THE DRAFTING DYNASTY :

WHICH NBA FRANCHISE DOMINATES THE DRAFT?

Wharton Moneyball Academy Presentation By:

Vik Dandapani, Pranav Batra, Ben Wolf, Alex Min, and Juju Zhao

DEFYING EXPECTATIONS: NIKOLA JOKIC

Nikola Jokic PF - Serbia

PART 1: QUANTIFYING DRAFT PICK VALUE

How valuable exactly was Jokic's selection at 41?

What are other Jokic-like picks are across modern NBA history?

CHOOSING OUR ADVANCED STAT

Win Shares

- A metric to estimate the number of wins a player *directly* contributes to their team over the course of the entire season

How to Calculate CAWS

- Calculate individual WS for each season
  - Offensive and Defensive

- Add WS values from each season to find career WS

- Divide career win shares by seasons played to get Career Average Win Shares

# STANDARDIZING WIN SHARES RELATIVE TO DRAFT CLASS

- Most models evaluate relative to draft position, but you can only draft who is available

- Want to evaluate teams' drafting relative to who they can pick

- Standardize average WS/season within draft classes
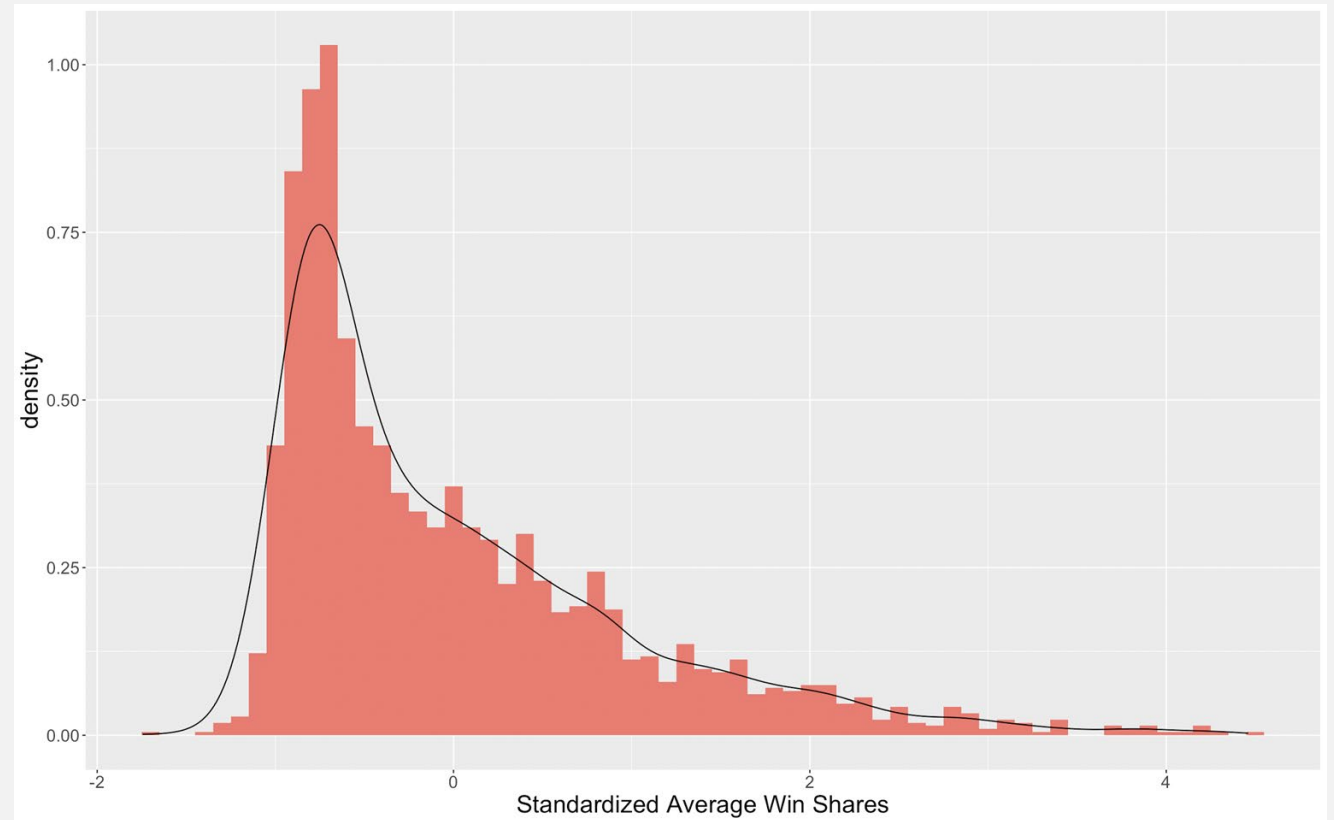

Chris Paul 4.46 Z-Score

ADJUSTING PICK VALUE FOR PICK POSITION

- How players out/under perform expected results given draft position

- Higher expectations usually indicative of a better player and vice versa
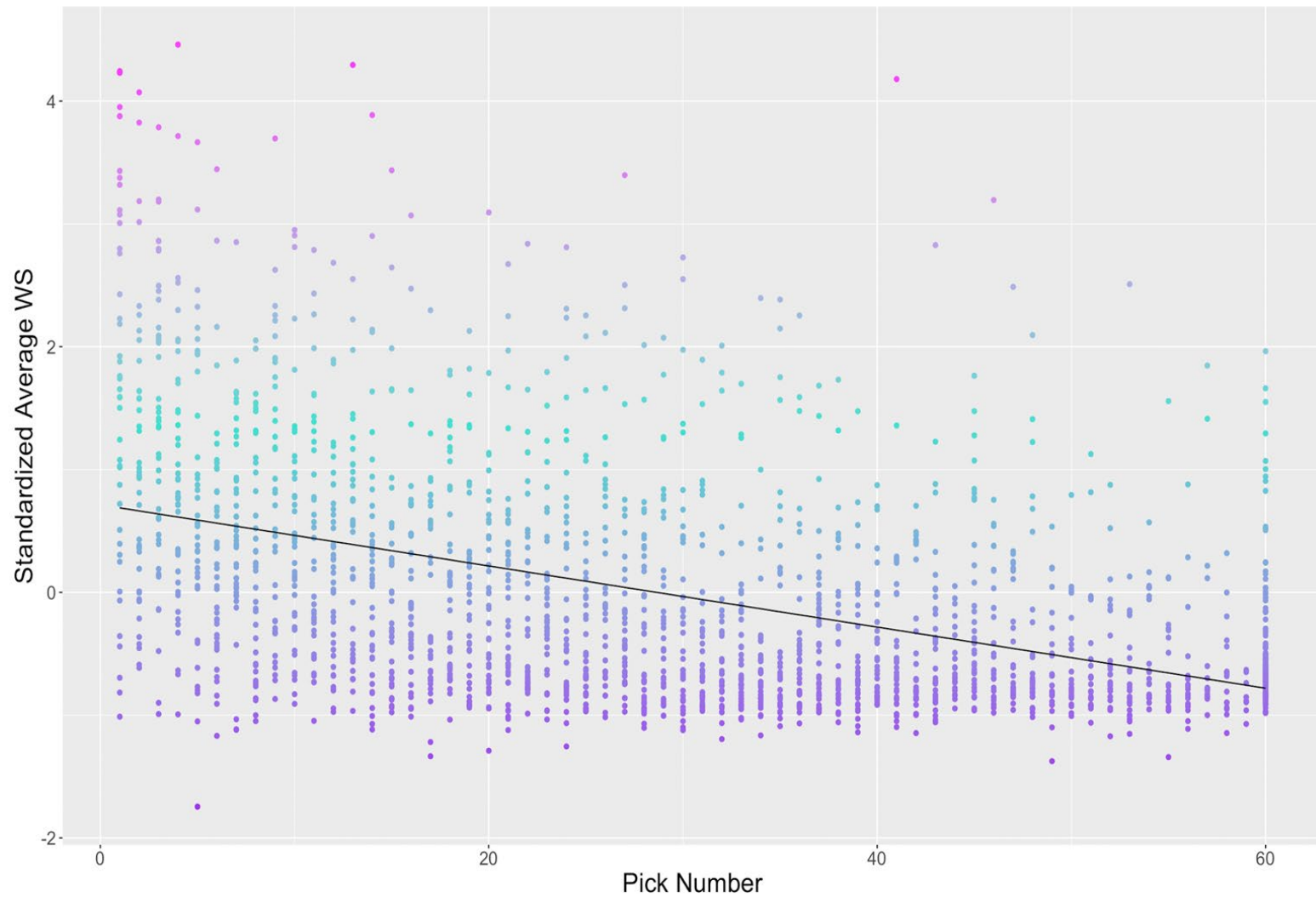
ADJUSTING FOR DRAFT CLASS STRENGTH: S.O.C.R.

- Discrepancies in average player value of each draft must be accounted for

- Calculated the average win shares per draft class from the average win share of each player

- Created ranking system by sorting classes into ten bins
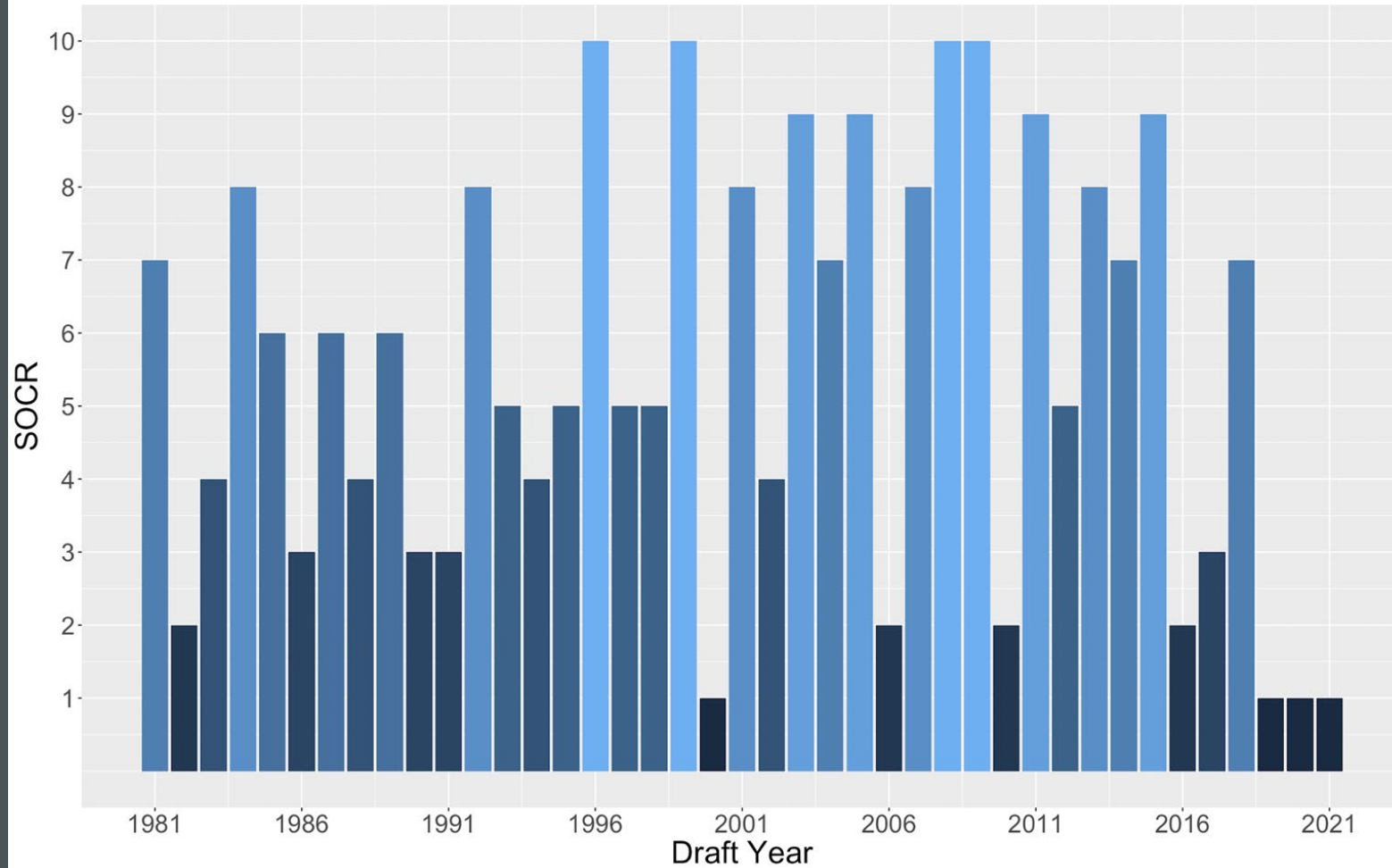
CREATING THE FINAL FORMULA

- *If* Standardized Average Win Shares < 0
  - JOKIC = Standardized Avg Win Shares * 1/(Pick Number) * 0.004358 * SOCR

≠
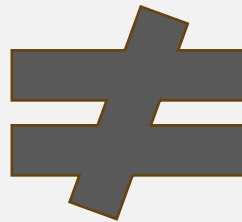
- *If* Standardized Average Win Shares > 0
  - JOKIC = Standardized Avg Win Shares * 0.0126193 * Pick Number * 0.004358 * SOCR

*From Left: Darko Milicic, Lebron James

BEST AND WORST PICKS ACCORDING TO OUR METRIC

BEST

1. Nikola Jokic (41, 2014, 6.59)
2. Manu Ginobili (57, 1999, 5.78)
3. Marc Gasol (48, 2007, 4.42)
4. DeAndre Jordan (35, 2008, 4.13)
5. Jimmy Butler (30, 2011, 4.04)

WORST

1. Anthony Bennett (1, 2013, -2.84)
2. Michael Olowokandi (1, 1998, -1.52)
3. Hasheem Thabeet (2, 2009, -1.34)
4. Greg Oden (1, 2007, -1.24)
5. Darko Milicic (2, 2003, -1.15)

*Name (pick, year, metric score)

AFTER ALL OF THIS, WE CAN NAME OUR FINAL METRIC...

THE "J.O.K.I.C." METRIC

J– Judging

O – Outstanding

K – Knowledge

I – In

C - (Draft) Choice

PART II: IDENTIFYING THE BEST DRAFTINGFRANCHISES

Have teams consistently found value in the draft?

Have the best - drafting teams fluctuated across decades?

Where do the best - drafting teams according to the JOKIC metric usually make their picks?

THE FIVE BEST DRAFTING TEAMS
ACCORDING TO THE J.O.K.I.C. METRIC

1.

2.

3.

4.

5.

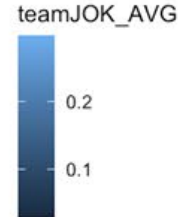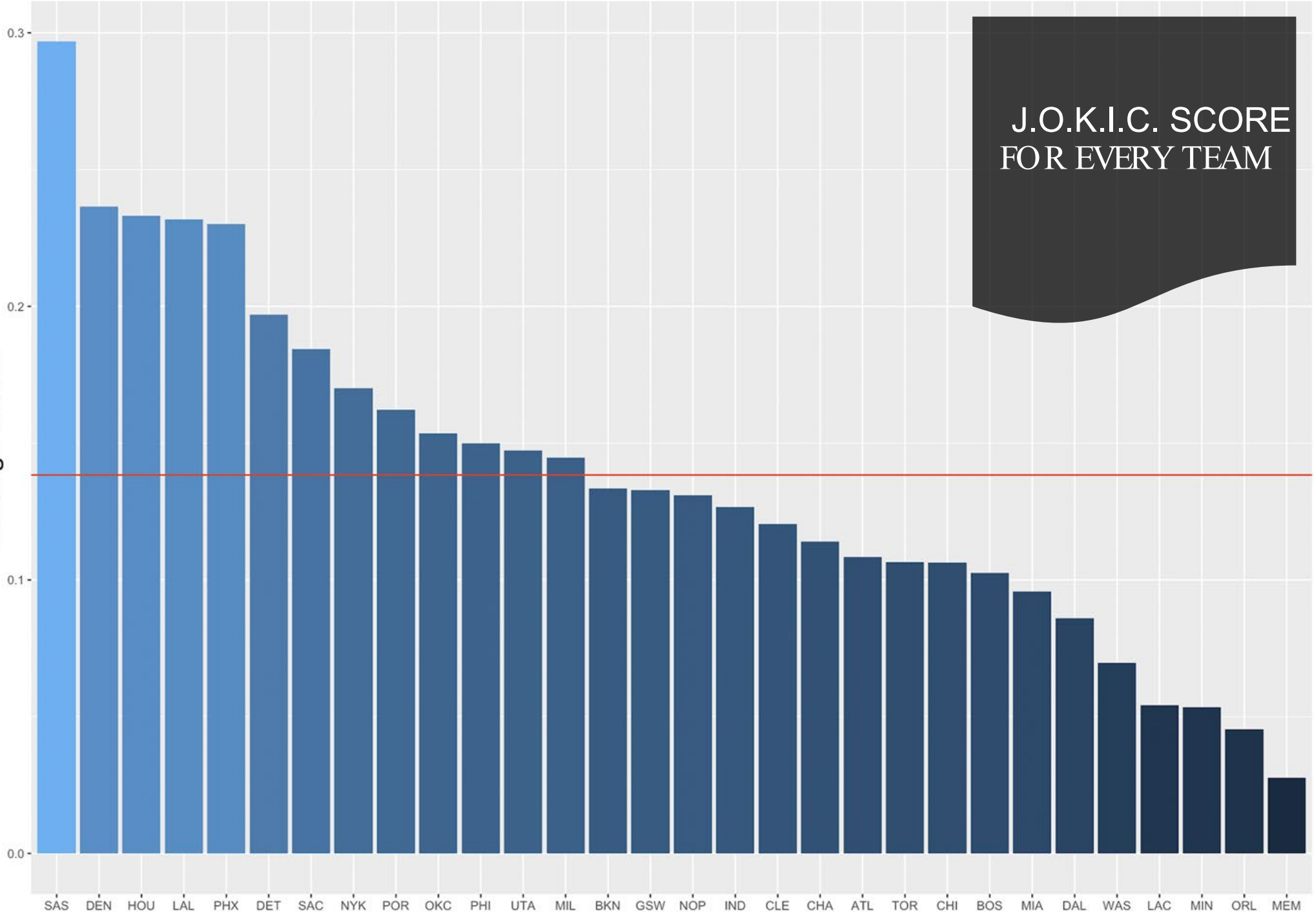2.48 Z-Score

1.54 Z-Score

1.48 Z-Score

1.46 Z-Score

1.43 Z-Score

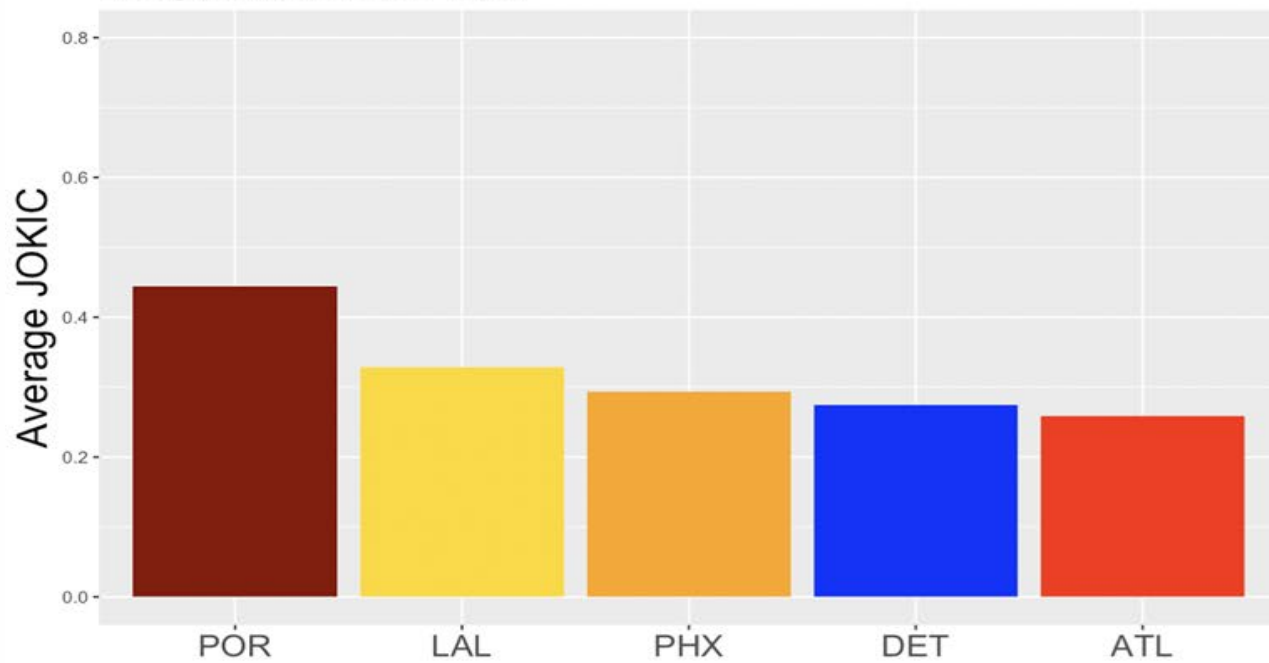*According to the J.O.K.I.C. metric

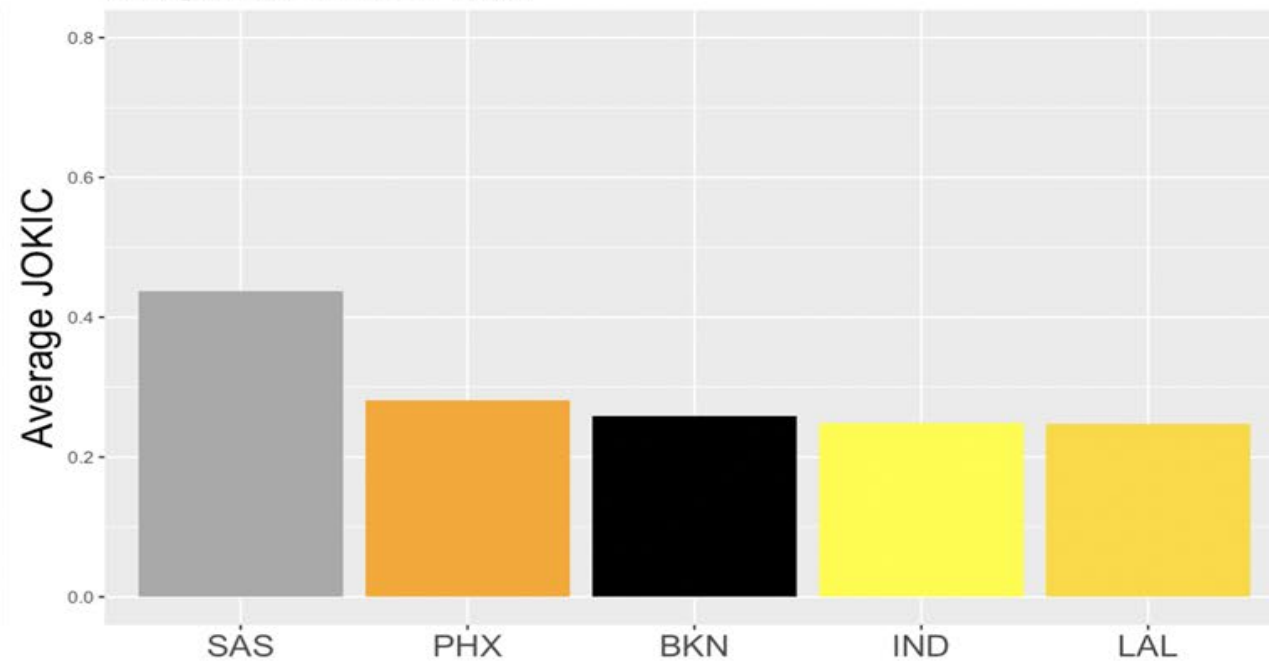J.O.K.I.C. SCORE FOR EVERY TEAM

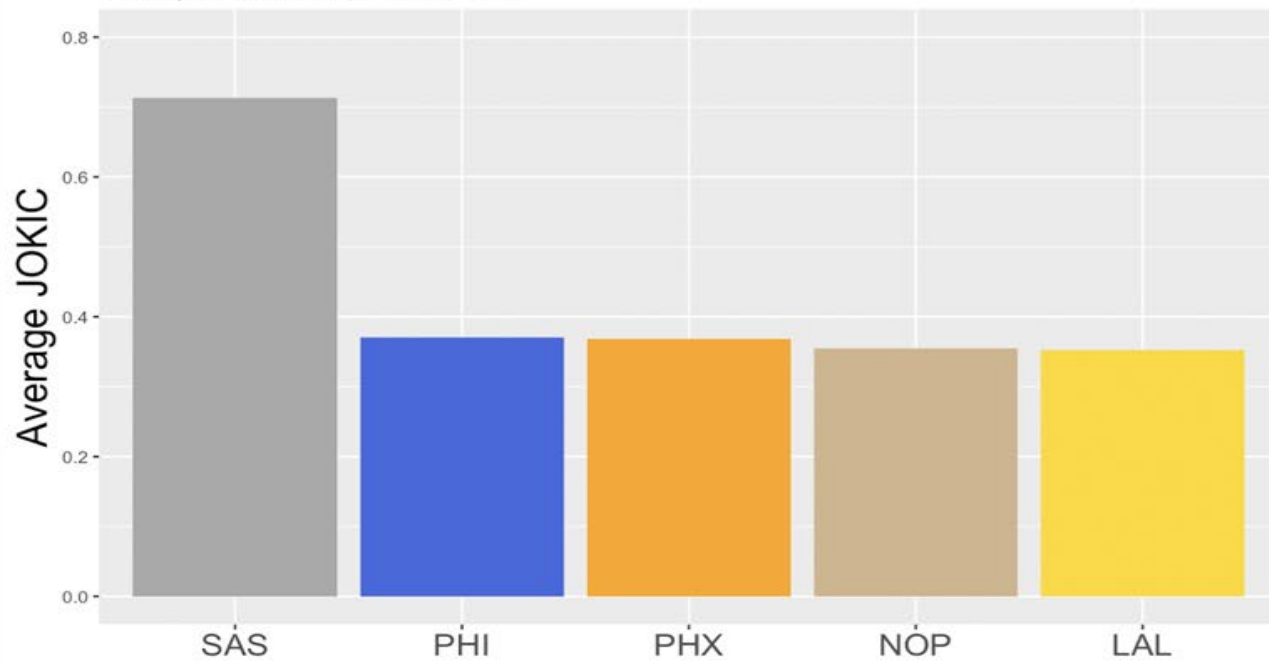LET'S BREAK IT DOWN BY DECADE

Average JOKIC value over 1980s

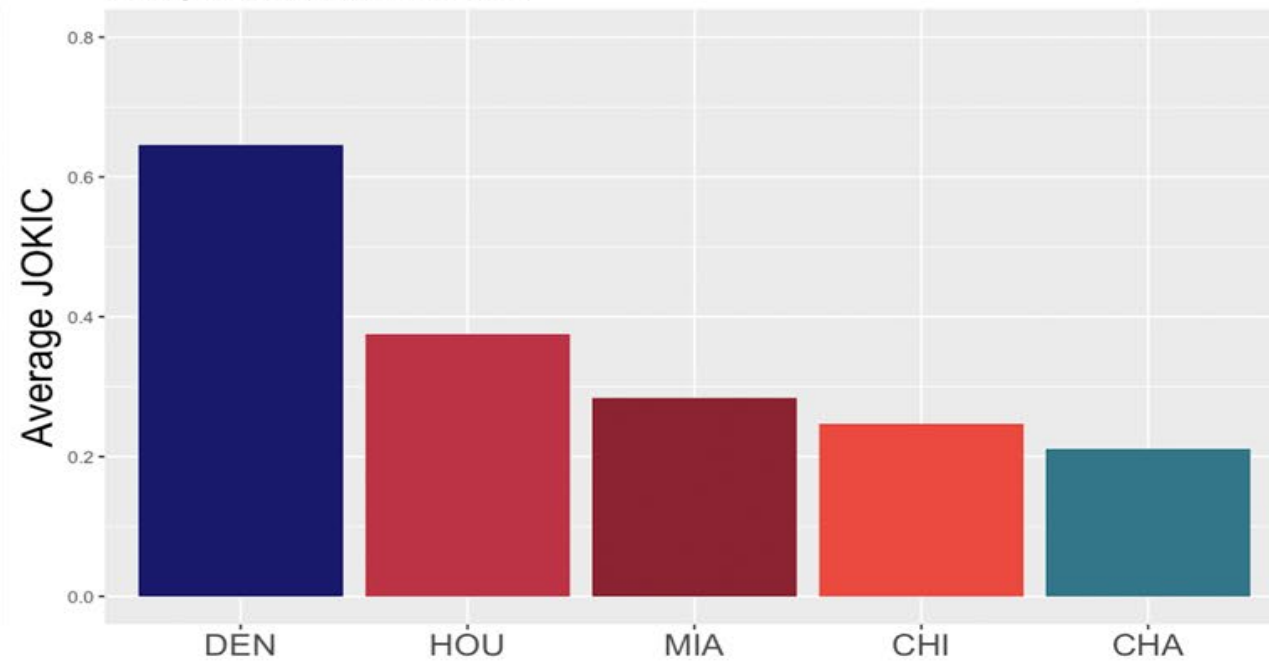**Average JOKIC value over 1990s**

Average JOKIC value over 2000s

Average JOKIC value over 2010s

MOST VALUABLE PICK POSITIONS

Nikola Jokic

Manu Ginobili
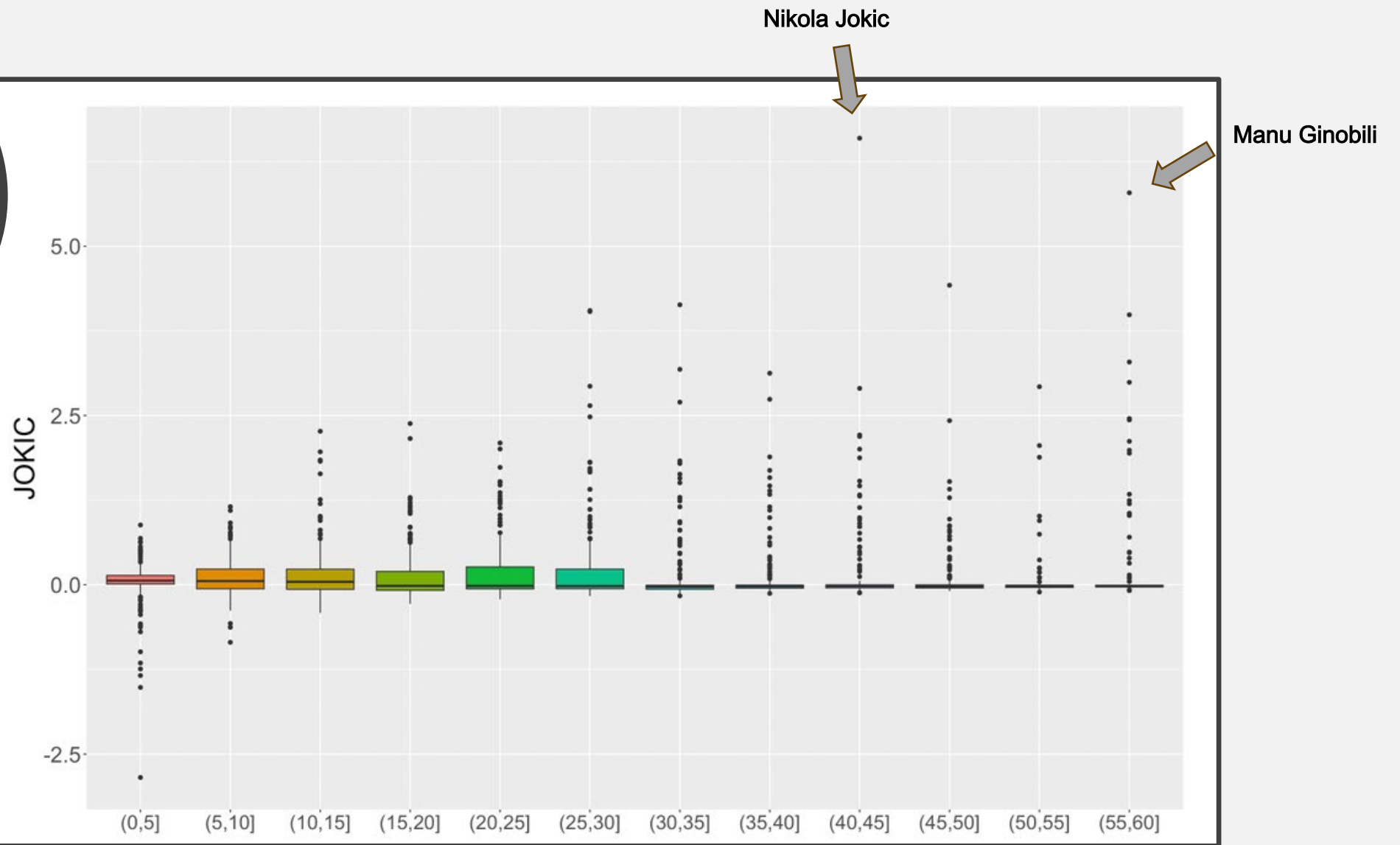
MOST VALUABLE PICK POSITIONS
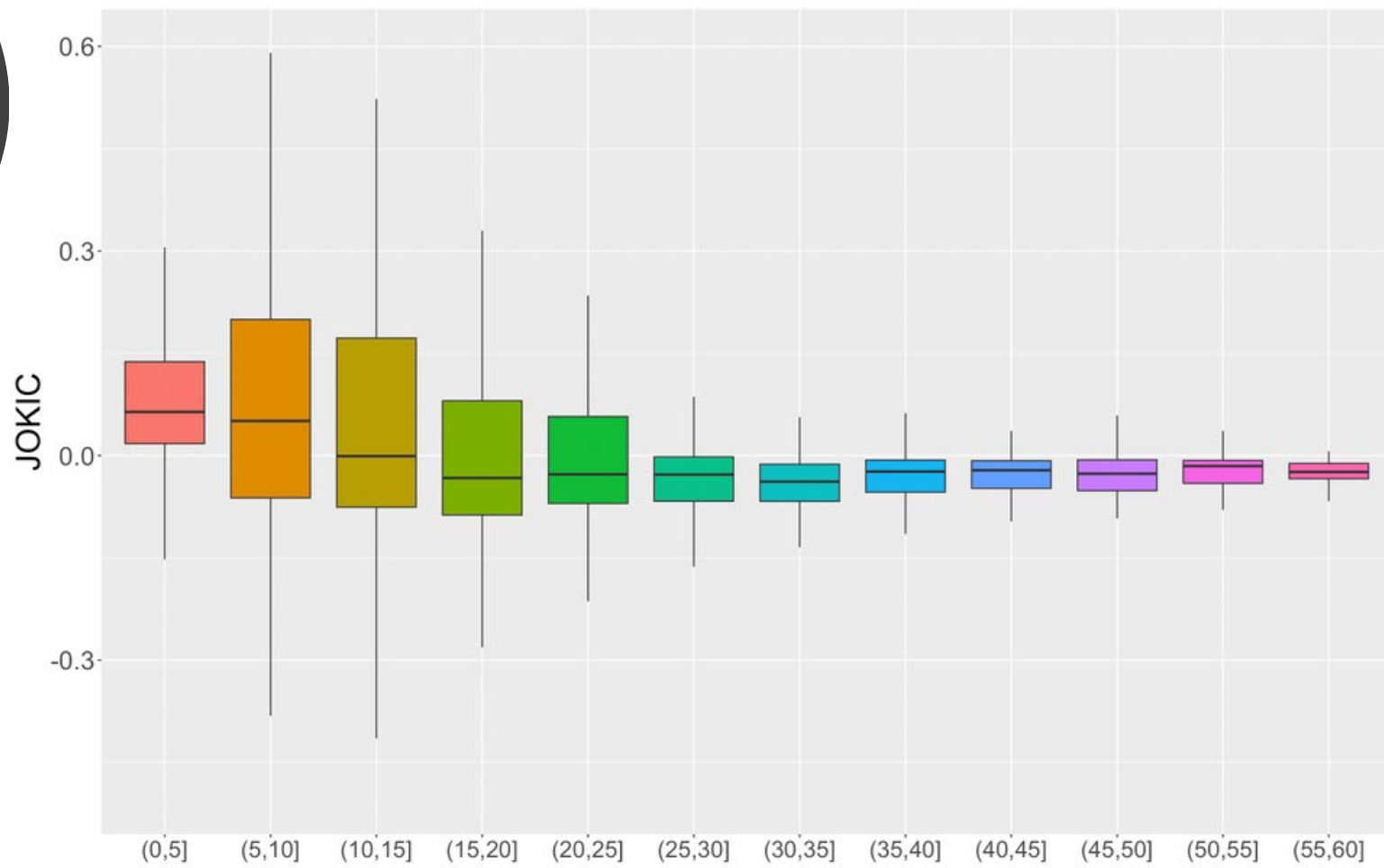
Draft-Day Trades

Earning Win Shares for Original Team

AREAS OF IMPROVEMENT

NEXT STEPS

- Building a college/pre-NBA prediction model
  - Collecting more data in terms of college basketball players and international athletes.

- Including more advanced stats accounting for difficulty of competition (standardizing win shares)

- Creating a new evaluation metric aside from WS

QUESTIONS?