

CHAPTER

14

Review

A Monopolistic Market

Monopoly is a market structure in which one firm makes up the entire market.

There are no close substitutes for the monopolist's product.

Barriers to entry into the market prevent competition.

Barriers to entry can be:

- Legal
- Sociological
- Natural
- Technological
- Positive network externalities

The Key Difference Between a Monopolist and a Perfect Competitor

A monopolistic firm's marginal revenue is *not* its price.

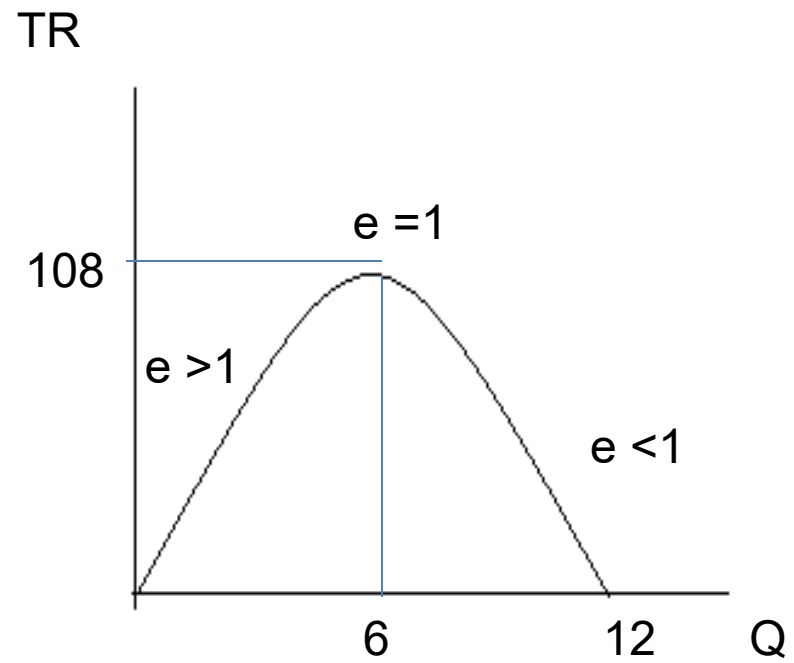
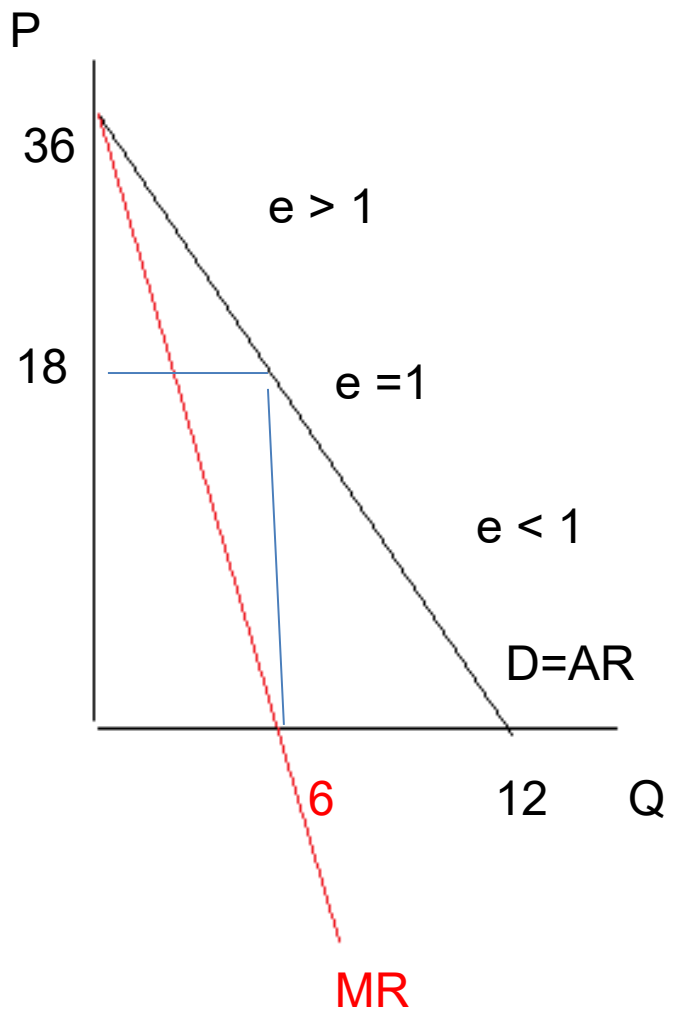
- Marginal revenue is always below its price.
- Marginal revenue changes as output changes and is not equal to the price.

A monopolistic firm's output decision can affect price.

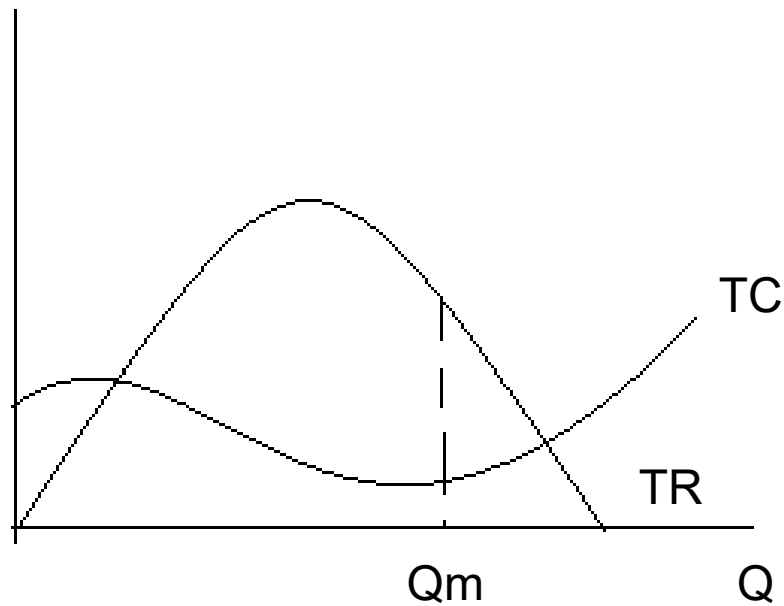
There is no competition in monopolistic markets so monopolists see to it that monopolists, not consumers, benefit.

Monopolistic Profit Maximization Table

Q	P=AR (\$)	TR (\$)	MR (\$)	TC (\$)	Profit (\$)
0	36	0		47	-47
1	33	33	33	48	-15
2	30	60	27	50	10
3	27	81	21	54	27
4	24	96	15	62	34
5	21	105	9	78	27
6	18	108	3	102	6
7	15	105	-3	142	-37
8	12	96	-9	198	-102
9	9	81	-15	278	-197



Profit-maximizing (TR-TC max.)



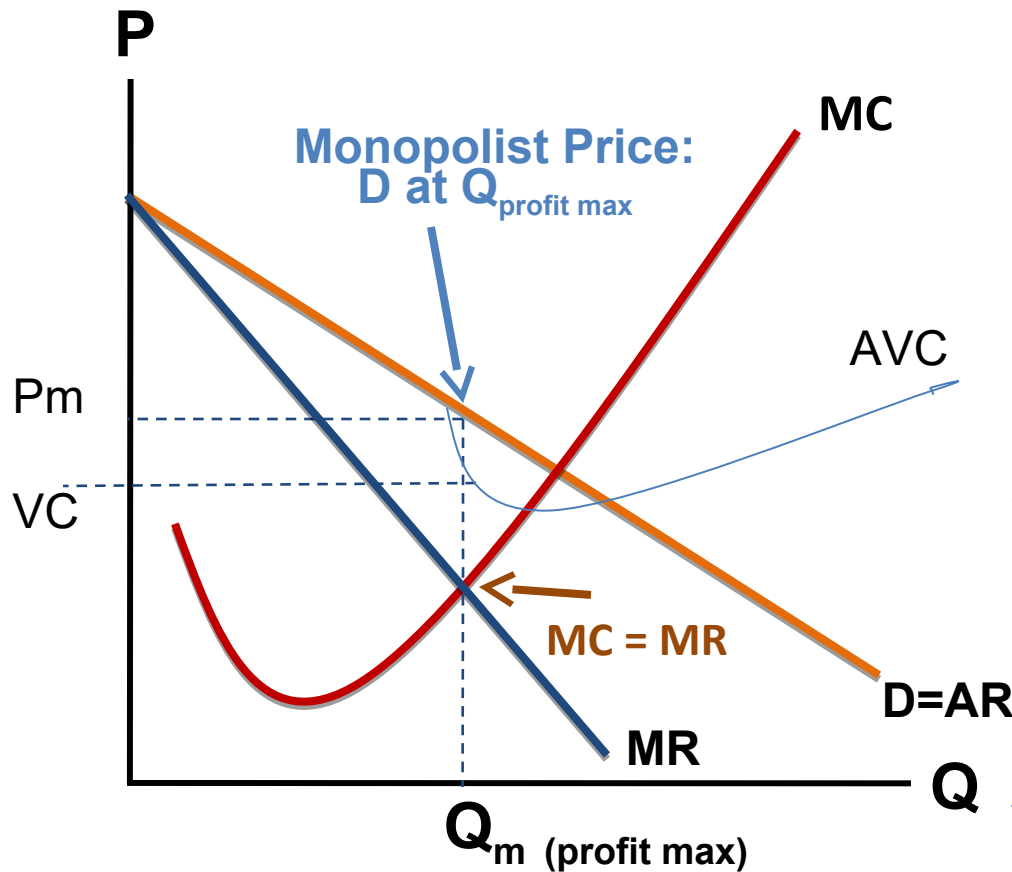
$$MR=MC \quad P \geq AVC$$

Draw the marginal revenue, marginal cost, and demand curves.

Find the profit maximizing level of output, where MR and MC curves intersect.

Find how much consumers will pay where Q_m intersects demand; this is the price the monopolist will charge.

At that output $P \geq AVC$



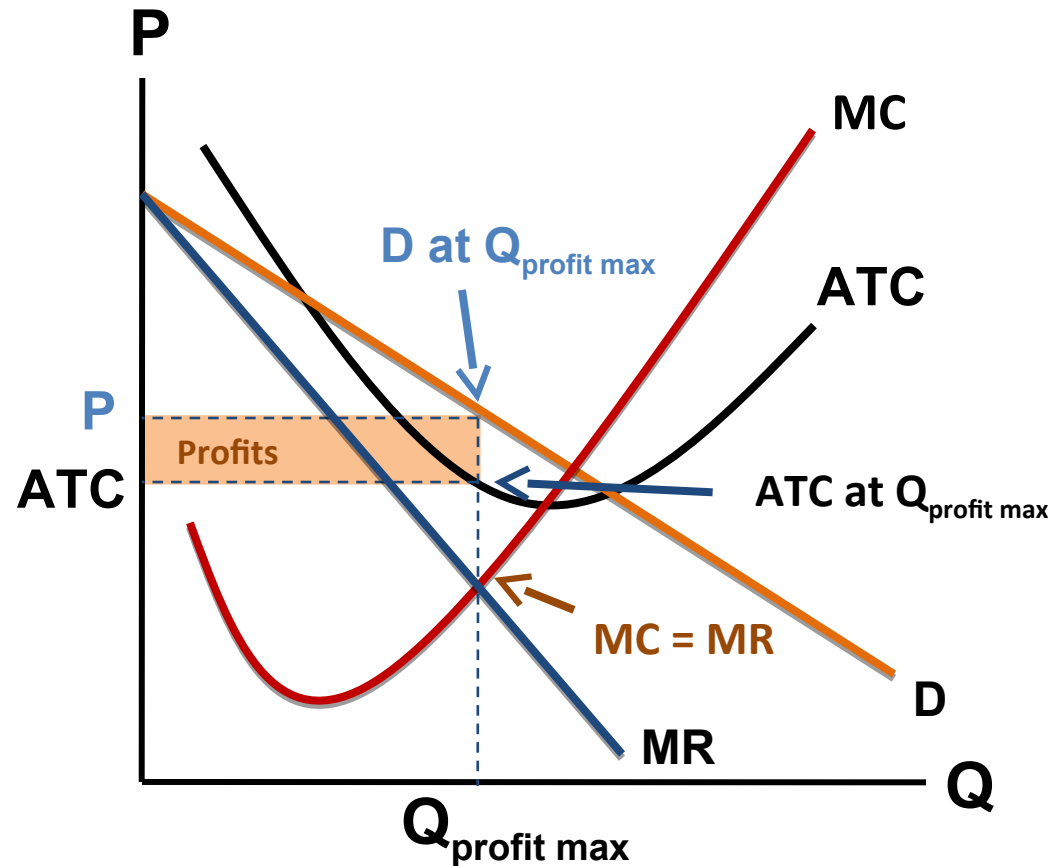
Determining Profits Graphically: A Firm with Profit

Find output where
 $MC = MR$, this is the profit
maximizing Q . At that Q ,
 $P \geq AVC$

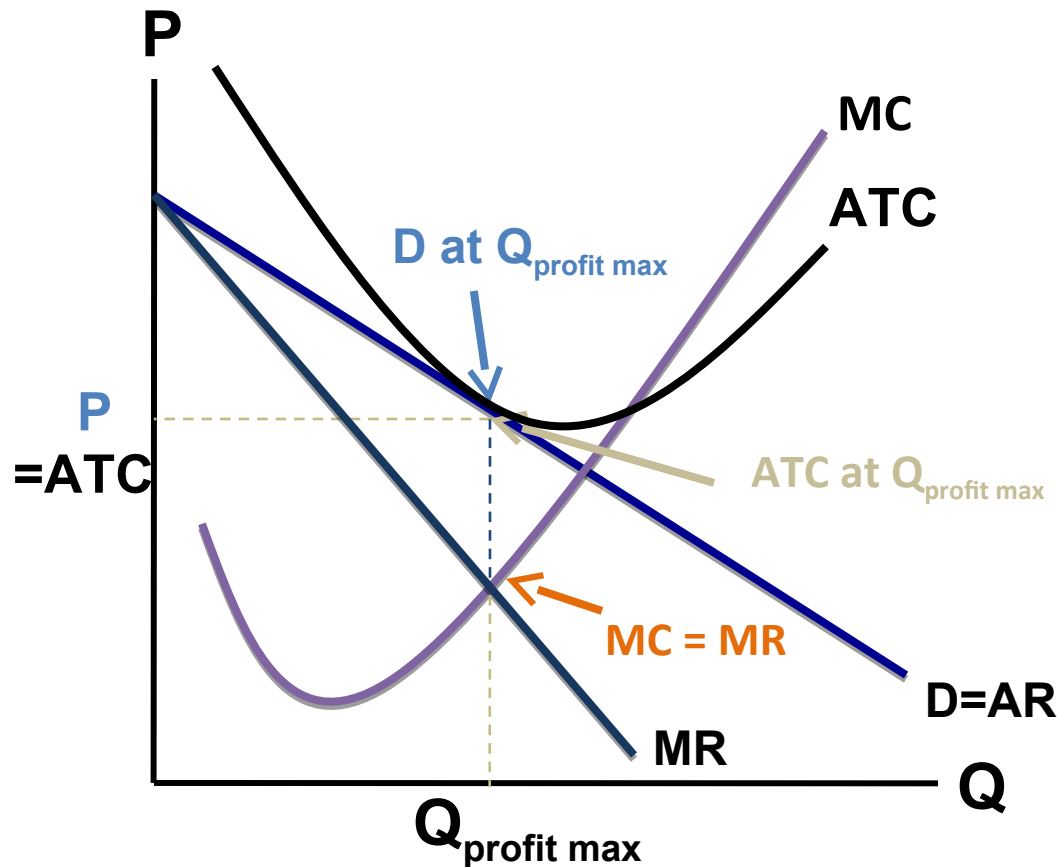
Find how much consumers
will pay where the profit
max Q intersects demand,
this is the monopolist price.

Find profit per unit where
the profit max Q intersects
 ATC .

Since $P > ATC$ at the profit
maximizing quantity, this
firm is earning profits.



Determining Profits Graphically: A Firm with Zero Profit



Find output where $MC = MR$, this is the profit maximizing Q . At that Q , $P \geq AVC$

Find how much consumers will pay where the profit max Q intersects demand, this is the monopolist price.

Find profit per unit where the profit max Q intersects ATC .

Since $P = ATC$ at the profit maximizing quantity, this firm is earning zero profit or loss.

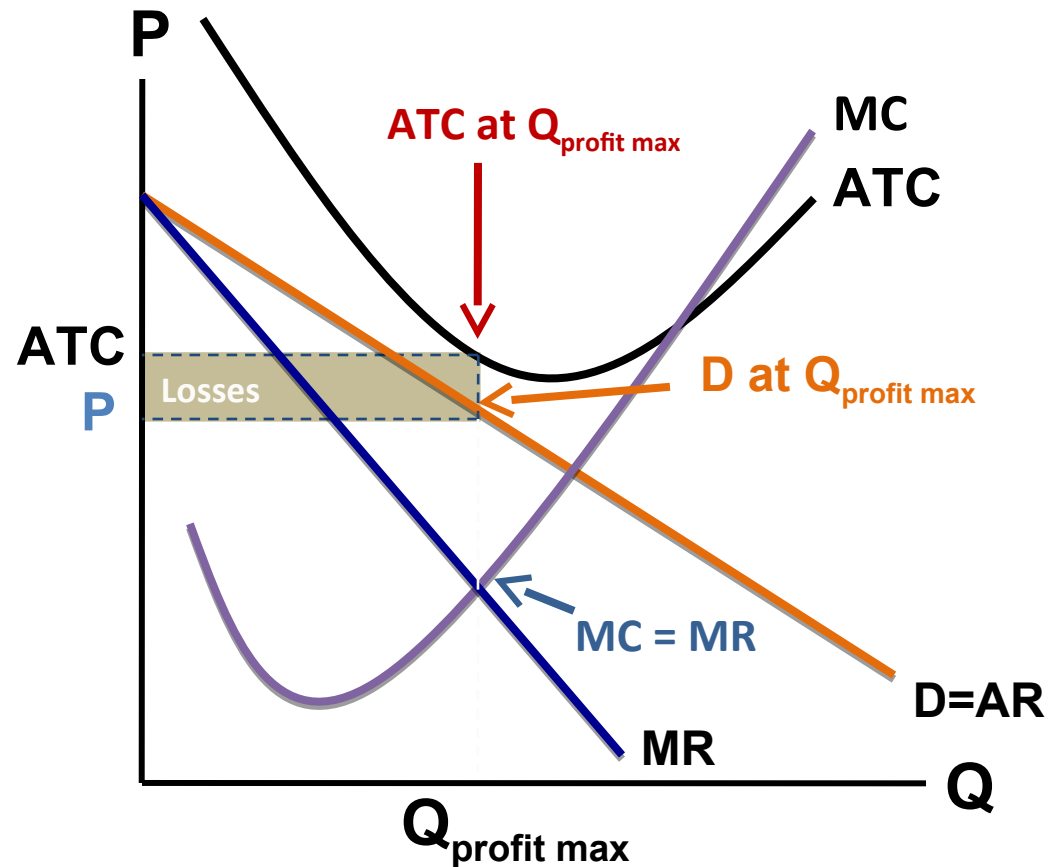
Determining Profits Graphically: A Firm with Losses

Find output where
 $MC = MR$, this is the profit
maximizing Q . At that Q ,
 $P \geq AVC$

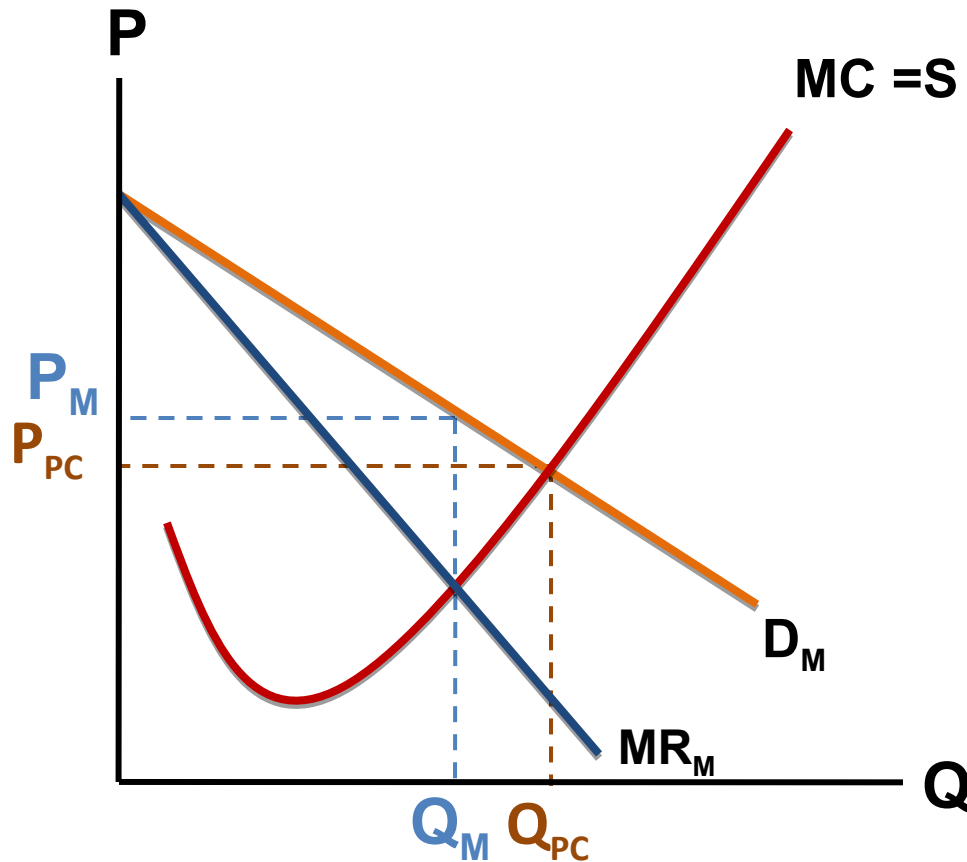
Find how much consumers will
pay where the profit max Q
intersects demand, this is the
monopolist price.

Find profit per unit where the
profit max Q intersects ATC .

Since $P < ATC$ at the profit
maximizing quantity, this firm
is earning losses.



Comparing Monopoly and Perfect Competition



In a monopoly, $P > MR$.

In perfect competition, $P = MR = D$.

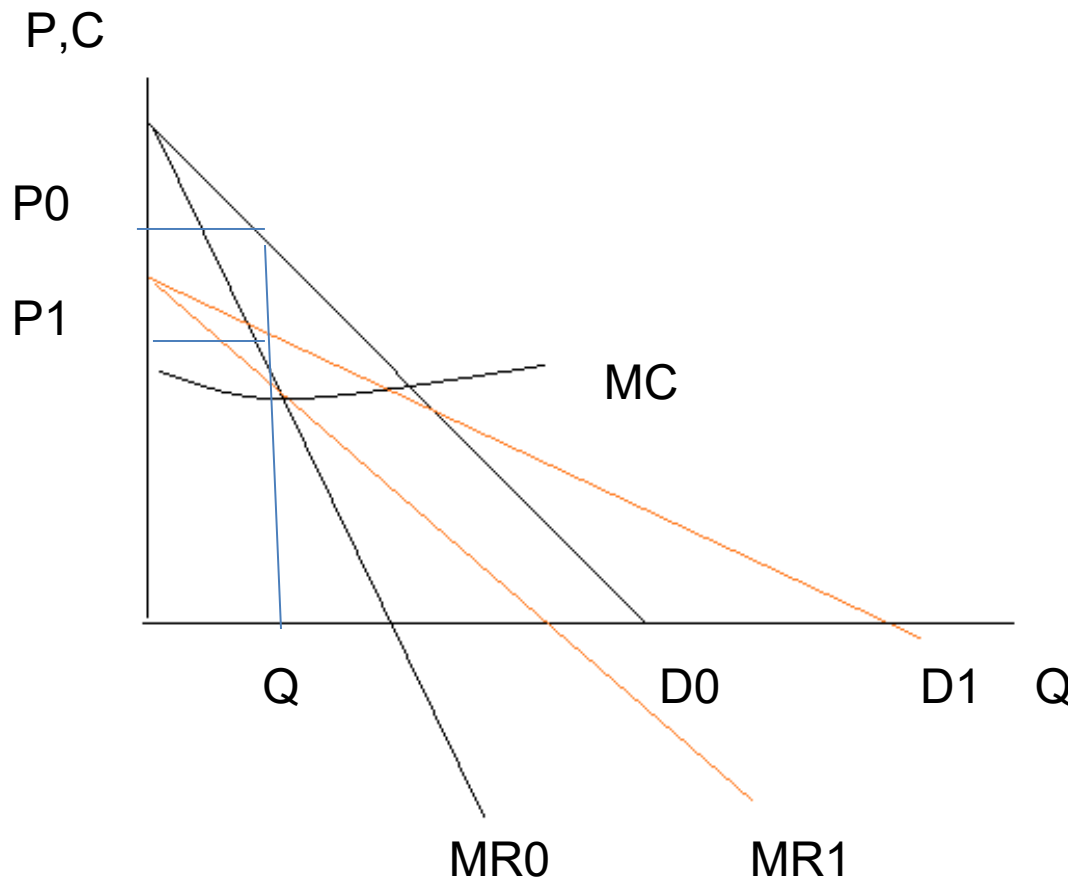
$MR = MC$ is the profit max rule for both.

First find the monopoly Q and P .

Then find the perfectly competitive Q and P .

Outcome: Monopoly *output is lower* and *price is higher* than perfect competition.

There is no supply curve for a monopolist



$MR = MC$

In perf. Comp.

$MR = P$ so $MC = P$

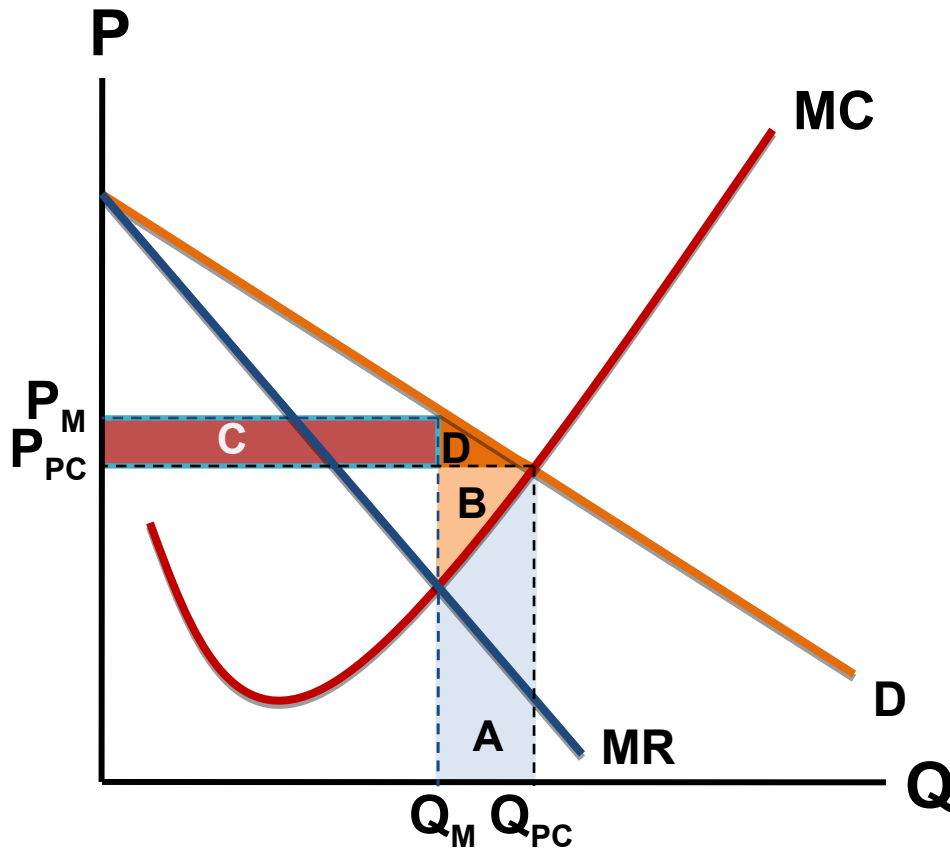
Therefore points on MC
are points on supply
curve.

In monopoly

MR is not equal to P so
 MC is

NOT equal to P .

Welfare Loss from a Monopoly: The Normal Monopolist



The welfare loss from monopoly is represented by the triangles **B** and **D**.

The rectangle **C** is a transfer of surplus from the consumer to the monopolist.

The area **A** represents the opportunity cost of diverted resources, which is not a loss to society.

The Price-Discriminating Monopolist

When a monopolist **price discriminates**, it charges different prices to different individuals or groups of individuals.

Examples of price discrimination:

- Movie discounts to senior citizens and children.
- Airlines charge more to fly on Fridays and Sundays.
- Tracking consumer information and pricing accordingly.

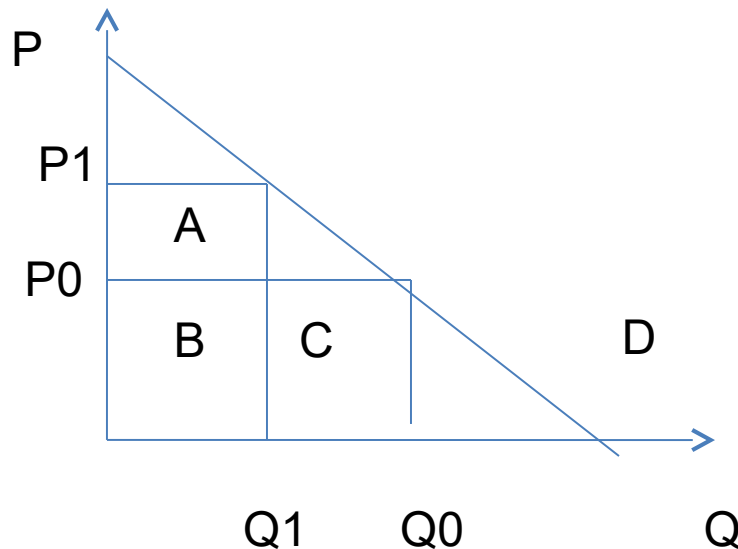
Consumers with less elastic demands are charged higher prices.

Price discrimination increases output and profits.

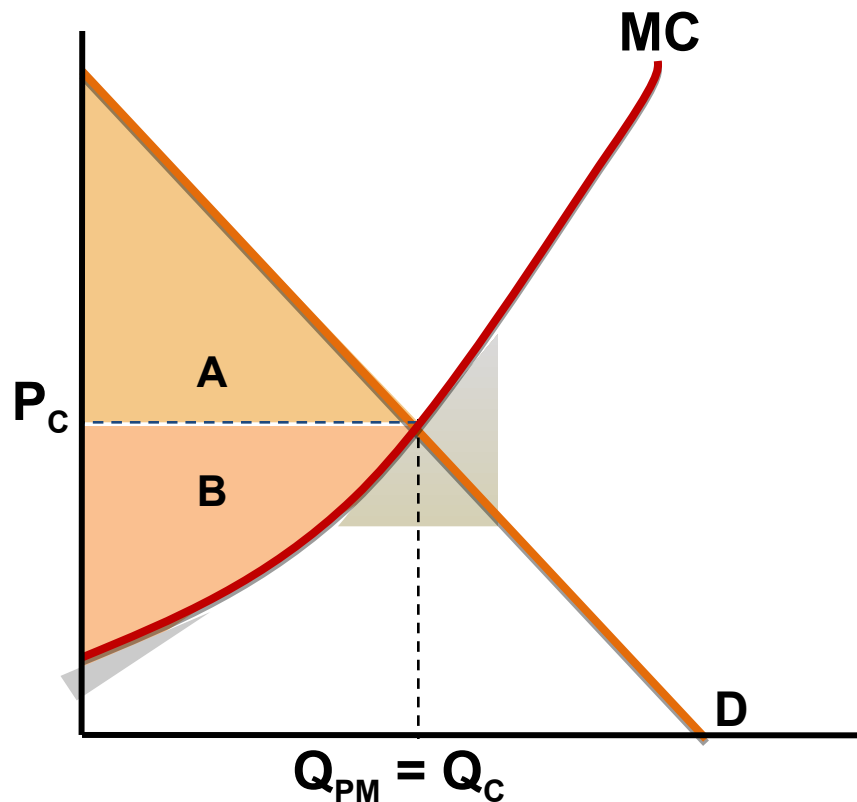
The Price-Discriminating Monopolist

It might seem unfair for a monopolist to charge different people different prices, but doing so eliminates welfare loss from monopoly.

For a price-discriminating monopolist, because it can charge what consumers are willing to pay, all consumer surplus is captured by the monopolist.



The Price-Discriminating Monopolist



A price-discriminating monopolist produces the same output as the combination of all firms in a competitive market

All firms in the perfectly competitive market capture only area **B**

The price-discriminating monopolist captures all the surplus represented by areas **A** and **B**.

Barriers to Entry and Monopoly

Natural Ability

- A firm is better at producing the good than anyone else.
- Microsoft's defense attorneys argued this in their antitrust case.

Natural Monopolies

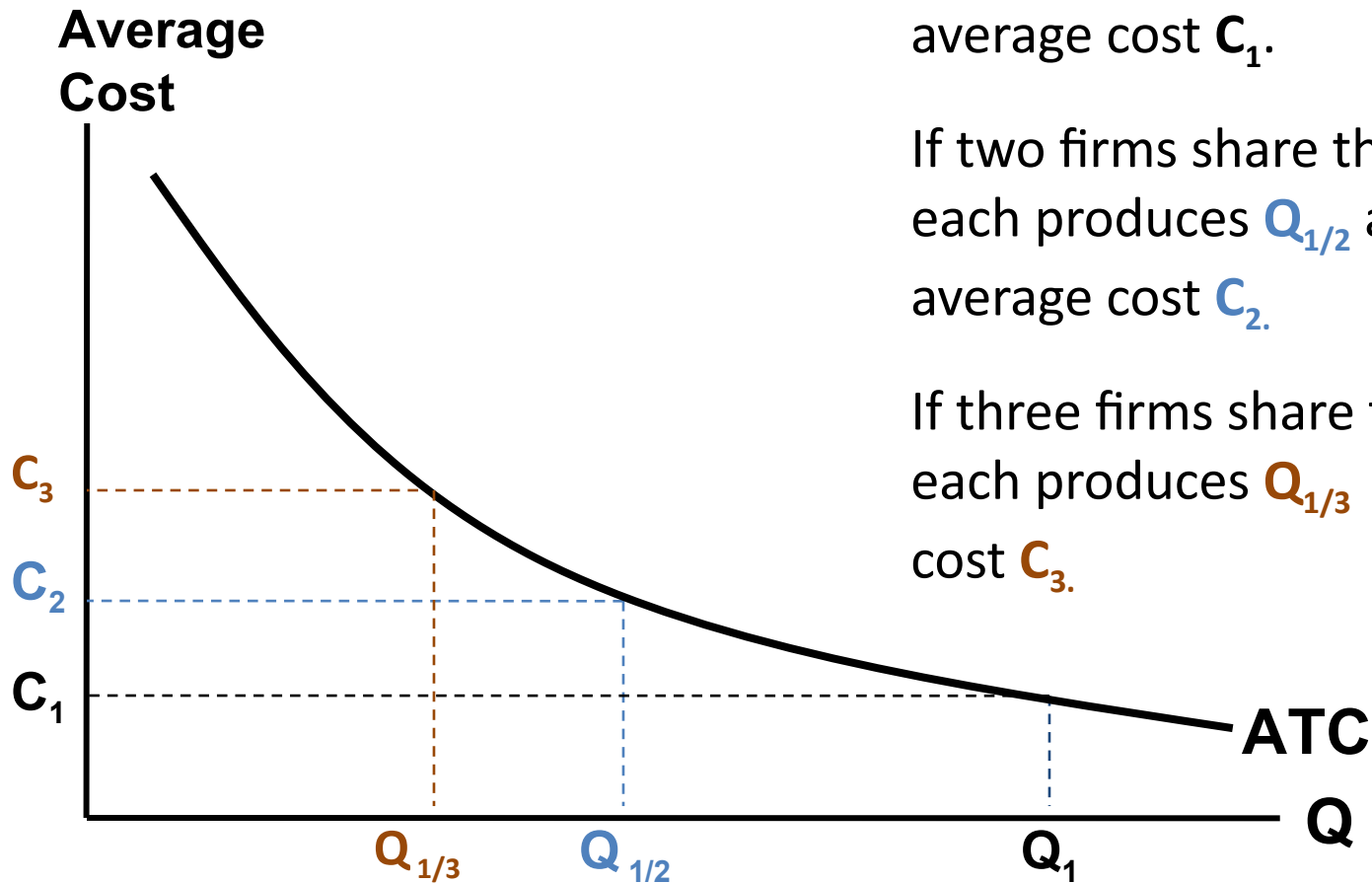
- **Natural monopoly** is when a single firm can produce at a lower cost than can two or more firms.

If there were no barriers to entry, profit-maximizing firms would always compete away monopoly profits.

Network and Platform Monopolies

- A **platform business** is a firm that provides people with a platform, or underlying infrastructure, that facilitates interaction among people. Examples are Facebook, Google, and Amazon.
- Allows businesses to gain a **first mover advantage**: benefits gained from being the first to gain a significant share of a market.
- Creates a **network externality**: when greater use of a product increases the benefit of that product to everyone without paying for it.

Average Cost for Natural Monopolist



One firm producing Q_1 has average cost C_1 .

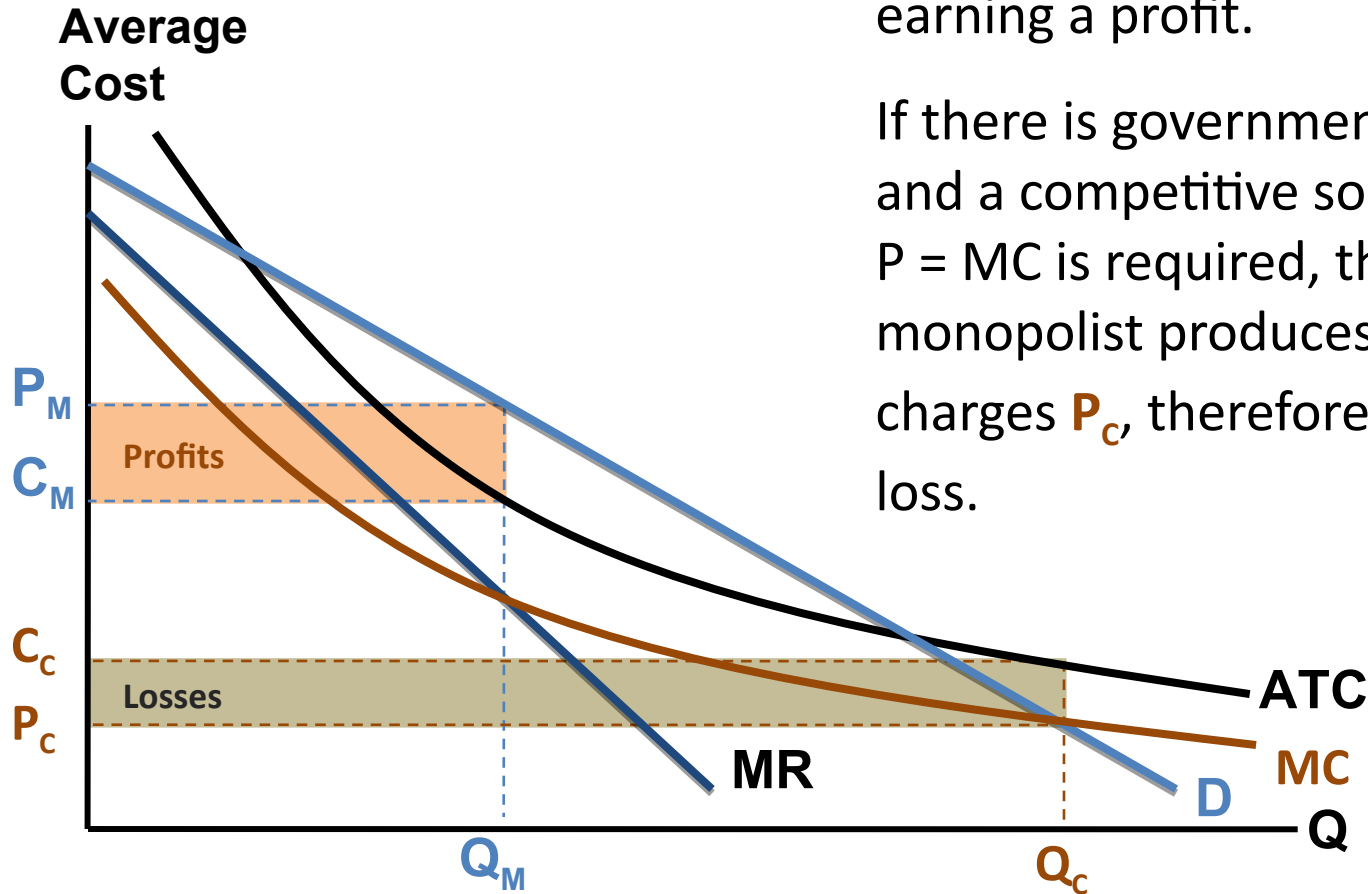
If two firms share the market, each produces $Q_{1/2}$ and has average cost C_2 .

If three firms share the market, each produces $Q_{1/3}$ has average cost C_3 .

Profit of Natural Monopolist

A natural monopolist produces Q_M and charges P_M , therefore earning a profit.

If there is government regulation and a competitive solution where $P = MC$ is required, the monopolist produces Q_C and charges P_C , therefore earning a loss.



Monopolistic Competition

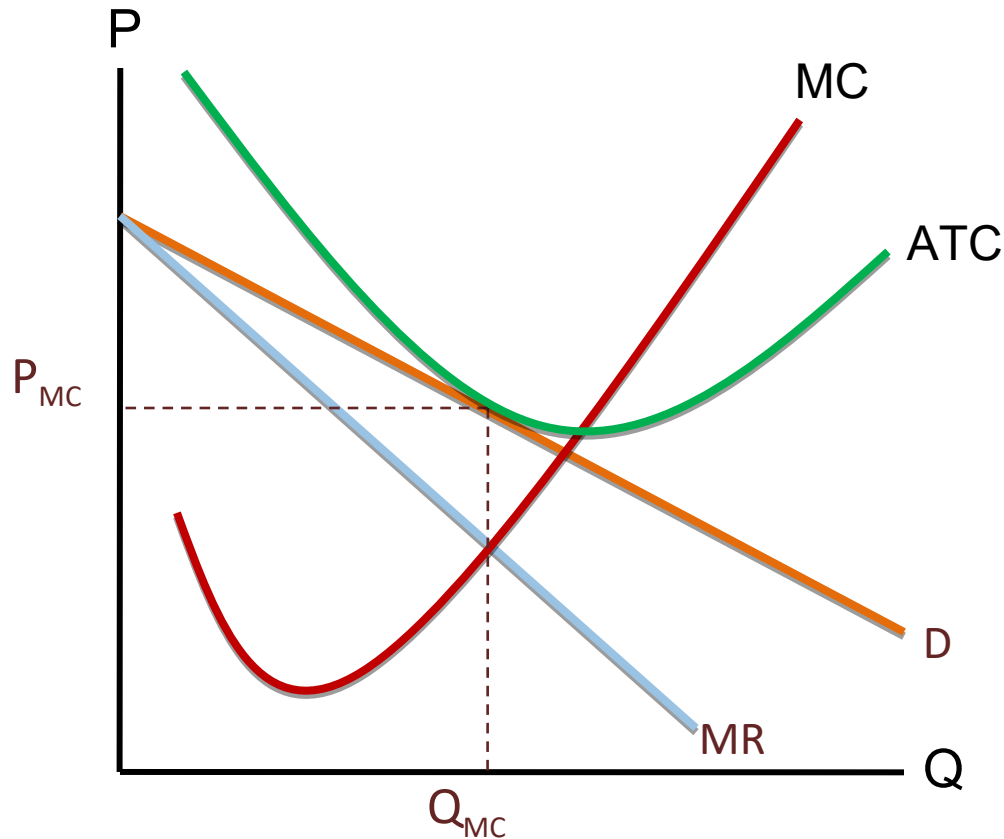
1. **Many sellers** that do not take into account rivals' reactions.
2. **Product differentiation** where the goods that are sold are not homogenous.
3. **Multiple dimensions of competition** make it harder to analyze a specific industry, but these methods of competition follow the same two decision rules as price competition.
4. **Ease of entry of new firms in the long run** because there are no significant barriers to entry.

Output, Price, and Profit of a Monopolistic Competitor

Like a monopoly:

- The monopolistic competitive firm has some monopoly power so the firm faces a downward sloping demand curve.
- Marginal revenue is like the MR curve of monopoly.
- The firm can make profits/ zero economic profit / loss in the short-run.
- Same graphs as monopoly.

Monopolistic Competition (Long-run)



You can see that a monopolistically competitive firm prices in the same manner as a monopolist, setting quantity where marginal revenue equals marginal cost. $P \geq AVC$

But the firm is also a competitor; competition implies zero economic profit in the long run (determined by ATC).

Comparing Monopoly, Monopolistic Competition, and Perfect Competition

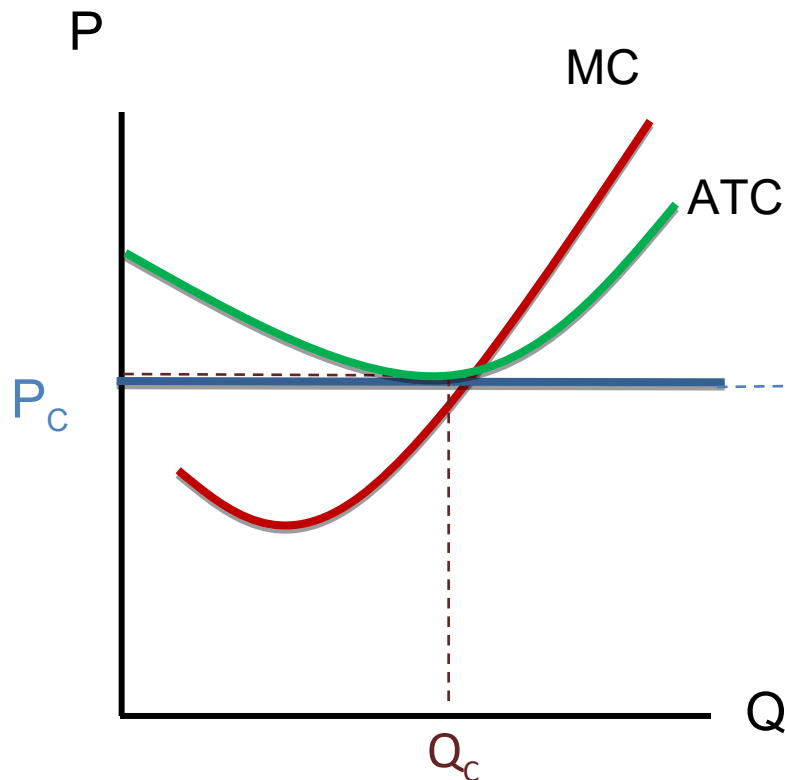
No long-run economic profit is possible in monopolistic competition because there are no significant barriers to entry.

It is possible for the monopolist to make economic profit in the long run because of the existence of barriers to entry.

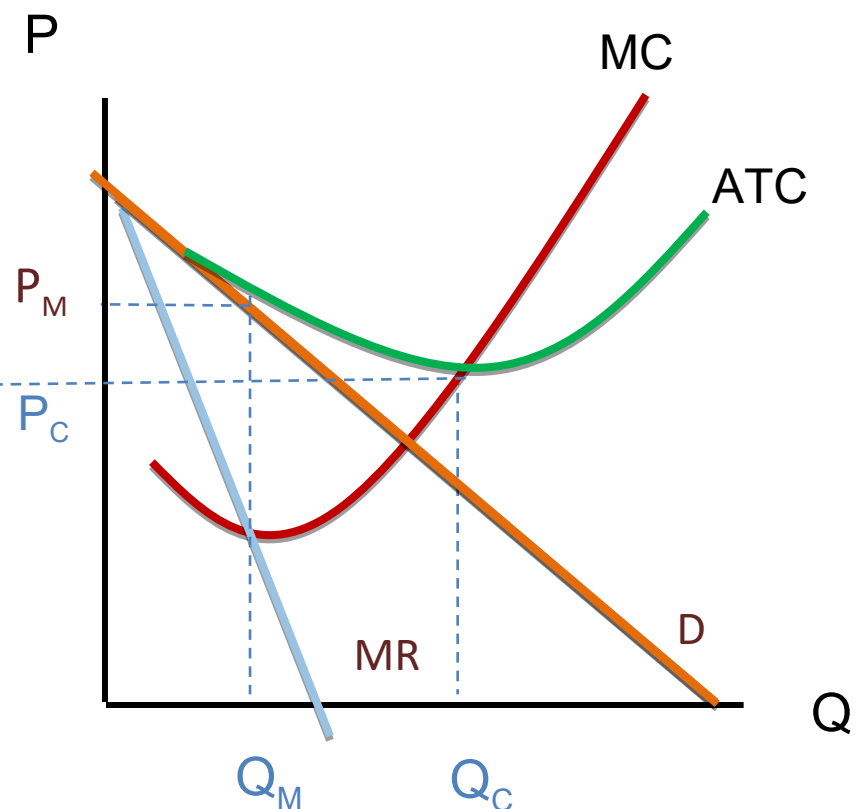
For a monopolistic competitor in long-run equilibrium:
 $(P = ATC) \geq (MC = MR)$

A Comparison of Perfect and Monopolistic Competition

In perfect competition in the long run, $P = \min ATC$.



In monopolistic competition in the long run, $P > \min ATC$.



Outcome: Monopolistic competition output is lower and price is higher than perfect competition