ANALYSIS OF MICRODATA WITH QUALITATIVE AND LIMITED-DEPENDENT VARIABLES
(個體資料模型設計分析)

Fall 2008

授課教師：張宏浩
農業綜合館 217 室
Tel: 02-33662656
E-mail: hunghaochang@ntu.edu.tw
Office Hour: Monday, Wednesday: 0110-0220 pm

Purpose:

This course is an introduction to applied Micro-econometrics. Micro-econometrics is about estimating economic models using **micro level data** (e.g. data on individuals, households or firms). When analysing micro data a number of issues such as sample selection and endogeneity arise and special techniques have been developed in order to deal with these problems. In this course a lot of emphasis will be put on **applied work**. In the course there will be examples of empirical analyses on micro data. Through the exercises the students will have to perform an empirical analysis on their own, probably with their own data sets.

Techniques:

Lectures, readings, problem sets, a term paper, and final exam will be used to fulfill these purposes. The lectures will provide a systematic treatment of the subject. The readings will either augment or deepen the treatment of the lectures. The problem sets will either have the student demonstrate or work out the consequences of the theory or provide practice problems for the student to analyze. Following the lecture of each topic, each student is required to select *the paper they like* (topic related to their own research) using the technique introduced in class, and present and share with other students.

Software:

Each student is required to be familiar with the econometric software. There is no restriction of software use. For those who are not familiar with any specific software, STATA program is strongly recommended. For those who are interested in making their own programs, GAUSS or MATLAB program is an essential tool. *In the end of this semester, you will be sure to be failed in this class if you don't have basic knowledge of using any software.* You can count me on this!!!!

Testing and Other Grade Components:

Problem Sets:	40 %	(4-5 assignments)
Class Presentation (assigned papers)	20 %	(find the one you like)
Final Paper/Presentation (10-15 page)	40 %	(15 % for oral presentation)

Final paper can be any summary report of any interesting topic. If you have your own data to work on, you can try the model introduced in the class and present your preliminary findings. For this type of final report, an additional bonus of grading will be guaranteed.

Recommended Texts:

Cameron, A.C., and Trivedi, P. (2005). *Microeconometrics: Methods and Applications*. Cambridge University Press, New York.

Maddala (1983), *Limited-dependent and Qualitative Variables*, Cambridge University Press.

Helpful Texts of Econometrics:

Greene (2003), *Econometric analysis*, 5th edition., Prentice Hall, Chapter 21-22.

Wooldridge (2002). *Econometric analysis of cross section and panel data*. MIT Press. Chapter 15-17and 19-20.

Course Outlines

1. General introduction of the Micro-econometrics Model/data issue
2. Review of Estimation Method (2 weeks)
   - Maximum Likelihood Estimation
   - Generalized Method of Moments
   - Instrumental Variables
3. Binary Discrete Choice Model (2 weeks)
   - Linear Probability Model
   - Probit Model & Logit Model
   - Generalized Binary Choice Model
4. Multinomial Discrete Choice Model (2-3 weeks)
   - Unordered Model – Multinomial Logit and Conditional Logit
   - Ordered Model – Ordered Probit and Ordered Logit
5. Censored Regression Model (2 week)
   - Tobit
   - Truncated Model
6. Sample Selection Model (2-3 weeks)
7. Simultaneous Equation with Endogenous Regressors (2 week)
8. Duration & Survival Analysis (1 week)
9. Count Data Analysis (1 week)
10. Treatment Effect Analysis