

CLASS XI | CBSE | 2025-26

INTRODUCTORY

MICROECONOMICS

CHAPTER 11

Supply

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Chapter Overview

What You Will Learn

- * Meaning and definition of Supply
- * Law of Supply and Supply Schedule
- * Supply Curve (individual and market)
- * Determinants of Supply
- * Change in Supply vs Change in Quantity Supplied
- * Price Elasticity of Supply (PES)
- * Measurement of PES and its determinants

Exam Importance: Very High

Law of Supply, supply curve diagram, change in supply vs change in quantity supplied, and elasticity of supply are all high-frequency board exam topics. Diagrams are mandatory to include.

1. Meaning of Supply

DEFINITION: Supply

Supply refers to the quantity of a commodity that a seller is willing and able to offer for sale at a given price, during a given period of time.

Important Points:

- * Supply is not the same as stock. Stock is what is produced/stored; supply is what is OFFERED FOR SALE.
- * Supply is always related to a PRICE and a TIME PERIOD.
- * There is a direct (positive) relationship between price and quantity supplied.

2. Supply Schedule

A supply schedule is a tabular statement showing different quantities of a commodity that a producer is willing to supply at different prices, during a given time period.

Individual Supply Schedule:

Price of Good (Rs)	Quantity Supplied (Units)
1	10
2	20
3	35
4	55
5	80

EXAM TIP

As price rises, quantity supplied rises. This is the Law of Supply. When price doubles from Rs 1 to Rs 2, supply also doubles (10 to 20 units) - showing direct relationship.

3. Law of Supply

DEFINITION: Law of Supply

The law of supply states that, other things remaining equal (ceteris paribus), when the price of a commodity rises, its quantity supplied also rises, and when price falls, quantity supplied also falls. There is a direct (positive) relationship between price and quantity supplied.

Price rises -> Quantity Supplied rises Price falls -> Quantity Supplied falls

Direct/Positive Relationship

Reasons/Assumptions behind the Law:

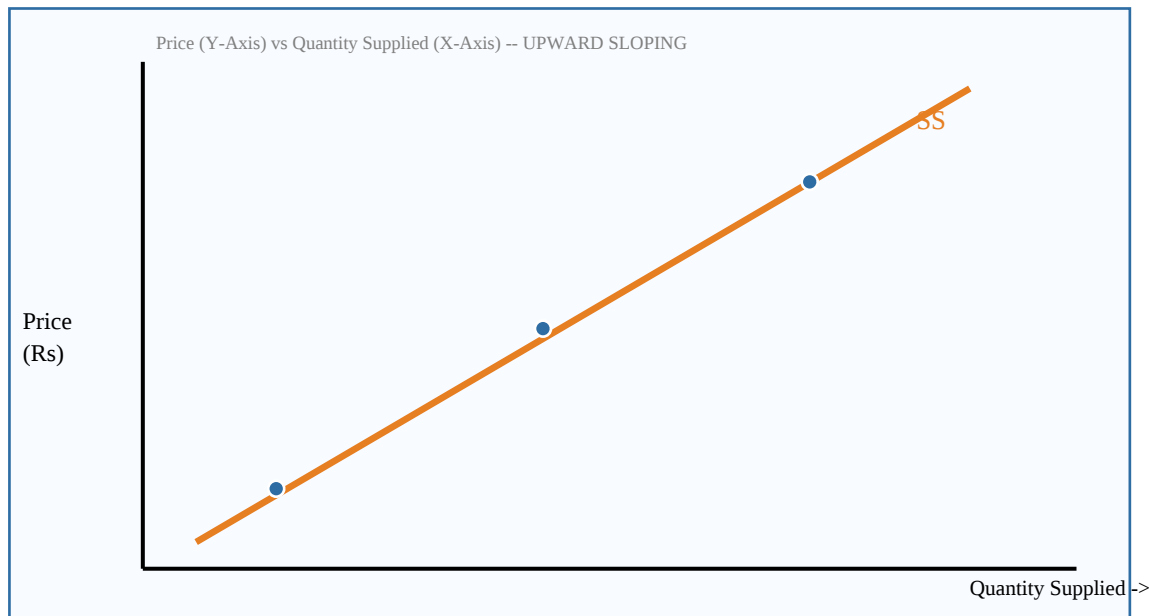
- * Higher price -> higher profit -> producer increases production
- * At higher prices, new firms enter the market -> total supply increases
- * Ceteris paribus (all other factors constant) must hold

COMMON MISTAKE

Exceptions to Law of Supply: Agricultural goods (depends on season, not just price), Rare/antique items (fixed supply), Labour supply at very high wages (backward-bending supply curve). BUT: These are rarely asked in exams at this level.

4. Supply Curve

The supply curve is a graphical representation of the supply schedule. It plots price on Y-axis and quantity supplied on X-axis.



Key Points about Supply Curve: * Slopes UPWARD from left to right (positive slope) * Shows direct relationship between price and quantity supplied * Each point on curve = one combination of price and quantity * Shift RIGHT = increase in supply | Shift LEFT = decrease in supply

5. Determinants of Supply (Factors Affecting Supply)

Factor	Effect on Supply	Example
Price of the good	Price rises -> Supply rises	Rs 10 to Rs 20 -> more supply
Input/Factor prices	Input price rises -> Supply falls	Labour wages rise -> less profitable
Technology	Better tech -> Supply increases	Machine production > hand production
Government policy	Tax rises -> Supply falls; Subsidy -> rises	GST increase reduces supply
Number of sellers	More sellers -> Market supply rises	New firms enter market
Goals of firm	Profit max -> more supply	Revenue max -> different output

Price of related goods	If substitutes price rises -> may switch	Wheat price rise may reduce rice supply
Future price expectations	If future price expected higher -> hold stock now	Farmers hoard in anticipation

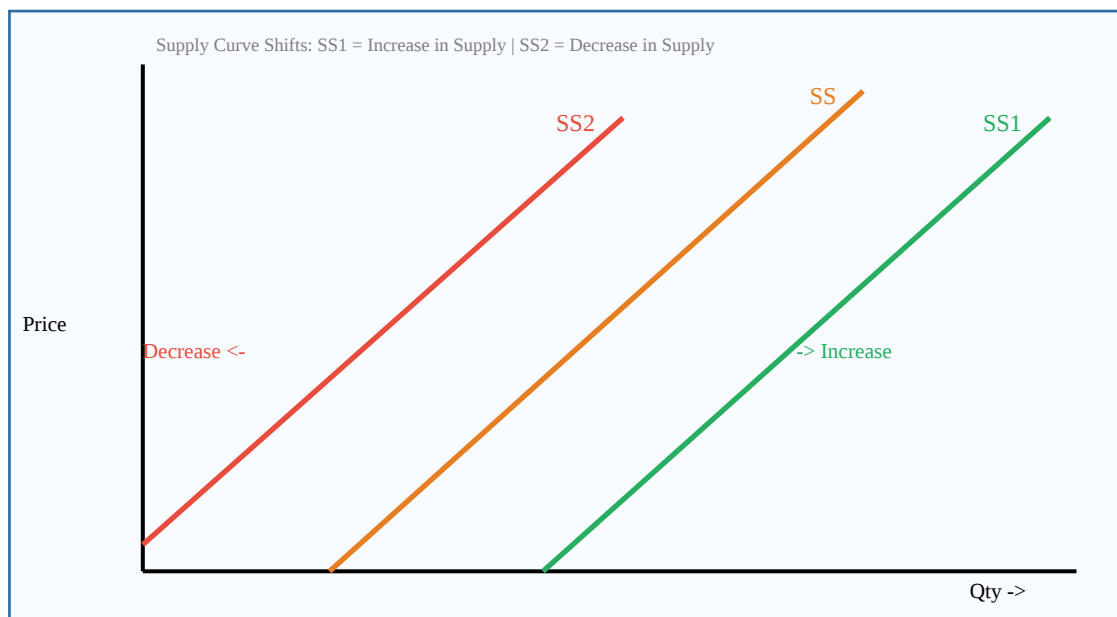
MEMORY TRICK

TRICK to Remember Determinants: 'PING FG' = Price of Inputs, Input Technology, Number of sellers, Government policy, Future expectations, Goals of firm

6. Change in Quantity Supplied vs Change in Supply

This is one of the most frequently asked distinctions in board exams.

Basis	Change in Quantity Supplied	Change in Supply
Cause	Change in OWN PRICE only	Change in factors OTHER than price
Movement	Movement ALONG same supply curve	SHIFT of entire supply curve
Direction	Up or down same curve	Right (increase) or Left (decrease)
Terms used	Extension or Contraction of supply	Increase or Decrease in supply
Diagram	Same SS curve, point moves	New supply curve (SS1 or SS2)



Increase in Supply: Curve shifts RIGHT (more quantity at same price) -- due to better technology, more sellers, fall in input prices, subsidy, etc. **Decrease in Supply:** Curve shifts LEFT (less quantity at same price) -- due to higher input prices, tax, natural calamity, etc.

7. Price Elasticity of Supply (PES)

DEFINITION: Price Elasticity of Supply

Price elasticity of supply measures the degree of responsiveness of quantity supplied of a commodity to a change in its own price, other things remaining equal.

$$\text{PES} = (\% \text{ Change in Quantity Supplied}) / (\% \text{ Change in Price}) \text{ Or: } \text{PES} = (\Delta Q_s / Q_s) / (\Delta P / P) = (\Delta Q_s / \Delta P) \times (P / Q_s)$$

Types of Price Elasticity of Supply:

Type	PES Value	Meaning	Example
Perfectly Elastic	PES = Infinity	Any change in price -> infinite change in Qs	Horizontal supply curve
Perfectly Inelastic	PES = 0	No change in Qs despite price change	Vertical supply curve
Unitary Elastic	PES = 1	% change Qs = % change price	
Elastic	PES > 1	% change Qs > % change price	Manufactured goods
Inelastic	PES < 1	% change Qs < % change price	Agricultural goods

Numerical on PES:

Q: Price rises from Rs 10 to Rs 12. Quantity supplied rises from 100 to 130 units. Find PES.

SOLUTION:

Change in Price (ΔP) = 12 - 10 = Rs 2

% Change in Price = $(2/10) \times 100 = 20\%$

Change in Qty Supplied (ΔQ_s) = 130 - 100 = 30 units

% Change in Qty Supplied = $(30/100) \times 100 = 30\%$

PES = $30\% / 20\% = 1.5$

ANSWER: PES = 1.5 (Elastic supply, since PES > 1)

Determinants of PES:

Factor	Effect on PES
Nature of the good	Perishable goods -> inelastic; Storable -> elastic
Time period	Long run -> more elastic; Short run -> less elastic
Availability of inputs	Easy input availability -> elastic supply
Cost of production	Constant costs -> elastic; Rising costs -> inelastic
Nature of industry	Agricultural -> inelastic; Manufacturing -> elastic
Mobility of factors	High mobility -> elastic supply

Exam-Oriented Questions & Model Answers

[1-Mark] Define Supply.

Model Answer: Supply refers to the quantity of a commodity that a seller is willing and able to offer for sale at a given price, during a given period of time.

[1-Mark] State the Law of Supply.

Model Answer: Other things being equal, when price of a commodity rises, its quantity supplied also rises, and vice versa. There is a direct relationship between price and supply.

[3-Mark] Distinguish between change in supply and change in quantity supplied.

Model Answer: Change in Quantity Supplied: Due to change in own price alone. Movement along the same supply curve (extension/contraction). Change in Supply: Due to change in factors OTHER than price. Entire supply curve shifts right (increase) or left (decrease). Example: Price rises from Rs 5 to Rs 10 -> extension of supply (same curve). Input prices fall -> increase in supply (curve shifts right).

[4-Mark] Draw a supply curve and explain what happens when (a) price rises (b) technology improves.

Model Answer: (a) Price rises: Movement along same supply curve upward. Quantity supplied increases. This is EXTENSION of supply. No shift of the curve. (b) Technology improves: Entire supply curve shifts RIGHTWARD. At the same price, more quantity is now supplied. This is INCREASE in supply. In diagram: Original SS curve. When price rises, point moves up-right on same curve. When technology improves, entire curve shifts right to SS1.

[6-Mark] Explain Price Elasticity of Supply with formula, types, and a numerical example.

Model Answer: Price Elasticity of Supply (PES) measures responsiveness of quantity supplied to change in price. Formula: $PES = (\% \text{ Change in } Q_s) / (\% \text{ Change in Price})$ Types: 1. Perfectly Inelastic ($PES=0$): Q_s does not change despite price change. Vertical supply curve. 2. Perfectly Elastic ($PES=\infty$): Infinite Q_s at given price. Horizontal supply curve. 3. Unitary Elastic ($PES=1$): $\% \text{ change in } Q_s = \% \text{ change in price}$. 4. Elastic ($PES>1$): $\% \text{ change } Q_s > \% \text{ change price}$. Common in manufacturing. 5. Inelastic ($PES<1$): $\% \text{ change } Q_s < \% \text{ change price}$. Common in agriculture. Numerical: Price rises from Rs 20 to Rs 25 (25%). Q_s rises from 200 to 250 units (25%). $PES = 25\%/25\% = 1$ (Unitary elastic).

[HOTS] A farmer produces wheat. Even when prices double, he cannot produce much more. What type of supply elasticity does wheat have? Why?

Model Answer: Wheat has INELASTIC supply ($PES < 1$). This is because: (1) Wheat is an agricultural commodity dependent on land, climate, and season -- cannot be quickly increased. (2) Production requires long gestation period. (3) Inputs like land are fixed and not easily expandable. Therefore, even large price increases lead to only small increases in supply.

Chapter Summary and Quick Revision

Key Formulas

$$PES = (\% \text{ Change in } Q_s) / (\% \text{ Change in } P)$$

$$PES = (\Delta Q_s / \Delta P) \times (P / Q_s)$$

LAST-MINUTE REVISION BOX

1. Supply = Quantity offered for sale at a given price in a given time
2. Law of Supply: Price up $\rightarrow$ Qty Supplied up (Direct relationship)
3. Supply curve slopes UPWARD (positive slope)
4. Change in Qty Supplied = movement along curve (own price change)
5. Change in Supply = shift of curve (other factors change)
6. Increase in Supply: Curve shifts RIGHT | Decrease: shifts LEFT
7. $PES = \% \text{ change } Q_s / \% \text{ change } P$
8. Elastic ($PES > 1$): Manufacturing | Inelastic ($PES < 1$): Agriculture
9. Long run supply is more elastic than short run

MEMORY TRICK

MNEMONIC: Supply curve is like a STAIRCASE going UP from left to right. Remember: 'S for Supply, S for Slope Upward'