

FEMALE, MARRIED

FEMALE, UNMARRIED

MALE, MARRIED

MALE, UNMARRIED

options

$\beta_0, \beta_1, \beta_2, \beta_3$   
C, FEM, MAR, FEM.MAR

$\alpha_0, \alpha_1, \alpha_2, \alpha_3$   
FEMMAR, FEMUNM, MALMAR, MALUNM

$$\text{FEM \& MAR: } \alpha_0 = \beta_0 + \beta_1 + \beta_2 + \beta_3$$

$$\text{FEM \& UNM: } \alpha_1 = \beta_0 + \beta_1$$

$$\text{MAL \& MAR: } \alpha_2 = \beta_0 + \beta_2$$

$$\text{MAL \& UNM: } \alpha_3 = \beta_0$$

$$\left. \begin{aligned} &= \gamma_0 + \gamma_2 \\ &= \gamma_0 + \gamma_3 \\ &= \gamma_1 + \gamma_2 \\ &= \gamma_1 + \gamma_3 \end{aligned} \right\} \begin{aligned} &= \omega_0 + \omega_1 + \omega_2 + \omega_3 \\ &= \omega_0 + \omega_1 \\ &= \omega_1 + \omega_2 \\ &= \omega_1 \end{aligned}$$

$\gamma_0, \gamma_1, \gamma_2, \gamma_3$   
FEM, MAL, MAR, UNMAR

Perf Colinearity

"Effect of Female":

$$\frac{\Delta Y}{\Delta \text{GEN}} (\text{MAL} \rightarrow \text{FEM}) = \beta_1 + \beta_3 \text{ MAR} = (\alpha_1 - \alpha_3) \text{ MAR} = (\omega_1 - \omega_3) \text{ MAR}$$

$$= \omega_0 - \omega_1 \} \text{ ?}$$

↳ not function of marital status

Need some:  $\omega_0, \omega_1, \omega_2, \omega_3$   
FEM, MAL, MAR, FEMMAR

$$\frac{\Delta Y}{\Delta \text{GEN}} (\text{MAL} \rightarrow \text{FEM}) = (\omega_0 - \omega_1) + \omega_3 \times \text{MAR}$$