

Course ID Number: ADC6525

Course Title: Applied Time Series Analysis

No. of Credits:1

Graduate School of International Relations
International University of Japan

Term: Winter 2012

Instructor: Soo Hyun Oh
Office: PTL office

Course Introduction

The goals of the course are twofold: (1) develop a comprehensive set of tools and techniques for analyzing various forms of time series and for understanding the current literature in applied time series econometrics; (2) show how to use STATA to estimate time series models.

ADC6525: Applied Time Series Analysis

Instructor : SooHyun (Catherine) Oh

Time: TBA

Location: TBA

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Office Hour: TBA

Introduction

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Textbook

There is no mandatory textbook. You may find that the followings are helpful.

1. Econometric Analysis (5th edition), William H. Greene, Prentice Hall
2. Time Series Analysis, James D. Hamilton, Princeton
3. Introductory Econometrics: A Modern Approach (4th edition), Jefferey M. Wooldridge, South-Western

Organization

This course will generally be conducted by class room lectures. Lectures cover basic concepts and their applications using computer software such as STATA. Homework will be given out during semester and final exam will be held on the designated day of 11th week.

Assessment

There will be a series of assignments involving use of real economic/business data and computer. The term paper should be a report on an empirical work which utilized the knowledge and techniques obtained in the class.

1. Assignments (2-3, 40%)
2. Term paper (60%)

Course Outline

- 1 Characteristic of Time Series Data
Basic Regression Analysis with Time Series Data
- 2 Stationarity
ARMA (Autoregressive moving average models)
- 3 VAR (Vector Autoregression)
 - Granger Causality
 - Variance decomposition
 - Impulse Response Function
 - Structural VAR
- 4 Testing for Unit Roots and Cointegration
 - Dickey Fuller Test
 - Spurious Regressions
 - Super Consistency
- 5 VECM (Vector Error Correction Model)
Forecasting
Structural Break