

Initialize coefficients:  
 $\Lambda = \mathbf{0}$  and  $\Xi = \mathbf{0}$

Compute negative partial derivatives of  $l(\mu, \sigma)$  w.r.t. to  $\mu$  and  $\sigma$   
(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:

$$\Lambda^* = \Lambda \text{ and } \Xi^* = \Xi, \text{ with} \\ \Lambda_{j_*}^* = \Lambda_{j_*}^* + v\rho(X_{j_*}, r) \text{ and} \\ \Xi_{k_*}^* = \Xi_{k_*}^* + v\rho(Z_{k_*}, s)$$

Really update the coefficient that improves the current fit most.

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

yes

no

Set  $\Lambda = \Lambda^*$

Set  $\Xi = \Xi^*$

$I = I + 1$

$I = I + 1$

no

$I < \text{mstop}$

yes

Stop