UPM

UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

EXECUTIVE DEVELOPMENT AND INDUSTRY LINKAGES UNIT (EDIL)
FACULTY OF ECONOMICS AND MANAGEMENT

AACSB ACCREDITED

WORKSHOP ON NONLINEAR AFFECT AND THRESHOLD REGRESSION ANALYSIS   30 APRIL - 1 MAY 2018

INTRODUCTION

This workshop focuses on the nonlinear panel data estimation and threshold regression that consists of static panel, cross-section, time series and dynamic panel models.

The threshold model allows the role of threshold variable to differ depending on whether the variable is below or above some unknown level of threshold. To search for a turning point using square term has a limitation because it imposes an a priori restriction that the effect of X on Y monotonically and symmetrically increases and decreases with the level of X. However, it may also be that a certain level of X has to be achieved before X can have any impact on Y.

The course is geared for researchers and practitioners in all fields. The workshop aims to familiarize participants with nonlinear estimation using generalized method of moments (GMM) and threshold modelling, and equip them with core skills in using these methods. This will be achieved through a combination of short lecturers and computer lab sessions, with greater emphasis on giving participants hands-on experience.

TOPICS INCLUDE

Dynamic Threshold Models (Hansen, 2000)
- Testing the existence of threshold
- Cross-section threshold estimation
- Time Series threshold estimation
- Interpretation of the threshold results
- Hand-on Session

Dynamic Panel Threshold Model
(Kremer et al. , 2013)
- Testing the existence of threshold for dynamic panel model
- Estimation of parameters (two or more regimes)
- Interpretation of the dynamic panel threshold results
- Hand-on Session

Nonlinear Model using GMM Estimation
- Interaction term model
- Quadratic model
- Marginal effect
- Evaluate the significant of marginal effect
- Interpretation of marginal effect
- Hand-on Session

Static Threshold Model (Hansen , 1999)
- Testing the existence of threshold
- Static panel threshold estimation
- Interpretation of the threshold results
- Hand-on Session

AT THE END OF THE WORKSHOP, PARTICIPANTS WILL

1. Elaborate the concept of nonlinear and threshold model
2. Formulate static and dynamic models for nonlinear and threshold estimations
3. Identify the correct threshold method in estimating the datasets
4. Perform an empirical analysis, involving the construction of threshold models using real actual observations
5. Interpret the empirical results of static and dynamic threshold models