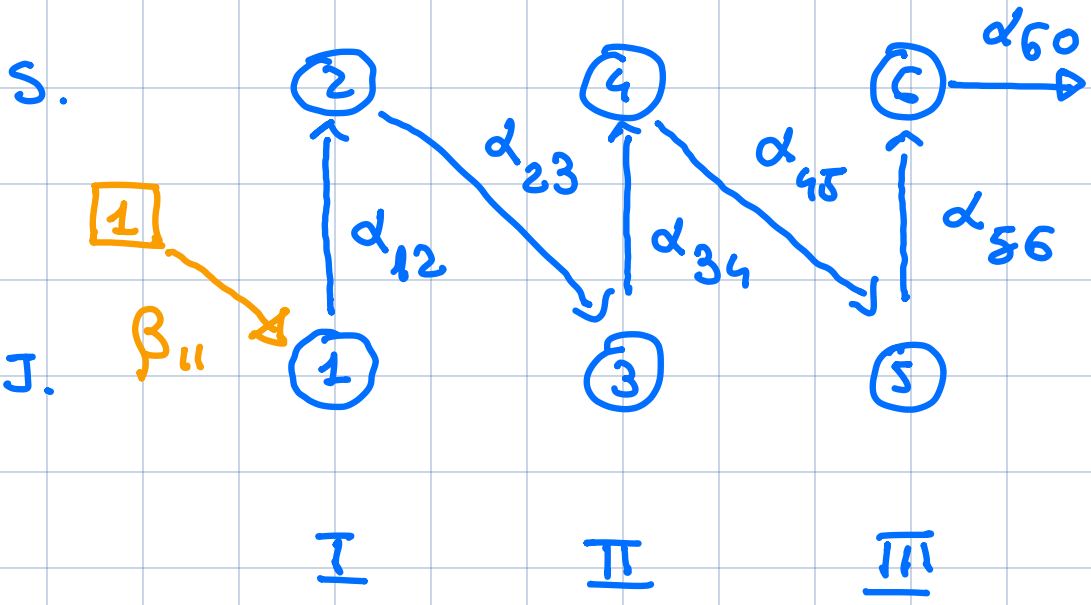
MODELLO GERARCHICO

AZIENDA

- DIPENDENTI SONO RIPARTITI SU LIVELLI STIPENDIALI (I, II, III)
- PER CIASCUN LIVELLO STIPENDIALE ABBIAMO DUE CATEGORIE: JUNIOR, SENIOR (INCOMPETENTE, COMPETENTE)

$x_1(t)$	# DIP.	I LIVELLO	JUNIOR
$x_2(t)$	# DIP.	I "	SENIOR
$x_3(t)$	# DIP.	II "	JUNIOR
$x_4(t)$	# DIP.	II "	SENIOR
$x_5(t)$	# DIP.	III "	JUNIOR
$x_6(t)$	# DIP.	III "	SENIOR



$$\dot{x}_1(t) = \beta_{11} u_1(t) - \alpha_{12} x_1(t)$$

$$\dot{x}_2(t) = \alpha_{12} x_1(t) - \alpha_{23} x_2(t)$$

$$\dot{x}_3(t) = \alpha_{23} x_2(t) - \alpha_{34} x_3(t)$$

$$\dot{x}_4(t) = \alpha_{34} x_3(t) - \alpha_{45} x_4(t)$$

$$\dot{x}_5(t) = \alpha_{45} x_4(t) - \alpha_{56} x_5(t)$$

$$\dot{x}_6(t) = \alpha_{56} x_5(t) - \alpha_{60} x_6(t)$$

IPOTIZZO DI MISURARE TUTTO L'ORGANIGRAMMA AZIENDALE

IL MODELLO AMMETTE UN EQUILIBRIO ?

CONTESTUALIZZARE: IPOTIZZO CHE IL NUMERO DI CANDIDATURE SIA COSTANTE

$$u_1(t) = \bar{u} \quad \forall\, t$$

$$0 = \beta_{11}\bar{u} - \alpha_{12}x_{1e} \longleftarrow$$

$$0 = \alpha_{12}x_{1e} - \alpha_{23}x_{2e}$$

$$0 = \alpha_{23}x_{2e} - \alpha_{34}x_{3e}$$

$$0 = \alpha_{34}x_{3e} - \alpha_{45}x_{4e}$$

$$0 = \alpha_{45}x_{4e} - \alpha_{56}x_{5e}$$

$$0 = \alpha_{56}x_{5e} - \alpha_{60}x_{6e}$$

$$x_{1e} = \beta_{11}\bar{u}\,\frac{1}{\alpha_{12}}$$

$$\alpha_{12}x_{1e} - \alpha_{23}x_{2e} = 0$$

$$\cancel{\alpha_{12}}\,\beta_{11}\bar{u}\,\frac{1}{\cancel{\alpha_{12}}} - \alpha_{23}x_{2e} = 0$$

$$x_{2e} = \beta_{11}\bar{u}\,\frac{1}{\alpha_{23}}$$

$$\alpha_{23}x_{2e} - \alpha_{34}x_{3e} = 0$$

$$x_{3e} = \beta_{11}\bar{u}\,\frac{1}{\alpha_{34}}$$

$$\bar{x} = \beta_{11}\bar{u}\begin{bmatrix} \frac{1}{\alpha_{12}} \\ \frac{1}{\alpha_{23}} \\ \frac{1}{\alpha_{34}} \\ \frac{1}{\alpha_{45}} \\ \frac{1}{\alpha_{56}} \\ \frac{1}{\alpha_{60}} \end{bmatrix}$$

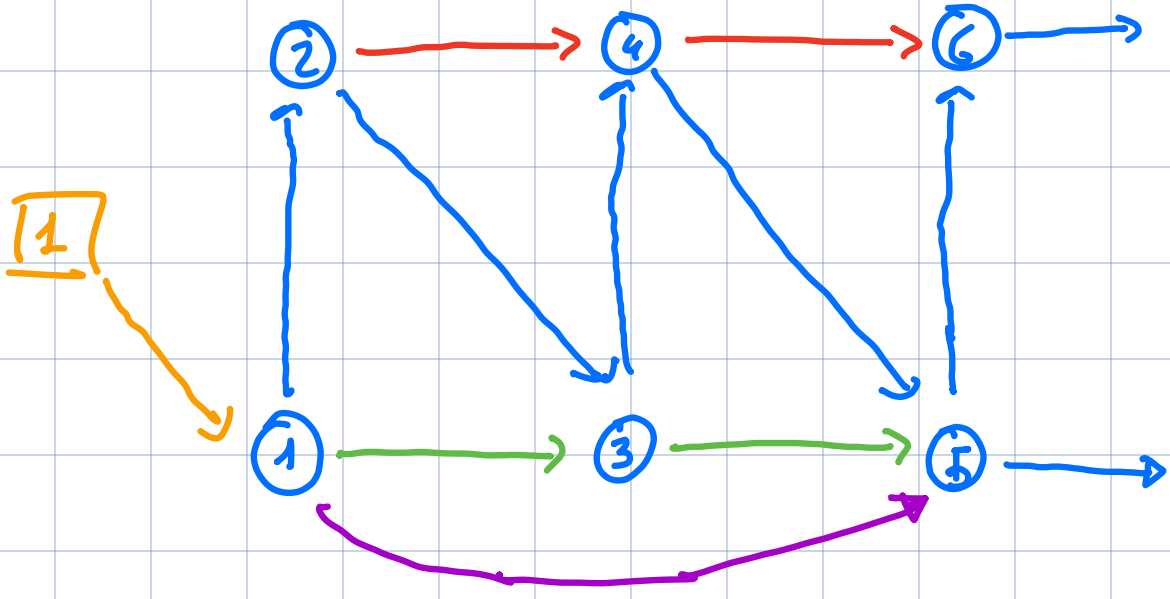
EQUILIBRIO

$$\frac{1}{\alpha_{12}} + \frac{1}{\alpha_{23}} > \frac{1}{\alpha_{34}} + \frac{1}{\alpha_{45}} > \frac{1}{\alpha_{56}} + \frac{1}{\alpha_{60}}$$

IN QUESTO MODO GARANTISCO LA PIRAMIDE GERARCHICA

VALORIZZARE LE COMPETENZE $\Rightarrow$ # DIR. SENIOR > # DIR. JUNIOR

$$\frac{1}{\alpha_{12}} + \frac{1}{\alpha_{34}} + \frac{1}{\alpha_{56}} < \frac{1}{\alpha_{23}} + \frac{1}{\alpha_{45}} + \frac{1}{\alpha_{60}}$$

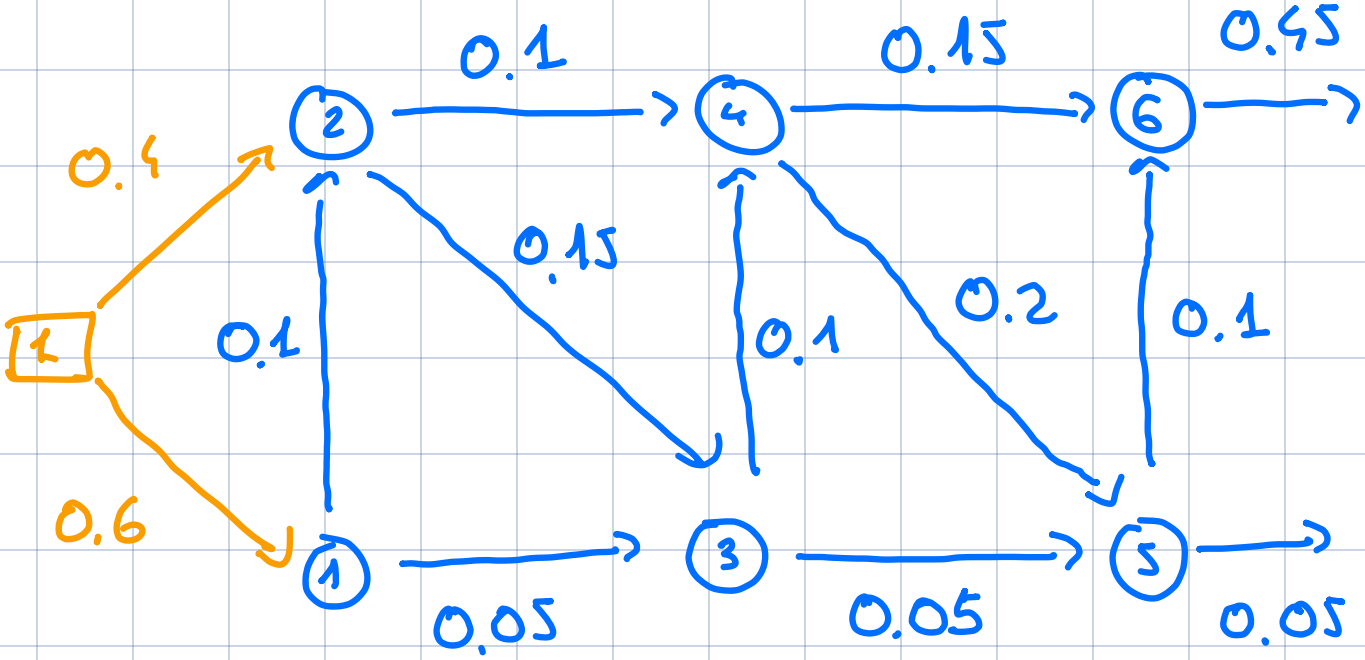


STRUTTURA GERARCHICA / MERITOCRATICA

PRINCIPIO DI PETER

OGNI DIPENDENTE DURANTE LA VITA LAVORATIVA TENDE AL PROPRIO LIVELLO DI INCOMPETENZA

LA FRAZIONE DI "INCOMPETENTI" AUMENTA AL CRESCERE DELLA FASCIA STIPENDIALE



$u(t) = 10$ DOMANDE PER TRIMESTRE

$$X_0 = \begin{bmatrix} 300 \\ 100 \\ 150 \\ 50 \\ 90 \\ 30 \end{bmatrix}$$

$$\dot{x}_1(t) = \beta_{11} u_1(t) - \alpha_{12} x_1(t) - \alpha_{13} x_1(t)$$

$$\dot{x}_2(t) = \alpha_{12} x_1(t) - \alpha_{23} x_2(t) - \alpha_{24} x_2(t) + \beta_{12} u_1(t)$$

$$\dot{x}_3(t) = \alpha_{13} x_1(t) + \alpha_{23} x_2(t) - \alpha_{34} x_3(t) - \alpha_{35} x_3(t)$$

$$\dot{x}_4(t) = \alpha_{24} x_2(t) + \alpha_{34} x_3(t) - \alpha_{45} x_4(t) - \alpha_{46} x_4(t) .$$

$$\dot{x}_5(t) = \alpha_{35} x_3(t) + \alpha_{45} x_4(t) - \alpha_{56} x_5(t) - \alpha_{50} x_5(t)$$

$$\dot{x}_6(t) = \alpha_{46} x_4(t) + \alpha_{56} x_5(t) - \alpha_{60} x_6(t)$$

$$fr_1 = \frac{x_1}{x_1 + x_2}$$

$$fr_2 = \frac{x_3}{x_3 + x_4}$$

$$fr_3 = \frac{x_5}{x_5 + x_6}$$