

$$\log(\text{wage}) = \beta_0 + \beta_1 \text{educ} + u$$

$$\hat{\beta}_1 (\text{OLS}) = 0.109$$

$$\hat{\beta}_1 (\text{IV}) = 0.059$$

② regress y (wage) on \hat{x} ($\hat{\text{educ}}$)

$\hat{\beta}_1 (\text{IV})$ using two-stage LS

$$= 0.059$$

Two-stage LS

① regress x (educ) on z (feduc) → predicted value

$\hat{\text{educ}}$