Principles of Economics (Spring 2024)
Lecture 1
Basics of Economics

Part I

Economics, Scarcity, Opportunity Cost, Trade-off

(e.g. what is economics?)

Economics { Desire unlimited; Resource limited } choice → Economics is a choice we make out of the limited Resources to satisfy our desire as much as possible.

contradict

need both of them to exist regardless of the real quantity of goods.

Scarcity: The imbalance between human desire and resource available.

Tiny but not needed isn't scarcity

usually used to measure TIME. we give up

Opportunity Cost: The highest valued alternative you would have to give up to engage in that activity.

it's a choice

highest valued thing among all the things you give up

Trade-off: With limited resource available, producing/consuming more of one good or service means producing/consuming less of another good or service.

Example: Pick A Restaurant In Campus

Restaurant	A	B	C	D
~~available~~ cost	$10	$8	$10	$1000

pick A ⇒ C is the highest valued alternative as we gave up the meal in C and the meal in B to have a meal in A. And meal C is more valued (meal is alternatve here!) not money

Exercise 1

C Economists say that something is scarce when

A. only a finite amount exists.
B. there is at least one use for the thing.
C. the amount available is less than what people would like to have.
D. the amount of the item is both finite and decreasing.

Part II

defined based on circumstance (year / day)

Margin – The "__next__" or "__extra__" __unit__.

- **Marginal Benefit (MB)** – An increase (or decrease) in __total benefit__ that is caused by a __unit increase__ in the level of that activity, all other factors remaining constant. spend 1 hour, score 90 → 94 ⇒ MB = 4
- **Marginal Cost (MC)** – An increase (or decrease) in __total cost__ that is caused by a __unit increase__ in the level of that activity, all other factors remaining constant.
- **Net Gain** = MB - MC

Example 1

Suppose you own a pizza hut. You hire workers to make pizzas, and sell them to make profits. The wage rate is $10 per person per hour, and the price of pizza is $5. Assume the wage is the only cost incurred, and you sell out the pizza.

Number of Workers	Number of Pizza Made Per Hour	(TB) Total Benefit = Price of Pizza * Price Per Pizza	Marginal Benefit (of an Extra Worker)	(TC) Total Cost = Wage Rate * (Price Per Unit) # Workers Hired	Marginal Cost (of an Extra Worker)	Total Profit = TB − TC
1	10	~~40~~ 50	50	10	10	40
2	30	~~130~~ 150	~~90~~ 100	20	10	130
3	40	~~170~~ 200	50	30	10	170
4	45	~~185~~ 225	25	40	10	185
5	47	~~185~~ 235	(10)	50	(10)	185
6	47	~~175~~ 235	0	60	10	175

MB = MC Maximum!

- **Rational Behavior**

  For each additional unit

  - If MB __>__ MC,
    Go for it! (Consume this extra unit)
  - If MB __<__ MC,
    Avoid it! (Do not consume this extra unit)
  - Thus, keep consuming as long as MB __>__ MC.

Exercise 2

Even though nowadays you can purchase music on iTunes with a better price, you may still prefer to buy CDs because you would then have the album artwork, lyrics, etc. Assume that the price of a CD is $14. Fill in the table.

Marginal Benefit

Number of CDs	Total Benefit	Marginal Benefit
1	30	30
2	55	25
3	70	15
4	75	5

Marginal Cost

Number of CDs	Total Cost	Marginal Cost
1	14	14
2	28	14
3	42	14
4	56	14

Marginal Analysis

Number of CDs	Marginal Benefit	Marginal Cost	Net Gain	Buy or Not
1	30	14	16	✓
2	25	14	11	✓
3	15	14	1	✓
4	5	14	-9	x

Exercise 3

Suppose that a pair of jeans sells for $35, fill in the table. How many pairs would you buy assuming you are rational?

3 pairs.

Pairs of Jeans	Marginal Benefit	Marginal Cost	Net Gain
1	55	35	20
2	50	35	15
3	42	35	7
4	34	35	-1
5	24	35	-11
6	10	35	-25