Extension of Linear Regression Model

- More than just one "x-variable"
- Example in Exercise 1:

Animal	x_1 BC (cm)	x_2 BCS (–)	x_3 HEI (cm)	y BW (kg)
1	176	5.0	161	471
2	⋮	⋮	⋮	⋮
10				

- Are additional x-variable (BCS and HEI) bringing any new information for modelling BW?
- Extended model:
  - $E(y_i) = b_0 + b_1 \cdot x_1 + b_2 \cdot x_2 + b_3 \cdot x_3$
- Estimates for b_0, b_1, b_2 and b_3 are obtained from $\frac{\partial e^T e}{\partial b_0}$; $\frac{\partial e^T e}{\partial b_1}$; $\frac{\partial e^T e}{\partial b_2}$; $\frac{\partial e^T e}{\partial b_3}$ } cumbersome ...