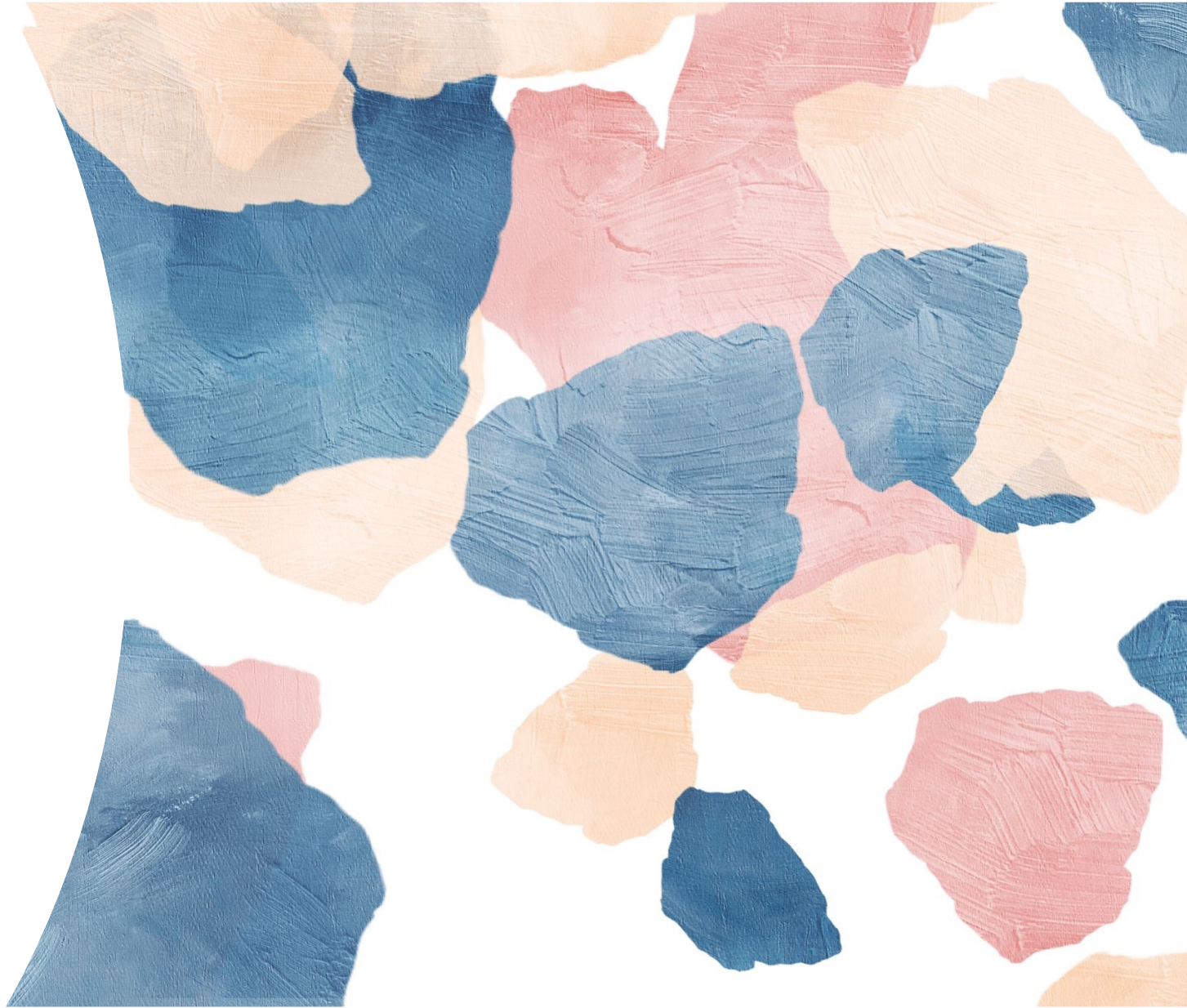


Monopoly



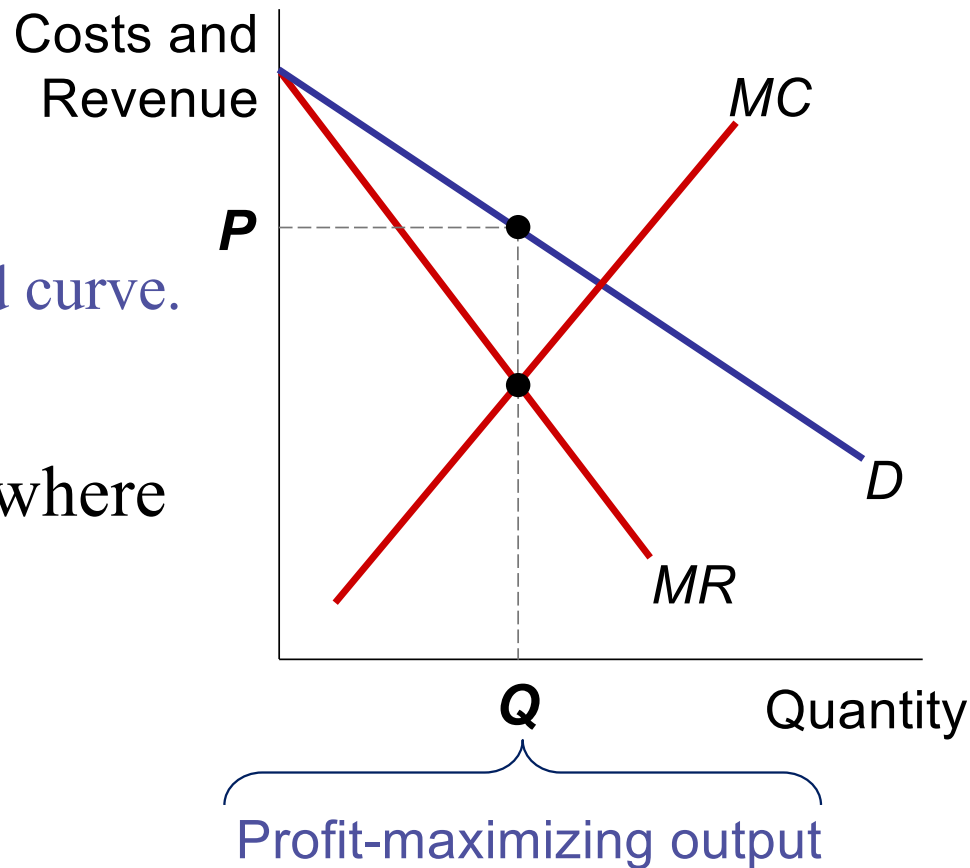
Monopoly Profit Maximization

- Produce Q where $MR = MC$
 - Sets the highest price consumers are willing to pay for that quantity
 - Finds this price on the D curve
 - $P > MR = MC$
 - If $P > ATC$, the monopoly earns a profit

Profit-Maximization for a Monopoly

At this Q , find P on the demand curve.

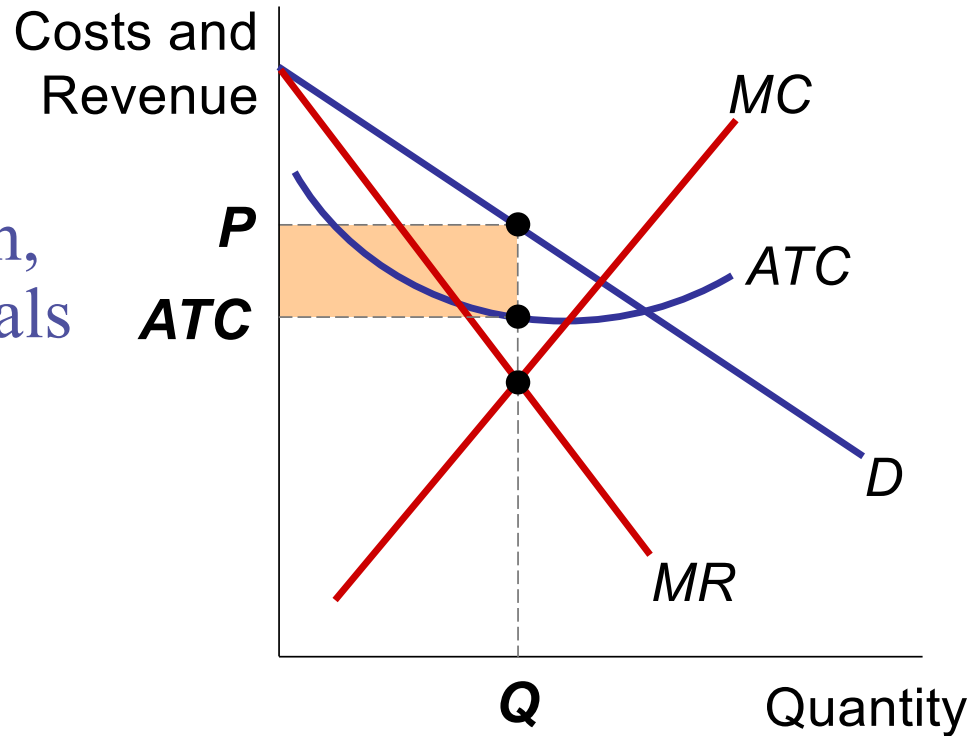
The profit-maximizing Q is where
 $MR = MC$.



The Monopoly's Profit

As with a competitive firm,
the monopolist's profit equals

$$(P - ATC) \times Q$$



A Monopoly Does Not Have a S Curve

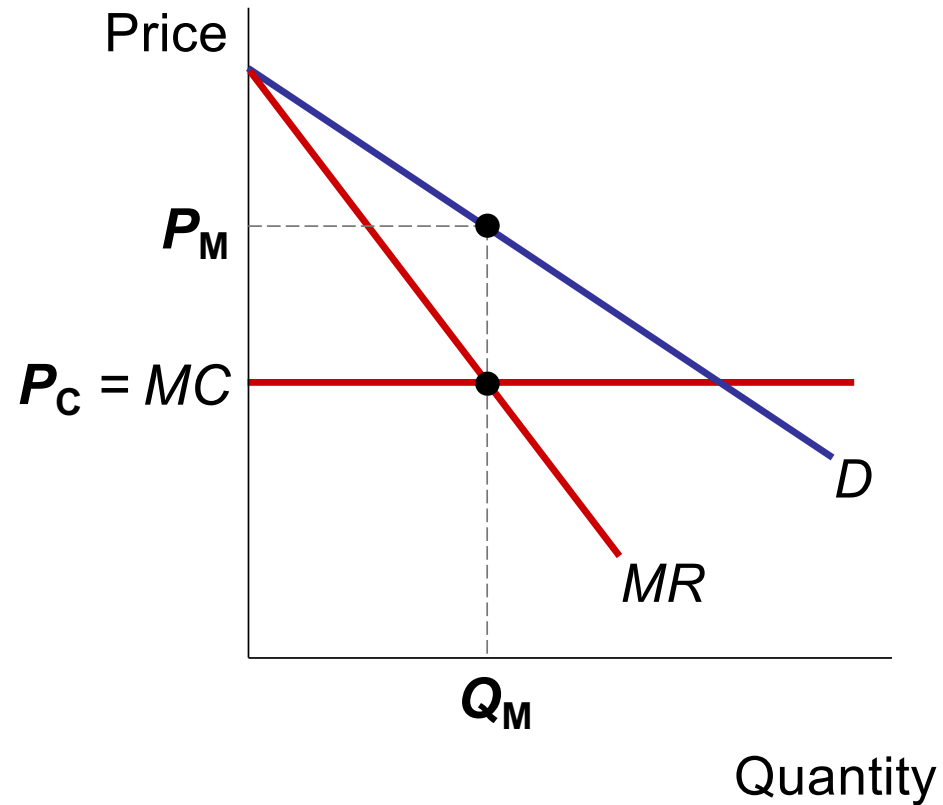
- A competitive firm takes P as given
 - Has a supply curve that shows how its Q depends on P
- A monopoly firm is a “price-maker”
 - Q does not depend on P
 - Q and P are jointly determined by MC , MR , and the demand curve
 - Hence, no supply curve for monopoly.

Case Study: Monopoly Drugs versus Generic Drugs

- When a firm discovers a drug, patent laws give it a monopoly on the sale of that drug. But when the patent expires, any company can make and sell the drug. At that point, the market becomes competitive rather than monopolistic.
- What does theory predict will happen to the price of a drug when the patent expires?

CASE STUDY: Monopoly vs. Generic Drugs

Patents on new drugs give a temporary monopoly to the seller: P_M , Q_M .

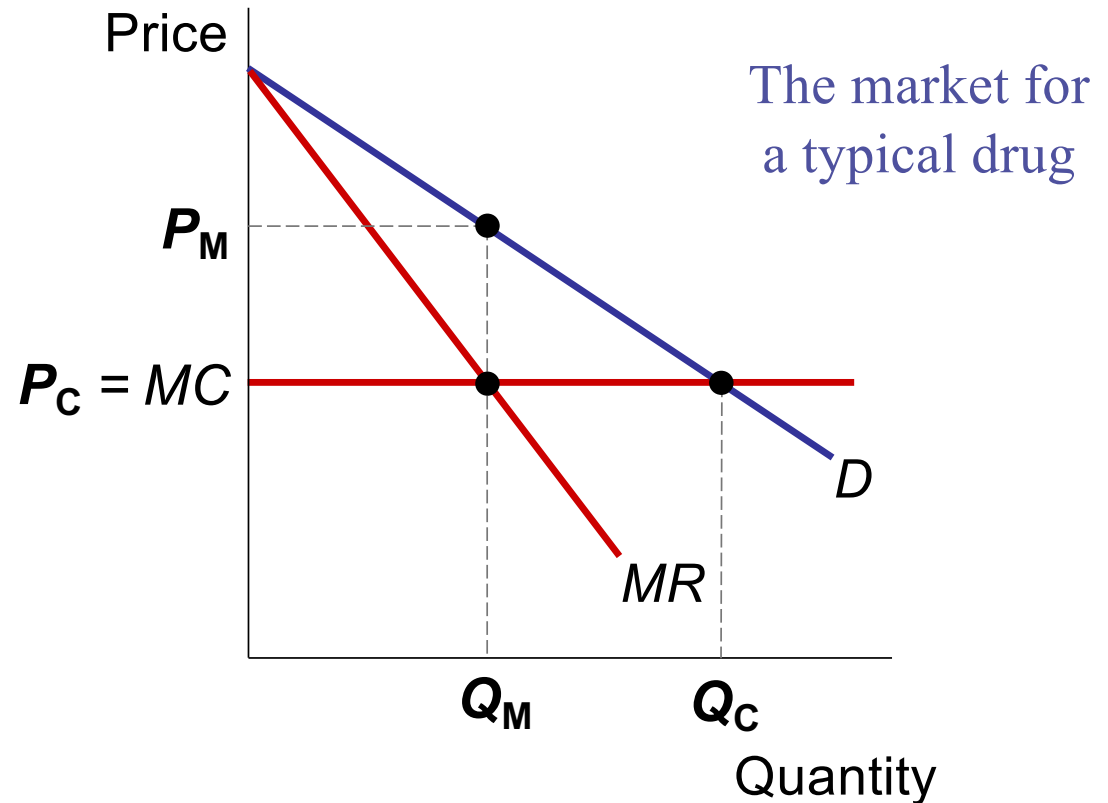


- During the life of the patent, the monopoly maximizes profit by producing the quantity at which $MR = MC$ and charging a price well above MC .
- But when the patent expires, the profit from making the drug encourages new firms to enter the market. With competition, the price should fall to equal MC .

CASE STUDY: Monopoly vs. Generic Drugs

Patents on new drugs give a temporary monopoly to the seller: P_M , Q_M .

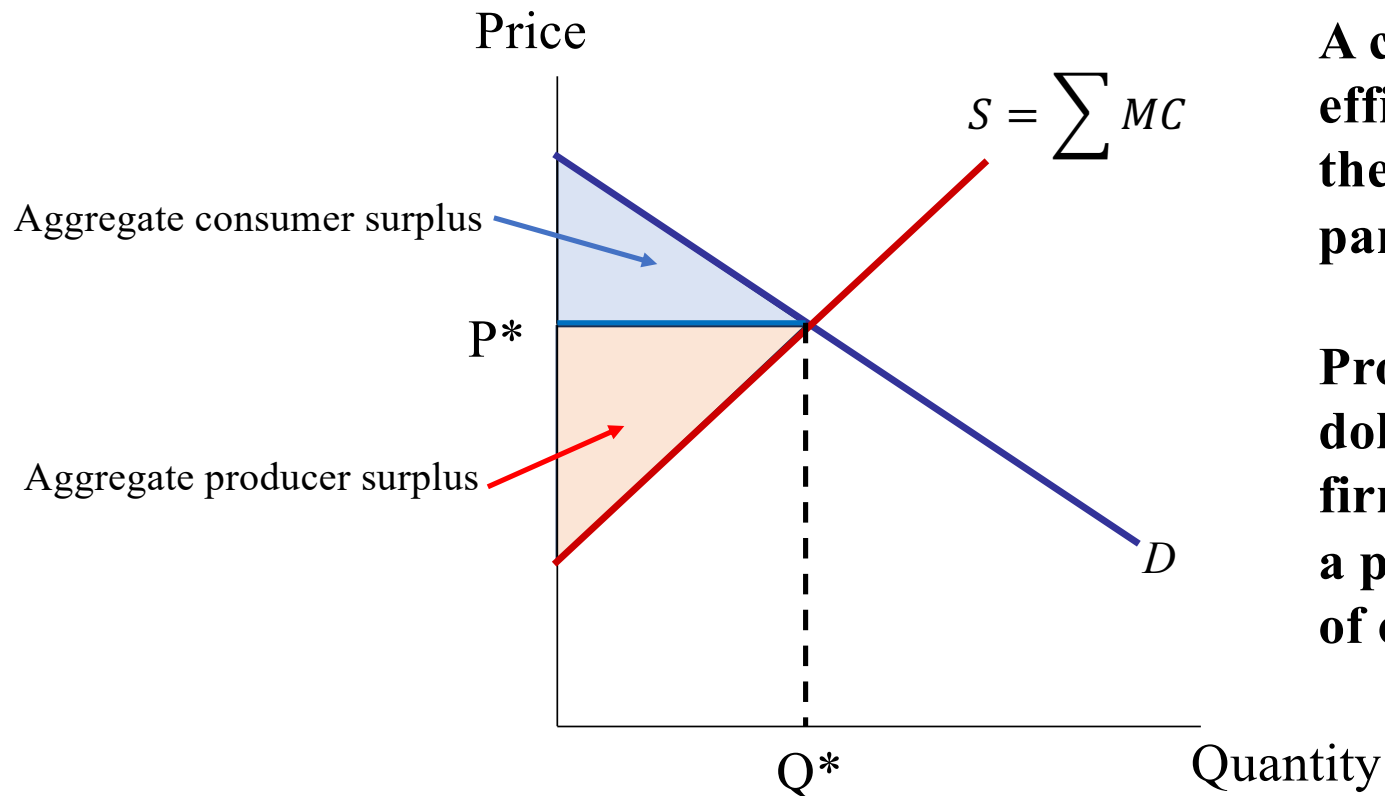
When the patent expires, the market becomes competitive, generics appear: P_C , Q_C .



The Welfare Cost of Monopolies

- Competitive market equilibrium:
 - At $P = MC$ and maximizes total surplus
- Monopoly equilibrium: at $P > MR = MC$
 - The value to buyers of an additional unit (P) exceeds the cost of the resources needed to produce that unit (MC)
 - The monopoly Q is too low – could increase total surplus with a larger Q .
 - Monopoly results in a deadweight loss

The Efficiency of Competitive Equilibrium



A competitive market is efficient when it maximizes the net benefits to its participants.

Producer surplus: the dollar amount by which a firm benefits by producing a profit-maximizing level of output

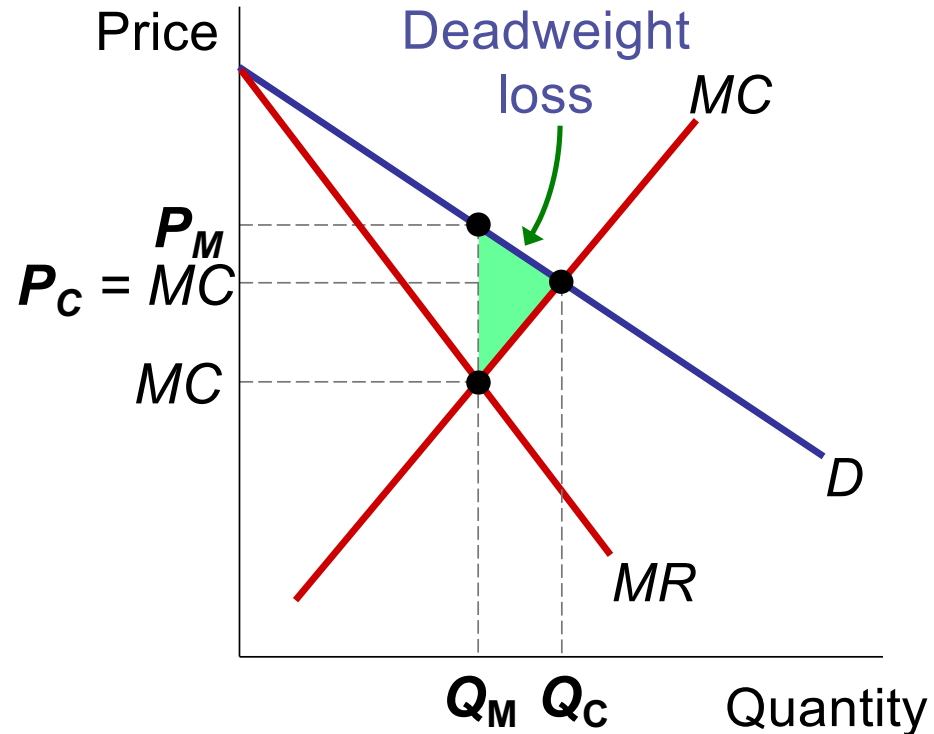
The Deadweight Loss of Monopoly

Competitive equilibrium:

- quantity = Q_C
- $P_C = MC$
- total surplus is maximized

Monopoly equilibrium:

- quantity = Q_M
- $P_M > MC$
- deadweight loss



References

- Mankiw, N.G., (2023)