

# **Homework #1, Due July 17 at 5pm**

**Econ 120B**

**UC San Diego**

**Instructor Arman Khachian**

Please use stata to complete all the empirical (E) exercises, writing all your code in a do-file and submitting a stata log file (preferably txt) along with your written answers (typed or hand-written). Submit answers and log file output to Canvas (2 documents max). Data for empirical exercises are available directly from Pearson here. TAs will help you get started with Stata in the discussion sections.

## **1 Lecture 1: Probability and Statistics Review**

Stock and Watson Exercises 2.2, 2.3, 2.6, 2.17, 3.7, 3.16

## **2 Lectures 2 and 3: Univariate Regression Mechanics and Hypothesis Testing**

Stock and Watson Exercises 4.3, 4.5, E4.2, 5.2, 5.5, E5.3

### **Additional least squares assumptions question (key concept 4.3)**

**(LSA Q1)** What do we know about our regression analysis if the least squares assumptions are satisfied? In other words, why does it matter if they are satisfied?

**(LSA Q2)** In your own words, what is least squares assumption 1? i.e. what does it require to be true in intuitive terms?