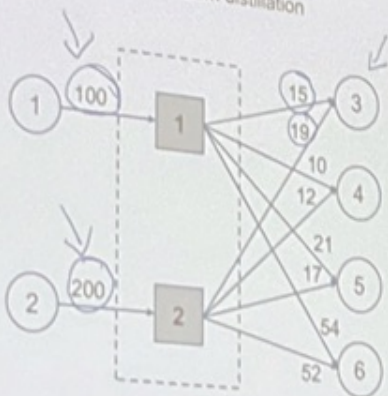



Kapitel 1.2 Input-side determined production

- Distinct relationship between basic activities and input types (1:1)
- Only one input coefficient per activity unequal to zero
- **Example:** Petroleum distillation

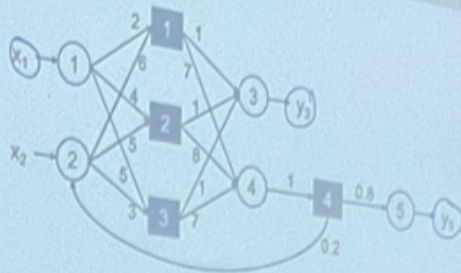


Algebraic model:

$$\begin{aligned}
 y_3 &= 0.15 \cdot x_1 + 0.095 \cdot x_2 \\
 y_4 &= 0.10 \cdot x_1 + 0.06 \cdot x_2 \\
 y_5 &= 0.21 \cdot x_1 + 0.085 \cdot x_2 \\
 y_6 &= 0.54 \cdot x_1 + 0.26 \cdot x_2
 \end{aligned}$$

Cyclic technologies Algebraic model in x/v notation

x_1 egal Vorzeichen - alles Input



$$\begin{aligned}x_1 &= 2 \cdot \lambda_1 + 4 \cdot \lambda_2 + 5 \cdot \lambda_3 \\z_2 &= -6 \cdot \lambda_1 - 5 \cdot \lambda_2 - 3 \cdot \lambda_3 + 0.2 \cdot \lambda_4 \\y_3 &= \lambda_1 + \lambda_2 + \lambda_3 \\z_4 &= 7 \cdot \lambda_1 + 8 \cdot \lambda_2 + 7 \cdot \lambda_3 - \lambda_4 \\y_5 &= 0.8 \cdot \lambda_4\end{aligned}$$



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