
Study Guide for Midterm (Monday, February 9)

READING

Part 1 – The Role of Public Policy

- 1.1 Introduction
- 1.2 Efficiency and Equity – Welfare Economics
 - 1.2.1 Partial Equilibrium and Efficiency
Katz, Michael L. and Harvey S. Rosen, *Microeconomics*, Second Edition, Burr Ridge, Ill.: Irwin, 1994, pp. 377-385. (<http://oregonstate.edu/~tremblac/katzandrosen.pdf>)
 - 1.2.2 General Equilibrium and Efficiency
 - Pindyck, Robert S. and Daniel L. Rubinfeld, *Microeconomics*, Sixth edition, Upper Saddle River, NJ: Pearson Prentice Hall, 2005, pp. 579-584, 590, 604-607.
 - 1.2.3 Equity
Katz and Rosen, pp. 422-426.
 - Pindyck and Rubinfeld, pp. 591-593.
 - 1.2.4 When Should the Government Intervene?
 - Pindyck and Rubinfeld, pp. 607-610.
- 1.3 Behavioral Economics and Neuroeconomics
 - 1.3.1 Behavioral Economics
 - B. Douglas Bernheim and Michael D. Whinston, *Microeconomics*, Chapter 13, Behavioral Economics, Boston: McGraw-Hill, 2008.
 - 1.3.2 Neuroeconomics
Camerer, Colin F., George Loewenstein, and Drazen Prelec, “Neuroeconomics: Why Economics Needs Brains,” *Scandinavian Journal of Economics* 106(3), 2004, pp. 555-579, <http://proxy.library.oregonstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ecn&AN=0762506&loginpage=Login.asp&site=ehost-live>

Part 2 – Tools of Analysis

- 2.1 Cost-Benefit Analysis (skip for now)
- 2.2 Introduction to Regression Analysis
 - Wooldridge, Jeffrey M., *Introductory Econometrics*, South-Western, 2000, Chapter 1.
 - Stock, James H. and Mark W. Watson, *Introduction to Econometrics*, Brief Edition, Boston: Pearson, 2008, pp. 109-119.

Note: You will not be tested on “Are Idle Hands the Devil’s Workshop? Incapacitation, Concentration and Juvenile Crime” by Brian A. Jacob and Lars Lefgren until the final.

STUDY QUESTIONS

Partial Equilibrium and Efficiency

- Define consumer surplus, producer surplus, and total surplus verbally and graphically.
- Explain and show graphically why total surplus is maximized in perfect competition.
- Show how consumer surplus, producer surplus, and total surplus change when price controls are imposed.
- Define deadweight loss and show graphically.
- Explain why society might impose rent control laws even if total surplus falls.
- Show how a rent control policy can actually reduce consumer surplus.
- Illustrate how a federal tax on a good would affect total surplus.
- Define excess burden.

General Equilibrium and Efficiency

Note: PowerPoint slides for the lecture are posted on my website for this topic.

- Define partial equilibrium analysis and general equilibrium analysis.
- Construct a supply and demand model of 2 interrelated markets (i.e., where the goods are complements, goods are substitutes, or 1 good is an input in the production of the other good). Show how a partial equilibrium model understates the effects of a change in price or quantity in one market when there are feedback effects from a related market.
- Explain when a General Equilibrium occurs.
- Define a Pareto efficient allocation.
- State the first and second theorems of welfare economics.
- Define Marginal Rate of Substitution (MRS), Marginal Rate of Technical Substitution (MRTS), and Marginal Rate of Transformation (MRT).
- List the 3 conditions needed for economic efficiency.
- Describe the equalities that must hold for each of the following types of efficiency:
 - Efficiency in exchange.
 - Efficiency in production.
 - Efficiency in the output market.
- Why do competitive markets satisfy the 3 conditions of efficiency? Use equalities to show your answer.
- Suppose that the MRTS for good $x=2$ and the MRTS for good $y=3$. Should society change the amount of x produced and the amount of y produced? If so, how?
- Explain why an allocation of goods is efficient only if the goods are distributed so that the MRS between any pair of goods is the same for all consumers.
- Practice problems in Pindyck and Rubinfeld, pp. 34-35: #2, 3 (skip the Edgeworth Box; use a chart like 16.1–note that there is more than 1 answer.)

Equity

- Using a utility possibilities frontier, illustrate that: 1) an efficient allocation need not be equitable; 2) an inefficient allocation may be more equitable than an efficient allocation.
- Define a social welfare function verbally and in equation form.
- State 4 views of equity.
- Critique the idea of social welfare maximization as a method of attaining social goals.

When Should the Government Intervene?

- Briefly discuss 4 situations in which free markets are not efficient.
- Explain why monopoly power violates the conditions of economic efficiency.
- How does the second welfare theorem relate to government intervention?

Behavioral Economics and Neuroeconomics

Note: PowerPoint slides for the lecture are posted on my website for this topic.

- What are behavioral economics, experimental economics and neuroeconomics?
- Describe the Ultimatum Game.
 - What would be the split of \$10 if both players act to maximize their payoff?
 - What is the typical result in experimental settings?
 - Does this mean that economic incentives do not matter? (Consider a pot of \$1,000,000 or what you would do if you didn't have enough to eat.)
 - What advantage does the Ultimatum Game experiment have over real world investigations of offer rejection due to fairness concerns?
 - What does the neuroscience evidence show about brain activity during the Ultimatum Game?
- List 4 advantages and 4 disadvantages of experiments.
- According to the chapter on Behavioral Economics, if a finding from behavioral research is inconsistent with standard economic theory, what questions should we ask to evaluate the evidence?
- Describe and give examples of each of the following behavioral patterns:
 - Choice reversals
 - Anchoring
 - Money illusion
 - Endowment effect
 - Default effect
 - Narrow framing
 - Salience
 - Rules of thumb
 - Sunk cost fallacy
 - Projection bias
- Define dynamic inconsistency, present bias and pre-commitment, and give examples of pre-commitment.
- Describe the hot-hand fallacy and the gambler's fallacy, and relate them to stock investment behavior.
- Describe a study about overconfidence and its economic implications.
- Define loss aversion.
- Exercise 13.2, Behavioral Economics chapter.
- Recent technological advances in neuroscience have stimulated the application of neuroscience to economics (and other social sciences). List 3 brain imaging techniques and briefly state the advantages and disadvantages of each. (See Camerer et al.)
- Are there any economic models incorporating neuroscience information?
- Discuss the neuroeconomic evidence regarding the economic assumption that the "utility of money depends only on the value of the goods and services it can buy" (Camerer et al.). What is the implication of this evidence for welfare and tax policies?

Regression Analysis

- Write down a regression equation that can be used to estimate the impact of a variable, X , on a dependent variable, Y .
- Explain the meaning of an estimated coefficient on the X variable.
- Show graphically a scatter plot of data with the regression line imposed.
- Predict the value of Y for a given value of X , given the least-squares estimated parameters.
- What is the nature of the Y variable when the appropriate estimation technique is probit or logit?
- What is the difference between (binomial) logit and multinomial logit?
- Define the marginal effect of X on Y , in general.
- What is the difference between cross-section, time series, pooled and panel data?

Student Presentations

The material presented in the oral presentations is covered on the exams. PowerPoint slides are posted on my webpage. Here are some types of questions that may appear on the exam.

- Choose a presentation, other than your own, and discuss the article presented thoroughly. Discuss the following issues:
 - Primary **question(s)** addressed in the paper
 - **Method** used to analyze the question
 - **Data** source used in the article, if relevant
 - **Results**, focusing on the implications for the primary question(s)
 - **Policy** implications.
- For 3 presentations of your choice, other than your own, summarize the question and main results of the paper.