

Framing contracts and jurisdiction ahead to match  $p = \text{"Economy Funds"}$  and  $v = \text{"Economy Velocity"}$  that can be modelled with typical approaches for fuction  $z = \text{"arrival state"}$  depending on  $x = \text{"starting state"}$ , so that "work"  $W = F \cdot r = F \cdot (z - x)$ :

Table 1: Modelling Functions

Type	Model	Linearisation
Linear	$z = a + bx$	$z = a + bx$
Gemetric	$z = a \cdot x^b$	$\log z = \log a + b \cdot (\log x)$
Exponential deca.	$z = a \cdot b^x$	$\log z = \log a + (\log b) \cdot x$
Exponential nat.	$z = a \cdot e^{bx}$	$\ln z = \ln a + bx$
Periodical		
Polynomial		
Taylor		

Linear optimization to achieve target states " $z, h$ ":

1. Oneness situaiton modelling:

minimize efforts =  $z$  or maximize return =  $z$

$$\begin{aligned}
 \text{target:} & \quad z = c^T \cdot x \\
 \text{min. constraints:} & \quad [a_{ki}] \cdot x \geq b \\
 \text{max. constraints:} & \quad [a_{ki}] \cdot x \leq b \\
 \text{condition:} & \quad x \geq 0
 \end{aligned} \tag{1}$$

2. Duality situation modelling:

minimize efforts =  $z$  and maximize return =  $h$

$$\begin{array}{ll}
\text{target min.:} & z = c^T \cdot x \\
\text{min. constraints:} & [a_{ki}] \cdot x \geq b \\
\text{condition:} & x \geq 0 \\
& \text{and} \\
\text{target max.:} & h = b^T \cdot y \\
\text{max. constraints:} & [a_{ki}]^T \cdot y \leq c \\
\text{condition:} & y \geq 0
\end{array} \tag{2}$$

### 3. Normalization:

$$\begin{array}{ll}
\text{target:} & z = c^T \cdot x \\
\text{min. constraints:} & ([a_{ki}] - x_{n+k}) \cdot x = b \\
\text{max. constraints:} & ([a_{ki}] + x_{n+k}) \cdot x = b \\
\text{condition:} & x \geq 0
\end{array} \tag{3}$$

### 4. Solution with [Simplex algorithm](#)

multilinear and exponential models ...