

## Study Guide for the Final

The final is Monday, March 16 at noon. It is comprehensive and covers all of the material before the midterm (Parts 1 and 2 on the syllabus), Section 2.1 on Cost-Benefit Analysis, Section 3.1.1 on Minimum Wages, and the readings on the Revised Reading List (February 26). Your oral presentations prior to the midterm and the presentations by Becky Knudson and Bruce McGough will not be covered on the exam. Refer to the Study Guide for the Midterm for earlier objectives. The material since the midterm will be weighted more heavily than the earlier work.

The course outline, readings, and objectives since the midterm are listed below. They are followed by information on reporting on journal articles, an exam question based on the student presentations, some background information regarding the Americans with Disabilities Act, and a test question on Cost-Benefit Analysis from an earlier class.

### Course Outline, Readings, and Objectives since the Midterm

#### Part 2 – Tools of Analysis

##### 2.1 Cost-Benefit Analysis

► Santerre, Rexford E. and Stephen P. Neun, *Health Economics: Theories, Insights, and Industry Studies*, Chapter 5: Cost-Benefit Analysis, Chicago: Irwin, 1996.

- Define cost-benefit analysis (CBA).
- Give an example of an application of CBA.
- Show graphically the social welfare-maximizing level of output ( $Q^*$ ) of a publicly-provided good or service. Be sure to label axes, curves, and  $Q^*$ .
- Write the equation for expected value. When is it necessary to use expected values?
- Write the equation for the present value of net benefits.
- Explain why present values are used in cost-benefit analyses.
- Calculate the present value of a project.

- Identify the impact of an increase in the value of the discount rate on present value of net benefits, when costs are incurred in the first period and benefits accrue over a long period of time.
- Explain how the value of human life is assessed using the human capital approach.
- Evaluate the human capital approach for valuing life.
- Describe how earnings in dangerous occupations can be used to infer values of life.
- Using equations show how the value of life can be estimated from consumers' willingness-to-pay for safety devices.
- Evaluate the willingness-to-pay approach for valuing life.

(See also question at the end of this study guide.)

### Part 3 – Selected Policy Issues

#### 3.1 Policies to Alleviate Poverty

##### 3.1.1 *The Minimum Wage*

► Ehrenberg, Ronald G. and Robert S. Smith, *Modern Labor Economics: Theory and Public Policy*, Ninth Edition, Boston: Pearson Addison Wesley, 2006, pp. 94-96, 107-115.

Card, David and Alan B. Krueger, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania," *American Economic Review*, 84(4), September 1994, pp. 772-793. (Available on-line through the library webpage.)

Burkhauser, Robert V., Kenneth A. Couch and David C. Wittenburg, "A Reassessment of the New Economics of the Minimum Wage Literature with Monthly Data from the Current Population Survey," *Journal of Labor Economics*, 18(4), October 2000, pp. 653-680. (Available on-line through the library webpage.)

- Define the own-wage elasticity of demand for labor.
- Identify elastic, unitary elastic, and inelastic segments along a labor demand curve.
- Compare an elastic and an inelastic labor demand curve at a given wage rate.

- Show graphically how the minimum wage results in unemployment.
- Explain why the elasticity of labor demand is important for minimum wage policy.
- Show how the minimum wage affects the covered and the uncovered sectors of the labor market.
- State the estimates of the elasticity of teen employment with respect to the minimum wage according to Brown (1999), based on his survey of studies. The estimates imply that a 10 percent increase in the minimum wage leads to a \_\_\_\_\_ change in employment. (Fill in the blank.)
- What were the findings of the body of work by Card and Krueger since the 1990s regarding the elasticity of teen employment with respect to the minimum wage?
- Explain how Card and Krueger (1994) used the difference-in-differences approach to estimate minimum wage effects.
- What is the consensus among economists regarding the value of the elasticity of teen employment with respect to the minimum wage today? (Answer: there is none.)

### 3.1.2 *Traditional Welfare and the Earned Income Tax Credit*

Required reading and lecture: Part of Chapter 1 (pp. 9-18), and Chapter 5.

Recommended reading: Rest of Chapter 1 and Chapter 3.

► Hoffman, Saul D. and Laurence S. Seidman, *Helping Working Families: The Earned Income Tax Credit*, W.E. Kalamazoo, MI: UpJohn Institute for Employment Research, 2003.

- Discuss the phase-in, stationary and phase-out phases of the earned income tax credit (EITC) and draw a graph relating earnings to the amount of the credit. (You need not use specific numbers.)
- Explain how the EITC might draw some people into the labor force, and how it might discourage work.
- What does the empirical literature show about the impact of EITC on labor supply overall?
- Compare the incentives for work for the EITC and traditional welfare, i.e., AFDC/TANF.
- Compare and contrast minimum wage policy with the EITC regarding targeting efficiency and labor market impacts.

## 3.2 Policies Aimed at Special Populations

### 3.2.1 *The Disabled and the Americans with Disabilities Act*

#### Required reading but no lecture:

► Stapleton, David C. and Richard V. Burkhauser, eds., *The Decline in Employment of People with Disabilities: A Policy Puzzle*, Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2003, Chapter 11.

- State the 3 points of agreement on the decline in employment for the disabled by the authors who contributed to the volume edited by Stapleton and Burkhauser (S&B).
- According to S&B, what is the direction of the theoretical impact of the ADA on employment? Explain.
- Referring to Blanck, et al., S&B discuss the impact of the ADA on the 'culture of disability,' which might affect employment in the long run. Explain what is meant by 'culture of disability' in this context.
- The employment decline for disabled persons may have been an unintended consequence of well-intentioned public policy, in particular, the ADA and SSDI and SSI programs. Explain the incentives that were created by the ADA and the SSDI and SSI programs.
- List 2 features of the ADA that differ from the Civil Rights Act of 1964.
- Identify the 3 approaches suggested by B&S for improving ADA compliance and employment outcomes.
- S&B suggest a "three-pronged" attack for overall policy change for people with disabilities. What is it?

### 3.2.2 *Selected Policies Affecting Youth*

#### Required reading and lecture:

Tremblay, Carol Horton and Davina Ling, "AIDS Education, Condom Demand, and the Sexual Activity of American Youth," *Health Economics*, 14(8), August 2005: 851-867.

<http://www3.interscience.wiley.com/cgi-bin/fulltext/110428639/PDFSTART>

Required reading; lecture delivered earlier in the term:

Jacob, Brian A. and Lars Lefgren, "Are Idle Hands the Devil's Workshop? Incapacitation, Concentration and Juvenile Crime," *American Economic Review* 93(5), December 2003: 1560-1577. (Available online through the library webpage.)

(See "Reporting on Journal Articles" below.)

### 3.3 Externalities and Public Goods

Required reading and lecture:

- ▶ Pindyck and Rubinfeld, pp. 641-669.
- ▶ Folland, Sherman, Allen C. Goodman, and Miron Stano, *The Economics of Health and Health Care*, Fifth Edition, Upper Saddle River, NJ: Pearson Prentice Hall, 2007, "Excise Taxes and Consumption of Cigarettes and Alcohol," pp. 535-538.

- Define public goods, nonrivalry, nonexclusion, free rider, and externalities.
- Show graphically how a public good will be underproduced in a competitive market.
- Suppose that when a firm produces a good, it imposes an external cost on another producer or consumer. Show graphically that a competitive market will overproduce the good.
- Higher education creates private benefits to the student, as well as social benefits, such as enhanced potential to contribute to society (e.g., medical discovery or being an informed voter and citizen). Show graphically how the competitive market (i.e., only private universities) would fail to produce the socially optimal level of education.
- Define property rights.
- Describe 3 methods for dealing with externalities, including the Coase Theorem.
- According to the Coase Theorem, what is the role of government in transactions involving externalities?
- What was an unforeseen consequence of the Cigarette Broadcast Advertising Ban of 1971?
- Define common property resources and give examples.
- Explain how transferable emissions permits are used to contain external costs.

## Reporting on Journal Articles

You should be able to state the important elements of the following journal articles: Card and Krueger, (1994); Burkhauser, Couch and Wittenburg (2000); Tremblay and Ling (2005); and Jacob and Lefgren (2003). Include the usual elements:

- 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.

You might also think about any weaknesses of the paper. Be concise – your answer should be only about 1/2 of a page and may be in list form.

### Exam Question for Student Presentations (March 9 and March 11)

Choose a presentation by one of your colleagues of interest to you. Discuss the question of interest, the main points of the paper, and the student's conclusion regarding the evidence and the original question.

### Background Information about the Americans with Disabilities Act

The *employment provisions of the ADA* prohibit discrimination on the basis of disability in all employment practices and mandates “reasonable” job accommodation.

*A disabled person* is one with a physical or mental impairment that substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment. Major life activities are activities that an average person can perform with little or no difficulty such as walking, breathing, seeing, hearing, speaking, learning, and working.

*A qualified employee or applicant with a disability* is someone who satisfies skill, experience, education, and other job-related requirements of the position held or desired, and who, with or without reasonable accommodation, can perform the essential functions of that position.

*Reasonable accommodation* may include, but is not limited to, making existing facilities used by employees readily accessible to and usable by persons with disabilities; job restructuring; modification of work schedules; providing additional unpaid leave; reassignment to a vacant position; acquiring or modifying equipment or devices; adjusting or modifying examinations, training materials, or policies; and providing qualified readers or interpreters.

## Question on Cost-Benefit Analysis from Prior Exam

### Question

Suppose that a program is proposed to provide pre-natal care to pregnant women who are on public assistance. Physicians have established that some babies born to women who have not had proper care have health problems at birth and throughout their lives. Advocates of the proposal claim that it will actually reduce public expenditures because medical expenses for the child, which would likely be publically financed, will be averted. Explain step by step how you would use cost-benefit analysis to assess whether or not the proposed program should be undertaken.

### Answer

A proposal should be undertaken if the present value of expected net benefits (benefits - costs) exceed zero (or rank highly compared to other public projects).

Step 1: Determine costs: The costs include the cost of pre-natal care (CP).

Step 2: Determine benefits

a. Expected value of averted health care costs

The benefits are averted health care costs for the lifetime of the child.

Averted health care costs =  $EVP - EVNP$  where

$EVP$  = expected value of the costs of an unhealthy baby if the mother did receive pre-natal care, and

$EVNP$  = expected value of the costs of an unhealthy baby if the mother did not receive pre-natal care

Let  $PP$  = probability that a baby is unhealthy, given that the mother had pre-natal care

$PNP$  = probability that a baby is unhealthy, given that the mother did not have pre-natal care, and

$C$  = lifetime medical costs for an unhealthy baby

Then  $EVP = PP * C$ ,  $EVNP = PNP * C$ , and

Expected benefits of averted costs =  $EVNP - EVP$ .

b. Present value of expected benefits

The benefits (or averted costs) of pre-natal care accrue over the child's lifetime.

Thus, present values must be used to evaluate costs and benefits in today's dollars. The present value of the expected benefits =  $(EVNP - EVP)/(1+r)^t$  where  $t = 1, \dots, T$ ,  $T$  is the expected years of life, and  $r$  is the discount rate, generally estimated by 0.04 or the prevailing interest rate. (Since pre-natal care lasts less than a year, it is not necessary to put these costs in present value terms.)