Ch 7 Dummy / binary indep var

y	x	u
trade / env performance	trade / env agreement	political preferences
wage	marital status	work ethic, reliability

Single dummy variable

$$y = \beta_0 + \delta_0 x + u$$

x ↓ 0/1

$$E(y|x) = \beta_0 + \delta_0 x$$

effect of $x=1$ rel to $x=0$ (base/reference group)

$$\Rightarrow \delta_0 = E(y|x=1) - E(y|x=0)$$

$$\hat{\delta}_0 = \bar{y}_{x=1} - \bar{y}_{x=0}$$

$$= \overline{wage}_{marr} - \overline{wage}_{not\ marr}$$

if $y \rightarrow$ wage

$x \rightarrow 1$ for marr

0 o w

$$y = \beta_0 + \beta_1 x_1 + \delta_0 x_2 + u$$

x_2 → 0/1

if y wage, x_1 educ, x_2 1 for marr, 0 o w

$$E(y \mid x_1, x_2) = \beta_0 + \beta_1 x_1 + \delta_0 x_2$$

$$\delta_0 = E(y \mid x_1, x_2 = 1) - E(y \mid x_1, x_2 = 0)$$

effect of $x_2 = 1$ rel to $x_2 = 0$ after controlling for x_1

→ base / reference group