

Ch: 15 Instrumental Variables

$$y = \beta_0 + \beta_1 x + u$$

$x \times u$: correlated

$\rightarrow$ endog. $\Rightarrow$ OLS is biased

Suppose there is a variable z corr. w/ x
uncorr. w/ u

z only affects y via x

then we may still be able to estimate β_1 .

wage
grade

educ
charter

grade

$$= \beta_0 + \beta_1 \text{attendance} + u$$

e.g. z = distance from school

charter lottery

compulsory schooling laws