

PSC 400

SYRACUSE UNIVERSITY

DATA ANALYTICS FOR POLITICAL SCIENCE

CAUSALITY AND SINGLE VARIABLES

ASSIGNMENTS

- **Review Exercise 0 due today**
 - try to do it ASAP if you haven't yet
- **Problem Set 1 due on Friday**
- **Review Exercise 1 due Friday**
 - good idea to do it by Wednesday

REVIEW

- **Causal effect, counterfactual**

CODE REVIEW

```
resume$call[resume$race=="black"]
```

```
resume.black <- resume[resume$race=="black",]
```

```
resume.notblack <- resume[resume$race!="black",]
```

```
resume.black.and.woman <-  
resume[resume$race=="black" & resume$sex=="female",]
```

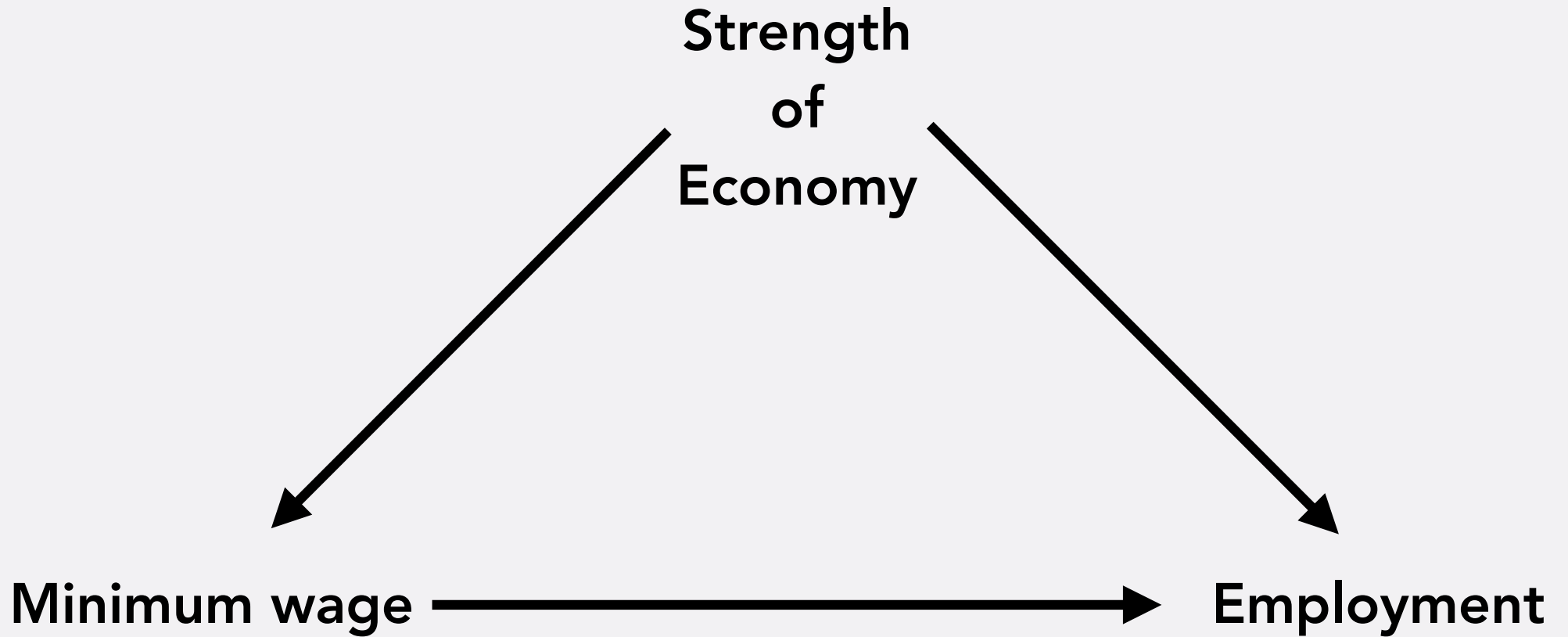
```
resume.black.or.woman <- resume[resume$race=="black"  
| resume$sex=="female",]
```

```
resume$black.woman <- ifelse(resume$race=="black" &  
resume$sex=="female", 1, 0)
```

CAUSALITY

Minimum wage  **Employment**

CAUSALITY



IN-CLASS EXERCISE

Table 2.5. Minimum-Wage Study Data.

<i>Variable</i>	<i>Description</i>
chain	name of the fast-food restaurant chain
location	location of the restaurants (centralNJ, northNJ, PA, shoreNJ, southNJ)
wageBefore	wage before the minimum-wage increase
wageAfter	wage after the minimum-wage increase
fullBefore	number of full-time employees before the minimum-wage increase
fullAfter	number of full-time employees after the minimum-wage increase
partBefore	number of part-time employees before the minimum-wage increase
partAfter	number of part-time employees after the minimum-wage increase

- minwage.csv

IN-CLASS EXERCISE

Table 2.5. Minimum-Wage Study Data.

Variable	Description
chain	name of the fast-food restaurant chain
location	location of the restaurants (centralNJ, northNJ, PA, shoreNJ, southNJ)
wageBefore	wage before the minimum-wage increase
wageAfter	wage after the minimum-wage increase
fullBefore	number of full-time employees before the minimum-wage increase
fullAfter	number of full-time employees after the minimum-wage increase
partBefore	number of part-time employees before the minimum-wage increase
partAfter	number of part-time employees after the minimum-wage increase

- What is the average wage in in the different locations *before/after* the minimum wage increase?
 - use `tapply`

IN-CLASS EXERCISE

Table 2.5. Minimum-Wage Study Data.

Variable	Description
chain	name of the fast-food restaurant chain
location	location of the restaurants (centralNJ, northNJ, PA, shoreNJ, southNJ)
wageBefore	wage before the minimum-wage increase
wageAfter	wage after the minimum-wage increase
fullBefore	number of full-time employees before the minimum-wage increase
fullAfter	number of full-time employees after the minimum-wage increase
partBefore	number of part-time employees before the minimum-wage increase
partAfter	number of part-time employees after the minimum-wage increase

- What is the average wage in PA and NJ *before/after* the minimum wage increase?
- What is the share of restaurants that did not pay \$5.05 *before* the minimum wage increase in PA and NJ?
 - less than: < less of equal than: <=

IN-CLASS EXERCISE

Table 2.5. Minimum-Wage Study Data.

Variable	Description
chain	name of the fast-food restaurant chain
location	location of the restaurants (centralNJ, northNJ, PA, shoreNJ, southNJ)
wageBefore	wage before the minimum-wage increase
wageAfter	wage after the minimum-wage increase
fullBefore	number of full-time employees before the minimum-wage increase
fullAfter	number of full-time employees after the minimum-wage increase
partBefore	number of part-time employees before the minimum-wage increase
partAfter	number of part-time employees after the minimum-wage increase

- What is the proportion of full-time employees in PA and NJ *before/after* the minimum wage increase?