Boston College

Department of Economics

EC 771 Econometrics (4 Weeks), Spring 2000

Tuesdays and Thursdays 9-11 am Carney 11

Professor Serena Ng

Office Hours: Monday 1-3pm or by appointment

Web Page for the Class: http://www2.bc.edu/~ngse/ec771-00.html

This is a module on the classical linear regression model. Knowledge of matrix algebra is essential. The lectures will be based on the manuscript prepared by Fumio Hayashi. Permission has been granted by Hayashi to photocopy chapters 1 to 3 for this course. Copies of the manuscript will be available for photocopying. Professor Kit Baum, who will take over the course Feb 17, 2000, will use Greene as the basic text. You may find Greene adequate for the first 4 weeks as well. I suggest but do not insist that you photocopy Hayashi s manuscript.˚

Please make every effort to come to class on time.

Recommended Text:

Hayashi, Econometrics, (Princeton University Press, forthcoming)

Other Useful Texts:

Greene, Econometric Analysis, 3rd Edition (Prentice Hall)

Johnston and diNardo, Econometric Methods (Mcgraw Hill)

Davidson and MacKinnon, Estimation and Inference in Econometrics

Pindyck and Rubinfeld, Econometric Models and Economic Forecasts

Fomby, Hill, and Johnson, Advanced Econometric Methods

Judge, Griffiths, Hill, Lee, The Theory and Practice of Econometrics

Evaluation:

There will be 2 problem sets, each accounting for 20% of the grade. 2 points per day will be deducted for problem sets that are turned in late. The final exam (for my 4 weeks) will be 60% of the grade and will take place on a mutually agreeable date. My suggestion is March 1st, 2000.

Topics:

Hayashi Chapter 1: Finite Sample Properties of OLS

1. Assumptions of the Classical Linear Regression Model

2. The Algebra of the Least Squares Estimator and its Finite Sample

Properties

3. Hypothesis Testing Under Normality

4. The Maximum Likelihood Estimator and Method of Moments Estimator

5. Generalized Least Squares

Hayashi Chapter 2: Asymptotic Theory

2.3 Large Sample Properties of the Least Squares Estimator

2.4 Robust Hypothesis Testing in Large Samples

Hayashi Chapter 3: Instrumental Variables

Problem Set 1: Due Feb 1, 2000

Hayashi 1.3 #4˚ (p.28)

Hayashi p. 64 # 1, 3, 4a-4d.

Show that the centered R2 may not lie between 0 and 1 if the regression does not include a constant.

Hayashi p.67 5a