



Monopoly

EE211



Monopoly Profit Maximization

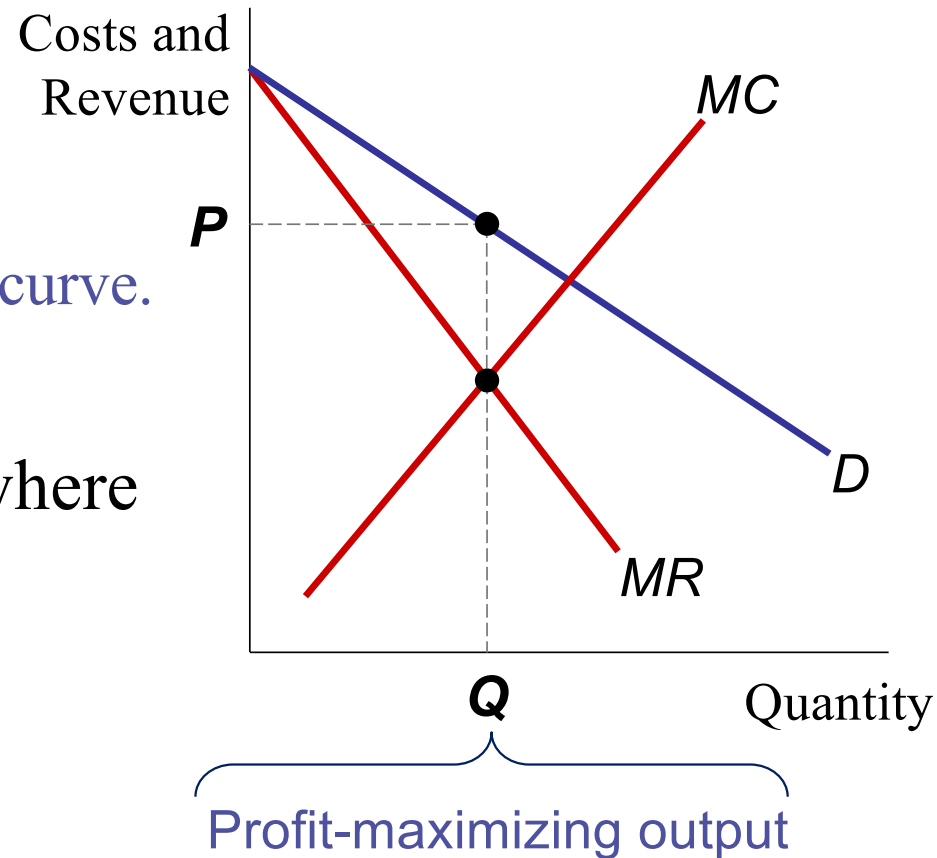
Produce Q where $MR = MC$

- 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.

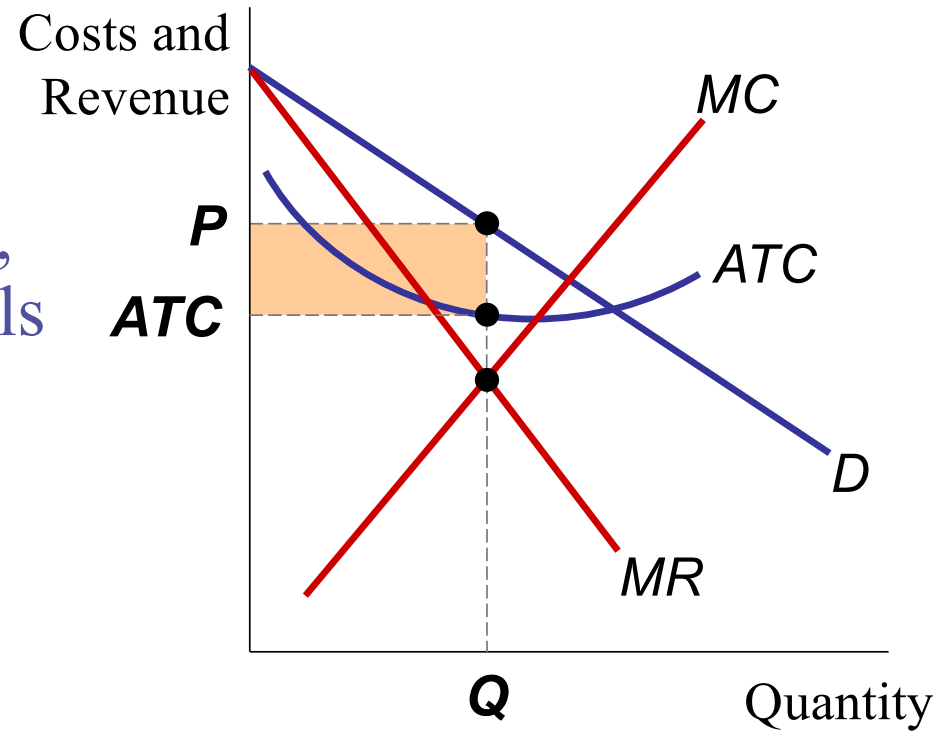
The profit-maximizing Q is where
 $MR = MC$.



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.

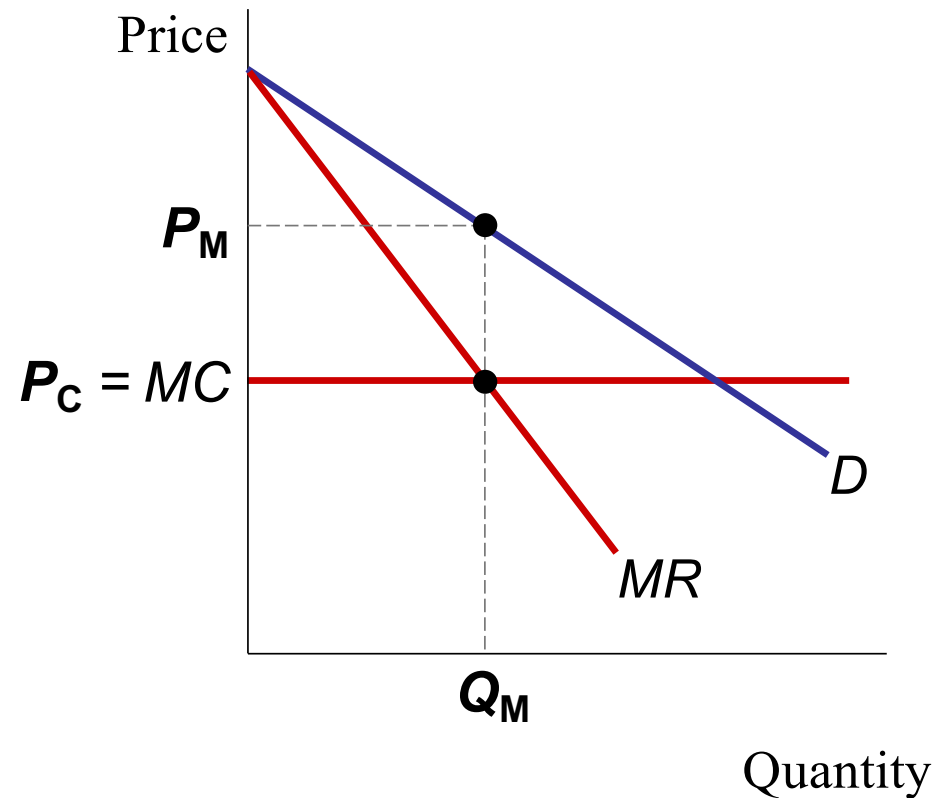
Case Study: Monopoly Drugs versus Generic Drugs

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 .



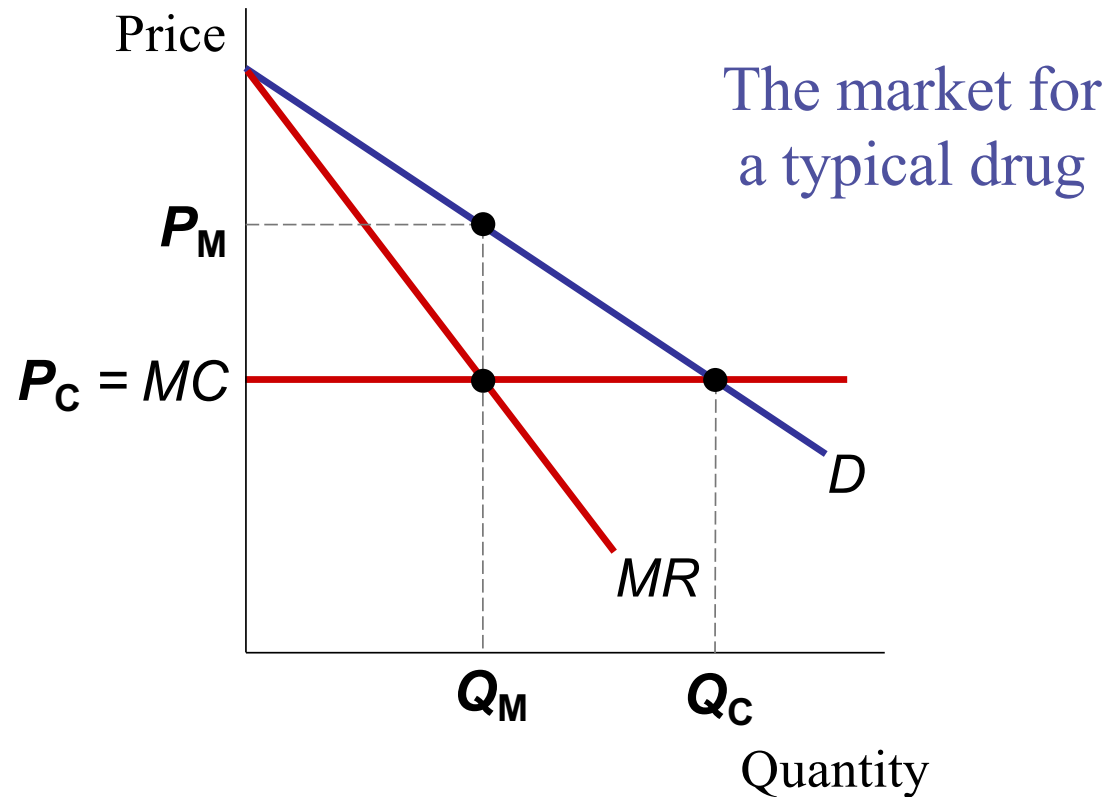
During the life of the patent, the monopoly maximizes profit by producing the quantity at which $MR = MC$ and charging a price will above MC.

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

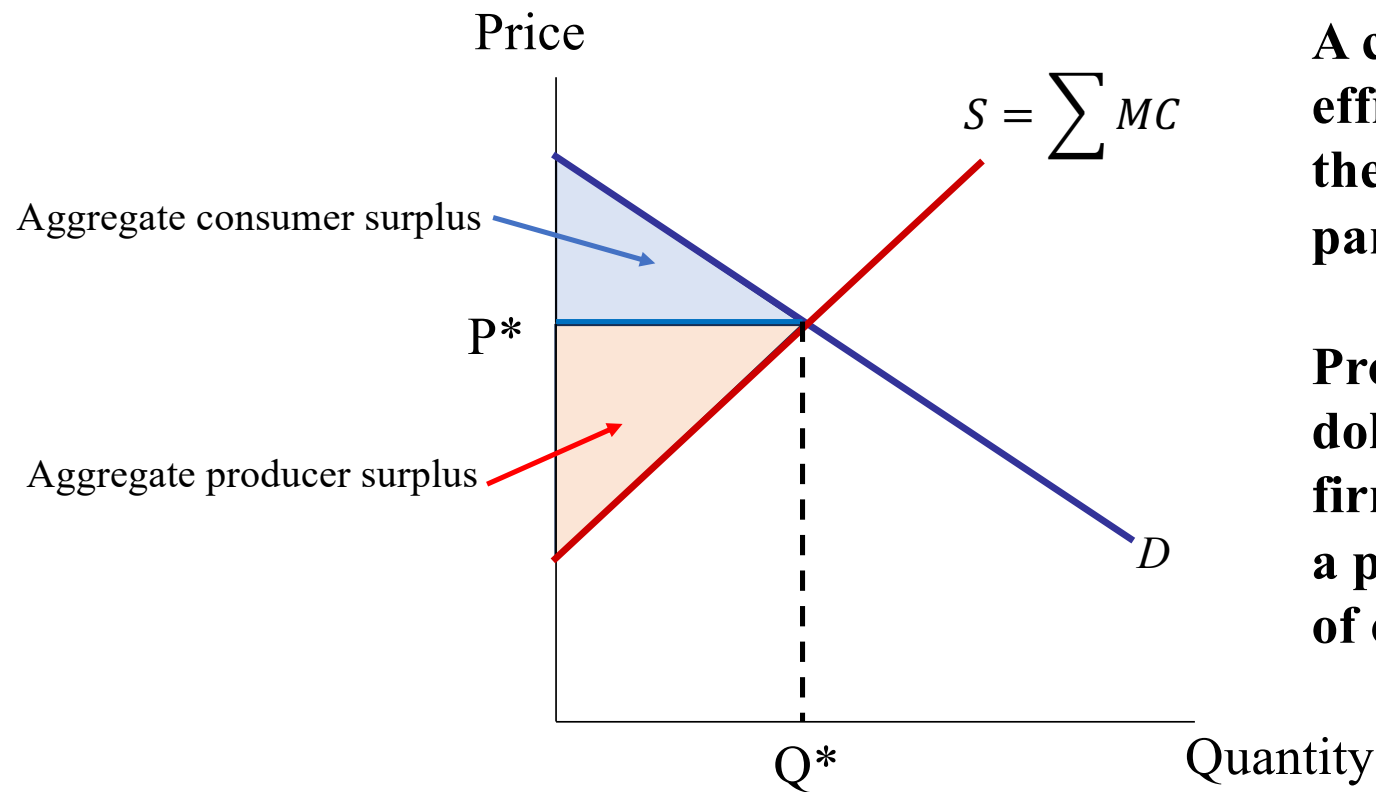
Competitive market equilibrium:

- 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

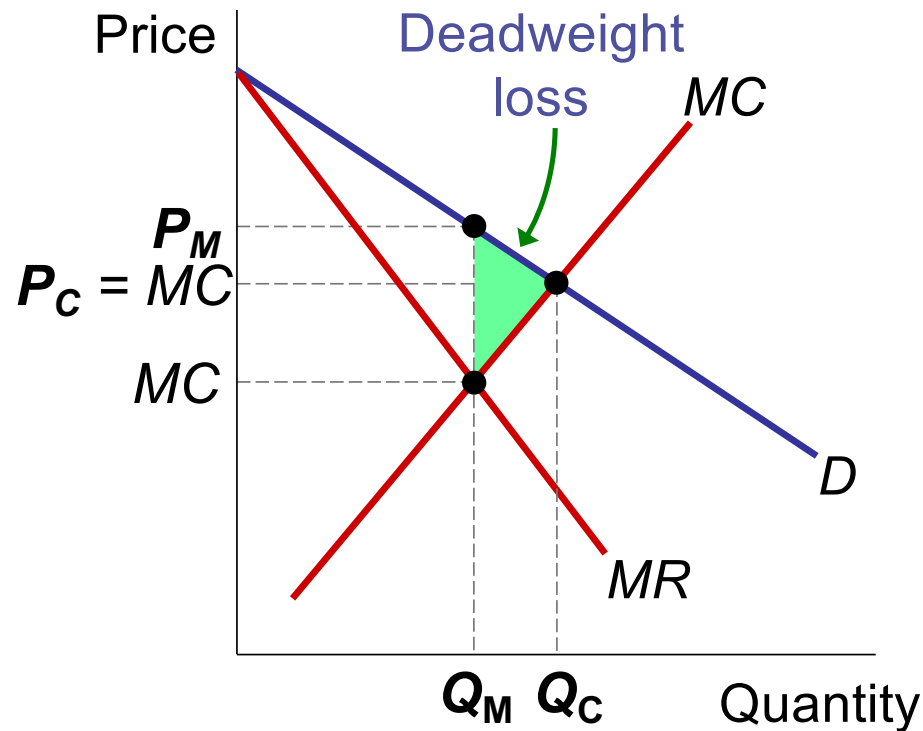
The Deadweight Loss of Monopoly

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., (2024) Principles of Microeconomics, 10th ed.,
Cengage, (ISBN-13: 978-981-5119-30-5)