

Data analysis in R

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https://economic.github.io/data_bootcamp/

1. Review of R basics
2. Inflation adjust minimum wage data
3. Calculate shares of workers affected by minimum wage

1. Calculations, functions, objects
2. Packages
3. rstudio basics

Ohio raised its minimum wage in 2007 and indexed to inflation.

Goal: calculate and create a figure of inflation-adjusted Ohio minimum wage since 1970s.

Minimum wage data:

[*https://github.com/benzipperer/historicalminwage/releases*](https://github.com/benzipperer/historicalminwage/releases)

Inflation data:

[*https://www.bls.gov/cpi/research-series/r-cpi-u-rs-home.htm*](https://www.bls.gov/cpi/research-series/r-cpi-u-rs-home.htm)

Convert 1978 minimum wage to 2021 dollars

The 1978 wage in 1978 dollars:

$$\text{wage}_{1978} = 2.65$$

The 1978 wage in 2021 dollars

$$= \text{wage}_{1978} \times \frac{\text{CPI}_{2021}}{\text{CPI}_{1978}} = 2.65 \times \frac{399.0}{104.4} = 10.13$$

Every ggplot has three components

1. data
2. aesthetic mapping
3. geoms and other layers

```
ggplot(data, aes(x = xvar, y = yvar)) +  
  geom_line()
```

Who earns near the minimum wage?

Goal: calculate how many Ohio workers earn near actual/hypothetical minimum wage.

CPS ORG data: [*https://microdata.epi.org/*](https://microdata.epi.org/)

- ggplot book: [*https://ggplot2-book.org/*](https://ggplot2-book.org/)
- R for data science: [*https://r4ds.had.co.nz/*](https://r4ds.had.co.nz/)