Then,

 $\beta_{2SLS} = -$

 $Eig[\omega_iig(ar{Y}_i(1) - ar{Y}_i(0)ig)ig] + Eig[\sum_{j=1}^J \lambda_jig(p_j - pig)\gamma_{ij}ig]$

 $E[\omega_i]$

 $\sum_{j=1}^{J} \lambda_j (p_j - p)^2$