

The LISREL Structural Equation Model

$$\underset{(m \times 1)}{\eta} = \underset{(m \times m)}{\beta} \underset{(m \times 1)}{\eta} + \underset{(m \times n)}{\Gamma} \underset{(n \times 1)}{\xi} + \underset{(m \times 1)}{\zeta}$$

$$\underset{(p \times 1)}{y} = \underset{(p \times m)}{\Lambda_y} \underset{(m \times 1)}{\eta} + \underset{(p \times 1)}{\varepsilon}$$

$$\underset{(q \times 1)}{X} = \underset{(q \times n)}{\Lambda_x} \underset{(n \times 1)}{\xi} + \underset{(q \times 1)}{\delta}$$

$\xi \sim N(0, \Phi)$, $\zeta \sim N(0, \Psi)$, $\varepsilon \sim N(0, \Theta_\varepsilon)$, $\delta \sim N(0, \Theta_\delta)$

β , Γ , Λ_y and Λ_x constants with diagonal of β zero

η : Vector of latent endogenous variables

ξ : Vector of latent exogenous variables

y : Vector of observed indicators for η

x : Vector of observed indicators for ξ

ζ , ε and δ : Error terms (independent of one another)