# LECTURE 10: MONOPOLISTIC COMPETITI

## Today's Topics: Brands and Advertising

1. **Between Monopoly and Perfect Competition:** **number of sellers? type of products? oligopolies, monopolistic competition.**
2. **Monopolistic Competition:** **competition in the short run, in the long run; compared with perfect competition, and efficiency.**
3. **Advertising:** **pros and cons, as a signal of quality, brand names.**

# 1. BETWEEN TWO POLES

<table>
<tr><th></th><th colspan="3">Number of Sellers:</th></tr>
<tr><th></th><th>One</th><th>A Few</th><th>Many</th></tr>
<tr><td>Homogenous Product</td><td rowspan="2">Pure Monopoly</td><td>Homogeneous Oligopoly</td><td>Pure Competition</td></tr>
<tr><td>Differentiated Product</td><td>Differentiated Oligopoly</td><td>Monopolistic Competition</td></tr>
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**Assume: *Many Buyers***

**“I think it’s wrong only one company makes the game Monopoly”**
**— US humorist, Steve Wright**

***Oligopoly*: a market structure in which only a few sellers offer similar or identical products. Often behave strategically. (Lecture 17.) Examples?**

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

# DIFFERENTIATED PRODUCTS

**HOMOGENEOUS**

**or**

**DIFFERENTIATED?**

**Degree of Substitutability?**

**Attributes:**

- **Physical Attributes**
- **Ancillary Services**
- **Geographical Location**
- **Subjective Image**

# 2. MONOPOLISTIC COMPETITION

**For a firm with market power in a market with 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.**

→ ***Monopolistic Competition***

**Examples?**

# CONDITIONS FOR MONOP. COMP.

1. ***Many sellers* competing by selling differentiated (such as branded) products.**
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.**
3. ***Free entry or exit* from the market: until zero economic profits for all.**
4. ***Firms do not collude or behave strategically*: they assume competitors' actions fixed.**
5. **Buyers are price takers; *no bargaining.***

# IN THE SHORT RUN

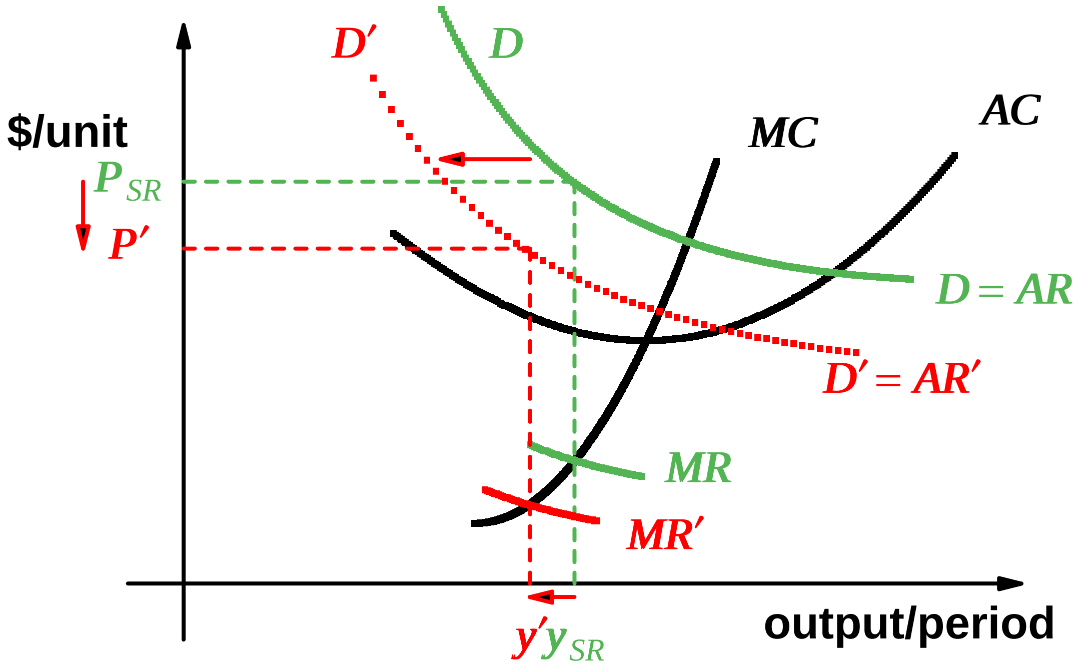
1. **Prices of substitutes affect the demand curve, downwards-sloping. (imperfect substitutes)**
2. **Assume that each firm takes others' actions constant & then *sets sales* ($y^*_{SR}$) so that**

   $$MR(y^*_{SR}) = MC(y^*_{SR}) \qquad (SR = \text{Short Run})$$

   **to maximize its profit ($y^*_{SR} \to P^*_{SR}$).**
3. **In general, $P^*_{SR} > AC(y^*)$ for each firm, so that profit $\pi$ is positive in the short run.**

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

# POSITIVE PROFITS




**With demand $D$, profit attracts new entrants, which contracts the demand to $D'$.**

**Profit falls, but still positive: $AR'(y') = P' > AC(y')$.**

# LONG-RUN EQUILIBRIUM

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.**

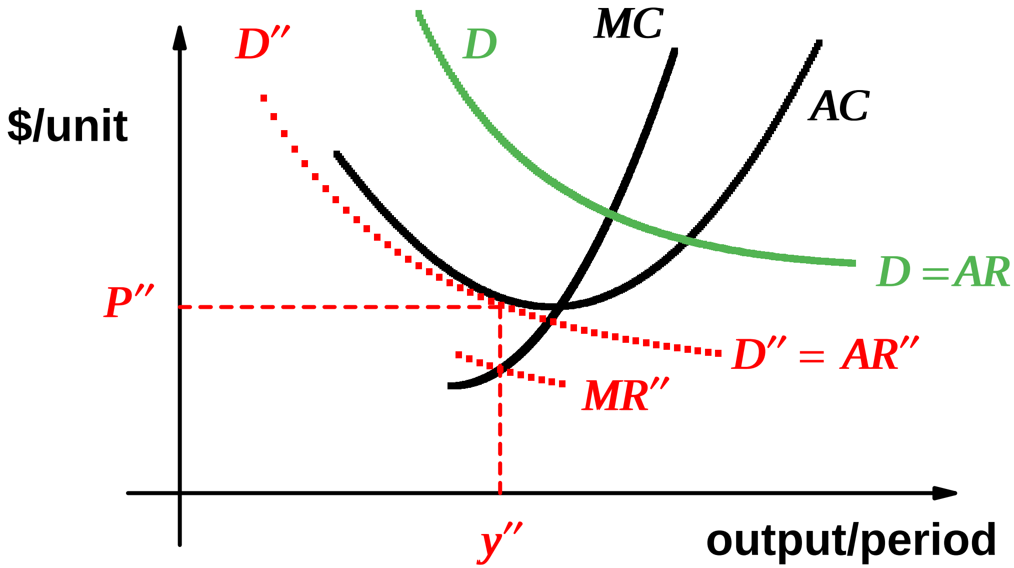
5. **In the long run (*LR*), all profits will be bidded away for the marginal firm, with**

$$AR = D \equiv P = AC \qquad\qquad \therefore \quad \pi = 0$$

**and maximum (zero) profit point on demand curve**

$\therefore$ **the demand curve $D''$ must be tangent to the $AC$ curve at the price & output chosen.**

# ZERO PROFITS




**Long-run equilibrium at the margin.**

**At $y''$, $AR''(y'') = P'' = AC(y'')$: zero profit.**

**There will be excess capacity: firms will not operate at minimum *AC*, and so they could reduce AC by increasing output. Why don’t they?**

# VERSUS PERFECT COMPETITION

**Higher average costs: zero profits, but firms are on the downwards-sloping part of the *ATC* curves, not at the minimum (Efficient Scale).**

**Mark-up over marginal cost: price is always above *MC*, because the firm always has some market power, not $P = MC$.**

**Note that $MC < AC$, since *AC* is falling, not $MC = AC$.**

**Always eager to make another sale: an extra unit sold at the current price means more profit, not unwilling.**

# AND EFFICIENCY

**Inefficient, but greater variety in the market.**

**Inefficiencies:**

1. **Mark-up:** $P > MC$ $\therefore$ **the DWL of monopoly pricing: some consumers value it above** $MC$ **but below the** $P$ **charged.**
2. **Production** $y''$ **less than the Efficient Scale of production at minimum** $AC$**: excess capacity.**
3. **Too much or too little entry: individual entrant considers only its profit, *but* consumers gain** $CS$ **with a new product, *while* incumbents lose** $PS$ **with the new competitor.**

# 3. ADVERTISING

**A natural feature of monopolistic competition: each firm wants more sales.**

| | |
|---|---|
| **Print media:** | **50%** |
| **Electronic media:** | **33%** |
| **Rest:** | **17%** |

**How does the level of advertising vary over types of goods and services?**

**Highest advertising budgets for highly differentiated consumer goods.**

**Examples?**

# PRO & CON

**Manipulation of tastes? Creating desires that otherwise wouldn't exist?**

**Higher prices (for two reasons)? Because $P > MC$, and by reducing consumers' price elasticity of demand (brand loyalty).**

***OR***

**Conveys information (prices, locations, existence of new products) $\rightarrow$ better choices? More competition, not less (think: Internet comparison browsing). Reduces brands' market power. Facilitates entry.**

**Empirical results: Across 50 states: price of spectacles 20% lower when advertising allowed.**

# AS A SIGNAL OF QUALITY

**How much information?**

**The firm’s willingness to buy advertising (especially for repeat-purchase, experience goods) is a signal of quality?**

**Is what the advert says important? Not much — just that it is expensive and paid for.**

# BRAND NAMES

**Economics of brand names:**

**Perceived differences, not real — a rip-off, from advertising.**

**But:**
**Quality — firms use brands to convey signals about quality; and, firms must defend their brands' reputations (or *brand equity*) as high-quality products by maintaining quality.**

**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 a price mark-up.**
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 of the $MR$ curve ($\frac{dMR}{dQ}$) is twice that of the $AR$ (i.e demand) curve ($\frac{dP}{dQ}$)?**

$$R = Q \bullet P(Q)$$

$$\therefore\ MR = \frac{dR}{dQ} = P(Q) + Q\,\frac{dP}{dQ} = P \bullet \left(1 + \frac{1}{\eta}\right).$$

**The slope of the $MR$ 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).**