

# FINANCIAL MICROECONOMETRICS : Methods and Applications

## 1 教學目標 :

The main objective of the course in advanced econometrics is to provide the student the necessary tools for the analysis of the economic cross-sectional data. To this aim, the course combines econometric techniques, economic models and data handling. The approach we follow in this course is mainly empirical. We will perform empirical applications on issues of concern to the economic analysis, including issues on financial analysis, marketing analysis. The course goals are to train graduate students to be able to read econometrics articles in applied journals and to be able to implement cross-section methods as needed for thesis.

## 2 參考書目 :

Alan Duncan (Nottingham), *Cross-Sectional and Panel Data Econometrics*, Download from this Website <http://www.econphd.net/notes.htm#Econometrics>

Amemiya, Takeshi (1985): *Advanced Econometrics*, Harvard University Press.

Baltagi, Badi H. 2005. *Econometric Analysis of Panel Data*, 3rd Ed. John Wiley&Sons

**Cameron A. C. and Trivedi P. K., 2005, *Microeconometrics: Methods and Applications*, Cambridge University Press.**

Greene, W. (2002): *Econometric Analysis*, Fifth Edition, Prentice Hall.

Hsiao, Cheng. 2002. *The Analysis of Panel Data*, 2nd Ed. New York: Cambridge University Press.

Lee, Myoung-jae (1996): *Method of Moments and Semiparametric Econometrics for Limited Dependent Variable Models*, New York: Springer-Verlag.

Wooldridge, Jeffrey. 2002. *Econometric Analysis of Cross Section and Panel Data*. Cambridge, Mass: MIT Press.

## 3 **Software:** LIMDEP 9.0, Gauss, Stata 12.0

## 4 教學內容及進度 :

Lecture 1: Introduction to Microeconometrics and Characteristics of Microeconomic data

Lecture 2: Binary choice models

--- Probit and Logit models

--- Marginal effects

Reading: Brown, S. J., and W. N. Goetzmann (1995), "Performance Persistence," *The Journal of Finance*, 50, 679-698.

### Lecture 3: Ordered choice models

Reading: Jerry A. Hausman, Andrew W. Lo, A. Craig MacKinlay (1992), An Ordered Probit Analysis of Transaction Stock Prices, *Journal of Financial Economics*, Volume 31, No.2, pp.319-379.

### Lecture 4: Panel data models

- Least-squares dummy variables
- Fixed-Effects Models
- Random-Effects Models
- Dynamic Models

### Lecture 5: Panel data and Binary choice model

- Binary choice models
- Fixed-Effects Models
- Random-Effects Models
- Dynamic Models

### Lecture 6: Panel data and Ordered choice models

- Fixed-Effects Models
- Random-Effects Models

### Lecture 7: Bivariate probit models and Bivariate ordered probit model

- Estimating a System of Simultaneous Probit Models by Nonlinear GMM
- One-sided response model (survey bias)
- Sequential response model

### Lecture 8: Multinomial choice models

### Lecture 9: Count data models

- Poisson regression model
- Negative binomial regression model
- Fixed-Effects Models
- Random-Effects Models

Reading: Frank Windmeijer (2000), Moment conditions for fixed effects count data models with endogenous regressors, *Economics Letters*, 68, 21–24.

Richard Blundell, Rachel Griffith, Frank Windmeijer (2002), Individual effects and dynamics in count data models, *Journal of Econometrics* 108, 113–131.

Frank Windmeijer (2006), GMM for Panel Count Data Models, Discussion Paper No. 06/591, University of Bristol.

#### Lecture 10: Censored data and Tobit model

Reading: Dittmar, A. K. (2000), “Why do firms repurchase stock?” *Journal of Business*, 73, 331-355.

Maddala, G. 1991. A perspective on the use of limited-dependent and qualitative variables models in accounting research. *The Accounting Review* 66 (4): 788–807.

#### Lecture 11: Tobit model with endogenous variables

Reading: Kuo, C. S. and S. T. Yu, 2013, Market Valuation of Disclosed and Recognized Employee Stock Option Expenses- Evidence from Taiwan, *Review of Securities and Futures Markets*, 25:1, 115-158.

#### Lecture 12: Sample selection models

Reading: Heckman, J. (1979), “Sample selection bias as a specification error,” *Econometrica*, 47, 153–61.

Doidge, C., Karolyi, G. A., & Stulz, R. M. (2004). Why are foreign firms listed in the U.S. worth more? *Journal of Financial Economics*, 71(2), 205-238.

#### Lecture 13: Panel data sample selection model

Reading: Kyriazidou (1997), “Estimation of a panel data sample selection model,” *Econometrica*, 65, 1335-1364.

#### Lecture 14: Self- selection models

Reading: Li, K., Prabhala, N. (2007) Self-selection models in corporate finance. In *Handbook of Corporate Finance: Empirical Corporate Finance*, ed., B.E. Eckso. North-Holland.

#### Lecture 15: Duration models-1:

--- Standard duration models

--- Hazard function

Reading: Goetzmann, B, S. J., W., R. G. Ibbotson, and S. A. Ross (1992), "Survivorship Bias in Performance Studies," *The Review of Financial Studies*, 5, 553-580.

Grinblatt, M., and S. Titman (1992), "The Persistence of Mutual Fund Performance," *The Journal of Finance*, 47, 1977-1984.

## Lecture 16: Duration models-2

- Cox's semi-parametric models
- Time-varying covariate
- Split-population models

Reading: Lunde, A., A. Timmermann, and D. Blake (1999), "The Hazards of Mutual Fund Underperformance: A Cox Regression Analysis," *Journal of Empirical Finance*, 6, 121-152.

Deng, Yongheng (1997), "Mortgage Termination: An Empirical Hazard Model with Stochastic Term Structure. *Journal of Real Estate FINANCE AND ECONOMICS*, 14:3,309-331.

## Lecture 17: Final Report