

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.
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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 3rd 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

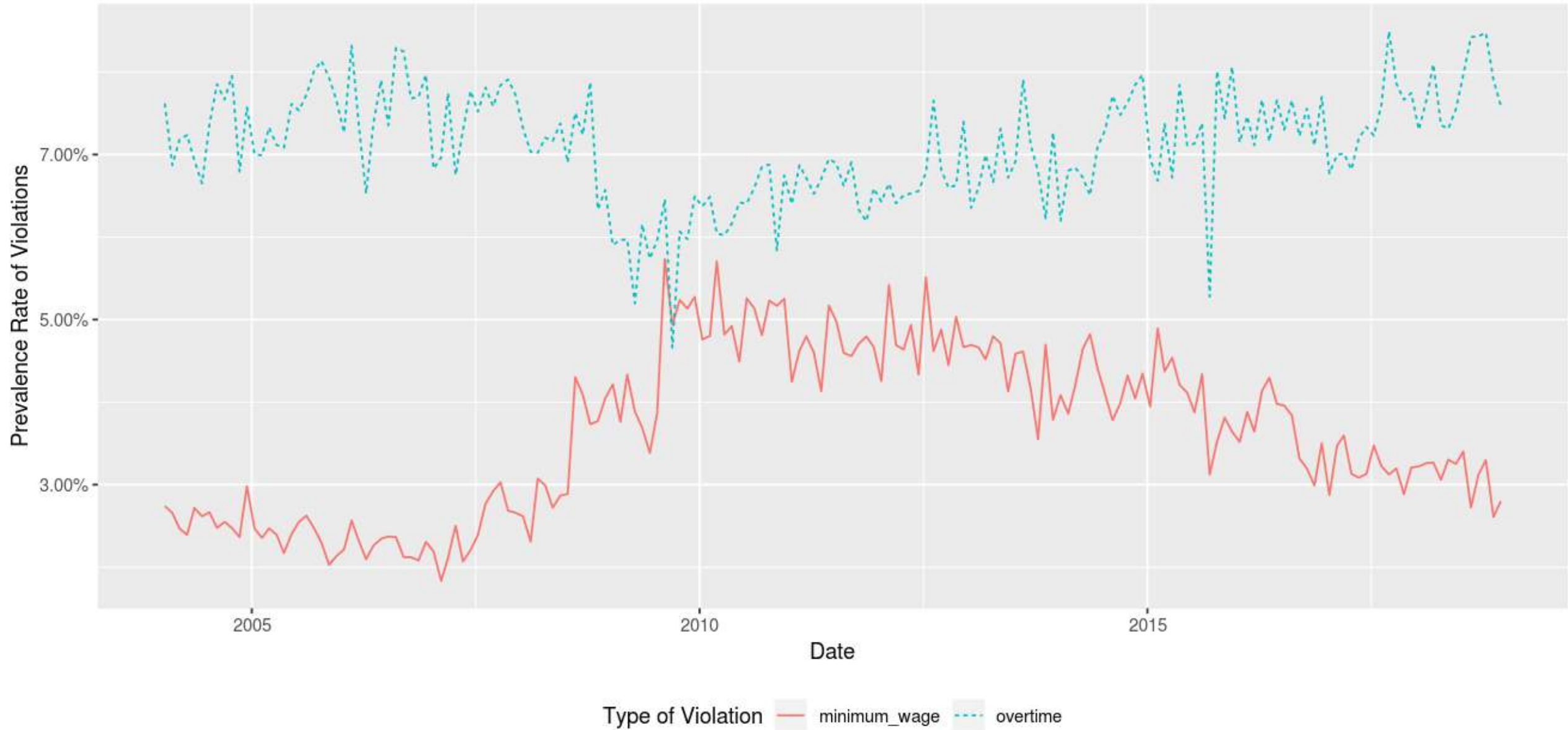
Source: Current Population Survey, Eastern Research Group, and DOL Chief Evaluation Office

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

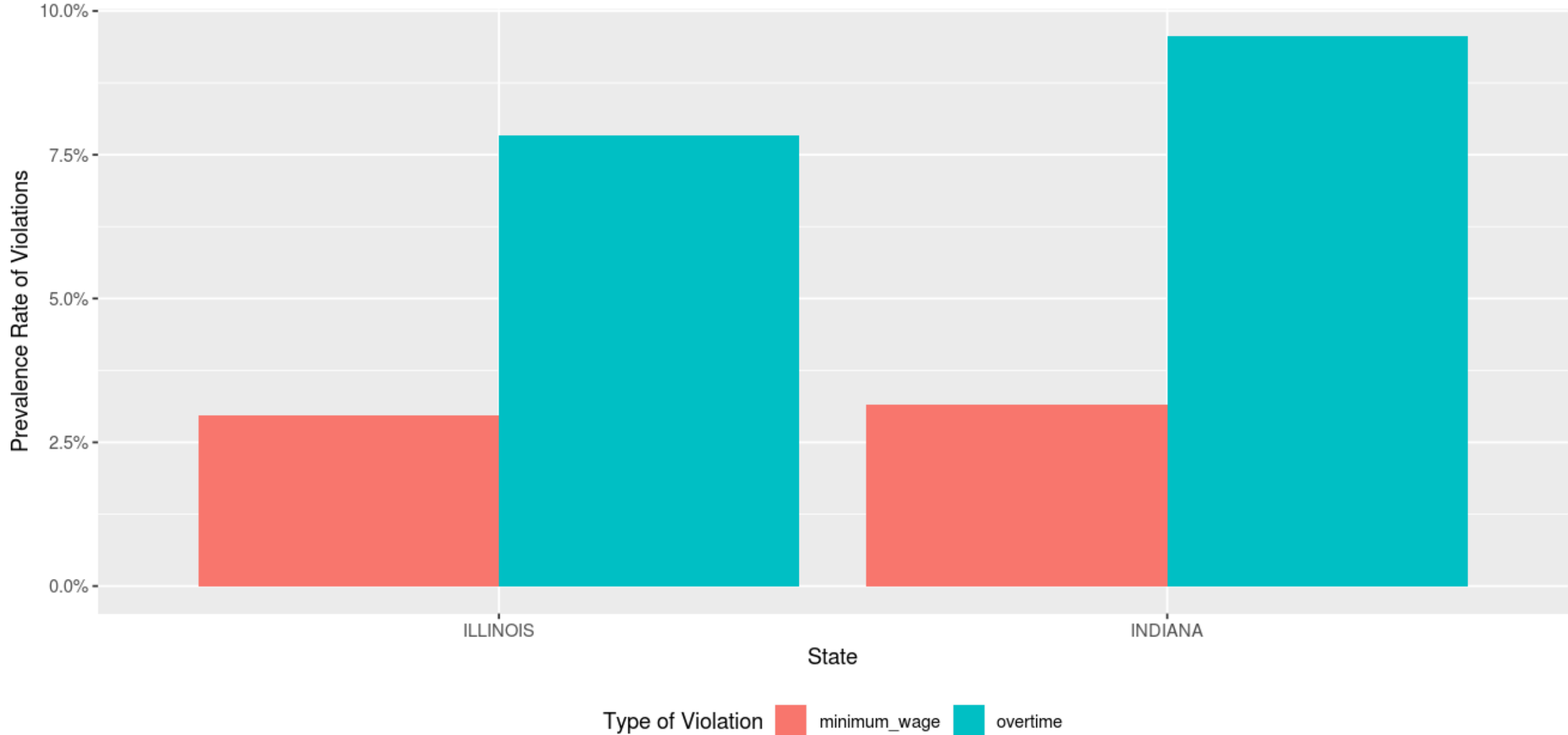
Estimates of FLSA Violations

Types of FLSA Violations 2004-2018



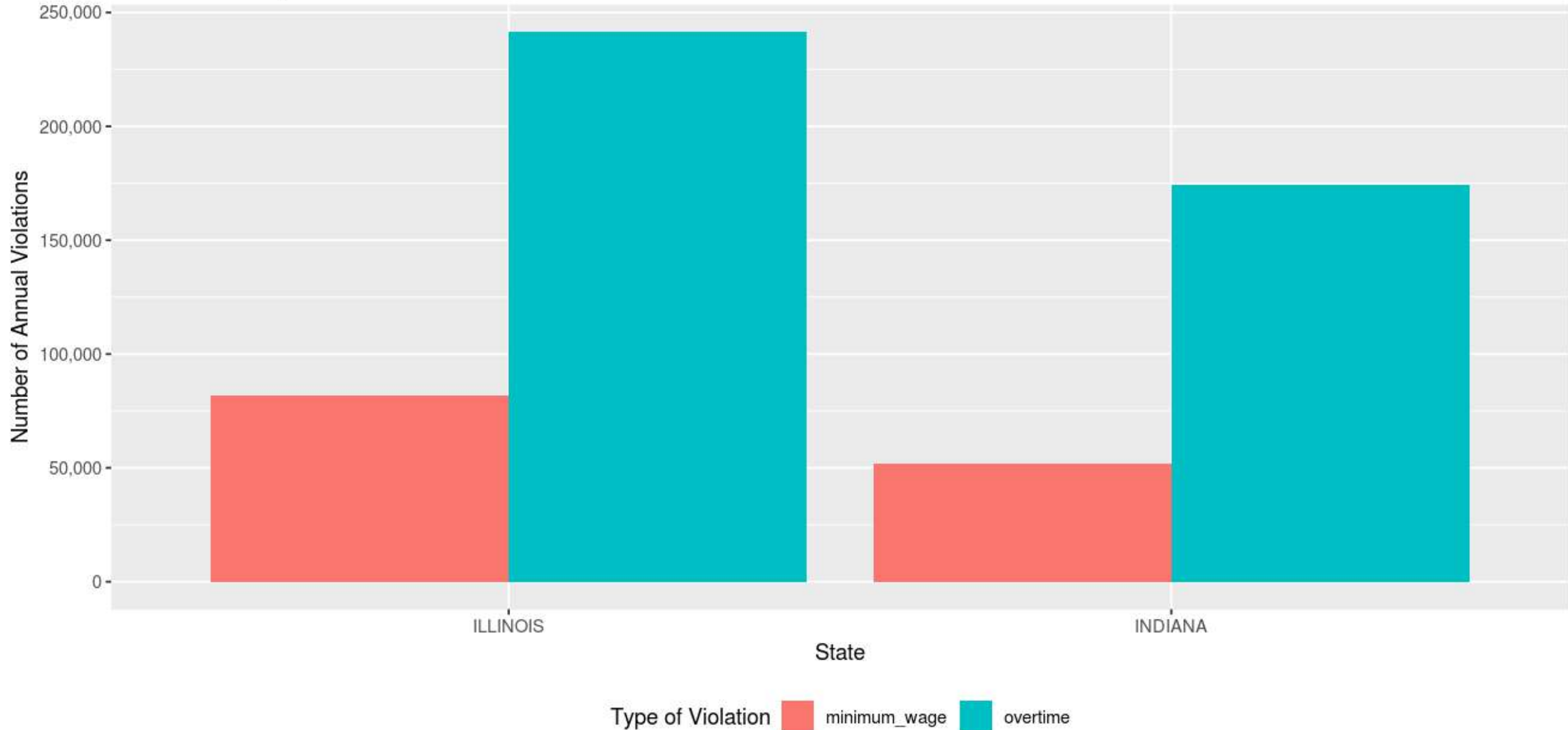
Estimates of Prevalence of FLSA Violations in 2018

FLSA Violations by States



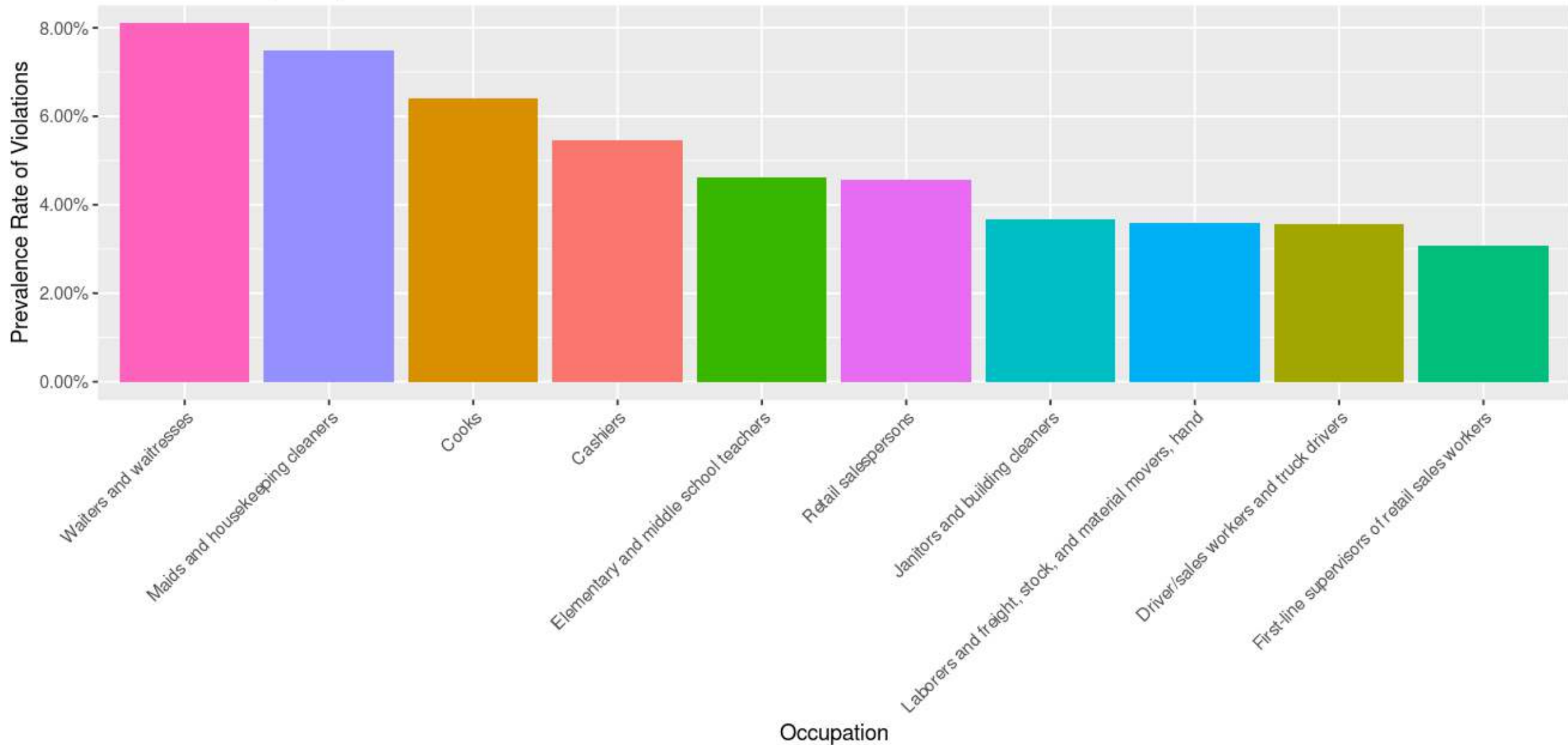
Estimates of FLSA Violations in 2018

FLSA Violations by States



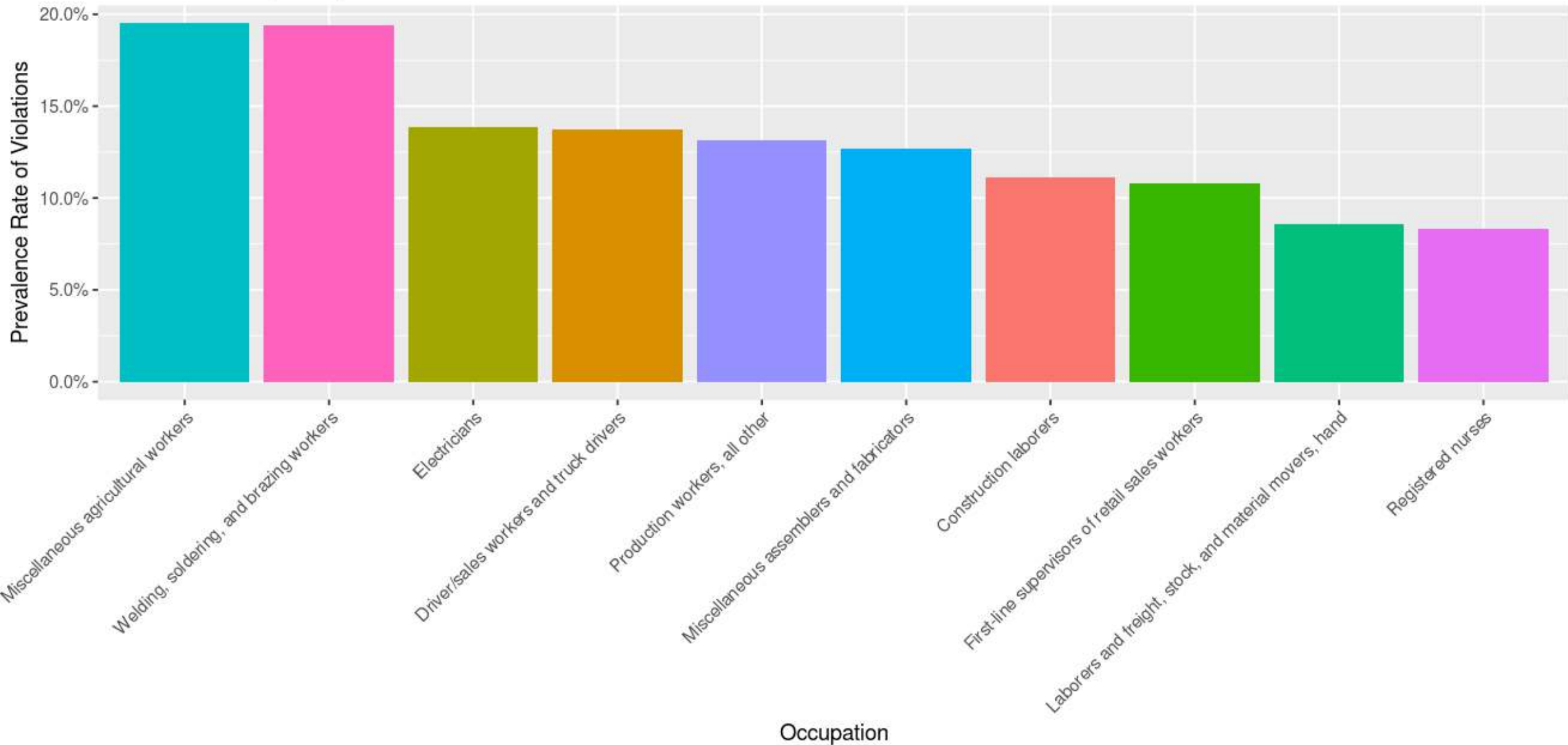
Estimates of Prevalence of FLSA Violations in 2018 for Minimum Wage

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

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