

Research questions

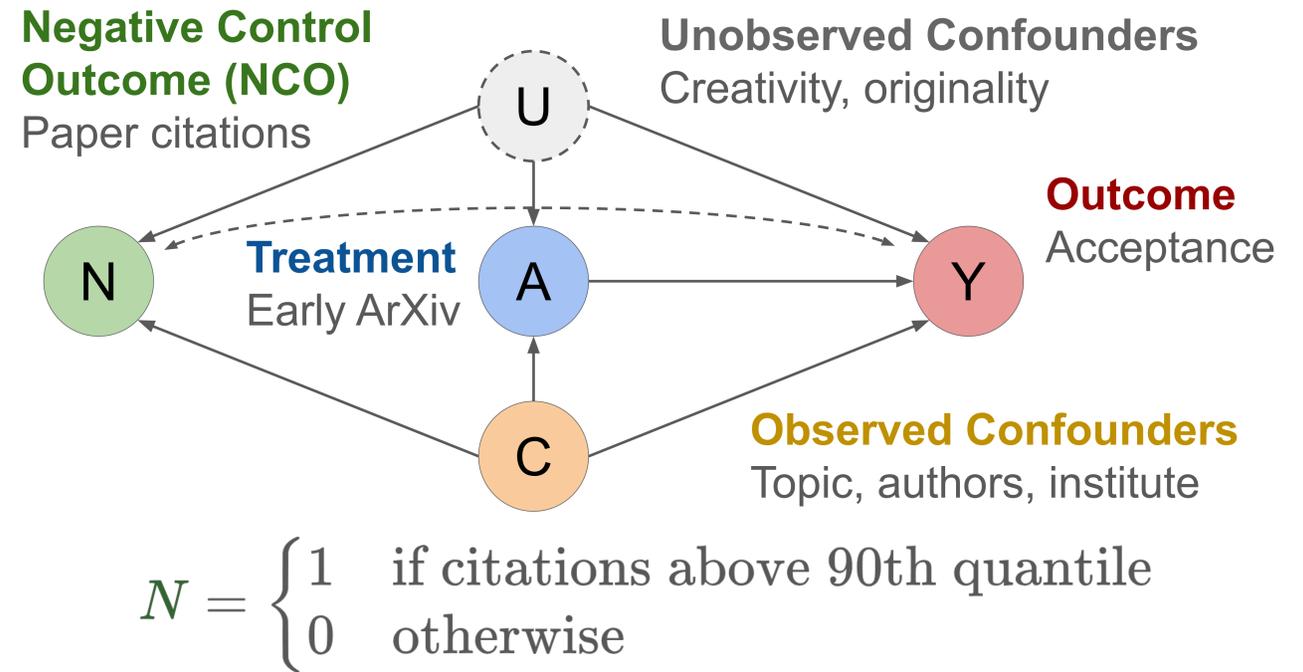
- Does early arXiving affect likelihood of a *paper's acceptance* at a conference?
- If so, does this effect vary based on *researcher characteristics* (e.g., host institution, citation count)?

Dataset

ICLR papers between 2018-2022

Paper characteristics	Author / institute characteristics
- Number of tables and figures	- Author citation count
- Paper topic	- Number of non-male authors
- ...	- ...

Causal Graph



Causal effect estimation

Matched sample Each paper in treatment group ($A = 1$) is matched on C with a paper in control group ($A = 0$).

Estimation target $ATET = \mathbb{E}[Y_{A=1} - Y_{A=0} | A = 1]$

Difference-in-differences

$$ATET = \mathbb{E}[Y_{A=1} - N_{A=1}] - \mathbb{E}[Y_{A=0} - N_{A=0}]$$

Expectation via logistic regression

$$\widehat{ATET} = \sum_{i:A_i=1} [\sigma(w_Y^T c_i) - \sigma(w_N^T c_i)] - \sum_{i:A_i=0} [\sigma(w_Y^T c_i) - \sigma(w_N^T c_i)]$$

Unadjusted estimate $\widetilde{ATET} = \sum_{i:A_i=1} [\sigma(w_Y^T c_i)] - \sum_{i:A_i=0} [\sigma(w_Y^T c_i)]$

Results

