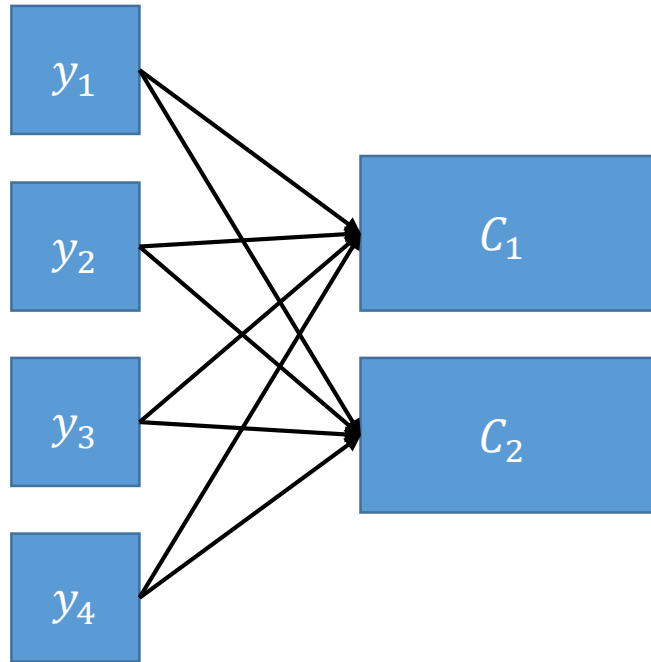


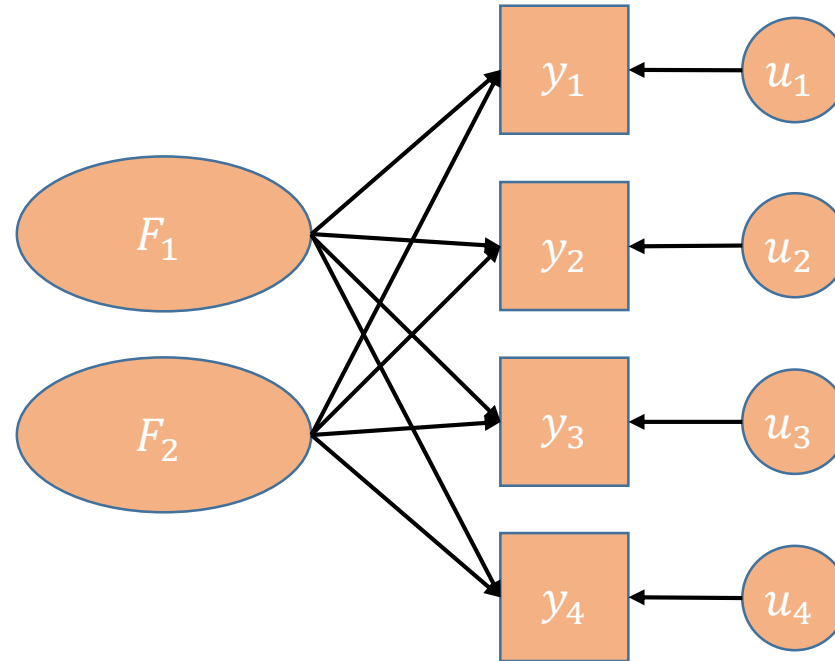
Principal Components Analysis (PCA)



$$C_1 = \lambda_{11} \cdot y_1 + \lambda_{12} \cdot y_2 + \lambda_{13} \cdot y_3 + \lambda_{14} \cdot y_4$$

$$C_2 = \lambda_{21} \cdot y_1 + \lambda_{22} \cdot y_2 + \lambda_{23} \cdot y_3 + \lambda_{24} \cdot y_4$$

Exploratory Factor Analysis (EFA)



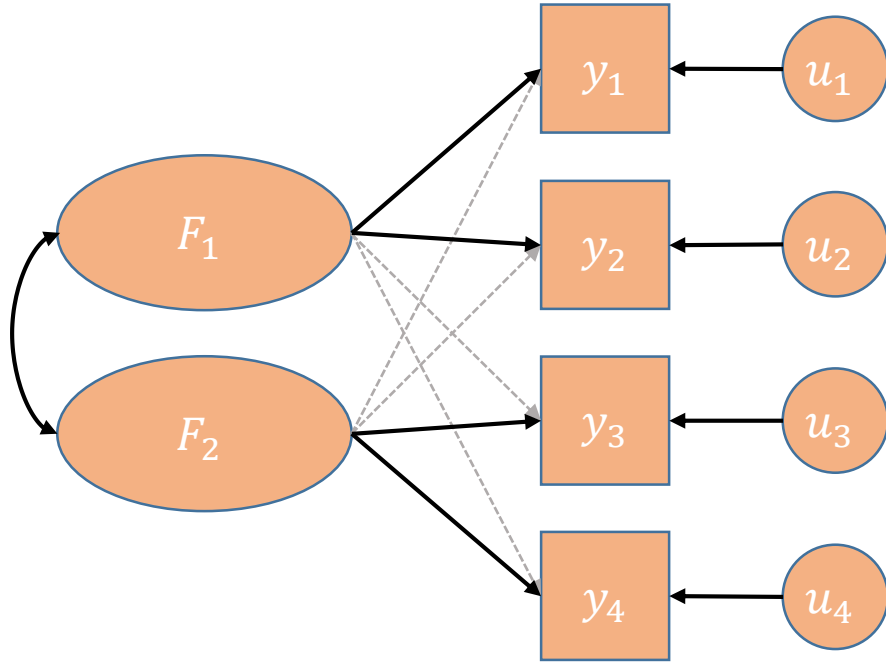
$$y_1 = \lambda_{11} \cdot F_1 + \lambda_{21} \cdot F_2 + u_1$$

$$y_2 = \lambda_{12} \cdot F_1 + \lambda_{22} \cdot F_2 + u_2$$

$$y_3 = \lambda_{13} \cdot F_1 + \lambda_{23} \cdot F_2 + u_3$$

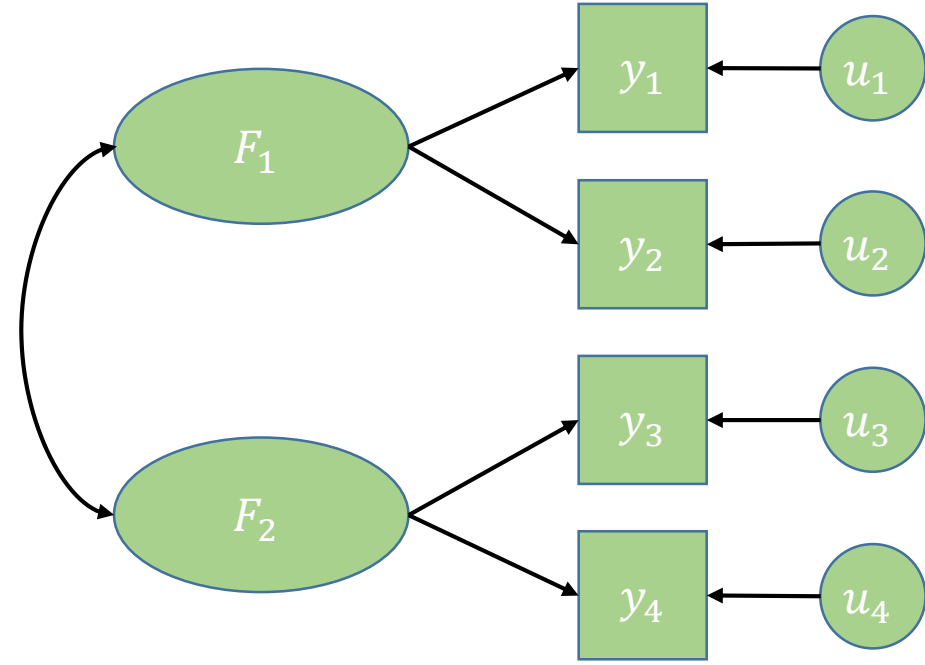
$$y_4 = \lambda_{14} \cdot F_1 + \lambda_{24} \cdot F_2 + u_4$$

Exploratory Factor Analysis (rotated)



$$\begin{aligned} y_1 &= \lambda_{11} \cdot F_1 + \lambda_{21} \cdot F_2 + u_1 \\ y_2 &= \lambda_{12} \cdot F_1 + \lambda_{22} \cdot F_2 + u_2 \\ y_3 &= \lambda_{13} \cdot F_1 + \lambda_{23} \cdot F_2 + u_3 \\ y_4 &= \lambda_{14} \cdot F_1 + \lambda_{24} \cdot F_2 + u_4 \end{aligned}$$

Confirmatory Factor Analysis (CFA)



$$\begin{aligned} y_1 &= \lambda_{11} \cdot F_1 + u_1 \\ y_2 &= \lambda_{12} \cdot F_1 + u_2 \\ y_3 &= \lambda_{23} \cdot F_2 + u_3 \\ y_4 &= \lambda_{24} \cdot F_2 + u_4 \end{aligned}$$