

Positive economics: facts and what it is

Normative economics: value judgements and how things ought to be

Unlimited wants + limited resources = scarcity

Opportunity costs: what is (sacrificed) when one decision is made over another

Scarcity exists because of:

- Limited resources
- Unlimited/growing wants
- Inefficient use of resources

Production Possibility Curve (PPC)

- "whole" curve shows all the production possibility points resulting from full utilization of resources

Three assumptions:

- An economy makes only two commodities
- Resources and technology are fixed
- All resources are employed to their fullest capacity

Market Demand: sum of quantities demanded by all consumer in a market

Law of Demand: as price decreases, Qd increases (inverse)

Graphing: Increasing in Demand (shift to right) Decreasing in Demand (shift to left)

Market: Any network that brings buyers and sellers together so they can exchange goods and services

Demand Non-Price Factors

1. Consumer's tastes and preferences
 - Preference for a good, consumption \uparrow , demand \uparrow , shift right
 - No preference, consumption (C) \downarrow , demand \downarrow , shift left
2. Personal Income
 - Normal Good: products whose demand changes directly with income
 - (Income \uparrow , Demand \uparrow , shift right)

****Note:** The Income Effect:

P \downarrow Purchasing Power \uparrow

P \uparrow Purchasing Power \downarrow

- Exception: Inferior Good (demand changes inversely with income)
- Income \uparrow demand \downarrow

3. Price of related goods

- Complementary Goods/Complements (Ice Cream P \uparrow D \downarrow , Ice Cream Cones D \downarrow)
- Substitutes (Beef P \downarrow D \uparrow , Chicken D \downarrow)

****Note:** Substitution effect: As price of good \uparrow , substitute for similar good

Close vs. Remote Substitutes

- Coca-Cola vs. Pepsi (CLOSE)
- Coke vs. Apple Juice (REMOTE - same market)

4. Market Size (Population)
 - Market size \uparrow , Demand for Goods \uparrow
5. Expectations on Future Prices (right now)
 - Price is expected to \downarrow , demand will \downarrow

Supply (S) is the quantities that SELLERS are willing and able to sell at various prices

Law of Supply: (direct relation between P and Qs)

- $P \uparrow Q_s$
- movement along the curve
 - Increase in Supply shift right
 - Decrease in Supply shift left

Supply Non-Price Factors

1. Technology Advancements $S \uparrow$ Efficient
2. Price of Related Goods
 - Willingness to produce current goods may decrease
 - e.g. basketball cost \uparrow soccer balls $\$ \uparrow$
3. Price inputs
 - Land, labour, capital (cost)
 - Cost of production \uparrow supply \downarrow
4. Number of producers
 - Number of producers \uparrow supply \uparrow
5. Unexpected disasters (e.g. weather)
 - Oranges \rightarrow disaster \rightarrow supply \downarrow
6. Government intervention (regulations, taxes, and subsidies)
 - Regulation imposed (e.g. air filters), supply \downarrow
 - Tax \uparrow supply \downarrow
 - Subsidy (government) \uparrow , supply \uparrow

** subsidy is when the government gives businesses money

7. Price expectation (materials \downarrow , supply \uparrow /materials)
 - Expect for good economic situation - produce less
 - In a good situation, produce more

Market Equilibrium Price:

- The price in a competitive market where $Q_d = Q_s$
- Buyers are willing to buy, and sellers are willing to provide

Ceiling is below market equilibrium

Floor is above market equilibrium

1. effects of ceiling prices?
Creating a shortage. Start a black market (stocks up on gas and sells high)
2. effects of floor prices?
Surplus. (milk goes bad) government may need to subsidize the product (buy it all off)

Elastic Demand (PED): small increase in a good's price cause a major decrease in the quantity demanded

- $\% \Delta Q_d > \% \Delta P$
- $\Delta = \text{change}$

Unit elastic: $\% \Delta Q_d = \% \Delta P$

If PED = 1 you have a unitary demand

Inelastic demand: Change in good's price has little impact on the quantity demanded

- $\% \Delta Q_d < \% \Delta P$

1. Perfectly inelastic demand: change in price has impact on Qd (completely vertical)

- Note: usually things need for survival
- Line is vertically upwards
- Consumers not "sensitive" to price change
- Line should intersect x axis

e.g. insulin/medicine

2. Perfectly Elastic demand: price fixed horizontally and consumers willing to buy at that one price

- Note: standard/identical product sold by producers

e.g. potatoes - everyone will buy potatoes at the same price. A price increase will lead to no purchases from that producer

Factors that affect elasticity of demand

1. Availability of substitutes

- More substitutes - elastic (more choice)
- Rise in price? Qd responds/changes A LOT
- Less substitutes - inelastic (less choice)
- Rise in price? Qd responds/changes ONLY A LITTLE
- e.g. diamonds, hydro

2. Nature of product

- Importance of the product and its use
- Not important - elastic
- Price increase? Qd will decrease A LOT
- e.g. chips
- Highly important (necessity) - inelastic
- e.g. hydro gas

3. Percentage of one's income

- Large % of one's income - elastic
- e.g. price of houses ↑ ...Qd decreases A LOT. Let's wait until we can afford it
- Small % of one's income - inelastic
- e.g. price of gym ↑5 cents... Qd changes very little

4. Time period since price change

- Long time since price change - elastic
- People may find substitutes for them, if give time, may be able to find alternative
- Price change is recent - inelastic (cannot change habits right away)

Point Elasticity - $PEd = \% \Delta Qd / \% \Delta P$

- Elasticity of demand
Elastic demand:
If $PEd > 1$ (ex. Final answer is 1.3)
Inelastic Demand:
If PEd is $0 < PED < 1$
Unit Elastic:
If $PEd = 1$
Perfectly inelastic:
If $PEd = 0$
Perfectly Elastic:
If $PEd = \text{infinity}$
- IGNORE THE MINUS (-) SIGN!

Cross Price Elasticity of Demand: relationship between changes in price of one and demand for another related good. Substitutes have positive relationship (direct), complements have negative relationship (inverse), independent is independent.

Income Elasticity of Demand: relationship between change in consumer income and demand for different types of goods. Normal goods have direct and positive relationship. Inferior Goods have inverse and negative relationship.

Elasticity of Supply: Measure the sensitivity of quantity supplies to changes in the price of a product

Inelastic Supply: the seller cannot increase the quantity supplied at a greater rate than the percentage increase in price

Elastic Supply: the seller can increase the quantity

Good Situation - Elastic

Bad Situation - Inelastic

- Can't respond and/or supply very quickly
1. Time
 - Long term - more elastic supply
 - Short term - inelastic supply (e.g. shorter time for supplier to produce required goods)
 - No time - elasticity of supply is zero
 2. Availability/Amount of Resources
 - Resources are scarce - inelastic supply
 - Amount goes down
 - Producers cannot supply very quickly
 - e.g. the Lorax situation
 - A lot of resources - elastic supply
 3. Ease of storage (inventory)
 - More storage - higher possibility to supply
 - Less storage - inelastic supply
 4. Price/cost factors
 - Lower input expenses - more elastic supply
 - You can supply more when cost of land, labour, and/or capital is low

- Higher input expenses - more inelastic supply
 - Cost of production is too high

Factors of Elasticity of Supply	Inelastic	Elastic
Time (Long Run)		X
Time (Short Run)	X	
More Resources		X
Less Resources	X	
More Storage		X
Less Storage	X	
Lower Input expenses		X
High input expenses	x	

Organizations:

1. Sole proprietorship: adv: sole decision maker, easy to start, keep all profits. Dis: limited money to start, difficult to specialize, unlimited liability, difficult to become large enterprise
2. Partnerships: more capital, workload share, easy organize, disagreements, unlimited liability
3. Corporations: adv.: limited liability, sell stocks and bond raise capital, longevity, easy to expand. Dis: selfish management, fixed salaries, expensive to establish, double taxation (corporate and personal income)
 - a. Crown: government
 - b. Business: private
4. Non-profit/charitable: registered by government, board of directors. Adv: tax refunds. Dis: hard to get capital raised through donations
5. Public/government enterprises: garbage disposal, medical, etc. crown corps semi-independent. Produces essentials and reasonable price. Reduce debt and privatize inefficient crown corps.

Utility:

- The satisfaction or pleasure that one gets from consuming a good

Marginal Utility: extra utility of a consumer obtains from the additional consumption of one more unit of a product or a combination of products

Total Utility: total amount of satisfaction from consumption of single product or combination

Law of Diminishing Marginal Utility

When your satisfaction starts to fall, you won't purchase unless the price falls. At one-point, marginal utility becomes negative

Utility Maximizing Rule

- obtain greatest utility the consumer should allocate money income so that the last dollar spent on each good or service yields the same marginal utility

Term	Formula
Total Revenue (TR) Price (P) Output (Q)	$P \times Q$
Average Revenue (AR)	TR/Q
Marginal Revenue	Rate of change of revenue with each additional unit of output
Total Cost (TC)	Total Variable Cost (TVC) + Total Fixed Cost (TFC)
Marginal Cost	$MC = \Delta TC / \Delta Q$ (differences- TC) Rate of change of cost with each additional unit of output
Total Profit (π)	Total Revenue - Total Cost $(P \times Q) - (TVC + TFC)$
Elasticity of Demand	$PED = \% \Delta Qd / \% \Delta P$ Note: $Ed = \frac{(New\ Qd - Old\ Qd) + [(New\ Qd + Old\ Qd) \div 2]}{(New\ P - Old\ P) + [(New\ P + Old\ P) \div 2]}$
Income Elasticity	$\frac{\% \text{ Change in Quantity Demanded}}{\% \text{ Change in Income}}$
Cross Price Elasticity	$XED = \frac{\% \Delta \text{ in } qd \text{ of } X}{\% \Delta \text{ in } p \text{ of } Y}$