

Fixed vs. Random effects

Stat 565
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①

Fixed effect: The levels of the factor are chosen so that you can test for differences between these specific levels

Random effect: The levels of the factor were selected at random from a larger number of levels

②

Fixed effect:

$$H_0: \tau_1 = \tau_2 = \dots = \tau_a = 0$$

Random effect:

$$H_0: \sigma_\tau^2 = 0$$

Nested vs. Crossed effects

Suppose we have 3 factories
+ 4 Suppliers at each

(3)

Crossed effects: Same 4 suppliers
for each factory

Nested effects: Each factory has a
different set of 4 suppliers