

LECTURE 2A — STATA FACTOR-NOTATION BASICS

For predictors  $x, z$  and outcome  $y$ , we have the notation

- $i.x \sim$  categorical effect of  $x$  ( $x$  must be integer)
- $c.x \sim$  continuous (slope) effect of  $x$  ( $x$  must be numerical)
- default depends on command:
  - \* `reg y x`  $\sim$  `reg y c.x` (i.e., default is  $c.x$ )
  - \* `anova y x`  $\sim$  `anova y i.x` (i.e., default is  $i.x$ )

Combined effects:

- $x\#z \sim$  interaction  $x \times z$ ; in all commands, the default is  $x\#z \sim i.x\#i.z$
- $c.x\#c.z \sim$  multiplication  $x \cdot z$
- always:  $x\#\#z \sim x \ z \ x\#z$
- quadratic regression:  $c.x\#\#c.x \sim$  continuous terms  $x$  and  $x^2$

Factor terms can be used in tests, e.g. the Stata commands

- `testparm i.x`
- `testparm c.x\#\#c.x`