

IDV

$$\sigma^2 \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

1 variance parameter (σ^2)

0 correlation parameters (ρ)

Initialisation order: σ^2

IDH (DIAG)

$$\begin{bmatrix} \sigma_A^2 & 0 & 0 & 0 \\ 0 & \sigma_B^2 & 0 & 0 \\ 0 & 0 & \sigma_C^2 & 0 \\ 0 & 0 & 0 & \sigma_D^2 \end{bmatrix}$$

n variance parameters (σ^2)

0 correlation parameters (ρ)

Initialisation order: $\sigma_A^2, \sigma_B^2, \sigma_C^2, \sigma_D^2$

CORV

$$\sigma^2 \begin{bmatrix} 1 & \rho & \rho & \rho \\ \rho & 1 & \rho & \rho \\ \rho & \rho & 1 & \rho \\ \rho & \rho & \rho & 1 \end{bmatrix}$$

1 variance parameter (σ^2)

1 correlation parameter (ρ)

Initialisation order: ρ, σ^2

CORH

$$\begin{bmatrix} \sigma_A^2 & \rho\sigma_A\sigma_B & \rho\sigma_A\sigma_C & \rho\sigma_A\sigma_D \\ \rho\sigma_A\sigma_B & \sigma_B^2 & \rho\sigma_B\sigma_C & \rho\sigma_B\sigma_D \\ \rho\sigma_A\sigma_C & \rho\sigma_B\sigma_C & \sigma_C^2 & \rho\sigma_C\sigma_D \\ \rho\sigma_A\sigma_D & \rho\sigma_B\sigma_D & \rho\sigma_C\sigma_D & \sigma_D^2 \end{bmatrix}$$

n variance parameters (σ^2)

1 correlation parameter (ρ)

Initialisation order: $\rho, \sigma_A^2, \sigma_B^2, \sigma_C^2, \sigma_D^2$

CORGV

$$\sigma^2 \begin{bmatrix} 1 & \rho_{AB} & \rho_{AC} & \rho_{AD} \\ \rho_{AB} & 1 & \rho_{BC} & \rho_{BD} \\ \rho_{AC} & \rho_{BC} & 1 & \rho_{CD} \\ \rho_{AD} & \rho_{BD} & \rho_{CD} & 1 \end{bmatrix}$$

1 variance parameter (σ^2)

n(n - 1)/2 correlation parameters (ρ)

Initialisation order:

$\rho_{AB}, \rho_{AC}, \rho_{AD}, \rho_{BC}, \rho_{BD}, \rho_{CD}, \sigma^2$

CORGH

$$\begin{bmatrix} \sigma_A^2 & \rho_{AB}\sigma_A\sigma_B & \rho_{AC}\sigma_A\sigma_C & \rho_{AD}\sigma_A\sigma_D \\ \rho_{AB}\sigma_A\sigma_B & \sigma_B^2 & \rho_{BC}\sigma_B\sigma_C & \rho_{BD}\sigma_B\sigma_D \\ \rho_{AC}\sigma_A\sigma_C & \rho_{BC}\sigma_B\sigma_C & \sigma_C^2 & \rho_{CD}\sigma_C\sigma_D \\ \rho_{AD}\sigma_A\sigma_D & \rho_{BD}\sigma_B\sigma_D & \rho_{CD}\sigma_C\sigma_D & \sigma_D^2 \end{bmatrix}$$

n variance parameters (σ^2)

n(n - 1)/2 correlation parameters (ρ)

Initialisation order:

$\rho_{AB}, \rho_{AC}, \rho_{AD}, \rho_{BC}, \rho_{BD}, \rho_{CD}, \sigma_A^2, \sigma_B^2, \sigma_C^2, \sigma_D^2$

US

$$\begin{bmatrix} \sigma_A^2 & \sigma_{AB} & \sigma_{AC} & \sigma_{AD} \\ \sigma_{AB} & \sigma_B^2 & \sigma_{BC} & \sigma_{BD} \\ \sigma_{AC} & \sigma_{BC} & \sigma_C^2 & \sigma_{CD} \\ \sigma_{AD} & \sigma_{BD} & \sigma_{CD} & \sigma_D^2 \end{bmatrix}$$

$n(n + 1)/2$ variance parameters (σ^2)

0 correlation parameters (ρ)

Initialisation order: $\sigma_A^2, \sigma_{AB}, \sigma_B^2, \sigma_{AC}, \sigma_{BC}, \sigma_C^2, \sigma_{AD}, \sigma_{BD}, \sigma_{CD}, \sigma_D^2$

RR(1)

$$\begin{bmatrix} \ell_A \\ \ell_B \\ \ell_C \\ \ell_D \end{bmatrix} [\ell_A \quad \ell_B \quad \ell_C \quad \ell_D]$$

n factor loadings (ℓ)

0 specific variances (ψ)

Initialisation order: $\ell_A, \ell_B, \ell_C, \ell_D$

RR(2)

$$\begin{bmatrix} \ell_{1A} & \ell_{2A} \\ \ell_{1B} & \ell_{2B} \\ \ell_{1C} & \ell_{2C} \\ \ell_{1D} & \ell_{2D} \end{bmatrix} \begin{bmatrix} \ell_{1A} & \ell_{1B} & \ell_{1C} & \ell_{1D} \\ \ell_{2A} & \ell_{2B} & \ell_{2C} & \ell_{2D} \end{bmatrix}$$

$2n$ factor loadings (ℓ)

0 specific variances (ψ)

Initialisation order:

$\ell_{1A}, \ell_{1B}, \ell_{1C}, \ell_{1D}, \ell_{2A}, \ell_{2B}, \ell_{2C}, \ell_{2D}$

FA(1)

$$\begin{bmatrix} \ell_A \\ \ell_B \\ \ell_C \\ \ell_D \end{bmatrix} [\ell_A \quad \ell_B \quad \ell_C \quad \ell_D] + \begin{bmatrix} \psi_A & 0 & 0 & 0 \\ 0 & \psi_B & 0 & 0 \\ 0 & 0 & \psi_C & 0 \\ 0 & 0 & 0 & \psi_D \end{bmatrix}$$

n factor loadings (ℓ)

n specific variances (ψ)

Initialisation order:

$\psi_A, \psi_B, \psi_C, \psi_D, \ell_A, \ell_B, \ell_C, \ell_D$ (for FA)

$\ell_A, \ell_B, \ell_C, \ell_D, \psi_A, \psi_B, \psi_C, \psi_D$ (for FACV and SFA)

FA(2)

$$\begin{bmatrix} \ell_{1A} & \ell_{2A} \\ \ell_{1B} & \ell_{2B} \\ \ell_{1C} & \ell_{2C} \\ \ell_{1D} & \ell_{2D} \end{bmatrix} \begin{bmatrix} \ell_{1A} & \ell_{1B} & \ell_{1C} & \ell_{1D} \\ \ell_{2A} & \ell_{2B} & \ell_{2C} & \ell_{2D} \end{bmatrix} + \begin{bmatrix} \psi_A & 0 & 0 & 0 \\ 0 & \psi_B & 0 & 0 \\ 0 & 0 & \psi_C & 0 \\ 0 & 0 & 0 & \psi_D \end{bmatrix}$$

$2n$ factor loadings (ℓ)

n specific variances (ψ)

Initialisation order:

$\psi_A, \psi_B, \psi_C, \psi_D, \ell_{1A}, \ell_{1B}, \ell_{1C}, \ell_{1D}, \ell_{2A}, \ell_{2B}, \ell_{2C}, \ell_{2D}$ (for FA)

$\ell_{1A}, \ell_{1B}, \ell_{1C}, \ell_{1D}, \ell_{2A}, \ell_{2B}, \ell_{2C}, \ell_{2D}, \psi_A, \psi_B, \psi_C, \psi_D$ (for FACV and SFA)