



# The Impact of Professional Sports on Cities' Economic Performance

## Carter Mensing and Chris Cassi

### *Linfield Department of Economics • Spring 2019*

#### I. Abstract

The purpose of this paper is to estimate the impact of professional sports on cities' economic performance as measured by real per capita income growth and the unemployment rate. We use a panel model across 43 cities over eight years. Explanatory variables include the number of professional sports franchises in a city and the performance of those franchises. We find no statistically significant evidence suggesting that the number or performance of professional sports teams impact cities' real per capita income growth. We do, however, find that the number and performance of professional sports franchises have a statistically significant, mixed impact on unemployment rates in the cities.

#### II. Model and Variables

$$Y_{it} = F(\text{Sports Variables}_{it}, \text{Non-Sports Variables}_{it})$$

Y: Unemployment rate in each city with a professional sports team.

##### Sports variables for NBA, MLB, NFL, NHL teams

- Teams: Number of professional sports teams in the city.
- Playoffs: Whether a city's team made the playoffs.
- Championship: Whether a city's team won a championship.
- Stadium: Whether a new stadium was built in that city.

##### Non-sports variables

- PCIGRW(-1): Previous year's change in real per capita income measured as a percentage.

#### III. Theory and Hypotheses

- All sports-related variables are hypothesized to have a negative impact on the unemployment rate. Adding new teams, teams making the playoffs, teams winning a championship, or cities building new stadiums all lead to additional employment opportunities.
- PCIGRW(-1) is hypothesized to have a negative impact on unemployment rates. As PCIGRW increases, there is more money being spent in the local economy which leads to additional employment opportunities.

#### IV. Data

- Panel Data Across 43 cities over eight years (2010-2017).

##### Sports-Related Data Sources:

- Team statistics for NFL from <http://www.nfl.com>
- Team statistics for NBA from <http://www.NBA.com>
- Team statistics for MLB from <http://www.MLB.com>
- Team Statistics for NHL from <http://www.NHL.com>

##### Non-Sports Related Data Sources:

- St. Louis Fed. Retrieved from <https://www.stlouisfed.org/>
- U.S. Census Bureau. Retrieved from <https://www.census.gov/>

#### V. Statistically Significant Results

##### Playoff Appearances

- An MLB team making the playoffs causes a 0.51% increase in the unemployment rate.
- An NBA team making the playoffs causes a 0.33% decrease in the unemployment rate.
- An NFL team making the playoffs causes a 0.4% decrease in the unemployment rate.

##### Number of Teams

- Adding an MLB team causes a 0.43% increase in the unemployment rate.
- Adding an NHL team causes a 0.46% decrease in the unemployment rate.

##### New Stadiums

- Adding a new NHL team causes a 2.23% decrease in the unemployment rate.
- Adding a new MLB team causes a 1.52% decrease in the unemployment rate.

#### VI. Conclusion

Our results indicate the presence and performance of professional sports teams have statistically significant, mixed effects on cities' unemployment rates. Counter to the arguments made by sports promoters, this suggests that introducing a new team, building a new stadium, and enhancing team performance do not necessarily lead to job creation.