

# Using the Current Population Survey to Answer DOL-Relevant Questions: Applications in R

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\*Views expressed are for the author only and do not represent the views of the U.S.  
Department of Labor or the Chief Evaluation Office

# Overview

- Introduction to DOL Chief Evaluation Office (CEO)
- Data Exchange and Analysis Platform (DEAP)
- Estimating FLSA Coverage and Exemptions
- Program Relevant Questions
- Policy Relevant Questions

# Introduction to CEO

- Chief Evaluation Office (CEO)
  - CEO is an independent evaluation office, located organizationally in the Office of the Assistant Secretary for Policy
  - Collaborative work between CEO and other DOL agencies to identify priority research questions to the agencies and the department
  - Most questions come through the DOL Evaluation Plan
  - <https://www.dol.gov/sites/dolgov/files/OASP/legacy/files/CEO-FY-2018-Evaluation-Plan.pdf>
- CEO Analytics Team (CEOAT)
  - Some questions are more consultative and do not require large 3<sup>rd</sup> party evaluations
  - Agencies ask questions CEOAT that are relevant to administering their program to build capacity and be data-informed
  - Provide support and build capacity for the agencies

# Data Exchange and Analysis Platform (DEAP)

- Analysis platform available to all DOL employees
  - Server access to clustered file system to host large data sets
  - Hub and spoke architecture to promote collaboration, not silos
  - Provides Dockerized containers for open-source tools: R, Python, Julia
  - R Studio or Jupyter Notebooks for R
  - Free of charge for DOL users – funded by CEO and OCIO partnership
  - Access via web browser – but requires DOL provided GFE
- Platform to answer program and policy relevant questions agencies
  - Upload admin data into agency secure tenants
  - Access public use data
  - Work collaboratively with the different agencies, not silos
  - Visualize results

# Fair Labor Standards Act (FLSA)

- Fair Labor Standards Act
  - Created in 1938
  - Amended multiple times over the years
  - Affects employees in private sector employment and in federal, state, and local government employment
- Establishes
  - Minimum Wage
  - Time-and-a-half overtime pay
  - Prohibits child labor
  - Recordkeeping
- Enforced by DOL Wage and Hour Division
  - <https://www.dol.gov/whd/flsa/>

# Methodology to Estimate FLSA

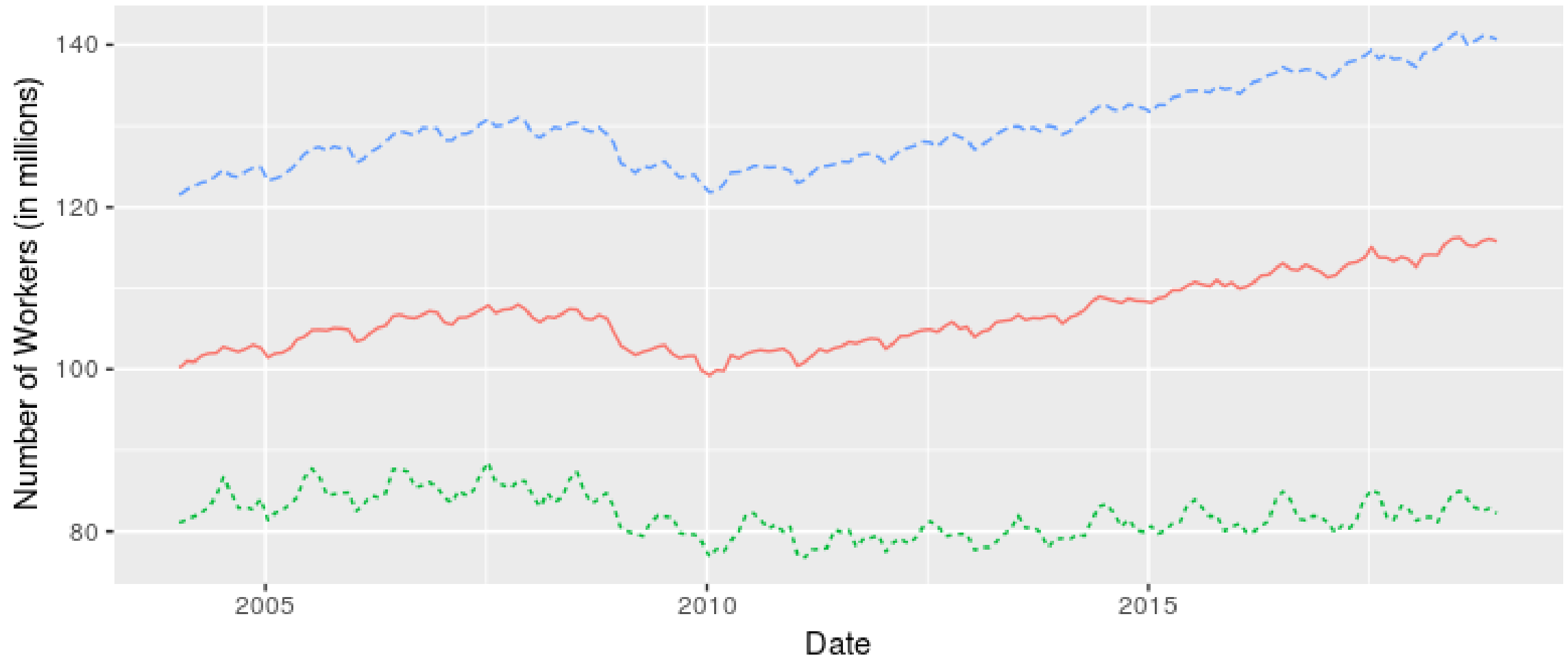
- Inputs
  - Current Population Survey – Monthly Public Use Micro Data
- Coverage Estimates
  - Estimate coverage from 500K and remove self-employed
- Exemptions Estimates
  - Binary Exemptions – ex: 13(a)(5) Fisherman exemption
  - Probabilistic Exemptions – ex: 13(a)(1) EAP exemption
- Wage violation estimates
  - Establish “regular rate” – hourly pay plus tips and commission
- Outputs
  - CPS micro data augmented with FLSA exemptions and violations estimates

# Program Relevant Questions

- Lead with a Question
  - Agencies lead with a question, not tools
  - Provide results, which can lead to new questions
- Iterative Process
  - Follow up on additional questions
- Example Potential Questions
  - How many workers are covered by the FLSA?
  - How many workers are covered non-exempt for minimum wage?
  - Are the proportions of FLSA coverage consistent across industries or states?

# Estimates of Workers Covered by FLSA

Types of Wage and Salary Workers



Type of Workers — flsa\_covered — flsa\_covered\_nonexempt\_minwage — wage\_salary

Source: Current Population Survey, Eastern Research Group, and DOL Chief Evaluation Office



# Program Relevant Questions

- What is the overall trend in FLSA violations?
- Aggregate violations by different groups:
  - Which state has the highest prevalence for minimum wage violations?
  - What occupational group has the highest violations?
  - What are the trends over time?
- What are their characteristics associated with estimated FLSA violations?
  - CPS household and individual characteristics
  - Match with additional external data for establishment characteristics

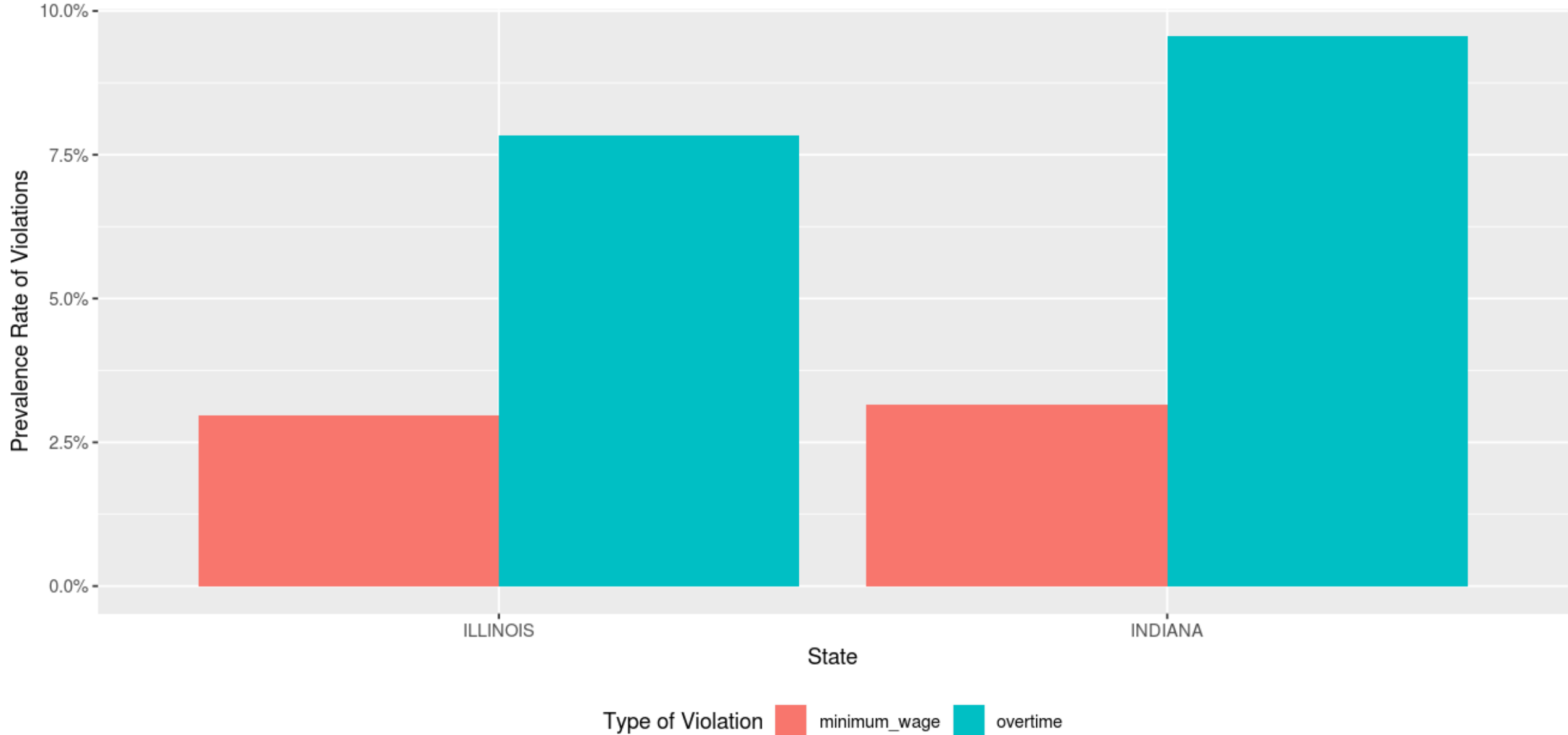
# Estimates of FLSA Violations

## Types of FLSA Violations 2004-2018



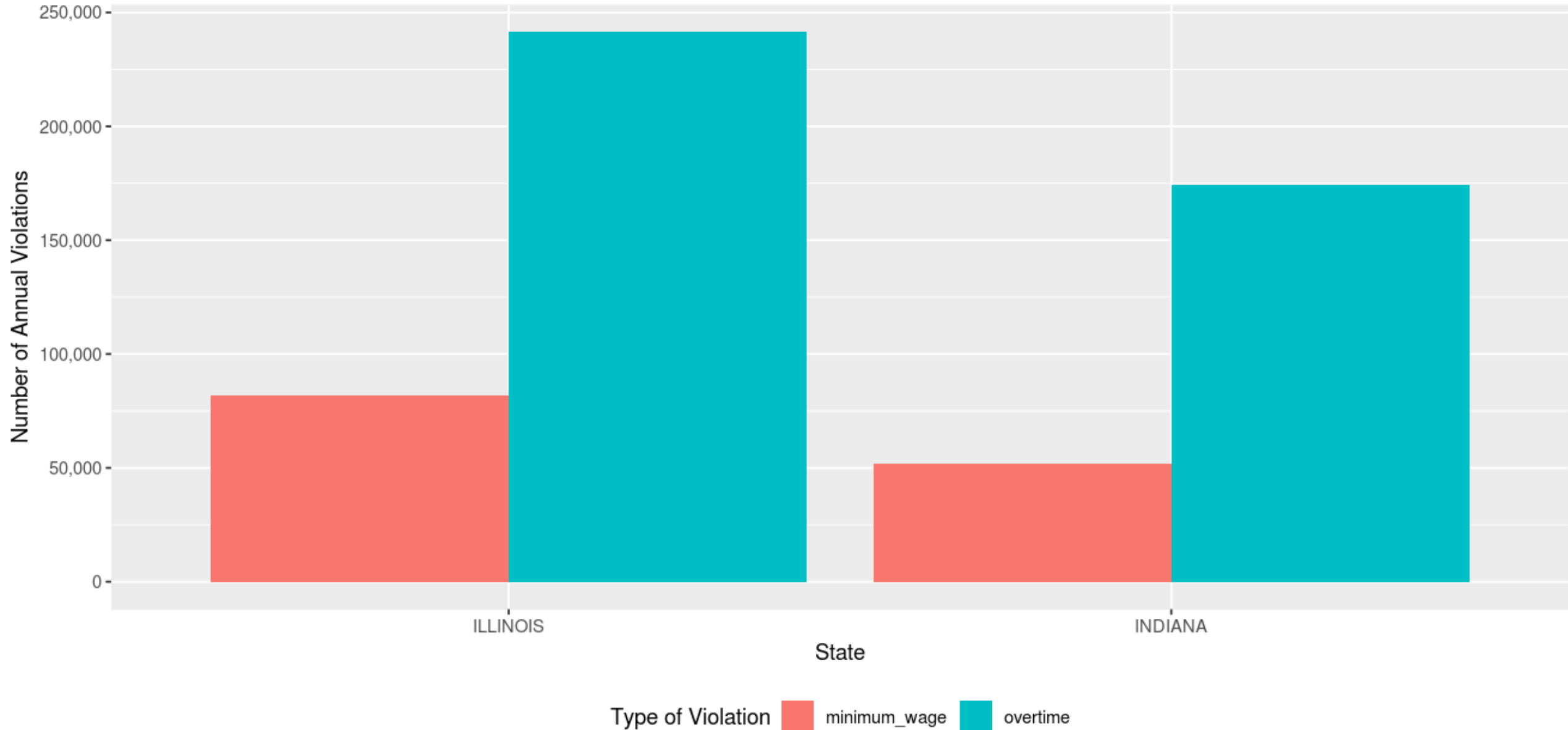
# Estimates of Prevalence of FLSA Violations in 2018

## FLSA Violations by States



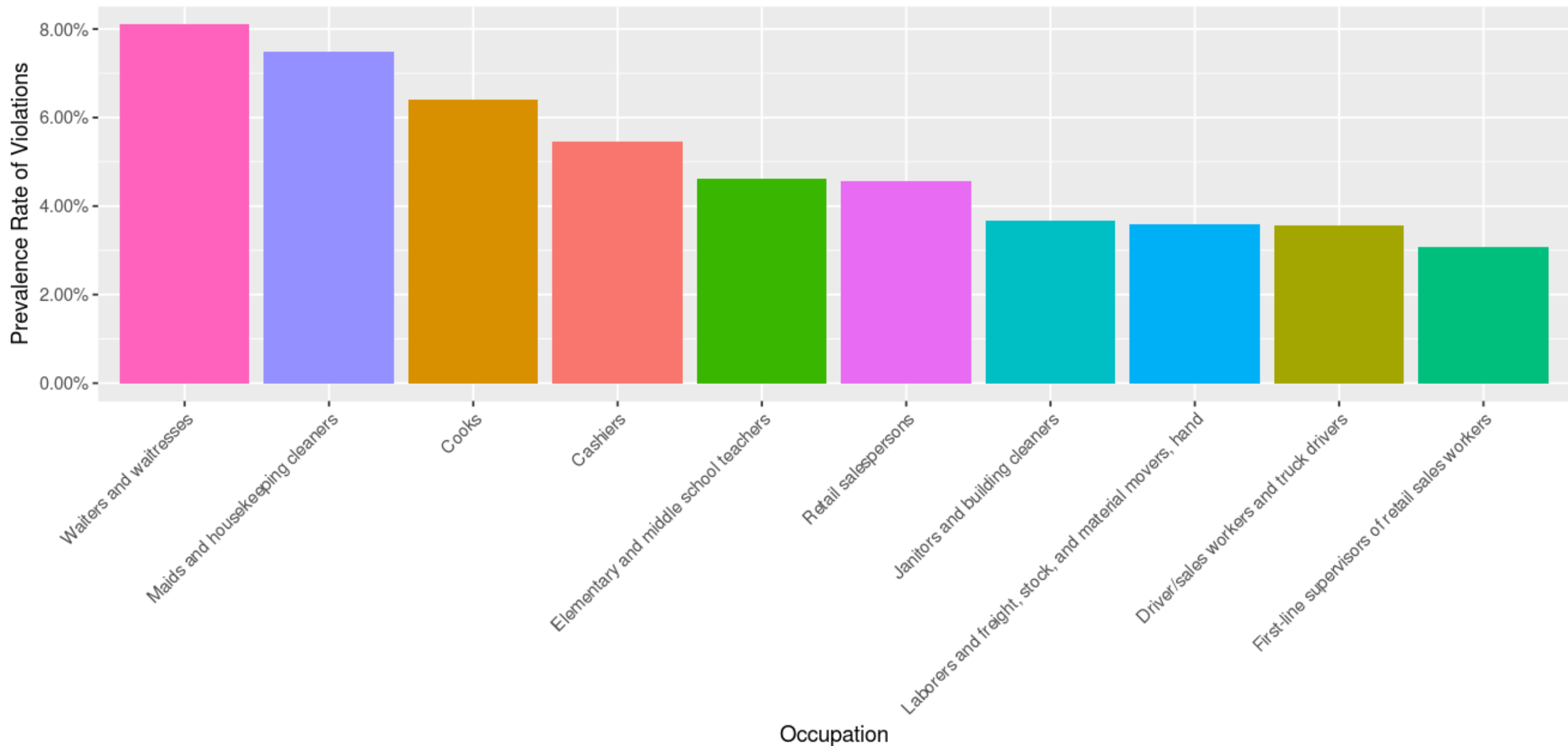
# Estimates of FLSA Violations in 2018

## FLSA Violations by States



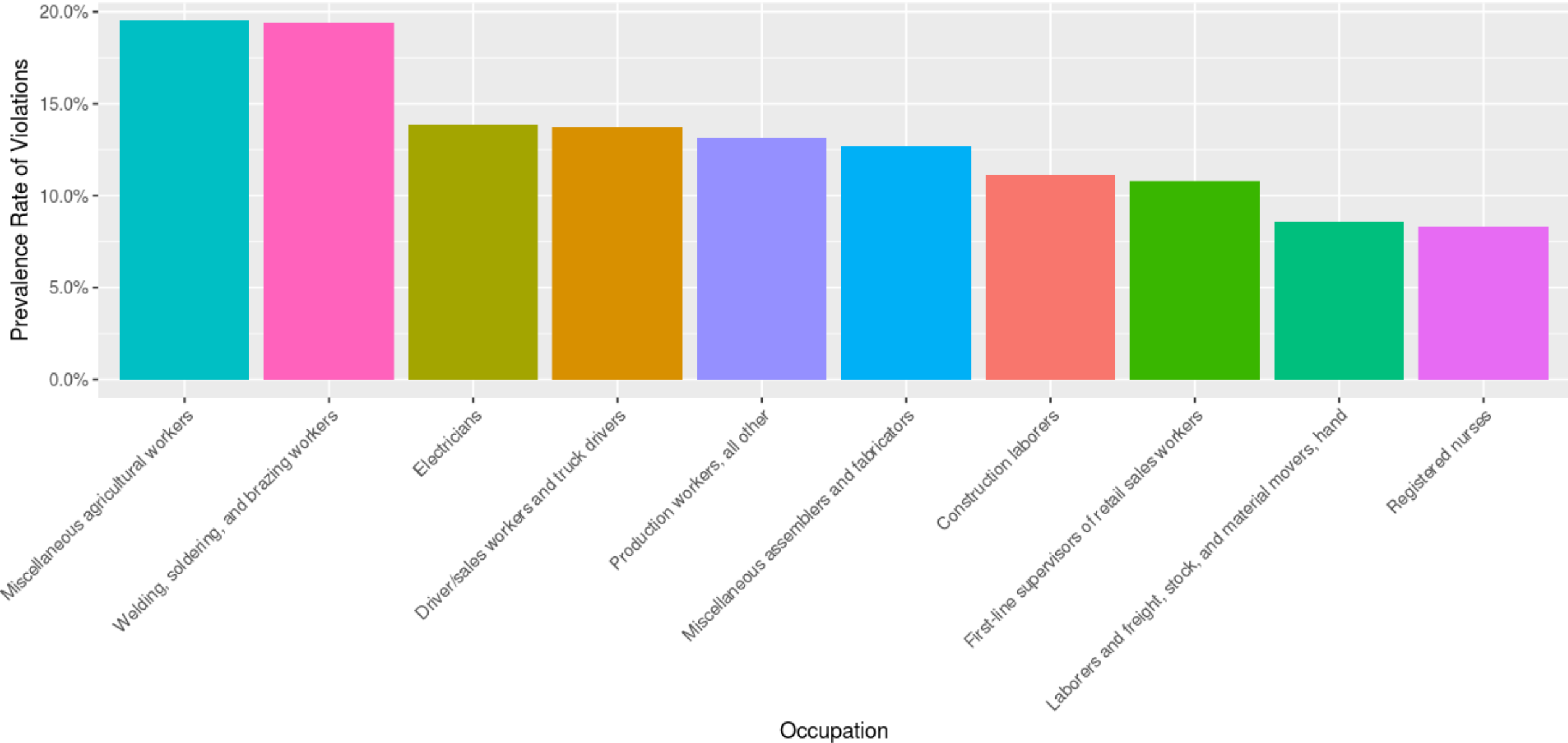
# Estimates of Prevalence of FLSA Violations in 2018 for Minimum Wage

## FLSA Violations by Occupation



# Estimates of Prevalence of FLSA Violations in 2018 for Overtime

## FLSA Violations by Occupation

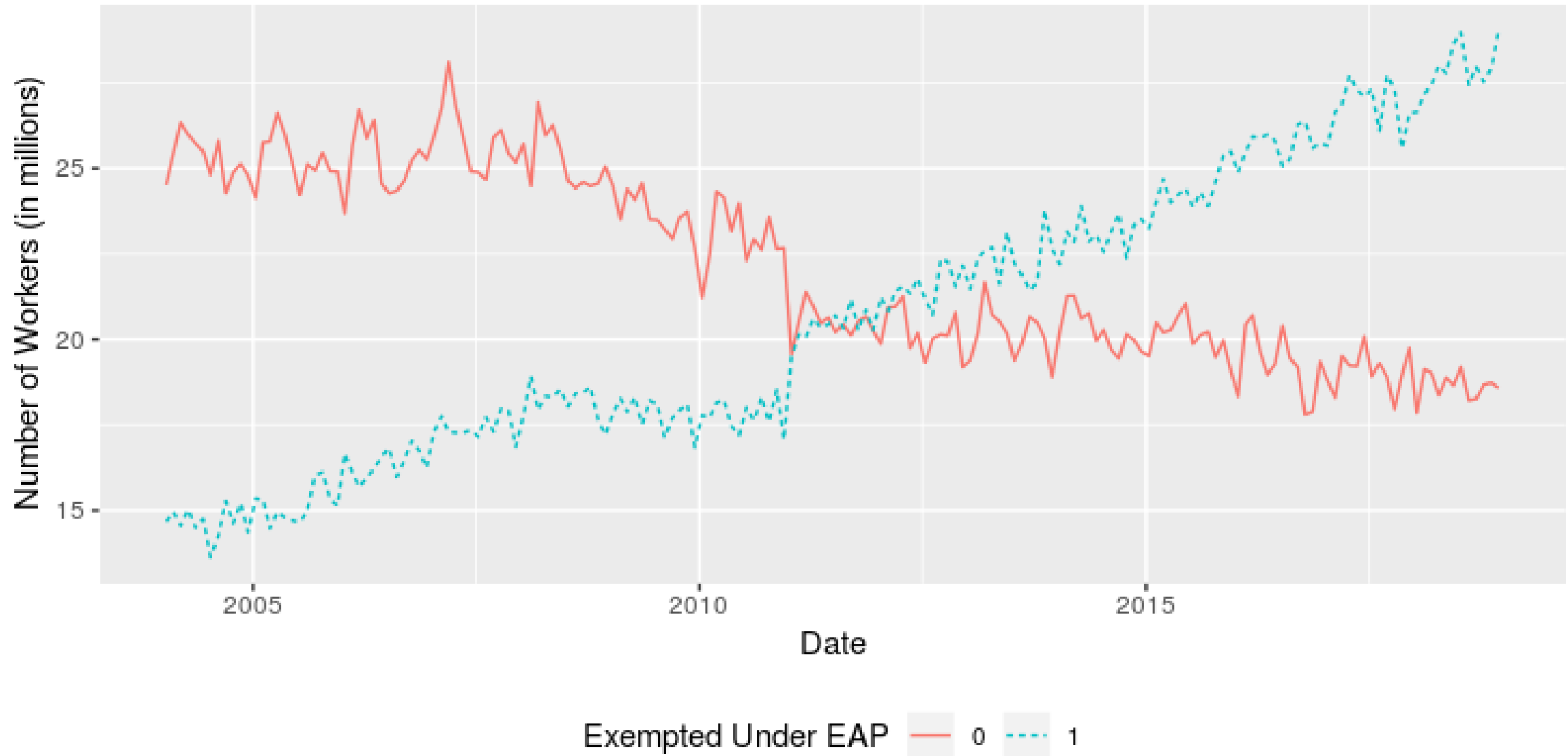


# Policy Relevant Questions

- Who is potentially affected by a proposed rule change?
  - What are their earnings?
  - What are their worker characteristics?
- How many individuals are exempt under the Executive, Administrative, and Professional exemption?
  - What is the trend over time?
  - What if a proposed rule changed the salary level test?

# Estimates of Salaried Workers Covered by FLSA

Salaried Workers Under Executive, Administrative, and Professional Exemption



Source: Current Population Survey and FLSA Calculations



# Future Work

- Generalized Variance Functions
  - Estimating and incorporating standard errors for employment coverage and violations
- Factors and Correlates of FLSA violations
  - Ask descriptive research on factors and correlates for FLSA violations
- R Shiny and R Shiny Server
  - Visualization dashboards for collaborative work via web browsers

# Contact

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