Poisson and Negative Binomial Regression

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Poisson Regression "is a form of regression analysis used to model count data and contigency tables. Assumes the response variable Y has a Poisson Distribution and that the logarithm of its expected value can be modeles by a linear combination of unknown parameters. [...] It's a form of generalized linear model with the logarithms as the link function and the Poisson distribution as the assume probability distribution of the response."

Assumes:

$$Y \sim Poisson$$

$$ln(\hat{y}) = ln(\lambda i) = \alpha + \beta_1 x_1 + .. + \beta_n x_n$$

Stata

- `poisson <variables>`
- `poisson <variables>, irr`