

Studying Social Inequality with Data Science

INFO 3370 / 5371
Spring 2023

Causal Estimators:

Parametric estimation with OLS

Learning goals for today

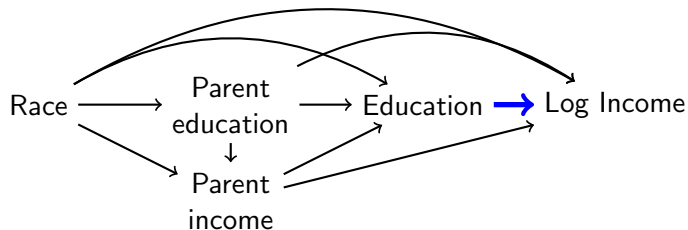
By the end of class, you will be able to

- ▶ Estimate causal effects parametrically with OLS

Data

We will examine the effect of education on log income using the data from the [PSID Prediction Challenge](#)

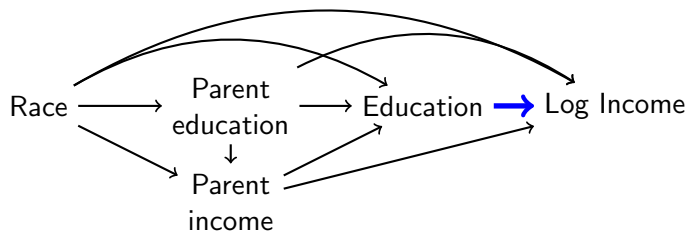
Assume this causal DAG:



Ultimately, we will adjust for race, parent education, and parent income

Model-based adjustment

1. fit a model to predict the outcome
2. create two new data frames
 - ▶ with education set to college
 - ▶ with education set to high school
3. predict the outcome under each treatment
4. difference
5. average over all the people



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