Stata Tutorial

ECONOMETRIC ANALYSIS

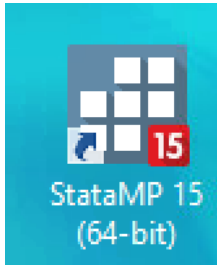
SEPT 2023

Use Stata via Vlab

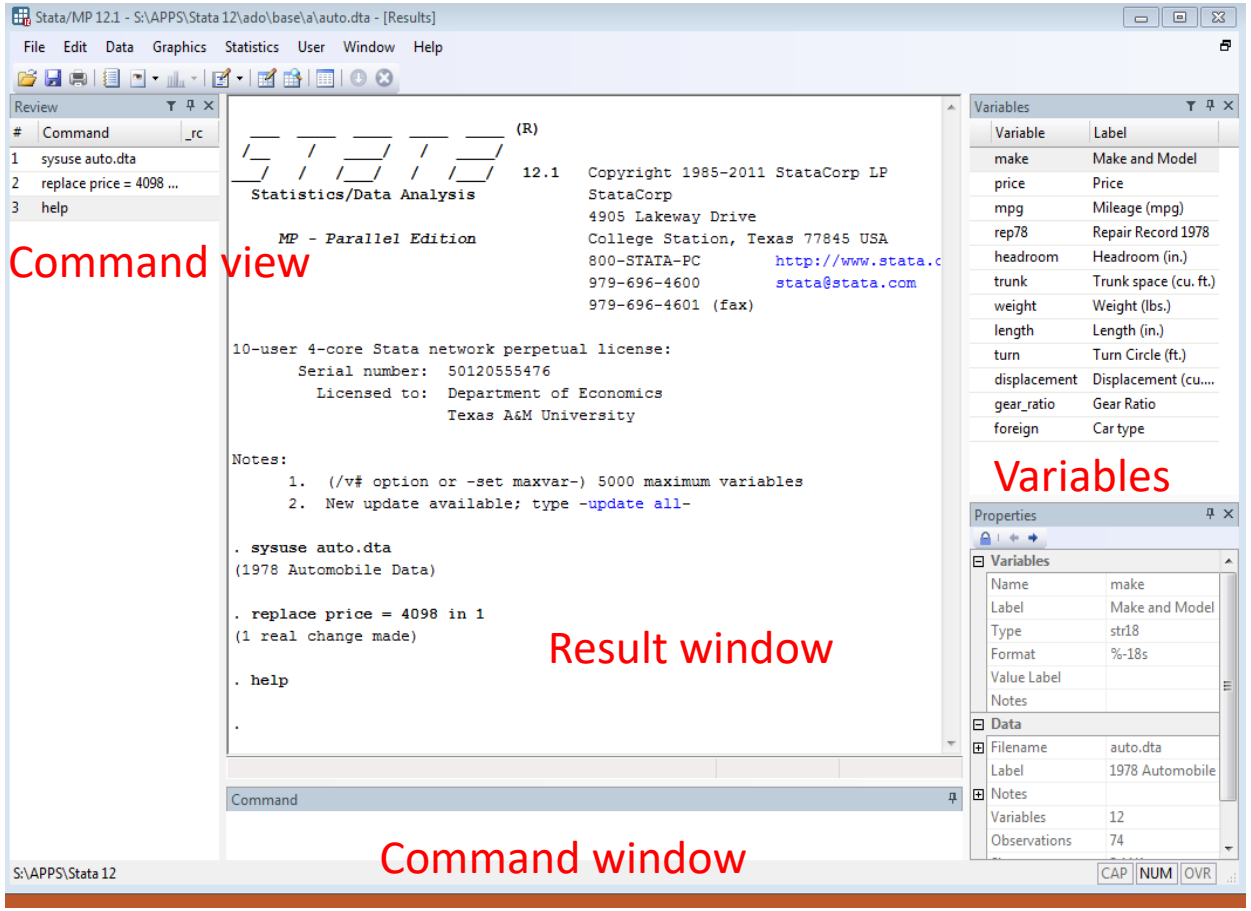
1, log on through

https://mycloud.gatech.edu/vpn/index.html

2, click desktop -> click 

3, click the Stata shortcut on the desktop 

Get Started on Stata



Stata is a command-driven package. Its source code is written in C/C++.

You can enter commands in following ways:

1 . Type the first command window and execute it, then the next,…

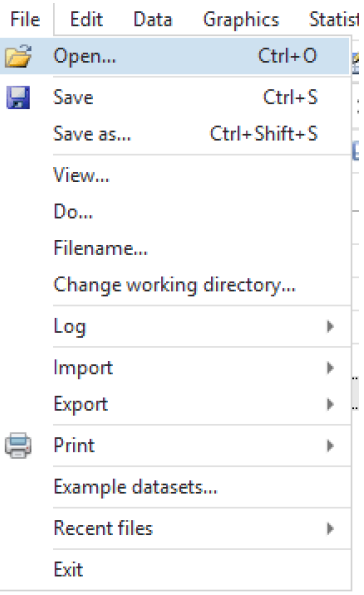
2. Do-file: type up a list commands in a ‘do-file’,and execute the do-file.

Directory and folder

- cd (or pwd): display the current directory
- dir: list contents of directory or folder
- mkdir “C:\Stata”: creates a new directory in
- cd “ C:\Stata” : change directory to “C:\stata”

*Almost the same as windows command line.

Reading data into stata



- Stata data format: dta
- If your data in stata format, then simply read it as:

  use "C:\Users\xyan306\Desktop\stataDataset\wage2.dta“, clear

  or if you have changed the directory, you can just type “use wage2.dta, clear”

- If your data is originally from Excel or some other format, you need to save the data as either csv or txt-file for reading into stata.

The first line in the spreadsheet should have the variable names, and the second line onwards are the data

Once your data is the csv or txt format, you can read it as:

import excel "C:\Users\xyan306\Desktop\stataDataset\wage2.xls", sheet("Sheet1") firstrow clear

Examine the data

- list in 2/5 (list row 2 to row 5, including 2 and 5)
- list if wage==1000 (list the row(s) if and only if price equals to 1000)
- count if wage==1000
- describe(describe the type and format)
- summarize (generate summary statistics)
- summarize, detail (with percentile and moments)
- scatter price weight (plot the data with scatter)

help scatter to see more properties on scatter command

Do-files

clear (clear all data in the RAM allocated to Stata)

cd “c:\stata” (change directory)

More commands

- gen: creates a new variable

  gen logwage= log(wage)

- replace: changes the value of a variable or observation

  replace wage2=2*wage

- drop: deletes a variable or observation

  drop wage2

- keep: specifies which variables to leave in the dataset
- regress
- predict

More commands

- predict r, residual
- predict fitted, xb
- regress ……if…..
- test

  test educ=0: test the coefficient on educ is zero

  test educ=exper: test the coefficients on the price and length are the same

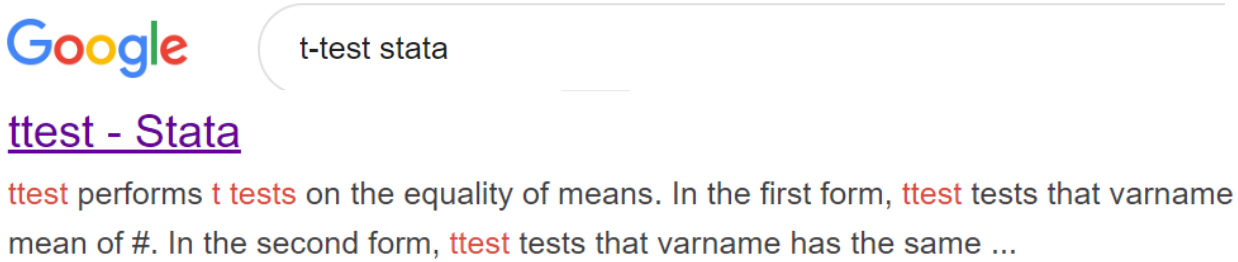
  test educ exper: test coefficients on price and length are jointly zero

More commands

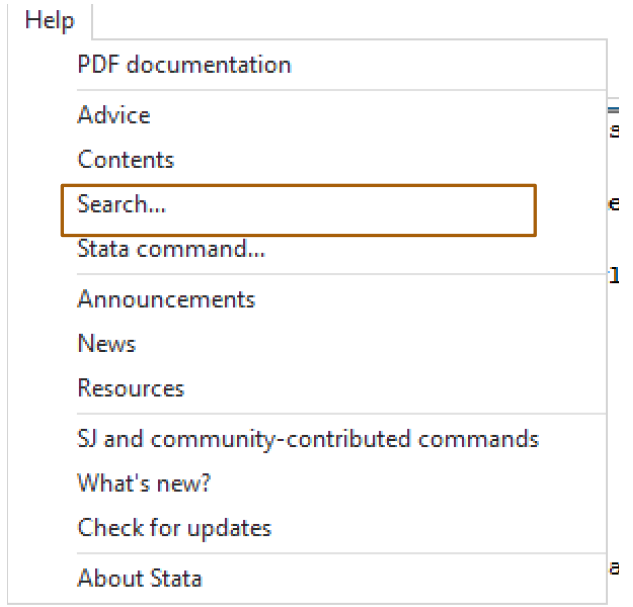
- ivreg (instrumental variable regression/2SLS)
- xtreg (Panel data regression: Random effects/fixed effects estimation)
- esttab: produces a pretty regression table in a format that you specify (.csv, .tex, .txt and others)
- esttab using example.tex, label nostar title (Regression table \label{tab1})
- esttab using example.tex, title (Regression table \label{tab1})

Documentation

- Like any other programming languages, it has official documentation.
- Google the key words + “stata”



- The search function under the help tab is helpful too.



Output

```
regress wage hours iq educ exper tenure age married black urban south
```

Source	SS	df	MS		
Model	37148718.4	10	3714871.84	Number of obs	= 935
Residual	115567450	924	125072.998	F(10, 924)	= 29.70
				Prob > F	= 0.0000
Total	152716168	934	163507.675	R-squared	= 0.2433
				Adj R-squared	= 0.2351
				Root MSE	= 353.66

wage	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
hours	-3.21257	1.622245	-1.98	0.048	-6.396282	-.0288583
iq	3.549025	.9693936	3.66	0.000	1.646556	5.451493
educ	52.46424	7.011271	7.48	0.000	38.70437	66.2241
exper	9.619544	3.5974	2.67	0.008	2.559522	16.67957
tenure	5.479802	2.41179	2.27	0.023	.7465807	10.21302
age	10.21389	4.550158	2.24	0.025	1.284049	19.14374
married	177.7986	37.88222	4.69	0.000	103.4534	252.1437
black	-125.9797	38.63195	-3.26	0.001	-201.7963	-50.1632
urban	168.8338	26.09792	6.47	0.000	117.6158	220.0519
south	-50.41342	25.57057	-1.97	0.049	-100.5965	-.230294
_cons	-702.3279	175.3895	-4.00	0.000	-1046.536	-358.12

End

Have fun with Stata!