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**Economics of Social Spheres**

**Yekun imtahan sualları**

1. Why is a randomized trial the “gold standard” for solving the identification problem? What are some of the concerns with conducting randomized trials? How can quasi-experiments potentially help here?
2. Consider the utilitarian social welfare function and the Rawlsian social welfare function. Show that government redistribution from rich to poor can be consistent with either of the two social welfare functions.
3. When the state of Virginia imposed stricter regulations on air pollution in 2003, it also authorized an auction of pollution permits, allowing some plants to emit larger amounts of ozone -depleting chemicals than would otherwise be allowed, and some to emit less. Theory predicts that this auction led to a socially efficient allocation of pollution. Describe how this outcome would occur.
4. Suppose 10 people each have the demand Q = 20 - 4P for streetlights, and 5 people have the demand Q = 18 - 2P for streetlights. The cost of building each streetlight is 3. If it is impossible to purchase a fractional number of streetlights, how many streetlights are socially optimal? Explain.
5. Provide two economic justifications for using the student voucher system in tertiary education. This is when the students with certain scores from the national admission tests get funding and may apply to any university of their choice. The funding then is transferred to university to form its budget.
6. Explain the Moon-Ghetto metaphor (well- and ill-structured problems) and implications for economic problems in social spheres. Give an example.
7. What do we mean when we say that correlation does not imply causality? What are some of the ways in which an empirical analyst attempts to disentangle the two?
8. Consider the utilitarian social welfare function and the Rawlsian social welfare function. Which one is more consistent with a government that redistributes from rich to poor? Which is more consistent with a government that does not do any redistribution from rich to poor?
9. Can government assignment and enforcement of property rights internalize an externality? Will this approach work as well as, better than, or worse than direct government intervention? Explain your answers and describe one of the difficulties associated with this solution.
10. Murad loves to play the trombone. Even though he does not have to pay anyone when he practices, he would be willing to pay for practice time if he had to. His willingness to pay can be illustrated by a linear demand curve decreasing for one AZN each hour and starting from AZN 10 for the first hour. He is a terrible musician, and his practice sessions are torture for Sona, his neighbor. Each hour of Murad’s practicing makes Sona worse off by AZN 4. Sona complained and Murad was banned from practicing at all. Draw a diagram, Show and calculate the gain/loss to each. Is this efficient? Why? Shade in the diagram if any deadweight loss.
11. Discuss the possible economic effects of mandatory employer health insurance (you can discuss from different perspectives: the job market, health sector, overall economy).
12. Higher education has positive externalities. Discuss at least two. Show graphically how in a competitive market users (i.e. students and potential students) would underinvest in this service, i.e. buy it less than the socially optimal level.
13. Governments offer both cash assistance and in-kind benefits such as payments that must be spent on food or housing. Will recipients be indifferent between receiving cash versus in -kind benefits with the same monetary values? Use indifference curve analysis to show the circumstances in which individuals would be indifferent, and situations in which the form in which they received the benefit would make a difference to them.
14. Proper hygiene, such as regular hand-washing, can greatly limit the spread of many diseases. What kinds of public interventions might be possible? Suggest three distinct types of possible interventions.
15. Why social public project analysis requires considering the distributional implications of the project?
16. Firms A and B each produce 80 units of pollution. The government wants to reduce pollution levels. The marginal costs associated with pollution reduction are (50 + 3Q) for firm A and (20 + 6Q) for firm B (Q is quantity of pollution reduced by each firm). Society’s marginal benefit from pollution reduction is 590 - 3QT, where QT is the total reduction in pollution. How much total pollution is there in the social optimum?
17. Birth control (including eugenics): Discuss the social and economic effects, including the effects on the future behavior of people. Provide arguments in favor and against of it.
18. Private tutoring for secondary school students: Discuss its effects on a) students, b) parents, and c) teachers. Discuss other stakeholders, their gains and losses.
19. Explain why a consumer’s optimal choice is the point at which her budget constraint is tangent to an indifference curve.
20. Proper hygiene, such as regular hand-washing, can greatly limit the spread of many diseases. How might this suggest a role for public interventions?
21. Why do governments sometimes impose quantity regulations that limit the level of negative-externality-inducing consumption? Why do governments sometimes impose price regulations by taxing this consumption?
22. Ann, Beth, and Cathy live in Lindhville. Ann’s demand for bike paths, a public good, is given by Q = 12 - 2P. Beth’s demand is Q = 18 - P, and Cathy’s is Q = 8 - P/3. The marginal cost of building a bike path is MC = 21. The town government decides to use the following procedure for deciding how many paths to build. It asks each resident how many paths they want, and it builds the largest number asked for by any resident. To pay for these paths, it then taxes Ann, Beth, and Cathy the prices a, b, and c per path, respectively, where a + b + c = MC. (The residents know these tax rates before stating how many paths they want.) What tax prices a, b, and c should the government set to achieve the social optimum? Explain.

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1. Provide the equity based rationale AND the efficiency based rationale for public interventions in student loans.
2. Explain the role of Risks and Assumptions in horizontal logic. Give an example to the use of them.
3. Explain how social welfare is determined by considering both social efficiency (the size of the pie) and equity (the distribution of the pie). Or, why might society choose to redistribute resources from one group to another, when doing so reduces the overall size of the economic pie? Hint: Koroghlu (or Robin Hood) increases social welfare without having any economic activity. Give an example.
4. Sally eats out at the local burger joint quite frequently. The burger joint suddenly lowers its prices. Suppose that, in response to the lower burger prices, Sally goes to the burger joint less often. Explain how this could happen in terms of the income and substitution effects by using the concepts of normal and/or inferior goods. Show in the graph.

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1. A city government is considering building a new system of lighted bike paths. A councilor supporting their construction lists the following as potential benefits of the paths: (1) more enjoyable bike rides for current and future bikers, (2) reduction of rush-hour automobile traffic due to increases in bike commuting, (3) the creation of 15 construction-related jobs. Can all of these actually be considered to be benefits? Explain.
2. Jellystone National Park is located 10 minutes away from city A and 20 minutes away from city B. Cities A and B have 200,000 inhabitants each, and residents in both cities have the same income and preference for national parks. Assume that the cost for an individual to go to a national park is represented by the cost of the time it takes her to get into the park. Also assume that the cost of time for individuals in cities A and B is $0.50 per minute. You observe that each inhabitant of city A goes to Jellystone ten times a year while each inhabitant of city B goes only five times a year. Assume the following: the only people who go to the park are the residents of cities A and B; the cost of running Jellystone is $1,500,000 a year; and the social discount rate is 10%. Also assume that the park will be there forever. There is a timber developer who wants to buy Jellystone to run his business. He is offering $100 million for the park. Should the park be sold? Why?
3. Provide the equity based rationale for public support in private tutoring.
4. Explain the role of indicators in horizontal logic. Give an example to the use of indicators. Explain the requirements on indicators.
5. Think of commodity egalitarianism and equality of opportunity. What are the other equity criterion you might think of? List advantages and disadvantages of each from the government policy perspective.
6. You work for the executive branch of the city (mayor’s office). One official suggested that, given city budget problems, the city should eliminate the central public library. She claims that many library users today are school children and students working on projects for schools and universities. She believes that the schools and universities should take care of these needs, not the city. Another official agrees with this logic, and also argues that adult users are primarily middle-class individuals who are just using the library for “light reading” such as mysteries and romance novels, and for reading the newspapers and magazines; he wonders why city taxpayers should subsidize this activity.

The mayor, thinks that public libraries are important and wants to preserve them, but he cannot make an economic argument. You want to support his side. How would you respond? Be sure to address whether there is an economic rationale for public libraries.

1. In order to determine the right amount of public good to provide, the government of West Essex decides to survey its residents about how much they value the good. It will then finance the public good provision by taxes on residents. Describe a tax system that would lead residents to underreport their valuations. Describe an alternative system that could lead residents to overreport their valuations.
2. You are trying to decide where to go on vacation. In country A, your risk of death is 1 in 10,000, and you’d pay $6,000 to go on that vacation. In country B, your risk of death is 1 in 20,000, and you’d pay $9,000 to go on that vacation. Supposing that you’re indifferent between these two destinations, save for the differential risk of death, what does your willingness to pay for these vacations tell you about how much you value your life?
3. Give two economic (efficiency or equity) arguments to the US government to stop Obamacare.
4. Explain the horizontal logic in public interventions in social spheres (program approach). Draw the logical framework and explain its content.
5. Explain this: “Individual well-being, or utility, is maximized when individuals choose the bundle of goods that equates the rate at which they want to trade off one good for another (the marginal rate of substitution) with the rate at which the market allows them to trade off one good for another (the price ratio).” Hint: at the optimum, the ratio of marginal utilities equals the ratio of prices. Show in the graph.
6. Explain diminishing marginal rate of substitution along indifference curve. Show in the graph.
7. People in my neighborhood pay annual dues to a neighborhood association. This association refunds neighborhood dues to selected home owners who do a particularly nice job in beautifying their yards. At the most recent home owners’ association meeting, home owners voted to end this practice because they felt that it was unfair that some people would not have to pay their share of the costs of maintaining the neighborhood. What is likely to happen to the overall level of neighborhood beautification? Explain.

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| Price perday in AZN | # of swimmers per day |
| 6 | 40 |
| 7 | 20 |
| 4 | 80 |
| 5 | 60 |
| 3 | 100 |

1. ASEU is considering a swimming pool for its students. It may have a capacity of 20, 40, 60, 80 or 100 swimmers per day. The proposed fee is AZN 5 per swimmer per day, and the estimated cost of the swimming pool, averaged over the life of the pool, is AZN 3 per swimmer per day. The early proposal is to build a pool with a capacity of 60 swimmers per day.

The University has hired you, as a consultant to assess this project. Fortunately, there is a pool in a neighboring identical university, and that university has randomly varied the price of the pool to find how price affects usage. The results from that study are in the table.

Propose an optimal capacity for pool and provide a brief and clear justification of that.

1. Provide the efficiency based rationale for public support in private tutoring.
2. Explain the concept of Pareto efficiency. Give an example of Pareto optimization (Pareto superior policy change).
3. Explain this: “Social efficiency is maximized at the competitive equilibrium, where demand (which is derived from underlying utility maximization) equals supply (which is derived from underlying profit maximization).” Show in the graph.
4. Explain income effect and substitution effect on indifference curve. Show in the graph.

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1. Explain how in some cases, the private market can overcome the free rider problem (at least partially). Give an example. Under what circumstances are private market forces likely to provide solution closer to the socially optimal level? Explain.
2. Kazakhstan government is considering launching a satellite that would cost $2 billion today, but would save $500 million in each of the next 4 years. Then (in the 5th year), the government is considering to sell the satellite to a neighboring country at the expected price of $0.5 billion. Is the project worth undertaking if the US are the only possible source to fund the project and are offering money to finance the project at an interest rate of 5%? Is it worth it if the interest rate is 10%?
3. Explain the vertical logic in public interventions in social spheres (program approach). Give an example.
4. Give two economic (efficiency or equity) arguments to the US government to join Kyoto Protocol.
5. Draw the demand curve *Q* = 200 - 10*P*. Calculate the price elasticity of demand at prices of $5, $10, and $15 to show how it changes as you move along this linear demand curve.
6. You have $100 to spend on food and clothing. The price of food is $5 and the price of clothing is $10.

**a.** Graph your budget constraint.

**b.** Suppose that the government subsidizes clothing such that each unit of clothing is half -price, up to the first five units of clothing. Graph your budget constraint in this circumstance.

1. The federal government wants to reduce the pollution produced by firms. Explain how the social optimum can be achieved if firms are given equal numbers of pollution permits but are allowed to trade them.
2. Explain this: "If markets are in competitive equilibrium, the opportunity cost of an input is its market price; if markets are not in competitive equilibrium, however, the opportunity cost will differ from the market price, and some of the government spending may simply be transfers of rents."
3. Explain this: “there is a built-in inefficiency in subsidizing one and taxing another producer of the same good (provider of the same service)” using the example of higher education (universities). Explain inefficiency, as well as market and behavior distortions involved.
4. One way to structure a student loan repayment plan is to make it income -contingent—that is,

to relate the amount that a student would have to repay in any given month to how much income he or she earns. How might the existence of such a plan alter a student’s choice of college major?

1. You have $3,000 to spend on entertainment this year. The price of a day trip (*T*) is $40 and the price of a pizza and a movie (*M*) is $20. Suppose that your utility function is *U*(*T,M*)= *T1/3M2/3*.

**a.** What combination of T and M will you choose?

**b.** Suppose that the price of day trips rises to $50. How will this change your decision?

1. The country of Adventureland has two citizens, Bill and Ted. Bill has a private legal business. He earns $50 per hour. At a tax rate of 0%, Bill works 20 hours. At a 25% tax rate he works only 16 hours, and at a 40% tax rate he works only 8 hours per week.

Ted works a manufacturing job. He works 20 hours per week and earns $6 per hour, regardless of the tax rate. The government is considering imposing an income tax of either 25% or 40% on Bill and using the revenues to make transfer payments to Ted. The accompanying table summarizes the three possible policies.

Suppose that Bill and Ted instead have different utility functions: Bill’s utility is given by UB(Y)= ¼Y1/2, and Ted’s is given by UT(Y)= Y1/2. (This might happen for example, because Bill has significant disabilities and therefore needs more income to get the same level of utility.) Rank the three tax policies for a utilitarian social welfare function. Rank the three for a Rawlsian social welfare function.

1. In two -car automobile accidents, passengers in the larger vehicle are significantly more likely to survive than are passengers in the smaller vehicle. In fact, death probabilities are decreasing in the size of the vehicle you are driving, and death probabilities are increasing in the size of the vehicle you collide with. Some politicians and lobbyists have argued that this provides a rationale for encouraging the sale of larger vehicles and discouraging legislation that would induce automobile manufacturers to make smaller cars. Critically examine this argument using the concept of externalities.
2. Kazakhstan government is considering launching a satellite that would cost $2 billion today, but would save $500 million in each of the next 4 years. Then (in the 5th year), the government is considering to sell the satellite to a neighboring country at the expected price of $0.5 billion. A politician says “I don’t care what the interest rate is. The project is clearly a good investment. We get what we invest within 4 years and then satellite is ours for free.” Critically analyze this argument.
3. Give an example of the market for lemons, explain why it is inefficient. Provide a policy option to alleviate the effect of it in health insurance.
4. Edwards and Edwards (2002) mentioned in the textbook describe evidence that, following a social security reform in Chile that reduced the implicit tax on working in the formal sector, informal sector wages rose. What do you think is the mechanism at work here?
5. Consider a free market with demand equal to Q = 1,200 – 10P and supply equal to Q = 20P. The government decides to impose a $10 per unit subsidy on the production of the good. What is the consumer surplus now? The producer surplus?
6. The country of Adventureland has two citizens, Bill and Ted. Bill has a private legal business. He earns $50 per hour. At a tax rate of 0%, Bill works 20 hours. At a 25% tax rate he works only 16 hours, and at a 40% tax rate he works only 8 hours per week.

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Suppose that Bill and Ted have the same utility function U(Y) = Y1/2, where Y is consumption (which is equal to net income). Rank the three tax policies for a utilitarian social welfare function. Rank the three for a Rawlsian social welfare function.

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1. We add the demands of private goods horizontally but add the demands of public goods vertically when determining the associated marginal benefit to society. Why do we do this and why are the procedures different for public and private goods?
2. Murad loves to play the trombone. Even though he does not have to pay anyone when he practices, he would be willing to pay for practice time if he had to. He is a terrible musician, and his practice sessions are torture for Sona, his neighbor. The Coase theorem says that, no matter who gets the property rights, an efficient outcome will be obtained. Will Murad and Sona be indifferent about whom the property rights are assigned to? Explain briefly.
3. Explain the moral hazard and give an example to that in health insurance.
4. Epple and Romano (2002) mentioned in the textbook describe theoretical evidence that school vouchers will lead to “cream -skimming,” where private schools will pick off the better students and leave public schools with lower -ability average students. They propose targeted vouchers, in which different-sized vouchers go to different groups of students, to combat this potential concern. How would you design a targeted voucher system that would lead to a reduced level of cream -skimming?
5. Consider a free market with demand equal to Q = 1,200 – 10P and supply equal to Q = 20P. The government decides to impose a $10 per unit subsidy on the production of the good. Why is there a deadweight loss associated with the subsidy, and what is the size of this loss?
6. The country of Adventureland has two citizens, Bill and Ted. Bill has a private legal business. He earns $50 per hour. At a tax rate of 0%, Bill works 20 hours. At a 25% tax rate he works only 16 hours, and at a 40% tax rate he works only 8 hours per week.

Ted works a manufacturing job. He works 20 hours per week and earns $6 per hour, regardless of the tax rate. The government is considering imposing an income tax of either 25% or 40% on Bill and using the revenues to make transfer payments to Ted. The accompanying table summarizes the three possible policies.

Suppose that Bill and Ted have the same utility function U(Y) = Y1/5, where Y is consumption (which is equal to net income). Rank the three tax policies for a utilitarian social welfare function. Rank the three for a Rawlsian social welfare function.

1. Show in the graph and explain the optimal level of provision of pure public good.
2. Answer for each of the following examples: (i) smoking by individuals; (ii) toxic waste production by firms; (iii) research and development by a high -tech firm; and (iv) individual vaccination against communicable illness. Does it seem likely that private markets will arise to allow externalities to be internalized? Explain.
3. Explain policy problem statement and problem-tree analysis, based on a policy problem example.
4. Lazear (2001) mentioned in the textbook noted that when one simply compares the performance of students in small and large class sizes, there is little difference, despite

the presumption (and experimental evidence) that smaller class sizes improve performance. He argued that one reason for the lack of an observed relationship between class size and student outcomes is that schools may put more disruptive children in smaller classes. How would this practice bias the estimated effect of class size on student outcomes?

1. Why does redistribution cause efficiency losses? Give an example.
2. Explain this: public goods go underinvested if let only to competitive markets.
3. Explain the policy funding decision based on marginal analysis (marginal benefits and costs). How it may for example work in determination the efficient amount of subsidy to be given to private universities?