

Initialize coefficients:

$$\Lambda = \mathbf{0} \text{ and } \Xi = \mathbf{0}$$

Compute negative partial derivatives of $l(\mu, \sigma)$ w.r.t. to μ and σ
(see Eq. 20)

Find the predictor variable X_j with the highest correlation to r and Z_k with the highest correlation to s :

$$j_* = \operatorname{argmax}_j \rho(X_j, r) \text{ and}$$

$$k_* = \operatorname{argmax}_k \rho(Z_k, s)$$

Tentatively update coefficients:

$$\Lambda^* = \Lambda \text{ and } \Xi^* = \Xi, \text{ with}$$

$$\Lambda_{j^*}^* = \Lambda_{j^*} + \nu \rho(X_{j^*}, r) \text{ and}$$

$$\Xi_{k^*}^* = \Xi_{k^*} + \nu \rho(Z_{k^*}, s)$$

Really update the coefficient that improves the current fit most.

if $l(X^T \Lambda^*, \sigma) < l(\mu, Z^T \Xi^*)$

yes

Set $\Lambda = \Lambda^*$

Set $\Xi = \Xi^*$

$I = I + 1$

no

no

Stop

$I < mstop$

yes