Economics 3 Terms

white

Monopoly: A market wit a single seller that produces a product with no close substitute.

- A monopolist faces the (downward sloping) market demand.
- A monopolist has no supply curve.

Reasons for Monopoly

- Government franchise
- Patent
- Ownership of a scares resource.

Natural Monopoly: happens for very large economies of scale.
MR = P doesn't apply here→ P>MR
This is because based on the price, different quantity that customer wants. (More demand curve)
MR= P(1- 1/|E|)

In general, for any firm facing a downward sloping demand curve, P>MR
MR=MC: to maximize profit, a firm should produce the quantity where MR=MC.
MR>MC: the firm can increase profit by increasing output.
MR<MC: the firm can increase profit by decreasing output.
A profit maximizing monopolist will produce at level of output where P> MR=MC → P>MC
A monopolist produces too little output for social efficiency.

If demand is linear, the Marginal Revenue curve will have the same vertical intercept as the Demand Curve, and it will be twice as steep (double the slope.)
Ex) Demand: P=100-2Q, MC=20
Monopoly: MR=MC

- MR→ 100-4Q. (Double the slope.) = MC=20. →Q= 20, P=60

Perfectly competitive: P=MR, P=MC

- Q=40, P=20

In general, a monopolist will produce less output and charge a higher price than if the market were perfectly competitive.
A profit-maximizing monopolist will never produce where demand is inelastic.
If demand is inelastic the firm can increase profit by raising price.
→ P increased: TR increased , P increased, Q decrease: TC decreased -----→ Profit increase.

MR= P (1-1/|E|) =MC
Lerner Index: can know about market power. (ex. Gasoline or tobacco, how would tax impact on |E|.)
If MC > 0 than (P-MC)/P <1 → |E| >1

Consumer Surplus: the difference between what a consumer is willing to pay for a good, and what they actually have to pay (price).

- We can estimate this as the area between the demand curve and above the price.

Producer surplus: the difference between what a firm receives for a product (price) and the minimum they would be willing to accept to produce a unit of the good.(MC)

- We can estimate this area under the price and above MC.

EX) demand: P=100-2Q, MC=20
Monopoly: MR=200-4Q=MC=20 → Q=20, P=60 →TR(CS+PS)=1200
Perfectly competitive: P=200-2Q=MC=20→ Q=40,P=20 →TR(CS+PS)=1600
→ Dead weight loss: potential cost that could be generated but thrown away.

Pareto efficiency: a situation where there is no way to make someone better off without making someone else worse off. – when there is no more improvements to be made.
Monopoly is throwing Consumer Surplus.

Demand: P-72-2Q, MC=24

	Monopoly	Perfect market
Q	12	24
P	$48	$24
CS	$ 144	$576
PS	$288	0
TR	$432	$576
Dwb	$144	0
Lerner Index	1/2	0

Oligopoly

Oligopoly: a market with a few dominant firms. (Airline industry, wireless, and soft drink company)

The firms are strategically interdependent.

Economist use Game theory to model the behavior of firms in an oligopoly.

A game consist of

- a set of player.
- A set of strategies for each player.
- A payoff function that assigns a payoff to each player for all possible strategy combination.

EX)

- 2 player (Firm 1, Firm 2)
- 2 strategies (High price, Low price)

Assume

- the players choose their strategies simultaneously
- one shot game
- each player only comes about their own payoff.

	High price	Low price
High price	100,100	25,150
Low price	150,25	50,50

Each player has dominant strategy.

Dominant strategy: a strategy that always yields a higher payoff than any other strategy, regardless of the strategies chosen by the other players.

Nash Equilibrium: a combination of strategies where no player can improve their payoff by switching to a different strategy, given the strategies chosen by the other players.

No dominant strategy for player 1.
Dominant strategy for player 2.
BR: Nash equilibrium: when both of the players cannot switch.
There can be more than one Nash Equilibrium.

	L	R
T	2,2	3,4
B	1,1	4,3

A maxim in Strategy: To find a player's maxim in strategy, find the worst possible outcome for each of their strategies. Choose the strategy that yields the highest payoff out of all the worst-case payoff

Player 1
Top: 0 Bottom: 0.6
Bottom is the maxim in strategy.

	L	R
T	0,75	100,14
B	8,13	0.06,1

Social Security Game:
Monopolistic Competition

- Firm produces differentiated products. → Besides price.
  1) Demand is not perfectly inelastic.

In Short Run: MC=ATC ~ MR=MC=D → Profit
Profit→ leads firm to enter the competition.
When firms enter a monopolistic competitive industry, it lowers the individual demands that the existing firms face (the new firms steal some customers from the original firms.) → continues when firm makes P.

In Long Run: P=ATC>MC → Loss
Loss→ no more entry or exit: Zero economic profit.
ATC becomes tangent to the Demand curve.

– : In long run equilibrium, ATC is NOT minimized in a monopolistic competitive industry.
\+ : Consumers get variety products.
(Chart)

Price discrimination: occurs when a firm changes different price to different consumers for the same product.
Ex) student discount, happy hour, etc.

1) The firm must face a downward sloping demand curve.
2) The firm must be able to distinguish between to or more groups of consumers that have different price elasticity of demand.
3) It must be difficult to resell the good.

Marginal Revenue a: Pa (1- 1/|E|) = MC.
Marginal Revenue b: Pb (1-1/|E|) = MC.
Pa (1-1/|E|) = Pb (1-1|E|), Suppose Pa >Pb.
|Ea< |Eb|| :Ea should inelastic than Eb.
The consumers with the more elastic demand are charge a lower price.

Different Degree of Price discrimination

1. 1st degree price discrimination (Perfect price discrimination)
   = The firm charges each customer exactly what they are willing to pay.
2. 2nd degree price discrimination
   = the firm charges different prices based on how much of the good the consumer buys.
   Ex) Set fixed cost → more use more spread of fixed cost.

Two-part price

- The firm charges a flot fee
- The firm charges a price.

Lower price = increase the value of T.
Lower price= decreased dead weight loss.
To maximize profit using a two part pricing scheme: set P=MC, T=SC when P=MC.

3. 3rd Degree Price discrimination

The firm charges different groups of consumers different price. Ex) student, non-student.
Suppose a monopolist can identify two different types of consumers: