

Model : - Show influence of breed on expected body weight:
- For animal i , the expected body weight

$$E(y_i) = b_0 + b_1 x_i$$

where x_i is the numeric code for the breed of animal i

Consequence of Model : Consider data

$$\left. \begin{array}{l} \text{Animal 1: } E(y_1) = b_0 + b_1 \cdot 1 \\ \text{3: } E(y_3) = b_0 + b_1 \cdot 3 \\ \text{10: } E(y_{10}) = b_0 + b_1 \cdot 2 \end{array} \right\} \begin{array}{l} \text{dependent} \\ \text{on assignment} \\ \text{of codes to} \\ \text{breeds} \end{array}$$

$$E(y_{si}) - E(y_{an}) = 2 \cdot b_1$$

$$E(y_{li}) - E(y_{an}) = b_1$$

Exception : Regression on discrete Factors can be used in Marker effect estimation