$$\mu_{ij} = \beta_0 + \beta_1 x_{ij} + \alpha_j$$

$$y_{ij} \sim \text{normal}(\mu_{ij}, \sigma^2)$$

$$\alpha_j \sim \text{normal}(0, \varsigma^2)$$
is identical to:
$$\mu_{ij} = \alpha_j + \beta_1 x_{ij}$$

$$y_{ij} \sim \text{normal}(\mu_{ij}, \sigma^2)$$

$$\alpha_j \sim (\mu_{\alpha}, \varsigma^2)$$