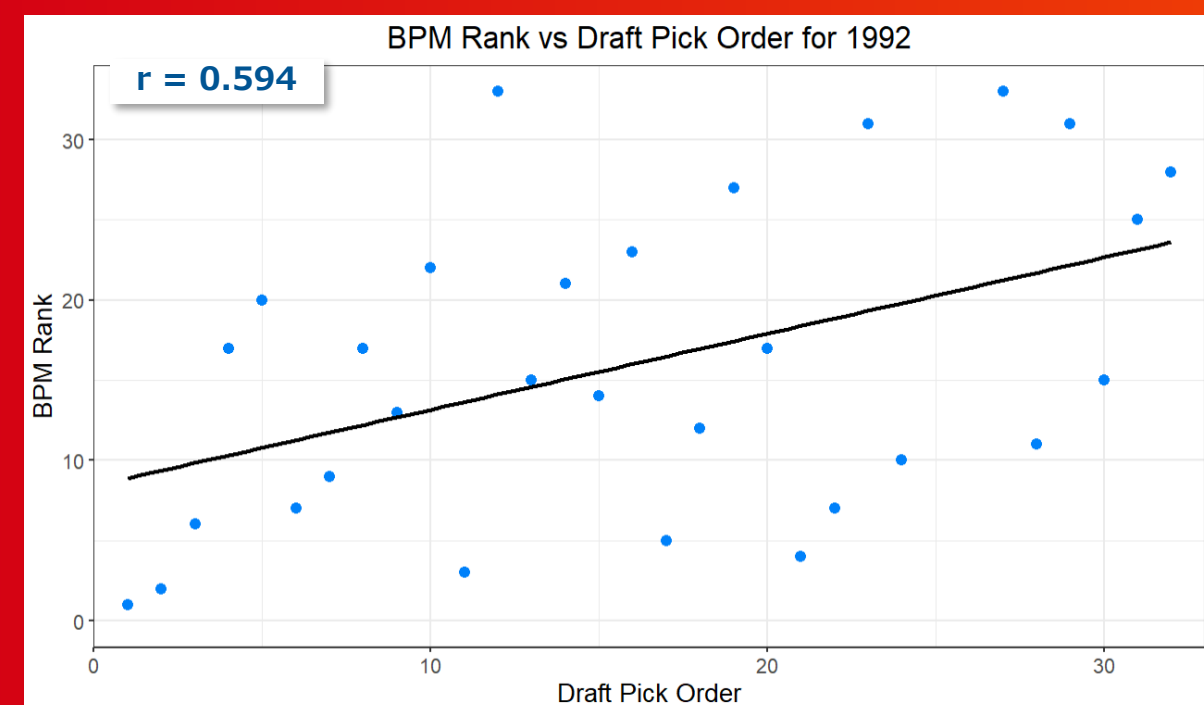
BPM Rank versus Draft Position

The closer the draft pick order aligns to the ranking of the players' career BPMs, the more accurate the draft year. The Correlation Coefficient of the BPM rank versus the draft pick order measures each year's accuracy.

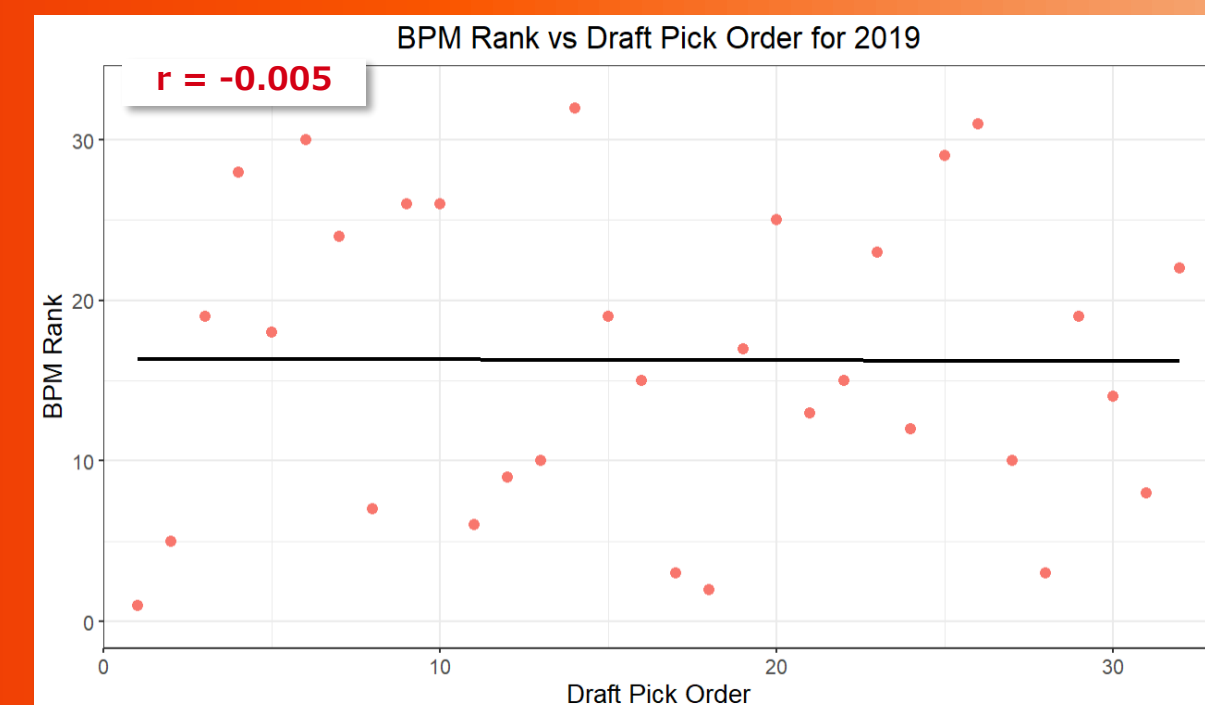
5

ACCURACY TREND

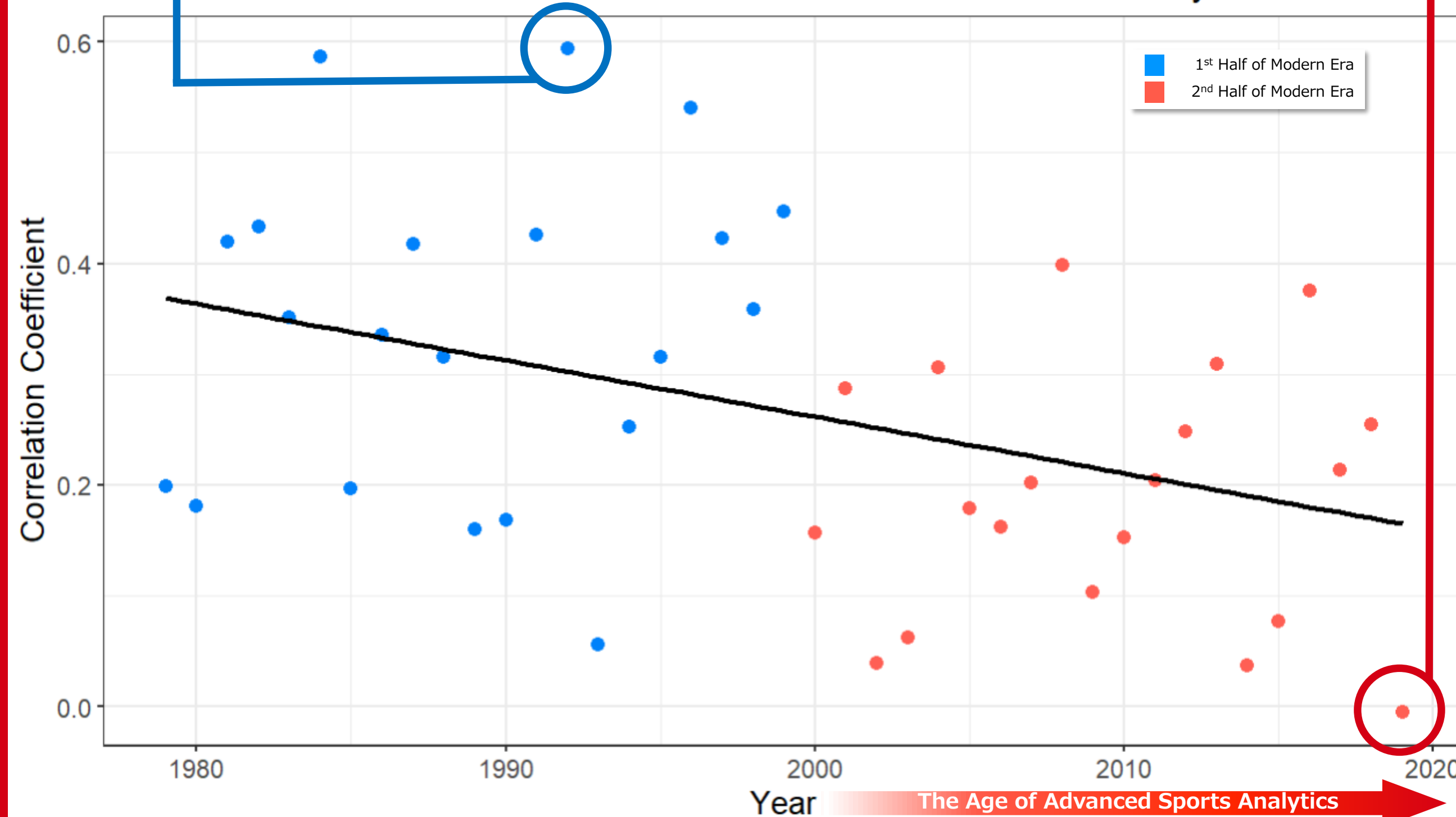
Best Year = 1992



Worst Year = 2019



BPM Rank vs Draft Pick Order Correlation Coefficient by Year

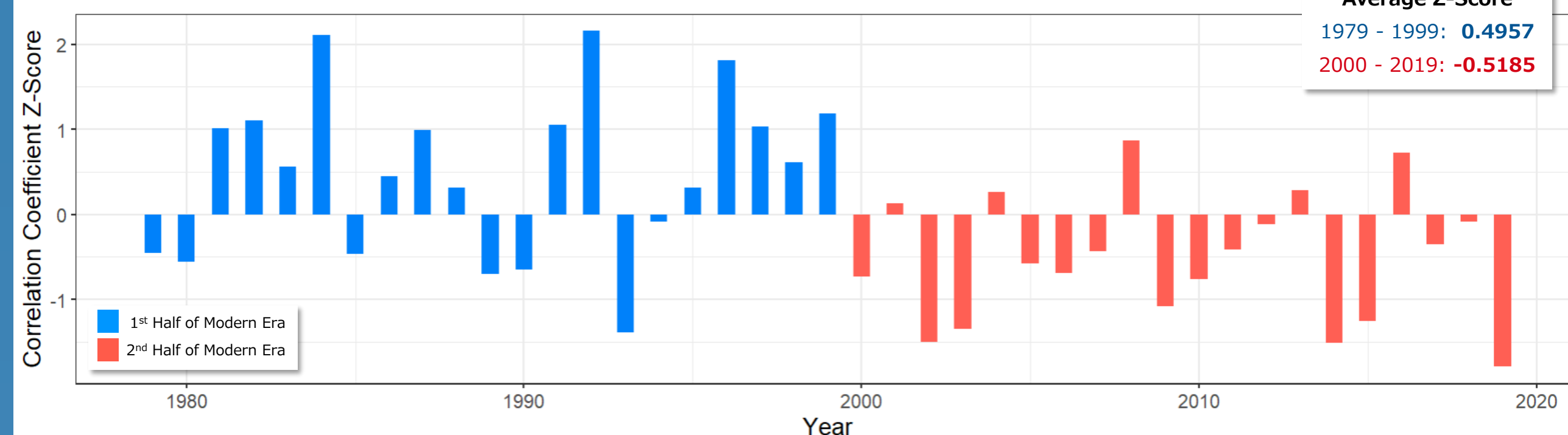


The declining correlation between BPM rank and player pick order indicates that NBA teams have gotten worse at drafting the better players earlier in the draft.

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ACCURACY BY YEAR

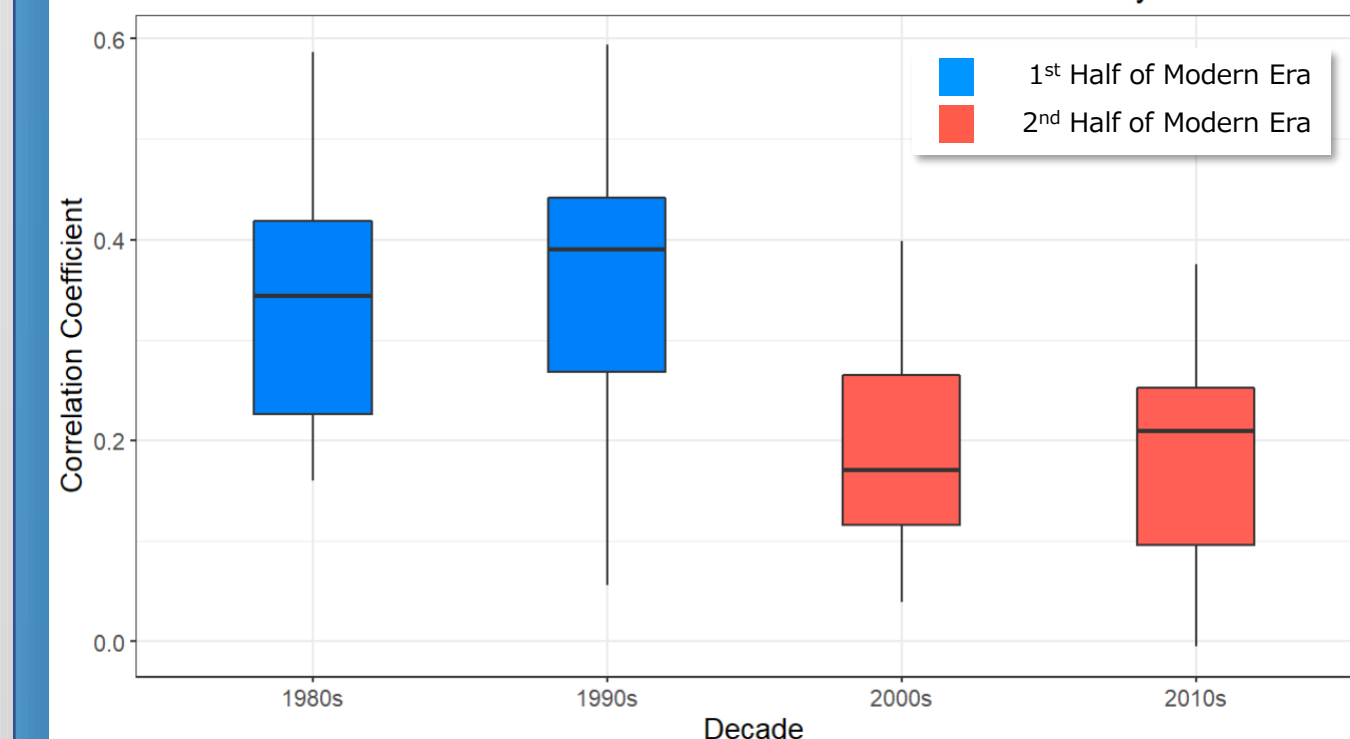
Normalized Correlation Coefficients for Years of NBA Draft



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ACCURACY BY DECADE

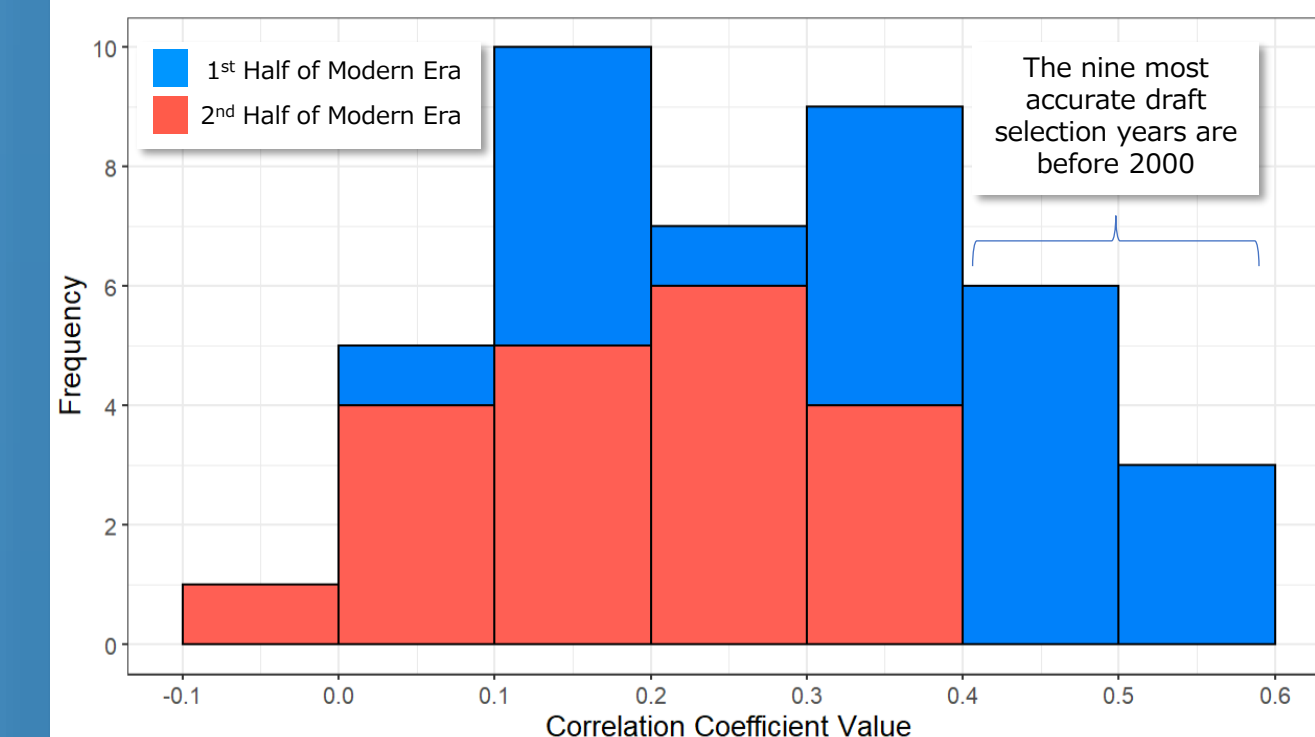
Correlation Coefficients for BPM Rank vs Draft Pick Order by Decade



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ACCURACY FREQUENCY

Correlation Coefficient Values for BPM Rank vs Draft Pick Order



CONCLUSION



With the NBA's rapid adoption of advanced sports analytics in the early 2000s, the expectation is that draft pick accuracy for the second half of the modern era of basketball would improve compared to the first half.

However, the evidence indicates that NBA teams have become worse at selecting the best players earlier in the draft since 2000.