Methods of Economic Investigation (Ec 402)
Lent Term

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Office Hour: Monday 3:30-4:30

This part of the course will build on what you learned in the first term but with a heavier emphasis on the empirical applications of the techniques. The goal is to build a strong link between the theoretical foundations and practical use of many of the techniques that are commonly used by economists. In addition, the course is structured to allow you to become critical consumers of empirical research by investigating the practical limitations of many techniques.

The course is set up with 3 1-hour lectures each week, on Monday, Tuesday, and Thursday. On Monday and Tuesday, we will cover the theoretic foundations of particular techniques. Each Thursday we will explore a specific application that has policy or economic significance.

Statistical software and Data
The data used in the course, lectures, classes and assignments, will be provided to you in STATA format. STATA is a statistical software program commonly used by economists. You can use the data we provide to follow along the lecture as well as complete your assignments

Readings:
Each week we will cover a set of topics that have useful empirical applications. While these applications are not contained in any particular text, you may find it useful to have:
Angrist and Pischke Mostly Harmless Econometrics  Princeton University Press

You may also wish to purchase following texts for your reference or review:
Jack Johnston and John DiNardo Econometric Methods, McGraw-Hill
Angus Deaton The Analysis of Household Surveys”  The World Bank

You will also need to read and understand the following papers to participate in class and take the final exam.

Week 1: Introduction
Angrist and Pischke, Chapters 1 and 2

http://www.nber.org/papers/w13934

(for a more detailed look read:  

Week 2: Experimental Vs. Non-Experimental Methods
Angrist and Pischke, Chapters 3

Application: Mandatory Arrest Laws


Week 3: Omitted Variable Bias and Error-Component Models
Angrist and Pischke, Chapter 5

Application: Returns to Schooling


Week 4-5: Difference-in-Differences and Propensity-Score Matching
Angrist and Pischke, Chapter 5


Application: School Drop-out Programs

Week 6: Instrumental Variables
Angrist and Pischke, Chapter 4


Application: Determinants of Growth and Development

Week 7: Discrete Choice Models
No assigned Reading

Week 8: Time Series Processes and Unit Roots
Johnston and Dinardo, Chapter 2.5


Application: The Financial Crisis (no readings but handouts will be provided)

Week 9: Forecasting and Regression Discontinuity
Angrist and Pischke, Chapter 6

Application: Using Stock Returns to Understand Changes in markets  

**Week 10: GMM Estimators and Vector Autoregression**

(*) Watson, MW “Vector Autoregressions and Cointegration” Handbook of Econometrics, Volume IV, Section 4

(*) Application: What does increasing the interest rate do?  