Monopolistic Competition

Today’s Topics: Brands and Advertising

1. **Between Monopoly and Perfect Competition:** (pp. 320–322) number of sellers? type of products? oligopolies, monopolistic competition.

2. **Monopolistic Competition:** (pp. 368–373) competition in the short run, in the long run; compared with perfect competition, and efficiency.

3. **Advertising:** (pp. 374–379) pros and cons, as a signal of quality, brand names.
I. Between Two Poles

<table>
<thead>
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**Oligopoly:** a market structure in which only a few sellers offer similar or identical products. Often behave strategically. (Next lecture.) Examples?

**Monopolistic Competition:** a market structure in which many firms sell products that are similar but not identical.
Differentiated Products
Differentiated Products

Homogeneous

or
Differentiated Products

Homogeneous
or
Differentiated?
Differentiated Products

Homogeneous or Differentiated?

Degree of Substitutability?

Different Attributes:

•
Differentiated Products

Homogeneous
or
Differentiated?

Degree of Substitutability?

Different Attributes:
  • Physical Attributes
  •
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Homogeneous or Differentiated?

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Different Attributes:

- Physical Attributes
- Ancillary Services
- Geographical Location
-
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Homogeneous
or
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Degree of Substitutability?

Different Attributes:

• Physical Attributes
• Ancillary Services
• Geographical Location
• Subjective Image

Examples?
2. Monopolistic Competition

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For a firm with some *market power* in a market with other firms selling *close substitutes*, there is competition as firms enter, and change the prices of the close substitutes, which results in a shift to the left in the demand curve that our firm faces.
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Examples?
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2. Because the *products are differentiated* (substitutes, but not perfect substitutes), each firm faces a downwards-sloping demand curve and has some market power to determine price.
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5. Buyers are price takers; no bargaining.
In the Short Run

Five points:

1.
In the Short Run

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2. Assume that each firm takes others’ actions constant & then sets sales $y_{SR}^*$ so that
   \[ MR(y_{SR}^*) = MC(y_{SR}^*) \quad (SR = \text{Short Run}) \]
   to maximize its profit. This results in the short-run price: $y_{SR}^* \rightarrow P_{SR}^*$.

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$\therefore$ attractive for new firms to produce close substitutes in the long run.
Positive Profits

(The firm’s cost and revenue curves, not the market’s.)
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$\text{unit}$

$\frac{\text{$/unit}}{\text{output/period}}$

$D = AR$

$D' = AR'$

$MC$

$AC$

$MR$

$y_{SR}$

$P_{SR}$

$D'$

$D$
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With demand $D$, the positive profit attracts new entrants, which contracts the demand to $D'$. 
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With demand $D$, the positive profit attracts new entrants, which contracts the demand to $D'$. Profit falls, but still positive: $AR'(y') = P' > AC(y')$. Profit always maximised: $MR(y) = MC(y)$. 
Long-Run Equilibrium

4.
4. In the medium-to-long run, new entrants invest, and the original firms’ demand curves move to the left, as their *market share* falls.

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\[ \therefore \text{the demand curve } D'' \text{ must be tangent to the } AC \text{ curve at the price } P'' \text{ & output } y'' \text{ chosen.} \]

& any further contraction of the firm’s demand \( \rightarrow \) negative profits.
Zero Profits $\pi$

$\$/\text{unit}$

$y_{\text{MES}}$  output/period

$MC$

$AC$
Zero Profits $\pi$

\[ \pi = \text{output/period} \]

\[ D = \text{AR} \]

\[ D \]

\[ \text{$/unit} \]

\[ Y_{MES} \]

\[ AC \]

\[ MC \]
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$\pi$/unit output/period

$D'' = AR''$

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$\pi$
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There will be excess capacity: firms will not operate at the $y_{MES}$ of their minimum $AC$, and so they could reduce their $AC$ by increasing output. Why don’t they?
versus Perfect Competition
versus Perfect Competition

Higher average costs: there are zero profits, but firms are on the downwards-sloping part of their \( ATC \) curves, not at \( y_{MES} \), the Minimum Efficient Scale.
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Mark-up over marginal cost: price is always above $MC$, because the firm always has some market power, not $P = MC$. 
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∴ Firms are always eager to make another sale: an extra unit sold at the current price means more profit, not unwilling.
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Australian media shares of advertising (roughly):

- Print media: 50%
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Empirical results (p. 375): Across 50 U.S. states: the price of spectacles was 20% lower when advertising allowed.
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e.g. breakfast cereals
Brand Names

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Rationality: irrational preference for brand names, or for good reason?
Summary

1. Between monopoly and perfect competition lie most markets: oligopolies (few sellers) or monopolistic competition (many sellers).

2. Monopolistic Competition: Neither perfect competition, nor pure monopoly: many sellers and zero profit, but with a price mark-up: \( P > MC \).

3. Many products \( \rightarrow \) variety for consumers!

4. Advertising to increase sales. Justified or not?
Appendix

Under what conditions is it true that the slope \( \frac{dMR}{dQ} \) of the \( MR \) curve is twice that \( \frac{dP}{dQ} \) of the \( AR \) (i.e. demand) curve?

Now revenue \( R = Q \cdot P(Q) \)
\[ \therefore MR \equiv \frac{dR}{dQ} = P(Q) + Q \frac{dP}{dQ} = P \cdot (1 + \frac{1}{\eta}), \]
where \( \eta \) is the price elasticity of demand.

\[ \therefore \text{The slope of the } MR \text{ curve is given by:} \]
\[ \frac{dMR}{dQ} = 2 \frac{dP}{dQ} + Q \frac{d^2P}{dQ^2} \]

So it is only true in general for linear demand curves, for which \( \frac{d^2P}{dQ^2} = \frac{d}{dQ} \left( \frac{dP}{dQ} \right) = 0 \), because their slopes are constant (but not, of course, their elasticities).