Typical framework

Y	X	U
dependent var.	indep. var.	unobserved
wage	educ.	ability
productivity	experts	managerial quality

Random variables :

have probability distributions

expected values

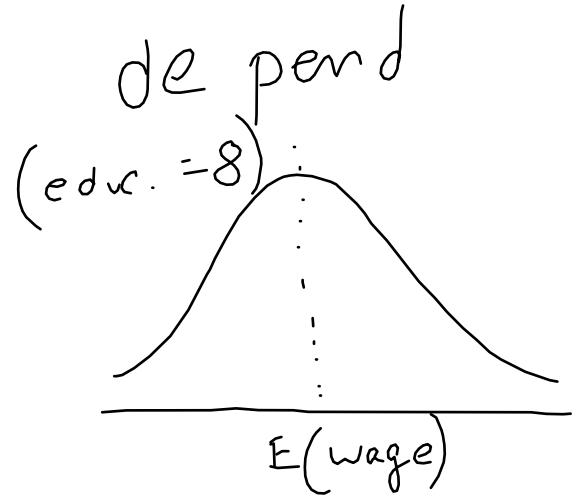
variances

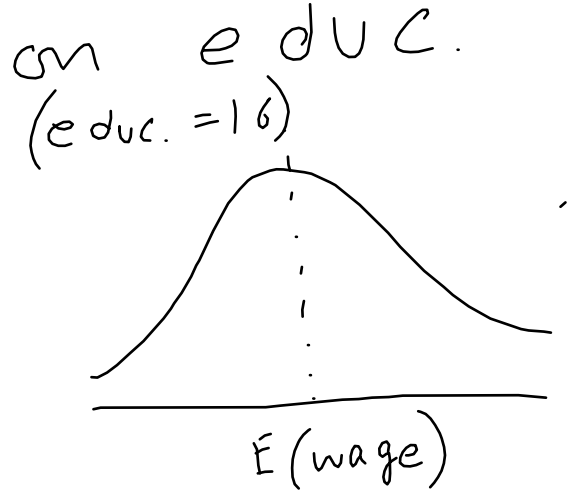
E(wage) : expected value of wage

V(wage) : variance of wage

$E(wage)$ may depend on educ.

$E(wage \mid educ = 8)$





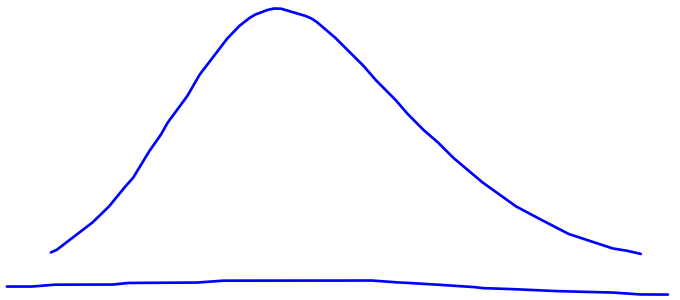
conditional on (given)

$E(wage \mid educ = 16)$

$V(wage)$ may depend on educ.

$V(wage \mid educ = 8)$

$V(wage \mid educ = 16)$



E (productivity) may depend on exports.

V (prod.) "

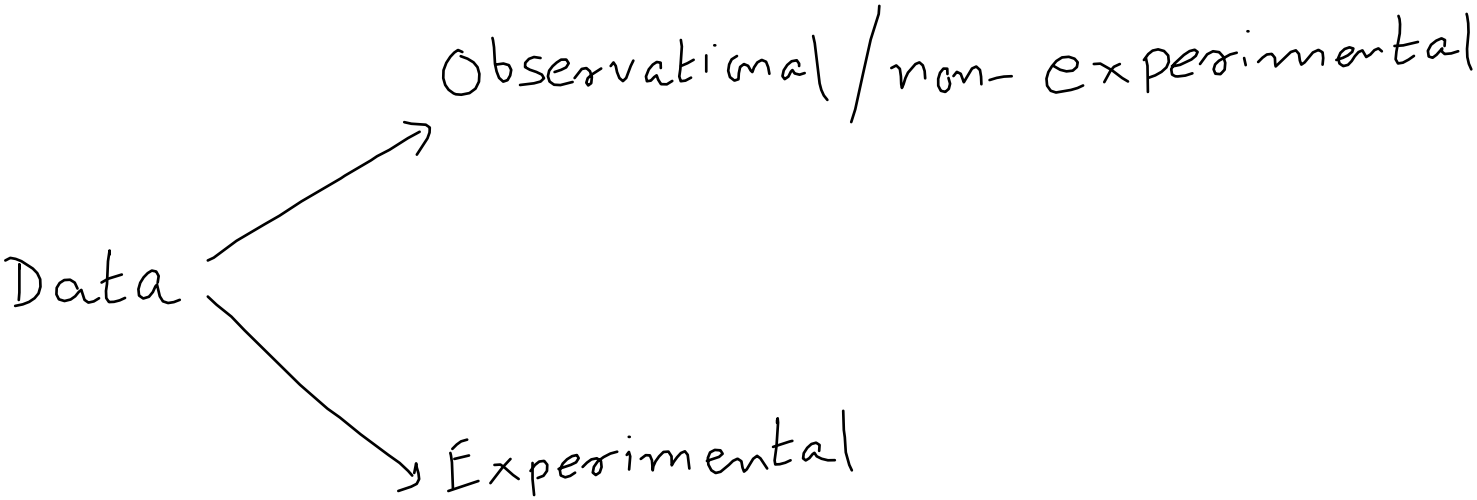
E (Y) " ×

V (Y) " ×

Econometrics : not just

- economic statistics
- " theory
- applic^{n} of math to econ.
- machine learning

combination


Observational / non- experimental
Data
Experimental