

EXAM 3 OUTLINE

Ch. 13 Production and Costs

1. Def. and Concepts
 - i. REMEMBER THAT THE COST OF SOMETHING IS WHAT YOU GIVE UP TO GET IT; THIS IS TRUE NO MATTER IF THE COSTS ARE IMPLICIT OF EXPLICIT.
 - ii. PROFIT= TOTAL REVENUE-TOTAL COST
 - iii. TOTAL REVENUE: THE AMOUNT A FIRM RECEIVES FROM THE SALE OF ITS OUTPUT
 - iv. TOTAL COST: THE MARKET VALUE OF THE INPUTS A FIRM USES IN PRODUCTION
 - v. RATIONAL PEOPLE THINK AT THE MARGIN
 - vi. IF THE COST OF ADDITION MC IS LESS THAN THE REVENUE THAT WOULD BE MADE FROM SELLING IT, THE PROFIT RISES IF MORE IS PRODUCED.
 - vii. EFFICIENT SCALE: THE QUANTITY THAT MINIMIZES ATC
 - viii. THE MC CURVE CROSSES THE ATC CURVE AT THE ATC CURVE'S MINIMUM
2. What are explicit costs and implicit costs?
 - i. EXPLICIT COST: REQUIRE AN OUTLAY OF MONEY
 1. E.G. PAYING WAGES TO WORKERS
 - ii. IMPLICIT COST: DO NOT REQUIRE A CASH OUTLAY
 1. E.G. THE OPPORTUNITY COST OF THE OWNER'S TIME
3. Calculating accounting and economic profit.
 - i. ACCOUNTING PROFIT= TOTAL REVENUE MINUS TOTAL EXPLICIT COSTS; IGNORES IMPLICIT COSTS, SO IT'S HIGHER THAN ECONOMIC PROFIT.
 - ii. ECONOMIC PROFIT= TOTAL REVENUE MINUS TOTAL COSTS (INCLUDING EXPLICIT AND IMPLICIT COSTS)
4. What is a production function and what is marginal product?
 - i. PRODUCTION FUNCTION: SHOWS THE RELATIONSHIP BETWEEN THE QUANTITY OF INPUTS USED TO PRODUCE A GOOD AND THE QUANTITY OF OUTPUT OF THAT GOOD. IT CAN BE REPRESENTED BY A TABLE, EQUATION, OR GRAPH.
 - ii. MARGINAL PRODUCT: THE INCREASE IN OUTPUT ARISING FROM AN ADDITIONAL UNIT OF THAT INPUT, HOLDING ALL OTHER INPUTS CONSTANT.
 1. NOTATION: Δ = CHANGE IN...
 2. ΔQ = CHANGE IN OUTPUT; ΔL = CHANGE IN LABOR
5. Calculating marginal product of labor (MPL).
 - i. MARGINAL PRODUCTION OF LABOR (MPL)= $\Delta Q / \Delta L$
6. What is diminishing MPL and why does it occur?
 - i. IN GENERAL, MPL DIMINISHES AS L RISES WHETHER THE FIXED INPUT IS LAND OR CAPITAL (EQUIPMENT, MACHINES, ETC.)
 - ii. DIMINISHING MARGINAL PRODUCT: THE MARGINAL PRODUCT OF AN INPUT DECLINES AS THE QUANTITY OF THE INPUT INCREASES (OTHER THINGS EQUAL)
7. Calculate or determine FC, VC, TC, AFC, AVC, ATC and MC.
 - i. FIXED COSTS (FC): DO NOT VARY WITH THE QUANTITY OF OUTPUT PRODUCED.
 1. EXAMPLES: COST EQUIPMENT, LOAN PAYMENTS, RENT
 - ii. VARIABLE COSTS (VC): VARY WITH THE QUANTITY PRODUCED.

1. EXAMPLES: WAGES AND COST OF MATERIALS

- iii. TOTAL COST: FIXED COST + VARIABLE COST
- iv. AVERAGE FIXED COST: FIXED COST/ QUANTITY
- v. AVERAGE VARIABLE COSTS: VARIABLE COST/ QUANTITY
- vi. AVERAGE TOTAL COST: TOTAL COST/ QUANTITY
- vii. MARGINAL COST: THE INCREASE IN TOTAL COST FROM PRODUCING ONE MORE UNIT. $\Delta TC/ \Delta Q$

8. How they all appear on a graph.

- i. FIXED COST APPEARS AS A HORIZONTAL LINE
- ii. VC ALWAYS STARTS AT ZERO AND IT GRADUALLY INCREASES FROM LEFT TO RIGHT
- iii. TC IS GOING TO START AT THE SAME PLACE FIXED COST DOES AND INCREASE FROM LEFT TO RIGHT
- iv. AFC LOOKS LIKE THE SEAT OF YOUR CHAIR. IT STARTS HIGH LIKE THE BACK OF A CHAIR WOULD ON THE LEFT AND GRADUALLY CURVES WHILE DECREASING TO THE RIGHT
- v. AVC IS A LINE WITH A VERY TINY DIP DOWNWARD AND THEN COMES UP AGAIN. IT LOOKS LIKE A REALLY STRETCHED OUT UPSIDE DOWN UMBRELLA
- vi. ATC LOOKS A LOT LIKE AFC. IT STARTS HIGH ON THE LEFT AND GOES DOWN TO THE RIGHT IN A CURVE. ONLY THIS ONE STARTS TO CURVE BACK UP. USUALLY U SHAPED.
- vii. MARGINAL COST IS A CURVE FROM LEFT TO RIGHT, INCREASING ALONG THE WAY.

9. Relationship between MC and ATC and the Efficient Scale.

10. Long Run vs Short Run

- i. SHORT RUN: SOME INPUTS ARE FIXED (E.G., FACTORIES, LAND). THE COSTS OF THESE INPUTS ARE FIXED COST.
- ii. LONG RUN: ALL INPUTS ARE VARIABLE (E.G., FIRMS CAN BUILD MORE FACTORIES, OR SELL EXISTING ONES).
 - 1. ATC AT ANY Q IS COST PER UNIT USING THE MOST EFFICIENT MIX OF INPUTS FOR THAT Q (E.G., THE FACTORY SIZE WITH THE LOWEST ATC).
- iii. FIRMS CAN CHOOSE FROM 3 FACTORY SIZES: SMALL, MEDIUM, OR LARGE
 - 1. EACH SIZE HAS ITS OWN SRATC CURVE
 - 2. THE FIRMS CAN CHANGE TO A DIFFERENT FACTORY SIZE IN THE LONG RUN BUT NOT IN THE SHORT RUN.

11. What are the 3 Economies of Scale? Why would a firm experience Economies of Scale and why would a firm experience Diseconomies of Scale?

- i. ECONOMIES OF SCALE: ATC FALLS AS Q INCREASES. ECON OF SCALE OCCURS WHEN INCREASING PRODUCTION ALLOWS GREATER SPECIALIZATION (WORKERS MORE EFFICIENT WHEN FOCUSING ON A NARROW TASK); MORE COMMON WHEN Q IS LOW.
- ii. CONSTANT RETURNS TO SCALE: ATC STAYS THE SAME AS Q INCREASES
- iii. DISECONOMIES OF SCALE: ATC RISES AS Q INCREASES. THIS IS DUE TO COORDINATION PROBLEMS IN LARGE ORGANIZATIONS. E.G., MANAGEMENT

BECOMES STRETCHED, CANT CONTROL COSTS; MORE COMMON WHEN Q IS HIGH

Ch. 14 Perfect Comp.

1. Def. and Concepts.
2. Characteristics of Perfectly Comp. Market and Perfectly Comp. Firm.
3. Calculating Marginal Revenue (MR).
 - i. **MARGINAL REVENUE: $\Delta TR / \Delta Q$; THE CHANGE IN TOTAL REVENUE FROM SELLING ONE OR MORE UNIT; $MR=P$ IN PERFECT COMPOTITION. A PERFECTLY COMPETITIVE FIRM CAN KEEP INCREASING IT'S OUTPUT WITHOUT AFFECTING THE MARKET PRICE.**
4. Where does a firm maximize profit?
5. Where does a firm minimize losses?
6. Solve for profit maximizing quantity, profit, and loss using a table or a graph.
7. Stay Open, Shut Down, Exit the Market Conditions.
8. Short Run Supply Curve and the Long Run Supply Curve for the PC Firm.
9. What happens to the market and firm in the long run if there is profit or if there is losses?
10. Zero Profit Condition (Long Run Equilibrium)
11. Why is a perfectly competitive market efficient?

Ch. 15 Monopoly

1. Def. and Concepts.
2. Characteristics of a Monopoly.
3. Types of Barriers to Entry.
4. Natural Monopolies and their characteristics.
5. Solving for Price and Quantity and Profit on a Monopoly Graph.
6. Welfare Cost of a Monopoly.
7. Differences between a Monopoly and Competition.
8. Why do Monopolies have a Deadweight Loss?
9. What is Price Discrimination? What is it based on and why firms use it?
10. What can we do about Monopolies?

Ch. 16 Monopolistic Competition

1. Def. and Concepts.
2. Characteristics of Monopolistic Competition.
3. How Monopolistic Competition differs from a Monopoly and Perfect Comp.
4. Mono. Comp. in the Short Run
5. Mono. Comp. in the Long Run.
6. Why does a Monopolistically Comp. Firm's Economic Profit go to 0 in the Long Run?
7. Excess Capacity and Mark Up.
8. Pros and Cons of Advertising and Brand Names.

Ch. 17 Oligopolies