

$a_j = 0 \rightarrow$ test of statistical significance of π_j

$\hat{\beta}_j$: economic significance

t_{test} : statistical "

Single hypothesis - Multiple Parameters

$$H_0 : \beta_j = \beta_l$$

$$H_1 : \beta_j \neq \beta_l$$

$$t_{\text{test}} = \frac{\hat{\beta}_j - \hat{\beta}_l}{\text{se}(\hat{\beta}_j - \hat{\beta}_l)}$$

nbasal

$$H_0 : \beta_1 = \beta_2$$

$$H_1 : \beta_1 \neq \beta_2$$

Multiple Hypotheses

$$H_0 : \beta_j = 0, \beta_l = 0$$

$$H_1 : \text{at least } \beta_j \text{ or } \beta_l \neq 0$$

unrestricted model : H_0 not imposed

restricted model : H_0 imposed
by omitting x_j and x_l

Test statistic : based on comparing fit across
the 2 models

Follows F distribution.

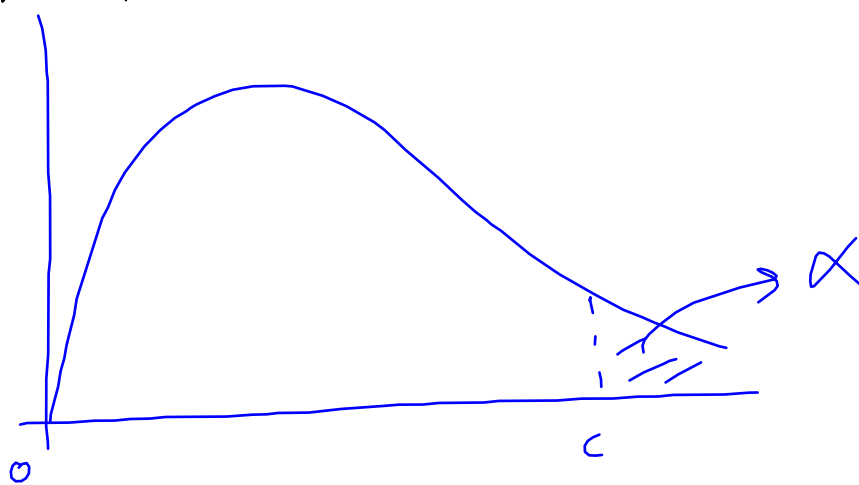
$$F_{\text{test}} = \frac{(SSR_r - SSR_{ur}) / q}{SSR_{ur} / (n - k - 1)}$$

q : numerator df (# β 's tested)

$n - k - 1$: denominator df

$$F_{\text{test}} \sim F_{q, n-k-1}$$

$$t_{n-k-1}^2 = F_{1, n-k-1}$$



Reject H_0

if $F_{\text{test}} > c$

critical values:

Tables Gr. 3a, Gr. 3b, &
Gr. 3c