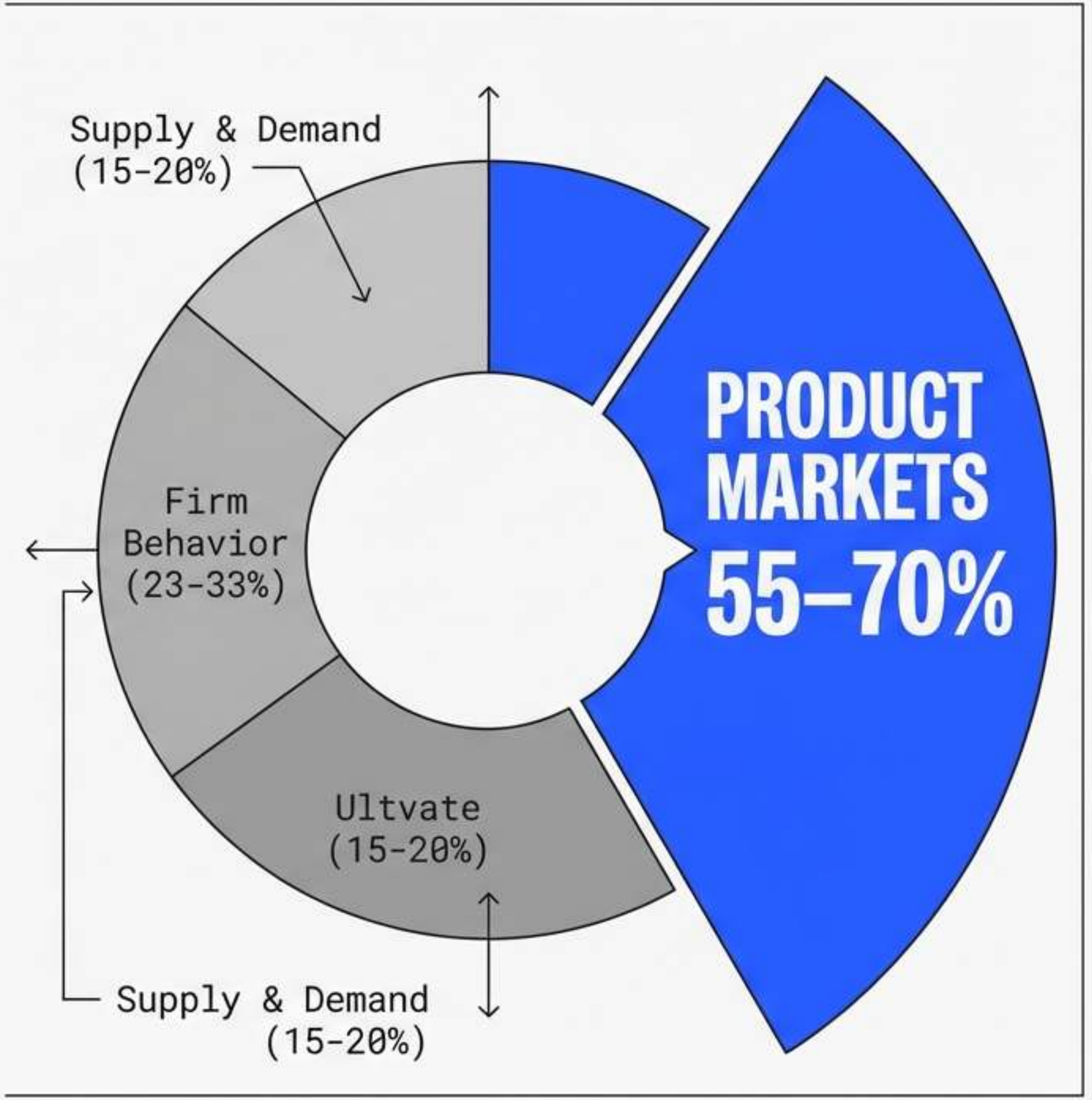
CLEP PRINCIPLES OF MICROECONOMICS

STRATEGIC REVIEW // FIELD MANUAL

80 QUESTIONS
90 MINUTES
3 CREDITS

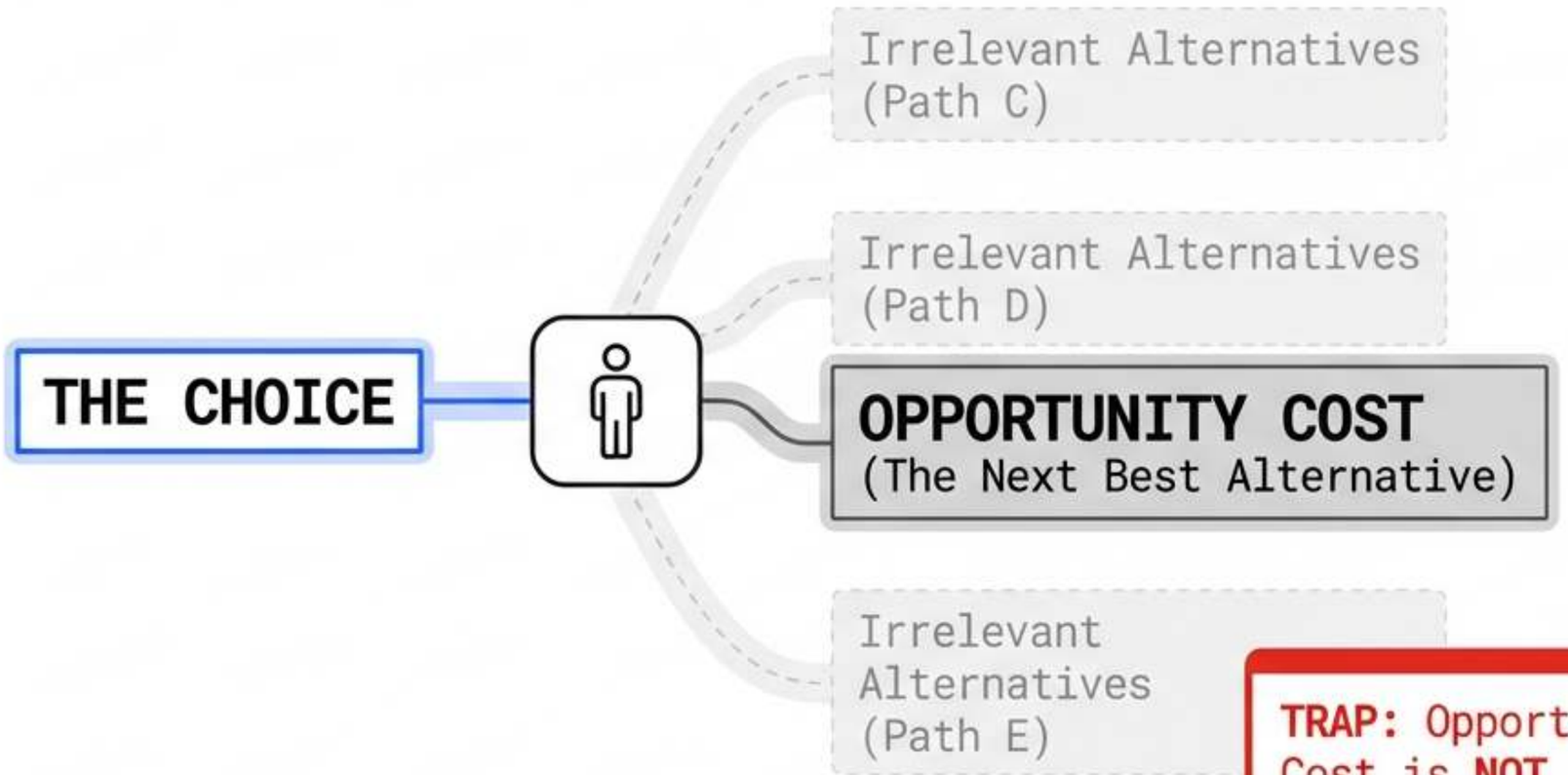
MISSION: Master “Product Markets”. This is the engine of the exam.



THE ECONOMIC PROBLEM: SCARCITY

SCARCITY:
Universal limitation of resources (Time, Money, Raw Materials).

OPPORTUNITY COST:
The value of the single next best alternative foregone.



ACTION: Do it if Marginal Benefit (MB) ≥ Marginal Cost (MC)

TRAP: Opportunity Cost is **NOT** the sum of all unchosen options. It is **ONLY** the value of option #2.

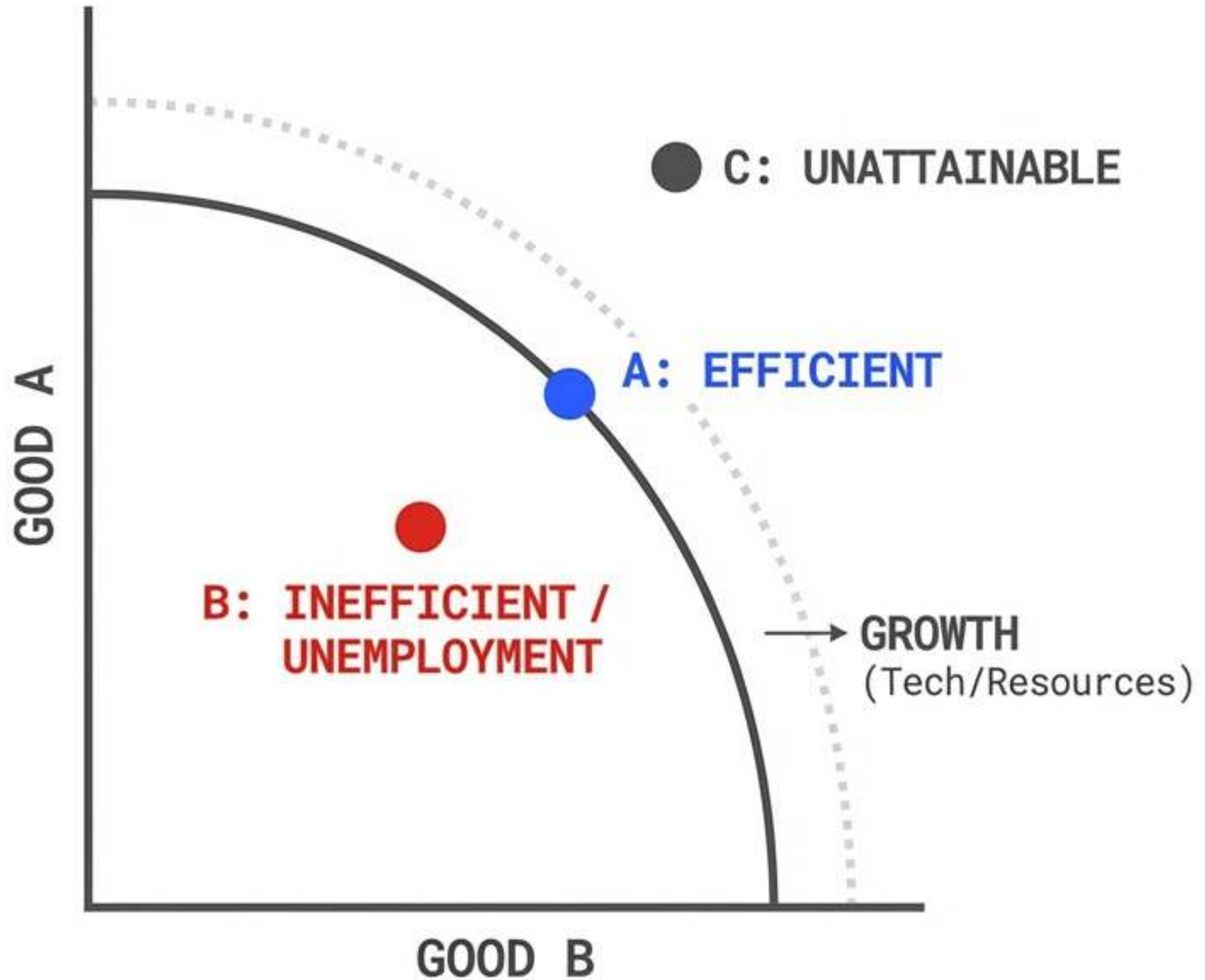
LIMITS OF PRODUCTION (PPC)

1. ON THE CURVE:
Resources maximized.

2. INSIDE:
Waste or recession.
Money left on the table.

3. OUTSIDE:
Impossible without growth shifters.

4. BOWED SHAPE:
Increasing Opportunity Costs.



COMPARATIVE ADVANTAGE: WHY WE TRADE

	Country A	Country B
Wheat Output	100	200
Steel Output	300	150

THE GOLDEN RULE

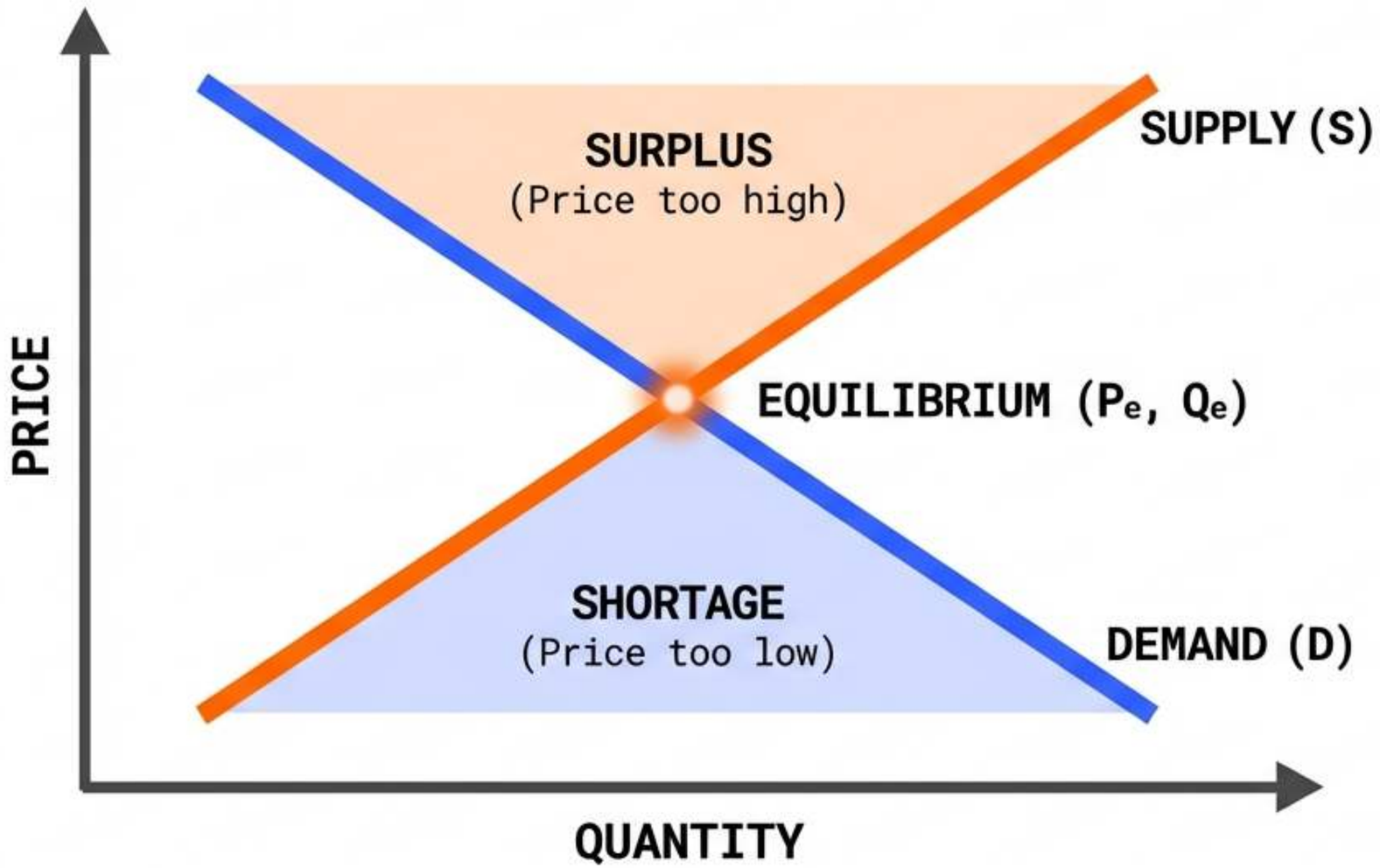
Trade is based on **COMPARATIVE ADVANTAGE** (Lower Opportunity Cost).

Ignore Absolute Advantage (Who produces more).

Formula: OC of Good A = Good B Sacrificed / Good A Gained

MNEMONIC: For Output Questions... OTHER GOES OVER

THE MARKET ENGINE: SUPPLY & DEMAND



LAW OF DEMAND:
Price ↓ = Quantity ↑

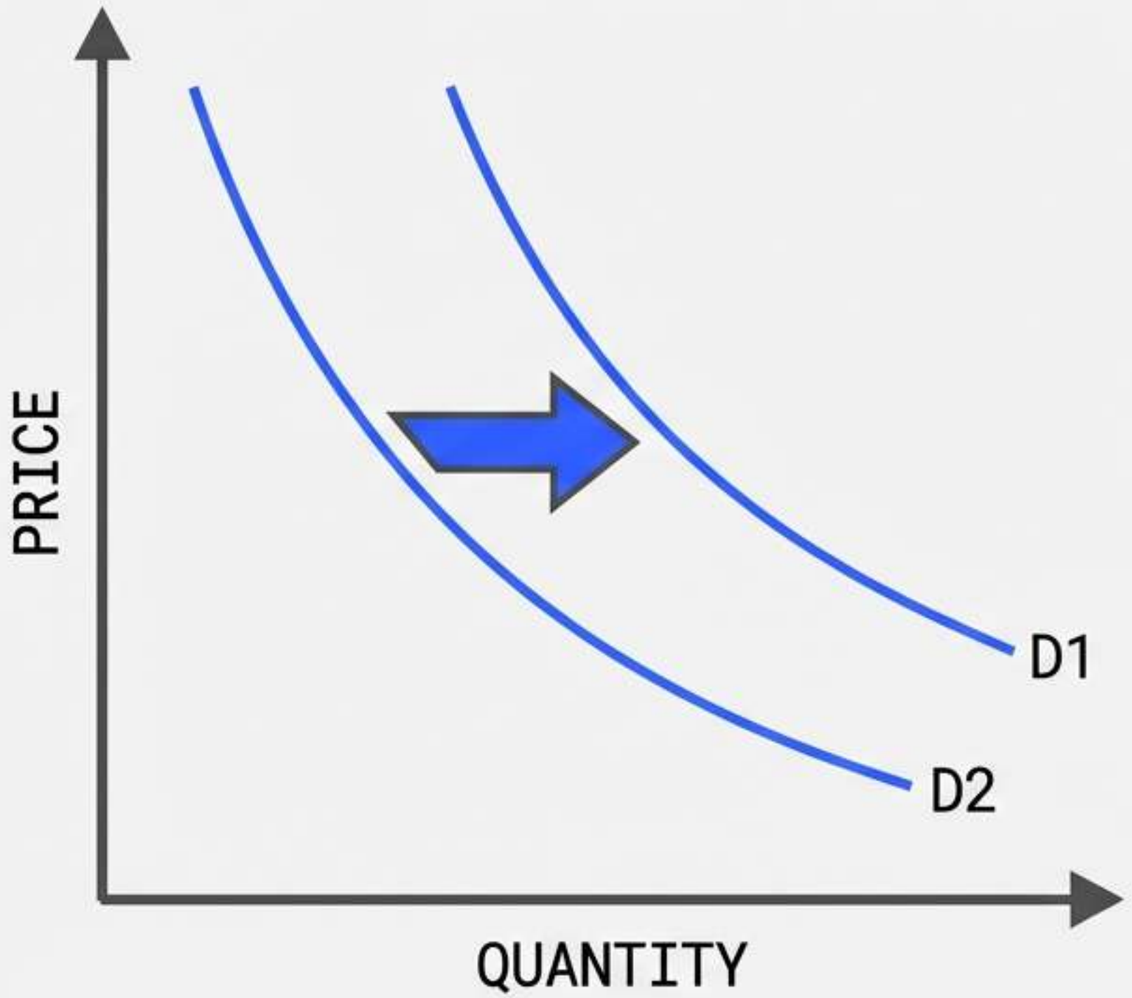
LAW OF SUPPLY:
Price ↑ = Quantity ↑

TRAP:

Price changes cause **MOVEMENT** along the curve.

Only non-price factors cause a **SHIFT**.

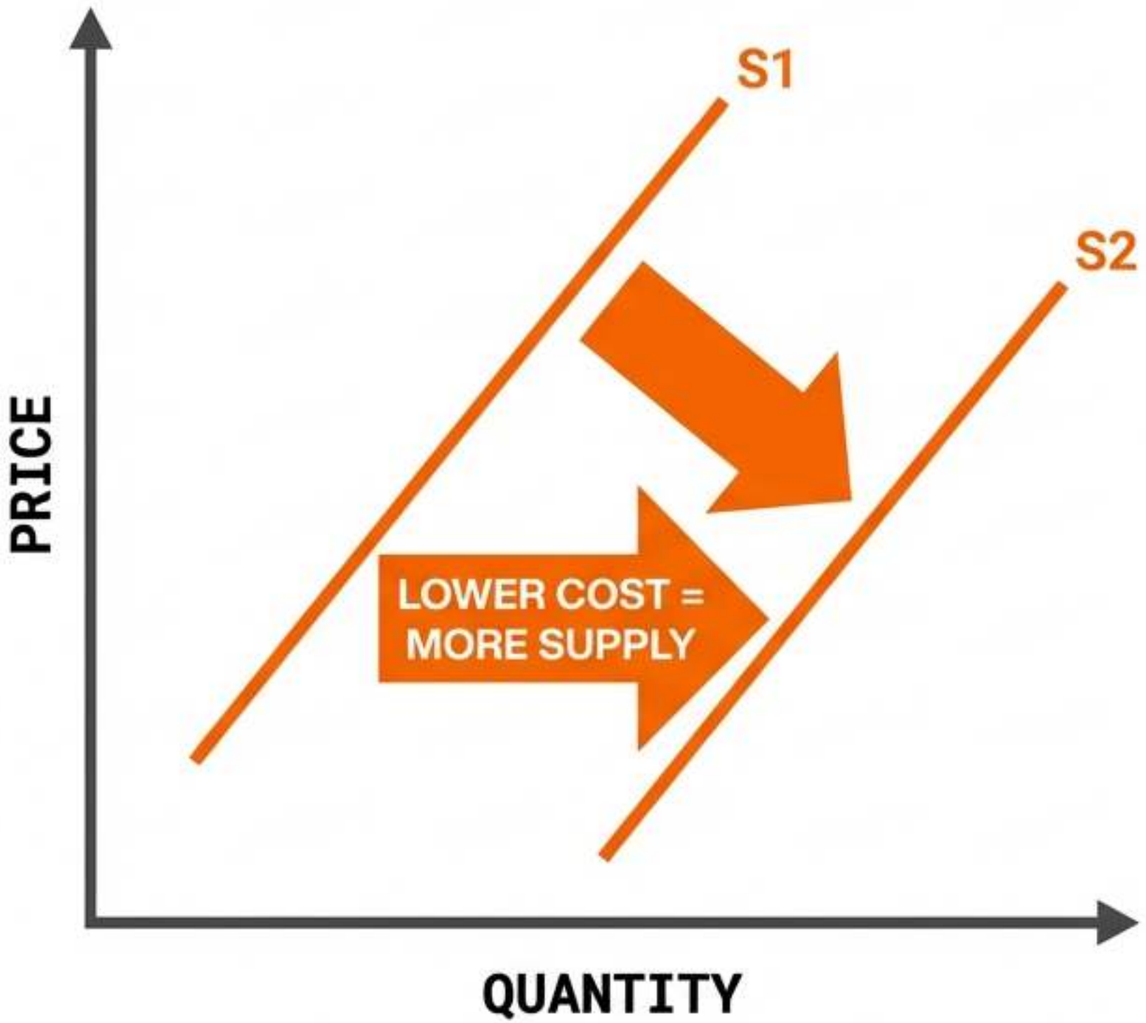
DEMAND SHIFTERS: THE BUYER



THE BUYER'S CHECKLIST (MERIT)
☐ M - Market Size (# of Buyers)
☐ E - Expectations (Future Price)
☐ R - Related Goods (Substitutes & Complements)
☐ I - Income (Normal vs. Inferior)
☐ T - Tastes & Preferences

NOTE: Price of the good itself NEVER shifts the curve.

SUPPLY SHIFTERS: THE SELLER

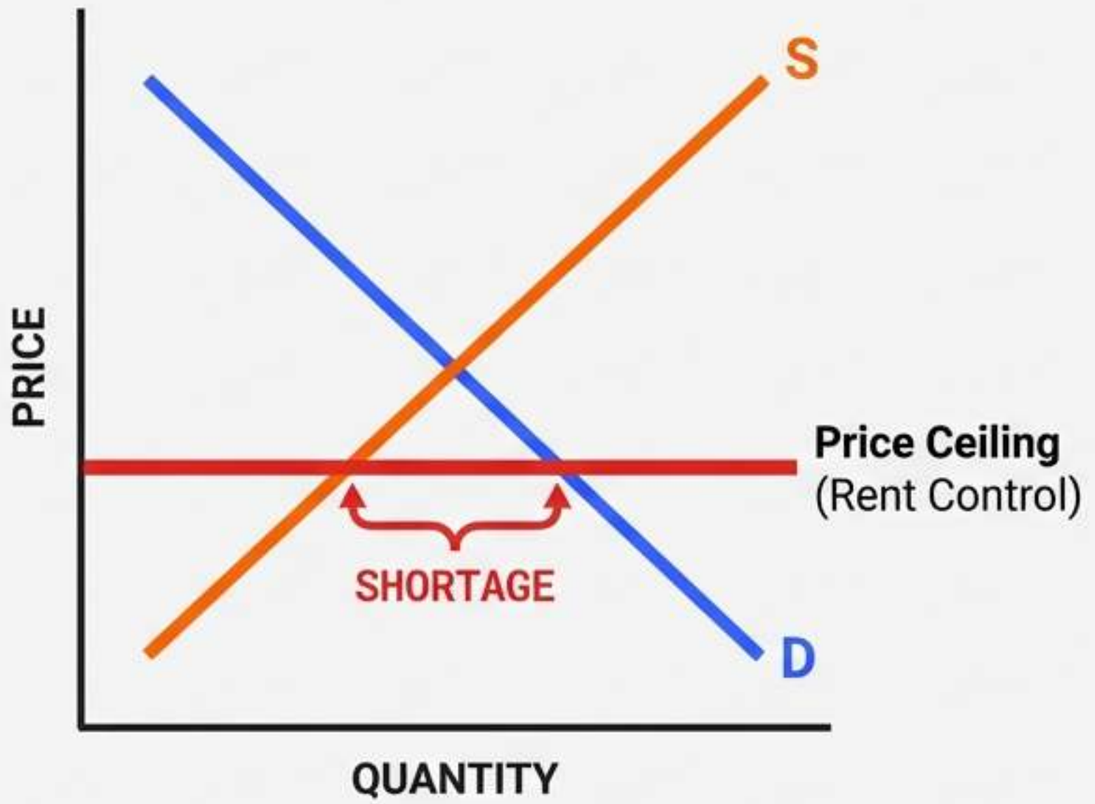


	☐ T - Technology
	☐ R - Related Outputs
MATERIALS	☐ I - Input Prices (Wages/Materials)
	☐ C - Competition (# of Sellers)
	☐ G - Government (Taxes/Subsidies)

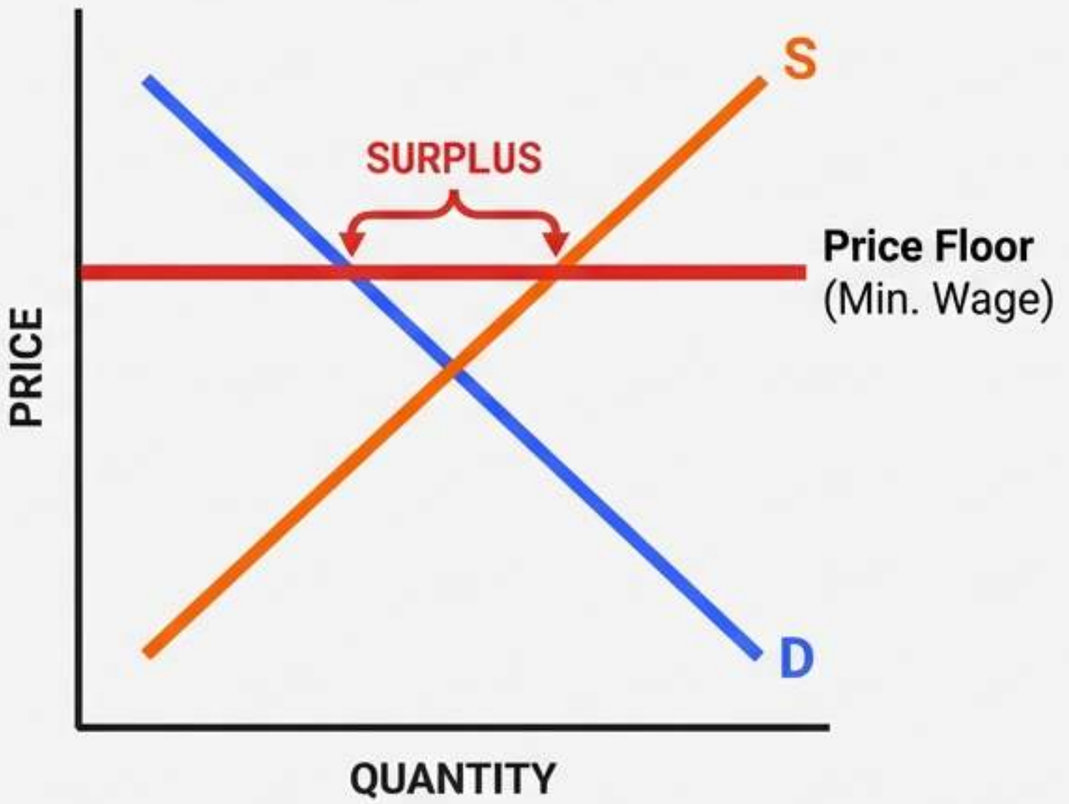
VISUAL TRAP:
A Right Shift looks like it's falling. This is good! Lower costs mean more supply. Always look Left/Right (Quantity), not Up/Down.

PRICE CONTROLS: CEILINGS & FLOORS

CASE A



CASE B

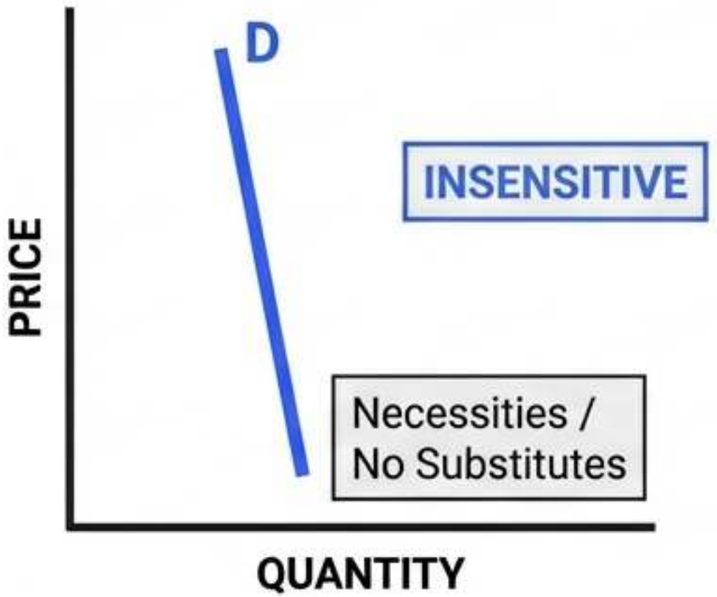


CEILING: Binding only if BELOW (Hit your head).

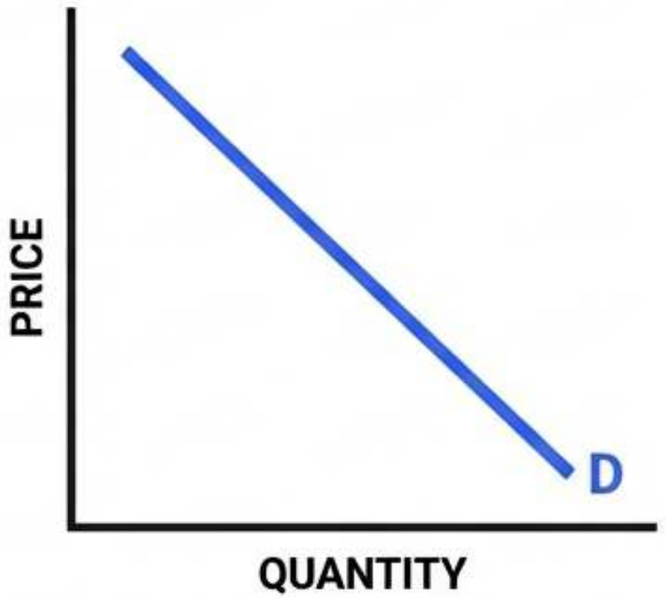
FLOOR: Binding only if ABOVE (Float above).

ELASTICITY OF DEMAND: SENSITIVITY

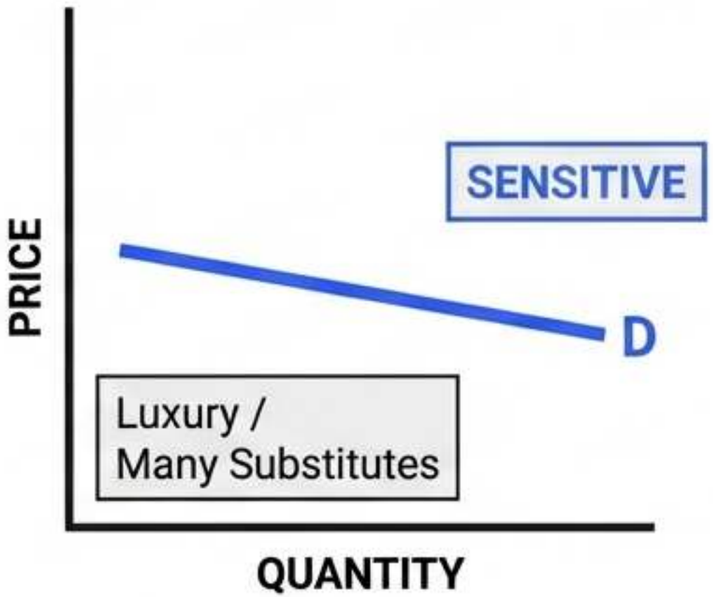
INELASTIC (<1)



UNIT ELASTIC (=1)



ELASTIC (>1)



$$Ed = \frac{\%\ \text{Change Quantity}}{\%\ \text{Change Price}}$$

TRAP: Always use PERCENTAGE CHANGE, not absolute numbers.

THE TOTAL REVENUE TEST

TYPE	PRICE ACTION	REVENUE RESULT	RELATIONSHIP
ELASTIC	Price ↑	TR ↓	OPPOSITE
INELASTIC	Price ↑	TR ↑	SAME
UNIT ELASTIC	Price Change ↔	TR Unchanged –	-

TOTAL REVENUE = PRICE x QUANTITY

Strategy: If Inelastic, Price is the boss.
If Elastic, Quantity is the boss.

OTHER ELASTICITIES: THE MATRIX

INCOME ELASTICITY

(+)

NORMAL GOOD
(Income ↑ Buy ↑)

(-)

INFERIOR GOOD
(Income ↑ Buy ↓)

CROSS-PRICE ELASTICITY

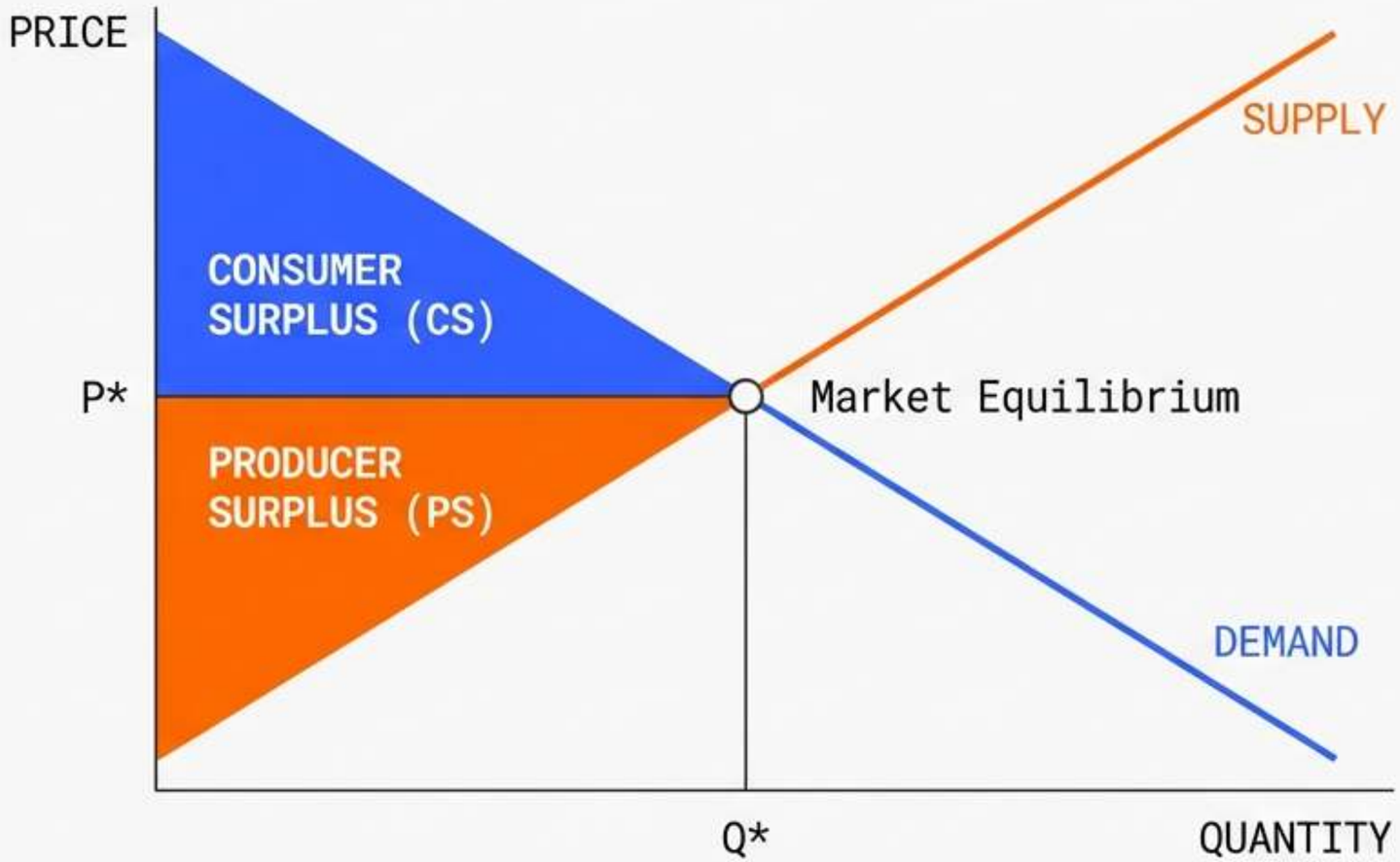
(+)

SUBSTITUTES
(Pepsi & Coke / Move Together)

(-)

COMPLEMENTS
(Hot Dogs & Buns / Move Opposite)

WELFARE ECONOMICS: SURPLUS



CS: The Deal.
(Willingness to Pay - Price Paid)

PS: The Profit.
(Price Received - Marginal Cost)

TOTAL SURPLUS: Maximized at Equilibrium.

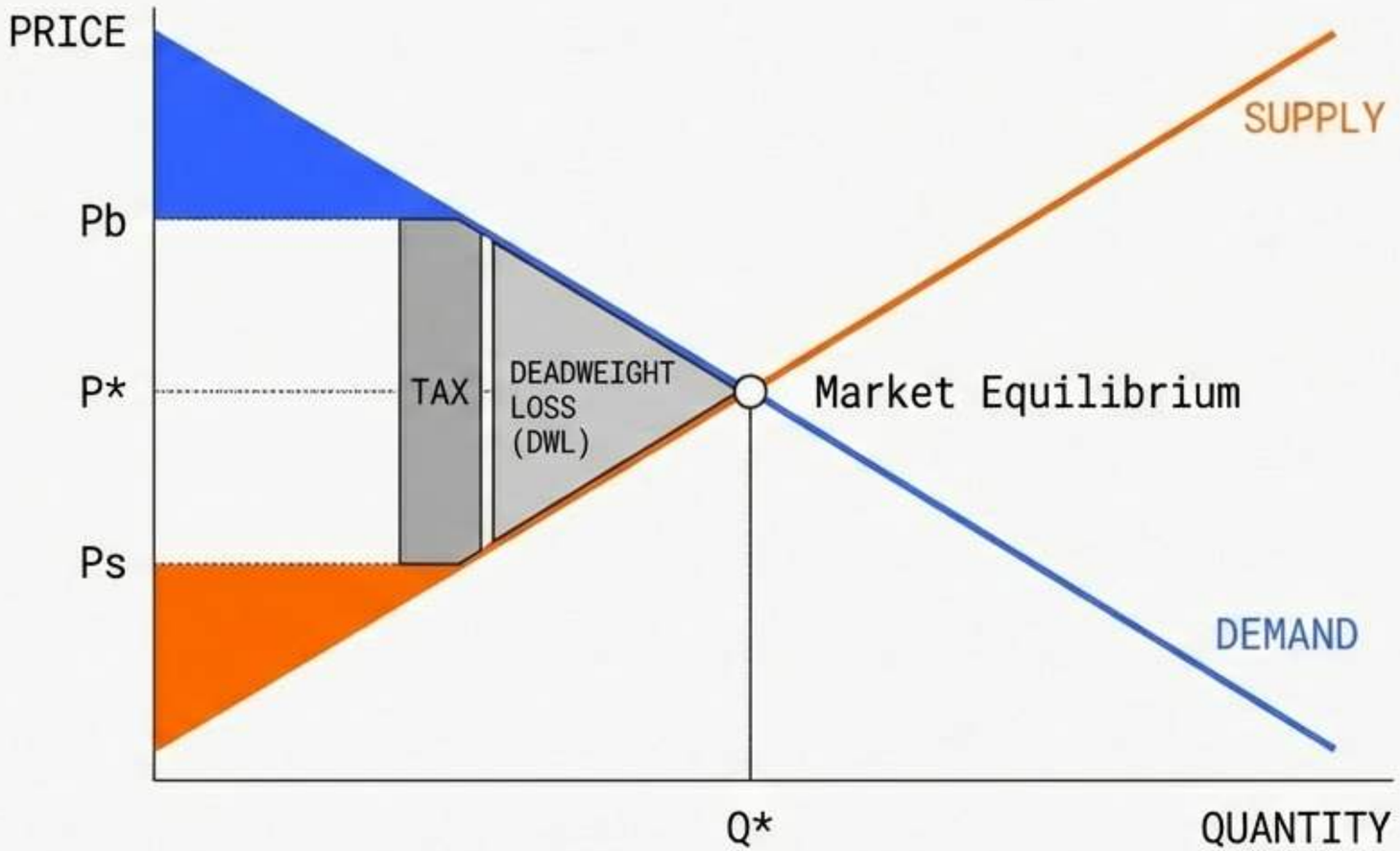
Geometry: Area of Triangle = 0.5 * Base * Height

THE COST OF INTERVENTION: TAXES & DWL

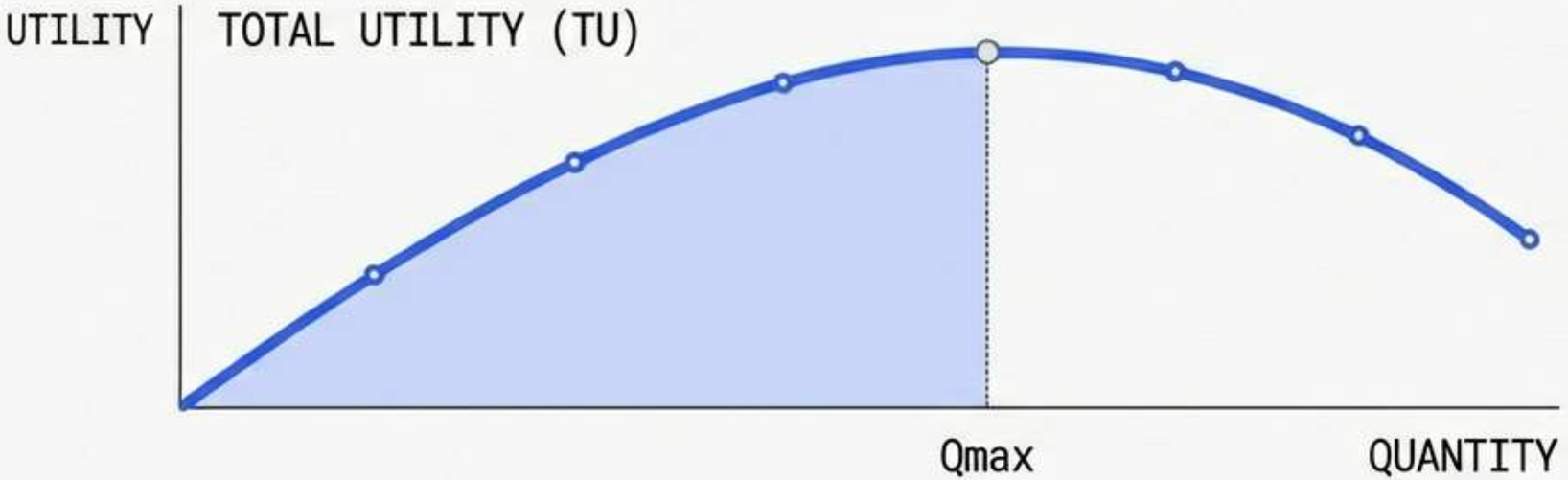
TAX WEDGE: Drives a gap between buyer and seller.

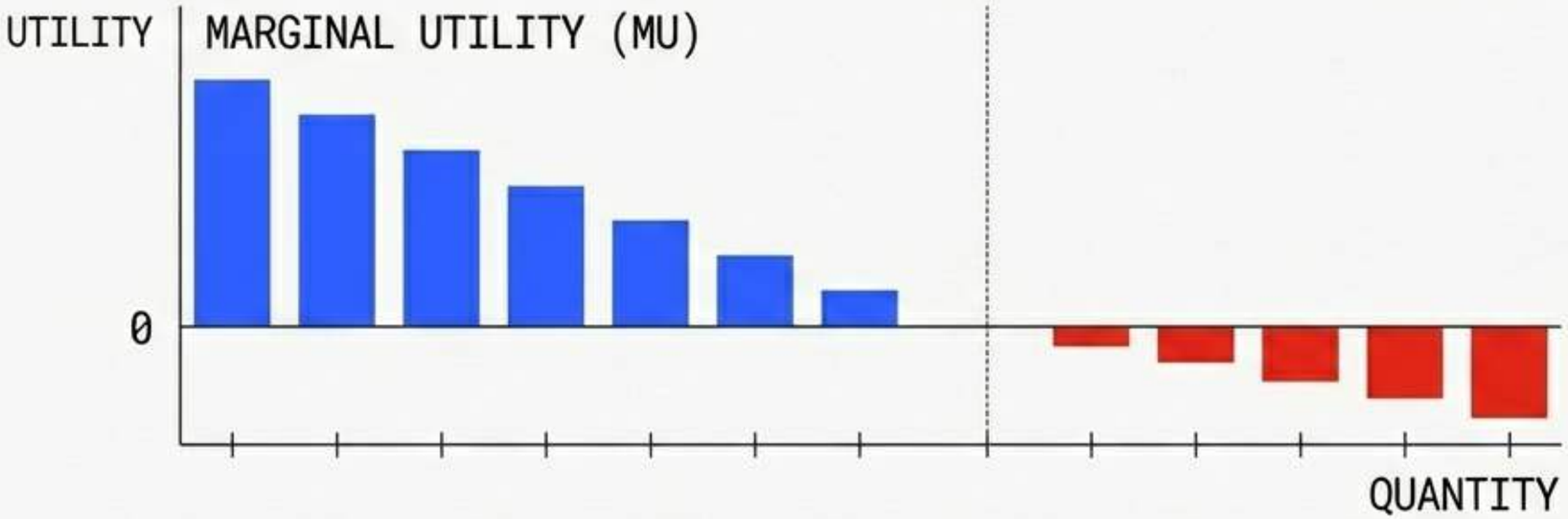
DWL: Lost efficiency. Trades that should have happened.

INCIDENCE: Who pays? The INELASTIC (stuck) side pays more.



UTILITY & DIMINISHING RETURNS





LAW OF DIMINISHING MU:
The first slice of pizza > The fifth slice.

TRAP: TU rises even as MU falls (as long as MU is positive).
TU only falls when MU is negative.

THE GOLDEN RULE: UTILITY MAXIMIZATION

Good X
(e.g., Taco)

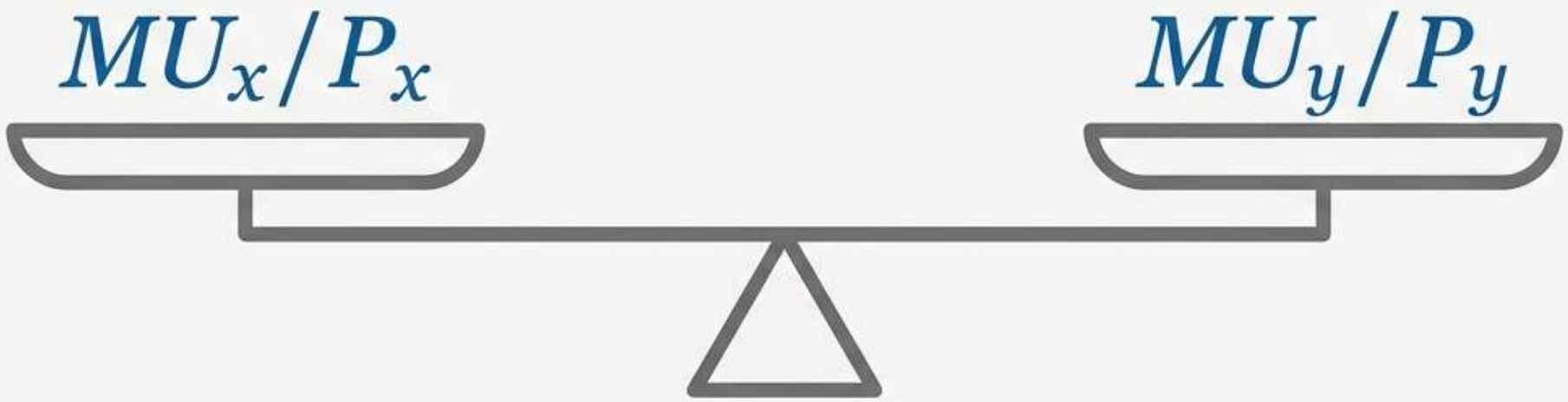
$$\frac{MUx}{Px} = \frac{MUy}{Py}$$

Good Y
(e.g., Movie)

THE STRATEGY: Equalize the “Bang for your Buck”.
IF MUx/Px > MUy/Py: Buy MORE X and LESS Y.
CONSTRAINT: Spend all income.

TRAP: Never compare raw Utility. Always divide by PRICE first.

THE UTILITY MAXIMIZATION RULE



The Formula

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

"Equilibrium Condition"

The Example

Pizza ($2/slice, 10 utils) vs. Soda ($1/can, 5 utils).

$10/2 = 5 \mid \$/1 = 5$

Bang-for-buck is equal. Stop spending.

TRAP:
Do not equate Marginal Utility (*MU$*). You must equate Marginal Utility *per dollar*.

DECONSTRUCTING PRICE: INCOME VS. SUBSTITUTION

Price of Pizza Drops

INCOME EFFECT

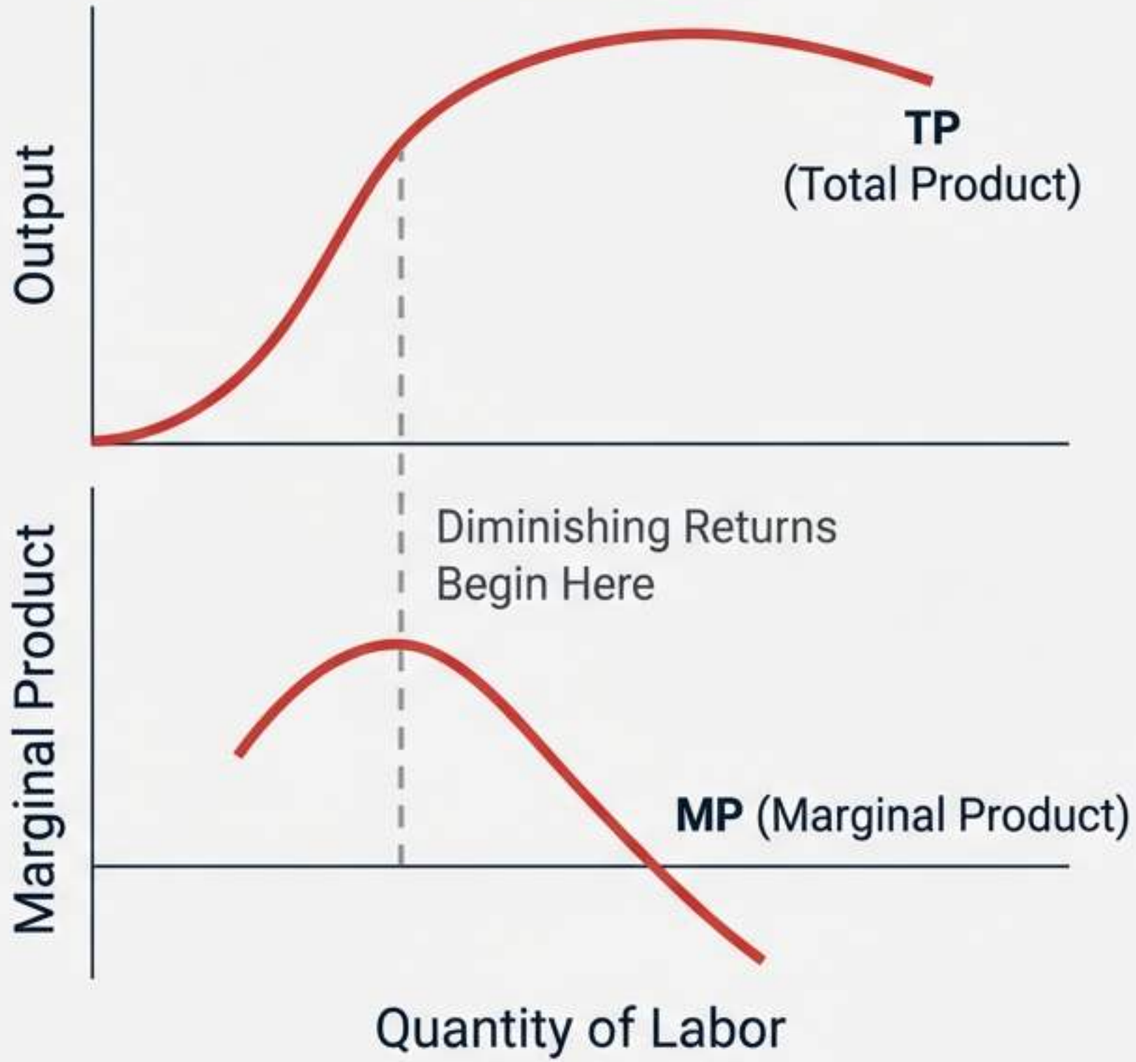
I feel richer.
Purchasing power rises.
I buy more of everything.

SUBSTITUTION EFFECT

Pizza is now a better deal than Burgers.
I swap Burgers for Pizza.

TRAP:
For Inferior Goods, the Income Effect reverses (we buy *less* as we get rich), but Substitution always increases consumption.

THE LAW OF DIMINISHING MARGINAL RETURNS



Too many cooks in the kitchen.

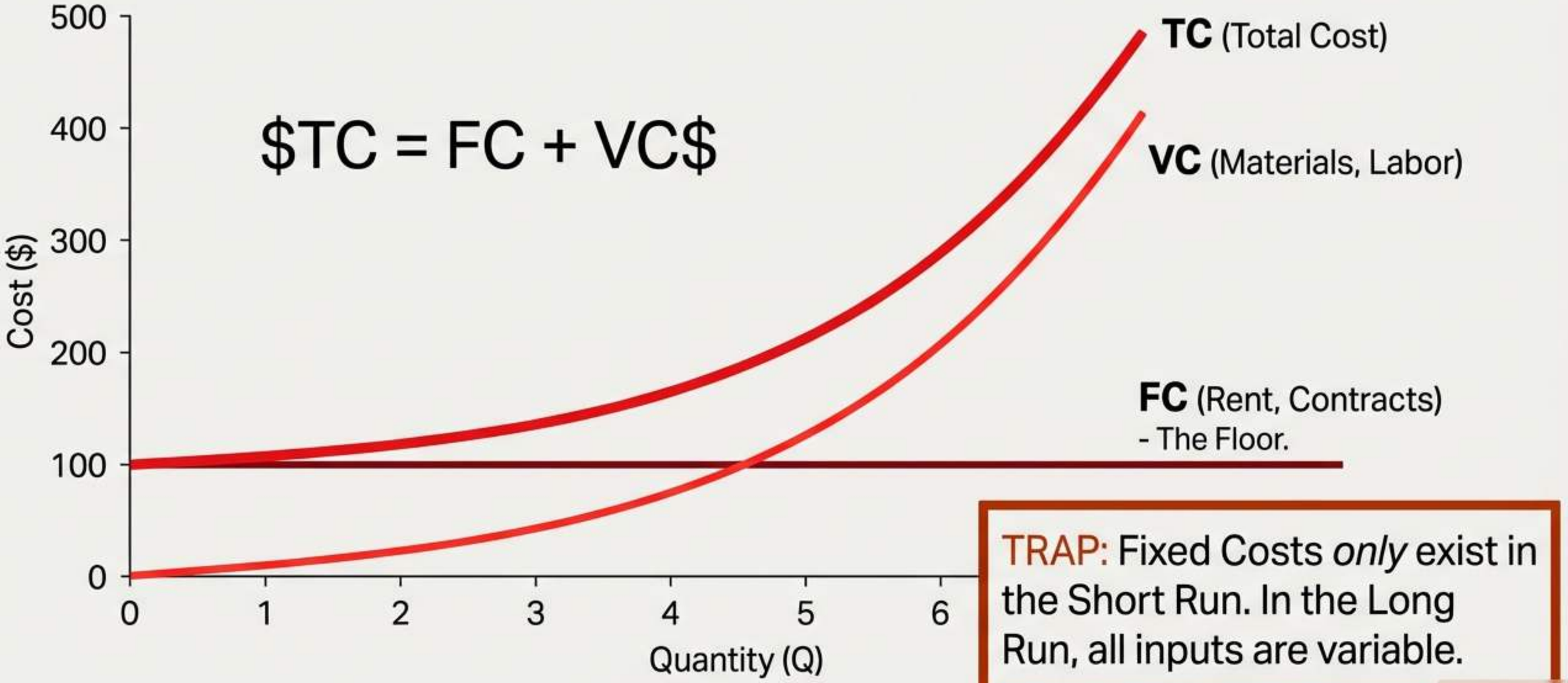
Adding workers helps initially, but eventually, efficiency drops due to congestion.

TRAP:

‘Diminishing’ ≠ Negative Output.

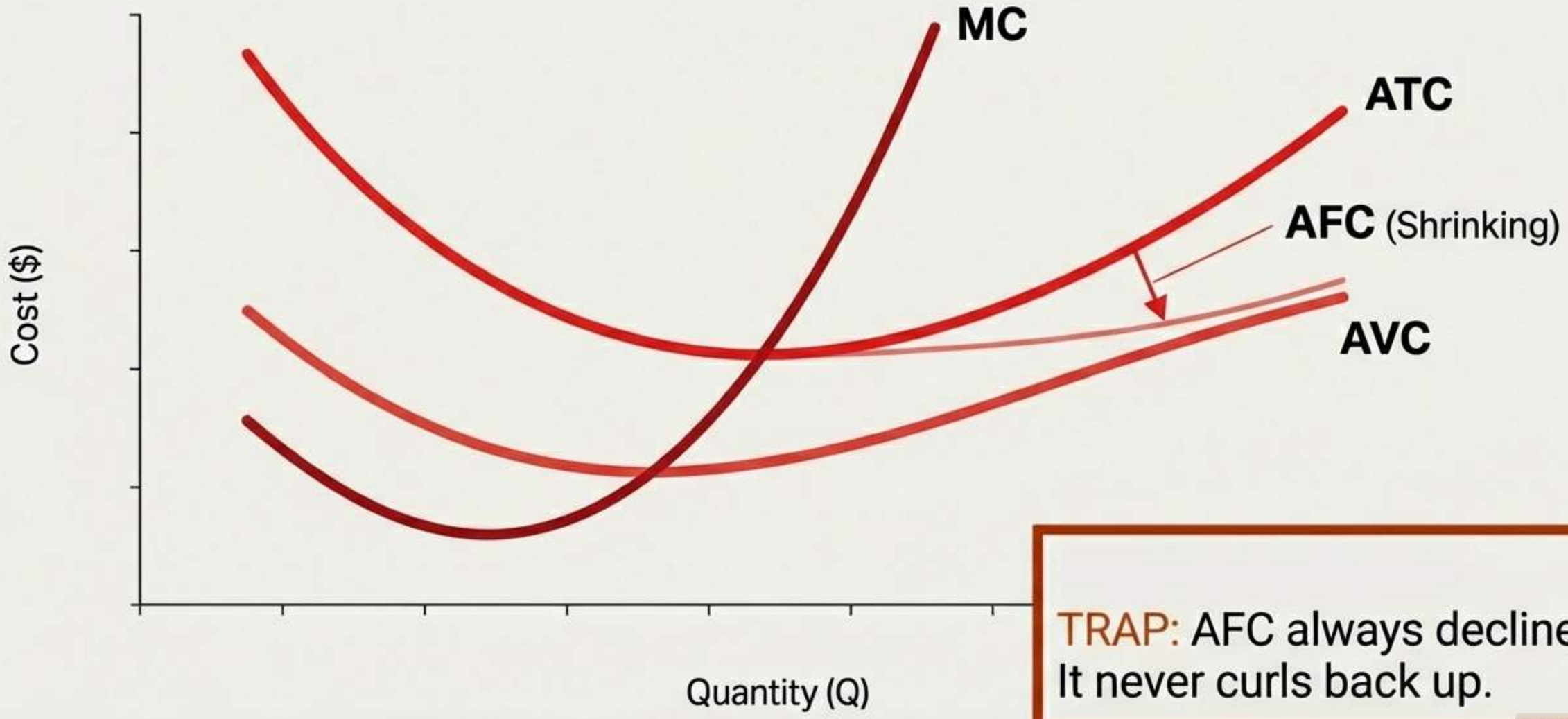
It means output grows at a *slower* rate.

ANATOMY OF COST: FIXED VS. VARIABLE



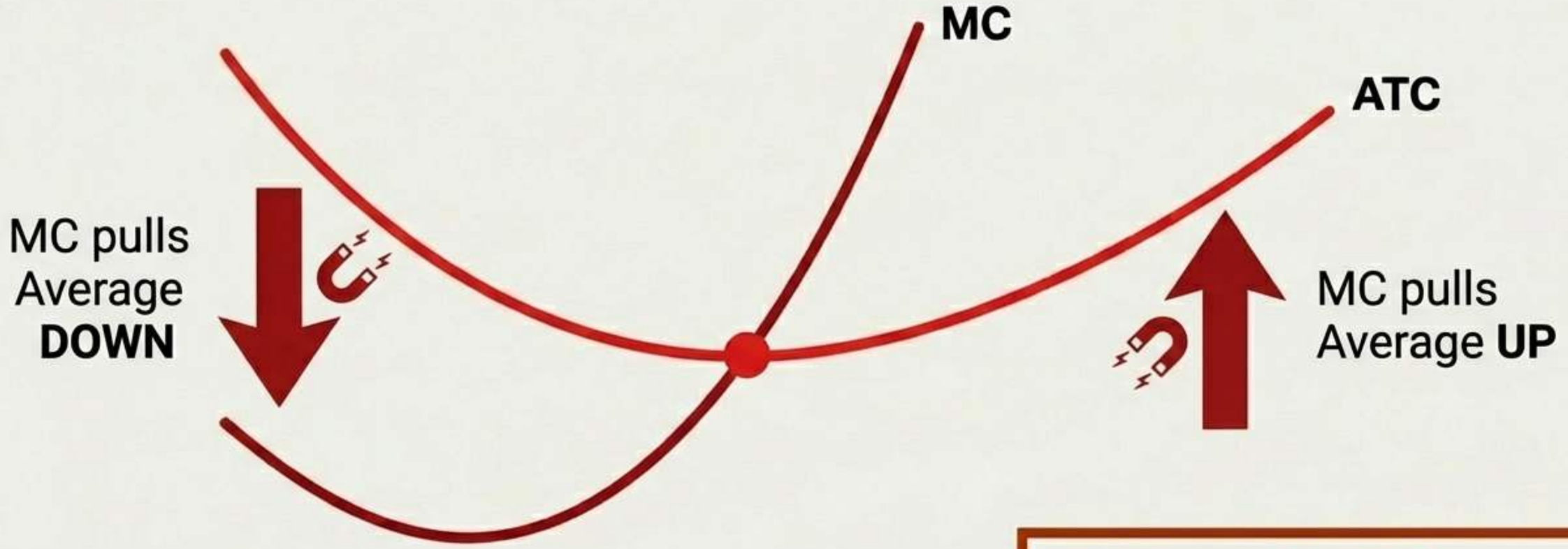
TRAP: Fixed Costs *only* exist in the Short Run. In the Long Run, all inputs are variable.

THE FAMILY OF PER-UNIT COSTS



TRAP: AFC always declines. It never curls back up.

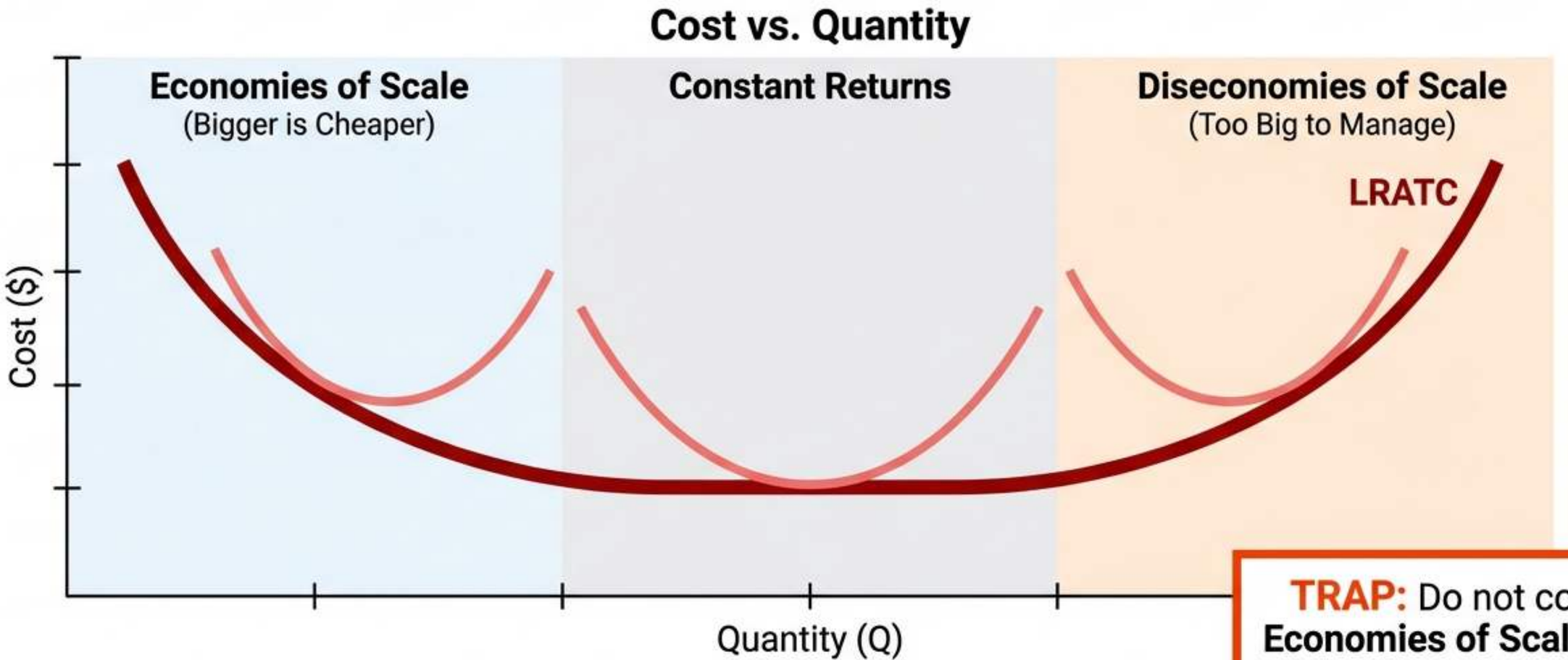
THE MARGINAL COST "MAGNET"



Think of your GPA. If your semester grade (Marginal) is lower than your GPA (Average), your GPA drops. If it's higher, your GPA rises.

TRAP: MC **ALWAYS** crosses ATC and AVC at their exact minimum points.

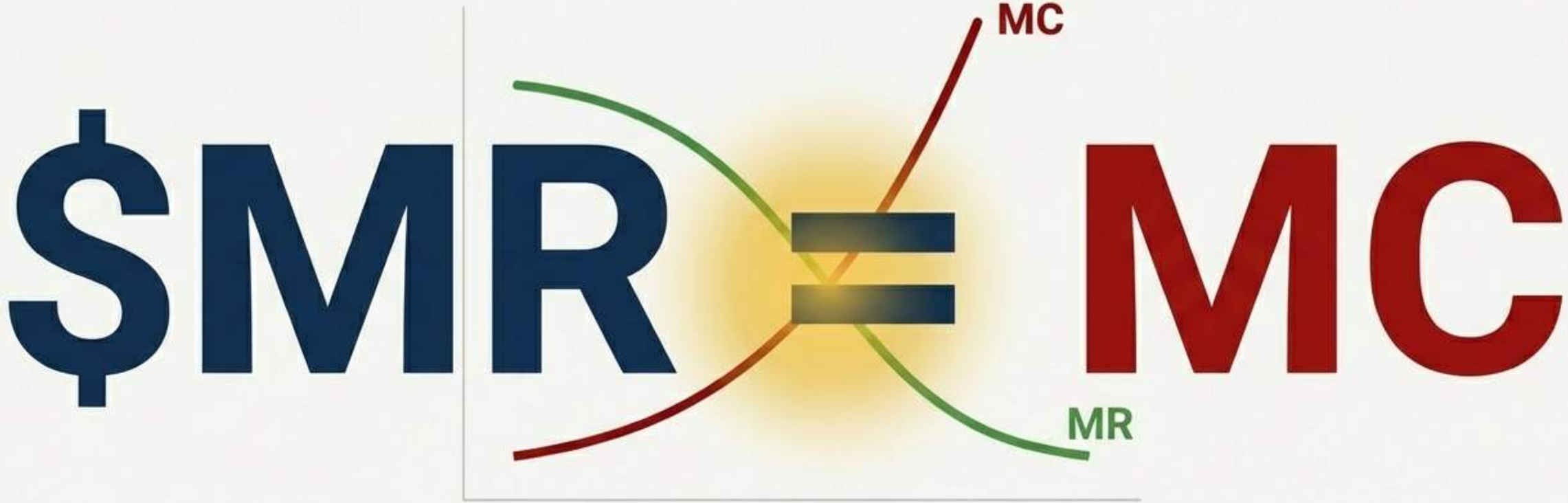
THE LONG RUN & ECONOMIES OF SCALE



In the long run, nothing is fixed.
You can build a bigger factory.

TRAP: Do not confuse **Economies of Scale** (Long Run cost advantage) with **Diminishing Marginal Returns** (Short Run constraint).

THE GOLDEN RULE OF PROFIT



The Profit-Maximizing Condition

Stop producing exactly when the revenue of the last unit equals the cost of the last unit.

TRAP: Never stop at highest Total Revenue. Stop where the *marginal* gain is zero.

ACCOUNTING VS. ECONOMIC PROFIT

Accounting Profit

Revenue - Explicit Costs
(Rent, Wages)

Implicit Costs

Opportunity Costs
(Forgone Salary, Capital)

Economic Profit

= Revenue -
(Explicit + Implicit)

Rule of Two

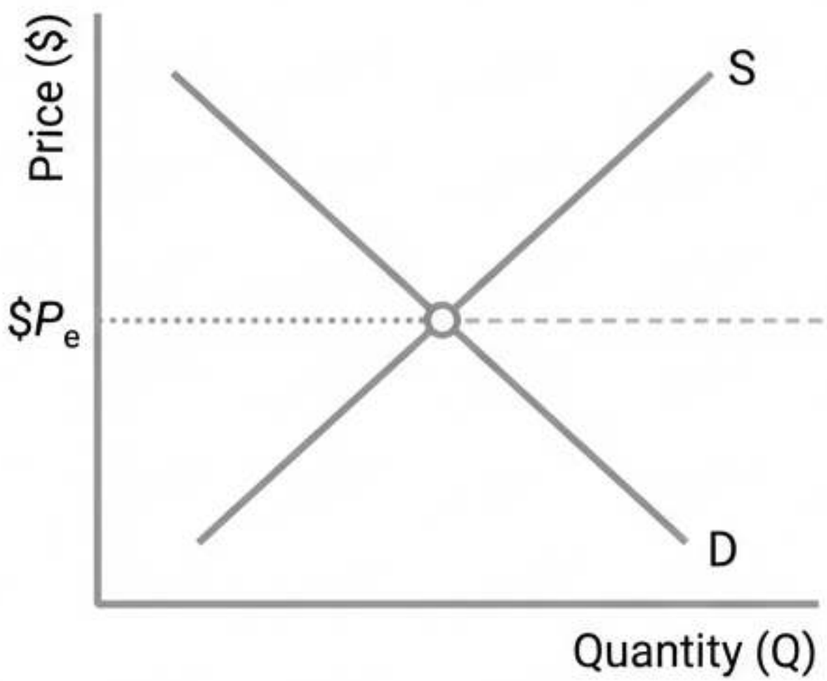
Formula:
Eco Profit = TR - (Explicit + Implicit)

Example: You make $100k profit. But you quit a $100k job to do it. Your Economic Profit is $0.

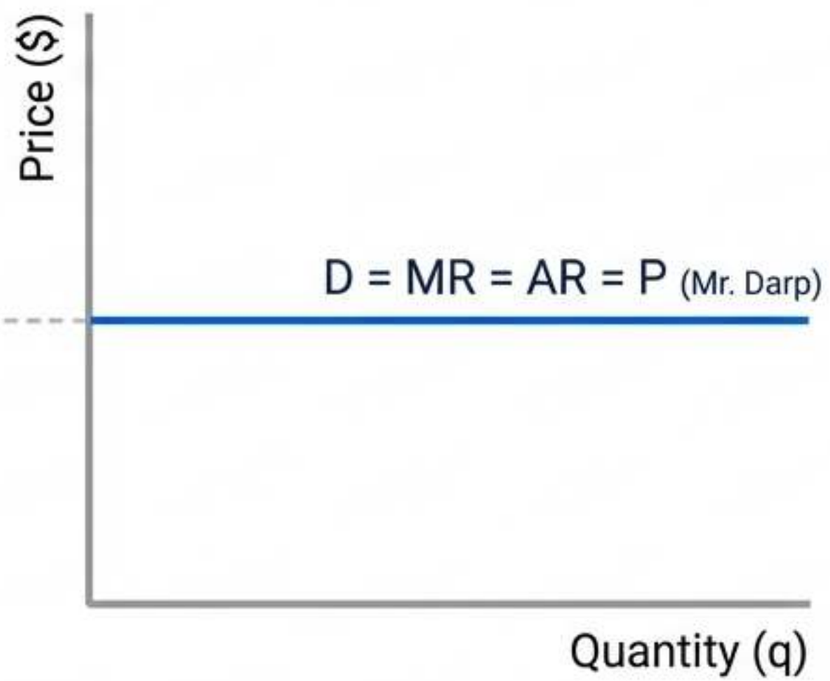
TRAP: Zero Economic Profit is NOT failure. It means you are doing exactly as well as your best alternative.

PERFECT COMPETITION: THE PRICE TAKER

The Market



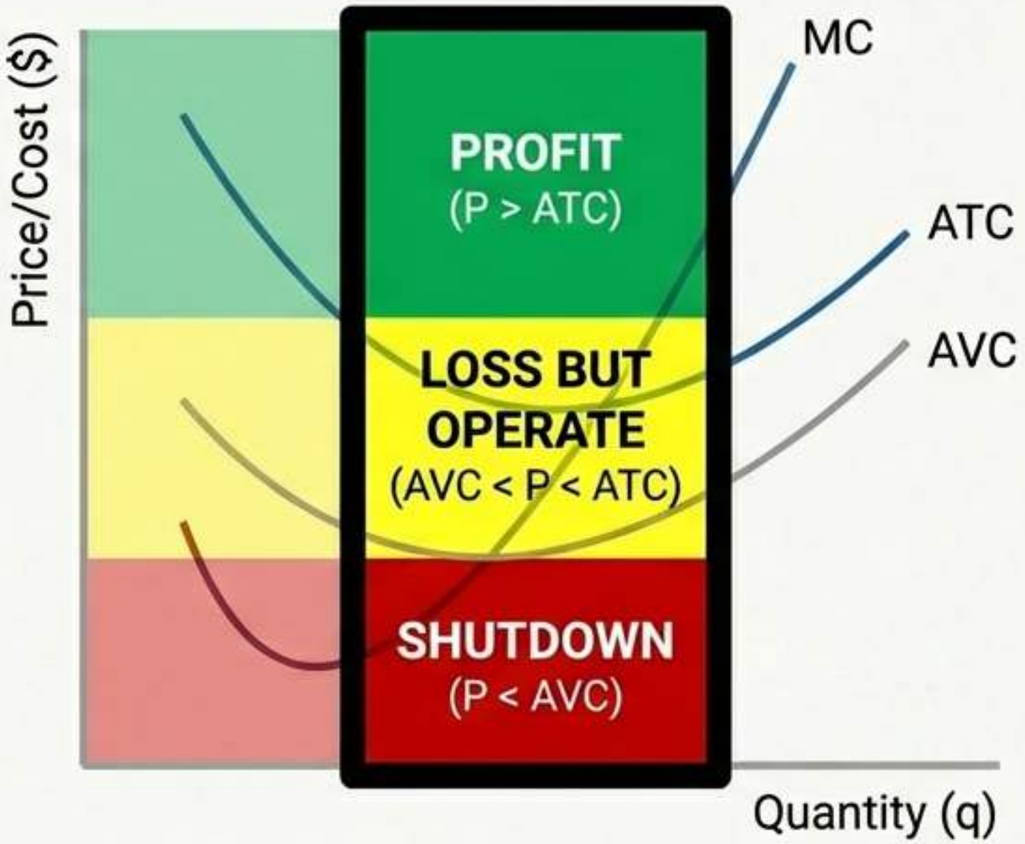
The Firm



You are a drop in the ocean. You take the market price. Attempting to charge more results in zero sales.

TRAP: The Firm's demand is perfectly horizontal (elastic), even though Market demand is downward sloping.

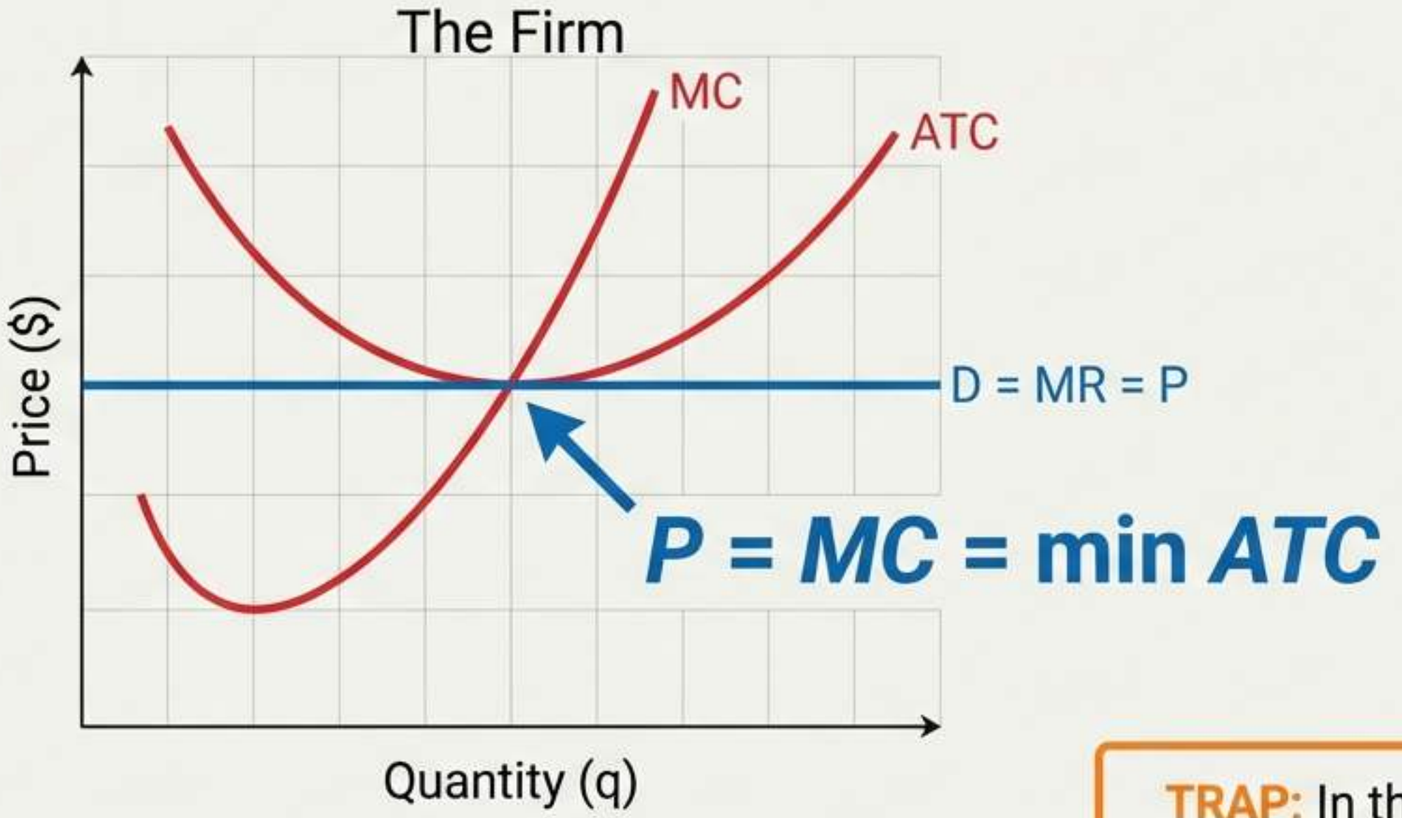
THE SHUTDOWN DECISION (SHORT RUN)



If you can’t even pay for the ingredients (AVC), stop cooking.

TRAP: The Shutdown point is minimum AVC, not minimum ATC.

PERFECT COMPETITION: LONG-RUN EQUILIBRIUM



Ruthless Efficiency. Survival of the fittest means producing at the lowest possible cost.

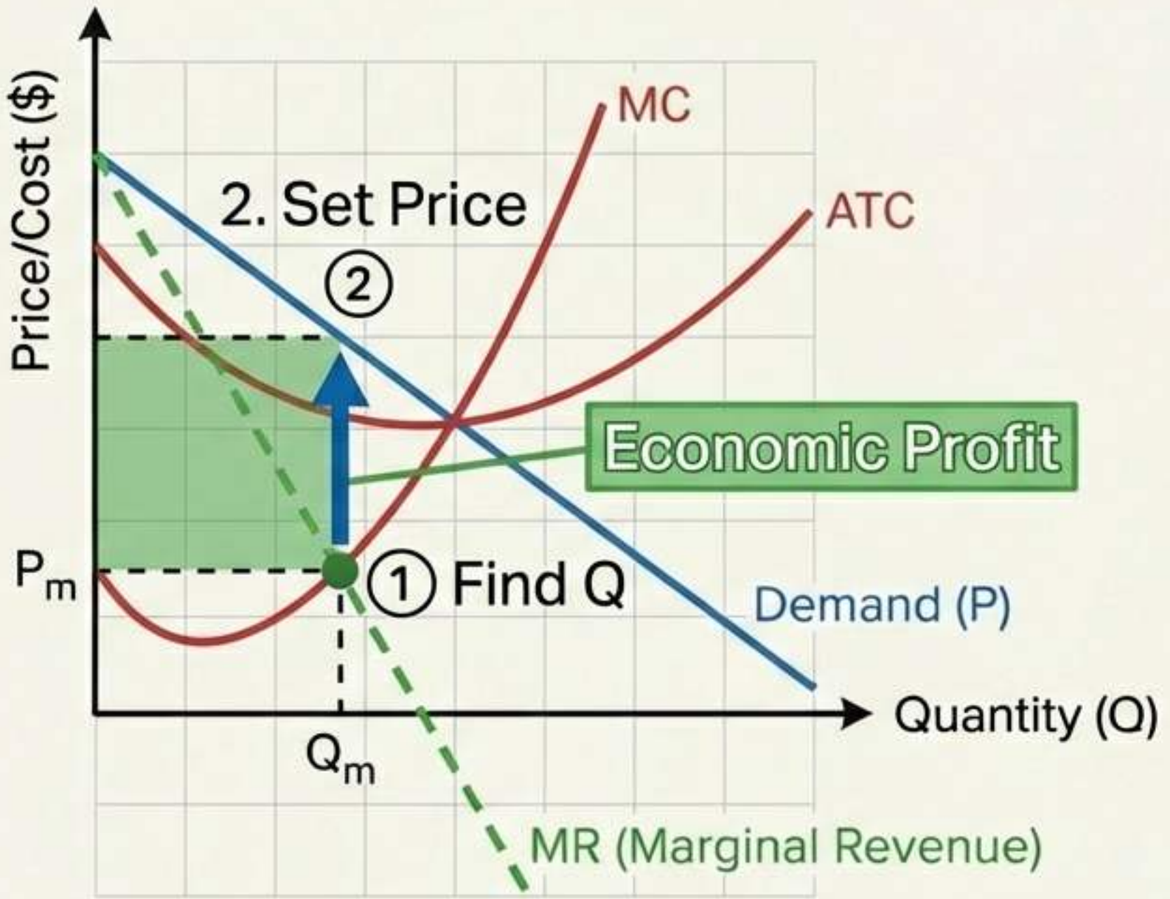
TRAP: In the long run, Economic Profit is **ZERO**. Entry destroys profit; exit eliminates losses.

MONOPOLY: THE POWER PLAYER

I am the market.

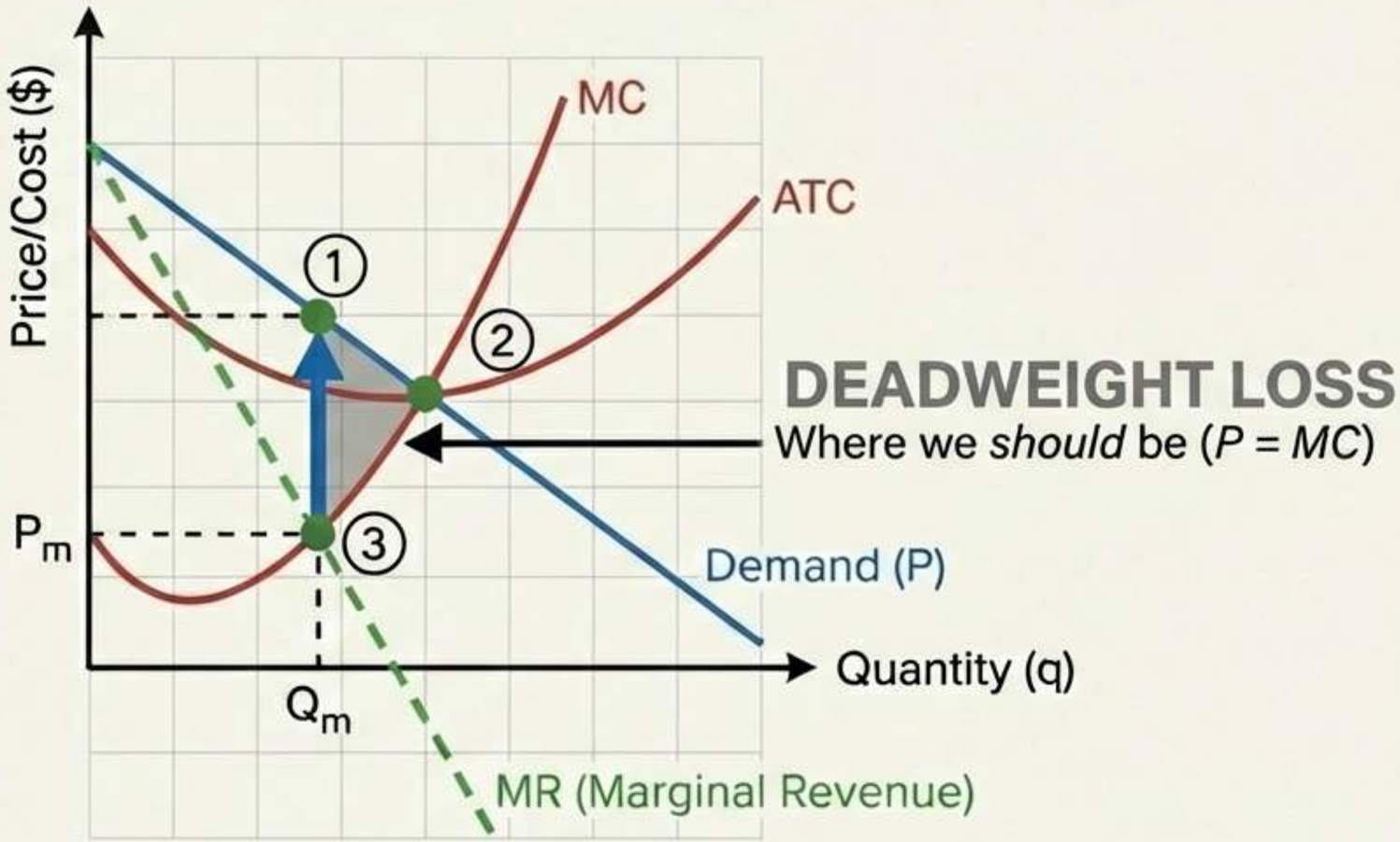
TRAP: Never draw MR equal to Demand for a monopoly. MR splits off and dives down twice as fast

MONOPOLY PROFIT MAXIMIZATION: THE TWO-STEP



TRAP: The most common mistake is reading the price off the MR curve. Always go UP to Demand!

THE COST OF MONOPOLY: DEADWEIGHT LOSS

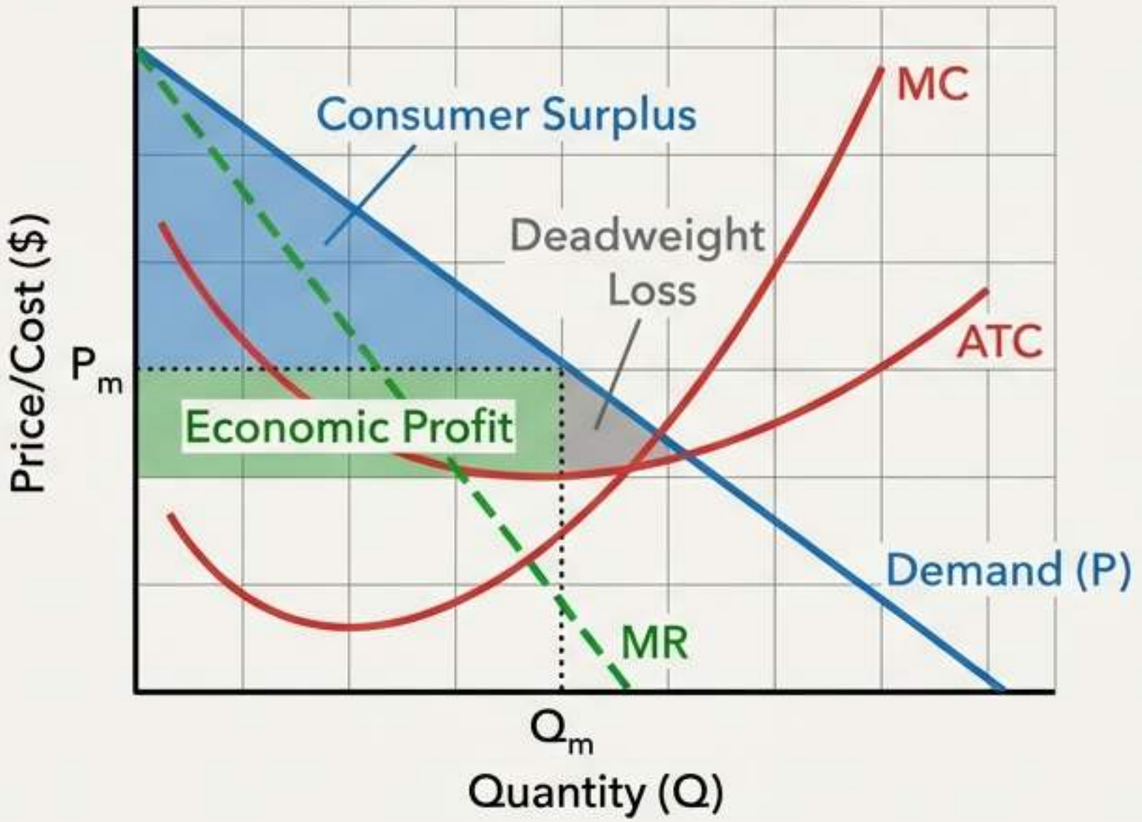


Monopolies produce too little and charge too much, destroying value for society.

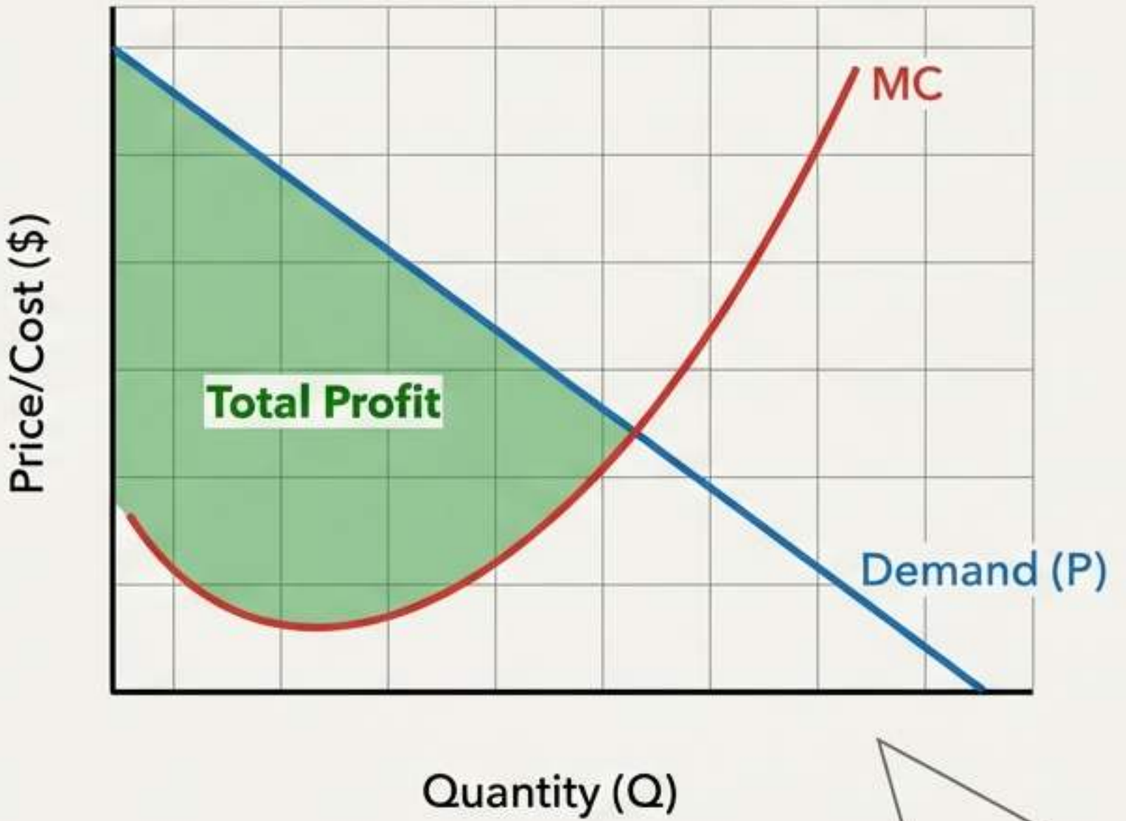
TRAP: Monopolies produce *less* (Q_m) and charge *more* (P_m) than competitive markets.

PERFECT PRICE DISCRIMINATION

SINGLE PRICE MONOPOLY



PRICE DISCRIMINATION

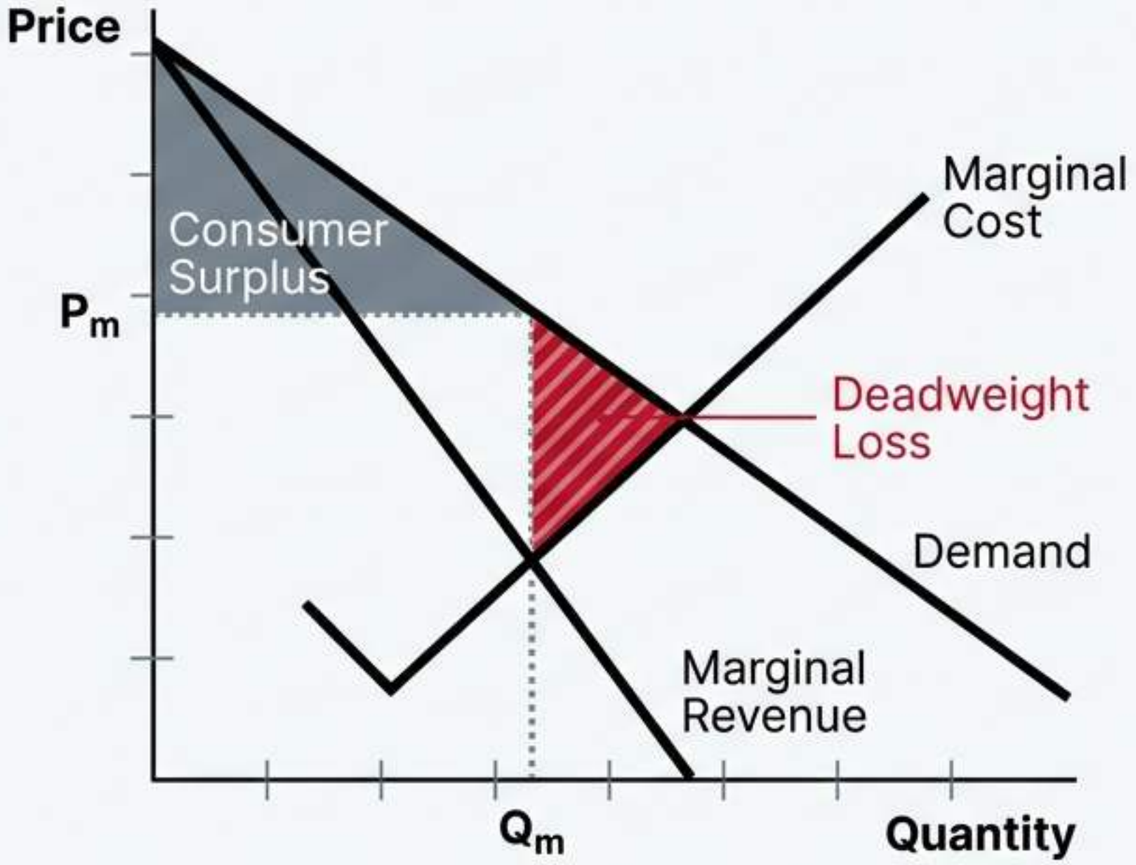


If they know your secrets (your max willingness to pay), they take it all. Efficiency is restored, but the consumer gets nothing.

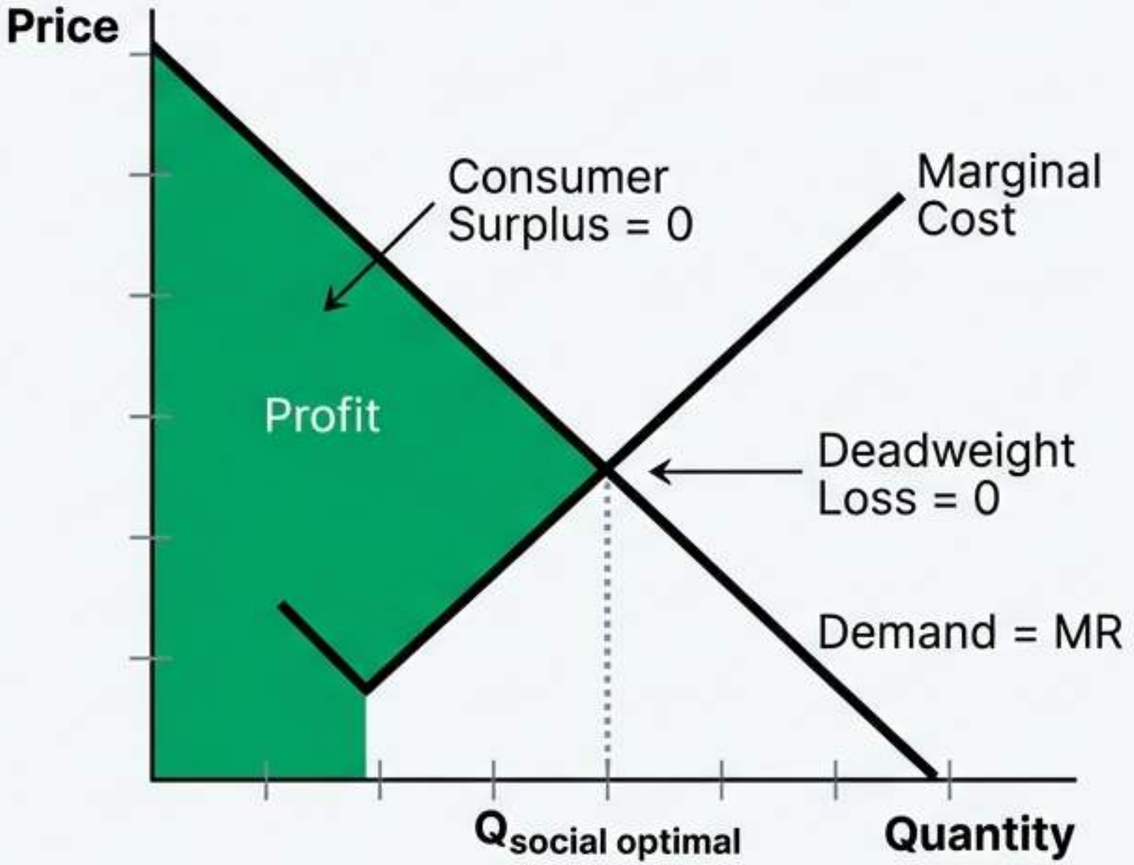
TRAP: Perfect Price Discrimination ***eliminates*** Deadweight Loss, but transfers all surplus to the producer.

The Art of the Perfect Price

Single-Price Monopoly



Perfect Price Discrimination



TRAP ALERT: Discrimination eliminates inefficiency (DWL) but transfers all value to the firm.

Many Firms, Different Brands
The Monopolistic Competition Spectrum

Perfect Competition
Identical Products / Price Takers

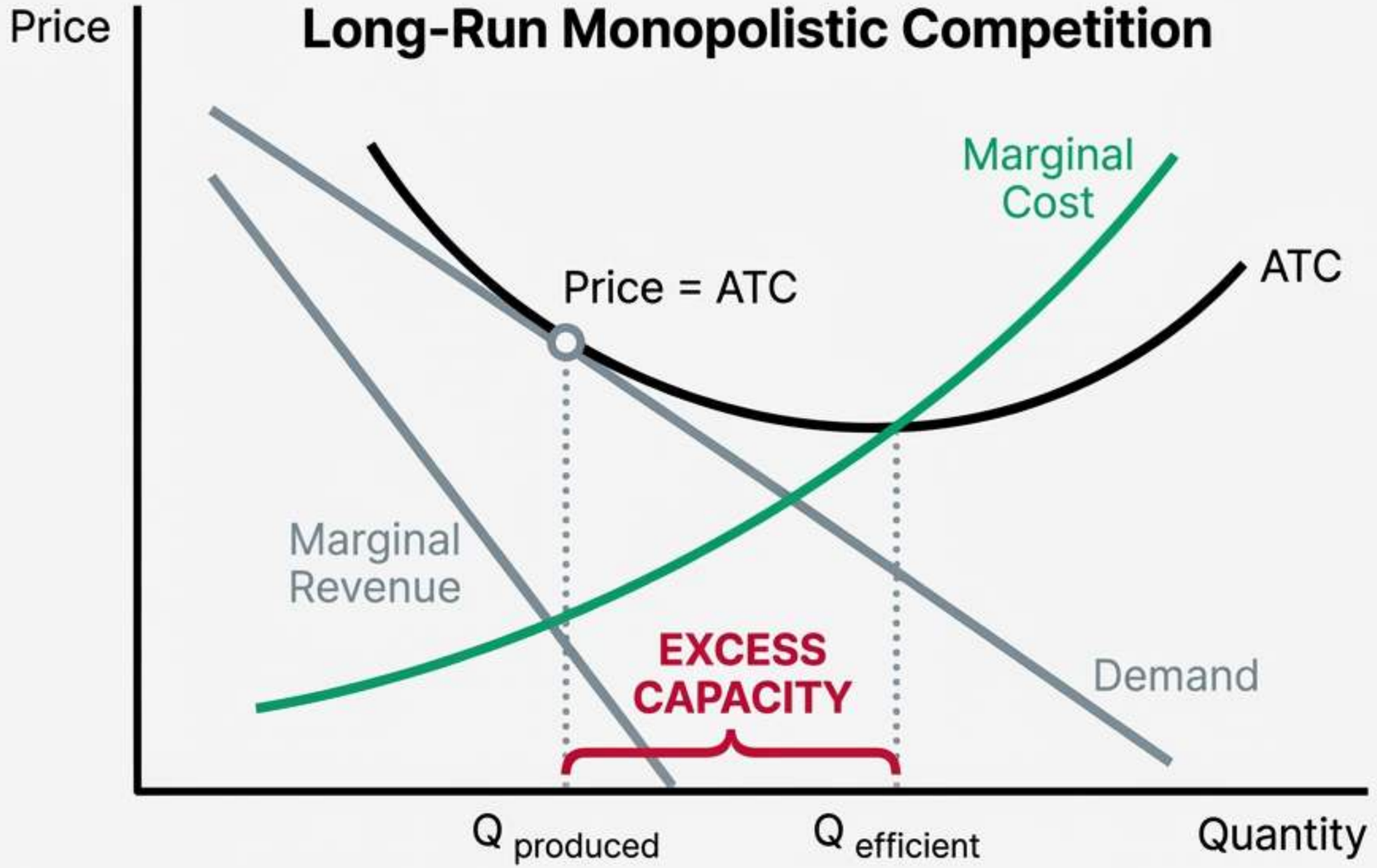
Monopolistic Competition
Differentiated Products / Low Barriers

Monopoly
Unique Product / Price Maker

Key Traits:

- Many Sellers
- Highly Elastic Demand (Substitutes exist)
- Short Run: Behave like Monopolies (MR = MC)
- Long Run: Zero Economic Profit

The Cost of Variety: Excess Capacity



Long Run Equilibrium

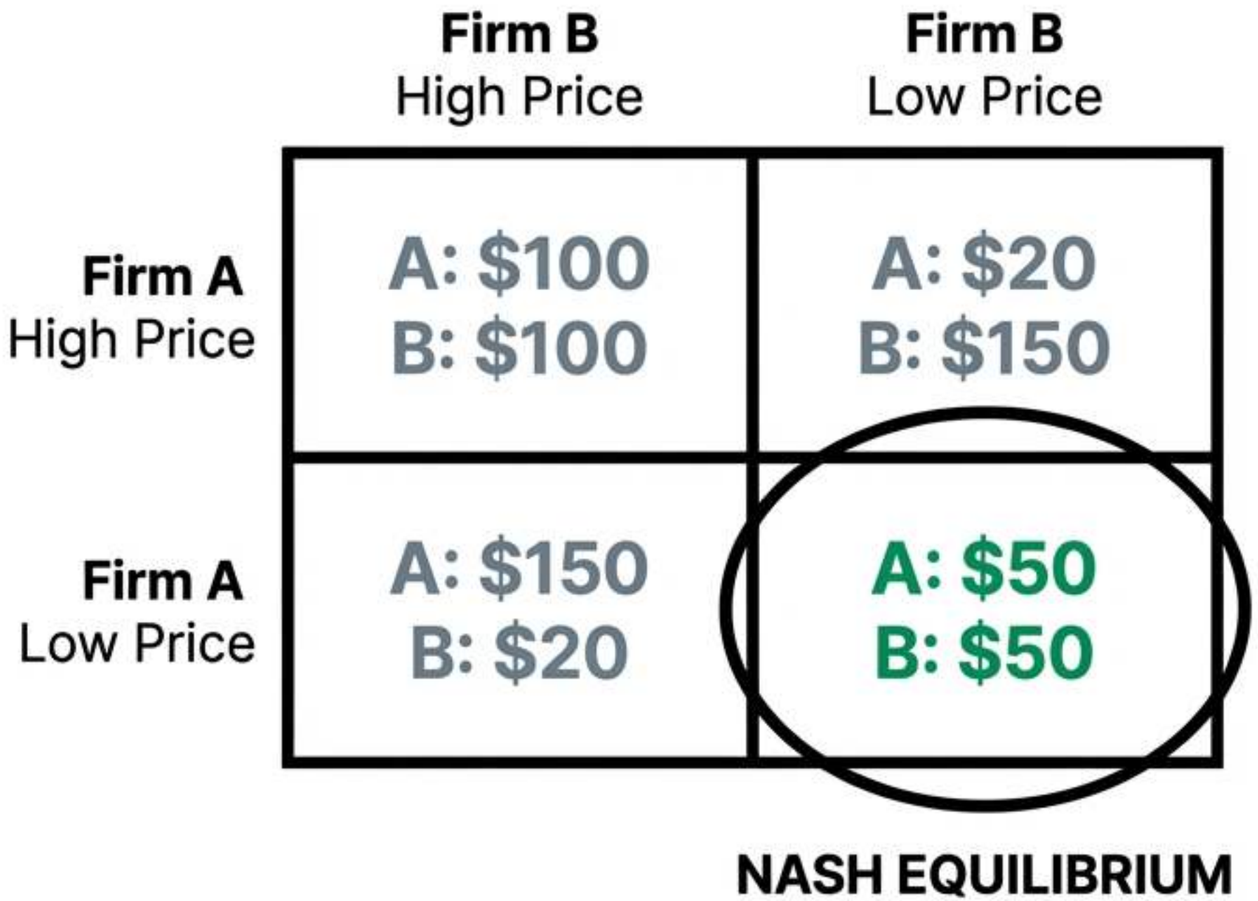
- Entry/Exit drives Profit to Zero (P = ATC).
- Inefficiency: P > MC.
- Trade-off: We pay a premium for brand variety.

Strategic Interdependence

Oligopoly & Game Theory

Oligopoly Traits

- Few Large Firms
- High Barriers
- Mutual Interdependence



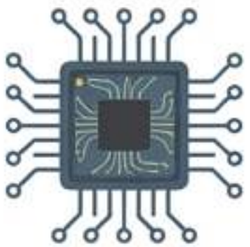
Game Theory Logic

- **Dominant Strategy:** Best move regardless of opponent.
- **Nash Equilibrium:** No incentive to switch.
- **Cartel Danger:** Collusion ($100/$100) is unstable because cheating pays off.

Demand is Derived

The Factor Market Logic

Product Market:
Consumer buys Phone

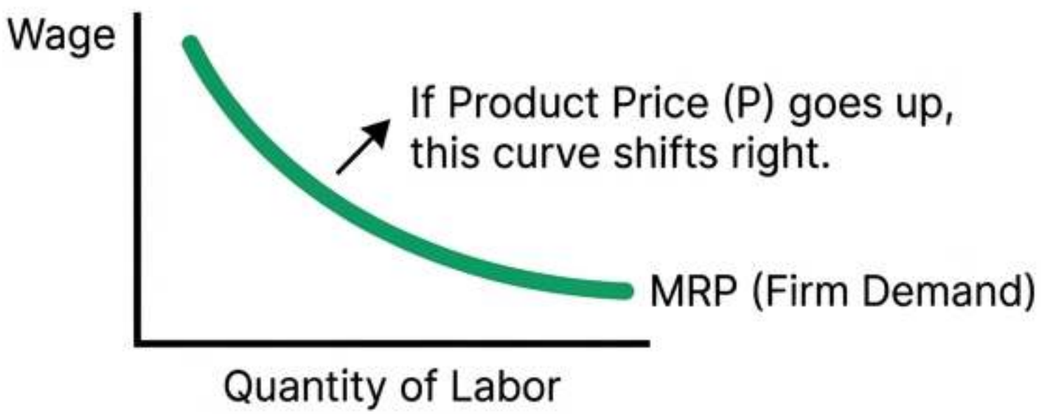


Firm Needs Input

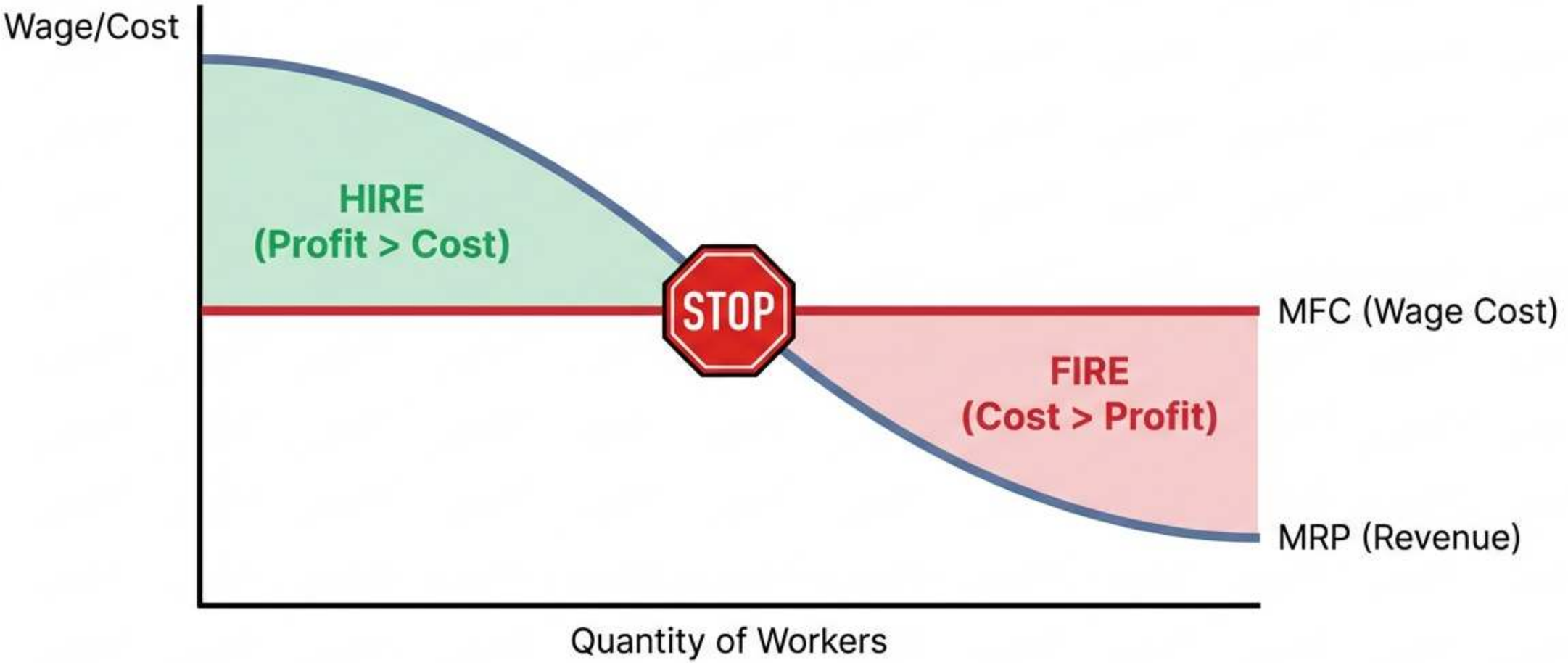
Factor Market:
Firm hires Engineer

MRP = MP × P

Marginal Revenue Product = Marginal Product × Price of Output



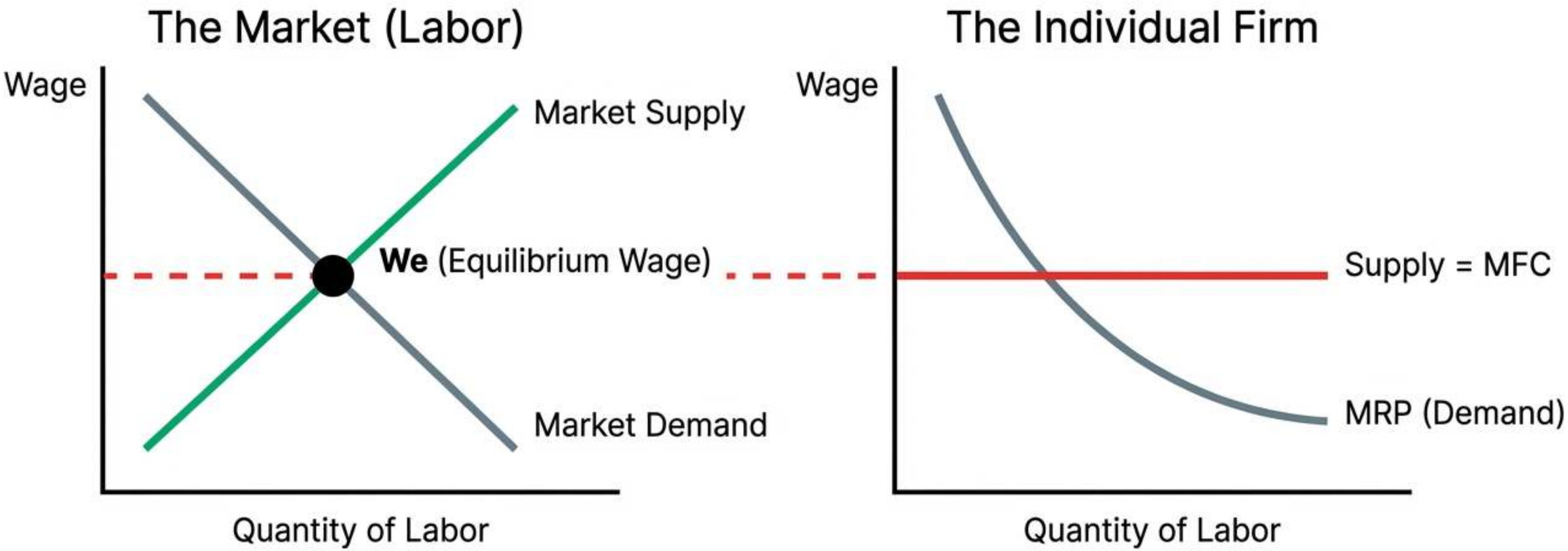
When to Stop Hiring



The Golden Rule: Hire until MRP = MFC

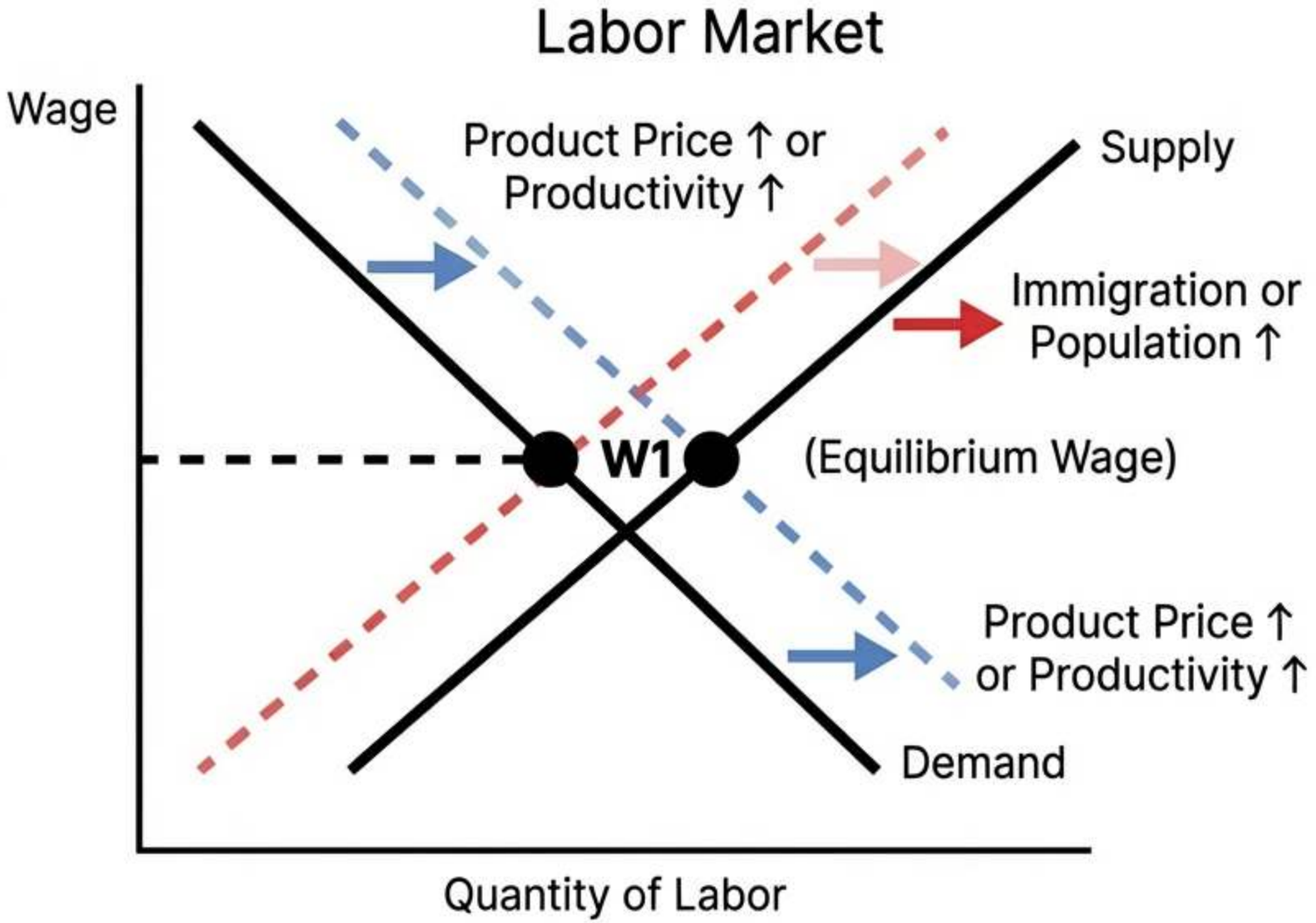
Trap: Do not confuse Total Profit with Marginal Profit. Stop exactly at the margin.

The Firm is a Wage Taker



The Market sets the wage. The Firm takes it.
Firm Supply is Perfectly Elastic.

What Changes the Wage?



Demand Shifters (MRP):

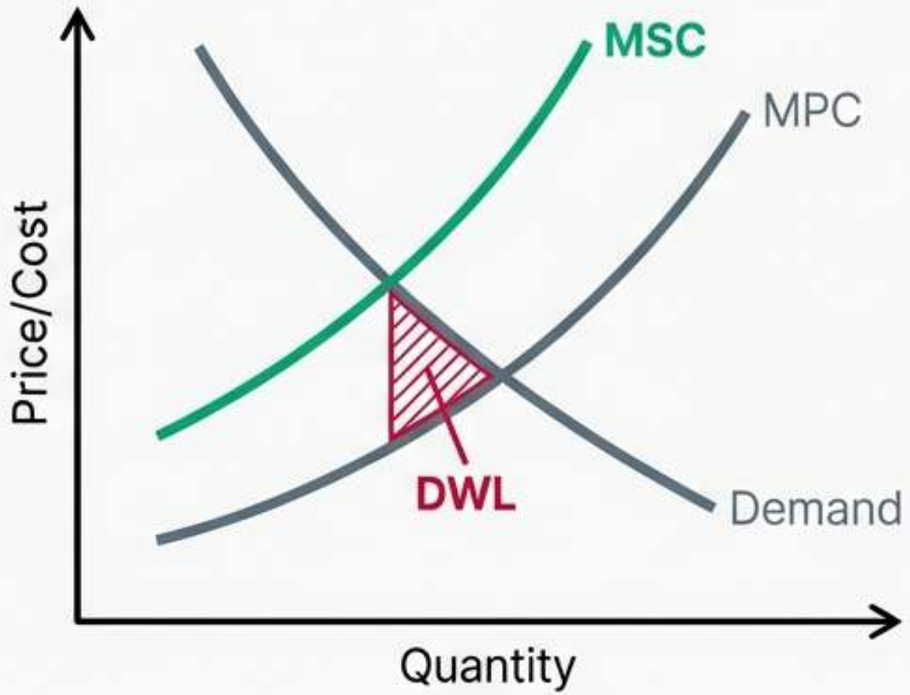
- Product Price (Derived Demand)
- Worker Productivity (Better Tech)

Supply Shifters:

- Immigration
- Leisure Preferences
- Alternative Opportunities

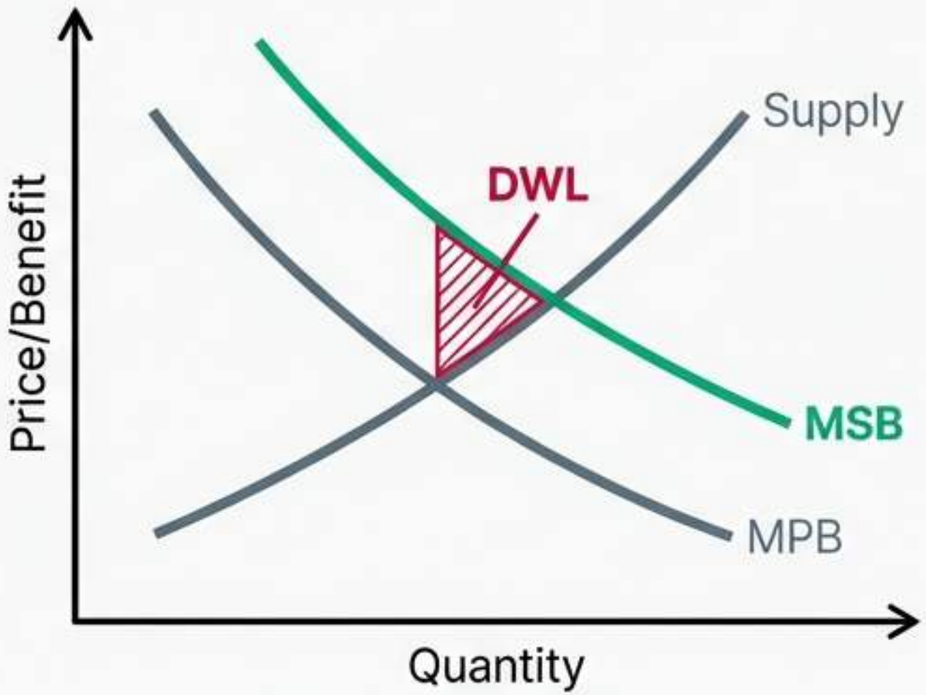
When the Market Gets It Wrong
Externalities & Deadweight Loss

Negative Externality (Pollution)



Market Overproduces
(MSC > MPC)

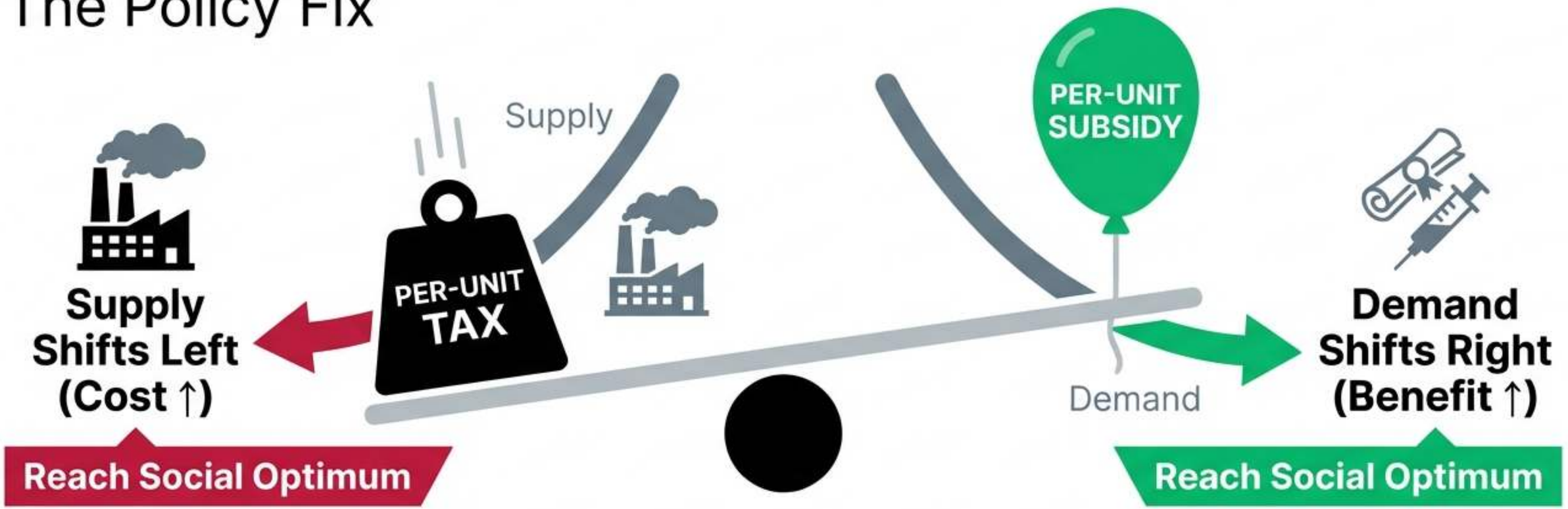
Positive Externality (Vaccines)



Market Underproduces
(MSB > MPB)

Internalizing the Externality

The Policy Fix



Tax/Subsidy = Marginal External Cost/Benefit

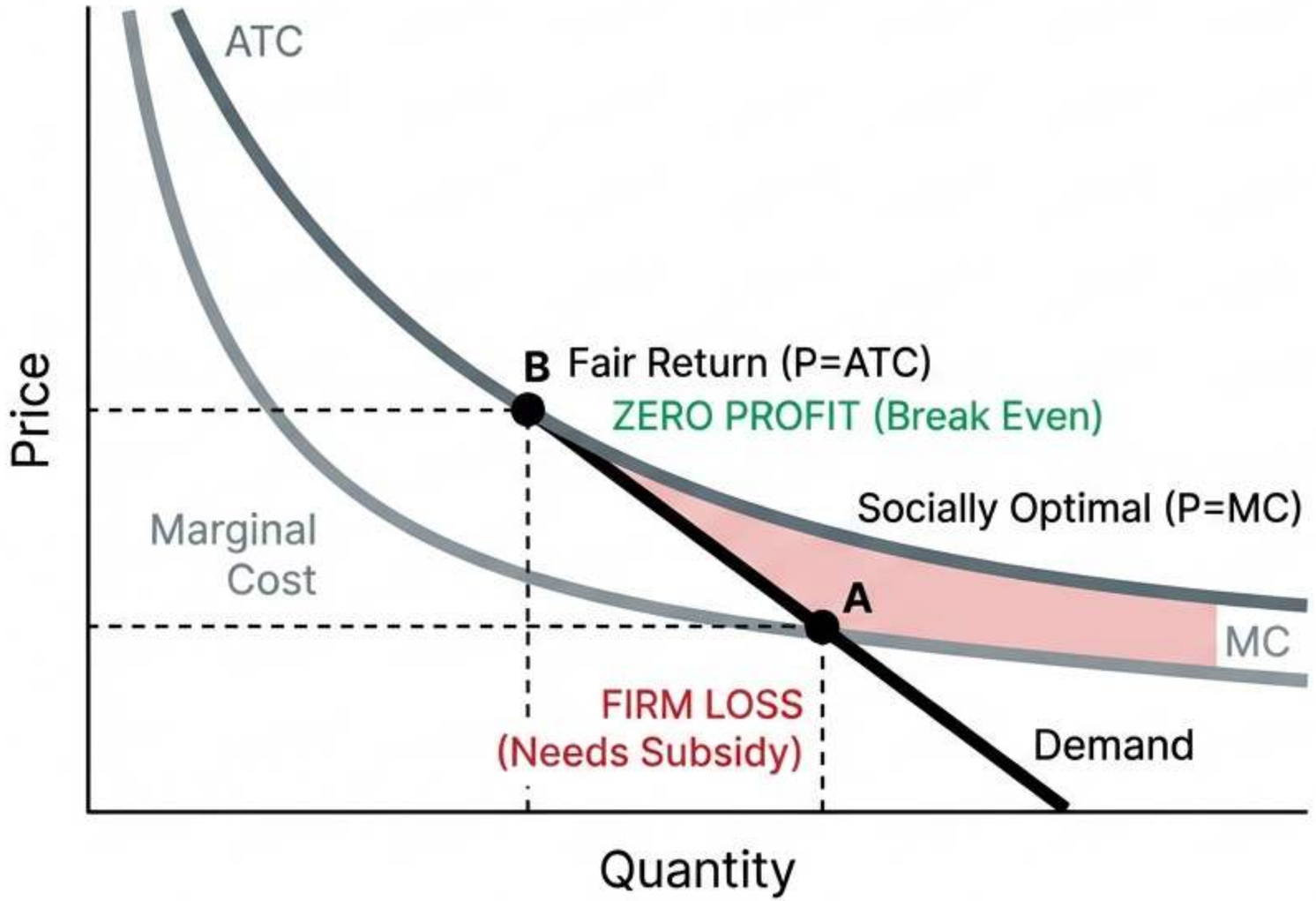
Rivalry and Excludability

Classifying Goods

	Excludable	Non-Excludable
Rival	**Private Goods** Ice Cream, Clothing	**Common Resources**  **TRAGEDY OF THE COMMONS** Rival but Non-Excludable.
Non-Rival	**Club Goods** Cable TV	**Public Goods**  **FREE RIDER PROBLEM** Non-Rival & Non-Excludable. Market Failure: Zero profit incentive to produce.

Regulating the Giants

Natural Monopoly

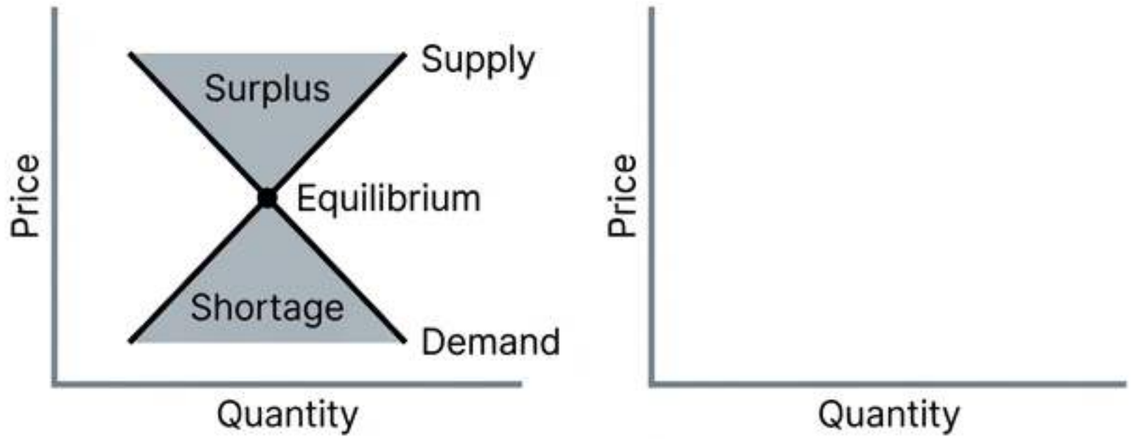


The Dilemma: Efficiency (P=MC) bankrupts the firm. Regulators usually settle for Fair Return (P=ATC).

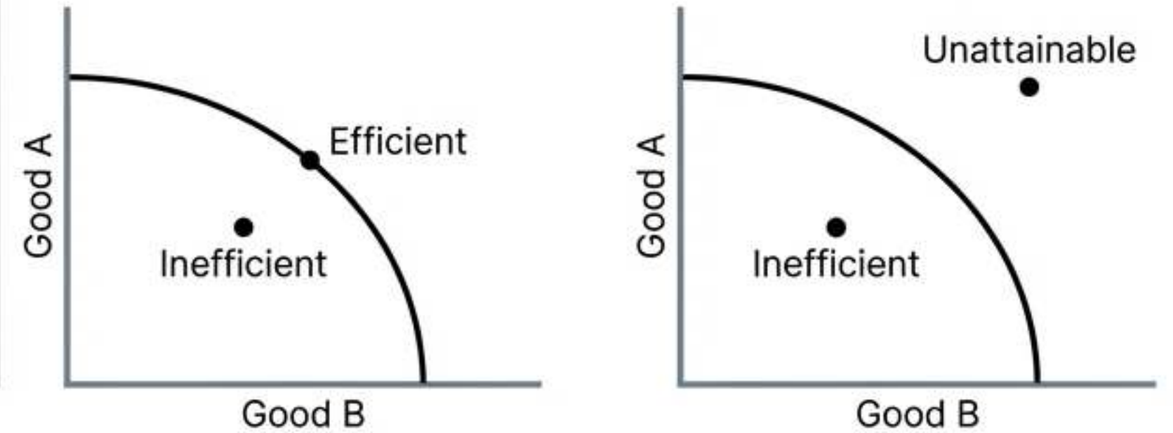
Graph Gauntlet: Product Markets

Can you draw these in 60 seconds?

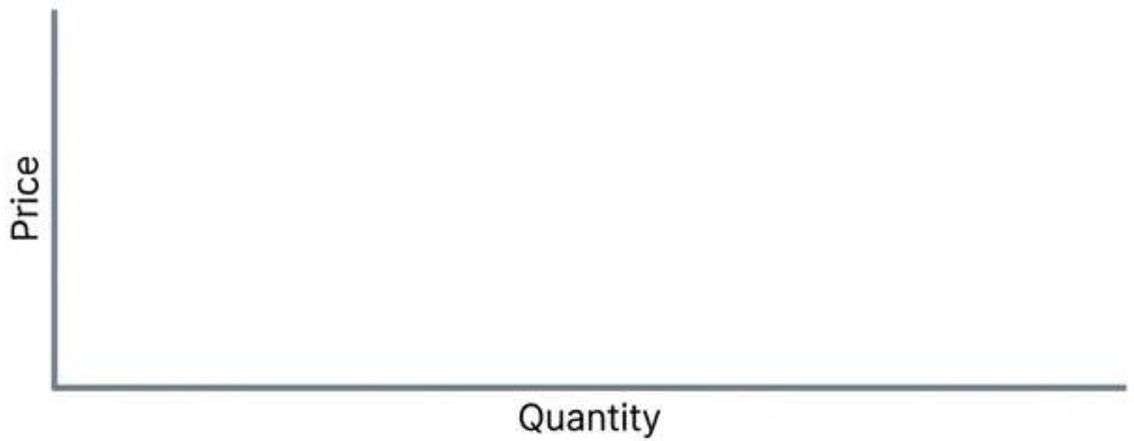
Supply & Demand



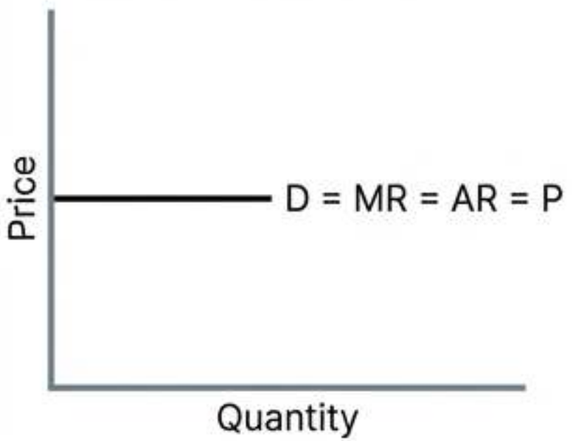
PPC



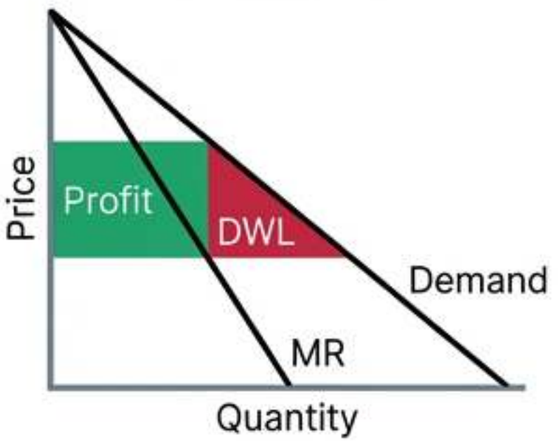
Supply Comp (Firm)



Perfect Comp (Firm)



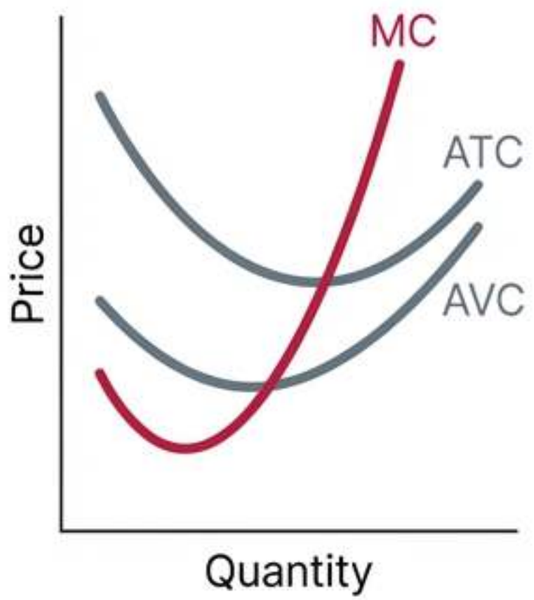
Monopoly



Graph Gauntlet: Advanced

The Difference Makers

1. Cost Curves

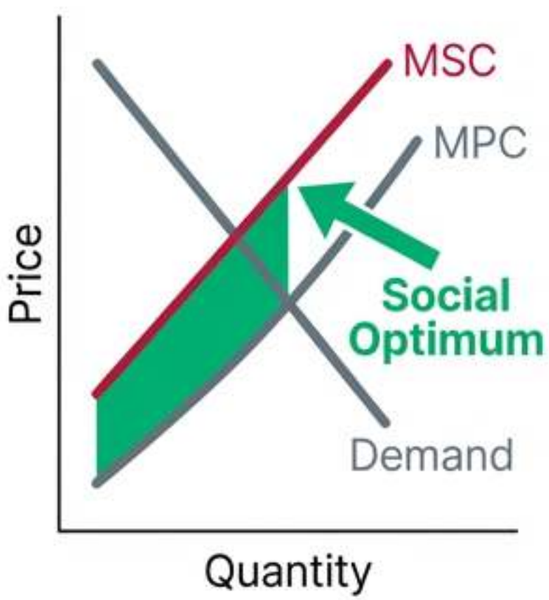


Panel 1

2. Factor Market

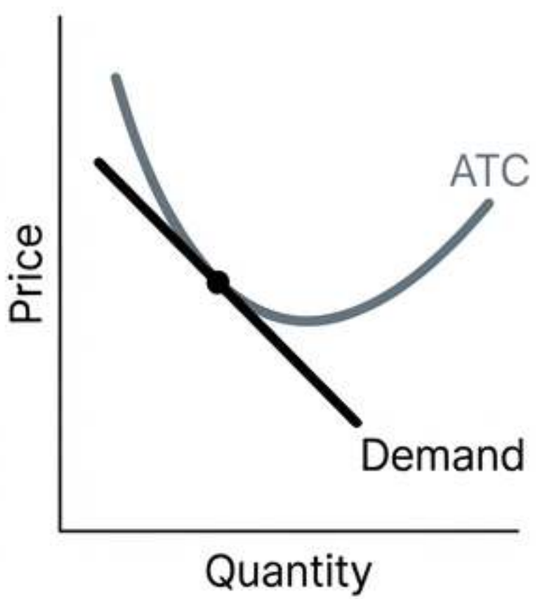
Panel 2

3. Externalities



Panel 3

4. Long-Run Monop. Comp.



Panel 4

90 Minutes to Victory

Execution Strategy

The Clock

- 80 Questions / 90 Minutes
- Strategy: Skip hard graphs. Do a Second Pass.

Battle Plan

The Big 3 Rules (Write These Down!)

1. Profit Max: **MR = MC**
2. Hiring: **MRP = MFC**
3. Social Optimum: **MSC = MSB**

Calculation Checks

- Elasticity: Use % Change.
- Utility: MUx/Px = MUy/Py

REMEMBER: Zero Economic Profit is OK! It means you are covering opportunity costs. You are winning.