

ECON 494

A short course in Stata.

Welcome

‘We are drowning in information, but starving for knowledge’

—Naisbitt, 1982 —RD. Rogers, 1985

Introductions. Syllabus. Course Goals.

Economics as Data science

Data science—

- Focuses on the methods and systems to extract knowledge or insights from data

Econometrics—

- Focuses on the application of statistical methods to economic data
- Aims to give empirical content to economic relations.

Fact. Economists make great data scientists! [Link](#).

1. Machine Learning is just a fancy term for Prediction.
2. Inference has higher standards.
3. Able to write coherent sentences.
4. Spoilers. **Coding isn't hard.**

Getting Started

Today—Lab 1 & Project 1

Intro **Stata**

Learning Goals

- Import data
- Save dataset
- Create new variables
- Use basic operators

Why Stata?

Two big divisions:

- Programming solutions: R, Matlab, & Python.
- Analytic solutions: Excel, SAS, **Stata**, & SPSS.

Stata is for people who ...

- Want the easiest way possible to do standard statistical analyses.
- Like **Stata** documentation & support, [Link](#) & [Link](#).

For a more 'informal' discussion ... see [Link](#).

Quick Compare

Name	Advantages	Disadvantages	Open source?	Typical users
R	Library support; Visualization	Steep learning curve	Yes	Finance; Statistics
Matlab	Matrix support; Visualization	Expensive; Incomplete stats support	No	Engineering
Python	SciPy/NumPy; Pandas	Immature	Yes	Engineering
Excel	Easy; visual; flexible	Large datasets	No	Business
SAS	Large datasets	Expensive; outdated	No	Business; Government
Stata	Easy statistical analysis	Limitations	No	Science

Source: Brendan O'Connor

The 5 Basic Concepts

Found in all Programming Languages, [Link](#).

1. Variables
2. Control Structures
3. Data Structures
4. Syntax
5. Tools

Learning by Doing

Many online resources available!

Tutorials—Each Features Extensive Instruction

- Beginner: UCLA—[Idre](#)
- Intermediate: Princeton—[Dss](#)
- Advanced: LSE—[Adv](#)

Cheat Sheets—Quick Reference Guides

Stata not STATA

What is the correct way to pronounce 'Stata'?

- Say / 'Stā-ta / like / 'dā-ta / unless you think it's pronounced / 'Sta-ta / like / 'da-ta /. Honestly, knowing the "correct" pronunciation is a running joke, though employees often say Stāta.

What is the correct way to write 'Stata'?

- Stata and Mata are invented words, not an acronyms. Neither should appear with all letters capitalized: write "Stata", not "STATA". See [Link](#) & [Link](#).