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UST 603/PAD 603/PDD603

PUBLIC FINANCE AND ECONOMICS

SUMMER 2004

I. COURSE OBJECTIVES

1. To provide an understanding of basic economic concepts and tools used by economists and show how economists use these in thinking, talking, and writing about issues of government spending, taxing, and regulation.
2. To provide an understanding of the economist's view of how the world works and the contributions of this view to thinking about public policy and budgeting issues.

II. REQUIRED TEXTS

1. Texts

David Hyman. Public Finance. Eighth Edition. Dryden Press. 2005.

Steven Landsburg. The Armchair Economist. Free Press. 1993

Ansel Sharp, Charles Register, and Paul W. Crimes. Economics of Social Issues. Sixteenth Edition. Irwin, 2003.

2. Reserve reading (Available from the Library over the web)

Robert Anthony and David Young."Program Analysis" in Management Control in Nonprofit Organizations. Irwin, 1988 or 1994.

Steven Rhoads, "Do Economists Overemphasize Monetary Benefits." Public Administration Review, Volume 45, Number 2, 1985: 815-819 (Reserve reading)

III. COURSE REQUIREMENTS

1. Two Midterms, July 15 and July 29 (25% each)
2. Final Comprehensive Examination, August 12 (50%)

All of these examination are designed to assess your knowledge of economic and public finance concepts and your ability to apply them to concrete real-world situations. The purpose of holding exams so frequently is to provide you with timely feedback on how well you are grasping the material so that you can improve your work on later exams. Exams will include questions on some arguments in the Hyman and Landsberg texts, but not covered in class. All exams will be open-book, but you should come as well-prepared as you would be for a regular exam.

3. Class Participation

IV. GRADING POLICY

Final grades will be assessed on an A-B-C-F scale. Pluses and minuses will be shown on graded assignments for advisory purposes only.

V. COURSE OUTLINE

Reading assignments should be completed prior to coming to the session indicated. Read the Sharp assignments before the Hyman assignments where both are assigned. In the Sharp text, try to understand the basic economic arguments advanced and don't dwell on the institutional data.

Session 1: Scarcity and the need to choose; Opportunity cost; The Nature of Economic Theory; Economic Efficiency.

Assignments: Sharp et al., Chapter 1; Hyman, Chapter 1 (3-28), 2 (52-59)

Session 2: Supply and Demand.

Assignments: Sharp et al., Chapter 2.

Session 3: Supply and Demand (cont'd); Markets, Efficiency, and The Role of Government; The Effects of Subsidies and Regulation on Efficiency; Efficiency versus equity.

Assignments: Hyman, Chapters 1 (41, 50-51), 2 (59-75); Landsburg, Chapters 1, 4, 5, 7, 8.

Session 4: Midterm I

Session 5: Rationale for Government Action: Externalities and Public Goods.

Assignments: Sharp et al. Chapters 4, 6; Hyman, Chapters 3, 4 (139-152, 162-167), Landsburg, Chapters 9, 24.

Session 6: Methods of expenditure analysis and Budgeting.

Assignments: Hyman, Chapter 6; Landsburg, Chapter 10

Anthony and Young. "Program Analysis" in Management Control in Nonprofit Organizations. Irwin, 1988 or 1994 (Reserve Reading).

Session 7: Income Distribution and Redistribution.

Assignments: Sharp et al. Chapter 7, 3; Hyman, Chapter 7 (251-263, 265-273, 283-298); Landsburg, Chapter 13.

Session 8: Midterm II

Session 9: Principles of Taxation.

Assignments: Sharp et al. Chapter 13; Hyman, Chapter 1(19-21), 2 (63-65), 10 (395-412), 14 (536-547), 16(611-617 624-629, 630-631), 17 (641-645, 650-654, 658-666).

Session 10: Public Choice

Assignments: Hyman, Chapter 5

Session 11. Limitations of Economics

Steven Rhoads, "Do Economists Overemphasize Monetary Benefits." Public Administration Review, Volume 45, Number 2, 1985: 815-819 (Reserve reading).

Session 12: Final

IV. HOMEWORK QUESTIONS

The following questions are designed to help you test your understanding of and ability to apply course material. You should come to the session indicated below prepared to both provide an answer to the questions assigned and also explain your reasoning for your answers, drawing graphs where appropriate. Your exams will take the form of questions of this type.

Session 2

1. Which of the following changes will have no effect on the position of (i.e. will not shift) the production possibility frontier for a country
 - a. the discovery of new oil reserves in that country
 - b. severe flooding
 - c. the development of new and more efficient methods of steel production
 - d. illegal immigration
 - e. none of the above

2. The existence of scarcity as an economic problem arises because:
 - a. business corporations are too greedy
 - b. inadequate education and training of workers
 - c. our wants exceed our resources
 - d. too many people are out of work
 - e. all of the above

Questions 3-4 are based on the following information:

A study has been instituted to determine the benefits and costs of a crime prevention program at different levels and the results are listed in the following

table. Figures for costs for crime prevention are also included:

Units of Crime Prevention	Total Social Benefit (\$)	Total Social Costs (\$)
1	70,000	55,000
2	135,000	110,000
3	195,000	165,000
4	250,000	220,000
5	300,000	275,000
6	345,000	330,000
7	385,000	385,000
8	420,000	440,000

3. The estimated marginal social benefit of the sixth unit of crime prevention is:
 - a. \$345,000
 - b. \$15,000
 - c. \$45,000
 - d. \$55,000
 - e. \$330,000

4. The economically efficient level of crime prevention is:
 - a. 4 units
 - b. 7 units
 - c. 8 units
 - d. 5 units
 - e. 0 units

Session 3

1. All but one of the following may cause an increase in the demand for higher education (i.e. shift the demand curve for health care to shift to the right). Which one will not:
 - a. an increase in incomes for college graduates
 - b. increased government financial aid to students

- c. a reduction in tuition
 - d. an increase in population
2. According to supply and demand, tightening restrictions on the loads that truckers can carry and on the hours they can work can be expected to lead to (hint: road and rail freight can be considered substitutes for buyers):
- a. an increased supply of trucking services
 - b. lower prices for trucking services
 - c. higher prices for freight carried by rail
 - d. a. and b.
 - e. all of the above
3. During this Spring, the price of oil rose and there was also an increase in the amount of oil traded. This suggests that there must have been:
- a. a reduction in the demand for oil
 - b. a reduction in the supply of oil
 - c. an increase in the demand for oil
 - d. an increase in the supply of oil
4. The existence of a shortage of day-care services means that:
- a. the quantity demanded of services exceeds quantity supplied
 - b. the price of day-care services will increase
 - c. this is an example of market failure and an indication government ought to finance the provision of more services
 - d. a. and b.
 - e. all of the above

Session 4

1. Taxi-Cab drivers in a city must obtain city licenses to do business. There is an increase in the number of licenses made available to drivers. As a result, tax-cab revenues decrease. This suggests that the elasticity of demand for taxi-rides with respect to price is:
- a. less than one
 - b. greater than one
 - c. equal to one
 - d. we can determine nothing about elasticities from the data given
 - e. the law of demand does not seem to apply here

2. Assuming that the price elasticity of demand for illegal drugs is zero, then, according to supply and demand theory, tougher enforcement of laws against drug sellers will lead to:
 - a. higher prices for drugs
 - b. a reduced equilibrium quantity of drugs consumed
 - c. increased revenues overall for drug sellers
 - d. a. and c.
 - e. all of the above

3. If the output of education is Pareto-optimal, this means that:
 - a. the marginal social benefit of education exceeds its marginal social cost
 - b. it is impossible, in changing education output, to make someone better off without making someone else worse off
 - c. equity in the availability of education is secured
 - d. a. and b.
 - e. a.,b., and c.

4. Assuming that a competitive market for human organs, for purposes of transplants, would be efficient, a ban on the sale of human organs would be expected to lead to (Assume here that the ban would have some effect but that an illegal market would exist):
 - a. economic inefficiency because the marginal social benefit of human organs will exceed the marginal social cost
 - b. economic inefficiency because the marginal social cost of human organs will exceed the marginal benefit
 - c. a reduction in the price of organ transplants
 - d. a. and c.
 - e. b. and c.

Session 6.

1. The marginal cost per unit of a pollutant discharged into a river by a competitive chemical industry is estimated at \$180 per ton. A pollution tax of \$80 per ton is in effect. The marginal cost to the firm of cleaning up a ton of discharge is \$100 at current clean-up levels. Given these conditions:
 - a. the firm will not clean up any more of the discharge and this is the correct decision from the point of view of economic efficiency
 - b. the firm will not clean up any more of the discharge but this is not the

- correct decision from the point of view of economic efficiency because pollution is not reduced.
- c. the firm will clean up more of the discharge and this is the correct decision from the point of view of economic efficiency because pollution is reduced
 - d. the firm will clean up more of the discharge but this is not the correct decision from the point of view of economic efficiency
2. An external cost results from the sale of firewood in a competitive market. It follows that at market equilibrium:
- a. the marginal private benefit of firewood exceeds its marginal social benefit
 - b. the marginal social cost of firewood exceeds its marginal social benefit
 - c. the marginal private cost of firewood exceeds its marginal social benefit
 - d. less than the efficient amount of firewood is produced
 - e. none of the above
3. An example of external benefits arising from higher education would include:
- a. increased income of university graduates
 - b. income earned by college professors
 - c. new scientific knowledge
 - d. all of the above
 - e. none of the above
4. Which of the following is a pure public good:
- a. water provided by a public utility
 - b. a public program to eliminate a communicable disease
 - c. public education
 - d. public housing
 - e. all of the above

Session 7

1. An investment provides a return of \$2,000 per year for the next nine years. Assuming an 8% discount rate, the most you should be prepared for this investment is:
- a. \$6,250

- b. \$12,500
 - c. \$1,100
 - d. \$16,000
 - e. \$10,670
2. A city is currently paying private contractors \$150,000 per year for snow removal from streets. A small fleet of snow removal trucks would eliminate the need to pay private contractors. The trucks would cost the city about \$600,000 to purchase and \$50,000 per year thereafter to operate. The trucks would last about thirteen years and have no salvage value. On the basis of a cost-benefit analysis, assuming a 10% discount rate, the net present value of investing in the fleet, instead of continuing to contract out for snow removal, is:
- a. about \$710,000 and the trucks should be purchased
 - b. about \$110,000 and the trucks should be purchased
 - c. about \$10,000 and the trucks should be purchased
 - d. about \$60,000 and the trucks should be purchased
3. Two government projects each have an investment cost of \$4 million. Project A yields no benefits for the first three years and then yields \$2 million per year for three years. Project B yields \$1 million each year for six years. Assuming a discount rate greater than zero, which of the following statements is accurate (Hint: it is not necessary to do any calculations in order to answer this question):
- a. Since both projects have the same investment cost and yield the same total future benefits of \$6 million across six years, their net present values to the community are the same
 - b. Since total future benefits exceed the investment cost for both projects, both projects must always have a positive net present value
 - c. The net present value of Project A will be greater than the net present value of Project B
 - d. The net present value of Project B will be greater than the net present value of Project A
 - e. c. or d. may be true depending on the discount rate selected
4. In cost-benefit analysis of irrigation capital

projects, using a discount rate which is lower than that which measures the true opportunity cost to society of resources invested in a capital project:

- a. will lead to the adoption of irrigation projects that are not justifiable on efficiency grounds
- b. will lead to the rejection of irrigation projects which are justifiable on efficiency grounds by lowering their rate of return
- c. is economically justifiable if the government can borrow funds at the lower rate
- d. is economically justifiable since irrigation provides a public good

Session 8

1. The food stamp program:
 - a. leads to an output of food such that $MSB > MSC$
 - b. leaves recipients better off than they would be if they received the same dollar aid in the form of cash
 - c. promotes efficiency in the consumption and production of food
 - d. all of the above
 - e. none of the above
2. The effects of a price ceiling imposed on all pharmaceutical drugs at a level below equilibrium prices would include:
 - a. an increased quantity of drugs available
 - b. a loss of mutually beneficial trade between drug buyers and sellers
 - c. reduced investment in pharmaceutical research
 - d. a. and b.
 - e. all of the above
3. Families of three are to be supported at a minimum income of \$16,000 per year by a negative income tax program with a tax rate of 40%. A family of three earns an income of \$20,000. Its total income, including the earned income and the negative tax payment, will be:
 - a. \$28,000
 - b. \$8,000
 - c. \$36,000
 - d.. \$24,000

- e. \$20,000
4. According to supply and demand, the beneficiaries from rental subsidies provided to low-income tenants do not include:
- a. landlords
 - b. low-income tenants
 - c. all tenants
 - d. a. and b
 - e. all of the above

Session 10

1. If the ability to pay principle is interpreted as simply meaning that people with more income should pay more taxes, then:
- a. progressive income tax rates are consistent with this principle
 - b. proportional income tax rates are consistent with this principle
 - c. regressive income tax rates may or may not be consistent with this principle
 - d. all answers above are correct
2. An income tax taxes all income below \$30,000 at 10% and all income in excess of \$30,000 at 20%. A household earning \$60,000 faces:
- a. an average tax rate and marginal tax rate of 20%
 - b. an average tax rate and marginal tax rate of 15%
 - c. an average tax rate of 15% and a marginal tax rate of 20%
 - d. an average tax rate of 20% and a marginal tax rate of 15%
 - e. an average tax rate of 10% and a marginal tax rate of 20%
3. A tax is imposed on fast food as a means of lowering cholesterol levels and health-care costs. The tax is levied on fast food producers. It follows that:
- a. the fall in fast food consumption and the burden of the tax on buyers will be greater, the less elastic is the demand for fast food with respect to price
 - b. the fall in fast food consumption will be greater and the burden of the tax on buyers will be smaller, the less elastic is the demand for fast food with respect to price
 - c. the fall in fast food consumption will be smaller and the burden of the tax on buyers will be greater, the less elastic is the demand for fast food with

- d. respect to price
- d. the fall in fast food consumption and the burden of the tax on buyers will be smaller, the less elastic is the demand for fast food with respect to price.
- 4. In the absence of market failures, tax preferences given to certain activities under the Federal income tax:
 - a. decrease efficiency by encouraging less than the efficient amount of the activities to be undertaken
 - b. decrease efficiency by encouraging more than the efficient amount of the activities to be undertaken
 - c. have a larger effect on the level of the activities when income tax rates are reduced
 - d. a. and c.
 - e. b. and c.

Session 11

1. A County Commission with three members (Brown, Waters, and Smith) is faced with choosing one of three programs; a day-care program (D), a rehabilitation program for substance abusers (R), and a homeless shelter (H). Commissioner Brown prefers D to R and R to H. Commissioner Waters prefers R to H and H to D. The expressed majority preference turns out to be arbitrary and unstable. What are Commissioner Smith's preferences?
 - a. She prefers D to H and H to R
 - b. She prefers H to R and R to D
 - c. She prefers H to D and D to R
 - d. She prefers R to D and D to H
 - e. None of the above
2. Three equal size groups, A, B, and C, are voting on the building of a public recreational facility. The facility will provide \$8,000 of annual benefits per head to members of group A, \$7,000 of benefits per head to group B, and \$1000 of benefits per head to group C. The annual cost to be shared equally will be \$6,000 per head. According to economic theory:
 - a. majority rule will result in building the facility
 - b. the facility should be built on efficiency grounds
 - c. the facility should not be built on efficiency grounds
 - d. a. and b.
 - e. a. and c.

3. According to public choice, health-care policy-makers are most likely to be subject to organized political pressure exerted by groups of:
 - a. doctors
 - b. taxpayers
 - c. patients
 - d. voters

4. Examine again the data for the crime prevention program used above in the homework for Session 2 in questions 3 and 4. Assuming that the program was delivered by a budget-maximizing bureaucracy:
 - a. the bureaucracy will produce 7 units and this is the efficient amount
 - b. the bureaucracy will produce 4 units and this is the efficient amount
 - c. the bureaucracy will produce 7 units and this exceeds the efficient amount
 - d. the bureaucracy will produce 7 units and this is smaller than the efficient amount
 - e. the bureaucracy will produce 8 units and this is more than the efficient amount