

# The Age-Wage-Productivity Puzzle: A Contribution from Professional Football

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## Non-Technical Summary

- There are several advantages to using data from sports labour markets to consider questions in labour economics
- Major League Soccer is the premier association football league in North America, and our dataset covers approximately the universe of players there between 2008 and 2019. Media and fan interest in professional football ensures that detailed and accurate information on individual productivity over time is freely available.
- Another advantage of our setting is the structure of the League; MLS is a single-entity with a players' union that negotiates salary regulations with the League and publishes annual salary data for all players.
- This combination of individual productivity and salary data is unusual.
- There is an inverted u-shaped relationship between age and wages in most labour markets and occupations, but the effects of age on productivity are less clear.
- We use the productivity and salaries of all elite professional footballers (soccer players) in North America to estimate age-productivity and age-wage profiles, which control for unobserved player characteristics and for entry and exit from this market, finding stark differences.
- While the productivity of footballers tends to peak in their early to mid-20s and then falls slowly, wages continue to increase throughout most of their careers, up to age 30, after which they fall rapidly.
- This discrepancy has been observed in other labour markets and poses the question: why are the youngest and oldest workers seemingly underpaid relative to their productivity?
- We consider a number of possible mechanisms that could be responsible without finding a clear culprit.

You can read the full paper [here](#).