



1 WHAT IS ECONOMICS?

Answers to the Review Quiz

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1. List some examples of the scarcity that you face.

Examples of scarcity common to students include not enough income to afford both tuition and a nice car, not enough learning capacity to study for both an economics exam and a chemistry exam in one night, and not enough time to allow extensive studying and extensive socializing.

2. Find examples of scarcity in today's headlines.

A headline in *The New York Times* on May 8, 2010 was "Containment Effort Inches Closer to Oil Target." This story discusses how "A giant steel container meant to capture oil leaking into the Gulf of Mexico was lowered to within 200 feet of the seafloor." The story points out that the scarcity of oil has led to drilling in deepwater locations, with the attendant risk of extensive oil spills.

3. Find an illustration of the distinction between microeconomics and macroeconomics in today's headlines.

Microeconomics: On May 7, 2010 a headline in *The Wall Street Journal* was "Cape Wind to Sell 50% of Offshore Output to National Grid." This story covers a microeconomic topic because it discusses how a wind farm located off Cape Cod has signed a deal to sell half of its power output to a utility company in Massachusetts. *Macroeconomics:* On May 8, 2010, a headline in *The New York Times* was "Economy Gains Impetus as U.S. Adds 290,000 Jobs." This story covers a macroeconomic topic because it concerns employment in the entire economy.

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1. Describe the broad facts about *what*, *how*, and *for whom* goods and services are produced.

What gets produced is significantly different today than in the past. Today the U.S. economy produces more services, such as medical operations, teaching, and hair styling, than goods, such as pizza, automobiles, and computers. How goods and services are produced is by businesses determining how the factors of production, land, labour, capital and entrepreneurship, are combined to make the goods and services we consume. Land includes all natural resources, both renewable natural resources such as wood, and nonrenewable natural resources such as natural gas. Labour's quality depends on people's human capital. In the U.S. economy, human capital obtained through schooling has increased over the years with far more people completing high school and attending college than in past years. Finally, for whom are goods and services to be produced depends on the way income is distributed to U.S. citizens. This distribution is not equal; the 20 percent of people with the lowest income earn about 5 percent of the nation's total income while the 20 percent of people with the highest incomes earn about 50 percent of total income. On the average, men earn more than women, whites more than non-whites, and college graduates more than high school graduates.

2. Use headlines from the recent news to illustrate the potential for conflict between self-interest and the social interest.

One example of an issue concerns what drinks are sold on high school campuses. Take the March 8, 2010 headline from the *Los Angeles Times* “Protecting Teens or Expanding a ‘Nanny State?’” This story discusses lawmakers’ attempts to ban sales of Gatorade in California high schools. These legislators are convinced that such a ban is in the social interest because “Childhood obesity has become epidemic.” However many students, pursuing their self interest disagree, with one student saying “If a kid is 17, he can sign up for the Marines to fight for his country, but people deciding what he can drink at school? It’s ridiculous.”

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1. Explain the idea of a tradeoff and think of three tradeoffs that you have made today.

A tradeoff reflects the point that when someone gets one thing, something else must be given up. What is given up is the opportunity cost of whatever is obtained. Three examples of tradeoffs that are common to students include: a) When a student sleeps in rather than going to his or her early morning economics class, the student trades off additional sleep for study time. The opportunity cost of the decision is a lower grade on the exam. b) When a student running late for class parks his or her car illegally, the student trades off saving time for the risk of a ticket. The potential opportunity cost of the decision is the goods and services that cannot be purchased if the student receives an expensive parking ticket. c) A student trades off higher income by spending time during the day working at a part-time job for less time spent at leisure time and study. The opportunity cost for the higher income is less leisure and lower grades in classes.

2. Explain what economists mean by rational choice and think of three choices that you’ve made today that are rational.

A rational choice is one that compares the costs and benefits of the different actions and then chooses the action that has the greatest benefit over cost for the person making the choice. Three rational choices made by students include: a) The choice to skip breakfast to go to class. In this case the benefit is the higher grade in the class and the cost is the breakfast forgone. b) The choice to stop talking with a friend on the phone and start studying for an impending exam. In this case the benefit is the resulting higher grade in the class and the cost is the conversation forgone. c) The choice to do laundry today rather than watch television. In this case the benefit is the fact the student will have clean clothes to wear and the cost is the loss of the entertainment the television show would have provided.

3. Explain why opportunity cost is the best forgone alternative and provide examples of some opportunity costs that you have faced today.

When a decision to undertake one activity is made, often many alternative activities are no longer possible. Often these activities are mutually exclusive so only the highest valued alternative is actually forgone. For instance, the decision to go to a student’s 8:30 AM class eliminates the possibility of sleeping in during the hour and of jogging during the hour. But in this case, it is impossible to *both* sleep in and to jog during the hour, so the opportunity cost cannot be both activities. What is lost is *only* the activity that otherwise would have been chosen—*either* sleeping in *or* jogging—which is whatever activity would have been chosen, that is, the most highly valued of the forgone alternatives. For students, attending class, doing homework, studying for a test are all activities with opportunity costs.

4. Explain what it means to choose at the margin and illustrate with three choices at the margin that you have made today.

Choosing at the margin means choosing to do a little more or a little less of some activity. Three common examples students encounter are: a) When a student faces a chemistry and an economics final exam in one day, the student must determine whether spending the last hour studying a little more chemistry or a little more economics will yield a better contribution (marginal benefit) to his or her overall GPA. b) A college student buying a computer must decide whether the marginal benefit of adding 1 GB of additional memory is worth the marginal cost of the additional memory. c) A student football fan with a choice of a

cheap seat in the student bleachers located at the far end of the playing field or a more expensive seat located on the 30 yard line must determine whether the marginal benefit of watching the game from a better seat is worth the marginal cost of the higher ticket price.

5. Explain why choices respond to incentives and think of three incentives to which you have responded today.

People making rational decisions compare the marginal benefits of different actions to their marginal costs. Therefore people's choices change when their incentives, that is the marginal benefit and/or marginal cost, of the choice changes. Just as everyone else, students respond to incentives; a) A student studies because of the incentives offered by grades. b) A student is more likely to attend a class if attendance is factored into the grade. c) A student might attend a meeting of a club if the student's significant other is eager to attend the meeting.

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1. Distinguish between a positive statement and a normative statement and provide examples.

A *positive* statement is a description of how the world *is*. It is testable. A *normative* statement is a description of how the world *ought to be*. It is, by its very nature, not testable because there is no universally approved criterion by which the statement can be judged. "I will receive an A for this course," is a positive statement made by an economics student—it might not be true, but it is testable. "I will receive a good grade for this course," is a normative statement. Whether someone agrees with it depends on his or her interpretation of what makes for a "good" grade.

2. What is a model? Can you think of a model that you might use in your everyday life?

A *model* is a description of some aspect of the economic world. It includes only those features that are necessary to understand the issue under study. An economic model is designed to reflect those aspects of the world that are relevant to the user of the model and ignore the aspects that are irrelevant. A typical model is a GPS map. It reflects only those aspects of the real world that are relevant in assisting the user in reaching his or her destination and avoids using information irrelevant to travel.

3. How do economists try to disentangle cause and effect?

Economists use models to understand some aspect of the economic world. Testing the predictions of models makes it necessary to disentangle cause and effect. To overcome this problem, economists have three methods of testing their models: Using a natural experiment, using a statistical investigation, and using economic experiments. A natural experiment is a situation that arises in the ordinary course of life in which one factor being studied varies and the other factors are the same. This method allows the economist to focus on the effect from the factor that differs between the two situations. A statistical investigation looks for correlations between variables but then determining whether the correlation actually reflects causation can be difficult. An economic experiment puts people into decision making situations and then varies the relevant factors one at a time to determine each factor's effect.

4. How is economics used as a policy tool?

Individuals, businesses, and governments use economics as a policy tool. Individuals use the economic ideas of marginal benefit and marginal cost when making decisions for such topics as attending college, paying cash or credit for a purchase, and working. Businesses also use the concepts of marginal benefit and marginal cost when making decisions about what to produce, how to produce, and even how many hours to stay open. Finally governments also use marginal benefit and marginal cost when deciding issues such as the level of property taxes, the amount to fund higher education, or the level of a tariff on Brazilian ethanol.

Answers to Study Plan Problems and Applications

1. **Apple Inc. decides to make iTunes freely available in unlimited quantities.**
 - a. **Does Apple's decision change the incentives that people face?**
Apple's decision changes people's incentives. For example, it increases people's incentives to buy an iPod to take advantage of the newly "free" music available on iTunes.
 - b. **Is Apple's decision an example of a microeconomic or a macroeconomic issue?**
Apple's decision is a microeconomic decision because it affects a single company and a single market.
2. **Which of the following pairs does not match.**
 - a. **Labour and wages?**
Labour earns wages, so this pair matches.
 - b. **Land and rent?**
Land earns rent, so this pair matches.
 - c. **Entrepreneurship and profit?**
Entrepreneurship earns profit, so this pair matches.
 - d. **Capital and profit?**
Capital earns interest, so this pair does *not* match.
3. **Explain how the following news headlines concern self-interest and the social interest.**
 - a. **Starbucks Expands in China**
Starbucks' expansion is a decision made by Starbucks to further Starbucks' interest. Thus the decision is directly in Starbucks' self interest. The social interest is affected because Starbucks' expansion will have an effect in China. For instance, more Chinese citizens might drink coffee rather than tea and fewer coffee shops run by Chinese firms might open.
 - b. **McDonald's Moves into Salads**
McDonald's decision to serve salads is a decision made by McDonald's to further McDonald's interest. Thus the decision is directly in McDonald's self interest. The social interest is affected because more people will eat salads rather than other quick serve meals.
 - c. **Food Must Be Labeled with Nutrition Information**
The decision to require that food must be labeled with nutrition information is made in the social interest. This decision is not made by any one single firm and so does not (necessarily) reflect anyone's self interest.
4. **The night before an economics test, you decide to go to the movies instead of staying home and working your MyEconLab Study Plan. You get 50 percent on your test compared with the 70 percent that you normally score.**
 - a. **Did you face a tradeoff?**
Yes, you faced a tradeoff. The tradeoff was between a higher test score and an evening with your friends at the movies.
 - b. **What was the opportunity cost of your evening at the movies?**
The opportunity cost of going to the movies is the fall in your grade. That is the 20 points forgone from choosing to see the movie rather than study.
5. **Costs Soar for London Olympics**
The regeneration of East London, the site of the 2013 Olympic Games, is set to add extra £1.5 billion to taxpayers' bill.

Source: *The Times*, London, July 6, 2006

Is the cost of regenerating East London an opportunity cost of hosting the 2013 Olympic

Games? Explain why or why not.

The regeneration of East London is an opportunity cost of hosting the 2013 Olympics *if* East London would not have been regenerated otherwise. However, if there were already plans underway to regenerate East London, then the cost is not an opportunity cost of hosting the Olympics because the cost would have been paid even if London did not host the Olympics.

6. Which of the following statements is positive, which is normative, and which can be tested?**a. Russia to lift grain export ban.**

The statement is positive and can be tested.

b. China is the largest trading partner of the Canada.

The statement is positive and can be tested.

c. The government should increase the production of biofuels.

The statement is normative and cannot be tested.

Answers to Additional Problems and Applications

7. Hundreds Line up for 5 p.m. Ticket Giveaway

By noon, hundreds of Eminem fans had lined up for a chance to score free tickets to the concert.

Source: *Detroit Free Press*, May 18, 2009

When Eminem gave away tickets, what was free and what was scarce? Explain your answer.

The seats in the concert are scarce—there are only a limited number (1,500 as it happens) available. Also scarce is the time the enthusiastic fans spent in line to acquire the tickets. In addition, if the fans who scored tickets attended the concert rather than sell their “free” tickets, they incurred the opportunity cost of the foregone ticket price. So the concert was far from “free” for the concert-goers. The publicity that Eminem receives is free to him but the publicity used reporters’ scarce time to report on the lines for the tickets rather than reporting on other news worthy events.

8. How does the creation of a successful movie influence *what*, *how*, and *for whom* goods and services are produced?

The “what” question is affected in two ways. First, one good or service that is produced is the successful movie. Second, spinoffs (*Iron Man II*) and/or similar films likely will be created in the future. The “how” question is affected to the extent that movies use different production methods. Some movies, for instance, have a lot of special effects while other movies have few or none. The “for whom” question is influenced because those people who, as the result of the blockbuster movie, have higher incomes so that more goods and services are produced for them.

9. How does a successful movie illustrate self-interested choices that are also in the social interest?

The a successful movie increases the income of the people involved with the movie. Hence these people’s choices are driven largely by self interest. However the creation of a successful movie also increases the quantity of widely enjoyed entertainment. The amount of entertainment available in the economy increases which benefits society. So the choices the people made in their self interest also reflected choices made in the social interest.

10. Last fall, Costco opened its gas bar at a busy intersection just off Highway 401 in Toronto. Since then the neighbourhood has been swamped with cars, as drivers come from far and away for discounts of 10 cents a litre.

a. What is the opportunity cost of a litre of gas? Explain.

The opportunity cost of a litre of gas is the next best alternative way to spend the money that was spent on the litre of gas. The opportunity cost also includes the additional time it takes to purchase the gas.

b. To control the crowd, Costco hires traffic police. What is the tradeoff Costco faces?

To hire the traffic police, Costco must increase its costs. If Costco were to raise the price it charges for gas it would not need to control the crowd. The tradeoff is between selling a lot of gas at a low price but having to pay for the extra police officers, or selling less at a higher price.

11. What might be an incentive for you to take a class in summer school? List some of the benefits and costs involved in your decision. Would your choice be rational?

Early graduation, smaller class sizes, and/or retaining eligibility for a scholarship are examples of incentives that encourage taking summer classes. The benefits of taking summer classes might include early graduation, more personal attention from the instructor, retained eligibility for a scholarship, and increased knowledge about some aspect of the world. Costs potentially include forgone summer jobs or internships, less time to spend with friends, and additional tuition and other class-related expenses if the class I not one

that would be taken otherwise. The choice is rational as long as the student determines that taking summer classes offers the highest benefit over cost for the use of his or time and efforts.

- 12. Look at today's *Financial Post*. What is the leading economic news story? With which of the big economic questions does it deal and what tradeoffs does it discuss or imply?**

On December 8, 2011, the top economic news story discussed the federal government's plan to end the Canadian Wheat Board. This story involved the "what?" question and was closely related to the issue of whether self-interested choices advance the social interest. The "what?" question was involved because the Wheat Board affects farmers that choose to grow wheat on their land. The question of whether the Wheat Board's monopoly advanced the social interest was in sharp perspective as the government is arguing that the monopoly hurts the social interest, while the farmers take the opposite position.

- 13. Provide two microeconomic statements and two macroeconomic statements. Classify your statements as positive or normative. Explain why.**

Microeconomic statements are: Fewer deep water oil wells should be drilled in the Gulf of Mexico. If less oil is produced, the price of oil will rise. The first statement is normative because it relies on what the person thinks "should" be done. The second statement is positive because it is possible to test the effect of less oil being produced.

Macroeconomic statements are: The currently unemployment rate is too high. The current unemployment rate is higher for blacks than for whites. The first statement is normative because it depends on what is deemed "too high." The second statement is positive because it can be checked to determine its validity.

Extra Problems

1. You plan a major adventure trip for the summer. You won't be able to take your usual summer job that pays \$6,000, and you won't be able to live at home for free. The cost of your travel on the trip will be \$3,000, film and videotape will cost you \$200, and your food will cost \$1,400. What is the opportunity cost of taking this trip?
2. The university has built a new parking garage. There is always an available parking spot, but it costs \$1 per day. Before the new garage was built, it usually took 15 minutes of cruising to find a parking space. Compare the opportunity cost of parking in the new garage with that in the old parking lot. Which is less costly and by how much?

Solutions to Extra Problems

1. The opportunity cost of taking this trip is \$10,600. The opportunity cost of taking the trip is the highest-valued activity that you will give up so that you can go on the trip. In taking the trip, you will forgo all the goods and services that you could have bought with the income from your summer job (\$6,000) plus the expenditure on travel (\$3,000), film and videotape (\$200), and food (\$1,400).
2. The opportunity cost of parking before the building of the new parking garage is the highest-valued activity that you forgo by spending 15 minutes parking your car. The opportunity cost of parking in the new parking garage is \$1 that you could have spent elsewhere. If the opportunity cost of 15 minutes spent parking your car is greater than the opportunity cost of \$1, then the new parking garage is less costly.