Monopolistic Competition

AP Microeconomics | Unit 4 | short run, long run, and excess capacity

1. What it is

Three features

- **Many firms.**
- **Differentiated products**: similar, but not identical (coffee shops, restaurants, clothing brands).
- **Easy entry and exit**: low barriers.

Like a *monopoly*: the product is a little different, so the firm's demand curve slopes down and it chooses its own price. Like *perfect competition*: anyone can enter, so economic profit does not last.

2. Short run: the monopoly graph

Example. Demand $P = 12 - q$, so $MR = 12 - 2q$; marginal cost $MC = q$.

1. **Quantity:** where $MR = MC$. $12 - 2q = q$, so $q = 4$.
2. **Price:** up to the demand curve. $P = 12 - 4 = \$8$.
3. **Profit or loss:** compare price with ATC. With $ATC = \$5$ at $q = 4$, profit is $(8 - 5) \times 4 = \$12$.

In the short run the firm can earn a profit, take a loss, or break even.

3. Long run: entry takes the profit

Profit attracts new firms. The same customers are now split among more sellers, so **each firm's demand curve shifts left** (and becomes more elastic). The cost curves do not move.

Long-run equilibrium

Entry stops when economic profit is zero: the demand curve is **tangent** to the ATC curve.

$$P = ATC \qquad \text{at the quantity where} \qquad MR = MC$$

On the graph, the tangency sits directly above the point where MR crosses MC.

If firms start with losses instead, some exit, the demand curves of the remaining firms shift right, and the market reaches the same tangency.

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4. Zero profit, but not efficient

long run	perfect competition	monopolistic competition
economic profit	zero	zero
price and marginal cost	$P = MC$	$P > MC$
price and minimum ATC	$P = \min ATC$	$P > \min ATC$
allocatively efficient	yes	no
productively efficient	yes	no

Excess capacity

The firm produces **less** than the output that minimizes ATC: it is on the downward-sloping part of its ATC curve. The gap between the two quantities is excess capacity. It is the cost of product variety.

5. Advertising, losses and markups

Why firms advertise

To make the product look different: shift the firm's demand curve **right** (more buyers at every price) and make it **less elastic** (fewer close substitutes in buyers' minds), which raises market power. Ads also raise ATC, and rivals copy them in the long run.

- **Short-run loss**: if demand lies below ATC at the $MR = MC$ quantity (demand $P = 7 - q$: $q = \frac{7}{3}$, $P \approx 4.67$, $ATC \approx 6.3$), the firm loses money. It keeps producing while $P > AVC$ and shuts down if $P < AVC$.
- **Long run**: losses make firms exit; the survivors' demand shifts right until $P = ATC$ again (zero economic profit).
- A higher **fixed** cost (rent) does not change MC: the same output and price; profit falls (or the loss grows) by the increase.
- The **markup** $P - MC$ is smaller when the firm's demand is more elastic (close substitutes).

Where students lose points

1. Long-run graph where demand *crosses* ATC: it must be tangent.
2. The tangency not lined up with the $MR = MC$ quantity.
3. Shifting cost curves when firms enter: the firm's *demand* curve shifts.
4. Saying the long-run price equals minimum ATC: that is perfect competition.
5. Saying zero profit makes it efficient: P is still above MC.
6. Saying advertising only shifts demand right: it also makes demand less elastic.

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