

# NFL Scoring in the Super Bowl Era

By Michael Whiting



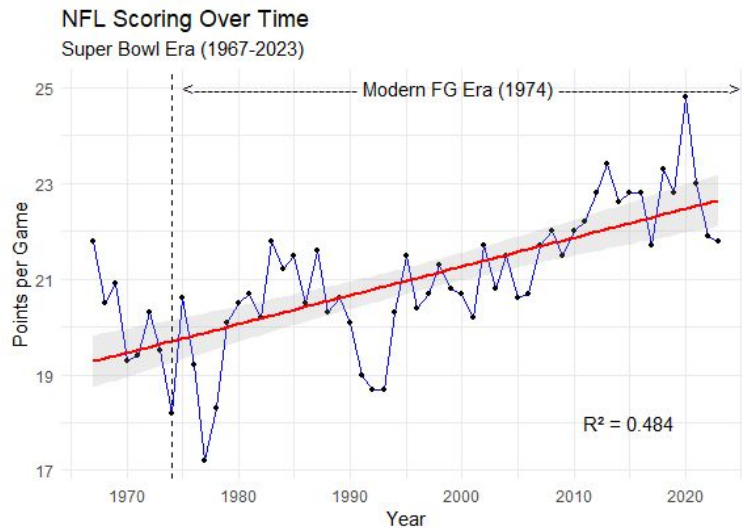


# Introduction

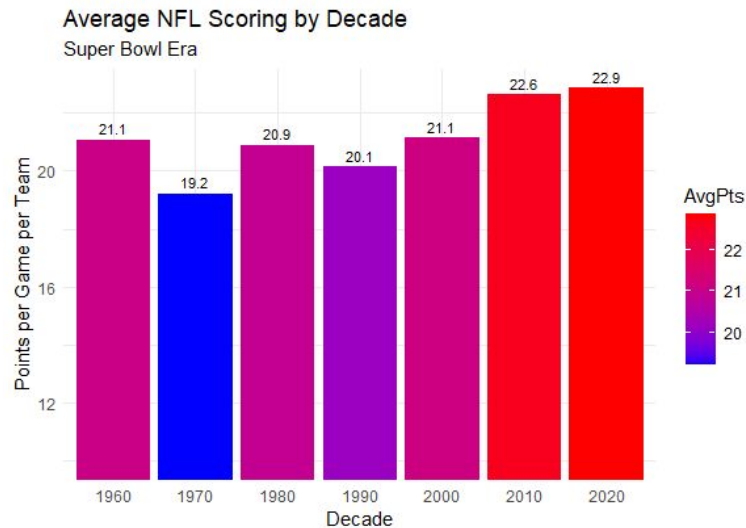
- Prevailing Wisdom:
  - NFL scoring has increased over time as offensive schemes and talent have improved
  - New rules meant to protect players have disproportionately benefited offenses
  - The transition to pass-heavy offenses has led to higher scoring games
- Questions:
  - Has scoring increased over time, and if so, by how much?
  - If scoring has increased, in what ways? Are teams simply scoring more offensive touchdowns, or have there been significant increases in other methods of scoring (two-point conversions, field goals, special teams/defensive touchdowns)?
  - Has offensive innovation outpaced defensive innovation, evidenced by significant increases in yards per game over time?
  - What impact have trends in other aspects of the game (penalties, turnovers, play count) had on scoring?

# Scoring Over Time

- Scoring per team per game in 1967 and 2023 was identical (21.8)
- However, in the aggregate, there has been a steady increase over time since 1967, particularly in the modern FG era
  - $R^2$  value = .494



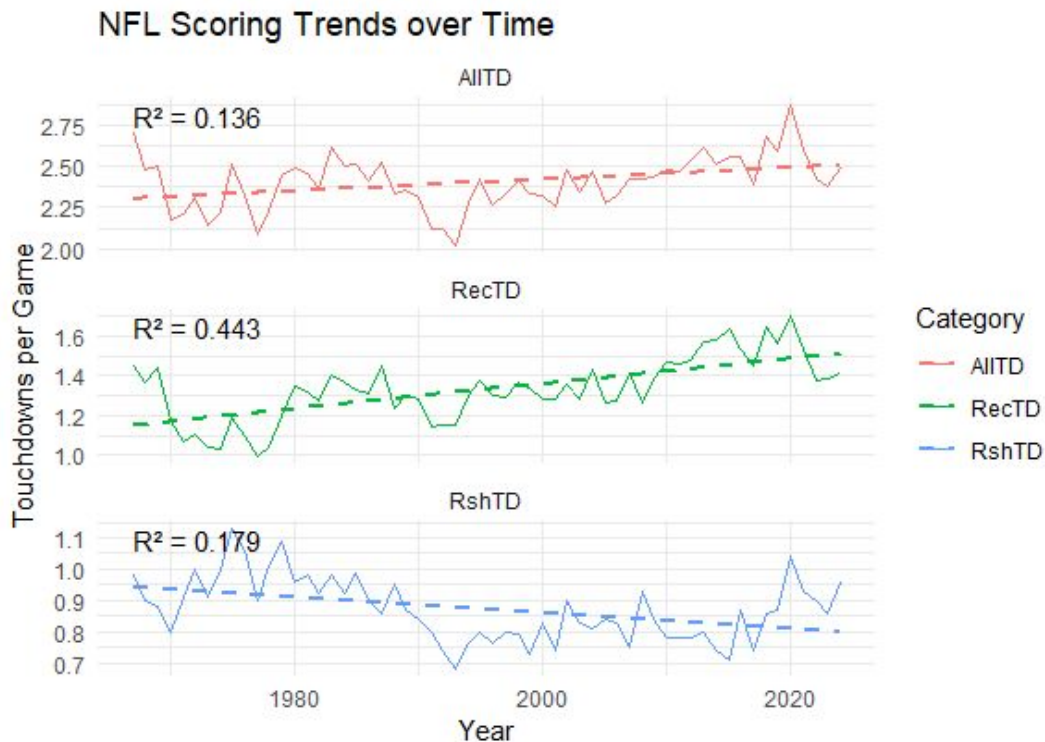
- Modest increase in scoring by decade
  - Scoring has climbed for three consecutive decades
- Scoring has fallen from one decade to the next only twice
  - 1960s to the 1970s (during transition to modern FG era)
  - 1980s to the 1990s





# Touchdown Trends

- Despite increase in scoring, no meaningful increase in total touchdowns per game
- Modest increase in passing touchdowns
  - Moderate correlation
- Slight decline in rushing touchdowns, but correlation is inconclusive



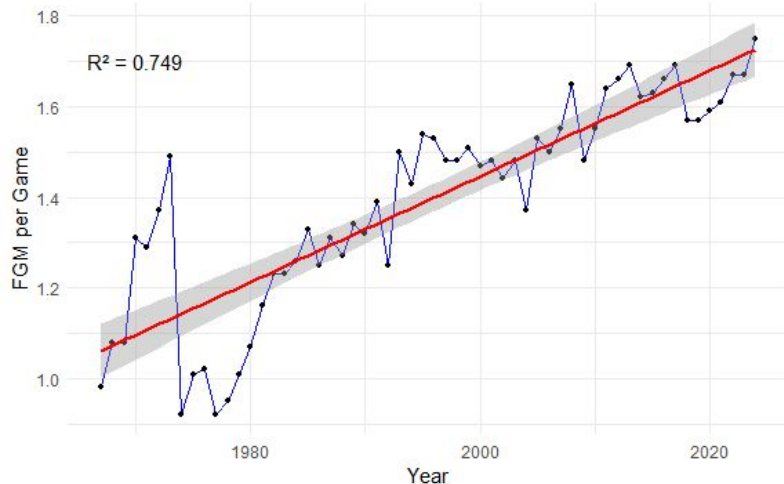


# Field Goal Trends

- Significant increase in number of field goals made over time
  - Sharp decline in 1974 due to rule change that moved FG posts to back of end zone
  - Number of field goals made per team per game has doubled since posts were moved back

## Field Goals Made Over Time

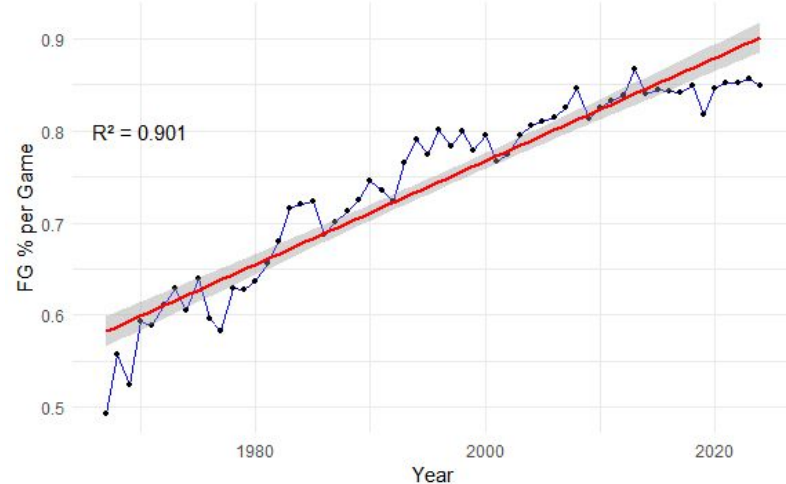
1967-2024 (Note: In 1974, FG posts were moved to back of end zone)



- Significant rise in field goal accuracy
  - 50-60% in 1960s
  - Consistently between 80-90% in 21st century
  - Little to no change since 2010

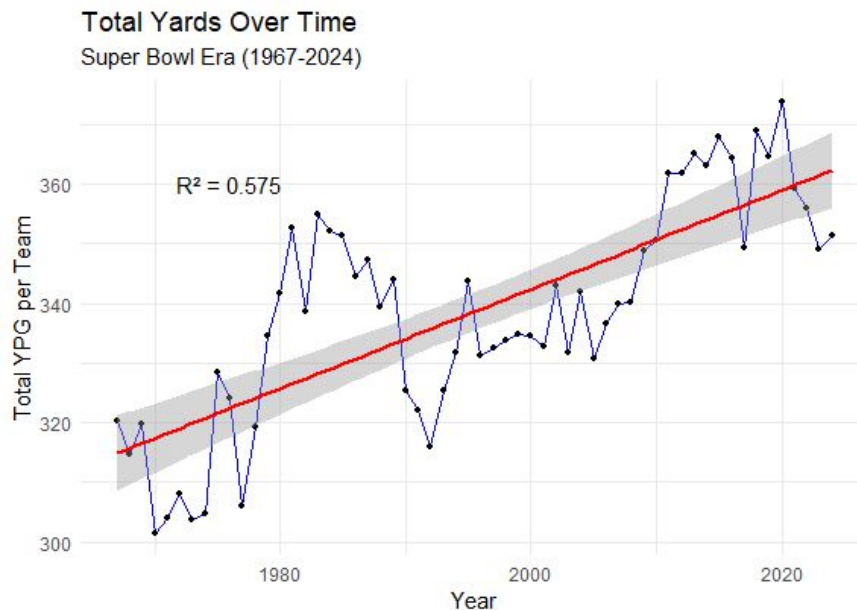
## Field Goal % Over Time

1967-2024 (Note: In 1974, FG posts were moved to back of end zone)



# Yardage Over Time

- Yards per game per team have increased over time in the Super Bowl era
  - Consistently below 330 YPG until late 1970s
  - Consistently over 350 YPG since 2010
- Sharp increase in late 1970s, before flattening and declining in the 1980s and 1990s
- Another sharp increase in late 2000s, before a slight decline in late 2010s and 2020s

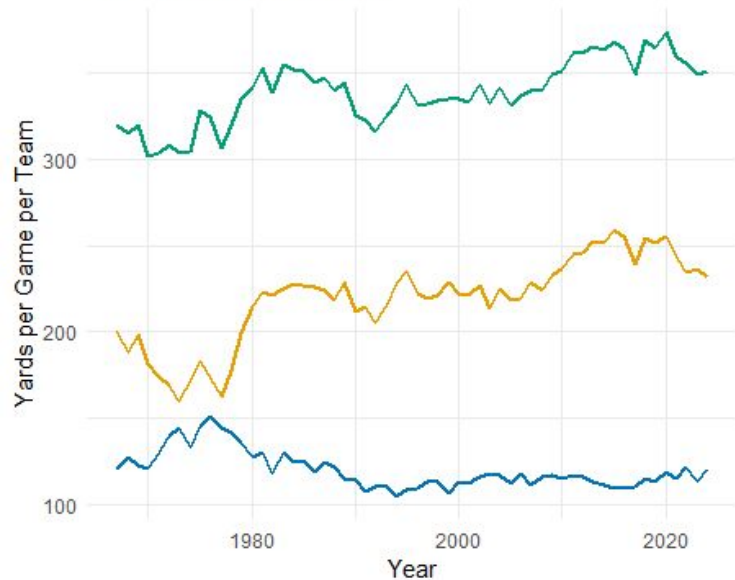




# Yardage Trends

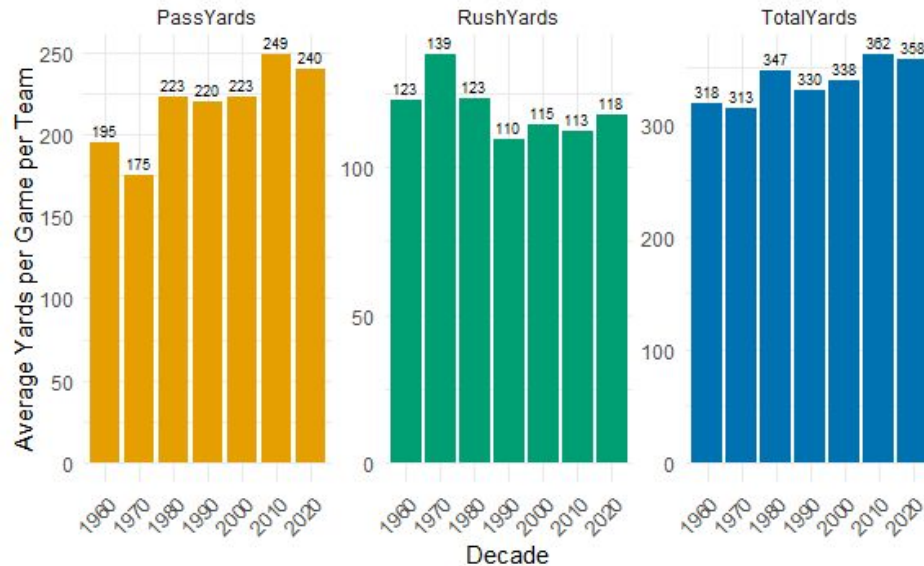
## NFL Yardage Over Time

Super Bowl Era (1967-2023)



## Average Yardage by Decade

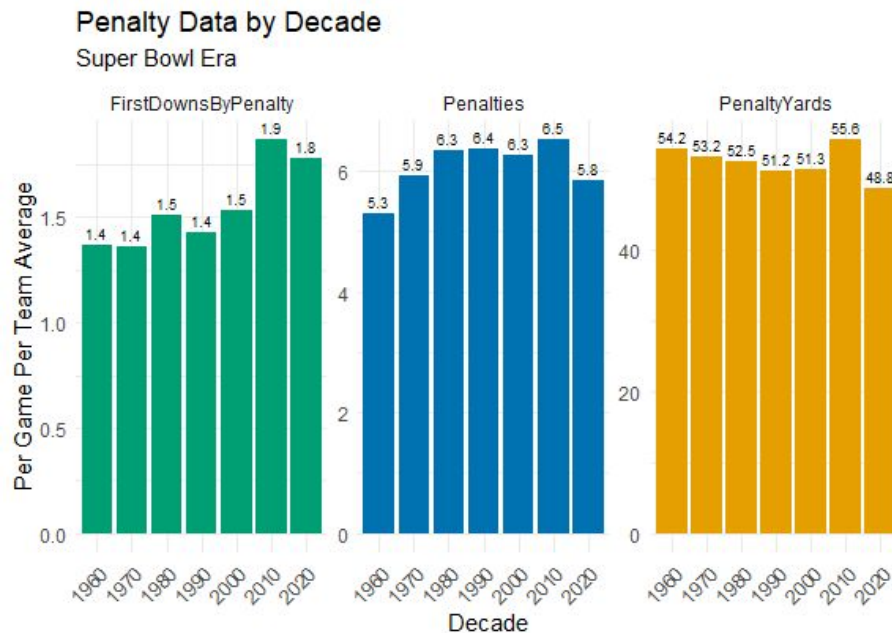
Super Bowl Era





# Penalty Trends

- Teams are gaining first downs by penalty more frequently
- The number of penalties per game has remained relatively static
- Penalty yardage per game has modestly declined over the decades, with a brief spike in the 2010s
- Insufficient evidence to suggest that a rise in penalties has played a role in increased offensive production







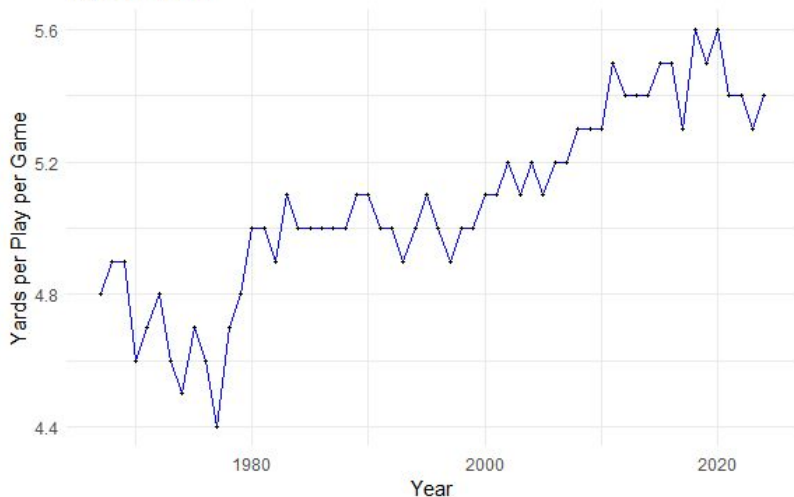
# Other Trends

- Modest increase in yards per play over time
  - Around 5.4 YPP since 2011
  - At or below 5.0 YPP for most years prior to 2000

- Significant and consistent decline in turnovers per game over time
  - Consistently above 2.0 prior to 1990
  - Below 1.4 since 2019

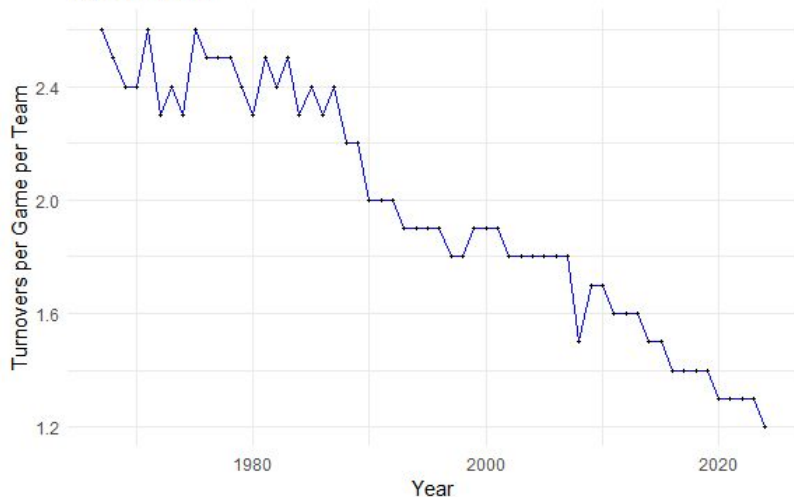
## Yards per Play Over Time

Super Bowl Era



## Turnovers Over Time

Super Bowl Era





# Conclusions

1. The NFL has seen a modest increase in scoring in the Super Bowl era, but this increase has been driven by field goals rather than touchdowns
  - a. Modern-day kickers are far more accurate and effective, evidenced by a significant and steady increase in both field goals made and field goal percentage over time
  - b. Kickers today make an average of one additional field goal per game compared to kickers in 1974, when the posts were first moved back
2. Although teams are not necessarily scoring significantly more touchdowns, they are moving the ball far more effectively than in the early Super Bowl era, evidenced by a steady increase in yards per game over time
  - a. Increase in yardage per game has been driven by a rise in passing yards, while rushing yards per game has actually declined slightly
3. Offenses have become increasingly efficient and effective over time
  - a. Not only do teams gain more yards per game in the modern era, but they turn the ball over far fewer times and average more yards per play
  - b. Penalties have not played a major role in this increased efficiency