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Econ EC

1. Select two good examples to apply the role of scarcity, showing how it imposes choices and creates opportunity costs; one to understand and explain consumers' decision-making and firms' decision making

Consumer's decision making can often be explained by the scarce resource of **Leisure Time**. The amount of leisure time desired by consumers is not as freely available as most people would like. People cannot be two places at once and cannot even properly do two things at once so they are forced to choose how to spend their time. *Scarcity is present in this situation because leisure time is not a freely available good.* At some point, people have to work in order to live, whether it be going to the office and earning a salary or hunting caribou on the tundra. This forces people to choose and creates opportunity costs (the next best option given up) Do you want to go to class and get good grades, while giving up the opportunity cost of an extra hour of sleep? Or do you want to skip work tonight to go to a party with some friends? In both cases, the individual must choose a way to spend their time and pick whether the education or money is worth more than the benefits of leisure time.

Some firm's decision making can be explained by the scarcity of raw materials, such as **trees**. While there are millions of trees in the world, a pencil company still does not have unlimited access to that resource. The firm would prefer the trees to be freely available but due to environmental issues, the amount of deforestation that can occur must be limited in some way. *Scarcity is present in this situation because trees are not a freely available good.* This scarcity of trees causes the firm to have to be more selective and make choices about what trees they use and how many. The firm must choose whether they want to be environmentally conscious or not and whether to abide by conservation laws or not. Because of the scarcity of trees, the firm incurs opportunity costs as well. By limiting the number of trees cut down, the firm gives up the production possibilities of a certain number of pencils. Those pencils given up become the firm's opportunity cost.

(Scarcity definition found in Ch.1, p4 in the textbook)

2. From the textbook find a couple of situations in which we can see how the economic way of thinking (economic valuation, marginal analysis, and the role of prices) is applied to understand and explain consumers' and firms' decision-making (one for each)

Mary is an individual consumer and for her, pizza, lobster and sirloin steak all yield identical benefits for her. So based on the economic way of thinking, when choosing what she wants to eat for dinner, Mary will first consider the role of prices. Out of the three food options, pizza is considerably cheaper than steak or lobster, say by $5.00. So when considering the total cost, versus personal benefit, pizza has the highest economic value and is therefore the best choice for Mary. Some might say that pizza is the "wrong" choice but based on the economic way of thinking, this is the "right" choice for Mary because her preferences are unique and she yields the greatest economic benefit from eating the pizza. Now let's say that Mary had already ate pizza for dinner three nights in a row. The new marginal analysis might prove that Mary would prefer the marginal benefits of eating lobster or steak over the marginal cost of $5.00 difference in price. As her situation changes, so does her preferences; and therefore, benefits of choosing steak or lobster over pizza. (Example of Mary's dinner decision is on page 8)

An automobile manufacturer is a firm and it needs to decide on the amount of cars they should produce using the economic way of thinking. The firm's average cost of producing automobiles is $25,000 so in order to price their vehicles properly they must first consider the opportunity costs of spending $25,000 on each vehicle. Maybe there is a more beneficial way to spend that money. The economic value of producing the cars first must be assessed. If the initial average cost of producing each vehicle is deemed economically beneficial then the amount of cars that they produce is considered. Maybe the marginal cost of producing an additional automobile (or an additional 1000 automobiles) is $10,000 per car. Then, after analyzing the benefits of producing aditional cars versus the costs of the extra machinery and workforce required, the amount of cars produced will be determined. If the marginal cost of producing additional units is less than the average cost, based on the economic way of thinking, the firms best decision would be to expand production. (Automobile manufacturer example is found on page 10)

3. Show a situation in which the optimization of individual decisions and the socially efficient outcomes coincide, show another one in which they don't

The optimization of individual decisions and the socially efficient outcomes will coincide in politics when the preferences of the majority of individuals are similar and view the personal costs proportionate to the personal benefits. When voters pay in proportion to benefits received, all voters will gain if the government action is productive, and all will lose if it is unproductive. When the benefits and costs derived by individual voters are closely related, the voting process will enact efficient projects while rejecting inefficient ones. When

voters pay in proportion to the benefits they receive, there will tend to be harmony between good politics and sound economics. (Ch 6 - pg116)

When shortsightedness occurs, the optimization of individual decisions and the socially efficient outcomes will not coincide. Current economic conditions will have a major impact on the choices of voters on election day. As a result, politicians who are trying to gain support will want to institute programs that will provide visible results prior to the next major election. Thus, they have a strong incentive to favor projects that result in short-run benefits and long-run costs. In this case, what may be good for the individuals at the time may result in social inefficiency in the long run. (Ch 6 - pg121)

4. Show with a couple examples in which the use of graphs and equations can help as tools to understand economic concepts

Economic concepts can be shown using visuals such as graphs and charts. This teaching tactic can be used on even the simplest of concepts such as production possibilities. >
(Ch 2 - pg28)

Exhibit 1 Production Possibilities Curve for Susan's Grades in English and Economics

The production possibilities for Susan, in terms of grades, are illustrated for ten hours of total study time. If Susan studied ten hours per week in these two classes, she could attain a D in English and an A in economics (point S), a B in English and a B in economics (point T), or a D in economics and an A in English (point U).
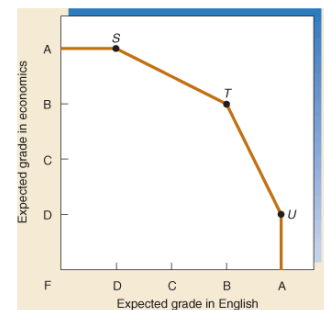
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Exhibit 2 The Price Searcher's Price and Output

A price searcher maximizes its profits by producing output q, for which MR = MC, and charging price P. The firm is making economic profits. What impact will these profits have if this is a typical firm?
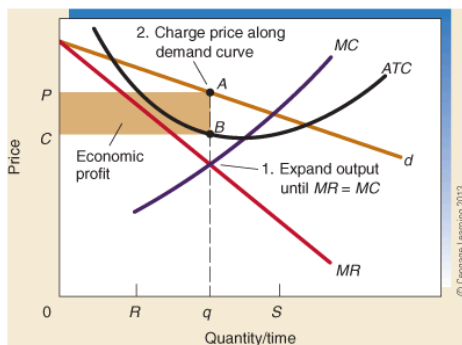
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< More complex concepts are also organized and simplified via graphs. The visual line graphs allows the economist to quickly identify various trends and intersections in complicated models such as when identifying the economic profit in a Price-searcher market.
(Ch 10 - pg194)

Equations can be used to calculate various outcomes in a situation and help predict what will occur on both large and small scales. They can be used as simply as determining income elasticity or calculating costs,

Total cost	TC	TC = TFC + TVC
Marginal cost	MC	MC = ΔTC ÷ Δq
Average fixed cost	AFC	AFC = TFC ÷ q
Average variable cost	AVC	AVC = TVC ÷ q
Average total cost	ATC	ATC = AFC + AVC

$$\text{Income elasticity} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in income}}$$

(Ch 7/pg145) ^   (Ch 8/pg156) >

Or equations can be used for more complex calculations such as discounting (determining the present value of a future income by considering the interest rate and inflation). This equation can even be expanded to calculate the collective future value of any income. (Ch14 - pg269/270)

$$PV = \frac{\text{Receipt One Year from Now}}{1 + \text{Interest Rate}}$$

$$PV = \frac{R_1}{(1 + i)} + \frac{R_2}{(1 + i)^2} + \ldots + \frac{R_n}{(1 + i)^n}$$