

Samuel Abreu

Professor Reid

BUS 603: managerial economics

Chapter 1-5 Outline/Notes

CH 1

- Solving problems is a define success that supports in overcoming obstacles and improving performance in both individuals and companies. Finding the problem's root cause, which involves understanding why individuals are making mistakes, is the first stage in problem solving. After the main cause has been identified, the next step is to create plans and put them into action to stop similar mistakes from happening again and to improve the process.
- Problem solving algorithm:
  - Who made the bad decision?
  - Did the decision maker have enough information to make a good decision?
  - Did the decision maker have the incentive to make a good decision?
- Understanding the causes of unethical conduct is essential for controlling it, but paradigm is simply a tool for behavior analysis.

## CH 2

- When assets are put to higher-value purposes, wealth is produced.
- A value is the importance or worth someone places on a good or service, expressed through their willingness to pay for it.
- Wealth is produced by free trade.
- Seller surplus is the amount a seller earns from selling a good or service for a higher price than they were willing to accept
- Buyer surplus is the amount a buyer saves from purchasing a good or service for a lower price than they were willing to pay.
- Zero-sum fallacy is the idea that every gain for one person or group must include an equal loss for another person or organization, even though cooperation or trade might have beneficial effects on both parties.
- One lesson economics is to consider the long-term effects and impact on all groups of a decision or policy, not just the immediate results for one group.
- One lesson in business is to find things that are being underutilized and figure out how to make money by using them in a better way.
- Price control is a rule that says what price you can sell or buy something for.
- Price ceilings and price floors are rules that limit the price at which goods or services can be sold. Price ceilings stop prices from going above a certain amount, while price floors stop prices from going below a certain amount.

## 2-1 Airline Delay

How will commercial airlines respond to the threat of new \$27,500 fines for keeping passengers on the tarmac for more than three hours? What inefficiency will this create?

- Airlines should have a strategy to prevent this as doing so might result in significant fines if passengers are kept on the runway for more than three hours. They will become more effective as a result, and passengers will be pleased. The government is thinking of passing a regulation that would compensate travelers for waiting more than three hours.

## CH 3

- Variable costs change depending on how much you produce, but fixed costs stay the same no matter how much you produce.
- Variable cost per unit =  $(\text{Total production cost} - \text{Total fixed costs}) / \text{Total quantity produced}$
- Fixed cost =  $\text{Total production cost} - (\text{Variable cost per unit} \times \text{Total quantity produced})$
- Accounting profit is the money a company has left after it pays all its bills. It shows how much a company has earned based on its financial records.
- Accounting costs are all the money a company spends while running its business. These costs are kept track of in the company's financial records and can include things like the cost of supplies, salaries, and taxes.
- Relevant costs are the costs that matter for a specific decision a company makes. These are the costs that will change because of the decision and are used to figure out the best option for the company to make money. They only include the costs that are important for the present and future.

- Interest is the fee you pay for borrowing money. When making investment decisions, it is important to consider interest because it affects how much money you'll make from the investment.
- The opportunity cost is what you lose out on by choosing one thing over another.
- Hidden-cost fallacy-the idea that some costs are not considered or are overlooked when planning, leading to a false belief about the true cost of an action.
- Sunk- or fixed-cost fallacy- the idea that past costs should influence current or future decisions, despite being unchangeable and irrelevant to the current situation.
- Relevant costs and benefits are the costs and benefits that matter for a specific decision and will change because of that decision. They are used to determine the most profitable course of action.
- Relevant benefits and costs are the important benefits and costs that will change because of a decision and are used to figure out the best option.

### 3-7 Business cost

A business incurs the following costs per unit: labor \$125/unit, materials \$45/unit, and rent \$250,000/month. If the firm produces 1,000,000 units a month. Calculate the following:

a. Total variable costs

$$- \$125 \times 1,000,000 + \$45 \times 1,000,000 = \$170,000,000$$

b. Total fixed costs

$$- \$250,000 \times 1 = 250,000$$

c. Total costs

$$- \$170,000,000 + \$250,000 = 170,250,000$$

## CH 4

- Marginal cost (MC) is the extra cost of making and selling one more unit of a product. Marginal revenue (MR) is the extra money made from selling one more unit of a product
- Sell more if  $MR > MC$ ; sell less if  $MR < MC$ . If  $MR = MC$ , you are selling the right amount (maximizing profit). (MR falls, and MC rises)
- In the world of business, shirking is the practice of avoiding work or responsibility, frequently through putting in less than your best effort or failing to finish duties on time.
- Marginal benefit is the extra benefit or advantage gained from having or doing one more unit of a good or service.

### 4-2 Game Day Shuttle Service

You run a game day shuttle service for parking services for the local ball club. Your costs for different customer loads are 1: \$30, 2: \$32, 3: \$35, 4: \$38, 5: \$42, 6: \$48, 7: \$57, and 8: \$68. What are your MCs for each customer load level? What is the AC? If you are compensated \$10 per ride, what customer load would you want?

1: \$30 (base cost)

2: \$32 ( $\$32 - \$30 = \$2$ )

3: \$35 ( $\$35 - \$32 = \$3$ )

4: \$38 ( $\$38 - \$35 = \$3$ )

5: \$42 ( $\$42 - \$38 = \$4$ )

6: \$48 ( $\$48 - \$42 = \$6$ )

7: \$57 ( $\$57 - \$48 = \$9$ )

8: \$68 ( $\$68 - \$57 = \$11$ )

The MC for each customer load level is: \$2, \$3, \$3, \$4, \$6, \$9, \$11

$30+32+35+38+42+48+57+68= 368$

Average cost=  $368/8= \$46$

## CH 5

- (Future value, one period in the future) = (Present value) X (1+R)
- (Future value, k periods in the future) = (Present value) X (1+ R)
- (Present value) = (future value, k periods in the future)/(1+R) ^k
- The NPV (Net Present Value) rule is a method used to determine the profitability of an investment by calculating the difference between the present value of cash inflows and the present value of cash outflows over a specified period.
- The IRR (Internal rate of return) is a financial metric that measures the expected annual rate of return for an investment, and it is used to compare the profitability of different investments.
- The break-even quantity is the point where a business's expenses equal its revenue, and it starts earning a profit.
- The break-even quantity is  $Q= F/(P-MC)$

-where F is annual fixed cost, P is price, and MC is marginal cost

- Profit =  $5 \text{ Rev} - 2 \text{ Cost} = 5 Q^* P - 2 Q^* (\text{Cost} / Q) = 5 Q^* (P - AC)$

- A partner in a business connection may be taken advantage of if their investment is sunk, or linked to, that deal and has no value outside of that relationship.
- A post-investment hold-up occurs when a party's investment is taken advantage of after it has been made because there are no alternatives or effective solutions.
- Sunk costs are investments that cannot be recovered and have no future value, making them irrelevant in decision making.
- Profit= Rev-Cost=Q\*P-Q\*(Cost-Q) =Q\*(P-AC)
- A specific investment is an intentional commitment of funds to a certain undertaking or asset with an eye toward potential future gains.
- A "relationship-specific investment" is a type of investment that is tied to a specific relationship and has no value outside of it, making the investor vulnerable to exploitation.

5-2

Suppose an initial investment of \$100 will return \$50/year for three years (assume the \$50 is received each year at the end of the year). Is this a profitable investment if the discount rate is 20%?

$$\$50 / (1+0.2) = \$41.67$$

$$\$50 / (1+0.2)^2 = \$34.72$$

$$\$50 / (1+0.2)^3 = \$28.93$$

$$\$41.67 + \$34.72 + \$28.93 = \$105.32$$

With a 20% discount rate, this investment is profitable since the sum of the present values of the future cash flows (\$105.32) is more than the original investment (\$100).