

Final Exam Preview

WHITE

Monday 8:00 ~9:50 AM at 100 Thomas

2 Questions

- (1) What is economics (definition)
 - Positive vs normative
 - Micro vs macro
- (2) Production possibility Frontier
 - Slope (law of increasing marginal opp cost)
 - What shift the curve
 - Point inside, outside
 - Finding a point on the PPC
 - Calculation with chart (wheat, cotton)

2 Questions

- (1) Absolute/ Comparative advantage
 - Finding opp cost

5 Questions

- (1) Supply & Demand
 - Law of Demand
 - Law of supply
 - Q_d
 - Q_s
 - Change in demand vs in Q_d in supply
 - Shifts= cause what to shift
 - Effect on P^* and Q^*
 - Calculate P^* and Q^*
 - Excess Demand or Supply
 - Price floor and price ceiling

4 Questions

- (1) Elasticity
 - Definition
 - Calculate (midpoint, point slope formula)
 - Applications (relationship between elasticity and TR)
 - Maximize TR ($E = -1$)
 - Determinants
 - Other elasticity (Income, cross-price)
 - Price elasticity of supply (+:substitute, -:complementary)

4 Questions

- (1) Cost of Production
 - Short run & long run
 - 7 short run costs (MC, FC, VC, TC, AFC, AVC, ATC)
 - Short Run $MC = W/MPL$
 - Marginal product of labor
 - Law of diminishing marginal product
 - Relationship between M and Average
 - Long run costs (Returns to scale)

5 Questions

- (1) Perfect competition
 - Assumptions
 - Profit maximizing level of output (Table of graph)
 - adjustment from short run to long run
 - short run supply curve
 - $MR = P(1 - 1/|E|)$

4 Questions

- (1) Monopoly
 - Find Q_m (Q of monopoly), P_m , Q_c , P_c (Q of perfect competition)
 - Find CS, PS for mono and perfect com.
 - DWL
 - Lerner Index

5 Questions

- (1) Oligopoly
 - 3 questions: game theory
 - Dominant, Nash equilibrium, maximin, sequel strategy (backward).
 - 2 questions: anti trust law
 - FTC Guideline for challenging a merger
 - Government

1 Question:

- (1) Environmental Economist
 - Externality
 - What happen if not corrected
 - Pollution permits
 - NO question on cost theorem
 - Public goods
 - Rival, non-rival, exclusive, non-exclusive
 - Free rider problem and drop in the bucket problem

1 Question

- (1) Pareto Efficiency

2 Questions

- (1) Price discrimination
 - Different degree
 - Necessity conditions
 - 3rd degree

1 Question: asymmetric information

2 Questions

- (1) Excise Taxes
 - Buyer's price, Seller's price
 - Proportion at tax paid by buyers
 - CS, PS
 - Government, DWL
 - Q with tax, P with tax

Sherman Act

- 1) Every contract, combination or conspiracy, in restraint of trade, is declared to be illegal.
- 2) Every person who shall monopolize, or attempt to monopolize, shall be deemed guilty of a felony.
→ Naturally monopolized → not illegal.

Rule of Reason= A firm must behave in unreasonable manner. Being a monopoly is not illegal, per se.

1914 Clayton Act.

Outlawed

- 1) Price discrimination (motive for less competition)
- 2) Tying Contracts ex) Microsoft and window.
- 3) Mergers

All are substantially lessen competition.

Herfindahl- Hirschman Index (HHI)

HHI: the sum of the square of the percentage of total sales for each firm added up across all firms added up across all firms in industry.

Firm	% of total sale
1	40
2	30
3	20
4	10

$$\text{HHI} = 1600 + 900 + 400 + 100 = 3000$$

FTC Guideline for challenging a merger:

- Calculate the pre-merger HHI.
 - Calculate the post-merger HHI.
- Using the post merger HHI
- HHI < 1000 → higher competitive= no challenge
- 1000 < HHI < 1800 → Challenge if change in HHI > 100
- HHI > 1800 → Challenge if change in HHI > 50 Low competitive.

Ex) Suppose there are 12 firms. 8 firms are 10%, 4 firms are 5% and HHI= 900.

- 1) if two of the smaller firms merged
9 firms each with 10%
2 firms each with 5% → New HHI: 950. → Not challenging.
- 2) If two larger firms merged
1 firm 20%
6 firm 10%
4 firm 5% → New HHI: 1100 → Challenge.

TAX

- 1) Excise tax: a tax levied on a particular product
-Per unit excise tax: a specific amount, t , that is charged on each unit of the good that is sold.
- 2) Legal incidence: who bears the burden
-Legal incidence of a tax: who pays the tax by law.
- 3) Economic Incident of tax: who actually ends up paying the tax
- A per unit excise tax is levied on consumers will shift the demand curve down (decrease in demand) by an amount exactly equal to the tax.

Has the same slope, subtracts tax from vertical equation. New demand equation.

Example for TAX

(1) Buyer

Demand: $Q = 100 - 2p$

Supply: $Q = -60 + 3p$

$100 - 2p = -60 + 3p \rightarrow P: 32, Q: 36$ Original equilibrium.

Now suppose a per unit excise tax, $t=10$, is levied on the consumers.

New demand: $p = 40 - 1/2Q, Q = 80 - 2p$.

$80 - 2p = -60 + 3p \rightarrow P_t: 28, Q_t: 24$

To find the new Demand curve.

- 1) First, change the equation to $P = \text{_____}$ form.
- 2) Subtract tax from the new form.
- 3) Then make the new form to $Q = \text{_____}$ equation.

$P_t + t$ is the price that buyers pay: $28 + 10 = \$38$

If the tax is levied on consumer, then $p_t = 28$ is the price that sellers receive.

(Graph)

Consumer pays \$6 more, and producer pays \$4 less.

Economic Incidence of the tax.

Buyers pay $6/10 \rightarrow 60\%$

Sellers pay $4/10 \rightarrow 40\%$

Government Revenue: $Q_t \times T_t \rightarrow 24 \times 10 = 240$

Other things equal, the steeper the demand curve, the larger the proportion of the tax paid by buyers.

(2) Seller

A per unit excise tax levied on producers will shift the supply curve up (decrease in supply) by an amount exactly equal to the tax

Example

D: $Q = 100 - 2P$

S: $Q = -60 + 3p$

If a \$10 per-unit tax is levied on suppliers

Original: $p = 20 + 1/3Q$

New: $p = -90 + 1/3Q$

New supply curve is shifted up.

$100 - 2p = -90 + 3p \rightarrow P^* \38 (buyer's price), $p - t: \$28$ (seller's price)

You can use either way, Buyer or Seller. The only difference is that the price that you get for (Buyer) new supply equation is for the seller's price and (Seller) is buyer's price.

Economic Incidence of a tax

E: price elasticity of Demand

M: price elasticity of Supply

Buyer's proportion: $m / (|E| + m)$

Seller's proportion: $|E| / (|E| + m)$

If the demand is perfectly inelastic = 1, 100% consumers burdens.

The legal incidence of a tax does not affect the economic incidence of a tax