

UNIT 1

Basic Economic Concepts

Scarcity, the production possibilities curve, comparative advantage, and the supply-and-demand model

5-10%

EXAM WEIGHTING

8-10

CLASS PERIODS

6

TOPICS IN UNIT

What This Unit Covers

TOPICS IN THIS UNIT

1.1 Scarcity

1.2 Opportunity Cost and the PPC

1.3 Comparative Advantage and Gains from Trade

1.4 Demand

1.5 Supply

1.6 Market Equilibrium, Disequilibrium, and Changes

BIG IDEAS

- MKT — Markets: Why do people and countries trade? What determines price?
- MOD — Macroeconomic Models: Why is there no such thing as a free lunch?

WHY IT MATTERS

Because most resources are scarce, individuals and societies must make choices. Examining how and why those choices are made introduces the principles of supply and demand and the importance of specialization and exchange — and the foundational models used throughout the course.

5-10%

of the AP Exam multiple-choice and free-response score

TOPIC 1.1

Scarcity

Enduring Understanding MOD-1 — The PPC model is used to demonstrate the full-employment level of output and to illustrate changes in full employment.

LEARNING OBJECTIVES: MOD-1.A — Define scarcity and economic resources.

Scarcity and Economic Resources

The fundamental economic problem: society's wants are unlimited, but the resources to satisfy them are limited.

1 Scarcity

The condition in which available resources are insufficient to satisfy all wants and needs. Because most resources are scarce, individuals and societies are forced to make choices.

2 Economic Resources

The factors of production used to make goods and services: LAND (natural resources), LABOR (human effort), CAPITAL (tools, machines, factories), and ENTREPRENEURSHIP (organizing the other three and bearing risk).

3 Choices Are Unavoidable

Scarcity applies to individuals, firms, and entire nations. Every choice to use a resource one way means giving up an alternative use — there is no costless decision.

TOPIC 1.2

Opportunity Cost and the Production Possibilities Curve

The PPC is the first model of the course — it makes scarcity, choice, and trade-offs visible.

LEARNING OBJECTIVES: MOD-1.B — Define the PPC; explain how it illustrates opportunity cost, efficiency, and growth; calculate opportunity cost.

The Production Possibilities Curve

The PPC shows the maximum combinations of two goods an economy can produce when all resources are fully and efficiently employed.

- Points ON the curve are productively efficient — resources are fully employed.
- Points INSIDE the curve are inefficient — resources are unemployed or used poorly.
- Points BEYOND the curve are currently unattainable with existing resources and technology.
- Moving along the curve from one point to another requires giving something up — that sacrifice is opportunity cost.

KEY TAKEAWAY

The PPC turns the abstract idea of scarcity into a picture: you cannot have more of everything at once.

Opportunity Cost, Trade-offs, and Efficiency

Opportunity Cost

The value of the next-best alternative given up when a choice is made. Every choice has a cost, even when no money changes hands — this is why 'there is no free lunch.'

Trade-off

Producing more of one good on the PPC requires producing less of the other. The PPC's downward slope IS the trade-off.

Efficiency

An economy is productively efficient when it operates on the PPC. It cannot make more of one good without sacrificing the other.

Underutilized Resources

Points inside the PPC mean idle or misallocated resources — the economy could produce more of both goods at no opportunity cost by moving to the curve.

The Shape of the PPC

The PPC's shape reveals how opportunity cost behaves as production shifts.

- A straight-line PPC shows **CONSTANT** opportunity cost — resources are equally suited to both goods.
- A bowed-out (concave) PPC shows **INCREASING** opportunity cost — the most common case.
- Increasing cost occurs because resources are specialized: as you make more of one good, you must use resources that are progressively less suited to it.
- This is the law of increasing opportunity cost.

KEY TAKEAWAY

Bowed-out PPC = increasing opportunity cost. Straight-line PPC = constant opportunity cost.

Calculating Opportunity Cost

On a straight-line PPC, opportunity cost is the trade ratio between the two goods.

- **Scenario: A country can produce a MAXIMUM of either 200 units of wheat OR 100 units of cloth (and points between).**
- Step 1 — Find the trade-off: giving up all cloth (100) gains all wheat (200).
- Step 2 — Opportunity cost of 1 unit of CLOTH = $200 \text{ wheat} \div 100 \text{ cloth} = 2 \text{ wheat}$.
- Step 3 — Opportunity cost of 1 unit of WHEAT = $100 \text{ cloth} \div 200 \text{ wheat} = 0.5 \text{ cloth}$.
- **Rule of thumb: 'The one you GET goes on the bottom.' Opportunity cost of the good you gain = (amount of the other good given up) \div (amount of this good gained).**
- From a table or PPC data: opportunity cost = loss \div gain between two rows or two points.

Economic Growth and Shifts of the PPC

The PPC is not fixed. It shifts when an economy's productive capacity changes.

- An OUTWARD shift = economic growth — the economy can now produce more of both goods.
- Causes of growth: more resources (land, labor, capital), or better productivity / technology.
- An INWARD shift = contraction — caused by losses of resources (war, disaster, falling population).
- Note: a point inside the PPC moving TO the curve is a recovery, not growth — growth is a shift of the curve itself.

KEY TAKEAWAY

Growth shifts the whole PPC outward; this is the same idea as a rightward shift of long-run aggregate supply (Unit 3) and the source of rising living standards (Unit 5).

TOPIC 1.3

Comparative Advantage and Gains from Trade

Why specialization and trade let both parties consume beyond their own production possibilities.

LEARNING OBJECTIVES: MKT-1.A — Define and determine absolute and comparative advantage. MKT-1.B — Explain and calculate gains from trade and terms of trade.

Absolute vs. Comparative Advantage

These two ideas sound similar but answer different questions — keep them distinct.

ABSOLUTE ADVANTAGE

- **Who can produce MORE?**
- A producer has absolute advantage when it can produce more of a good than another producer using the same quantity of resources.
- It is about raw productivity or output.
- A country can have an absolute advantage in BOTH goods.
- Does NOT determine who should specialize.

COMPARATIVE ADVANTAGE

- **Who gives up LESS?**
- A producer has comparative advantage when it can produce a good at a LOWER opportunity cost than another producer.
- It is about relative cost, not raw output.
- Each producer has a comparative advantage in something (it is impossible to have it in both).
- DETERMINES who should specialize and trade.

Determining Comparative Advantage from Data

Scenario — In one day: the U.S. can make 8 computers OR 16 bushels of wheat; Mexico can make 2 computers OR 8 bushels of wheat.

- **Absolute advantage: the U.S. produces more of BOTH goods — it has absolute advantage in everything.**
- **Find each country's opportunity cost (loss ÷ gain):**
 - U.S.: 1 computer costs 2 wheat ($16 \div 8$); 1 wheat costs 0.5 computers ($8 \div 16$).
 - Mexico: 1 computer costs 4 wheat ($8 \div 2$); 1 wheat costs 0.25 computers ($2 \div 8$).
- **Computers: U.S. gives up 2 wheat vs. Mexico's 4 → the U.S. has comparative advantage in computers.**
- **Wheat: Mexico gives up 0.25 computers vs. the U.S.'s 0.5 → Mexico has comparative advantage in wheat.**
- **Conclusion: the U.S. should specialize in computers, Mexico in wheat — then trade.**

Specialization, Trade, and the Terms of Trade

When each producer specializes by comparative advantage, total output rises and both can consume beyond their own PPC.

- Production specialization according to comparative advantage creates exchange opportunities.
- Through trade, a country can reach consumption points OUTSIDE its own production possibilities curve.
- Terms of trade = the rate at which the two goods are exchanged.
- Trade is mutually beneficial only if the terms of trade fall BETWEEN the two producers' opportunity costs.

KEY TAKEAWAY

Comparative advantage + agreeable terms of trade = gains from trade. Both parties end up better off than in isolation.

Finding Mutually Beneficial Terms of Trade

Using the prior example: U.S. opportunity cost of 1 computer = 2 wheat; Mexico's = 4 wheat.

- **A trade benefits BOTH parties only if each does better than producing the good itself.**
- The U.S. (exporting computers) will trade a computer only for MORE than 2 wheat — otherwise it would just keep its own wheat.
- Mexico (importing computers) will pay only LESS than 4 wheat for a computer — otherwise it would make its own.
- **Mutually beneficial terms of trade: between 2 and 4 wheat per computer.**
- Example: agree on 3 wheat per computer — the U.S. gains 1 extra wheat, Mexico saves 1 wheat. Both win.
- On the AP Exam, you may be asked to identify a specific number of units or a range that makes trade work.

TOPIC 1.4

Demand

Enduring Understanding MKT-2 — In a competitive market, demand and supply determine the equilibrium price.

LEARNING OBJECTIVES: MKT-2.A — Define the law of demand. MKT-2.B — Explain the determinants of demand.

The Law of Demand

The law of demand: all else equal, as the price of a good rises, the quantity demanded falls — and vice versa.

- Price and quantity demanded are INVERSELY related — the demand curve slopes downward.
- A change in the good's own price causes a MOVEMENT ALONG the curve — a change in quantity demanded.
- The curve is drawn holding all other factors constant (*ceteris paribus*).
- Market demand is the horizontal sum of all individual consumers' demand curves.

KEY TAKEAWAY

Down the demand curve = a change in quantity demanded caused only by the good's own price.

The Determinants of Demand — What Shifts the Curve

A change in any determinant OTHER than the good's own price shifts the entire demand curve. Memory aid: TRIBE.

T — Tastes & Preferences

Trends, advertising, and changing preferences.
More popular → demand rises (shifts right).

R — Related Goods

SUBSTITUTES: price of a substitute rises → demand for this good rises. COMPLEMENTS: price of a complement rises → demand for this good falls.

I — Income

NORMAL goods: higher income → demand rises.
INFERIOR goods: higher income → demand falls.

B — Buyers

More consumers in the market → demand rises.
A larger market = a rightward shift.

E — Expectations

If consumers expect higher future prices or income, current demand rises.

Change in Demand vs. Change in Quantity Demanded

This distinction is one of the most heavily tested — and most often missed — ideas in the course.

- CHANGE IN QUANTITY DEMANDED — movement ALONG a fixed curve, caused ONLY by the good's own price.
- CHANGE IN DEMAND — a SHIFT of the whole curve, caused by a determinant (TRIBE).
- A rightward shift of the entire demand curve = an INCREASE in demand: more is demanded at every price.
- A leftward shift of the entire demand curve = a DECREASE in demand: less is demanded at every price.

KEY TAKEAWAY

Own price → move along the curve. Anything else → shift the curve. Never say 'demand fell' when you mean 'quantity demanded fell.'

TOPIC 1.5

Supply

The producer side of the competitive market.

LEARNING OBJECTIVES: MKT-2.C — Define the law of supply. MKT-2.D — Explain the determinants of supply.

The Law of Supply

The law of supply: all else equal, as the price of a good rises, the quantity supplied rises — and vice versa.

- Price and quantity supplied are POSITIVELY (directly) related — the supply curve slopes upward.
- Higher prices make production more profitable, so firms are willing to produce and sell more.
- A change in the good's own price causes a MOVEMENT ALONG the supply curve — a change in quantity supplied.
- Market supply is the horizontal sum of all individual producers' supply curves.

KEY TAKEAWAY

Up the supply curve = a change in quantity supplied caused only by the good's own price.

The Determinants of Supply — What Shifts the Curve

A change in any factor other than the good's own price shifts the supply curve. Memory aid: ROTTEN.

- R — Resource (INPUT) prices: cheaper inputs → supply rises (shifts right).
- O — Other goods' prices: if a firm could make something more profitable, it shifts production away.
- T — Technology: better technology lowers cost → supply rises.
- T — Taxes & subsidies: taxes shift supply left; subsidies shift supply right.
- E — Expectations of producers: if sellers expect higher future prices, they may hold back current supply.
- N — Number of sellers: more firms in the market increases supply (a rightward shift).
- Rightward shift = INCREASE in supply; leftward shift = DECREASE in supply.

KEY TAKEAWAY

Own price → move along the curve. A determinant (ROTTEN) → shift the whole curve.

Supply: Movement vs. Shift — Lock It In

Before combining supply and demand, make sure students can sort any event correctly.

Change in Quantity Supplied

A MOVEMENT ALONG the supply curve. Cause: the good's OWN price changed. Example: the price of coffee rises, so coffee farmers harvest more — a move up the existing curve.

Change in Supply

A SHIFT of the whole supply curve. Cause: a ROTTEN determinant changed. Example: a frost destroys coffee crops (input/resource shock) — the entire curve shifts left.

The Diagnostic Question

Ask: 'Did the good's OWN price cause this?' If yes → move along the curve. If no → shift the curve. Apply the identical test to demand.

TOPIC 1.6

Market Equilibrium, Disequilibrium, and Changes in Equilibrium

How supply and demand together determine price — and how markets self-correct.

LEARNING OBJECTIVES: MKT-2.E — Define market equilibrium. MKT-2.F — Surpluses & shortages. MKT-2.G — Changes in equilibrium.

Market Equilibrium

Equilibrium is the price at which the quantity demanded equals the quantity supplied — the market 'clears.'

- Equilibrium occurs where the demand and supply curves intersect.
- Equilibrium price (P_e): the price at which quantity demanded = quantity supplied.
- Equilibrium quantity (Q_e): the quantity bought and sold at that price.
- At equilibrium there is no pressure for price to change — buyers' and sellers' plans are consistent.

KEY TAKEAWAY

Equilibrium is where the curves cross: $Q_d = Q_s$. It is the market's natural resting point.

Disequilibrium: Surpluses and Shortages

When price is not at equilibrium, market forces push it back. The market is self-correcting.

- SURPLUS (excess supply): price is ABOVE equilibrium → quantity supplied exceeds quantity demanded → unsold goods → price is bid DOWN.
- SHORTAGE (excess demand): price is BELOW equilibrium → quantity demanded exceeds quantity supplied → price is bid UP.
- Surplus or shortage size = the horizontal distance between the supply and demand curves at that price.
- Price adjusts until the surplus or shortage is eliminated and the market returns to equilibrium.

KEY TAKEAWAY

Price above equilibrium → surplus → price falls. Price below equilibrium → shortage → price rises. Markets self-correct.

Changes in Equilibrium — Single Shifts

When one determinant changes, one curve shifts and the market settles at a new equilibrium.

- Increase in demand → P rises, Q rises. Decrease in demand → P falls, Q falls.
- Increase in supply → P falls, Q rises. Decrease in supply → P rises, Q falls.
- When only ONE curve shifts, both the new price and the new quantity are fully determined.
- Always show the shift with an arrow and label the new equilibrium point on your graph.

KEY TAKEAWAY

One shift = a clear, predictable result for both price and quantity. Demand shifts move P and Q the same way; supply shifts move them opposite ways.

When Both Curves Shift — Indeterminate Outcomes

If supply and demand shift at the same time, one of the two equilibrium values cannot be determined without knowing the relative size of the shifts.

Demand ↑ & Supply ↑

Quantity definitely RISES. Price is INDETERMINATE — it depends on which shift is larger.

Demand ↓ & Supply ↓

Quantity definitely FALLS. Price is INDETERMINATE.

Demand ↑ & Supply ↓

Price definitely RISES. Quantity is INDETERMINATE.

Demand ↓ & Supply ↑

Price definitely FALLS. Quantity is INDETERMINATE.

Common Pitfalls & Exam Tips

Where students lose points on Unit 1 content — and how to avoid it.

Label every graph fully

Axes, curves, and equilibrium points must all be labeled. Unlabeled or mislabeled graphs lose easy points — model this from day one.

Shift vs. movement along

A change in the good's OWN price moves you along the curve. A determinant shifts the whole curve. Use precise language every time.

Comparative, not absolute

Specialization and trade are decided by COMPARATIVE advantage (lowest opportunity cost), never by absolute advantage.

Invert opportunity cost correctly

Opportunity cost of a good = what you give up ÷ what you gain. The good you are costing goes in the denominator.

Scarcity ≠ shortage

Scarcity is the permanent, universal condition. A shortage is a temporary market state when price is below equilibrium.

Draw arrows for changes

On free-response, show shifts with directional arrows and label the NEW equilibrium — demonstrate the effect, don't just redraw.

Unit 1 — Key Takeaways

1

Scarcity forces choice: limited resources (land, labor, capital, entrepreneurship) cannot satisfy unlimited wants.

2

The PPC models scarcity, opportunity cost, efficiency, and growth — and outward shifts represent economic growth.

3

Every choice has an opportunity cost: the value of the next-best alternative given up.

4

Comparative advantage (lowest opportunity cost) — not absolute advantage — drives specialization and gains from trade.

5

The law of demand (inverse) and law of supply (direct) describe how buyers and sellers respond to price.

6

Equilibrium clears the market; surpluses and shortages are self-correcting; shifts in determinants change equilibrium.