

**AZƏRBAYCAN RESPUBLİKASI TƏHSİL NAZİRLİYİ**

**AZƏRBAYCAN DÖVLƏT İQTİSAD UNİVERSİTETİ**

**BEYNƏLXALQ İQTİSADİYYAT MƏKTƏBİ**

**Theoretical tools**

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**Qrup 1023-1024**

1. 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? Explain. 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.
2. Explain and compare the maximizations of social welfare and social efficiency. Explain how social welfare is determined by considering both social efficiency (the size of the pie) and equity (the distribution of the pie).
3. 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. Think of commodity egalitarianism and equality of opportunity. What are the other equity criteria you might think of? List advantages and disadvantages of each from the government policy perspective.
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 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.
7. Consider the utilitarian social welfare function and the Rawlsian social welfare function.
8. Which one is more consistent with a government that redistributes from rich to poor? Explain.
9. Which is more consistent with a government that does not do any redistribution from rich to poor? Explain.
10. Explain also that government redistribution from rich to poor can be consistent with either of the two social welfare functions.

**Practical tools**

1. Explain:
2. Why is a randomized trial the “gold standard” for solving the identification problem?
3. What are some of the concerns with conducting randomized trials?
4. How can quasi-experiments potentially help here?
5. 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?
6. Explain this: “Cross-sectional regression analysis also suffers from bias problems because similar people make different choices for reasons that can’t be observed, leading once again to bias. Including control variables offers the potential to address this bias.”
7. Explain this: “Quasi-experimental methods have the potential to approximate randomized trials, but control groups must be selected carefully in order to avoid biased comparisons.”
8. Suppose that your friend Oscar has collected data and determined that towns with newly constructed high schools tend to have higher SAT scores than other towns. He tells you that he has proved that new high schools cause higher SAT scores. When you object that “correlation does not imply causation,” he is ready with more data. He shows you convincing evidence that SAT scores tend to increase shortly after towns build new high schools, but that there is no tendency for new high schools to be built in towns which have recently seen large increases in SAT scores. Is this enough evidence to prove that new high schools cause higher SAT scores, or can you think of an alternative explanation for Oscar’s data? Explain.
9. It is commonly taught in introductory microeconomics courses that minimum wages cause unemployment. The Federally mandated minimum wage is $7.25, but approximately 1/3 of states have higher state-mandated minimum wages. Why can’t you test the “minimum wages cause unemployment” theory by simply comparing unemployment rates across states with different minimum wages? Can you think of a better way to test it? Explain.
10. Suppose that your state announced that it would provide free tuition to high -achieving students graduating from high school starting in 2007. You decide to see whether this new program induces families with high-achieving children graduating n 2007 or later to purchase new cars. To test your findings, you use a “falsification exercise”: you observe the new-car-purchasing behavior of families with children graduating in 2006. Why is this useful exercise? Explain.
11. A researcher conducted a cross-sectional analysis of children and found that the average test performance of children with divorced parents was lower than the average test performance of children of intact families. This researcher then concluded that divorce is bad for children’s test outcomes. What is wrong with this analysis?
12. You are hired by the government to evaluate the impact of a policy change that affects one group of individuals but not another. Suppose that before the policy change, members of a group affected by the policy averaged $17,000 in earnings and members of a group unaffected by the policy averaged $16,400. After the policy change, members of the affected group averaged $18,200 in earnings while members of the unaffected group averaged $17,700 in earnings.

How can you estimate the impact of the policy change? What is the name for this type of estimation? What are the assumptions you have to make for this to be a valid estimate of the impact of the policy change?

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**Theoretical tools**

1. Problem solving: Consumer choice.
2. Problem solving: Subsidy.
3. Problem solving: Social welfare function.
4. Problem solving: Social welfare function.
5. Problem solving: Social welfare function.
6. Problem solving: Income guarantee program
7. Problem solving: Income guarantee program

**Theoretical tools**

1. Problem solving: Estimate of the effect of the tax cut.
2. Problem solving: Estimate of the effect of the tax cut.
3. Explain: Negative externalities cause overproduction of the good in a competitive market.
4. Explain: Private markets may be able to “internalize” the problems of externalities through negotiation, but this Coasian process faces many barriers that make it an unlikely solution to global externalities, such as most environmental externalities.
5. 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.
6. The federal government wants to reduce the pollution produced by firms. The firms have been provided with equal number of permits. Explain why it is inefficient if they are not allowed to trade them.
7. The federal government wants to reduce the pollution produced by firms. The firms have been provided with equal number of permits. Explain how the social optimum can be achieved if firms are allowed to trade them.
8. The federal government wants to reduce the pollution produced by firms. The firms have been provided with equal number of permits. Can the social optimum be achieved using a tax on pollution instead of permits?
9. 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?
10. 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.
11. 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.
12. Look at the following examples:

* smoking by individuals
* toxic waste production by firms
* research and development by a high-tech firm
* individual vaccination against communicable illness.

Answer the following questions for each of the above examples:

1. What kind of externality is there (negative/positive, production/consumption)
2. Does it seem likely that private markets will arise that allow this externality to be internalized? Why or why not?
3. 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.
4. Explain: In some cases, the private market can overcome the free rider problem, at least partially. A solution closer to the socially optimal one is more likely if there are individuals with high incomes or high demand for the public good, individuals who are altruistic, or individuals who derive a “warm glow” from their contributions.
5. Explain: Public provision of public goods faces three important problems: crowding out of private provision; determining the costs and benefits of public projects; and effectively reflecting the public’s demand for public goods.
6. 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 are the procedures different for public and private goods?
7. Think about the rival and excludable properties of public goods. To what degree is radio broadcasting a public good? To what degree is a highway a public good?
8. 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.
9. 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.
10. 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.
11. Show in the graph and explain the optimal level of provision of pure public good.
12. Show in the graph and explain the optimal price for a pure public good.

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1. Problem on determining the socially optimal number of streetlights.
2. Problem on determining the socially optimal number of bike paths, and tax level to be set to achieve social optimum.
3. Problem on the optimal level of pollution cleanup in different regions.
4. Problem on the socially optimal level of pollution reduction by firms.
5. Problem on how many hours the music player troubling the neighbor chooses to play dependent on who is assigned property rights.
6. 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."
7. Explain why measuring the benefits of public projects is difficult. Give an example.
8. Explain approaches for measuring the benefits of public projects, including using market values (such as wages to value time), asking individuals about their valuation (contingent valuation), using real-world behavior to reveal valuations (such as the compensating differentials for risky jobs to value life).
9. Explain: Public project analysis requires considering the distributional implications of the project, the level of uncertainty over costs and benefits, and the budgetary cost of financing the project.
10. Why social public project analysis requires considering the distributional implications of the project?
11. 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%?

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.

1. How does the opportunity cost of a government purchase vary depending on whether the market for the purchased good is perfectly competitive or monopolistic?
2. Two city councilors are debating whether to pursue a new project. Councilor Miles says it is only “worth it” to society if suppliers lower their costs to the city for the inputs to the project. Councilor Squeaky disagrees, and says it doesn’t matter—society is no better off with these cost concessions than it would be without the concessions. Where do you stand? Explain.
3. For your senior thesis, you polled your classmates, asking them, “How much would you be willing to pay to double the amount of parking on campus?” Based on their responses, you estimated that your fellow students were collectively willing to pay $12 million to double the amount of on-campus parking. What are some problems with this type of analysis?
4. 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.

1. Suppose you prefer working 40 hours per week to 20 hours, and prefer working 32 hours per week to either 20 or 40 hours. However, you are forced to work either 20 hours or 40 hours per week. Is your hourly wage rate an accurate reflection of the value of your time? Explain.

1. One approach to calculating the value of life involves the use of compensating differential studies. What informational problems make these studies difficult to carry out?
2. Consider two metropolitan areas, one that has many small school districts and one that has only a few large school districts. How are the efficiency and equity effects of introducing a voucher system likely to differ across these two areas?
3. Suppose you want to evaluate the effectiveness of vouchers in improving educational attainment by offering a vouchers to any student in a particular town who asks for one. What is wrong with simply comparing the educational performance of the students receiving vouchers with those who do not receive vouchers? What would be a better way to study the effectiveness of vouchers?
4. Empirical evidence suggests that better-educated adults donate more to charity than do less-educated adults with similar income levels. Why might this evidence justify public subsidization of education? What potential biases may make it difficult to interpret this empirical relationship?
5. 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?
6. Problem on cost-benefit analysis of National Park.
7. Problem on cost-benefit analysis of public swimming pool.
8. Problem on valuation of your life through differential risk of death in two countries you choose for vacation.
9. Problem on valuation of time for commuters.
10. Problem on opportunity cost of the labor employed?
11. Problem on the effect of voucher policy to different families.
12. Problem on the effect of voucher policy to different families.
13. Problem on the effect of voucher policy to different families.
14. Problem on family that has to spend on private goods and education.