

1 Classical Normal Linear Regression Model

Normality assumption for u

- Implications for the OLS estimator $\hat{\beta}_2$
- $u_i \sim i.i.d. N(0, \sigma^2)$
- Why the normal distribution for u
 - Analytical simplicity
 - Central limit theorem

Properties of OLS estimators under the normality assumption

- $\hat{\beta}_2 \sim N(\beta_2, var(\hat{\beta}_2))$
- Standardized Z distribution
- $\hat{\sigma}^2$ distribution

Maximum likelihood estimation

Monte Carlo experiment: consumption function