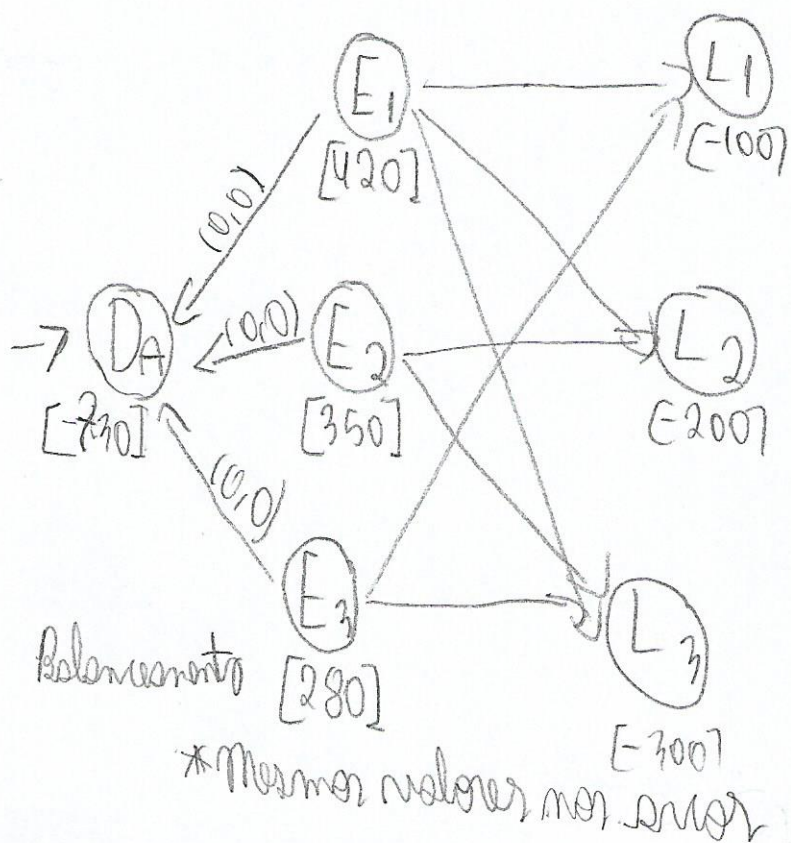
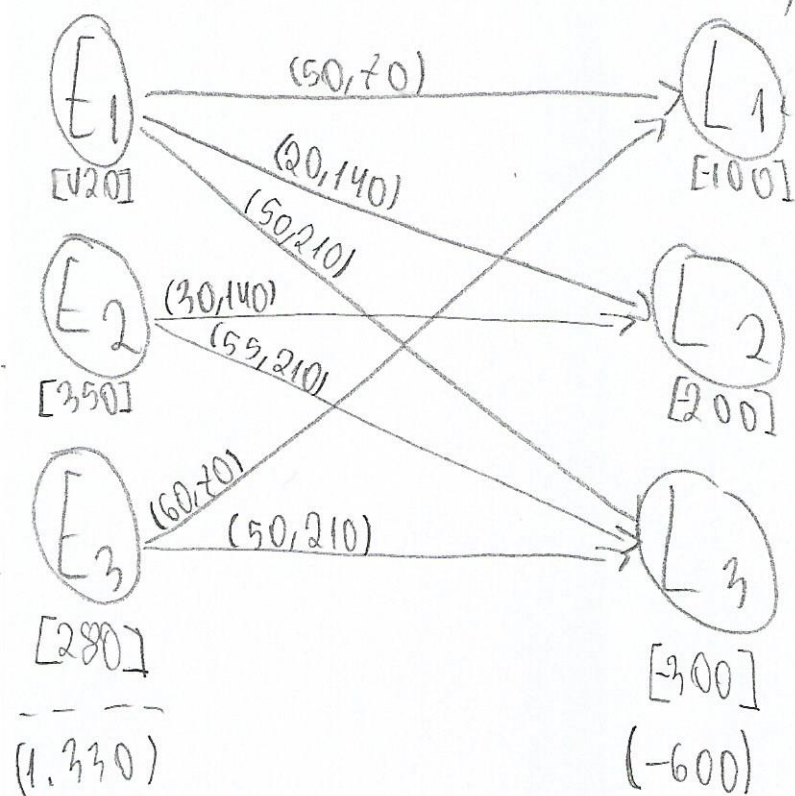


Marcelo Geraldo Braga Emiliano 19.1.4012

Rede: $E_i = \text{Empresa } i$, $L_i = \text{Local } i$, (custo, fluxo máximo)



Balancamento

* Mesmo valor por unidade

Modelo

$x_{ij} \Rightarrow$ recursos utilizados pela empresa i no local j

Objetivo

max lucro = $50x_{11} + 20x_{12} + 50x_{13} + 30x_{22} + 55x_{23} + 60x_{31} + 50x_{33}$

restrições:

$x_{11} + x_{12} + x_{13} + x_{1A} = 420$
 $x_{21} + x_{22} + x_{23} + x_{2A} = 350$

fluxo: $x_{11} \leq 70$; $x_{12} \leq 140$; $x_{13} \leq 210$
 $x_{22} \leq 140$; $x_{23} \leq 210$;
 $x_{31} \leq 70$; $x_{33} \leq 210$;

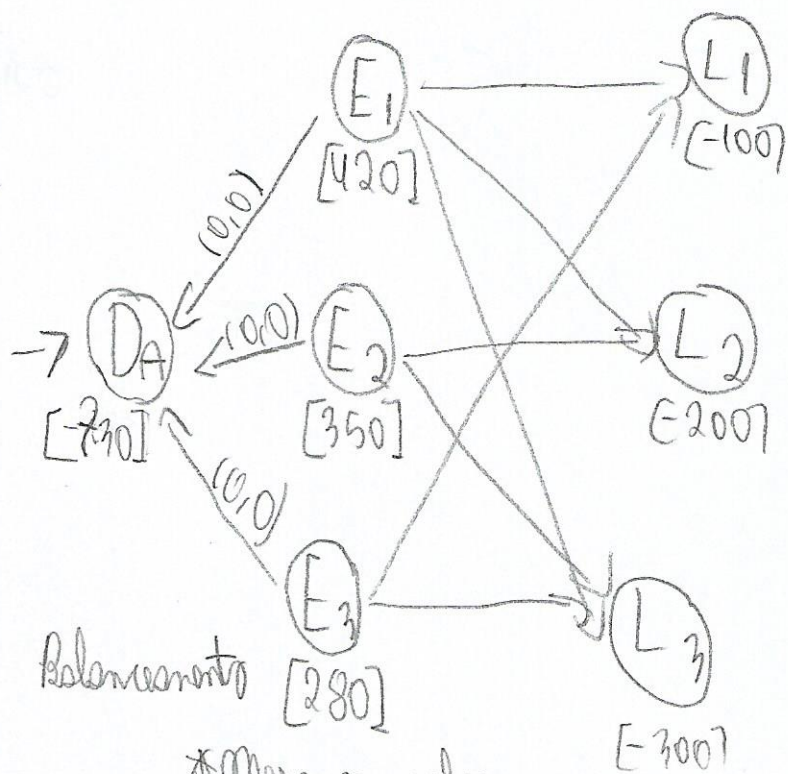
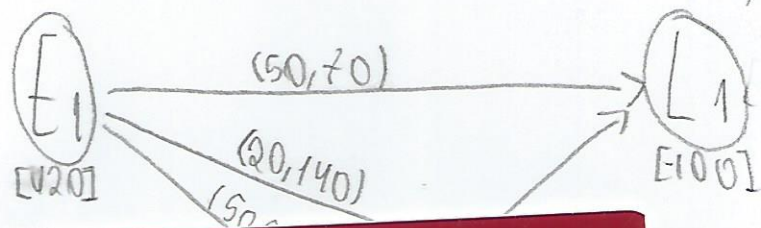
$\forall x_{ij}, x \geq 0$;

demanda



Monon Geraldo Braga Emiliano 19.1.4012

Rede: E_i = Empresa i , L_i = Local i , (recurso, fluxo máximo)



Balanced

* Mesmo valor no max e min

* A = demanda original

Modelo

$x_{ij} \Rightarrow$ res utilizada pela empresa i no local j

Objetivo

$$\max \text{ custo} = 50x_{11} + 20x_{12} + 50x_{13} + 30x_{22} + 55x_{23} + 60x_{31} + 50x_{33}$$

restrições:

$$\begin{cases} x_{11} + x_{12} + x_{13} + x_{1A} = 420 \\ x_{21} + x_{22} + x_{23} + x_{2A} = 350 \\ x_{31} + x_{32} + x_{33} + x_{3A} = 280 \end{cases}$$

$$\begin{cases} x_{11} + x_{31} - 100 = 0 \\ x_{12} + x_{22} - 200 = 0 \\ x_{13} + x_{23} + x_{33} - 300 = 0 \\ x_{1A} + x_{2A} + x_{3A} - 730 = 0 \end{cases}$$

$$\begin{cases} \text{fluxo: } x_{11} \leq 70; x_{12} \leq 140; x_{13} \leq 210 \\ x_{22} \leq 140; x_{23} \leq 210; \\ x_{31} \leq 70; x_{33} \leq 210; \\ \forall x_{ij}, x \geq 0; \end{cases}$$