# Stata Basic Syntax

*command varlist qualifiers, options*

| | |
|---|---|
| *command* | 1, 2, or 3 words that indicate what to do |
| *varlist* | 0, 1, or more variables to work with |
| *qualifiers* | add labels or limits to the instructions |
| *, options* | specify additions or changes to the output |

**Legend**

Replace any syntax in *italics* with your own variable names or values.

| | |
|---|---|
| *var* | any variable ("var") |
| *cat* | a categorical (nominal) var |
| *num* | a numeric (interval/scale) var |
| *x* | the predictor or Independent var |
| *y* | the response or Dependent var |

## Describe Values

### ANY VARIABLE(S)

codebook *vars*

### CATEGORICAL

tabulate *cat*

graph bar, over(*cat*)
*also* graph pie, ...

### NUMERIC

summarize *num*, detail

mean *num*

histogram *num*, freq
*if integer, add* discrete

### MORE OPTIONS

Install once before use.

ssc install fre
fre *cat*

ssc install univar
univar *num*

## Show Relationships

### TWO NUMERIC

pwcorr *num num*

scatter *y x* || lfit *y x*

### TWO CATEGORICAL

tabulate *x y*, row

tabulate *y x*, col

### NUMERIC + CATEGORICAL

tabulate *cat*, sum(*num*)

table *cat*, c(mean *num*)

graph bar *num*, over(*cat*)
*also* graph box ...

### 3-WAY RELATIONSHIPS

table *cat cat*, by(*cat*)

table *cat cat*, c(mean *num*)

scatter *num num*, by(*cat*)

scatter *num num* [w=*num*]

## Data Management

### SIMPLIFY THE FILE

keep *var1 var2 etc*

keep if *var* != *4*

### CHANGE VALUES

clonevar *newvar* = *var*
↑ avoid changing original var

recode *var* (*2 3* = *1*)

recode *var* (*99* = .)
missing value ↑

replace *var* = 1 if *var* == 9

replace *var* = "*US*"
if *var* == "*VA*"
strings must be quoted ↑

## Modifiers

Add to other commands

### IF EXPRESSION

Include obs only if true

tab *var* if *var* == *4*

### BY PREFIX COMMAND

Do for (by) each value in *cat*

bysort *cat* : tab *var*

### OPERATORS

| | | | |
|---|---|---|---|
| == | Equal to | < | Less Than |
| != | Not Equal to | <= | Less than or Equal to |
| & | AND | \| | OR |

## Significance Tests

| TEST | SYNTAX | P-VALUE |
|---|---|---|
| Chi-Square | tabulate *cat cat*, chi2 | after Pr = |
| Correlation | pwcorr *num num*, sig star(.05) | under Pearson's r |
| One-Way ANOVA | oneway *num cat*, tabulate | under Prob > F |