UNIVERSITY OF ILLINOIS Department of Economics

Course: ECON 503 (MSPE), Spring 2024 January 16, 2024

Instructor: Anil K. Bera Class Hours: 9:30-10:50 am TR

TA: Lovepreet Singh (M1) & Jay Rafi (M2)

TA Discussion Hours: 9:30-10:50 am F (M1)

11:00-12:20 am F (M2)

TA Office Hours (M1): 11:30 - 12:30 pm MW; 3:30 - 4:30 pm TR TA Office Hours (M2): 10:00 - 11:00 am MW; 8:15 - 9:15 am TR



This is an introductory course in Econometrics. *I will be assuming that you have good statistics and Matrix Algebra background.* We will start with some real economic problems, for example, in consumption analysis, production economics, education-wage relationship, and stock market behavior, and then we will look for some econometric techniques to solve them.

The emphasis of the course will be on the *econometric methodologies* that we can apply. We will cover the following topics:

- 1. Introduction: Art of Econometric Modeling
- 2. Simple Regression Analysis
- 3. Ordinary Least Squares (OLS) and Maximum Likelihood (ML) Estimation Methods
- 4. Hypothesis Testing with the Simple Regression Model
- 5. Forecasting with the Simple Regression Model
- 6. Matrix Algebra
- 7. Multiple Regression Analysis
- 8. Hypothesis Testing with the Multiple Regression Model
- 9. Nonnormal Disturbances
- 10. Heteroskedasticity
- 11. Autocorrelation and Time Series Analysis
- 12. Spatial Data Analysis

Textbook:

Introduction to Econometrics, by James H. Stock and Mark W. Watson, 2nd Edition, 2007, Pearson Addison Wesley.

I will not, however, follow this book closely. All the Lecture Notes along with past years' Questions & Answers will be uploaded on UIUC (University of Illinois at Urbana Champaign) canvas. As you will notice, the subject matter is dry and mechanical. We will try to make things livelier by analyzing some interesting data sets and contemporary real-world problems.

The evaluation of the course will be based on two exams: a midterm (20%) and a final (20%), and an applied project (50%): (15%) for proposal due on **March 20th** and (35%) for the term paper, on the last day of the class.

A surprise: there are still 10 marks left. That will be awarded to you at the discretion of your TA.

More surprise! You can get a straight A in the course by active class participation. All you will need is a high class participation score (CPS). You can get scores by answering questions in the class or by asking questions. You need to keep a full document of the questions and answers along with the dates and submit that at the end of the semester. I will discuss more about CPS in class.

About me: Anil K. Bera

My family name stands for:

Business Economics Research Advisor (BERA).

However, my family history goes back to Biblical times: (Genesis 14:2) "That these made war with Bera king of Sodom, and with Birsha king of Gomorrah..." Naturally, I am not at all proud of this.

My first name Anil is from Enlil, the ancient Mesopotamian god associated with wind, air, earth, and storms. Here we are talking about 3,000BC. The word Enlil came from ancient Sumerian EN, meaning "lord" and LL meaning "wind". In my mother tongue Bengali, Anil simply means wind.

I also have solid business experience - "run" an Internet Kafe in Turkey (Figure 1). I wanted to have my email address as @nil@uiuc.edu, but unfortunately, the university did not allow it. There is a Bera coffee house in Germany (Figure 2).

I also run a chain of 5-star hotels across Turkey, plus a fine dining CASA DEL BERA in Denizli, Turkey (Figure 3). More recently, I have started some business in my native place, India (Figure 4).

What about AB? These are first two English letters. Also think of first two alphabets in Arabic: alif and ba There is a . (dot) below ba, which embodies the entire universe:

ب

Finally, the lines below are from Bera's Bible:

(Matthew 19:26): "But Jesus beheld them, and said unto them, with professors this is impossible, but with Students all things are possible."



Figure 1:



Figure 2:



Figure 3:



Figure 4: