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UST 603

PUBLIC FINANCE AND ECONOMICS

Fall 2017

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, budgeting, and tax issues.

II. COURSE TEXTBOOKS AND READINGS

1. Required Textbooks

David Hyman. Public Finance. Tenth (2011) or Eleventh Edition (2014). Thompson.

Steven Landsburg. The Armchair Economist. First (1993) or Revised (2012) Edition. Free Press.

Ansel Sharp, Charles Register, and Paul W. Grimes. Economics of Social Issues. Twentieth (2013) or Twenty-First Edition (2016). McGraw-Hill.

2. Reserve readings (CSU library website)

These readings may be accessed at <http://researchguides.csuohio.edu/er.php> (The course number is UST 603 and the password is 1312).

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

John Mikesell. "Cost Estimation" in Fiscal Administration: Analysis and Applications in the Public Sector. Wadsworth.

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

Michael Spicer and Richard Bingham. "Public Finance and Budgeting." In Richard Bingham et al. Managing Local Government: Public Administration in Practice. Newbury Park: Sage, 1991.

XiaoHu Wang. "Incremental Cost Analysis" in Financial Management in the Public Sector 2006. M.E. Sharpe.

Xiaohu Wang. "Revenue Forecasting" in Financial Management in the Public Sector. Second Edition. 2010. M.E. Sharpe.

3. Recommended textbook

Julian Le Grand, Carol Propper, and Sarah Smith. The Economics of Social Problems. 2008. Palgrave MacMillan.

While purchase of this book is not required, I recommend it, especially for those who would like an additional accessible reading of the economics of social policy and also for those of you who have an interest in comparative social policy.

III. COURSE REQUIREMENTS

1. Three Midterms, **September 28, October 26, November 30** (25% each for two highest scores, lowest score dropped provided all exams are taken)
2. Final Comprehensive Examination, **December 14** (50%)

All of these examinations 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 Landsburg texts and also in articles on reserve, but not covered in class. All exams will be open-book, but please come as well prepared as you would be for a regular exam. Access to computers or phones during exams will not be permitted so please print out any materials you need and bring a calculator. Make-up exams will be granted only in cases of a documented emergency and, whenever possible, you should notify me prior to the scheduled exam. Any make-up exams must be taken by appointment during regular office hours (9am-5pm) and no later than 48 hours after the normally scheduled 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. The grading scale is as follows: A, 88-100; B, 70-87; C, 52-69; F, 0-51%.

V. COURSE OUTLINE

Reading assignments should be completed prior to coming to class. PAGE NUMBERS FOR THE OLDER EDITIONS OF THE TEXTS ARE LISTED IN BRACKETS. PAGE NUMBERS FOR THE NEWER EDITIONS ARE LISTED IN PARENTHESES. Please read the Sharp assignments before the Hyman assignments where both are assigned. In the Sharp text, please try to understand the basic economic arguments advanced and don't dwell on the institutional or historical data.

Session 1: Introduction; Course Overview; Working with Graphs.

Session 2: Scarcity and the Need to Choose; Opportunity Cost; the Nature of Economic Theory; Economic Efficiency.

Assignments: Sharp et al., Chapter 1, 11, [322-327] (302-306); Hyman, Chapter 1, 2 [55-62] (53-59)

Session 3: Supply and Demand.

Assignments: Sharp et al., Chapter 2

Session 4: Supply and Demand (cont'd); Markets, Efficiency, and The Role of Government; The Effects of Subsidies on Efficiency; Efficiency versus equity.

Assignments: Sharp et al., Chapter 14 [421-425] (397-401). Hyman, Chapters 1 [44, 54] (42, 51-52), 2 [62-79] (60-74); Landsburg, Chapters 1, 4, 5, 6, 7, 8.

Session 5: Midterm I

Session 6: Rationale for Government Action: Externalities.

Assignments: Sharp et al., Chapters 4, 6; Hyman, Chapter 3, Landsburg, Chapters 9, 17, 24.

Session 7: Rationale for Government Action: Public Goods. Budgetary Process; Cost Analysis

Assignments: Sharp et al. Chapter 5; Hyman, Chapter 4 [144-157, 168-173] (131-145, 154-157)

Michael Spicer and Richard Bingham. "Public Finance and Budgeting" (Reserve Reading).

XiaoHu Wang. "Incremental Cost Analysis" (Reserve Reading).

John Mikesell. "Cost Estimation" in Fiscal Administration" (Reserve Reading).

Session 8: Methods of Expenditure Analysis. Revenue Forecasting.

Assignments: Hyman, Chapter 6; Landsburg, Chapter 10

Anthony and Young. "Program Analysis" (Reserve Reading).

Xiaohu Wang. "Revenue Forecasting" (Reserve Reading)

Session 9: Midterm

Session 10: Income Distribution and Redistribution.

Assignments: Sharp et al, Chapters 7, 3, 15 [436-440] (413-416); Hyman, Chapter 7 [259-272, 274-279, 280-282, 291-308] (235-247, 249-253, 254-255, 264-278); Landsburg, Chapter 13.

Session 11: Principles of Taxation.

Assignments: Sharp et al. Chapter 14; Hyman, Chapter 1 [21-23] (22-26), 10 [412-429] (370-386), Landsburg, Chapter 7.

Session 12: Principles of taxation (cont'd.)

Assignments: Hyman, Chapters 2 [66-68] (63-65), 14 [557-568] (499-510), 16 [643-647, 657-664] (574-578, 587-594), 17 [674-679, 683-688, 692-704] (603-607, 612-614, 618-629)

Session 13: Midterm 3

Session 14: Public choice and the Politics of Budgeting and Taxation. Limitations of Economics

Assignments: Hyman, Chapter 5; Landsburg, Chapter 6.

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

Session 15: Final (comprehensive)

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 question for that session and also to explain your reasoning for the answer, drawing graphs where appropriate. Your exams will take the form of questions of this type.

Session 3

1. An inward shift (shift to the left) in the production possibility frontier for a country would occur in all of the following cases below EXCEPT:
 - a. an increase in deaths from heroin overdoses
 - b. layoffs of workers from air-conditioner manufacturers
 - c. terrorist bombing of subways
 - d. a major hurricane
 - e. none of the above (i.e. they all shift the frontier inward)

2. If the economy is currently operating on the production-possibilities curve for government goods and services versus private goods and services:
 - a. an increase in government goods and services can be obtained without any sacrifice of private goods and services
 - b. it will be impossible to increase the output of government goods and services
 - c. a decrease in the output of private goods and services will allow an increase in the output of government goods and services
 - d. a decrease in the output of government goods and services will have no effect on the output of private goods and services

Questions 3-4 are based on the following information. A study has been instituted to determine the benefits and costs of a disease prevention program at different levels and the results are listed in the following table. Figures for costs of disease prevention are also included:

| Units of Disease Prevention | Total Social Benefits (\$) | Total Social Costs (\$) |
|--------------------------------|----------------------------------|-------------------------------|
| 1 | 50,000 | 35,000 |
| 2 | 95,000 | 70,000 |
| 3 | 135,000 | 105,000 |
| 4 | 170,000 | 140,000 |
| 5 | 200,000 | 175,000 |
| 6 | 225,000 | 210,000 |
| 7 | 245,000 | 245,000 |
| 8 | 260,000 | 280,000 |

3. The estimated marginal social benefit of the fifth unit of disease prevention is:
- a. \$200,000
 - b. \$30,000
 - c. \$25,000
 - d. \$35,000
 - e. we cannot determine this from the information given
4. The economically efficient level of disease prevention is:
- a. 7 units
 - b. 6 units
 - c. 5 units
 - d. 4 units
 - e. 2 units

Session 4

1. Schools are having difficulty finding mathematics teachers. This suggests that the wage paid for the services of mathematics teachers is:
- a. currently higher than the equilibrium wage
 - b. currently lower than the equilibrium wage
 - c. can be expected to rise
 - d. a. and c.
 - e. b. and c.
2. All but one of the following may cause the demand curve for health care to shift to the right. Which is this?
- a. government subsidies to buyers of health insurance
 - b. an aging population
 - c. an increase in income
 - d. a decrease in the price of health care
 - e. none of the above (i.e. any of the above will shift the demand curve to the right)
3. According to supply and demand, a decrease in public school teachers' wages and an increase in the quantity of public school teaching services offered can be expected to result from:
- a. the provision of vouchers to parents for private schools
 - b. tougher standards for teaching certification
 - c. federal subsidies to school districts to hire new teachers
 - d. relaxing licensure requirements by allowing college graduates without education certificates to teach

4. Natural gas obtained by fracking is a substitute for coal. Tougher regulation of fracking can be expected to lead to:
 - a. an increased demand for coal (rightward shift in the demand curve)
 - b. a reduced demand for natural gas (leftward shift in the demand curve)
 - c. higher coal prices
 - d. a. and c
 - e. all of the above

Session 5

1. You need to increase the revenue generated by a local swimming pool in order to meet expenses. The mayor advises you to reduce the price of pool passes. The city manager recommends increasing the price of pool passes. You realize that
 - a. the mayor thinks demand is elastic and the city manager thinks demand is inelastic
 - b. both the mayor and the city manager think that demand is elastic
 - c. both the mayor and the city manager think that demand is inelastic
 - d. the mayor thinks demand is inelastic and the city manager thinks demand is elastic
2. Assuming that the demand for prescription painkiller drugs is inelastic with respect to price, the effect of tougher regulation of prescriptions for painkiller drugs will lead to:
 - a. higher painkiller drug prices
 - b. a reduced quantity of painkiller drugs demanded
 - c. reduced revenues for painkiller drug producers
 - d. a. and b.
 - e. all of the above
3. Because of national health insurance, there has been an increase in the demand for health care. As a result,
 - a. the decrease in health care prices will be larger the more elastic is the supply of health care
 - b. the increase in health care prices will be larger the more elastic is the supply of health care
 - c. the decrease in health care prices will be smaller the more elastic is the supply of health care
 - d. the increase in health care prices will be smaller the more elastic is the supply of health care
4. Assuming that, in the absence of government intervention, the market for day care operates efficiently, then subsidies to day care users will:
 - a. lead to economic inefficiency because such subsidies will result in marginal social benefit exceeding marginal social cost for day care
 - b. result in a larger than efficient output of day care
 - c. lead to an increase in the price of day care
 - d. b. and c.
 - e. all of the above

Session 7

1. An external cost results from the use of cell phone services because of increased auto accidents. If cell phone services are sold in a competitive market, it follows that:
 - a. too few cell phone services will be purchased unless a subsidy is provided for these services
 - b. too few cell phone services will be purchased unless a tax is imposed on these services
 - c. too many cell phone services will be purchased unless a subsidy is provided for these services
 - d. too many cell phone services will be purchased unless a tax is imposed on these services
2. The marginal cost per unit of a pollutant discharged into a lake by a competitive chemical industry is estimated at \$200 per ton. A pollution tax of \$250 per ton is in effect. The marginal cost to the firm of cleaning up a ton of discharge is \$300 at current clean-up levels. Given these conditions:
 - a. the firm will clean up more of the discharge and this is the correct decision from the point of view of economic efficiency.
 - b. the firm will clean up more of the discharge but this is not the correct decision from the point of view of economic efficiency .
 - c. 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
 - d. 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.
3. Provided the affected parties can negotiate with each other, an efficient voluntary solution to the problem of water pollution by a mining firm may be reached:
 - a. if the mining firm has the legal right to pollute and the victims of pollution can offer to pay the firm to reduce pollution
 - b. if the victims of pollution have the legal right to prevent the mining firm from polluting but the firm can offer to pay the victims to bear some pollution
 - c. only if agreements between the parties actually result in reduced pollution
 - d. a or b
 - e. all of the above
4. 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

Session 8

1. The most efficient solution to the problem of global warming caused by carbon dioxide would be:
 - a. educational programs that show citizens how they can contribute to the reduction of global warming
 - b. a tax on those carbon-based energy sources that contribute to global warming
 - c. to subsidize the output of firms who contribute to global warming so that they can afford to take remedial measures without laying off workers
 - d. to impose regulatory limits on carbon-dioxide emissions
2. All of the following are examples of public goods except:
 - a. a lighthouse
 - b. reducing global climate change
 - c. treatment for diabetes
 - d. a more effective flood control system for New Orleans
 - e. prevention of a bird-flu epidemic

The following information is used in questions 3 and 4. A drug rehabilitation program is currently serving 150 clients for a total cost of \$450,000 with fixed costs of \$300,000. Costs are assumed to be a linear function of the number of clients served.

3. If the program adds 50 more clients, total costs will be:
 - a. \$200,000
 - b. \$500,000
 - c. \$600,000
 - d. \$800,000
 - e. \$900,000
4. Assuming that the program receives \$2,500 per client served, the program can be expected to break even at a service level of:
 - a. 120 clients
 - b. 150 clients
 - c. 200 clients
 - d. 300 clients

Session 9

1. Roadway City is considering building a new asphalt plant to help it maintain its roads. The plant will cost \$8 million to construct, last approximately 20 years, and, in addition, have operating costs of \$1 million per year. If the plant is built, it is estimated that the city will save \$2 million per year that is currently paid to private asphalt producers. Assuming a discount rate of 8%, on the basis of benefit-cost analysis and criteria, the plant has (Hint: calculate the net savings in annual costs as a result of building the plant to make your present value calculations easier):
 - a. A net present value of about \$12 million and should be built
 - b. A net present value of about \$1.8 million and should be built
 - c. A net present value of about \$7.8 million and should be built
 - d. A net present value of about \$9.8 million and should be built
 - e. A net present value of about minus \$ 8 million and should not be built

2. Two government projects each have an investment cost of \$2,400,000. Project X yields \$600,000 per year for the first four years and then yields \$400,000 per year for four years. After that, Project Y yields \$500,000 per year for eight years. Assuming a discount rate greater than zero, which of the following statements is accurate?
 - a. Since total future benefits exceed the investment cost for both projects, both projects must always have a positive net present value
 - b. The net present value of Project X will be greater than the net present value of Project Y
 - c. The net present value of Project Y will be greater than the net present value of Project X
 - d. The net present value of the two projects will be the same
 - e. b. or c. may be true depending on the discount rate selected

3. In cost-benefit analysis of capital projects, using a discount rate which is higher than that which measures the true opportunity cost to society of resources invested in a capital project:
 - a. will lead to the rejection of projects which are justifiable on efficiency grounds
 - b. will lead to the adoption of projects which are not justifiable on efficiency grounds
 - c. will not affect investment decisions so long as both costs and benefits are discounted
 - d. will lead to excessively high estimates of the present values of future benefits from the projects

4. Sales tax revenues for a local government for the past 5 years have been:

| | |
|------|--------------|
| 2012 | \$30 million |
| 2013 | \$33 million |
| 2014 | \$35 million |
| 2015 | \$34 million |
| 2016 | \$35 million |

Which revenue forecasting technique will provide the highest estimate of revenues for 2017?

- a. Simple moving average
- b. Exponential smoothing with $\alpha = 0.5$ for the latest revenue figure
- c. Transformation moving average

Session 11

1. Park rangers at Yellowstone National Park are known to have low wages. This is likely to be partially a result of the fact that
 - a. park rangers are required to be college graduates.
 - b. park rangers don't need much money to live.
 - c. park ranger jobs are perceived to be enjoyable
 - d. park ranger jobs are perceived to be dangerous
2. The effects of a price ceiling imposed on electricity prices at a level below equilibrium prices in a competitive market would include:
 - a. a decreased quantity of electricity available
 - b. a loss of mutually beneficial trade between electricity buyers and sellers
 - c. reduced investment in new electricity plants
 - d. a. and b.
 - e. all of the above
3. Economic problems can arise in our redistributive programs for the following reasons:
 - a. these programs may reduce work effort among the poor
 - b. many of those receiving benefits may not be poor
 - c. the poor waste their welfare payments on things they do not need
 - d. a. and b.
4. Families of four are to be supported at a minimum income of \$20,000 per year by a negative income tax program with a tax rate of 40%. A family is able to earn \$10,000. Its total income including earned income and the negative tax payment will be:
 - a. \$30,000
 - b. \$26,000
 - c. \$16,000
 - d. \$14,000

Session 12

1. The gasoline tax, used to pay for roads, can be defended on the basis of:
 - a. the benefits-received principle
 - b. the horizontal equity principle
 - c. neutrality in terms of its effects on economic behavior
 - d. the ability-to-pay principle

2. An income tax taxes all income below \$50,000 at 30% and all income in excess of \$50,000 at 50%. A household earning \$80,000 faces:
 - a. an average tax rate of 30% and marginal tax rate of 50%
 - b. an average tax rate of 37.5% and marginal tax rate of 50%
 - c. an average tax rate of 50% and a marginal tax rate of 37.5%
 - d. an average tax rate of 40% and a marginal tax rate of 50%
 - e. an average tax rate of 50% and a marginal tax rate of 30%

3. Although lawmakers legislated a fifty-fifty (equal) division in the payment of the FICA tax, supply and demand theory would suggest that
 - a. the same outcome would occur if the entire tax had been levied on only the worker or only on the firm.
 - b. the employer now is required by law to pay a larger percentage of the tax.
 - c. the employee now is required by law to pay a larger percentage of the tax.
 - d. employers are no longer required by law to pay their portion of the tax.

4. If a tax is imposed on the sellers of fast food:
 - a. the burden of the tax on buyers will be larger and the reduction in fast food consumption will be smaller when demand is more elastic with respect to the price.
 - b. the burden of the tax on buyers and the reduction in fast food consumption will be smaller when demand is more elastic with respect to the price.
 - c. the burden of the tax on buyers will be smaller and the reduction in fast food consumption will be larger when demand is more elastic with respect to the price.
 - d. the burden of the tax on buyers and the reduction in fast food consumption will be larger when demand is more elastic with respect to the price

Session 13

1. Assuming that wage levels are higher for those households who possess university degrees, a large increase in income tax rates on higher income families can be expected to lead to (Hint: What happens to the after-tax income differential between occupations that require a degree and those that do not?):
 - a. reduced demand for higher education
 - b. lower tuition
 - c. lower pre-tax wages in occupations not requiring a university degree
 - d. a and b
 - e. all of the above

2. A selective tax on luxury boats:
 - a. imposes an economic burden on both buyers and sellers
 - b. is likely to impose a greater deadweight loss when demand is more price elastic
 - c. is likely to impose a greater deadweight loss when demand is less price elastic
 - d. a. and b.
 - e. a. and c.

3. A tax leads to an excess burden or efficiency loss because
 - a. it induces the government to spend more
 - b. it induces buyers to consume less and sellers to produce less.
 - c. it causes a disequilibrium in the market.
 - d. the loss to buyers is greater than the loss to sellers.

4. At present, inter-state customer purchases of goods and services over the internet are exempt from state sales taxes. Abolishing this exemption would lead to
 - a. greater horizontal equity in sales taxation
 - b. increased state sales tax revenues
 - c. elimination of an excess burden resulting from this exemption
 - d. a. and b.
 - e. all of the above

Session 15

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 H to D and D to R. 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 R to H and H to D
 - d. She prefers R to D and D to H
 - e. none of the above
2. Public choice economists argue that voters find it rational to be ignorant about public policy issues because:
 - a. the policy process is controlled by special interests
 - b. elections are rarely decided by one vote
 - c. candidates for elected office rarely differ much on policy issues
 - d. candidates for elected office have no incentive to provide accurate information to voters
3. A community is going to vote on how much money to spend on education. 10% of voters want to spend \$25 billion, 20% of voters want to spend \$30 billion, 30% of voters want to spend \$35 billion and 40% of voters want to spend \$40 billion. Voting will be done in a pair-wise fashion, that is, only two of the four options will be considered at a time, with the winner of each vote then being paired with a remaining option until a winner is determined. According to the Median Voter Theory, the winner
 - a. will be \$25 billion.
 - b. will be \$30 billion.
 - c. will be \$35 billion.
 - d. will be \$40 billion
 - e. will be any of the budgets depending on the order in which they are voted on
4. According to public choice theory, health care policy-makers are most likely to be subject to organized political pressure exerted by groups of:
 - a. health care providers
 - b. taxpayers
 - c. patients
 - d. voters