Etymology & History

Etymology

The term 'Economics' owes its origin to the Greek word 'Oikonomia' which means 'household'.

History

Till 19th century, Economics was known as 'Political Economy.'

The book named 'An Inquiry into the Nature and Causes of the Wealth of Nations' (1776) usually abbreviated as 'The Wealth of Nations', by Adam Smith is considered as the first modern work of Economics.

Economic Problem/Scarcity Problem/Choice making Problem

An economy exists because of two basic facts.

1. **Human wants for goods and services are unlimited**
2. **Productive resources with which to produce goods and services are scarce.**

Hence we cannot satisfy all our wants and desires by producing everything we want.
It is this basic problem of scarcity which gives rise to many of the economic problems

Thus a society is faced with the problem of choice among the vast array of wants that are to be satisfied.

Note

If it is decided to use more resources in one line of production, then resources must be withdrawn from the production of some other goods.

Hence, we have the problem of allocating scarce resources so as to achieve the greatest possible satisfaction of wants of the people.

This is the economic problem. It is also called the scarcity problem or Choice making problem

What is Economics

Definition

According to Lionel Robbins, "Economics is a social science which studies human behavior as relationship of unlimited wants and scarce means having alternative uses."

Feature

1. **Wants are unlimited**
2. **Resources are scarce**
3. **Resources have alternative uses**
4. **Wants can be graded according to requirement**

- **It a permanent human problem**
- **It studies human behaviour**
- **Scarcity is relative Scarcity**

Central Economic Problem

Central task of economics is to solve central economic problem i.e.

- **What to produce**
- **How to produce**
- **For whom to produce**
- **What Provision to be made for future**

Economics Analysis

Economics has been broadly divided into two major parts i.e.

- **Micro Economics.**
- **Macro Economics.**

Economics Analysis

Micro Economics is basically the study of the behaviour of different individuals and organizations within an economic system.

We mainly study the following in Micro-Economics:

(i) Product pricing;
(ii) Consumer behaviour;
(iii) Behaviour of firms
(iv) Factor pricing;
(v) The economic conditions of a section of people;
(vi) Location of industry.

Economics Analysis

Macro Economics is the study of the overall economic phenomena or the economy as a whole, rather than its individual parts.

It analyzes the overall economic environment in which the firms, governments and households make decisions.

A few areas that come under Macro Economics are:

(i) National Income and National Output;
(ii) The general price level and interest rates;
(iii) Balance of trade and balance of payments;
(iv) External value of currency;
(v) The overall level of savings and investment; and
(vi) The level of employment and rate of economic growth

Business Economics

The management of a business unit generally needs to make strategic, tactical and operational decisions.

A few examples of issues requiring decision making in the context of businesses are illustrated below:

- Should our firm be in this business?
- Should the firm launch a product, given the highly competitive market environment?
- If the firm decided on launching the product, which available technique of production should be used?
- From where should the firm procure the necessary inputs and at what prices so as to have competitive edge in the market?
- Should the firm make the components or buy them from other firms?
- How much should be the optimum output and at what price should the firm sell?
- How will the product be placed in the market? Which customer segment should we focus on and how to improve the customer experience? Which marketing strategy should be chosen? How much should be the marketing budget?
- How to combat the risks and uncertainties involved?

Business Economics

Business Economics may be defined as the use of economic analysis to make business decisions involving the best use of an organization's scarce resources.

Joel Dean defined Business Economics in terms of the use of economic analysis in the formulation of business policies.

Business Economics is essentially a component of Applied Economics as it includes application of selected quantitative techniques such as

- **Linear programming,**
- **Regression analysis,**
- **Capital budgeting,**
- **Break even analysis and**
- **Cost analysis.**

Nature of Business Economics

Economics is a Science:

- Science is a systematized body of knowledge which establishes **cause and effect relationships.**

- Business Economics integrates the tools of decision sciences such as Mathematics, Statistics and Econometrics with Economic theory to arrive at appropriate strategies for achieving the goals of the business enterprises.

Business Economics is art

- Business Economics is an art as it involves practical application of rules and principles for the attainment of set objectives.

Nature of Business Economics

Normative in Nature:

Economic theory has developed along two lines – positive and normative.

Positive science	Normative science
What it is	What it should be
Cause and effect	Opinion
Descriptive	Prescriptive
No value judgment	Value judgment
Studies economic issues	Provides the solution

Nature of Business Economics

Normative in Nature:

- Business Economics is generally normative or prescriptive in nature.
- It suggests the application of economic principles with regard to policy formulation, decision-making and future planning.
- However, it requires the study of positive or descriptive economic theory in order to understand the environment and behaviour
- Thus, Business Economics combines the essentials of normative and positive economic theory, the emphasis being more on the former than the latter

Nature of Business Economics

Based on Micro Economics:

- Business Economics is based largely on Micro-Economics.

- Since Business Economics is concerned more with the decision making problems of individual establishments, it relies heavily on the techniques of Microeconomics.

Incorporates elements of Macro Analysis:

- It is affected by the external environment of the economy in which it operates such as, income and employment levels in the economy and government policies with respect to taxation, interest rates, exchange rates, industries, prices, distribution, wages and regulation of monopolies.

- A business manager must be acquainted with these and other macroeconomic variables, present as well as future, which may influence his business environment

Nature of Business Economics

Pragmatic in Approach:

- Micro-Economics is abstract and purely theoretical and analyses economic phenomena under unrealistic assumptions.

- In contrast, Business Economics is pragmatic in its approach as it tackles practical problems which the firms face in the real world.

Interdisciplinary in nature:

- Business Economics is interdisciplinary in nature as it incorporates tools from other disciplines such as Mathematics, Operations Research, Management Theory, Accounting, marketing, Finance, Statistics and Econometrics

Nature of Business Economics

Use of theory of Markets and Private Enterprises:

- Business Economics largely uses the theory of markets and private enterprise.
- It uses the theory of the firm and resource allocation in the backdrop of a private enterprise economy.

Scope in Economics

The scope of Business Economics is quite wide.
It covers most of the practical problems a manager or a firm faces.

There are two categories of business issues to which economic theories can be directly applied, namely:

1. Microeconomics applied → operational or internal Issues
2. Macroeconomics applied →environmental or external issues

Scope in Economics

Microeconomics applied to operational or internal Issues

Operational issues include all those issues that arise within the organisation and fall within the purview and control of the management.

Issues related to

- Choice of business and its size,
- technology and
- factor combinations,
- pricing and sales promotion,

The following Microeconomic theories deal with most of these issues.

Scope in Economics

Microeconomics applied to operational or internal Issues

Demand analysis and forecasting:

Demand Analysis – Chapter 2 and 3

Demand analysis pertains to the behaviour of consumers in the market. It studies the nature of consumer preferences and the effect of changes in the determinants of demand such as, price of the commodity, consumers' income, prices of related commodities, consumer tastes and preferences etc.

Demand Forecasting – Chapter 5

Demand forecasting is the technique of predicting future demand for goods and services on the basis of the past behaviour of factors which affect demand.

Scope in Economics

Microeconomics applied to operational or internal Issues

Production and Cost Analysis:

Production Analysis- Chapter 6

Production theory explains the relationship between inputs and output.
A business economist has to decide on the optimum size of output, given the objectives of the firm.

Production analysis enables the firm to decide on the choice of appropriate technology and selection of least - cost input-mix to achieve technically efficient way of producing output, given the inputs.

Cost Analysis – Chapter 7

Cost analysis enables the firm to recognise the behaviour of costs when variables such as output, time period and size of plant change. The firm will be able to identify ways to maximize profits by producing the desired level of output at the minimum possible cost.

Scope in Economics

Microeconomics applied to operational or internal Issues

Inventory Management:

Inventory management theories pertain to rules that firms can use to minimise the costs associated with maintaining inventory in the form of ‘work-in-process,’ ‘raw materials’, and ‘finished goods’.

Inventory policies affect the profitability of the firm. Business economists use methods such as

- ABC analysis,
- simple simulation exercises and
- mathematical models

to help the firm maintain optimum stock of inventories

Scope in Economics

Microeconomics applied to operational or internal Issues

Market Structure and Pricing Policies:

Analysis of the structure of the market provides information about the nature and extent of competition which the firms have to face.

This helps in determining the degree of market power (ability to determine prices) which the firm commands and the strategies to be followed in market management under the given competitive conditions such as, product design and marketing.

Price theory explains how prices are determined under different kinds of market conditions and assists the firm in framing suitable price policies

Scope in Economics

Microeconomics applied to operational or internal Issues

Resource Allocation:

- Business Economics, with the help of advanced tools such as linear programming, enables the firm to arrive at the best course of action for optimum utilisation of available resources.

Theory of Capital and Investment Decisions:

- For maximizing its profits, the firm has to carefully evaluate its investment decisions and carry out a sensible policy of capital allocation.

- Theories related to capital and investment provide scientific criteria for choice of investment projects and in assessment of the efficiency of capital.

- Business Economics supports decision making on allocation of scarce capital among competing uses of funds

Scope in Economics

Microeconomics applied to operational or internal Issues

Profit Analysis:

- Profits are, most often, uncertain due to changing prices and market conditions.
- Profit theory guides the firm in the measurement and management of profits under conditions of uncertainty. Profit analysis is also immensely useful in future profit planning.

Risk and Uncertainty Analysis:

- Business firms generally operate under conditions of risk and uncertainty.
- Analysis of risks and uncertainties helps the business firm in arriving at efficient decisions and in formulating plans on the basis of past data, current information and future prediction

Scope in Economics

Macroeconomics applied to environmental or external issues

Environmental factors have significant influence upon the functioning and performance of business. The major macro economic factors relate to:

- the type of economic system
- stage of business cycle
- the general trends in national income, employment, prices, saving and investment.
- Government's economic policies like industrial policy, competition policy, monetary and fiscal policy, price policy, foreign trade policy and globalization policies
- working of financial sector and capital market
- socio-economic organisations like trade unions, producer and consumer unions and cooperatives.
- social and political environment

Business decisions cannot be taken without considering these present and future environmental factors. As the management of the firm has no control over these factors, it should fine-tune its policies to minimise their adverse effects

Ten principles of economics

HOW PEOPLE MAKE DECISION

PRINCIPLE 1: PEOPLE FACE TRADE-OFFS

The first lesson about making decisions is summarized in an adage popular with economists**: 'There is no such thing as a free lunch.'** To get one thing that we like, we usually have to give up another thing that we also like. Making decisions requires trading off the benefits of one goal against those of another

Case scenario -1

Consider a student who must decide how to allocate her most valuable resource – her time.

a) She can spend all of her time studying economics which will bring benefits such as a better class of degree;
b) she can spend all her time enjoying leisure activities which yield different benefits; or
c) she can divide her time between the two.

For every hour she studies, she gives up an hour she could have devoted to spending time in the gym, riding a bicycle, watching TV, napping or working at her part-time job for some extra spending money.

Ten principles of economics

HOW PEOPLE MAKE DECISION

PRINCIPLE 2: THE COST OF SOMETHING IS WHAT YOU GIVE UP TO GET IT

Because people face trade-offs, making decisions requires comparing the costs and benefits of alternative courses of action. In many cases, however, the cost of some action is not as obvious as it might first appear.

Case scenario-3

Consider, for example, the decision whether to go to university.

Benefit: Intellectual enrichment and a lifetime of better job opportunities.

Cost: Add up the money you spend on tuition fees, books, room and board.

But Yet this total does not truly represent what you give up to spend a year at university.

Making decisions requires comparing the costs and benefits of alternative choices.

- Opportunity cost: The value of the next best alternative
- Cost of going to college: Tuiton + foregone income

Ten principles of economics

HOW PEOPLE MAKE DECISION

PRINCIPLE 3: RATIONAL PEOPLE THINK AT THE MARGIN

- Rational people systematically and purposefully do their best to achieve their objectives
- Economists use the term marginal changes to describe small incremental adjustments to an existing plan of action.

Case scenario -3

At dinner time, the decision you face is not between fasting or eating as much as you can, but whether to take that extra serving of pizza.

By comparing these marginal benefits and marginal costs, you can evaluate
Individuals and firms can make better decisions by thinking at the margin.
A rational decision maker takes an action if and only if the marginal benefit of the action exceeds the marginal cost.

Ten principles of economics

HOW PEOPLE MAKE DECISION

PRINCIPLE 4: PEOPLE RESPOND TO INCENTIVES

Because people make decisions by comparing costs and benefits, their behaviour may change when the costs or benefits change. That is, people respond to incentives.

Incentive = something that induces a person to act (navigation mechanism in making decisions), i.e. the prospect of a reward or punishment.

Public policymakers should never forget about incentives, because many policies change the costs or benefits that people face and, therefore, alter behaviour.

Examples:

a. In response to higher gas prices, sales of “hybrid” cars rise.
b. In response to higher cigarette taxes, the incidence of smoking falls.

HOW PEOPLE INTERACT
PRINCIPLE 5: TRADE CAN MAKE EVERYONE BETTER OFF

Case Scenario:

- Have you ever seen a family who would grow its own food, make its own clothes and build its own home.
- Trade allows each person to specialize in the activities he or she does best, whether it is farming, sewing or home building.
- By trading with others, people can buy a greater variety of goods and services at lower cost.

Countries as well as families benefit from the ability to trade with one another.
Trade allows countries to specialize in what they do best and to enjoy a greater variety of goods and services.

HOW PEOPLE INTERACT
PRINCIPLE 6: MARKETS ARE USUALLY A GOOD WAY TO ORGANIZE ECONOMIC ACTIVITY

Market = a arrangement between buyers and sellers through which they transact.

“Organize economic activity” means determining
- what goods to produce
- how to produce them
- how much of each to produce
- who gets them

With the help of price mechanism , the central economic problem will get solved and will to efficient and optimum allocation of resources

HOW PEOPLE INTERACT
PRINCIPLE 7: GOVERNMENTS CAN SOMETIMES IMPROVE MARKET OUTCOMES

Market works only if property rights are enforced.

Property rights = the ability of an individual to own and exercise control over scarce resources.

Government may alter market outcome to promote efficiency when there is market failure (the market fails to allocate society's resources efficiently).

- Externalities = the impact of one person's actions on the wellbeing of a bystander (e.g. pollution).
- Market power = the ability of a single person/firm (or small group) to have a substantial influence on the market prices (e.g. monopoly)

Ten principles of economics

HOW THE ECONOMY AS A WHOLE WORKS
PRINCIPLE 8: AN ECONOMY'S STANDARD OF LIVING DEPENDS ON ITS ABILITY TO PRODUCE GOODS AND SERVICES

More production of goods and service – higher standard of living
Less production of goods and service – lower standard of living

Ten principles of economics

HOW THE ECONOMY AS A WHOLE WORKS
PRINCIPLE 9: PRICES RISE WHEN THE GOVERNMENT PRINTS TOO MUCH MONEY

More Money Supply > Goods and service – lead to increase in inflation

Incident of Germany, Zimbabwe, Venezuela

In Zimbabwe in March 2007 inflation was reported to be running at 2,200 per cent. That meant that a good priced at the equivalent of Z$2.99 in March 2006 would be priced at Z$65.78 just a year later.

In February 2008, inflation was estimated at 165,000 per cent. Five months later it was reported as 2,200,000 per cent. In July 2008 the government issued a Z$100 billion note. Government issued Z$10, 20, 50 and 100 trillion dollar notes – 100 trillion is 100 followed by 12 zeros.

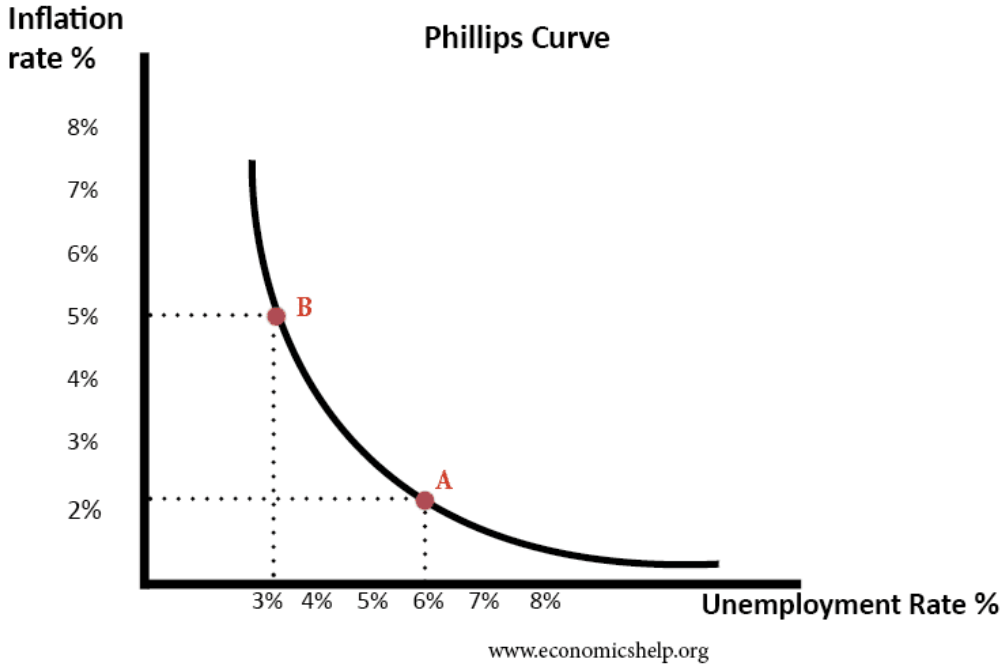
This episode is one of history's most spectacular examples of inflation, an increase in the overall level of prices in the economy.

HOW THE ECONOMY AS A WHOLE WORKS
PRINCIPLE 10: SOCIETY FACES A SHORT-RUN TRADE-OFF

Short run Trade off between Inflation

More money
Increase in demand
Increase in Inflation
Reduction in unemployment

Less money
Decrease in demand
Decrease in inflation
Increase in unemployment



Meaning of Demand

Meaning of Demand

What is Demand

In ordinary Sense
Demand = Desire

In Economics
Demand ≠ Desire

In Economics
Demand= Desire + Ability to buy + Willingness to pay

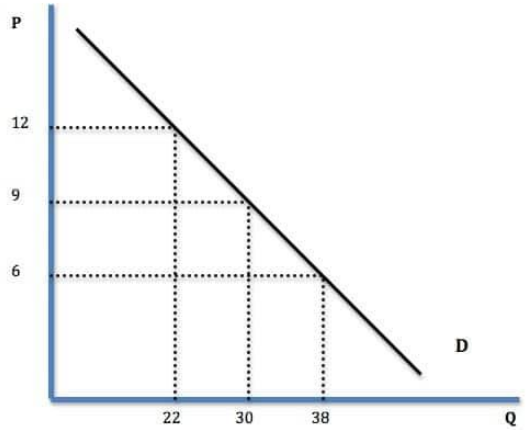
In case of poor person
Desire(✓) + Ability to pay (✗)
In case of miser
Desire(✓) + Ability to pay (✓) + Willingness to buy (✗)

Difference between Quantity Demand and Demand

Tabular Presentation

Price of a Commodity	Quantity Demanded	Consumer Decision
12	22	QD(A)
9	30	QD(B)
6	38	QD(C)

Graphical Presentation



Note: Point Represent Quantity Demand (Decision at a Specific Price)
Line Represents Demand (Behaviour at a Various price)

Note: Behaviour is group of different decision that helps us to understand

Difference between Stock and Flow

Stock

A stock is a quantity which is measurable at a particular point of time e.g., 4 p.m., 1st January, Monday, 2010, etc.

For example - Benches in Classes

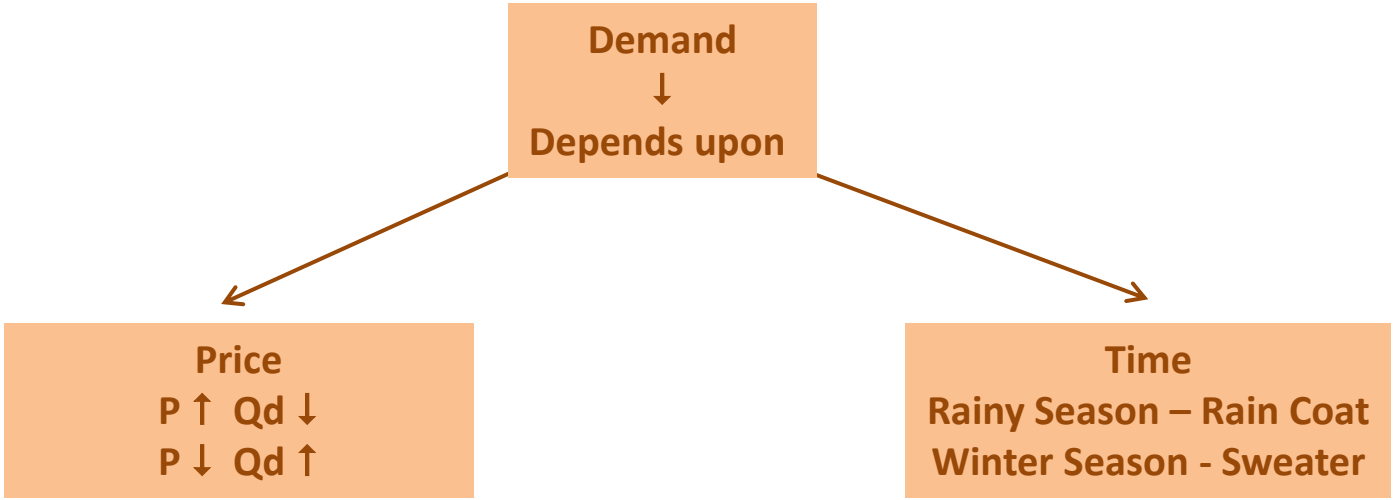
Flow

A flow is a quantity which is measured with reference to a period of time (length of time) e.g., hours, days, weeks, months or years.

For example- Tap water

Note: The quantity demanded is a flow

Demand is a Relative Concept



Hence demand is a relative concept

Demand Analysis

Demand Analysis

Individual Demand

For example:
Mr A demanded 10 Chocolate at Rs. 10 in the period of one month

Individual Demand =

Quantity of Commodity demanded →	**10 chocolate**
by a consumer →	**Mr. A**
at a given price →	**Rs. 10**
during a given period of time →	**One Month**

Demand Analysis

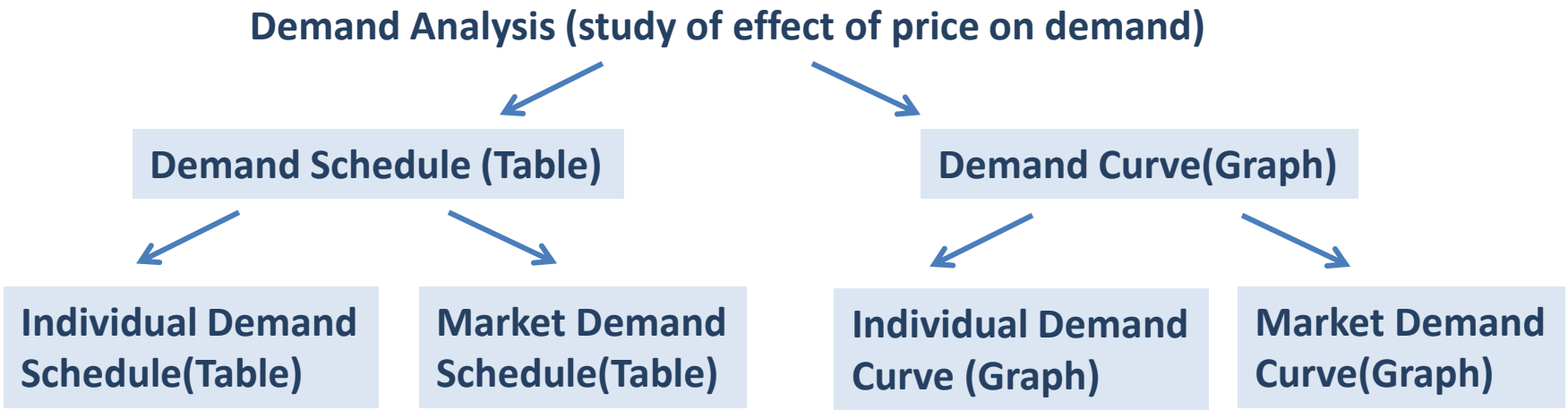
Market Demand

For example:
Total Quantity demanded by all consumer is 100 Chocolate at Rs. 10 for one month

Market Demand =

Total Quantity of Commodity demanded →	**100 chocolate**
by all the consumer →	**Mr. A, Mr. B, Mr. C, Mr. D etc.**
at a given price →	**Rs. 10**
during a given period of time →	**One Month**

Demand Analysis



Demand Analysis

Mr. A demand for Chocolate for one month

Price of Chocolate (Rs.)	Quantity demanded Of Chocolate(in units)
10	1
8	2
6	3
4	4
2	5

Price ↓ Quantity Demanded ↑
Price ↑ Quantity Demanded ↓
Inverse Relationship

Demand Analysis

Market Demand on a Chocolate for a month

Price In (Rs.)	A's QD	B's QD	C's QD	Market Demand
10	5	10	15	30
8	10	15	20	45
6	15	20	25	60
4	20	25	30	75
2	25	30	35	90

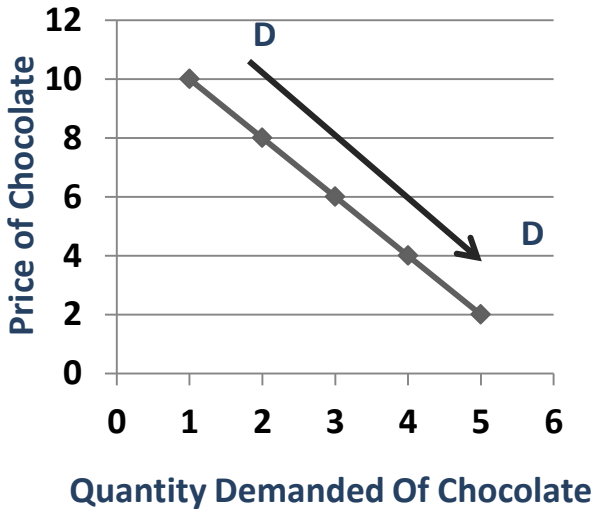
Price ↓ Quantity Demanded ↑
Price ↑ Quantity Demanded ↓
Inverse relationship

Demand Analysis

Individual Demand Schedule and Individual Demand Curve

MR. A Demand for chocolate in month of February

Price (Chocolate in Rs.)	QD (Chocolate in units)
10	1
8	2
6	3
4	4
2	5



X - axis – QD of Chocolate
Y - axis Price of Chocolate

Inverse Relationship
Price ↓ QD ↑
Price ↑ QD ↓

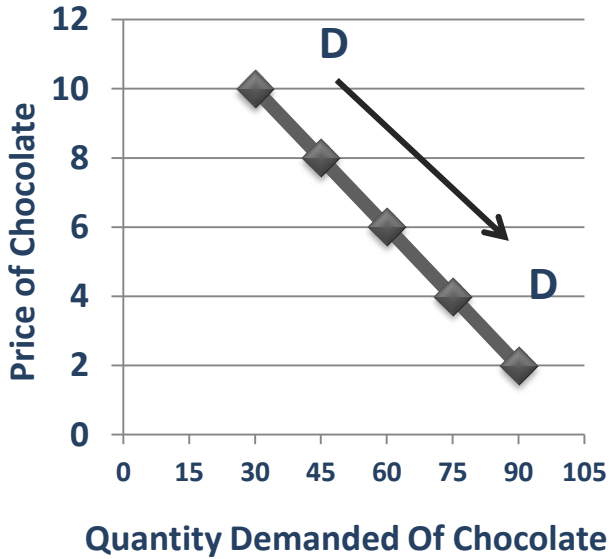
Demand Curve 'DD' slopes downward from left to right

Demand Analysis

Market Demand Curve

Demand for chocolate in month of February

Price	A's	B's	C's	MD
10	5	10	15	30
8	10	15	20	45
6	15	20	25	60
4	20	25	30	75
2	25	30	35	90



X - axis – QD of Chocolate
Y - axis Price of Chocolate

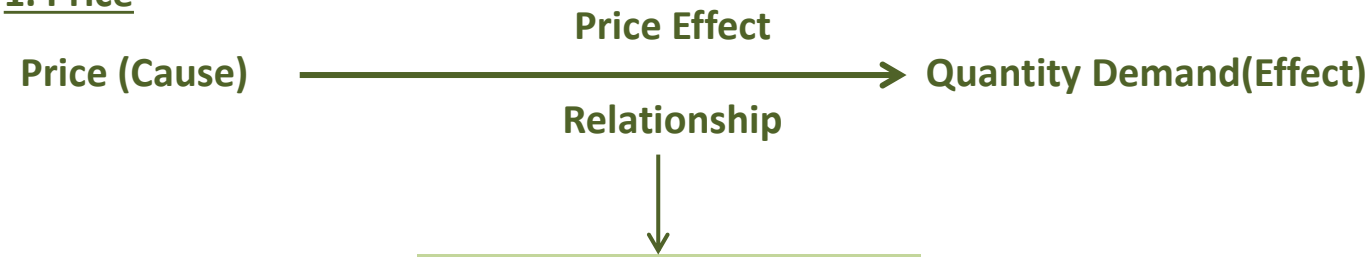
Inverse Relationship
Price ↓ QD ↑
Price ↑ QD ↓

Demand Curve 'DD' slopes downward from left to right

Determinants of demand

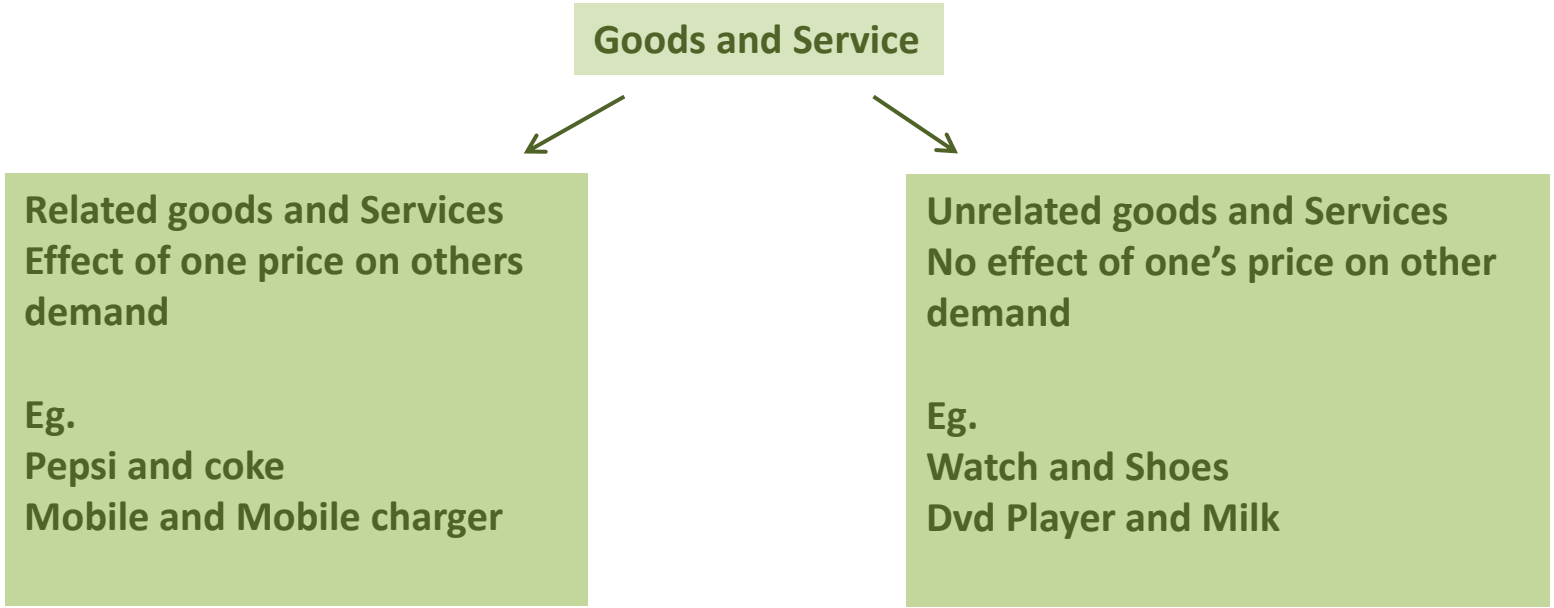
Determinants of Demand

1. Price



Determinants of Demand

2. Price of related goods



Determinants of Demand

2. Price of related goods

Related Goods can be classified as Complementary or Competitive Goods

Complementary Goods

Complementary goods are those goods which are consumed together or simultaneously.

Competitive Goods

Two commodities are called competing goods or substitutes when they satisfy the same want and can be used with ease in place of one another.

Complementary goods

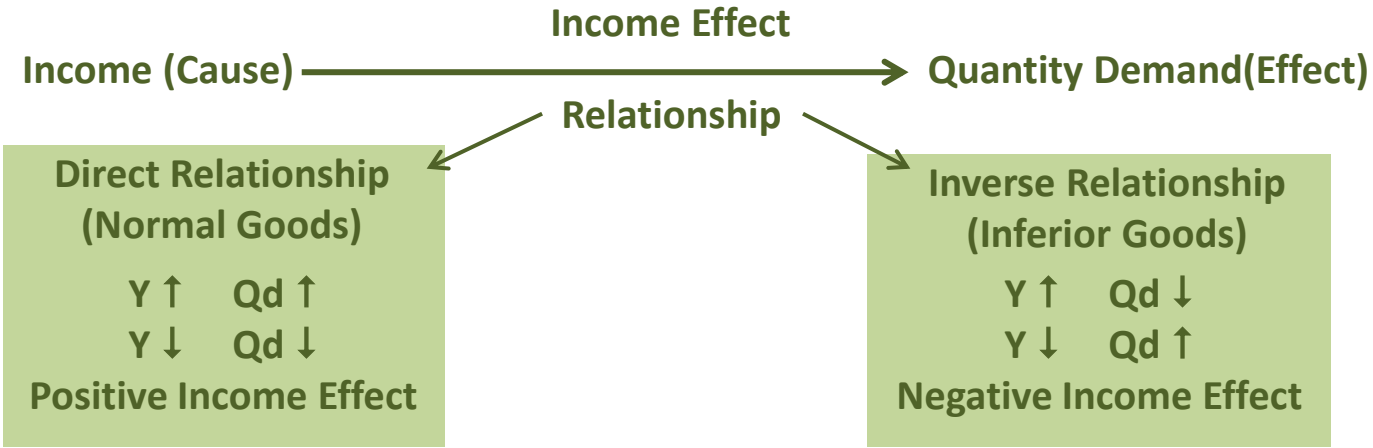
Petrol		car
P ↑	D ↓	D ↓
P ↓	D ↑	D ↑

Competitive goods(Substitute)

Blackberry		Apple
P ↓	D ↑	D ↓
P ↑	D ↓	D ↑

Determinants of Demand

3. Income



Determinants of Demand

4. Taste/ Habits / Fashion

Taste/ Habits /fashion rise	**Demand rise**
Taste/ Habits /fashion falls	**Demand Falls**

Goods which are modern or more in fashion command higher demand than goods which are of old design and out of fashion.

Determinants of Demand

Network effect (Preference)

Demonstration effect

The bandwagon effect arises when people's preference for a **commodity increases** as the number of **people buying it increases**

Example
I phone, One plus Mobile

Snob effect or Veblen effect → **Named after the American Economist Thorstein Veblen**

The Veblen effect arises when people's preference for a **commodity increases** as the number of **people buying it decreases**

Example
Rolls Royce Car, Diamond, Luxury House

In any case, people have tastes and preferences and these change, sometimes, due to external and sometimes, due to internal causes and influence demand.

Determinants of Demand

5. Consumer Expectation

Consumers' expectations regarding

1. **Future prices**
2. **Income**
3. **Supply conditions etc. influence current demand.**

Determinants of Demand

5. Consumer Expectation

Future Price Expectation

Future Price of gold	Present Demand For gold
P ↑	D ↑
P ↓	D ↓

Future Income Expectation

Future Income	Present Demand
Y ↑	D↑
Y ↓	D↓

Determinants of Demand

5. Other Factor

a. Size of Population

Larger the population
↓
Higher will be Quantity Demanded

Smaller the population
↓
Lower will be Quantity Demanded

b. Composition of Population

More Old People
↓
Demand For Spectacles
Walking sticks etc.

More Children
↓
Demand For toys,
Baby foods, toffee etc.

Determinants of Demand

5. Other Factor

c. Level of national income and its distribution

Higher the national income – Greater the Quantity demanded of normal goods
Lower the national income – Smaller the Quantity demanded of normal goods

Uneven Distribution of income → **Demand will be less**

Even Distribution of income → **Demand will be More**

Determinants of Demand

5. Other Factor

c. Consumer credit facility and interest rate

Easy availability of credits –	Demand ↑(Durable goods)
No easy availability of credits –	Demand ↓(Durable goods)

High Interest Rate –	High Cost of Borrowing -	Demand↓
Low Interest Rate –	Low Cost of Borrowing -	Demand↑

Law of demand (Price- Quantity Demand Relationship)

Law of demand (Price- Quantity Demand Relationship)

1. Introduction
2. Statement Of law
3. Explanation of Law
4. Assumption
5. Demand Schedule
6. Demand Curve

Introduction

- The law states the nature of relationship between the quantity demanded of a product and its price.
- Alfred Marshall- Principle of Economics-1890
- General behaviour of Rational consumer

Alfred Marshall

Law of demand (Price- Quantity Demand Relationship)

Statement

Other things being constant

Price P ↑ Quantity Demand Qd ↓
Price P ↓ Quantity Demand Qd ↑

Explanation

Price (Cause) → **Quantity Supply (Effect)**

Inverse Relationship
(Consumer Behaviour)

Law of demand (Price- Quantity Demand Relationship)

Assumption

- **Assumptions are initial conditions made before a micro or macroeconomic analysis is built.**
- **They are used for simplification**
- **Assumptions can be used to isolate the effects of a change in one variable on another**

We don't want any third factor to affect Quantity Demand and in order to prove the law of Demand there we will keep certain condition i.e. assumption

Law of demand (Price- Quantity Demand Relationship)

Demand Schedule

A demand schedule is drawn upon the assumption that all the other influences remain unchanged

Price	Quantity demanded
10	100
20	80
30 ↑	60 ↓
40 ↓	40 ↑
50	20

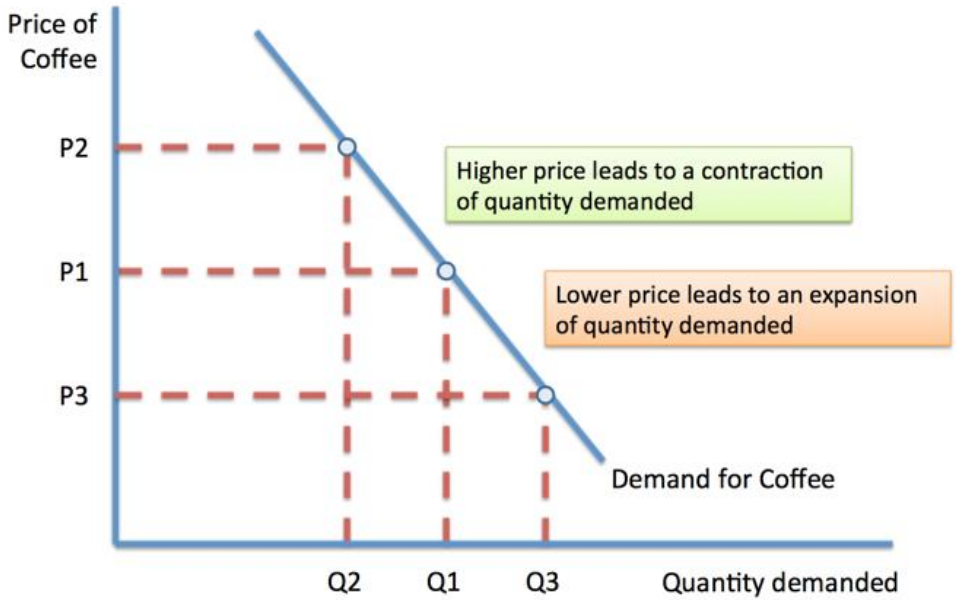
Price P ↑ Quantity Demand Qd ↓
Price P ↓ Quantity Demand Qd ↑
Inverse Relationship

Law of demand (Price- Quantity Demand Relationship)

Demand Curve

A demand curve is a graphical presentation of the demand schedule

1. **Price on the vertical axis and**
2. **Quantity on the horizontal axis.**



Points to be Noted

1. **Inverse relationship**
2. **Downward sloping from left to right**

Why does Demand Curve slopes downward From Left to Right

Why does Demand Curve slopes downward From Left to Right

1. Law of diminishing marginal utility:

Law of DMU

Units	Mux	Px1	Px2
1	20	15	5
2	15	15	5
3	10	15	5
4	5	15	5
5	0	15	5

Consumer Equilibrium (Decision)
MUx= Px

Consumer Decision

Price	Consumer decision
Px1 = 15	2 QD
Px2 = 5 ↓	4 QD ↑

The operation of diminishing marginal utility and the act of the consumer to equalize the utility of the commodity with its price result in a downward sloping demand curve

Why does Demand Curve slopes downward From Left to Right

a. Income Effect

Nominal Income	Price	Real Income (Purchasing Power)	Demand
1000	100	10	10
1000	200 ↑	5 ↓	5 ↓
1000	50 ↓	20 ↑	20 ↑

Change in Price → Change in purchasing power (Real income) → Changes the Demand

Why does Demand Curve slopes downward From Left to Right

b. Substitution Effect

Soft Drink Marked Demand = 10000

Coke

Price	Demand	
10	6000	
12 ↑	3000 ↓	→ Substitution (3000)
8 ↓	8000 ↑	← Substitution (5000)

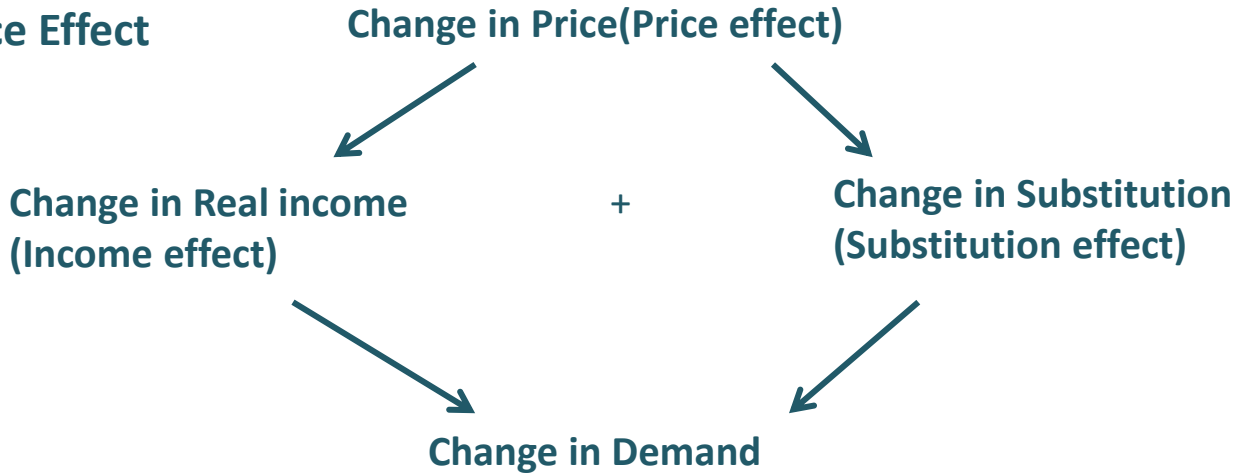
Pepsi

Price	Demand
10	4000
10	7000
10	2000

Change in Price → Substitution of the product→ Changes the Demand

Why does Demand Curve slopes downward From Left to Right

2. Price Effect



Income Effect + Substitution Effect = Price Effect (Combined Effect)

Why does Demand Curve slopes downward From Left to Right

3. Arrival of new consumers:

P↓	More people can afford it	Increase in New consumer	QD↑
P↑	Less people can afford it	Decrease in New Consumer	QD↓

Change in Price → New Consumer → Change in demand

Why does Demand Curve slopes downward From Left to Right

4. Different uses:

Many Commodity have Multiple uses for e.g. : Water, electricity, Coal etc.

P↓	Increase in number of uses	QD↑
P↑	Decrease in Number of uses	QD↓

Variation in demand
(Changes in Quantity Demand)

Variation in demand (Changes in Quantity Demand)

Effect of Price only Keeping other factor constant

Expansion/ Extension

P – 20 QD – 100
P – 15↓ QD – 150 ↑

Increase in **Quantity demanded**

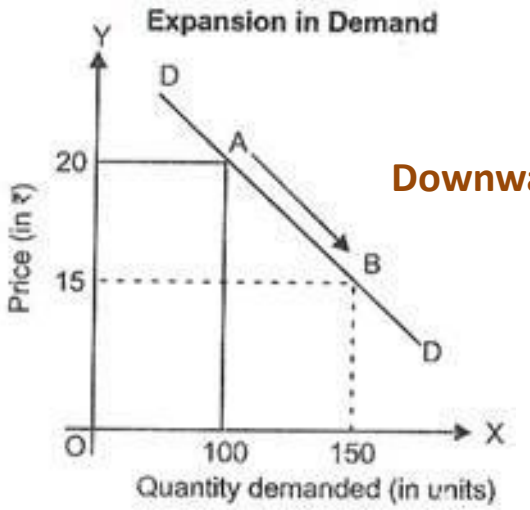


Fig. 3.5

Downward movement

Contraction/Reduction

P – 20 QD - 100
P – 25 ↑ QD – 70 ↓

Decrease in **Quantity demanded**

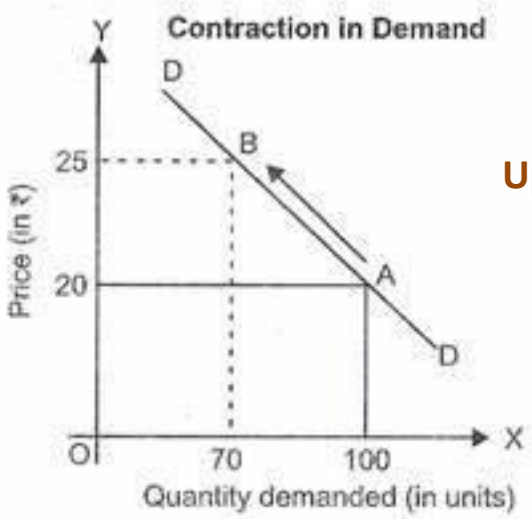


Fig. 3.6

Upward movement

Changes in Demand
(Effect of factor other than price)

Changes in Demand (factor other than price)

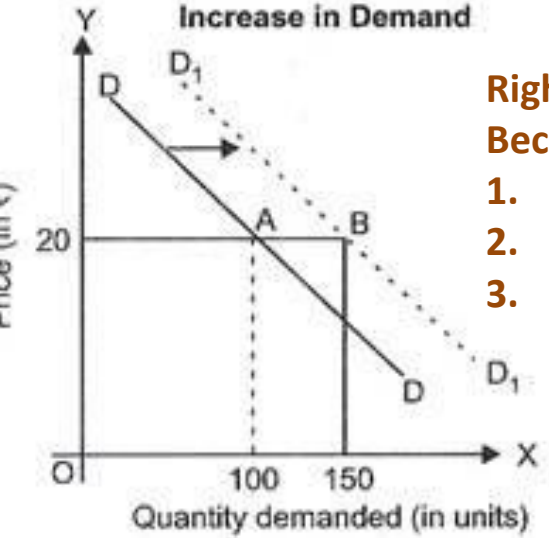
Effect of factor other than price keeping Price constant

Increase in Demand

P – 20 QD – 100 Y - 1000

P – 20↔ QD – 150 ↑ Y - 2000↑

Same price – Increase in Demand



Rightward Shift

Becoz

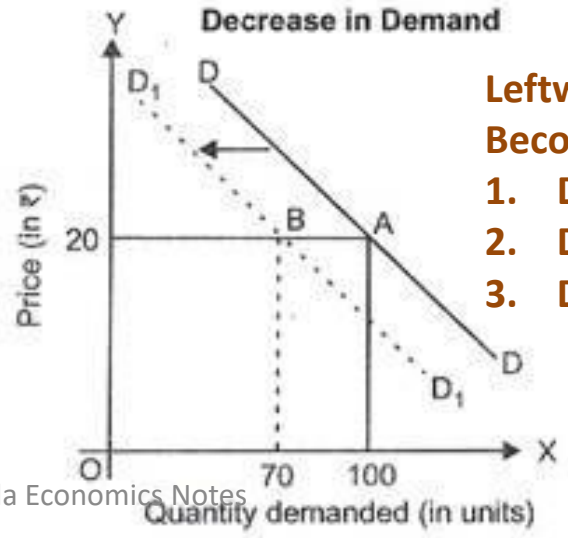
1. **Increase in quality**
2. **Increase in income**
3. **Increase in advt**

Decrease in Demand

P – 20 QD – 100 Y - 2000

P – 20 ↔ QD – 70 ↓ Y - 1000↓

Same price – Decrease in Demand



Leftward Shift

Becoz

1. **Decrease in quality**
2. **Decrease in income**
3. **Decrease in advt**

MOVEMENTS ALONG THE DEMAND CURVE VS. SHIFT OF DEMAND CURVE

Movement along the demand curve(Variation in Demand)	Shift in Demand curve(Changes in Demand)
A movement along the demand curve indicates changes in the quantity demanded because of price changes, other factors remaining constant	A shift of the demand curve indicates that there is a change in demand keeping price as constant and other factors have changed.
It is change in Quantity Demand (Consumer Decision)	It is a change in Demand (Consumer Behaviour)
Expansion and Contraction	Increase or Decrease
Movement Downward and Upward	Shift Rightward and Leftward

Meaning of Supply

Meaning of Supply

Supply = Ability to sale + Willingness to offer

↓ ↓

Stock Market Price

In case A
Ability to Sale (✗) + Willingness to offer (✓) = Supply (✗)

In case B
Ability to pay (✓) + Willingness to offer (✗) = Supply (✗)

Note: Supply refers to what a firm offer for sale in the market, not necessarily to what they sell

Difference between Quantity Supply and Supply

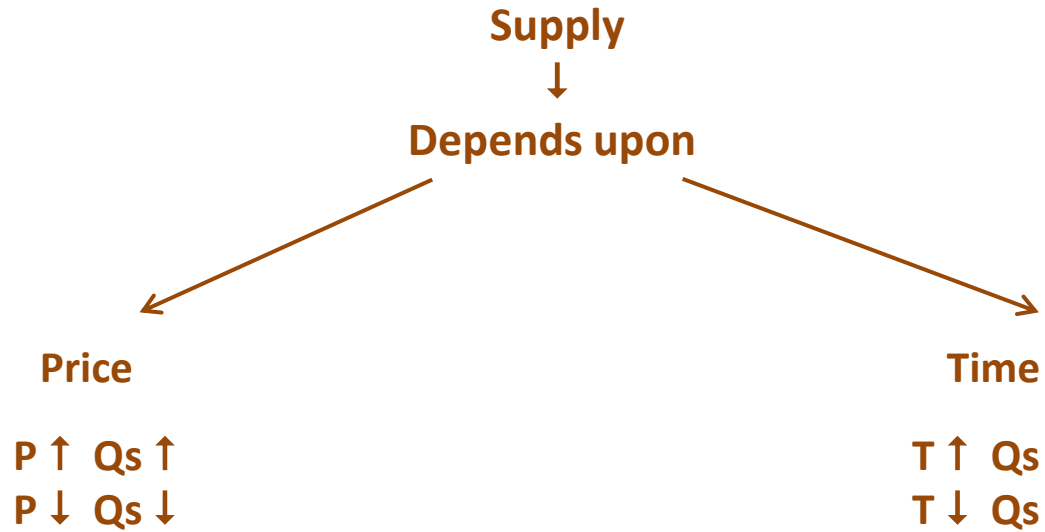
Tabular Presentation

Price of a Commodity	Quantity Supply	Producer Decision
12	120	QS(A)
9	90	QS(B)
6	60	QS(C)

Graphical Presentation

Note: Point Represent Quantity Supply (Decision at a Specific Price)
Line Represents Supply(Behaviour at a Various price)

Relative Concept



Hence Supply is a relative concept

Example: Mr. A has supplied 10 Chocolate at Price Rs. 100 for one month

Meaning of Supply

The term ‘supply’ refers to the amount of a good or service that the producers are willing and able to offer to the market at various prices during a given period of time

Ability to sale
Willingness to offer
At Various prices
During a given period of time

Supply = Ability to sale + Willingness to offer + At Various prices + given period of time

Determinants of Supply

Determinants of Supply

1. Price

Other things being constant

Price↑	Profit ↑	QS↑
Price↓	Profit ↓	QS↓

Price (Cause) ⟶ Quantity Supply (Effect)

Direct Relationship

↓

Producer Behaviour

2. Prices of related goods

Nokia		Samsung
Price	Quantity Supply	Quantity Supply
10000	100	80
12000↑	120↑	60 ↓
8000 ↓	80 ↓	100↑

Price of related goods (Cause) → Inverse relationship → Quantity Supplied (Effect)

Determinants of Supply

3. Prices of factors of production (Cost of input)

Price of Raw material	Cost of Production	Profit	Quantity Supply
↑	↑	↓	↓
↓	↓	↑	↑

Determinants of Supply

4. State of technology

New Technology	Supply Increase
Outdated Technology	Supply decrease

Determinants of Supply

5. Government Policy:

The production of a good may be subject to the imposition of commodity taxes such as excise duty, sales tax and import duties.

Taxes ↑	Cost of production ↑	Supply↓
Taxes ↓	Cost of production ↓	Supply↑
Subsidies ↑	Cost of Production ↓	Supply↑
Subsidies↓	Cost of production ↑	Supply↓

Note: When government imposes restrictions such as import quota on inputs, rationing of input supply etc, production tends to fall and supply fall

6. Number of Sellers and Size of Market

Competition	Large no. of Firms	Supply↑
Monopoly	Single firms	Supply↓

Size of industry	Large	Supply↑
Size of industry	Small	Supply↓

Note: Entry of new firms, either domestic or foreign, causes the industry supply curve to shift rightwards.

Law of Supply (Price- Quantity Supply Relationship)

Law of Supply (Price- Quantity Supply Relationship)

1. Introduction
2. Statement Of law
3. Explanation of Law
4. Assumption
5. Demand Schedule
6. Demand Curve

Introduction

- The law states the nature of relationship between the quantity Supply of a product and its price.
- Alfred Marshall- Principle of Economics-1890
- General behaviour of Rational Producer

Alfred Marshall

Law of Supply (Price- Quantity Supply Relationship)

Statement

"Other things remaining constant, the quantity of a good produced and offered for sale will increase as the price of the good rises and decrease as the price falls. ".

Other things being constant

Price P ↑ Quantity Supplied Qs ↑
Price P ↓ Quantity Supplied Qs ↓

Explanation

Price (Cause) ⟶ **Quantity Supply (Effect)**

Direct Relationship
(Producer Behaviour)

Law of demand (Price- Quantity Demand Relationship)

Supply Schedule

A Supply schedule is drawn upon the assumption that all the other influences remain unchanged

Price	Quantity Supplied
1	5
2	35
3 ↑	45 ↑
4 ↓	55 ↓
5	65

Price P ↑ Quantity Supplied Qs ↑
Price P ↓ Quantity Supplied Qs ↓
Direct Relationship

Law of Supply (Price- Quantity Supplied Relationship)

Supply Curve

A Supply Curve is a graphical presentation of the Supply schedule

1. **Price on the vertical axis and**
2. **Quantity on the horizontal axis.**

Points to be Noted

1. **Direct relationship**
2. **Upward sloping**
3. **Positive slope**
4. **Single Price- Quantity relationship**

Variation in Supply
(Changes in Quantity Supply)

Variation in Supply (Changes in Quantity Supply)

Change in Price only Keeping other factor constant

Expansion/ Extension

P – 20 QS – 200
P – 25 ↑ QS – 250 ↑

Increase in Quantity Supply

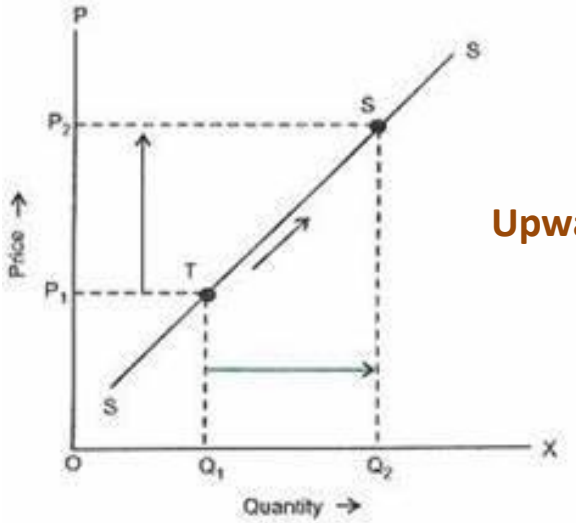


Fig. 2.22(a): *Expansion of supply.*

Upward movement

Contraction/Reduction

P – 20 QS - 200
P – 15 ↓ QS – 150 ↓

Decrease in Quantity Supply

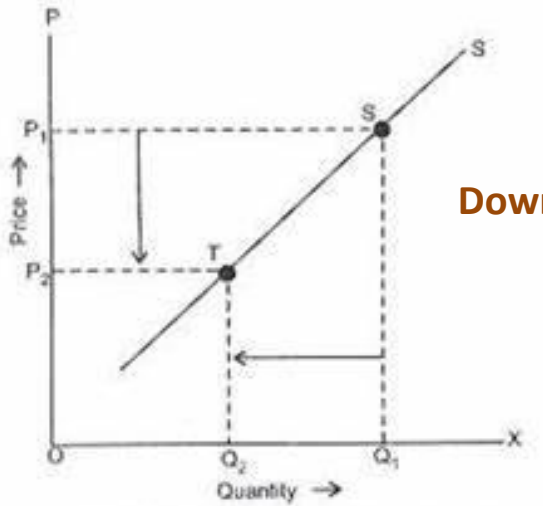


Fig. 2.23(a): *Contraction of supply.*

Downward movement

Changes in Supply
(factor other than price)

Changes in Supply (factor other than price)

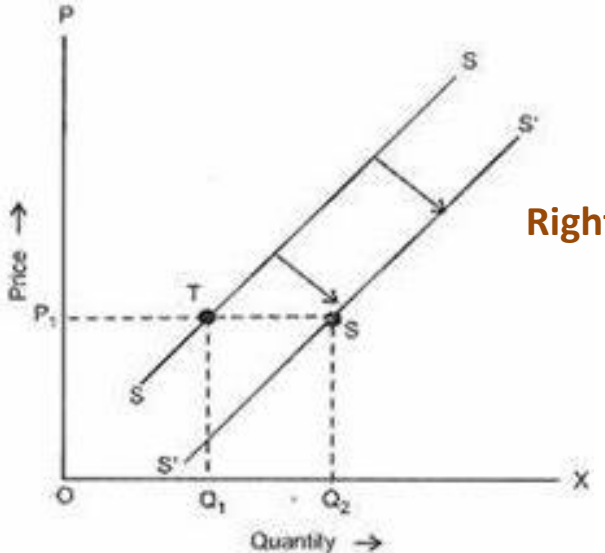
Change in other Factor keeping Price constant

Increase in Supply

P – 20 QS – 100 COP - 10

P – 20↔ QS – 150 ↑ COP - 5↓

Same price – Increase in Supply



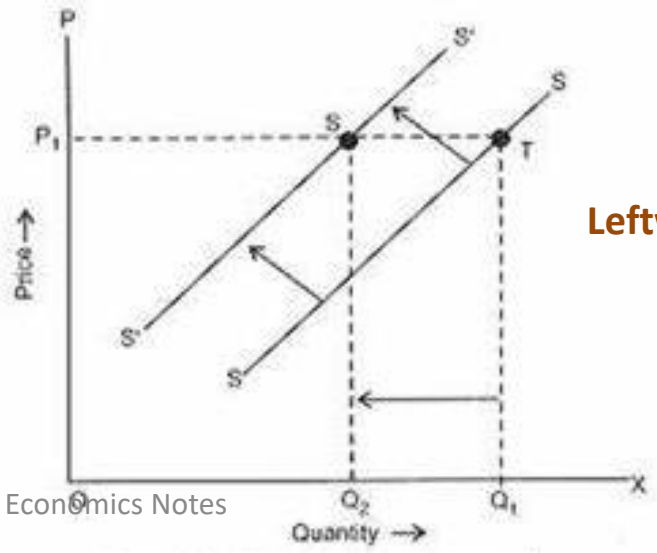
Rightward Shift

Decrease in Supply

P – 20 QS – 100 COP - 10

P – 20 ↔ QS – 70 ↓ COP - 15↑

Same price – Decrease in Supply



Leftward Shift

MOVEMENTS ALONG THE SUPPLY CURVE VS. SHIFT OF SUPPLY CURVE

Movement along the Supply curve(Variation in Supply)	Shift in Supply (Changes in Supply)
A movement along the Supply curve indicates changes in the quantity Supply because of price changes, other factors remaining constant	A shift of the Supply curve indicates that there is a change in Supply keeping price as constant and one or more other factors, such as incomes, tastes or the price of some other goods, have changed.
It is change in Quantity Supply (Producer's Decision)	It is a change in Supply (Producer's Behaviour)
Expansion and Contraction	Increase or Decrease
Movement upward and Downward	Shift Leftward and Rightward

Equilibrium

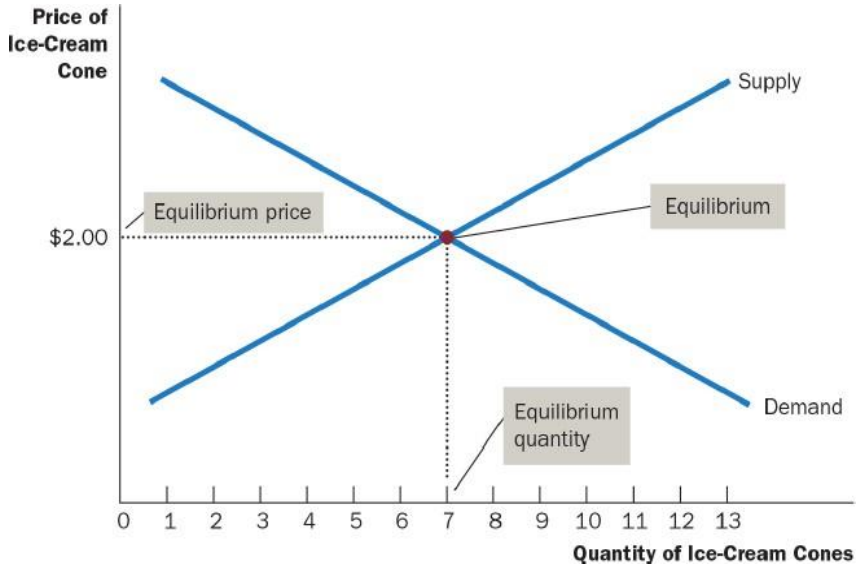
Equilibrium: A situation in which the price has reached the level where quantity supplied equals quantity demanded

Equilibrium Price: The price that balances quantity supplied and quantity demanded

Equilibrium Quantity: The quantity supplied and the quantity demanded at the equilibrium price

Equilibrium

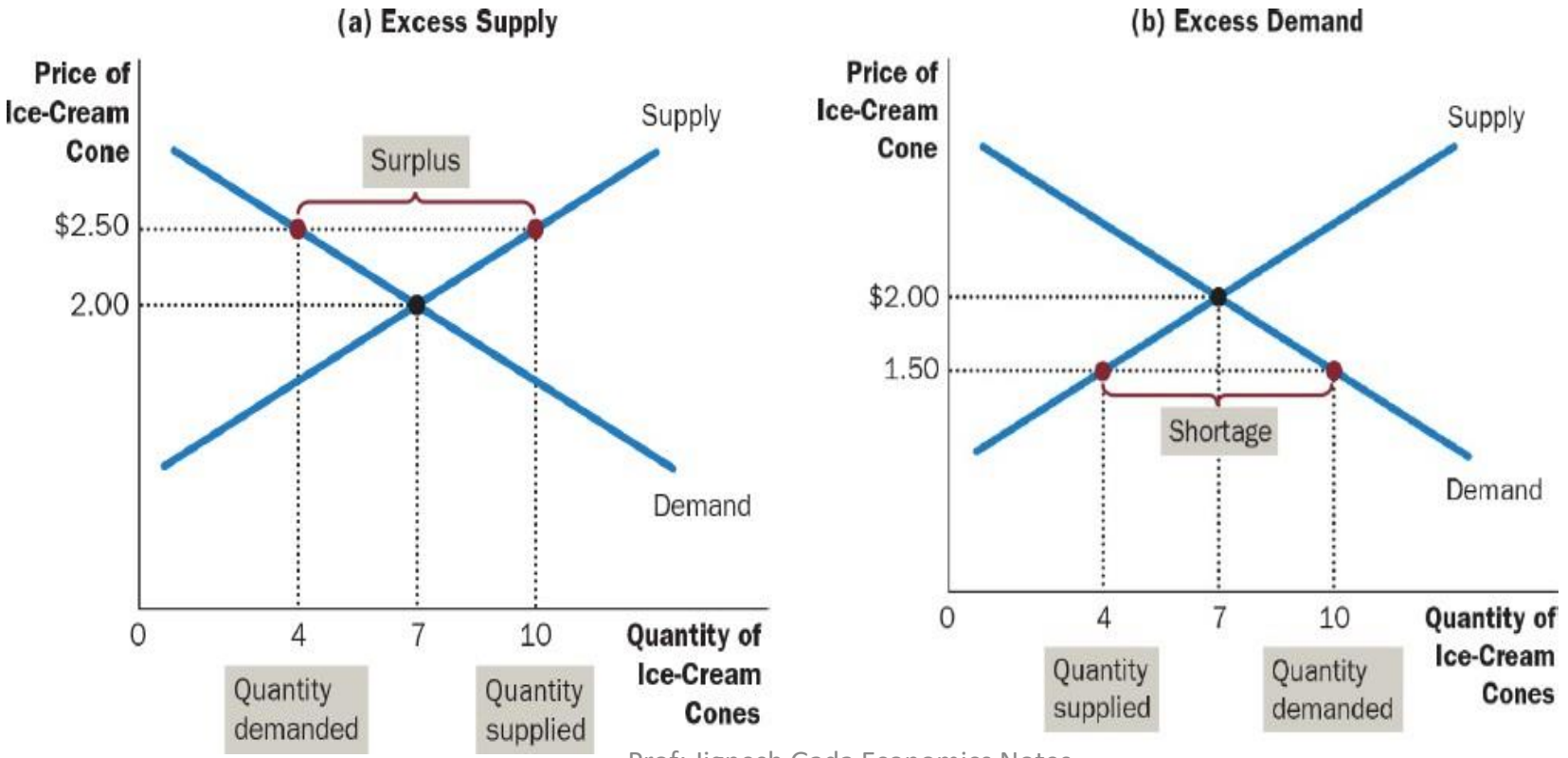
Price	Quantity Demand	Quantity Supply	Surplus or Shortage
3	1	14	Surplus
2.5	4	11	Surplus
2	7	7	Equilibrium
1.5	11	4	Shortage
1	14	1	Shortage



Demand and Supply Together

- **Surplus: Quantity supplied is greater than quantity demanded.**
- **Shortage: Quantity demanded is greater than quantity supplied.**

Equilibrium

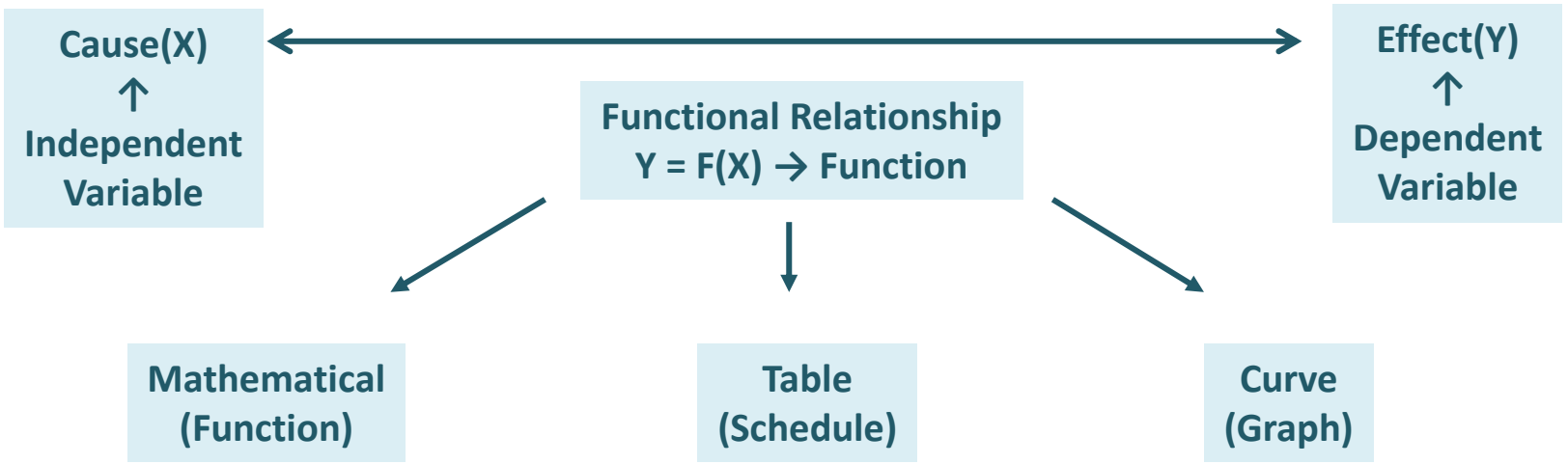


Three Steps to Analyze Changes in Equilibrium

When analyzing how some event affects the equilibrium in a market, we proceed in three steps.

- Whether event shifts demand or supply curve or perhaps both
- Decide in which direction it will shift
- Use demand and supply diagram in order to see

Mathematical Tools and Techniques



Mathematical Tools and Techniques

Variables:

A Variable can be anything which can be Quantified

Variables play an important role in economic theories.

It is a magnitude of interest which can be defined and quantified.

E.g. of variables are prices, profit, income, etc.

Function

A function describes the relation between two or more than two variables.

That is, a function expresses dependence of one variable on one or more other variables. Thus, if the value of a variable V depends on another variable X, we may write:

Y=f (X) …. (1)

Where f stands for function

Function

- General Function
- Specific Function (Equation)

General Function : General function state the functional relationship between two variable i.e. independent variable (Cause) and dependent variable (effect)
Y= f(x)

Specific function : Specific function are equation which states the specific relationship that is for every value of X (Cause) there is specific value of Y(Effect)
Y =2x + 7

Function

A function is relationship between two variable(independent variable and dependent variable)

Cause	Effect	Function	Mathematical Representation
Units of Commodity	Utility	Utility Function	U= f(Units)
Price	Demand	Demand Function	D= f(P)
Price	Supply	Supply Function	S =f(P)

Tabular Analysis – Schedule

A schedule is tabular representation of functional relationship between two variable

Cause	Effect	Function
Units of Commodity	Utility	Utility Schedule
Price	Demand	Demand Schedule
Price	Supply	Supply Schedule
Input	Output	Production Schedule
Output	Cost	Cost Schedule

Tabular Analysis – Schedule

A schedule is tabular representation of functional relationship between two variable

- **Direct Relationship**

Value of X	Value of Y
1	10
2↑	20↑
3	30
4	40

- **Inverse Relationship**

Value of X	Value of Y
1	40
2↑	30↓
3	20
4	10

Graphical Analysis – Curve

A curve is graphical representation of functional relationship between two variable

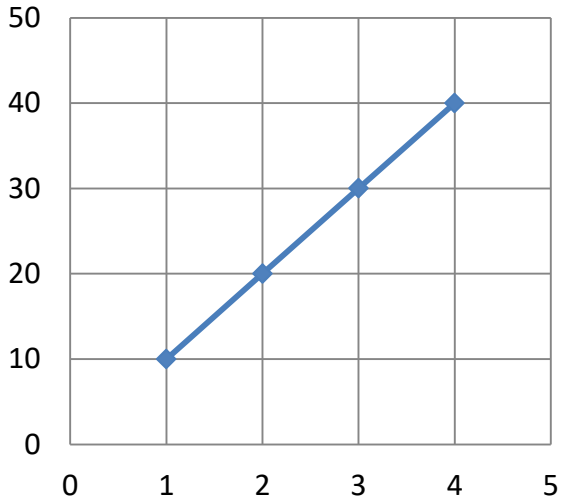
Cause	Effect	Function
Units of Commodity	Utility	Utility Curve
Price	Demand	Demand Curve
Price	Supply	Supply Curve

Curve can be further analyzed from

- **Slope**
- **Intercept**

Graphical Analysis- Curve

- Slope (Positive Slope)
- Direct Relationship → Upward Sloping



X-Values	Y-Values
1	10
2	20
3	30
4	40

Calculation of Slope

$$m = \frac{y2-y1}{x2.-x1} = \frac{\Delta y}{\Delta x}$$

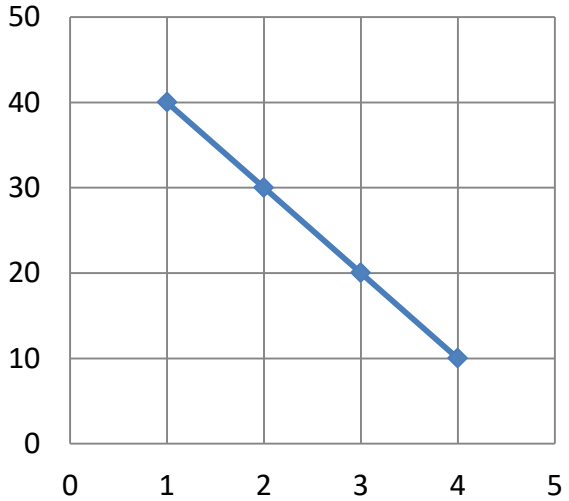
$$m = \frac{20-10}{2-1} = \frac{10}{1}$$

$$m = \frac{10-20}{1-2} = \frac{-10}{-1}$$

Conclusion : Direct Relationship Will always have positive Slope

Graphical Analysis - Curve

- Slope (Negative Slope)
- Inverse Relationship → Downward Sloping



X-Values	Y-Values
1	40
2	30
3	20
4	10

Calculation of Slope

$$m = \frac{y2-y1}{x2.-x1} = \frac{\Delta y}{\Delta x}$$

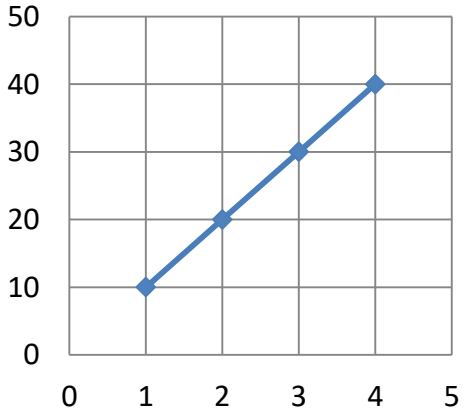
$$m = \frac{30-40}{2-1} = \frac{-10}{1}$$

$$m = \frac{40-30}{1-2} = \frac{10}{-1}$$

Conclusion : Inverse Relationship Will always have Negative Slope

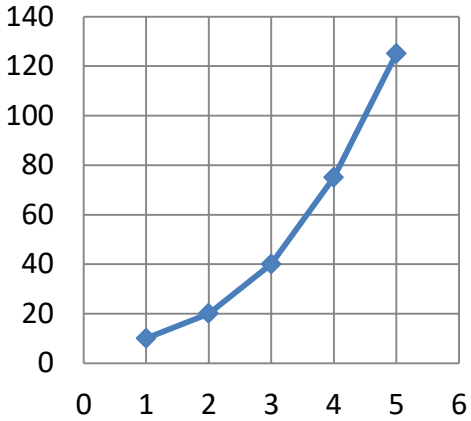
Graphical Analysis

- **Constant Slope – Linear Straight Line**



X	Y	Slope
1	10	
2	20	10
3	30	10
4	40	10

- **Changing Slope – Non Linear**



X	Y	Slope
1	5	
2	20	15
3	40	20
4	65	25

Mathematical Tools and Techniques

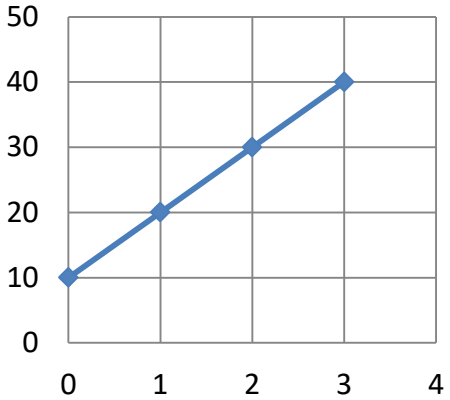
Graphical Analysis - Curve

Slope Conclusion

Slope	Representation
Constant Slope	Linear
Changing Slope	Non Linear

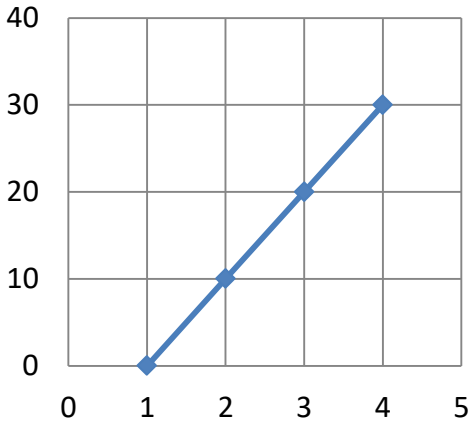
Graphical Analysis – Curve

- Intercept (Y intercept)



X-Values	Y-Values
0	10
1	20
2	30
3	40

- Intercept (X intercept)



X-Values	Y-Values
1	0
2	10
3	20
4	30

Demand Function

Demand Function

The demand function states the relationship between the demand for a product (the dependent variable) and its determinants (the independent or explanatory variables).

A demand function may be expressed as follows

$$D_x = f(P_X, M, P_Y, P_C, T, A)$$

Dx - Quantity demanded of product X
PX - Price of the commodity
M - Money income of the consumer
PY - Price of its substitutes
PC - Price of its complementary goods
T - consumer tastes, and preferences
A - Advertisement expenditure

Demand Function

Linear Demand Function Dx = a – bPx
a = Constant parameter
b = Slope of Demand Function (which is negative)

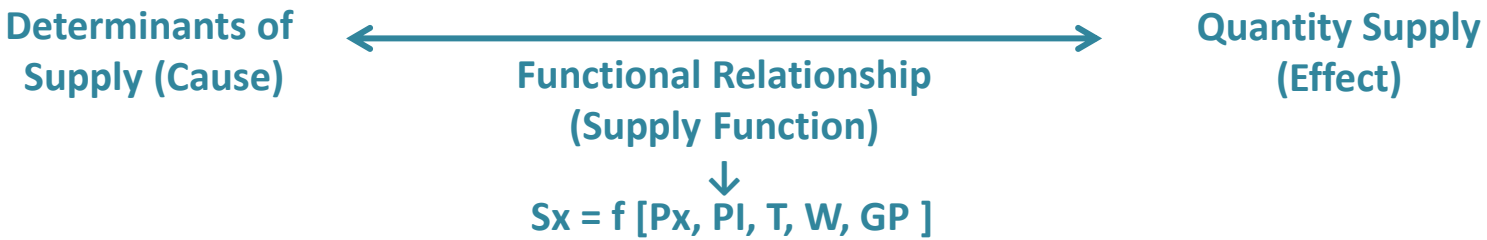
For e.g.
Linear Demand Function Dx = 100 – 2Px
a = 100 & b(Slope) = -2

Price	Demand Function Dx = 100 -2Px	Demand	Constant Parameter (a)	Change in demand w.r.t to change in price (b)→ Slope of demand function
5	100-2(5) = 90	90	100	2
4	100-2(4) = 92	92	100	2
3	100-2(3) = 94	94	100	2
2	100-2(2) = 96	96	100	2
1	100-2(1) = 98	98	100	2

Supply Function

Supply Function

The Supply function states the relationship between the Supply of a product (the dependent variable) and its determinants (the independent or explanatory variables).



Sx = Supply of a commodity 'X'
Px = Price of commodity 'x'
PI = Price of inputs (factor)

T = Technology
W = Weather Condition
GP =Government Policy

Supply Function

Linear Supply Function Sx = a + bPx
a = Constant parameter
b = Slope of Supply Function (which is positive)

For e.g.
Linear Supply Function Sx = 70 + 8Px
a = 70 & b(Slope) = 8

Price	Supply Function Sx = 70 + 8Px	Supply	Constant Parameter (a)	Change in Supply w.r.t to change in price (b)→ Slope of Supply function
5	70+ 8(5) = 110	**110**	70	8
4	70+ 8(4) = 102	**102**	70	8
3	70+ 8(3) = 94	**94**	70	8
2	70+ 8(2) = 86	**86**	70	8
1	70+ 8(1) = 78	**78**	70	8

Market Equilibrium

Market Equilibrium

Solving the market Equilibrium
Demand Equation Dx (Qd) = 100 – 2Px
Supply Equation Sx (Qs) = 70 + 8Px

At Equilibrium , Quantity Demand is equal to Quantity Supply
Therefore

100 -2Px = 70 + 8Px
100-70 = 8Px +2Px
30 = 10 Px

Therefore Equilibrium Px = 30/10 =3

Market Equilibrium

Solving the market Equilibrium
Demand Equation Dx (Qd) = 100 – 2Px
Supply Equation Sx (Qs) = 70 + 8Px

Substituting the value of Px = 3 in Demand and Supply Function
Dx (Qd) = 100 – 2Px = 100-2(3) = 94
Sx (Qs) = 70 + 8Px =70 +8(3) = 94

Therefore the Equilibrium Quantity is 94