

# Gretl Workshop 1

Download and Install  
Basic Commands

# Gretl download & install

- Type into browser window  
<http://gretl.sourceforge.net/index.html>
- Click on “gretl for windows” on the left.
- Click on [gretl-1.6.0.exe](#)
- Click on “use this direct link” and Run.
- Then Run the wizard to install (using defaults).




# Gretl Installation

- If installation was successful, a gretl icon should appear on your desktop.
- Double-click on this icon and a gretl window should appear.
- You can install gretl on your home computer by following these same instructions.
- Location of files is C:\Program files\gretl

# Gretl Basics: loading data

- Start gretl: double-click on gretl icon. Empty gretl window appears.
- From toolbar at top choose  
File/Open data/sample file
- Select Ramanathan tab and double-click on data4-1. Notice list of variables.



- Open data ▶
- Append data ▶
-  Save data Ctrl+S
- Save data as ▶
- Export data ▶
-  Send To...
-  Clear data set

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- Browse databases ▶
- Create data set ▶

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- View command log


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- Open command file ▶
- New command file ▶

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- Preferences ▶

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-  Exit Ctrl+X

-  user file... Ctrl+O
-  sample file...

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- Import ▶

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- 1. data4-1.gdt
- 2. data7-17.gdt
- 3. PINKHAM-dta.gdt
- 4. PINKHAM-dta.txt



Ramanathan | **Greene** | Gretl

File	Summary
data3-12	Population of the United Kingdom
data3-13	Population of the USA
data3-14	Personal income and travel expenditures
data3-15	U.S. Population and GDP
<b>data4-1</b>	<b>Prices of single-family homes</b>
data4-2	U.S. incomes and consumption
data4-3	Housing starts and their determinants
data4-3a	Housing starts (updated)
data4-4	Demand for bus travel and determinants
data4-5	Women's labor force participation
data4-6	County poverty rates, Calif.
data4-7	Deaths due to coronary heart disease
data4-8	Systems in the top 40 TV markets
data4-9	Early retirement and its determinants
data4-10	Parental school choice in the U.S.
data4-11	Private housing units authorized
data4-12	Mortality rates across states
data4-13	Factors affecting baseball attendance



gretl

File   Utilities   Session   Data   Sample   Variable   Model

data4-1.gdt

ID #	Variable name	Descriptive label
0	const	auto-generated constant
1	price	sale price in thousands of dollars (Range 199.9 - 505)
2	sqft	square feet of living area (Range 1065 - 3000)
3	bedrms	number of bedrooms (Range 3 - 4)
4	baths	number of bathrooms (Range 1.75 - 3)

# Gretl Basics: regression

- Click on Model (upper toolbar), select ordinary least squares.
- Double click on price (for dependent variable)
- Click on sqft and hit “add” button (for independent variable)
- Select OK. Note estimate of slope.



data4-1.gdt

ID #	Variable name	Descriptive label
0	con	
1	pr	
2	sq	
3	be	
4	ba	

**gretl: specify model**

OLS

Dependent variable

Choose -> price

Set as default

Independent variables

const

Add ->

<- Remove

Robust standard errors [configure](#)

OK Clear Cancel Help

Model 1: OLS estimates using the 14 observations 1-14

Dependent variable: price

VARIABLE	COEFFICIENT	STDERROR	T STAT	P-VALUE
const	52.3509	37.2855	1.404	0.18565
sqft	0.138750	0.0187329	7.407	<0.00001 ***

Mean of dependent variable = 317.493

Standard deviation of dep. var. = 88.4982

Sum of squared residuals = 18273.6

Standard error of residuals = 39.023

Unadjusted R-squared = 0.820522

Adjusted R-squared = 0.805565

Degrees of freedom = 12

Log-likelihood = -70.0842

Akaike information criterion (AIC) = 144.168

Schwarz Bayesian criterion (BIC) = 145.447

Hannan-Quinn criterion (HQC) = 144.05

# Gretl Basics: regression

- Return to main gretl window, and choose Model/Ordinary least squares.
- Click on “baths” and “add” to add second explanatory variable. Then OK.
- What is value of unadjusted R-squared?
- From same output window choose Graphs/fitted, actual plot/against sqft. Notice pattern of actual minus fitted.

descriptive label

auto-generated constant

sale price in thousands of dollars (Range 199.9 - 505)

square feet of living area (Range 1065 - 2000)

2

estimates using the 14 observations 1-14  
 variable: price

COEFFICIENT	STDERROR	T STAT	P-VALUE
121.179	80.1778	1.511	0.15888
0.148314	0.0212080	6.993	0.00002 ***
-23.9106	24.6419	-0.970	0.35274

dependent variable = 317.493

standard deviation of dep. var. = 88.4982

sum of squared residuals = 16832.8

standard error of residuals = 39.1185

adjusted R-squared = 0.834673

unadjusted R-squared = 0.804613

F(2, 11) = 27.7674 (p-value = 5.02e-005)

constant term = -69.5093

Akaike information criterion (AIC) = 145.019

Bayesian criterion (BIC) = 146.936

Hannan-Quinn criterion (HQC) = 144.841

# Gretl basics: Save session

- Any objects created within gretl can be saved for future work.
- From main window upper toolbar select “session/save as”
  - Give file name
  - Default folder is userdata\gretl\user
  - Can change to folder on your flashdrive or diskett.

# Lessons

- Basic regression: choose Model/Ordinary least squares from main gretl window.
- When you return to Model/Ordinary least squares, previous model specification is repeated. Variables can be added or removed.