

25LS

$$y_i = \alpha + \beta z_i + \gamma x_i + u_i, \quad i=1, \dots, N$$

z_i and u_i are correlated

Regress $z_i = a + b x_i + c q_i + d r_i + v_i$

q_i and r_i not correlated with u_i

$$\hat{z}_i = \hat{a} + \hat{b} x_i + \hat{c} q_i + \hat{d} r_i$$

$$z_i = \hat{z}_i + \hat{M}_i$$

Second stage

regress $y_i = \alpha + \beta \hat{z}_i + \gamma x_i + u_i + \underbrace{\beta \hat{M}_i}$

$\hat{\alpha}$ is consistent