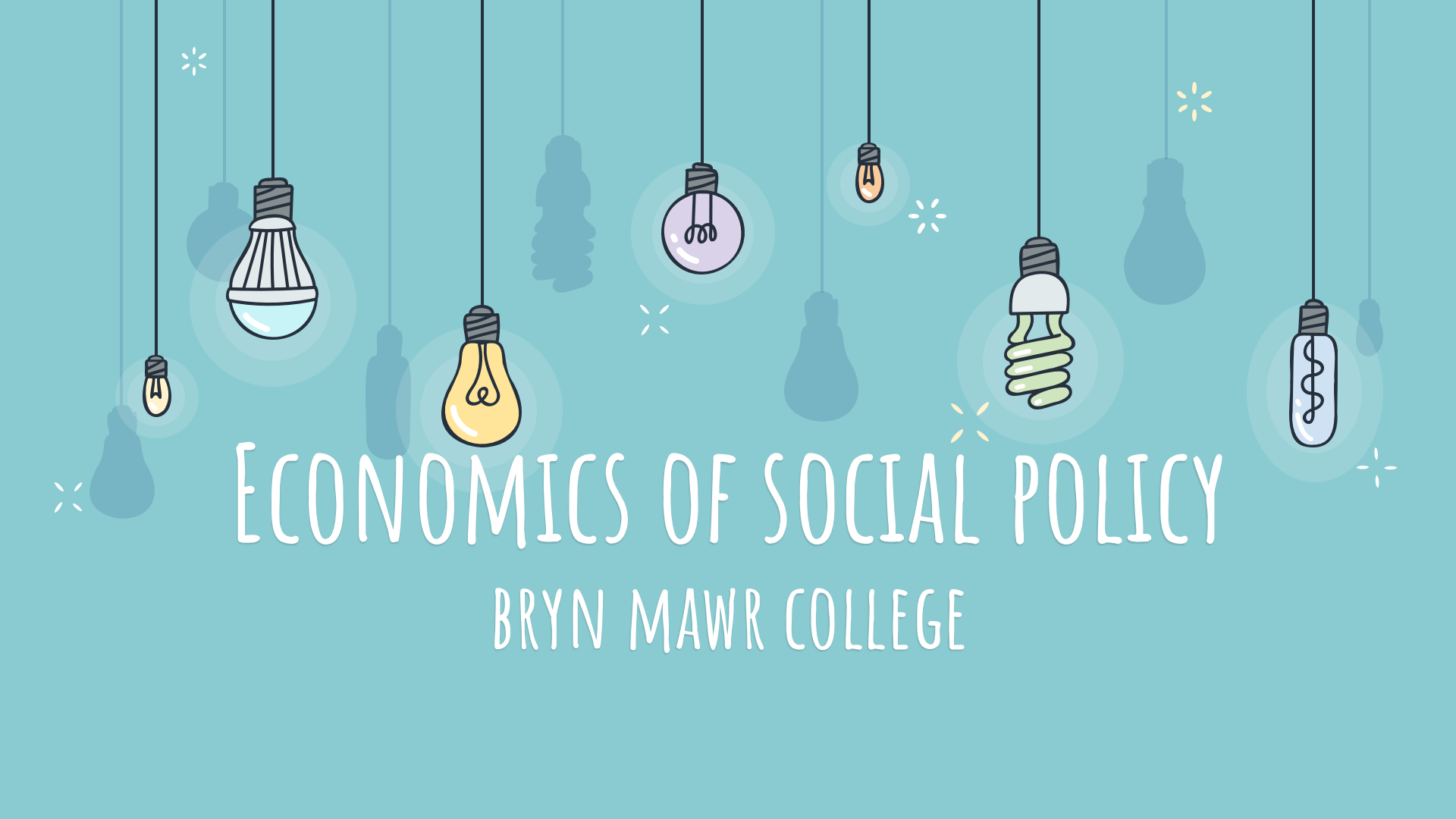




ECONOMICS OF SOCIAL POLICY

BRYN MAWR COLLEGE

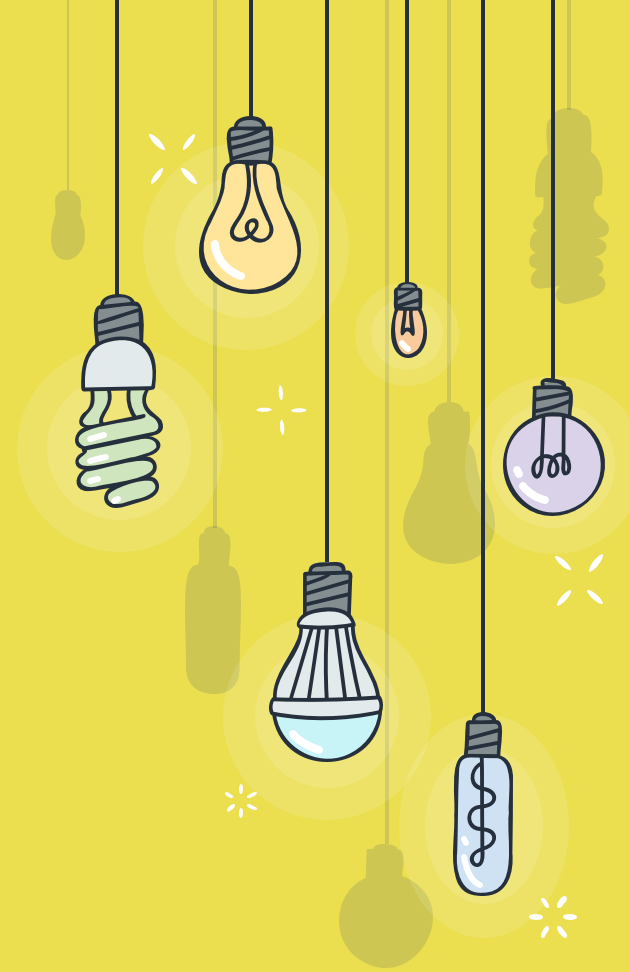
1

LET'S START WITH INTRO TO ECON REVIEW



“ what is your definition of
“Economics”?

It is the study of





ECONOMICS APPLIES TO ALL OF
HUMAN BEHAVIOR!



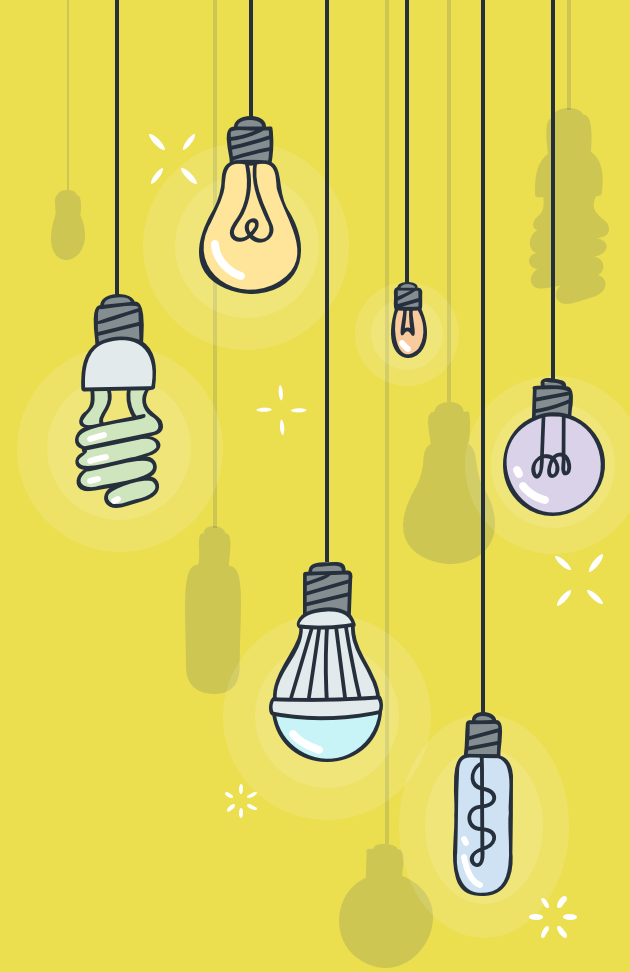
2

WHAT IS ECONOMIC RESEARCH?



“Theoretical” vs “Empirical” component

- ✦ Empirical analysis: Economists sought to estimate **causal** effects with quantitative data
- ✦ Investigating “What causes what” solves a lot of social problems and inform policy makers when designing policies



EXAMPLES OF ECONOMIC RESEARCH QUESTIONS

- ✦ ✦ Does a higher minimum wage increase unemployment?
- ✦ ✦ Does getting food stamp when you are in your mother's womb improve your health at birth?
- ✦ ✦ If the maternity leave is "paid" (rather than "unpaid"), does it improve infant's health? Parent's health? Mother's labor market outcomes?
- ✦ ✦ Whether you are relatively older (vs younger) compared to your classmates affects your grades?
- ✦ ✦ If health care is free, would it lead to better population health?
- ✦ ✦ To induce more use of reusable bag and less use of disposable bag, do we want to incorporate "carrot" (aka bonuses) or "stick" (aka taxes)?
- ✦ ✦ What happens in your later-life wellbeing if you are denied an abortion?



3

CORRELATION VS CAUSATION

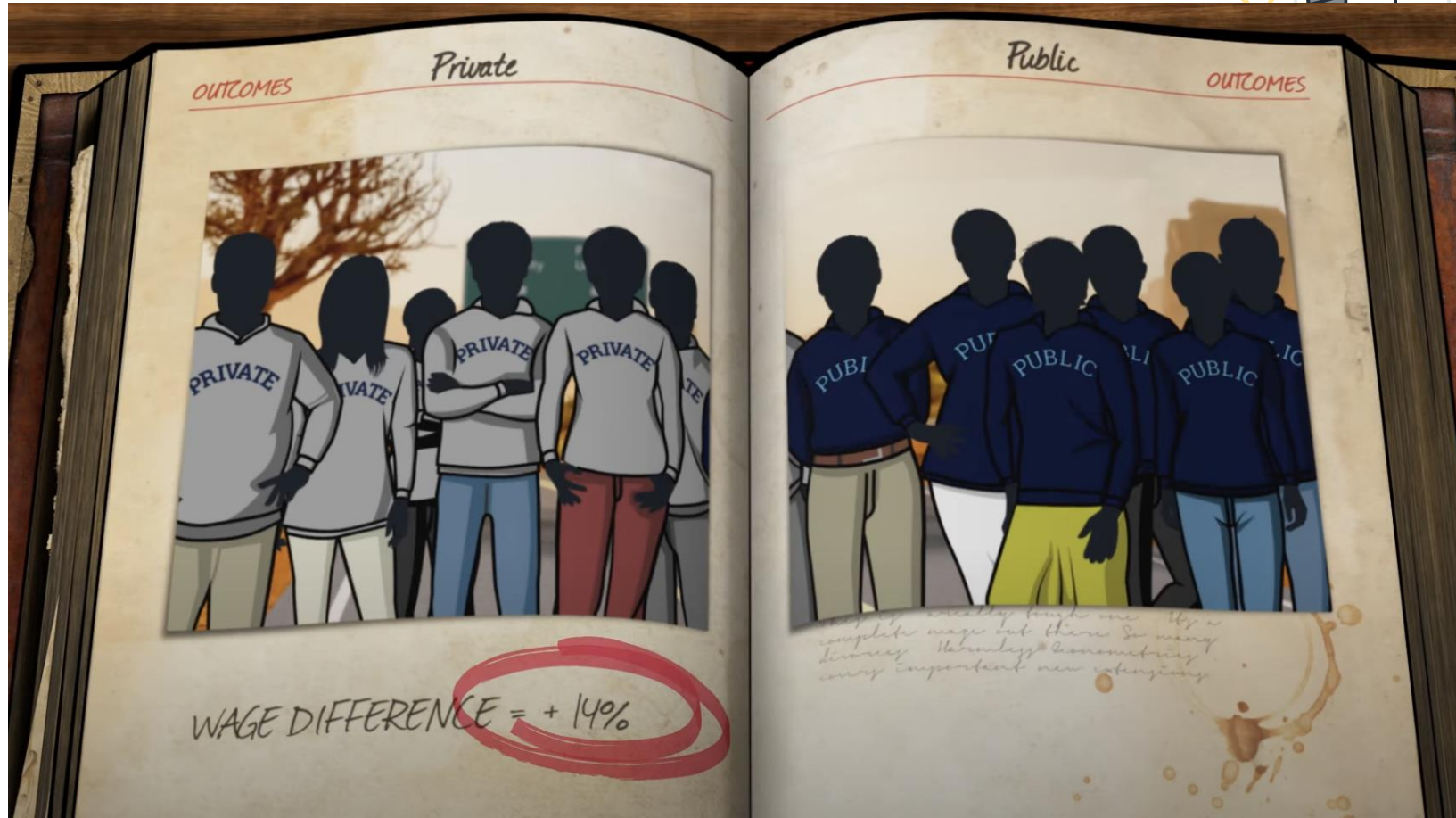


CORRELATION DOES NOT MEAN CAUSALITY

- ✦ + When the rooster crows, the sun rises
 - ✕ But we know the rooster didn't cause the sun to rise
 - ✕ Had the rooster been eaten by the farmer's cat, the sun still would have risen.
 - ✕ It is a simple correlation, not causation
- ✦ + Finding an association between two variables might be suggestive of a causal effect, but it also might not



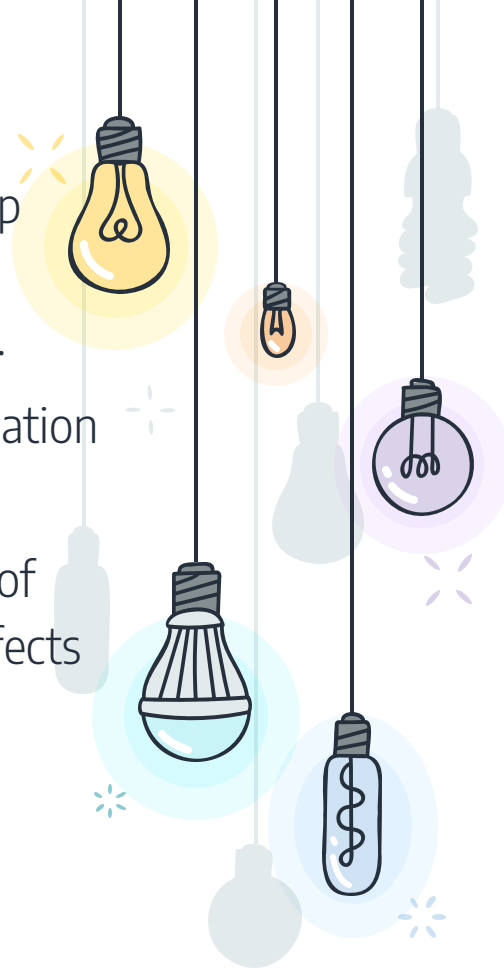
COLLEGE CHOICE AND YOUR FUTURE SALARY



OPTIMIZATION MAKES EVERYTHING ENDOGENOUS

✧ Correlations are almost certainly not reflecting a causal relationship because the variables were _____ chosen by people who were making decisions they thought were best while facing constraints.

- ✧ People choose certain things, which created a spurious correlation with other things
- ✧ A correlation must be based on a choice that was _____ of the potential outcomes in order to be a measure of **causal** effects





CONFOUNDERS

+ Ceteris Paribus

= Holding other things equal

+ Selection Bias

Bias is introduced by the selection of individuals in such a way that proper randomization is not achieved (Not apple-to-apple comparison)

+ Omitted Variable Bias

When a statistical model leaves out some relevant variables and biases the results (mostly unobservable characteristics)



GROUP ACTIVITY: FIND ANY CONFOUNDERS THAT MAKE THE FOLLOWING STATEMENT UNLIKELY TO BE CAUSAL

Confounders: unmeasured factors that may actually influence a certain outcome

- × Obtaining higher education leads to better health
- × Social media makes people more depressive
- × People who drink red wine have lower rates of heart disease than people who drink beer
- × Exposure to extreme heat during pregnancy leads to negative birth outcomes
- × Participation in SNAP (Food Stamp Program) improves food security



IDENTIFYING THE EFFECTS OF SNAP ON FOOD SECURITY


$$\text{Food Security} = \alpha + \beta \text{SNAP} + \gamma X + u$$

- + Selection Bias: Are people randomly assigned to SNAP (aka Food stamp program)?
 - × Eligible person A who selects himself into SNAP vs eligible person B who doesn't participate in SNAP
 - × The unobserved characteristics that is associated with SNAP participation could cause outcome to change, not SNAP itself.
 - ◆ Person A could be in more need of food assistance, more at a lower income side,
 - × It is likely that you will get the sign of β to be _____, due to this spurious relationship between SNAP and unobserved characteristics of participants.

4

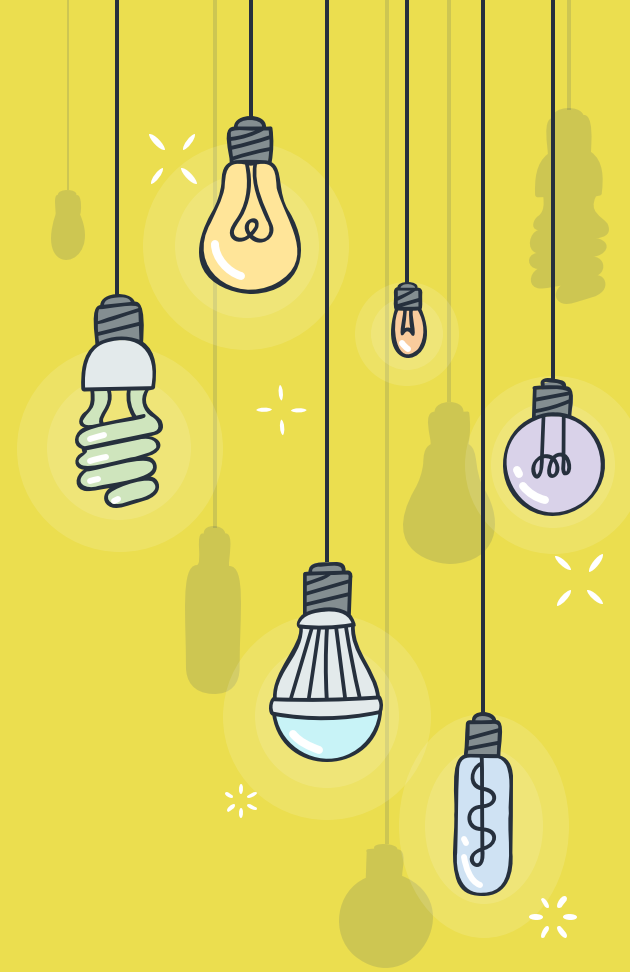
CAUSAL INFERENCE



“ Best weapon for estimating causal effects is....

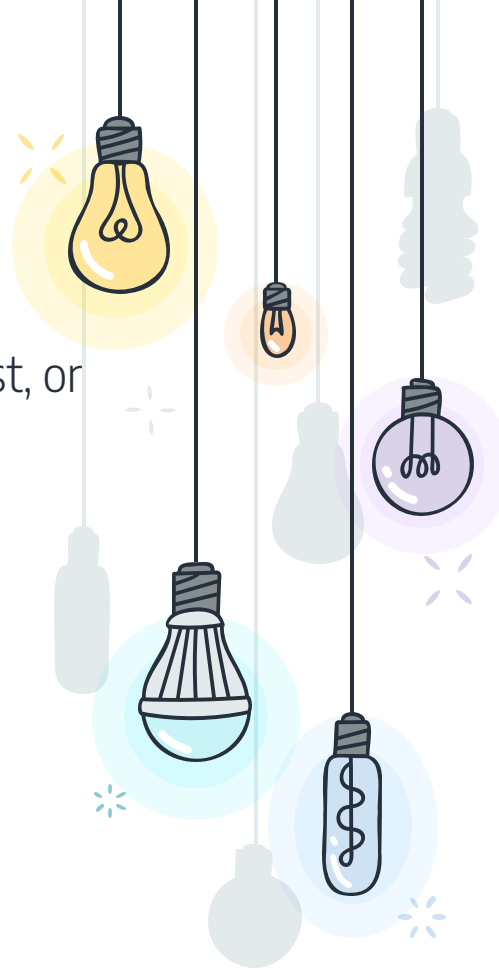
Randomized Control Trial

But it is costly, takes long time, sometimes not ethical!



TWO TYPES OF DATA

- ✦ + Experimental data
 - ✕ Collected in a laboratory environment
 - ✕ Hard to obtain data like this due to feasibility, financial cost, or moral objections.
- ✦ + Non-experimental data (i.e. observational data)
 - ✕ Collected through surveys in a retrospective manner
 - ✕ By-product of some business activity (“big data”)



GROUP ACTIVITY: DESIGN YOUR OWN EXPERIMENT



- + You want to study the **effects of electronic devices usage on learning in college**. Design your own randomized experiment as carefully as possible, such that you can find the causal estimates of the effects
 - × How are you going to measure students' "learning"?
 - × Which class will you experiment on?
 - × Class size, instruction type, class time
 - × Which characteristics to balance



5

WHERE DOES CAUSAL INFERENCE FIT IN THIS CLASS?



ECONOMICS OF SOCIAL POLICY

- ✧ Economics allows us to determine the costs and benefits of social policies
 - ✕ Cash benefits, unemployment insurance, health insurance, student loan forgiveness, abortion ban, etc.
- + Policies affect the behavior of individuals, families, firms
- + We ultimately want to know how policy is likely to affect behavior by understanding how the policy changes individual's decisions and what collective outcomes these myriad individual decisions bring about
- + Causal inference is used to quantify the effects of social policy on a myriad of outcomes
- + Also to measure any unintended consequences of the policy
 - ✕ E.g.) A universal basic income

