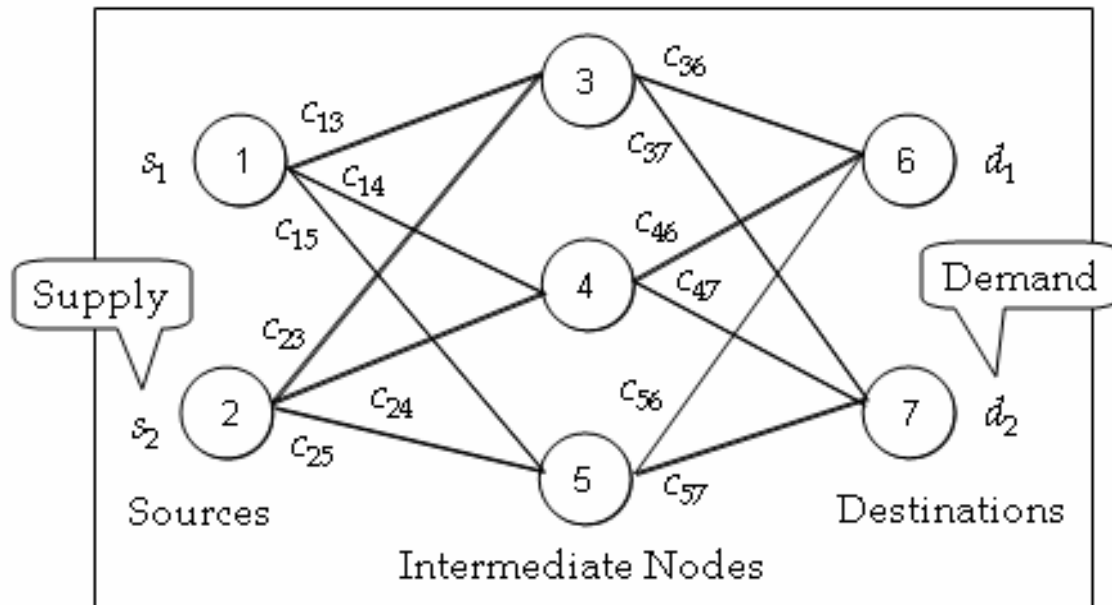


## Transshipment Problem

- Network Representation



## Transshipment Problem

- Linear Programming Formulation

$x_{ij}$  represents the shipment from node  $i$  to node  $j$

$$\begin{aligned}
 & \text{Min } \sum_{i,j} c_{ij} x_{ij} \\
 & \text{s.t. } \sum_j x_{ij} \leq s_i \quad \text{for each origin } i \\
 & \quad \sum_i x_{ik} - \sum_j x_{kj} = 0 \quad \text{for each intermediate node } k \\
 & \quad \sum_i x_{ij} = d_j \quad \text{for each destination } j \\
 & \quad x_{ij} \geq 0 \quad \text{for all } i \text{ and } j
 \end{aligned}$$