

The **general linear test**
approach to regression analysis

Three basic steps

- Define a (larger) **full model**.
- Define a (smaller) **reduced model**.
- Use an **F statistic** to decide whether or not to reject the smaller reduced model in favor of the larger full model.

The full model

The **full model** (or **unrestricted model**) is the model thought to be most appropriate for the data.

For simple linear regression, the full model is:

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$$