NARSIMHA REDDY ENGINEERING COLLEGE

UGC AUTONOMOUS INSTITUTION

Maisammaguda (V), Kompally - 500100, Secunderabad, Telangana State, India

UGC - Autonomous Institute
Accredited by NBA & NAAC with 'A' Grade
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Permanently affiliated to JNTUH

Department of Mechanical Engineering

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Subject: BEFA

Code:23MB504


Good Morning

UNIT – I

INTRODUCTION TO BUSINESS AND ECONOMICS

Business Economics, also called Managerial **Economics**, is the application of **economic** theory and methodology to **business**. **Business** involves decision-making. Decision making means the process of selecting one out of two or more alternative courses of action. **Business economic** meets these needs of the **business** firm.

Definition of Business

"Business is the exchange of goods, services, or money for mutual benefit or profit." – Skinner and Ivancevich

"Business may be defined as any form of commercial activity to satisfy the economic wants of people at a profit." - Keith Davis

"Business is any enterprise engaged in production and distribution of goods for sale in a market or rendering services for a price."- Professor Owen.

Examples of Business Processes

®***Manufacturing and production*:**

- Assembling product, checking quality, producing bills of materials

®***Sales and marketing*:**

- Identifying customers, creating customer awareness, selling

®***Finance and accounting*:**

- Paying creditors, creating financial statements, managing cash accounts

®***Human Resources*:**

- Hiring employees, evaluating performance, enrolling employees in benefits plans

Theory of a Firm

- **Definition** : A collection of resources that is transformed into products demanded by consumers.
- The firm buys and coordinates the services of production factors such as land, labour and capital along with its organization for producing a commodity and sells it in the market to the households.
- Firm controlled by entrepreneur who takes major decisions like:
  - What to produce?
  - Where to produce?
  - How and how much to produce?
  - Whom to sell and at what price?

Underlying concepts

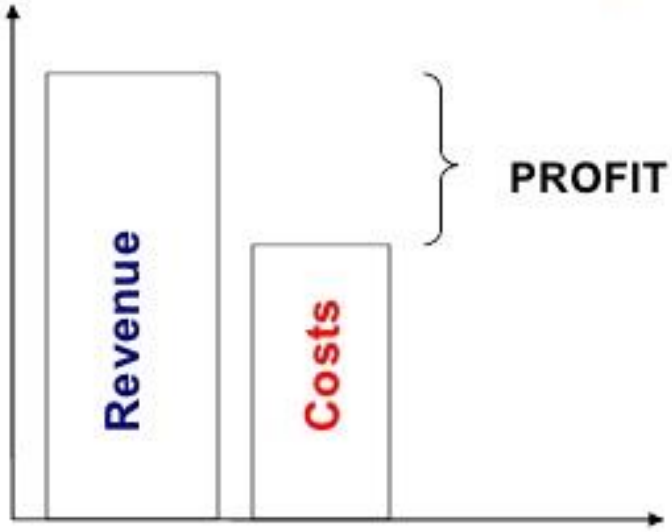
To understand the theory of the firm you must firstly understand some basic concepts underpinning the theory...

1. What is a firm?

A firm is a business enterprise which produces, or trades in, goods and/or services.

A firm can be privately or state owned (i.e. by individuals or government).

Concepts continued...

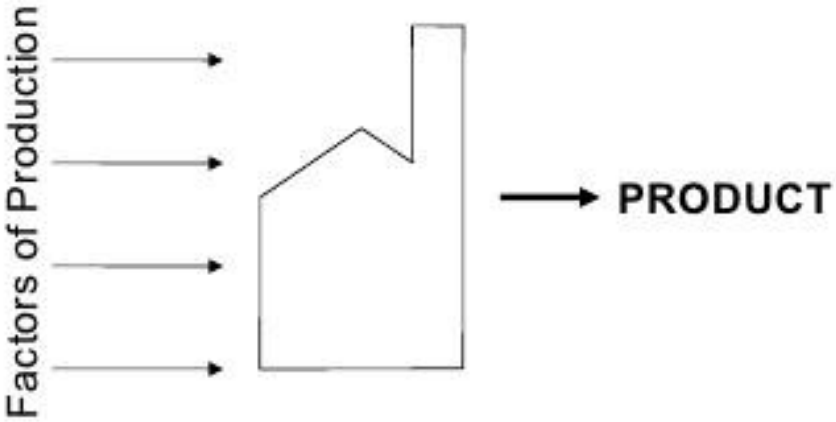


2. Profit Maximisation

Firms aim to make as much profit as possible i.e. produce at the level of output at which the gap between revenue and production costs is greatest.

3. Production

A firm 'adds value' by combining a range of factors of production into a finished product or service. This process is known as production.



Concepts continued

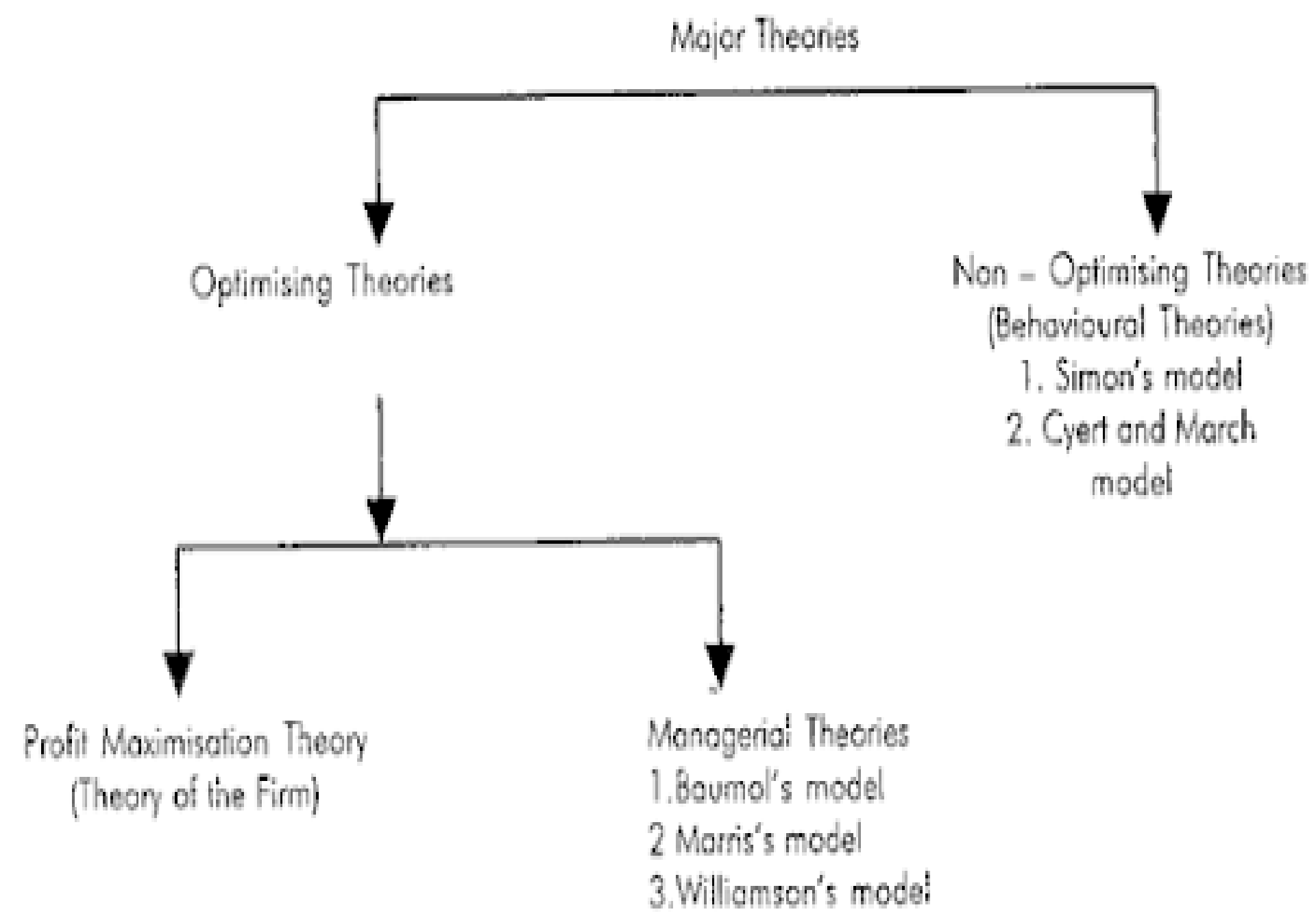
Put these UK markets in order according to the number of firms operating in them.

- Car market
- Hairdressers
- Banks
- Nuclear power plants
- Supermarkets
- Website designers

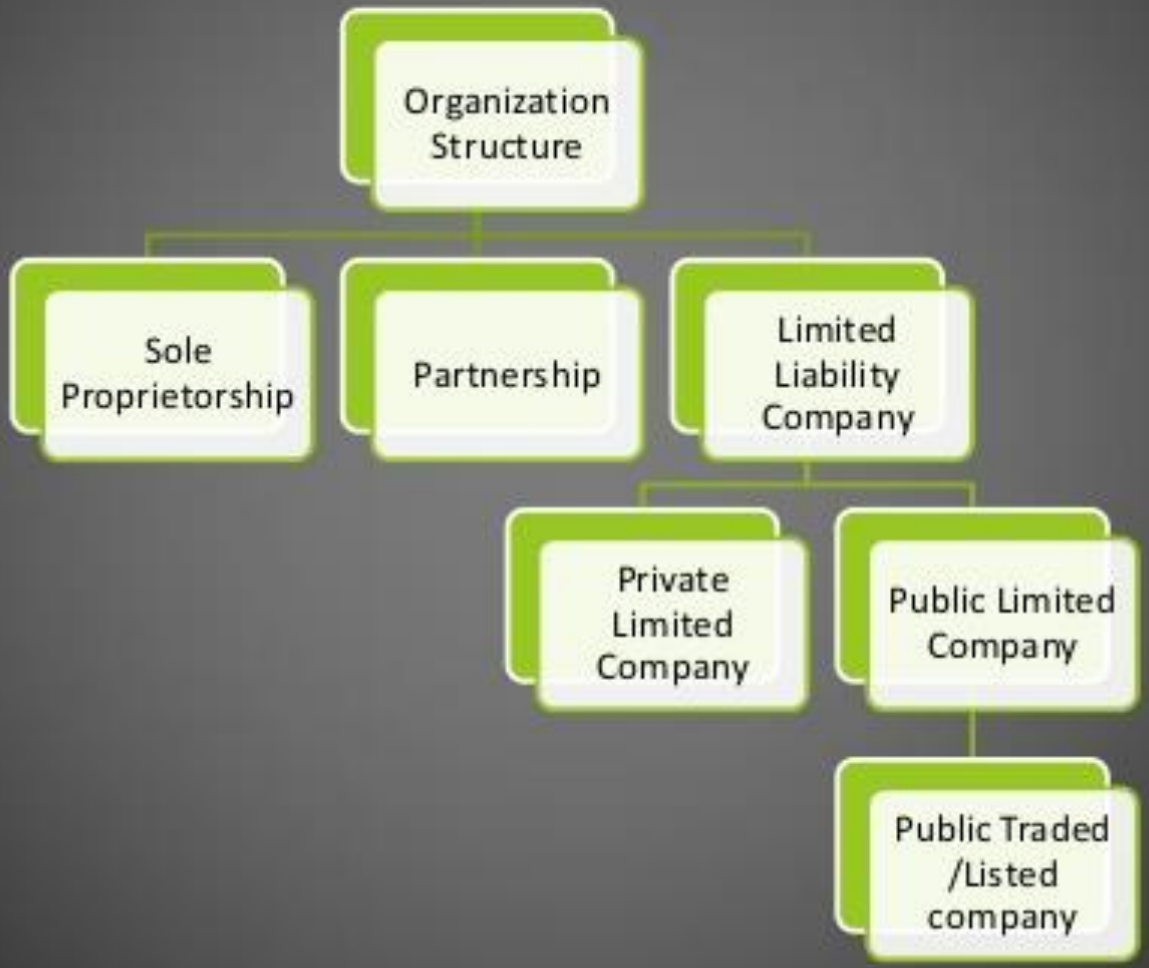
6. Market structure

The behaviour of a firm will vary according to the nature of the market it is in. An important factor is the number of firms in the market.

- Monopoly = 1 firm
- Oligopoly = a few firms
- Perfect competition = many firms


Major Theories
Optimising Theories
Non – Optimising Theories
(Behavioural Theories)
1. Simon's model
2. Cyert and March
model
Profit Maximisation Theory
(Theory of the Firm)
Managerial Theories
1.Baumol's model
2 Marris's model
3.Williamson's model

Structure of Business Firm



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Types of Business Entities

Sole Proprietorship

- Owned by Single Person
- Unlimited liability of equity holder
- Limited funds

Partnership

- Owned by Two or more
- Unlimited liability of equity holder
- Limited funds

Limited Liability Company

- Liability is limited to equity owners' commitment to capital
  - Private Limited Company (closely held company)
  - Public Limited Company

Private Limited Company

- Not allowed to invite public to provide share capital
- Minimum number of shareholder – 2
- Maximum – 50

Public Limited Company

- Share capital is contributed by large number of individuals
- Minimum number of shareholder – 7
- Maximum – no limit

Along with an individual, A body corporate, a partnership firm, a joint family or any other entity can contribute risk capital to limited liability company

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Sole Proprietorship

- Run by a single individual who bears the sole responsibility of the whole business;
- Business and owner is one entity, so much so that the personal property of the Proprietor may be attached to fulfill business liability;
- Profits earned in the business are added to the business owners income which are later subject to taxation. Same for losses
- Personal Property of the Proprietor may be attached to fulfill business liability;
- Ownership not transferable though assets can be transferred;
- Can trade in his own name or name of the business. E.g. Mr. A trading as X business;
- Some of the world's biggest companies started off as Sole Proprietorships, E.g. Mc. Donalds,

SELVAM & SELVAM

Partnership Firm

- Run by a minimum of 2 and a maximum 20 members;
- Responsibilities and liabilities are shared equally among partners; as stated in the partnership deed;
- The business maybe carried on by all or by one for all;
- Sleeping partner is one who simply provides the capital, but does not take part in the management;
- Loses incurred by one partner renders all the partners liable ;
- May or may not be registered with the Registrar of Firms;
- Name must not contain words like 'Crown', 'Emperor' or any such words implying patronage by the government. Unless the State Government by consent in writing allows the firm to do so.

SELVAM & SELVAM

Limited Liability Partnership

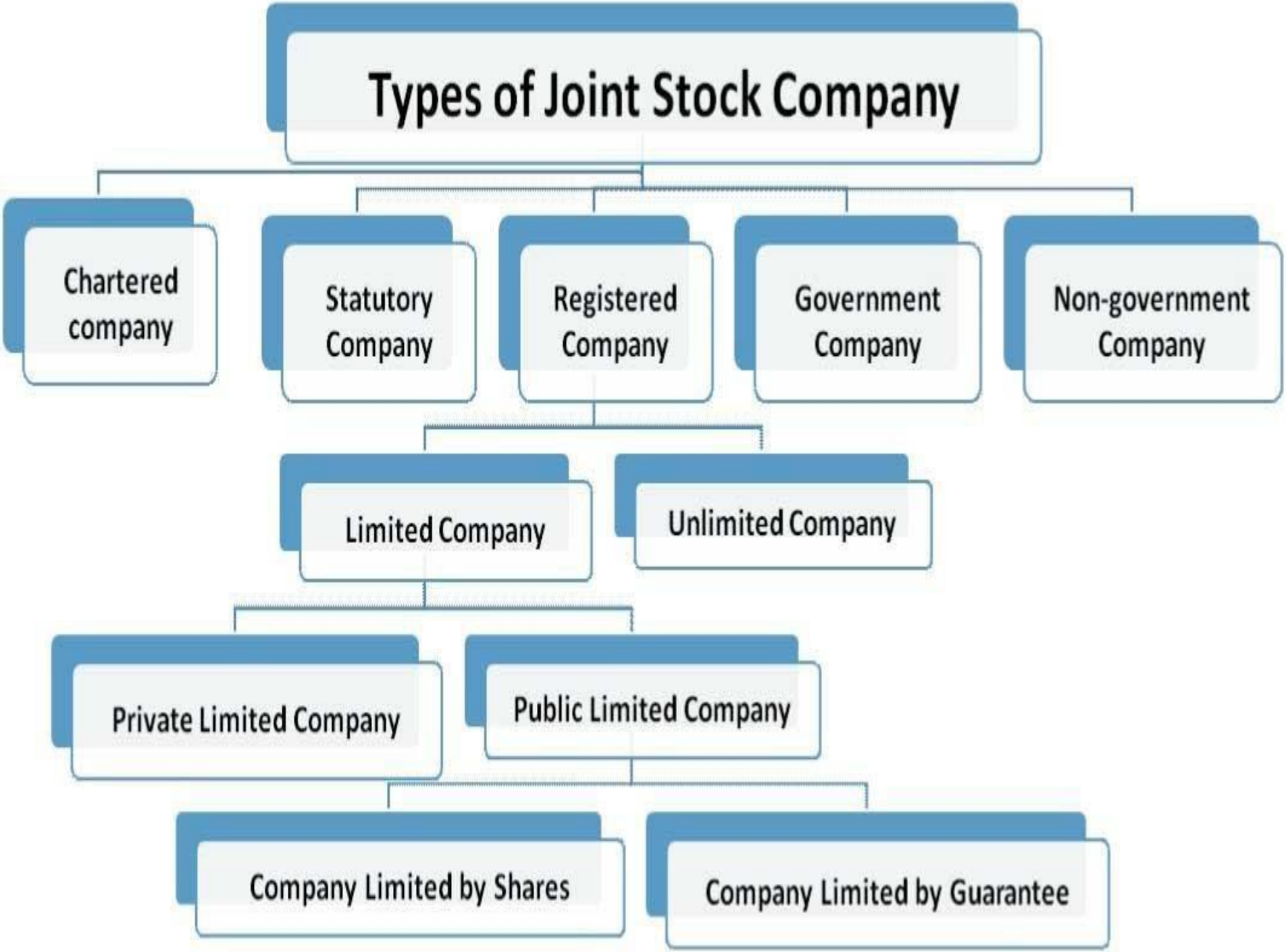
- Is a mix of both partnership and an company;
- The LLP and the partners are separate legal entity;
- No maximum number of partners ;
- Can be formed for any business, not restricted to any particular form of business;
- Private or Public Limited Company or a Partnership can be converted to an LLP;
- Only difference from a company is that it cannot come out with its IPO and sell its shares to the general public;

Private Limited Company

- Is formed by registering the company name with the Appropriate Registrar of Companies;
- Allows people to own and subscribe to shares and become shareholders of the company;
- Can have 2 – 50 shareholders and a minimum share capital of Rs.1 lakh;
- Liability of shareholder limited to invested share capital;
- More liability than an LLP, Board to meet quarterly and have at least one annual general meeting;
- Change in shareholders do not affect the legal status of the company;

Public Limited Company

- Most difficult to establish;
- Minimum number of shareholders to be 7, no maximum limit;
- Allows shareholders to trade freely with the shares at the stock market;
- Is under strict scrutiny by the government as well as SEBI(Securities and Exchange Board of India);
- Like a private limited company, the change in shareholders do not affect the legal status of the company;


Types of Joint Stock Company
Chartered company
Statutory Company
Registered Company
Government Company
Non-government Company
Limited Company
Unlimited Company
Private Limited Company
Public Limited Company
Company Limited by Shares
Company Limited by Guarantee

PUBLIC ENTERPRISES

Departmental Undertakings

Example
1. Posts & Telegraph
2. Railways
3. All India Radio (AIR)
4. DoorDarshan (TV)
5. Ordnance Factories

Statutory Corporations

Example
1. Food Corporation of India
2. Industrial Finance Corporation of India
3. Life Insurance Corporation of India
4. Unit Trust of India
5. State Trading Corporation

Government Companies

Example
1. Hindustan Machine Tools Limited
2. Steel Authority of India Limited
3. Hindustan Shipyard Limited

Forms of Public Enterprises: Features at a Glance

Features	***Departmental Undertaking***	***Public Corporation***	***Government Company***
1. Formation	*Executive Order of Govt*	*Statute of Parliament or State Legislature*	*Registered under Companies Act, 1956*
2. Legal Position	*An extension to a govt department*	*Separate legal entity*	*Separate legal entity*
3. Finances	*Budget of the concerned ministry*	*Government Provides the initial capital*	*Govt provides a minimum of 51% of capital and the balance is raised from public*
4. Degree of Autonomy	*Nil*	*Fairly Good*	*High*
5. Power to recruit staff	*Manned by govt employees and civil servants*	*It can recruit its own staff*	*It can recruit its own staff*

Limited Liability Partnership

A LLP is a form of business organization that is mid-way between a Private Limited company and a partnership firm. It embraces the ease and low-compliance of a partnership firm and the limited liability concept of a Private Limited company.

All tax, business & statutory registrations are to be done in the name of the LLP.

Income tax returns for the business and the partners of the company are to be filed separately.

Sources of Capital for a Company

Definition of capital

- "Capital is a necessary factor of production and, like any other factor, it has a cost,"

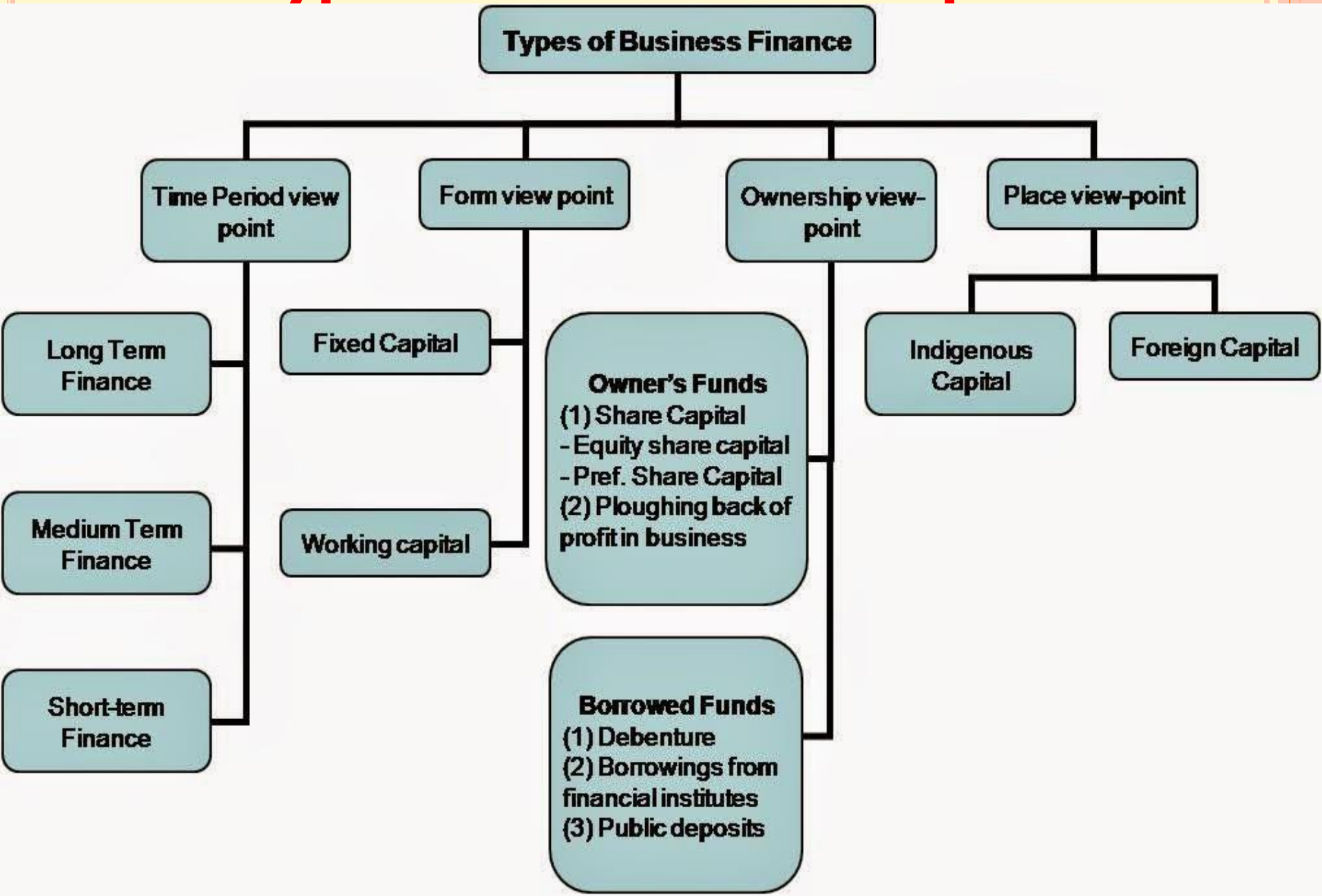
  - Eugene F. Brigham

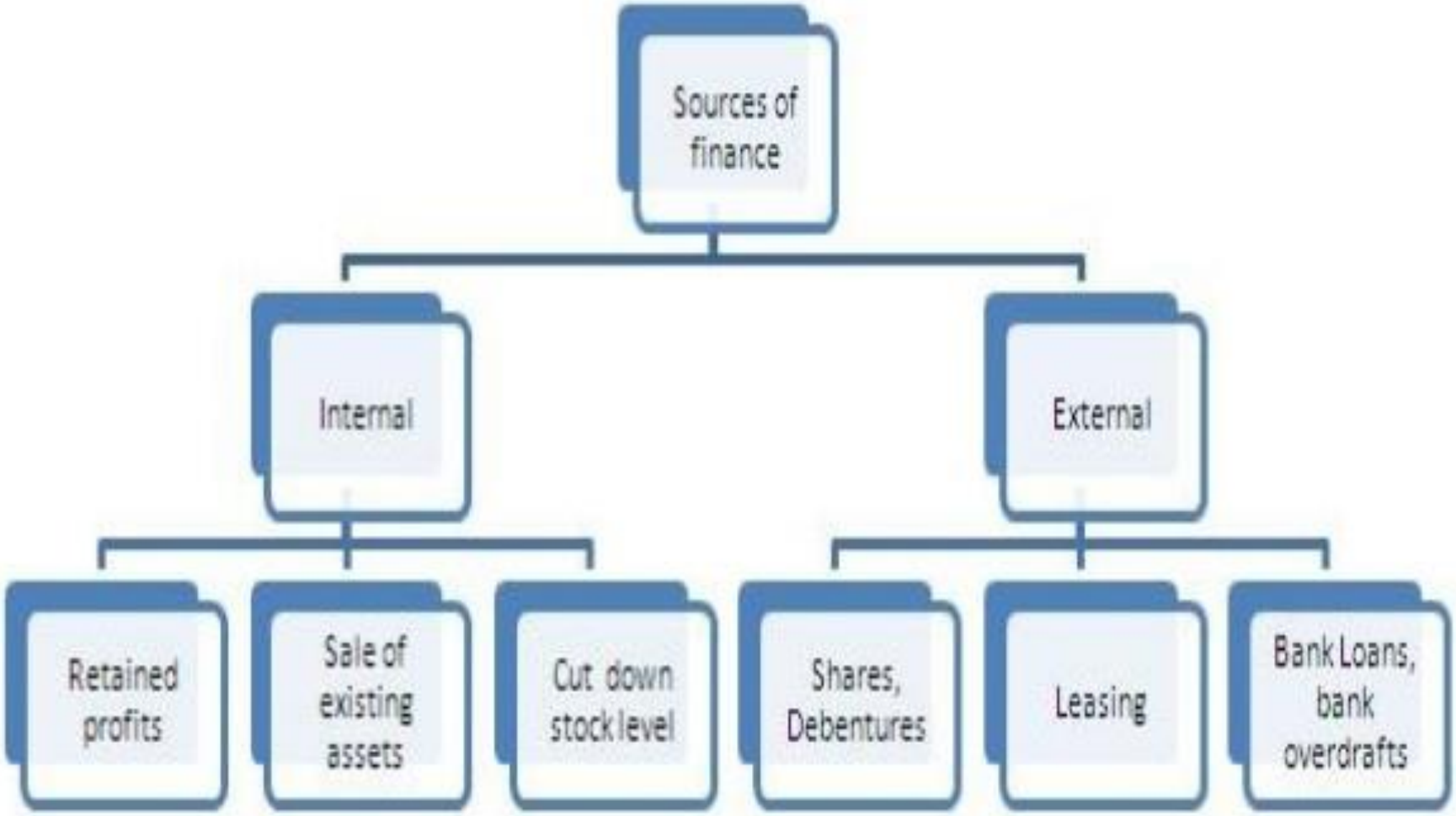
- "Firms with the most profitable investment opportunities are willing and able to pay the most for capital, so they tend to attract it away from inefficient firms or from those whose products are not in demand,"

  - Brigham

- Capital is the money or wealth needed to produce goods and services. In the most basic terms, it is money. All businesses must have capital in order to purchase assets and maintain their operations.

Types and Sources Of Capital




Sources of finance
Internal
External
Retained profits
Sale of existing assets
Cut down stock level
Shares, Debentures
Leasing
Bank Loans, bank overdrafts

Non-Conventional Sources of Finance

DEFINITION

✓'Non conventional' refers to the financial mechanisms employed, and not necessarily to the financial institutions who employ them.

✓Use of modified loan terms or eligibility requirements that allow lending to borrowers with limited financial resources.

✓Some of the more common nontraditional **financing sources** include selling assets, borrowing against the cash value of a life insurance policy, and taking out a second mortgage on a home or other property.

Introduction

Finance is the lifeblood of business.

No business can be carried out without Finance.

There are several sources of Finance which can be categorized as Internal or External, Long Term or Short Term and Fixed and Working Capital Finance

Sources for Finance . . . .

- Conventional : Bank / State Financial Corporation
- Non-conventional : Venture / Angel funds
- Country specific Govt. Schemes
- Industry / Technology specific schemes

Modern sources of Finance

Modern days the ways have changed as to how Startups and established business are sourcing funds for business. Below are the unconventional sources of Finance:

- Angel Investment
- Venture Capital (VC)
- Private Equity (PE)

Angel Investment

An angel investor is an experienced industry person who provides needed funds for small startups or entrepreneurs. Apart from funds, Angels invest their time, experience, network and energy in business they invest in.

Sanjay Mehta, an Angel Investor has invested in several startups viz., OYO Rooms, FabAlley, OrangeScape etc.

Venture Capital (VC)

Venture capital (VC) is money provided to seed early-stage, emerging growth companies. Venture capital funds invest in companies in exchange for equity in the companies they invest in, which usually have a novel technology or business model in high technology industries, such as biotechnology and IT.

Foodpanda is funded by a Venture Capital Firm, Rocket Internet.

Private Equity (PE)

Private equity consists of investors and funds that make investments directly into private companies or conduct buyouts of public companies that result in a delisting of public equity. Capital for private equity is raised from retail and institutional investors, and can be used to fund new technologies

Justdial, the local search engine was funded by Private Equity Investors like Sequoia Capital and SAP Ventures.

Introduction

- The word Economics is derived from the Greek words "OKIOS NEMEIN" meaning household management .
- Man is bundle of desires. Goods and services satisfy these wants. But almost all the goods are scarce. To produce goods land, labour, capital and organization are needed. Economic problem arises because of scarcity.
- Economics is a study of economic problems. Wants are motive force for economic activity. Wants leads to efforts. Efforts secures satisfaction.

ECONOMICS

What Is Economics?

Economics is a social science concerned with the production, distribution, and consumption of goods and services. It studies how individuals, businesses, governments, and nations make choices on allocating resources to satisfy their wants and needs, trying to determine how these groups should organize and coordinate efforts to achieve maximum output.

Economics can generally be broken down into ***macroeconomics***, which concentrates on the behavior of the aggregate economy, and ***microeconomics***, which focuses on individual consumers and businesses.

what is economics?

Economics as a subject deals with how people earn and spend their income to maximize their economic gains. It is concerned with the study of economic activities of various individuals and the society.

Economics deals with economic problems of the individuals business units, society and that of the globe.

An economic problem arises on account of the following reasons

1. Unlimited wants
2. Limited resources
3. Alternative use of resources
4. Problem of choices

Economic Activities

1. Consumption: Extracting utility from goods and services.
2. Production: Production of goods and services which posses utility.
3. Exchange: means buying and selling of goods and services. It is link between consumer and producer.
4. Distribution: Sharing of income by the four factors of production.

Economics Definitions

1. Wealth Definition. Adam Smith
2. Welfare Definition. Alfred Marshall
3. Scarcity Definition. Lionel Robbins
4. Growth Definition. Paul Samuelson

Definitions of Economics

Acc to Prof. Spencer and Seigelman "Managerial economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning".

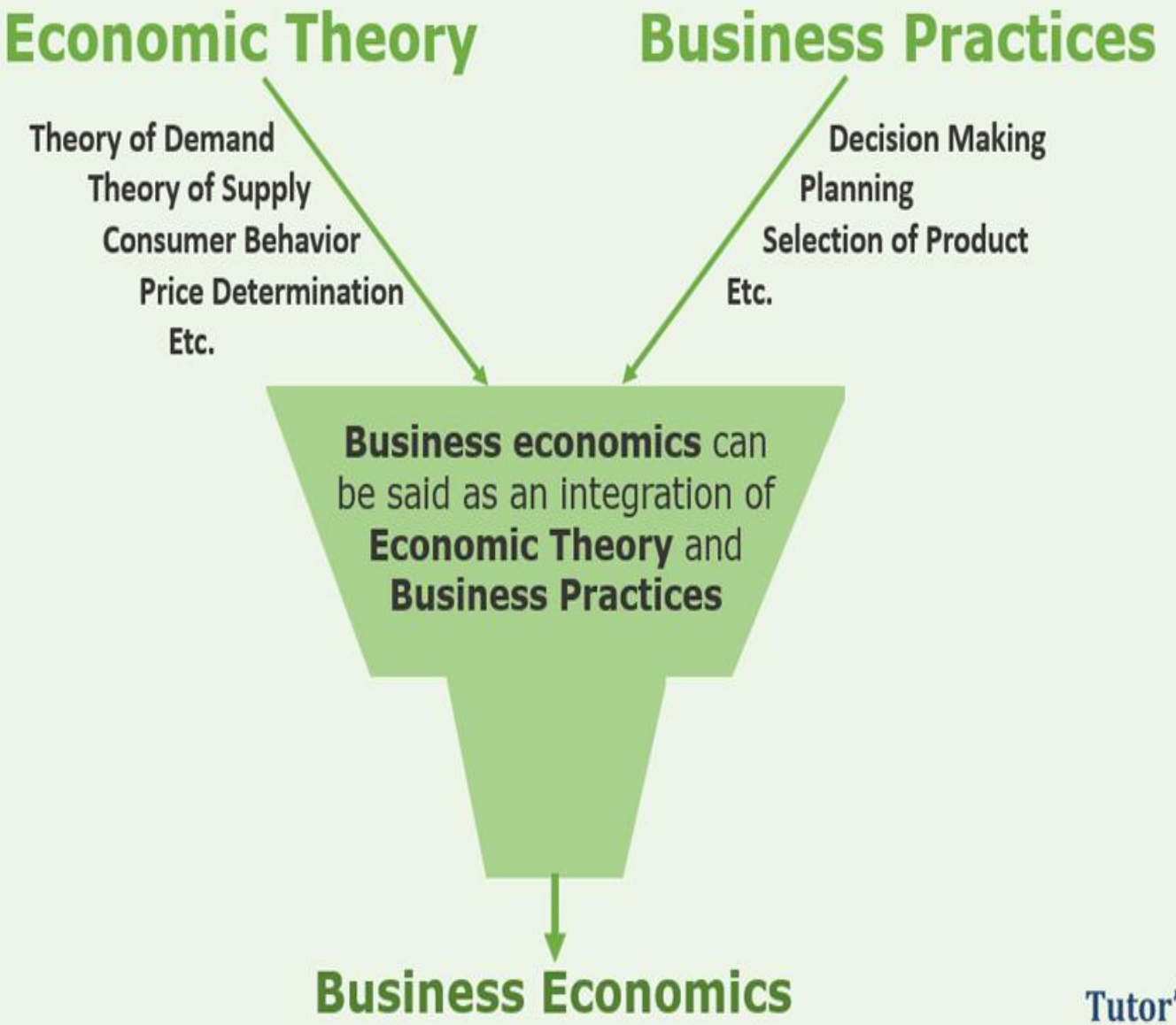
1. In the words of **TJ. Webster,** "Managerial economics is the synthesis of microeconomic theory and quantitative methods to find optimal solutions to managerial decision-making problems?

2. In the words of **Hirschey and Pappas**, "Managerial economics applies economic theory and methods to business and administrative decision making".

3. Brigham and Poppas believe that managerial economics is "the application of economic theory and methodology to business administration practice."

4. According to **McNair and Meriam,** "Managerial economics is the use of economic modes of thought to analyse business situations."

Business Economics | Meaning | Definition



Business Economics

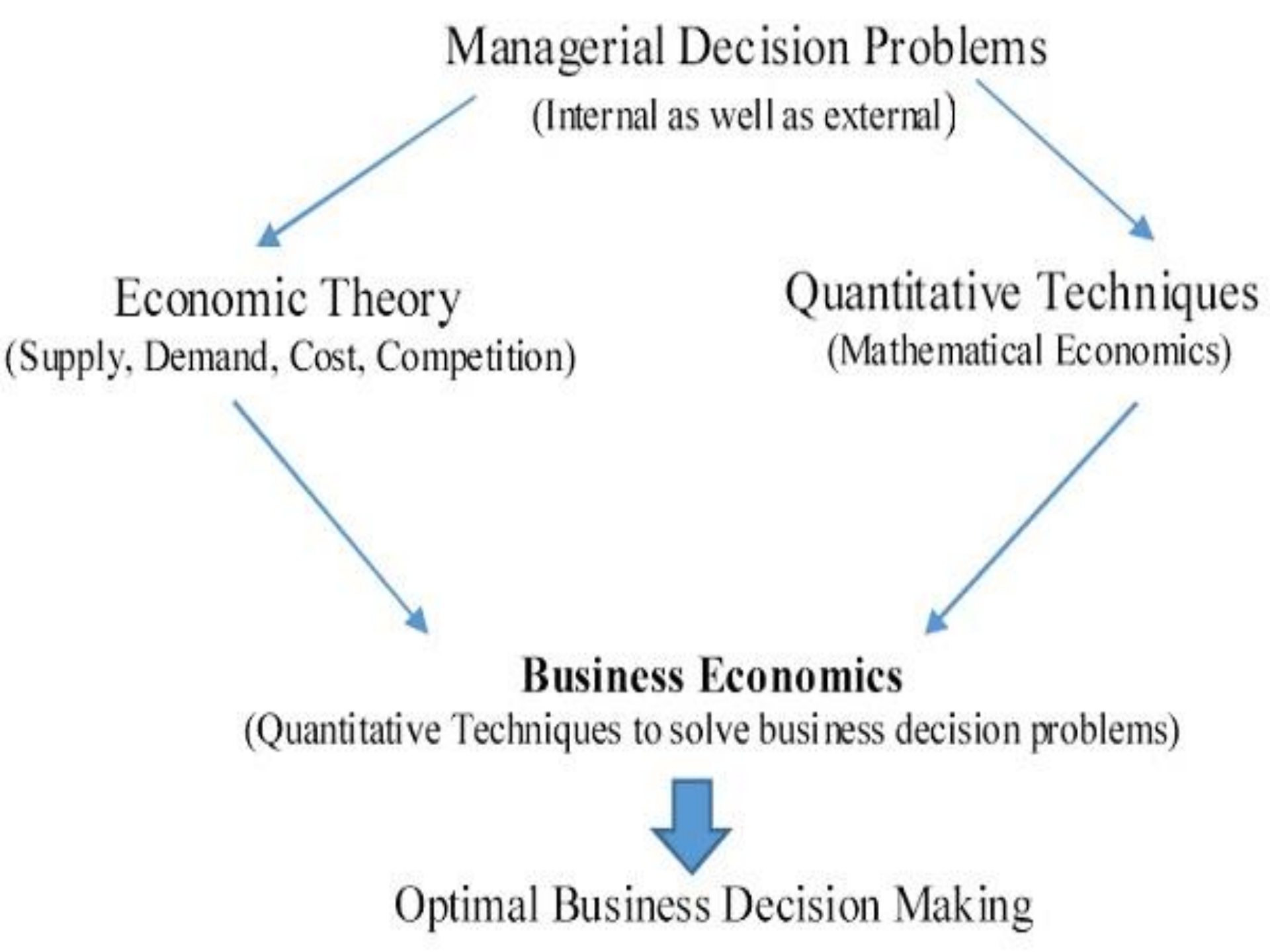
- Business Economics, also called Managerial Economics, is the application of economic theory and methodology to business.
- Business involves decision-making. Decision making means the process of selecting one out of two or more alternative courses of action.
- The question of choice arises because the basic resources such as capital, land, labour and management are limited and can be employed in alternative uses.
- The decision-making function thus becomes one of making choice and taking decisions that will provide the most efficient means of attaining a desired end, say, profit maximisation.

Significance of Managerial Economics

- Business Planning
- Cost Control
- Price Determination
- Business Prediction
- Profit Planning and Control
- Inventory Management
- Manages Capital

Micro and Macro Economic Concepts

MICROECONOMICS	MACROECONOMICS
Studies individual income	Studies national income
Analyzes demand and supply of labor	Analyzes total employment in the economy
Deals with households and firms decisions	Deals with aggregate decisions
Studies individual prices	Studies overall price level
Analyzes demand and supply of goods	Analyzes aggregate demand and aggregate supply


Managerial Decision Problems
(Internal as well as external)
Economic Theory
(Supply, Demand, Cost, Competition)
Quantitative Techniques
(Mathematical Economics)
Business Economics
(Quantitative Techniques to solve business decision problems)
Optimal Business Decision Making

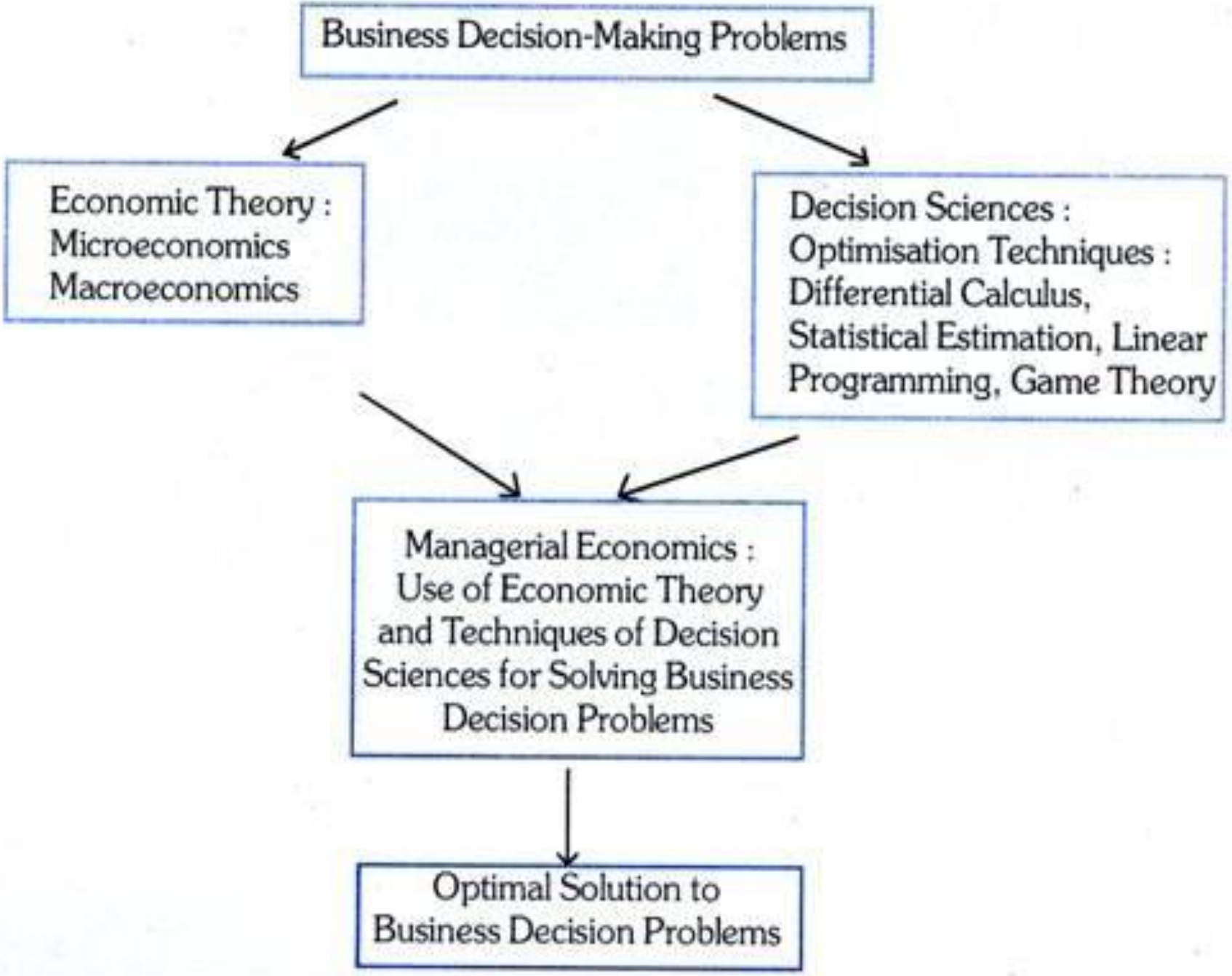


Fig. 1.1. *The Nature of Managerial Economics*

Meaning of National Income

- National income is the money value of all the final goods and services produced by a country during a period of one year. National income consists of a collection of different types of goods and services.

Concepts of National Income

Important Concepts of National Income

- Gross Domestic Product
- Gross National Product
- Net Domestic Product
- Net National Product
- Personal Income
- Disposable Income

***1. GDP at market price*:** Is money value of all goods and services produced within the domestic domain with the available resources during a year.

$$GDP = (P*Q)$$

Where,

GDP = Gross Domestic Product

P = Price of goods and services

Q= Quantity of goods and services

GDP is made up of 4 Components

consumption

investment

government expenditure

net foreign exports of a country

$$GDP = C+I+G+(X-M)$$

Where,

C=Consumption

I=Investment

G=Government expenditure

(X-M) =Export minus import

2. Gross National Product (GNP): Is market value of final goods and services produced in a year by the residents of the country within the domestic territory as well as abroad. GNP is the value of goods and services that the country's citizens produce regardless of their location.

GNP=GDP+NFIA or,

GNP=C+I+G+(X-M) +NFIA

Where,

C=Consumption

I=Investment

G=Government expenditure

(X-M) =Export minus import

NFIA= Net factor income from abroad.

Net Domestic Product

- It represents the net book value of all goods and services produced within a nation's geographic borders over a specified period of time.

- **NDP = Gross domestic product (GDP) - Depreciation**

4. Net National Product (NNP): Is market value of net output of final goods and services produced by an economy during a year and net factor income from abroad.

NNP = GNP - Depreciation

or, NNP=C+I+G+(X-M) +NFIA- IT-Depreciation

Where,

C=Consumption

I=Investment

G=Government expenditure

(X-M) =Export minus import

NFIA= Net factor income from abroad.

IT= Indirect Taxes

Personal Income

Personal Income is the total income received by the individuals of country from all sources before direct taxes. Personal income is not the same as National Income, because it includes '**Transfer payments**'

Personal income also includes:

1. Wages
2. Salaries
3. Interest and rent received by the individuals.

Personal Income = Private Income - Saving of Private enterprise – Corporate tax

Disposable Income

- All personal income is not at the disposal to be spent on consumption. Individuals have to pay personal direct taxes to the government. They are free to spend only after the payment of taxes.

- DPI = Personal income – Personal Direct taxes.

6. Disposable Income (DI) **:** It is the income left with the individuals after the payment of direct taxes from personal income. It is the actual income left for disposal or that can be spent for consumption by individuals.

Thus, it can be expressed as:

DI=PI-Direct Taxes

7. Per Capita Income (PCI): The average income of the people of a country in a particular year is called Per Capita Income for that year. Is calculated by dividing the national income of the country by the total population of a country.

Thus,

PCI=Total National Income/Total National Population

Inflation

INFLATION

- **Inflation is defined as a sustained increase in the price level or a fall in the value of money.**
- **Inflation is a rise in general level of prices of goods and services in the country over a period of time.**

Definition of Inflation according to few Economists.

MEYER:

" An increase in the prices that occurs after full employment has been attained."

CROWTHER:

" In the state of inflation, the prices are rising , i.e., the value of money is falling."

Coulburn:

" In inflation , too much money chases too few goods."

Types Of Inflation

1. Demand Pull Inflation
2. Cost Push Inflation

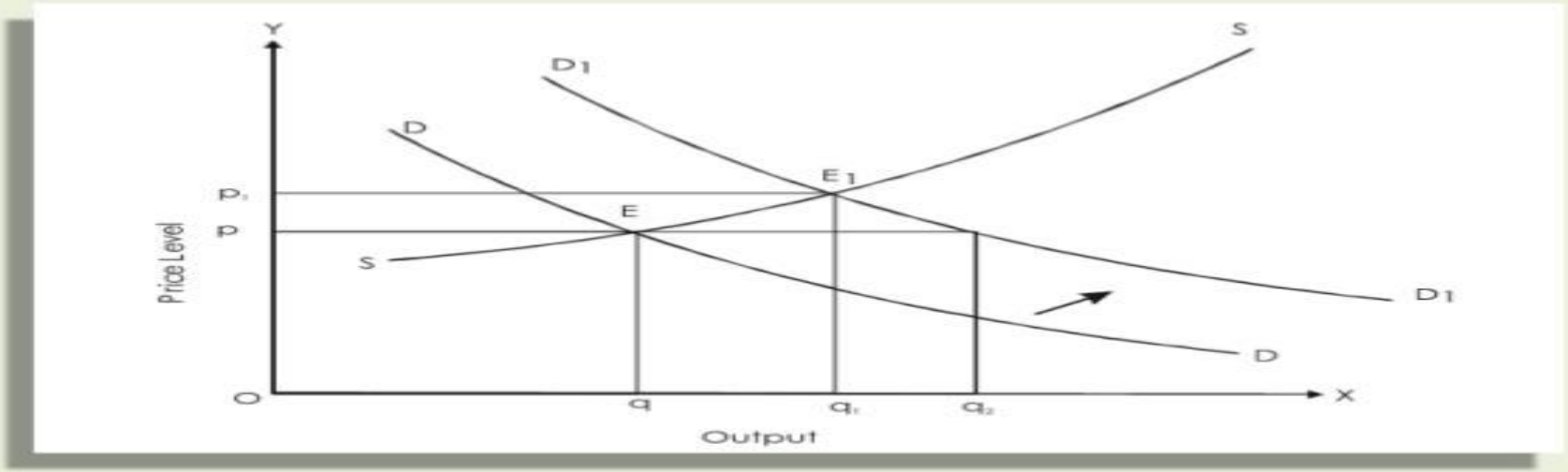
Demand Pull Inflation

- The demand for goods and services increases and production remains same or does not increase as fast.
- The excess demand results in prices being pulled up.

Demand Pull Inflation

- The demand pull inflation occurs when total demand for goods and services exceeds the total supply.
- This type of inflation happens when there is an inflationary gap.

Demand Pull Inflation



Demand Pull Inflation

- In this graph SS and DD are aggregate supply and demand curves.
- Op and Oq are equilibrium price and equilibrium output.
- Due to exogenous causes demand curves shifts right-wards to D
- At the current price Op, demand increase by qq
- But supply is Oq.
- Excess demand qq
- Put pressure on price, which gradually rises from Op to Op
- At this price a new equilibrium is achieved where Demand=Supply.
- The excess demand is eliminated by fall in demand and rise in supply arising out of rise in price

Cost Push Inflation

- The cost push inflation is caused by an increase in the cost of production.
- Increased costs push up the price level.

Causes of Inflation:

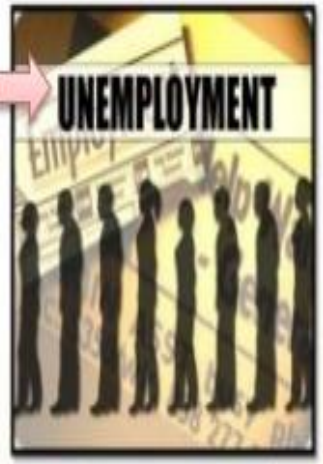
- Population explosion.
- Political Instability.
- Imported goods.
- Increase in wages and salaries.
- Climatic factors.

Causes of Inflation:

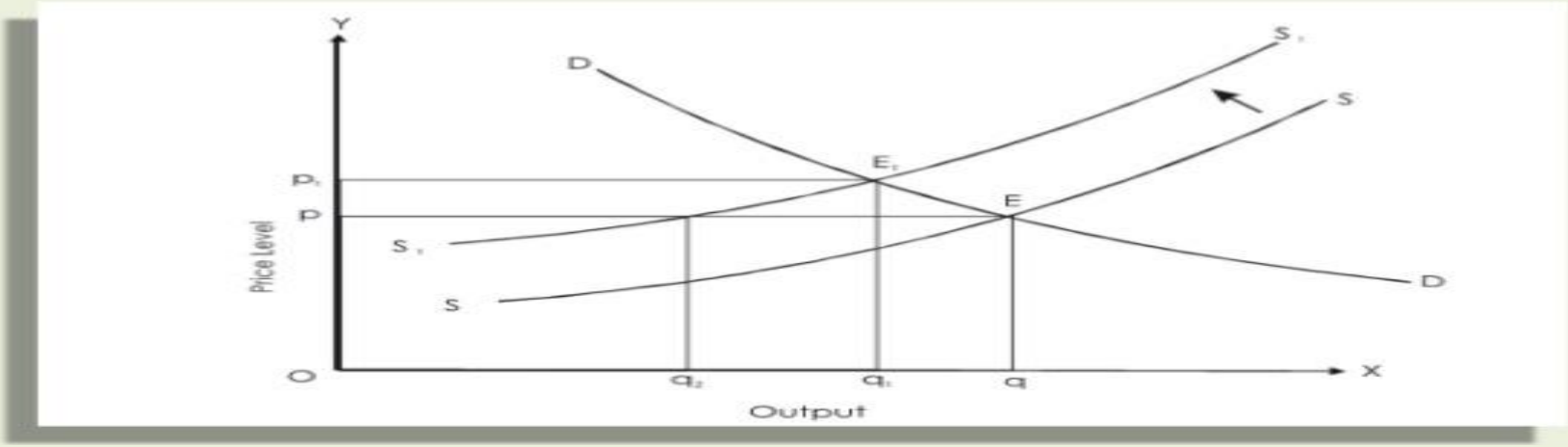
- Oil prices.
- Corruption.
- Slow agricultural development
- Slow Industrial growth.

Effects Of Inflation:

- Un employment
- Decreasing the purchasing power
- Decrease in stock.
- Exports decline.
- Breakdown of monetary system.
- Investment fall.



Cost Push Inflation



Cost Push Inflation

- In this graph, the starting point is the equilibrium price(Op)and output (Oq).
- If aggregate supply has fallen, the SS curve shifts leftward to S
- At price Op now supply will be Oq
- But demand Oq.
- This will push prices high till a new equilibrium is reached at Op
- At the new price there will be no excess demand.
- Inflation is thus a self limiting phenomenon.

Money Supply in Inflation

Money

- Money does not have any inherent value
- It is valuable because it is:
- ***Medium of Exchange***:
  - the most convenient medium of exchange.
  - all the things which have utility are available in exchange for money.
  - Under barter system where goods (or services) are exchanged for goods (or services) *dual coincidence of wants* is the basis for exchange.
- ***Measure of Value:***
  - Provides a common denominator to all types of goods and services.
- ***Store of Value:***
  - Can be saved for future with convenience, whereas other goods can be saved for a limited time period only.

Demand for Money

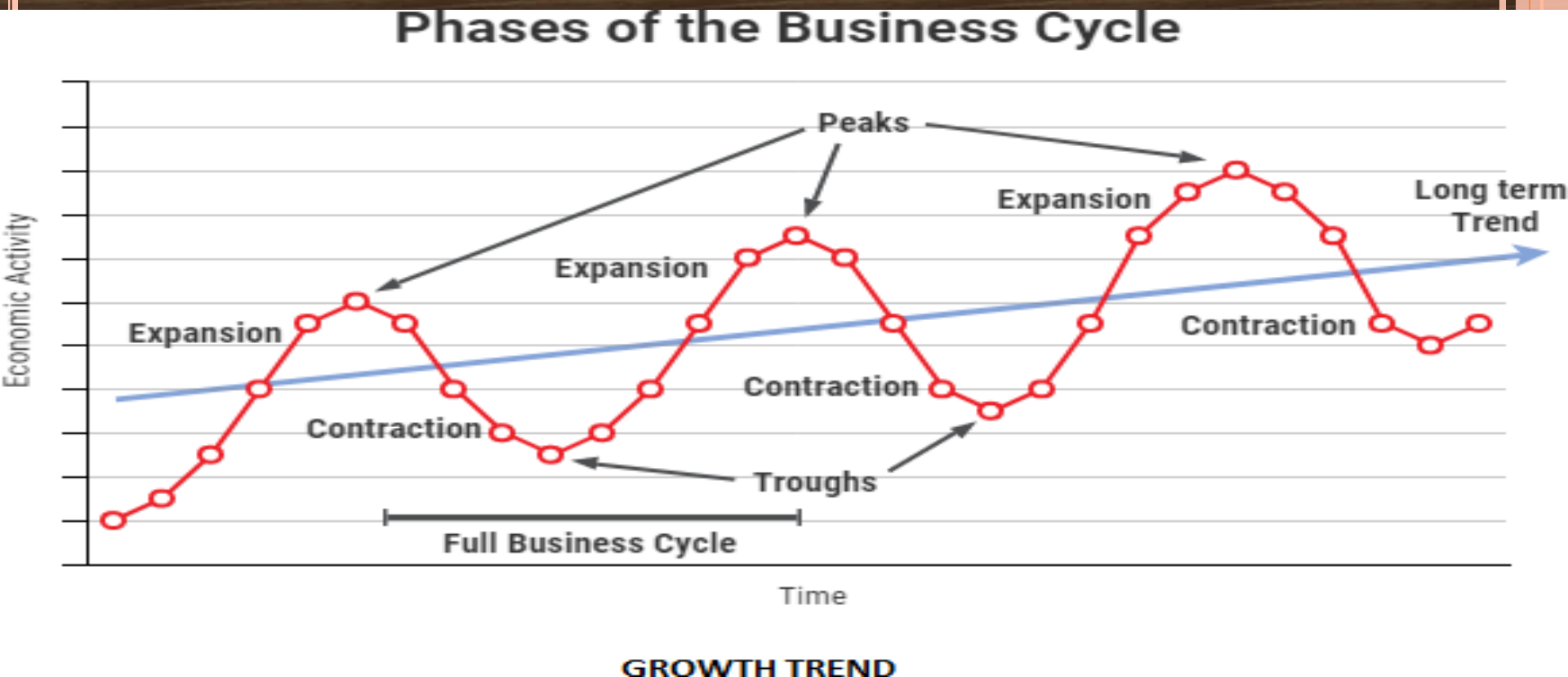
- *Keynes has identified three motives to hold money*
  - ***Transaction Motive*:**
    - Consumers need money to meet their day to day needs,
    - producers need money to make investments.
  - ***Precautionary Motive*:**
    - To cover for unforeseen events such as sickness, accidents and losses, money is kept as precaution for contingency.
  - ***Speculative Motive*:**
    - For making gains from speculation on future value of bonds and securities.
- Money may be demanded as a *flow* (transaction motive) as well as a *stock* (precautionary motive).
- Money as a flow is that which is in circulation.
- Total money supply at any point of time consists of money in circulation as well as in stock (in various forms of savings and deposits).

Supply of Money

- Earlier money was in the form of coins, composed of gold, silver and copper ,etc. Value of the coins was based on the value of the metals they contained.
- The gold standard broke down in 1930 in UK, in USA it lasted till 1971
- A currency issued by the government is called a *fiduciary issue* (based on trust and confidence).
- Modern form of money is simply pieces of paper or numbers in a ledger.
- System of paper money was introduced based on the *gold standard* or *silver standard* or some combination of the two, to ensure people's faith in the system.

Business Cycle

The **business cycle**, also known as the economic **cycle** or trade **cycle**, is the downward and upward movement of gross domestic product (GDP) around its long-term growth trend. The length of a **business cycle** is the period of time containing a single boom and contraction in sequence.



Features and Phases of Business Cycles

Variable	Expansion	Peak	Recession	Trough
Industrial Production	Increase	Rapid Increase	Decline	Lowest
Demand	Increase	Highest	Decline	Lowest
Prices	Increase	Rapid Increase	Decline	Rapid decline
cost	Increase	Rapid Decrease	Gradual Decline	Rapid decline
Investment	Increase	High	Falls slowly	Falls rapidly
Employment	Gradual Increase	Rapid Increase	Falls	Rapid falls
Bank Credit	Liberal	Very liberal	Falls	Rapid falls

Nature and Scope of Business Economics

Nature of Managerial Economics

1. **Close to Micro-Economics** – finding solutions for different managerial problems of a particular firm (production schedules)
2. **Operates against the backdrop of Macro-Economics** – macroeconomic conditions of the economy are also seen as limiting factors for a firm to operate. (industrial policy and Inflation)
3. **Normative Statements** – one problem with normative statements is that they cannot be verified by looking at the facts, because they mostly deals with the future. (agreement or disagreement – L.P.G.)
4. **Prescriptive Action** – suggest the course of action from the available alternatives for optimal solution. (mention concept to given context)
5. **Applied in Nature** – case study method to conceptualize problem
6. **Offers scope to evaluate each alternative** - cost and revenue
7. **Interdisciplinary** – drawn from different subjects (as mentioned)
8. **Assumptions and Limitations** – validity is not universal (changes)

Scope of Managerial Economics

Operational issues of firms are of internal nature. Internal issues include all those problems which arise within the business organization and fall within the control of the management. Some of the basic internal issues are:

- ✓ *Choice of business and the nature of products, that is, what to produce,*
- ✓ *Choice of size of the firm, that is, how much to produce,*
- ✓ *Choice of technology, that is, choosing the factor-combination*
- ✓ *Choice of price, that is, how to price the commodity,*
- ✓ *How to promote sales,*
- ✓ *How to face competition,*
- ✓ *How to decide on new investments,*
- ✓ *How to manage profit and capital,*
- ✓ *How to manage an inventory, that is, stock of both finished goods and raw materials.*

Scope of Managerial Economics (Cont..)

Fig : Scope and Decision Areas of Managerial Economics

Scope of Managerial Economics (Cont..)

1. **Demand Decisions** – Forecasting demand, Demand response with the changes of price and supply, impact of income and alternatives on demand , profit and demand relation etc..
2. **Input-Out put Decisions** – Input relation with Output to maximize profit, production function, factors of production, cost and production relationship, analyze cost – out put relation in the short run and long run etc..
3. **Price -Output Decisions** – production to determine price, understand price at different market structures, pricing policies, methods and strategies etc...
4. **Profit related Decisions** – BEP Analysis, Cost reduction and control, Ration Analysis, production needed to gain profit, reduce wastage etc...

Scope of Managerial Economics (Cont..)

5. **Investment Decisions** – Capital Budgeting decision, allocation and utilization of Investment, cost of capital, capital structure, to maximize return on capital etc.....

6. **Economic Forecasting and Forward Planning** – understanding major external factors like, government policy, competition, employment, labour, price and income levels and so on. Internal factors like finance, people, market and products. It is necessary to forecast the trends in the economy to plan for the future in terms of investments, profits, products and markets.

Role of Business Economist

1. Demand estimation and forecasting

2. Preparaton of business /sales forecast

3. Analysis of the market survey

4. Analysing the issues and problems of the concernedindustry

5. Assisting he business planning process of the firm

6. Advising on pricing, investment and capital budgeting.

7. Building micro and macro models.

8. Directing economic research activity.

9. Briefing the management on current domestic & global economic issues and emerging challenges.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Good
Morning

UNIT - II

Demand and Supply Analysis

What is DEMAND?

- "Every want supported by the willingness and ability to buy" – constitutes demand for a particular product or services.....
- In other words, if a person wants a CAR and cannot pay for it. There is no demand for the CAR from his or her side.....

- A product or service is said to have demand when **three conditions** are met:
- 1.Desire on the part of the buyer to buy.
- 2.Willing to pay for it
- 3,Ability to pay the specified price for it.
- Unless all these conditions are fulfilled, the product is not said to have any demand.

Nature of **DEMAND**

- The nature of demand is better understood when we see these variations as follows:
- **Consumer goods vs producer goods**
- **Autonomous demand vs derived demand**
- **Durable vs perishable goods**
- **Firm demand vs industry demand**
- **Short-run demand vs long-run demand**
- **New demand vs replacement demand**

Consumer goods vs producer goods

- The goods can be grouped under consumer goods and producer goods.
- Cg refers to such product and services, which are capable to satisfying human needs.
- Cg are those which are available for ultimate consumption.(give direct and immediate satisfaction)
- Example: bread, apple, rice, etc

- Pg are those which are used for further processing or production of goods/service to earn to INCOME.
- This goods yield indirect satisfactionand are used to produce cg
- Example: machinery , tractor etc.,
- The product may be both pg & cg
- **The farmer having 10 bags of paddy, 5 bags personel use, next 5 bags as SEEDS for the next crop.**
- **PADDY is both pg & cg**

- Pg are those which are used for further processing or production of goods/service to earn to INCOME.
- This goods yield indirect satisfactionand are used to produce cg
- Example: machinery , tractor etc.,
- The product may be both pg & cg
- **The farmer having 10 bags of paddy, 5 bags personel use, next 5 bags as SEEDS for the next crop.**

Autonomous demand vs derived demand

- Ad refers to direct demand for product and services.
- Example: the demand for the service of a super-specialty hospital can be consider ad
- Dd the demand for the product arises out of the purchase of a parent product.
- Example: the demand for hotel around that hospital is called dd.
- A demand for houses is autonomous whereas a demand for these input is derived.

Durable vs perishable goods

- Durable goods are those goods that give service for relatively long period.
- Example: rice, sugar etc.,
- The life of perishable goods is very small –a few hours or days.
- Example: vegetable, milk, fish etc.,

Firm demand vs industry demand

- A firm is a single business unit.
- The quantity of goods demanded by a single firm is called fir demand.
- Example: a construction company may use 100 tonnes of cement during the month....fd
- The group of firm carrying on similar activities.
- The quantity demanded by the industry as a whole is called industry demand.
- Example: the construction industry particular state may have used 10 million tonnes.

Short-run demand vs long-run demand

- The demand for a particular product or service in a given REGION for a particular DAY can be viewed as a shor-run demand.
- Example: available taste and technology
- The demand for a longer period for the same region can be viewed as a long-run demand.
- Example: changes in design and technology

New demand vs replacement demand

- The demand for a new product and it is in addition to the existing stock.
- Example: new model car
- The item of purchase to maintain the asset in good condition
- Example: replacement of car spare parts

Total markets vs Segment market

- **The total demand for a product in the region is the total market demand.**
- Example; sugar, rice
- The demand for the sugar from the sweet industry from the region is the segment (specific criteria)market demand.
- Example: age, gender, income,

Factors determining **DEMAND**

- The following factor determine the demand for a given product:
- 1.Price of the product **(P)**
- 2.Income level of the consumer **(I)**
- 3.Tastes and preferences of the consumer **(T)**
- 4.Prices of related goods which may be substitutes/complementary **(P_R)**
- 5.Expectation about the prices in future **(E_P)**

- 6.Expectation about the incomes in future **(E_I)**
- 7.Size of population **(S_P)**
- 8.Distribution of consumers over different region **(D_C)**
- 9.Advertising efforts **(A)**
- 10.Any other factor capable of affecting the demand **(O)**

DEMAND function

- Demand function describe the relationship between one variable and its determinants.
- It describe the quantity of goods bought at alternative prices of a goods and related goods. **Alternative income levels and alternative values of other variables affecting demand.**
- The demand function for a goods relates to the quantity of a goods that consumer demand during the given period to the factor that influenced demand.

- Matheamatically, the demand function for product X can be expressed as follows:

- $Qd = f(P, I, T, P_R, E_P, E_I, S_P, D_C, A, O)$
- Where Qd refer to the quantity of demand

Impact of **DEMAND** factors

1.Price of the product

- Demand for a product is inversely related to its price.
- In other words, if the **price rise, the demand falls** and vice versa.
- This is the price demand function showing the **PRICE EFFECT OF DEMAND**

2.Income of the consumer

- The income of the consumer or the household increases, there is a tendency to **buy more and more** up to a particular limits.
- The **demand for product is directly related to the income of the consumer**

3.Prices of Substitutes or Complementaries

- The demand for product X is determined by the prices of its related products: substitutes or complementaries.
- If there is an **increase in the price** of a substitute, the **demand of product X will go up** and vice versa.
- Similarly, if the **price** of complementary goods **goes up**, the **demand for product X will fall**.

Tastes and Preferences

- If the tastes and preference of the consumers change, there is change in the product demanded also.
- The companies keep changing the product and services…(when T & P)
- The companies take advantages of the **technological changes and upgrade the product and services.**(to meet specific requirements of customers)

Elasticity of demand

- ✓ The elasticity of demand is defined as the rate of change in quantity demanded for a given change in price.
- ✓ It is primarily related to extension or contraction of demand for a fall or rise in price.
- ✓ Hence, this is called price elasticity of demand.
- ✓ But there are other factors which influence elasticity of demand and accordingly we have three types of elasticity of demand.
    a) price elasticity of demand
    b) income elasticity of demand and
    c) cross elasticity of demand

Elasticity – the concept

- If price rises by 10% - what happens to demand?
- We know demand will fall
- By more than 10%?
- By less than 10%?
- **Elasticity measures the extent to which demand will change**

Elasticity

For example:

- An increase of price by 5% increases supply by 10%. **(Elastic)**
- An increase of price by 10% increases supply by 5%. **(Inelastic)**
- When the price rises but the supply is still kept constant. (**Unity** = elasticity = **1**) It is neither elastic nor inelastic.

Definitions

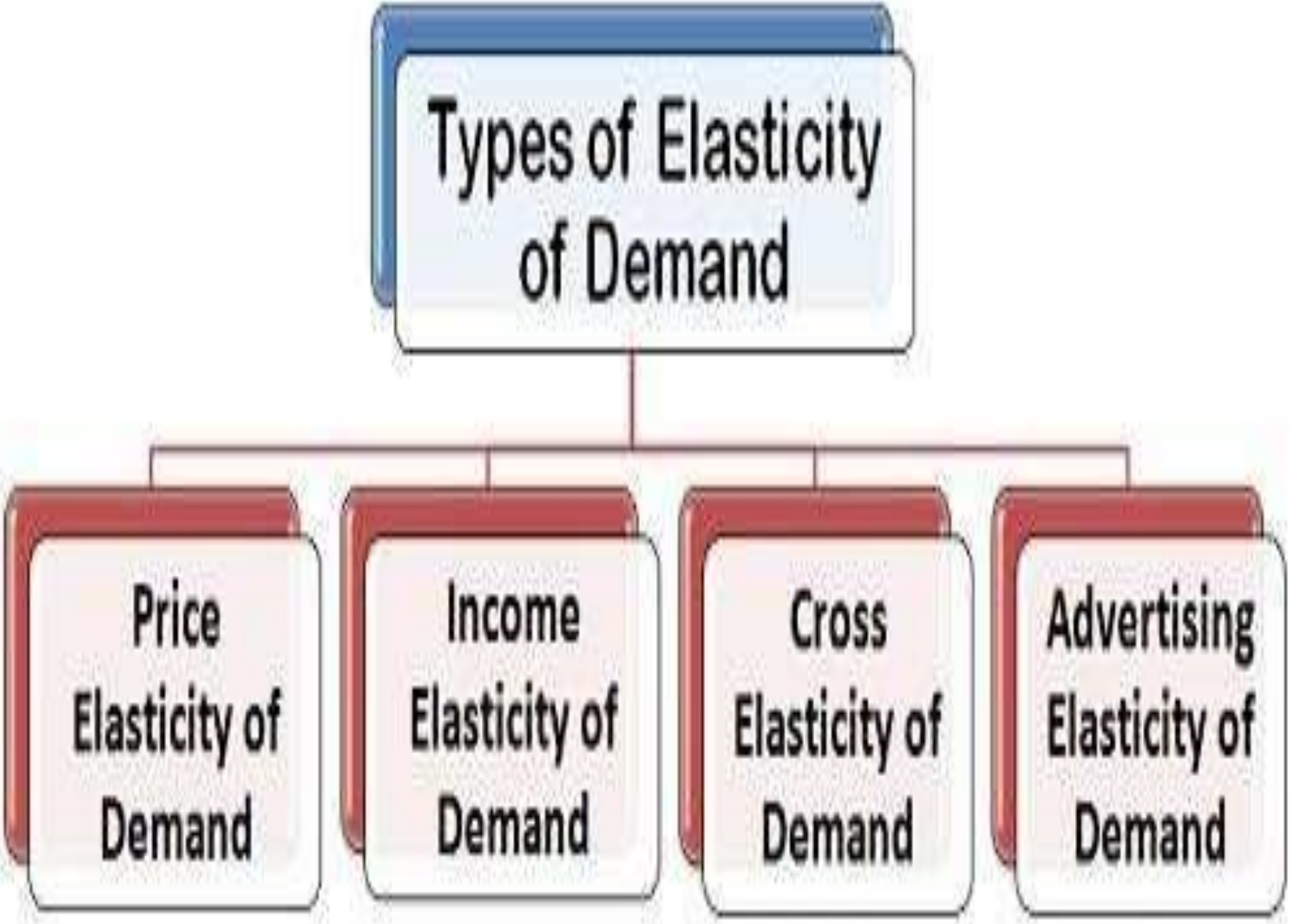
— In the words of **Dr. Marshall,** *"Elasticity of Demand may be defined as the percentage change in the quantity demanded divided by the percentage change in the price."*

— According to **Boulding,** *"Price elasticity of demand measures the responsiveness of the quantity demanded to the change in price."*

— In the words of **Dooley,** *"The price elasticity of demand measures the responsiveness of the quantity demanded to a change in its price."*

— According to **Antol Murad,** *"Elasticity of demand is the ratio of relative change in quantity to relative change in price."*

Thus, Price Elasticity of demand is a device to measure the rate of change in the quantity of a product demanded in response to a small change in its price.


Types of Elasticity of Demand
Price Elasticity of Demand
Income Elasticity of Demand
Cross Elasticity of Demand
Advertising Elasticity of Demand

4 types of elasticity

- ***Price elasticity of demand:***

$$\frac{\text{Proportionate change in quantity demanded}}{\text{Proportionate change in price}}$$

- ***Price elasticity of supply:***

$$\frac{\text{Proportionate change in quantity supplied}}{\text{Proportionate change in price}}$$

- ***Income elasticity of demand:***

$$\frac{\text{Proportionate change in quantity demanded}}{\text{Proportionate change in income}}$$

- ***Cross elasticity of demand for good A with respect to good B:***

$$\frac{\text{Proportionate change in quantity A demanded}}{\text{Proportionate change in price of B}}$$

Measurement of Price Elasticity

Price elasticity of demand measures the relationship between the proportionate change in demand and the proportionate change in price.

In other words, it shows how much change in price will cause how much change in demand. The formula to calculate the price elasticity of demand is:

$$E_P = \frac{\text{Proportionate change in Demand}}{\text{Proportionate change in Price}}$$

$$= \frac{dq}{dp} \times \frac{p}{q}$$

Types of Price Elasticity of Demand

- Perfectly elastic demand
- Perfectly inelastic demand
- Relatively elastic demand
- Relatively inelastic demand
- Unitary elastic demand

1. Perfectly elastic demand

Perfectly elastic demand is when the price is constant but there is a change in the demand i.e. increase or decrease of a commodity. Thus, the demand curve is parallel to the X-axis.

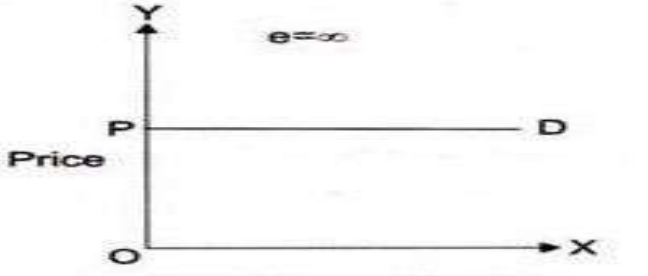


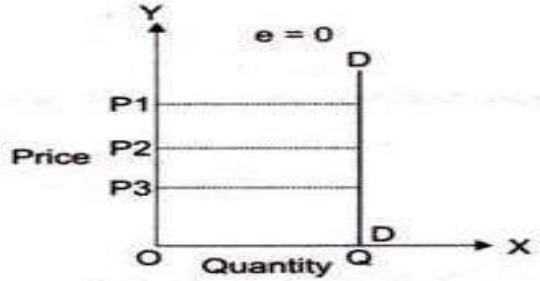
Figure-2: Perfectly Elastic Demand

Here, $E_P = \infty$

2. Perfectly inelastic demand

Perfectly inelastic demand is when the demand is constant or there is no change in the demand of a commodity even if the price changes i.e. increases or decreases.

Thus, the demand curve is parallel to the Y-axis. Demand for salt is an example of perfectly inelastic demand.

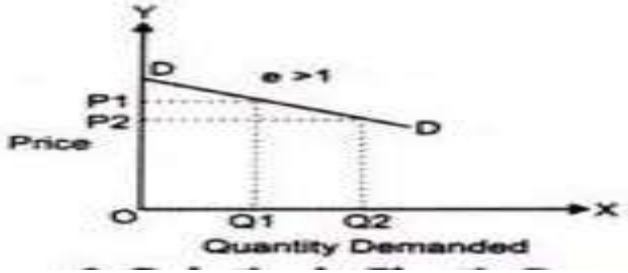


Here, $E_P = 0$

3. Relatively elastic demand

Relatively elastic demand is when the proportionate change in demand is more than the proportionate change in the price.

In other words, this means that a little change in the price shall cause more change in demand. Thus, the demand curve slopes downward from left to right. An example of this is luxury goods.

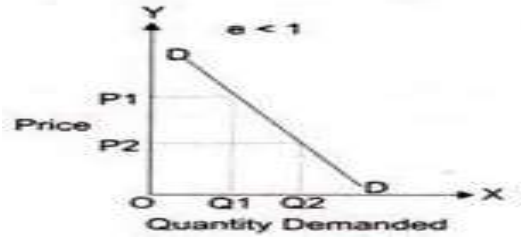


Here, $E_P > 1$

4. Relatively inelastic demand

Relatively inelastic demand is when the proportionate change in demand is less than the proportionate change in the price.

In other words, this means that more change in price shall cause less change in demand. Thus, the demand curve slopes downward from left to right but is steeper. An example of this is the necessary goods.



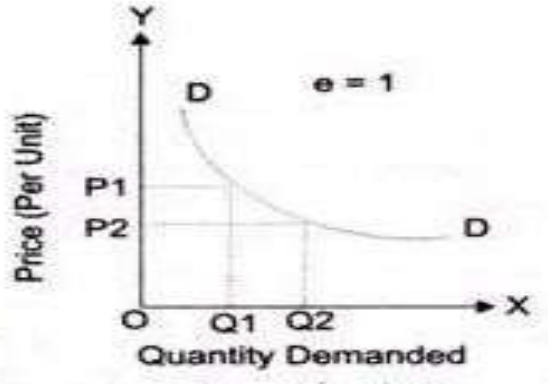
Here, $E_P < 1$

5. Unitary elastic demand

Unitary elastic demand is when the proportionate change in demand is equal to the proportionate change in price.

In other words, it means that the change in demand is the same as the change in price it may increase or decrease.

Thus, the demand curve slopes downward from left to right but it is a rectangular hyperbola. An example of this is comfort goods.



Here, $E_p = 1$

The different types of price elasticity of demand are summarized in Table-4:

Table-4: Price Elasticity of Demand

Numerical Value	Type of Price Elasticity	Description
$e_p = \infty$	Perfectly elastic demand	There is a greater change in demand in response to percentage or smaller change in the price. For example, the demand for a product decreases or completely stops, with a little change in its price and vice versa.
$e_p = 0$	Perfectly inelastic demand	Consumers do not respond to the demand for a product with increase or decreases in its price. This implies that the demand remains the same with change in the price.
$e_p > 1$	Relatively elastic demand	The percentage change in the quantity demanded of a product is greater than percentage change in its price. In such a case, consumers generally switch to new brands when the price of a particular brand increases. However, some consumers are loyal to the same brand.
$e_p < 1$	Relatively inelastic demand	The change in the demand of a product is less than that of change in its price.
$e_p = 1$	Unitary elastic demand	The change in the demand and change in the price of a product is same.

Price Elasticity of Demand

- **Price elasticity of demand** is the percentage change in quantity demanded given a percent change in the price.

- It is a measure of how much the quantity demanded of a good responds to a change in the price of that good.

Price Elasticity Formula

$$\text{Price Elasticity of Demand} = \frac{\%\ \text{Change in the Quantity Demanded } (\Delta Q)}{\%\ \text{Change in the Price } (\Delta P)}$$

$$\text{Price Elasticity of Supply} = \frac{\%\ \text{Change in the Quantity Supplied } (\Delta Q)}{\%\ \text{Change in the Price } (\Delta P)}$$

Computing the Price Elasticity of Demand

The price elasticity of demand is computed as the percentage change in the quantity demanded divided by the percentage change in price.

$$\textit{Price Elasticity of Demand} = \frac{\textit{Percentage Change in Quantity Demanded}}{\textit{Percentage Change in Price}}$$

The Percentage Method

Computing the Price Elasticity of Demand

$$\textit{Price elasticity of demand} = \frac{\textit{Percentage change in quatity demanded}}{\textit{Percentage change in price}}$$

Example: If the price of an ice cream cone increases from $2.00 to $2.20 and the amount you buy falls from 10 to 8 cones then your elasticity of demand would be calculated as:

$$\frac{\frac{(10-8)}{10}\times 100}{\frac{(2.20-2.00)}{2.00}\times 100} = \frac{20 \text{ percent}}{10 \text{ percent}} = 2$$

Ranges of Elasticity

Inelastic Demand

- Quantity demanded *does not respond* strongly to price changes.
- Price elasticity of demand is *less than* one.

Elastic Demand

- Quantity demanded *responds strongly* to changes in price.
- Price elasticity of demand is *greater than* one.

Income Elasticity

- The **income elasticity of demand** measures the response of Q^d to a change in consumer income.

$$\text{Income elasticity of demand} = \frac{\text{Percent change in } Q^d}{\text{Percent change in income}}$$

- It refers to the different quantities of commodities or services which consumers will buy at different levels of income, other things remaining the same.
- It expresses the relationship between income and quantity demanded.

Cross elasticity of demand

- It is the ratio of proportionate change in quantity demanded of A to a given proportionate change in the price of related commodity B.

- $Ec = \frac{\%\text{ change in demand for good A}}{\%\text{ change in price good B}}$

Advertising Elasticity of Demand (AED) :

- Advertising Elasticity of demand refers to the proportionate change in demand of a commodity due to proportionate change in advertising expense.
- Advertising elasticity is a measure of an advertising campaigns effectiveness in generating sales.
- Formula :

$$AED = \frac{\text{Proportionate change in Demand for product}}{\text{Proportionate change in Advertising expense}}$$

DETERMINANTS OF ELASTICITY OF DEMAND

1. Availability of substitutes
2. Proportion of income spent on a commodity
3. Different uses of commodity
4. Habit of consumer
5. Nature of commodity
6. Postponement of the use

Law of DEMAND

Law of demand

Statement of Law : " **Other things being equal, the higher the price of a commodity, the smaller is the quantity demanded and lower the price, larger the quantity demanded**".

The Law of Demand states **the relationship between price and demand of a particular product or services**

Assumptions of the Law of **DEMAND**

- **Other things being equal** : include income level of the consumer, tastes and preferences of the consumer, prices of related goods, expectation about the prices or incomes in the future, size of population, advertising efforts and any other factor capable of affecting the demand

The Law of **Demand**

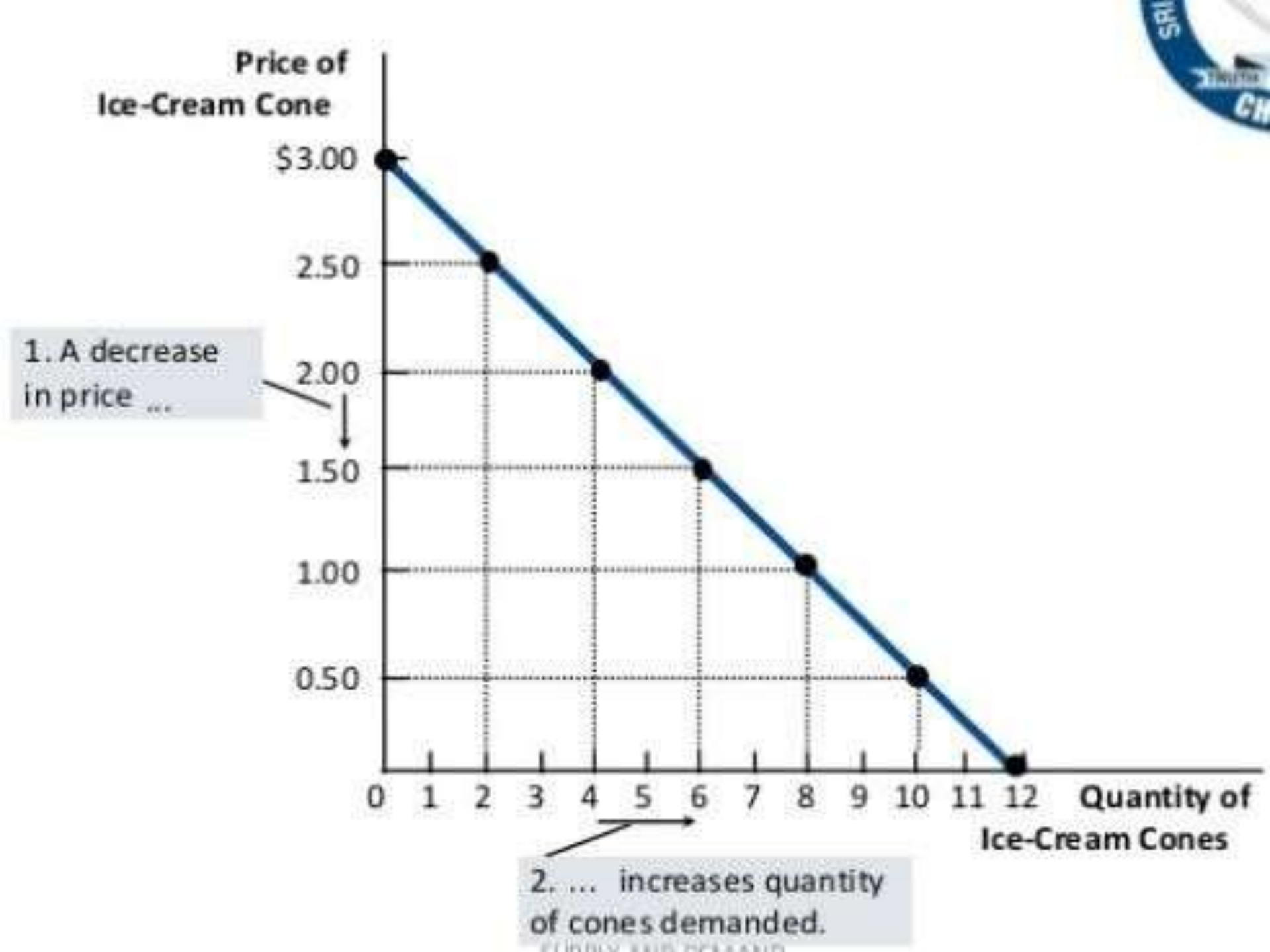
- When a good's **price is lower**, consumers will **buy more of it**
- When a good's **price is higher**, consumers will **buy less of it**

DEMAND Curve

- The graph has two axis - vertical line is labeled as price and the horizontal line is for the quantity number.
- Remember to state the units used for price and quantity and name the graph.

Demand reflects an inverse relationship between price and quantity demanded.

The Demand Curve is a graph reflecting the price consumers are willing to pay and the quantity consumers are willing buy.


Price of
Ice-Cream Cone
$3.00
2.50
2.00
1.50
1.00
0.50
1. A decrease in price ...
0 1 2 3 4 5 6 7 8 9 10 11 12
Quantity of
Ice-Cream Cones
2. ... increases quantity of cones demanded.

Law of Demand and Income effect

- When there is a **fall in the price** of a commodity. It leads to a **rise in the real income of the consumer.**
- Rise in **real income means the consumer will be able to buy more commodities for a given amount of money**.
- Example:the price of fall in banana

Increase **DEMAND**

- **If the consumers are willing and able to buy more of a particular brand of shirts (say.X) at the same price, the result will be an increase in demand.**
- **The demand curve will shift to the right**

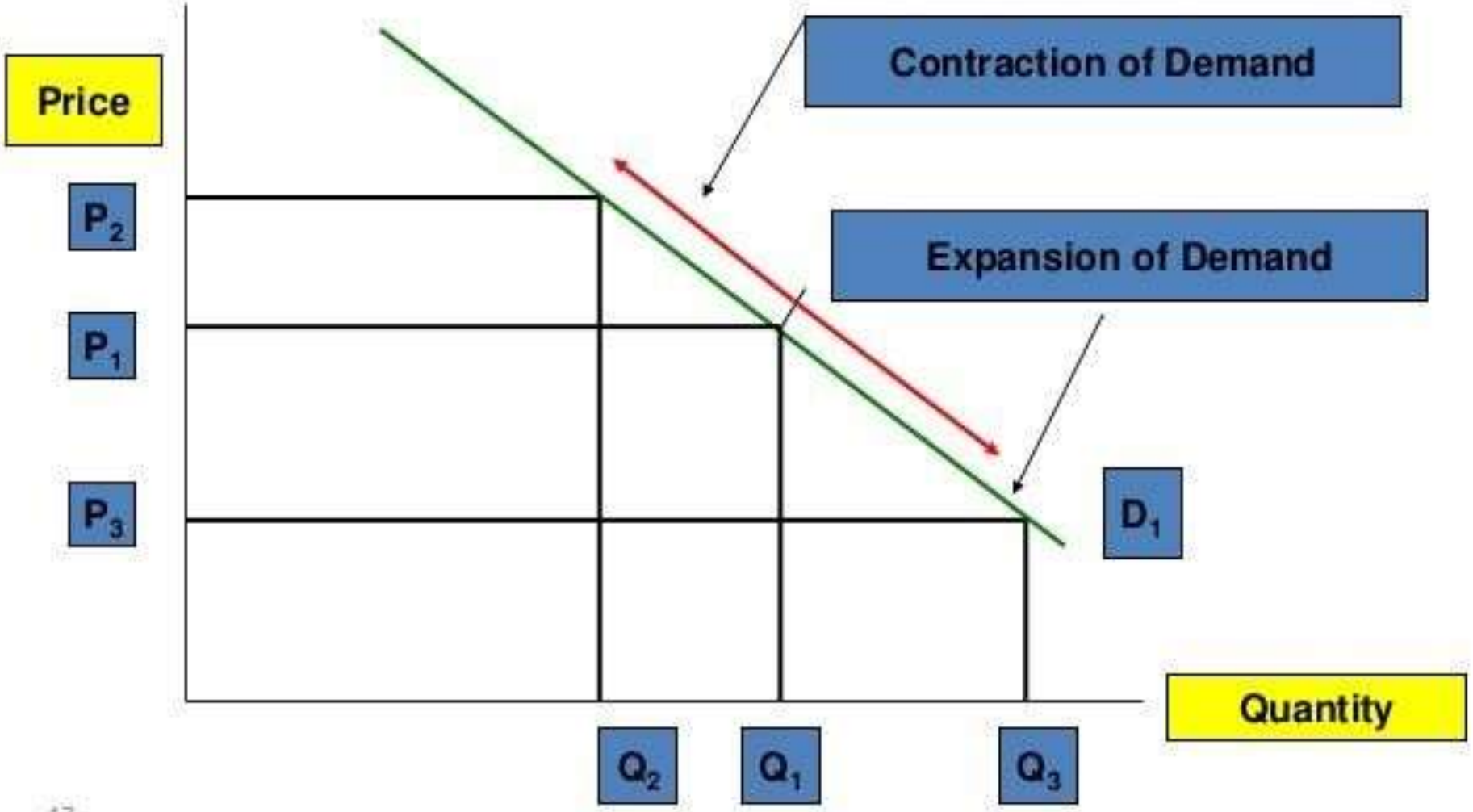
Decrease in **DEMAND**

- A **decrease in demand occurs when buyers buy less of a product at each possible price rise because of factors like fall in income, rise in price of complementary goods etc.,**

Extension and Contraction in **DEMAND**

- **Extension is a downward movement along the demand curve, which idicates that a higher quantity is demand for a given fall in the price of a good.**
- **Contraction is an upward movement along the demand curve which idicates that a lower quantity is demanded for a given increase in the price of the good**

Movements Along the Demand Curve



Factors governing elasticity of demand

- Nature of product
- Time frame
- Degree of postponement
- Number of alternative uses
- Tastes and preferences of the consumer.
- availability of close substitute
- In case of complementary or joint foods

- Level of prices
- Availability of subsidies
- Expectation of prices
- Durability of the product
- Government policy

Significance of elasticity of demand

- To fix the prices of factors of production
- To fix the prices of goods and services provided rendered
- To formulate or revise government policies
- to forecast demand
- to plan the level of output and price.

ELASTICITY OF DEMAND IN DECISION MAKING PROCESS

(a) BUSINESS DECISIONS.

(b) ECONOMIC POLICIES OF GOVERNMENT.

(c) DETERMINATION OF PUBLIC UTILITIES.

(d) TAXATION POLICY.

(e) DETERMINATION OF FACTOR PRICING.

(f) INTERNATIONAL TRADE

Steps in Demand Forecasting

Specifying the objective

Determining the time prospective

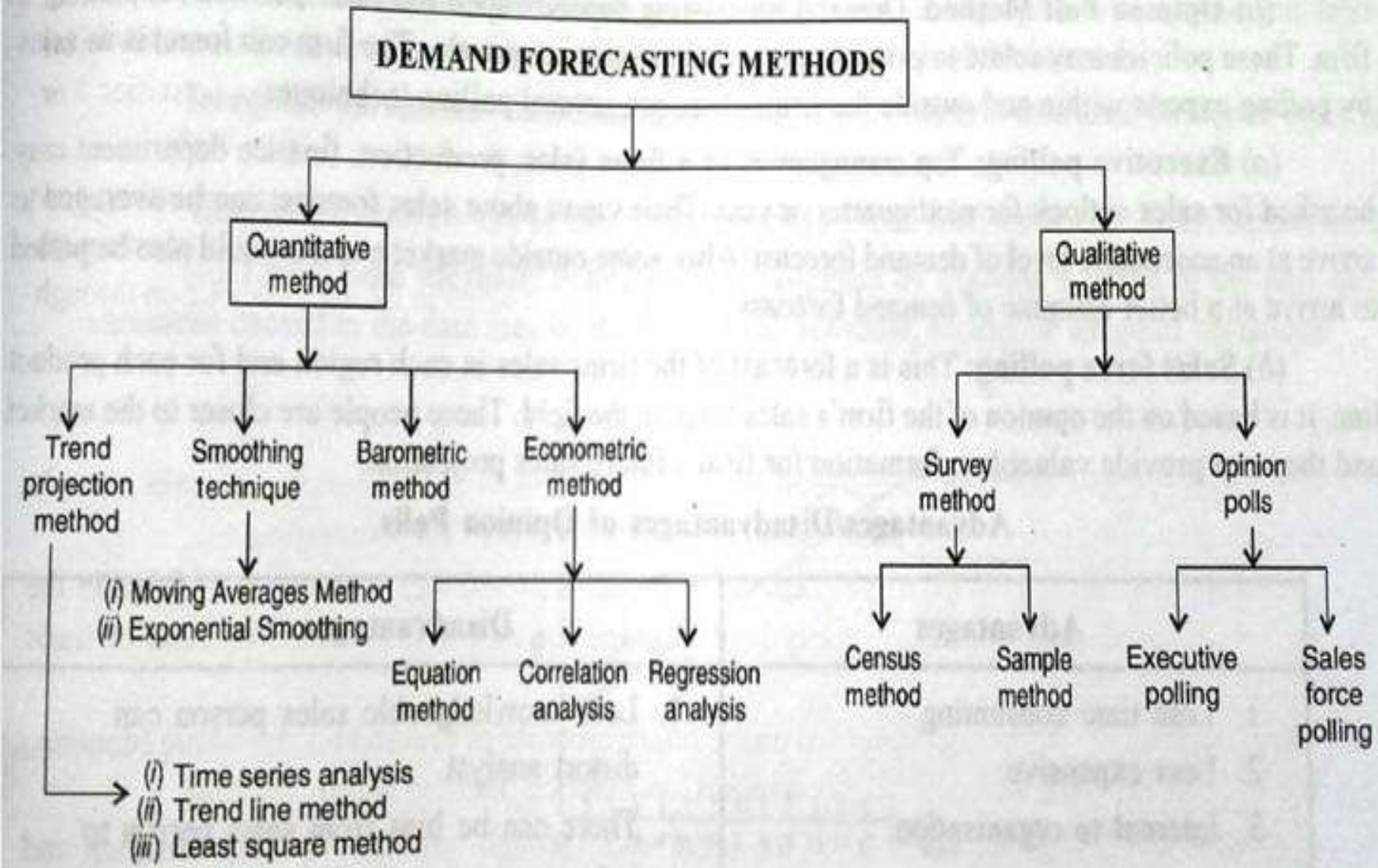
Choices of methods for demand forecasting

Collection of data and data adjustments

Estimation and interpretation of results

(Monitoring Results)

METHODS OF DEMAND FORECASTING



Qualitative Methods

Delphi Method

- Involves a group of experts who eventually develop a consensus
- They usually make long range forecast for future technologies

Merits:

1. Time saving
2. Useful for new product

Demerits:

1. Bias
2. Risk of loss of confidential information

Sales Force Opinions

- Sales people are a good source of information with regard to customers future intentions to buy a product

Merits:

1. Easy and cheaper
2. Collection wisdom of salesmen's

Demerits:

1. Carry Biases
2. Short run only
3. Salesmen are not trained

Expert Opinion Method

- Involves a group of experts within organization.
- Long run Demand Forecasting.

Merits:

1. Time Saving
2. Saving Resources
3. Long term forecasting

Demerits:

1. High Costs
2. Biased forecast

Customer Survey method

- By using a customer survey a firm can base its demand forecast on the customers purchasing plans

1. Complete Enumeration Survey:

Door to Door survey

2. End use method :

Producer Goods

3. Test marketing survey :

Representative of Households

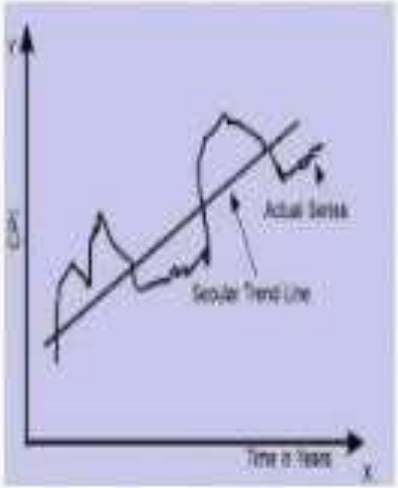
Controlled Experiment Method

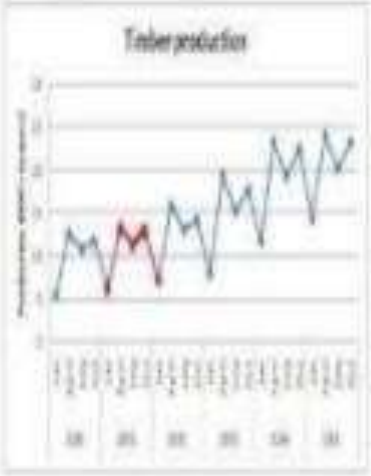
- Forecasting controlling expenditure on advertisement and try to find out effect on demand
- Assuming other things are constant
- Change in packaging

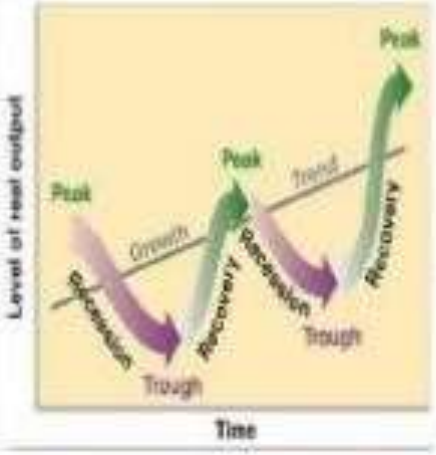
Quantitative Methods

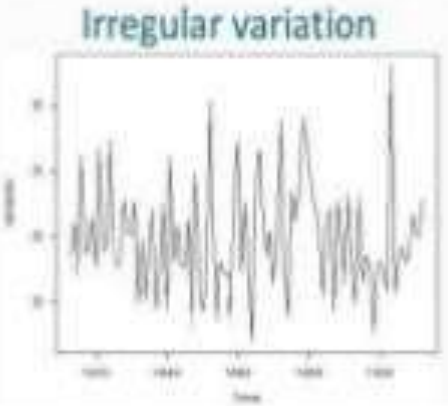
Time Series Analysis

- Trend projection method
- On the basis of data regarding sales of past years and demand
- Chronological orderly sales Data.









Secular Trend

Seasonal Variation

Cyclic Variation

Irregular Variation

Barometric Techniques

- Indicates changes in atmospheric pressures.
- Forecast future trends on the basis of movements in the index of economic indicators

Leading indicators :- it moves up & down ahead of some other series.

E.g.., (i) index of net business investment, (ii) change in the value of inventories: (iii) index of prices of the materials .

Coincidental indicators :-

it moves up and down simultaneously with the level of general economic activities. e.g., (i) no.s of employees in non agriculture sector : (ii) rate of unemployment ;(iii) gross national products at constant prices.

Lagging indicators :-

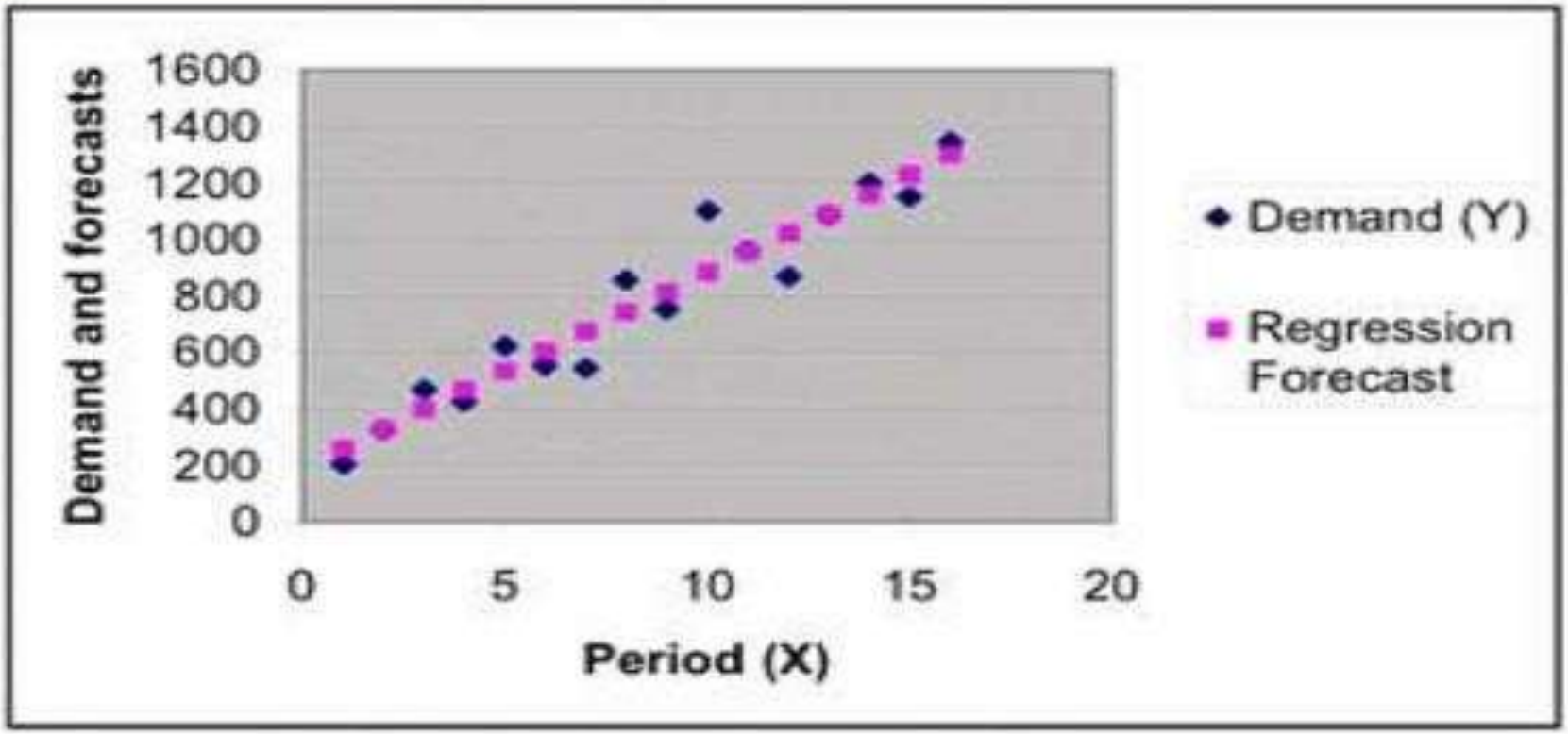
it consist of those indicators that follows a change after some time-lag.

e.g., labour cost per unit of manufactured output,

Lending rates for short term loans

Regression Analysis

- To access relationship between two variables from historical data
- On or more independent variables and one dependent variable



Demand Forecasting

- A forecast is a prediction or anticipation of any event which is likely to happen in future.
- Demand forecast is the prediction of the future demand for a firm's product.
- It can either be made through experience or by statistical methods.

Forecasts are necessary for :

- Fulfillment of the objectives.
- Preparations of budgets.
- Stabilization of employment and production.
- Decisions about expansion of a firm.
- Other decisions like long term investment plans, warehousing and inventory decisions.

A forecast is important for at least five reasons:

1. A forecast becomes a basis for setting and maintaining a production schedule – manufacturing.
2. It determines the quantity and timing of needs for labor, equipment, tools, parts, and raw materials – purchasing, personnel.
3. It influences the amount of borrowed capital needed to finance the production and the necessary cash flow to operate the business – controller.
4. It provides a basis for sales quota assignments to various segments of the sales force – sales management.
5. It is the overall base that determines the company's business and marketing plans, which are further broken down into specific goals – marketing offer.

Methods of Demand forecasting

- There are two different sets of methods for demand forecasting :
- Interview & survey methods (for short term forecasts)
- Projection Approach (for long term forecasts)

Interview and Survey approach

- **Executive Opinion :**
- **In small companies, usually the owner takes the responsibility of forecasting.**
- **As a result of the experience and knowledge he is expected to have, he can predict what would be the course of activities in future and plan his own activities accordingly.**

Interview and Survey approach

- **Opinion polling method : Information about the consumer's expenditure can be collected either by the market research department or through the wholesalers and retailers.**
- **As a result of technological advancements, it is now possible to collect this information by the means of internet.**

Interview and Survey approach

- **Collective opinion method :**
  - ®Jury is a group of individuals, usually the top bosses or sales, production, marketing managers having experience in different fields.
  - ®The advantage of this method is that instead of basing the forecast on the opinion of one single individual, a more accurate forecast can be drawn.

Interview and Survey approach

- **Sample survey method :**
- **The total number of customers of a company is called as its population. When this number is more, it is not possible to collect information for all the customers. When only a few customers are contacted, it is called as a Sample Survey.**

Delphi Method

Administering a series of questionnaires to panels of experts. This method gathers information from all experts and the opinion of all the experts is shared by all other experts. In case if an expert finds that his own forecast is unrealistic, after going through the opinion of other experts, there is a chance for corrections.

Projection Approach

- In this method, the past experience is projected for the future. This can be done by tow methods :
- Correlation or regression analysis.
- Time series analysis.

Classical approach to time series analysis:

Past sales can be used to forecast future demand. Past sales are viewed from the angles of trends, various cycles of business, seasonality and then a forecast is drawn after checking the possibility of the same treads, cycles and seasonality factors.

This method is easy to use, it is based on past behavior and does not include new company, competitor or macroeconomic developments.

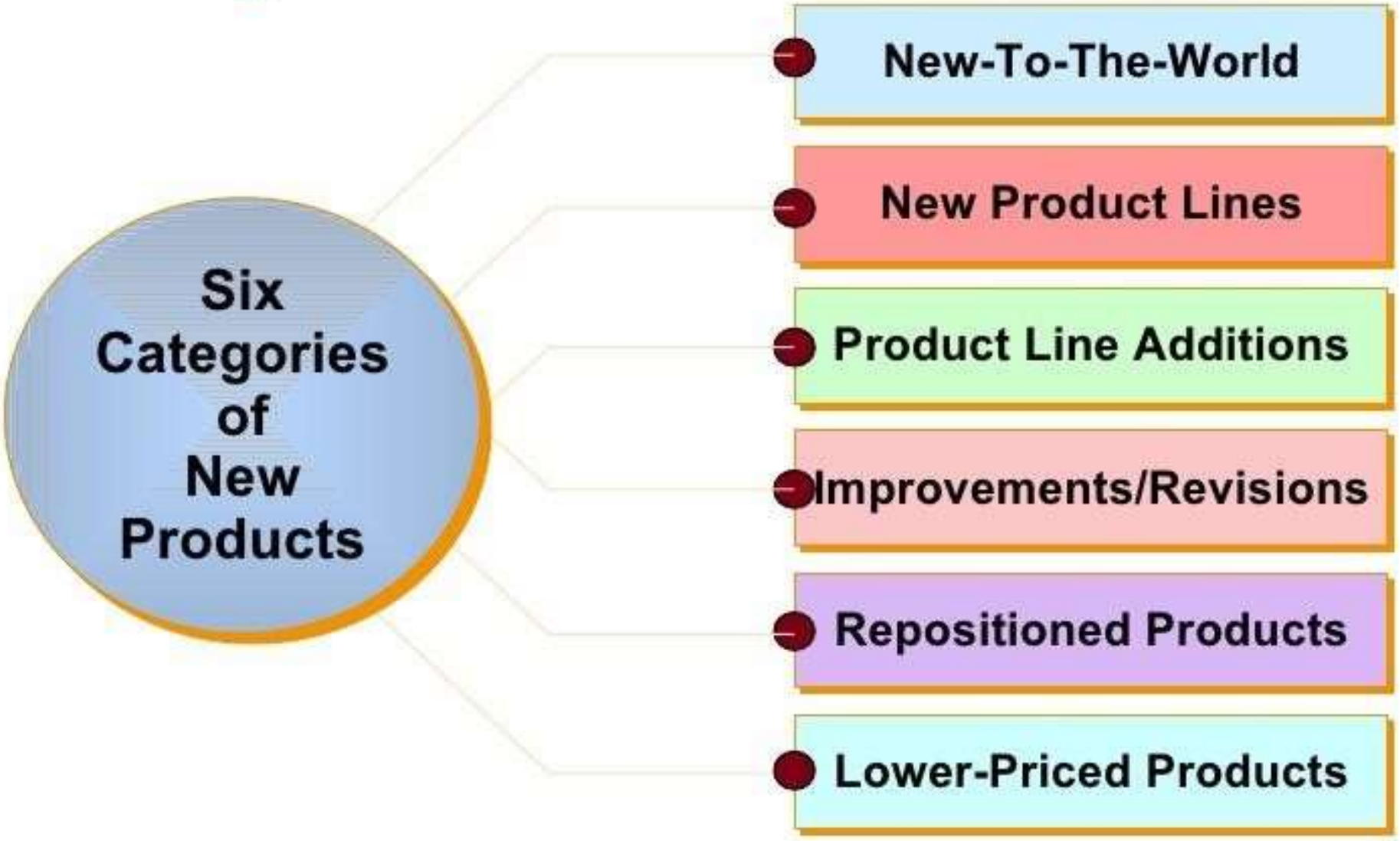
Moving Average

Moving averages are used to allow for marketplace factors changing at different rates and at different times.

Trend Projections – Least Squares

Eyeball fitting is simply a plot of the data with a line drawn through them that the forecaster feels most accurately fits the linear trend of the data.

Categories of New Products



Forecasting of New Products

- **Evolutionary method : Whenever a new product has been evolved from an existing product (eg. Colour TV from Black & White TV), the information of the existing product may be used for prediction of future for the new product.**
- **Substitution method : Many new goods are purchased by customers for replacing the old ones. (Eg. LCD TV's in place of Colour TV's).**

Forecasting of New Products

- **Growth pattern methods : To predict the demand for a new product, the growth pattern of an established related goods can be understood.**
- **Opinion polling method : This method advocates the direct questioning to the probable buyers or the influencers of sales of such products. (Eg. demand for drugs can be ascertained by asking the doctors)**

Forecasting of New Products

- **Sample survey method : A product is first introduced in a test market (small city having profiles of customers of metros). Responses from these markets are taken as a base for forecasts.**
- **Indirect opinion polling : Instead of asking the probable buyers, here, the resellers are consulted.**

What is Supply?

Supply of a commodity is the amount of that commodity which the sellers (or producers) are able and willing to offer for sale at a particular price during a certain period of time.

- Supply is always referred to in relation to price and time.
- Supply is what the seller is able and willing to offer.

Theory of Supply

Supply refers to the quantity of the commodity which the producer is willing to sell at a particular price during a particular time period.

SUPPLY ANALYSIS

→ "Supply of o commodity is the amount of it which the sellers (or producers) are able and willing to offer for sale at a particular price during a certain period of time."

→ Supply is a relative term – related to price and time.

→ SUPPLY AND STOCK

- Supply comes out of stock.
- Stock determines the potential supply.
- Stock is the outcome of production.

Supply Function or Determinants of Supply

Supply function studies the functional relationship between supply of a commodity and its various determinants.

$$S_x = f(P_x, P_R, N_F, G, P_F, T, E_x, G_P)$$

Where,

S_x = Supply of a Commodity

P_X = Price of the Commodity

P_R = Price of the Related Goods

N_F = Number of Firms

G = Goal of the Firm

P_F = Price of factors of Production

T = Technology

E_X = Expected Future Price

G_P = Government Policy

Determinants of Supply

Determinants of Supply: Factors That Shift the Supply Curve

Determinant	Examples
Change in resource prices	A decrease in the price of microchips increases the supply of computers; an increase in the price of crude oil reduces the supply of gasoline.
Change in technology	The development of more effective wireless technology increases the supply of cell phones.
Change in taxes and subsidies	An increase in the excise tax on cigarettes reduces the supply of cigarettes; a decline in subsidies to state universities reduces the supply of higher education.
Change in prices of other goods	An increase in the price of cucumbers decreases the supply of watermelons.
Change in producer expectations	An expectation of a substantial rise in future log prices decreases the supply of logs today.
Change in the number of suppliers	An increase in the number of tattoo parlors increases the supply of tattoos; the formation of women's professional basketball leagues increases the supply of women's professional basketball games.

Law of Supply

There is a direct relationship between the price of a commodity and the quantity supplied of that commodity.

$$S_x = f(P_x), \textit{ ceteris peribus}$$

where,

S_x = quantity supplied of good X

P_x = price of the good X

Price  Quantity 

Assumptions of Law of Supply

* Price of related goods is constant
* Number of firms is constant.
* Technology remain unchanged.
* Price of factors of production remains same.
* There is no change in the goal of the firm.
* Expected future price remains unchanged.
* Government policy is constant

Exceptions to the Law of Supply

- The law of supply does not apply strictly to agricultural products whose supply is governed by natural factors. If due to natural calamities, there is fall in the production of wheat, then its supply will not increase, however high the price may be.

- Supply of goods having social distinction will remain limited even if their price tends to rise.

- Seller may be willing to sell more units of a perishable commodity at a lower price.

Exceptions of Law of supply

- Closure of business
- Agricultural products
- Monopoly
- Competition
- Perishable Goods
- Rare goods
- Out of fashion goods

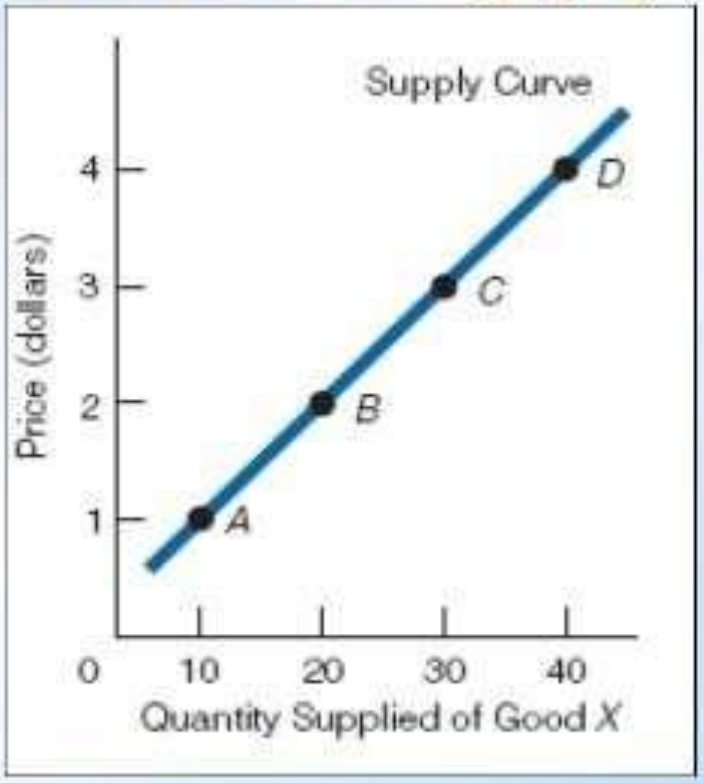
Supply Schedule and Supply Curve

Supply Schedule : It's a tabular representation showing the different quantities of a good that the producers are willing to sell at different levels of prices during a given period of time.

Price ($ per Kg)	Quantity Supplied of Good X	Ref Pt
1	10	A
2	20	B
3	30	C
4	40	D

Supply Curve

The graphical representation of the supply schedule is supply curve.



Individual Supply and Market Supply

- Individual Supply :-
  It means quantity supplied of a good by an individual producer at various prices per time period.
- Market Supply :-
  It is the aggregate of the quantities supplied by all producers in the market at different prices per time period.


Any Questions


Thank
You!

UNIT-3

MARKET STRUCTURES AND PRICING

Models of Competition

How businesses compete and what impact it has on me.

What are Models of Competition?

- Def. a description of the type of market that a particular business or industry operates in.
- Also known as **Market Structure.**

4 Types of Models of Competition

1. Perfect Competition
2. Monopoly
3. Monopolistic Competition
4. Oligopoly

Perfect Competition

- Def. a market structure in which a large number of firms (businesses) produce the same product.
- Only reason to choose one firm over another is the ***PRICE***

Four Conditions for Perfect Competition

1. Many buyers and sellers

   People have lots of options to choose whom they buy from.

2. Identical Products

   There are no differences between what is sold by different suppliers. They are exactly the same!

Four Conditions for Perfect Competition (cont.)

3. Informed Buyers and Sellers

   Buyers know the prices and quality of product sold by all venders to make the best decision

4. Free Market Entry and Exit

   Businesses can enter the market when they can make money and exit when they can't.

What types of businesses are Perfectly Competitive?

- Farm Markets (ex. Public Market)
  - Many farmers selling their vegetables (Many buyers and sellers)
  - A carrot from farmer Brown is equal to a carrot from farmer Jones (Identical Products)
  - Buyers can compare prices and quality by walking the market (Informed Buyers/Sellers)
  - Farmers choose to bring produce or not. Inexpensive to rent a space in the market (Free Market Entry/Exit)

Are there many perfectly competitive businesses?

- NO! All 4 of the conditions must be met for perfect competition. This is very difficult in most industries.
  - Often people can only buy from one supplier
  - Products are rarely identical
  - Buyers often do not know if a product is cheaper/better at a different supplier
  - Barriers to entry prevent free market entry

Barriers to Entry

Def. Factors that make it difficult for new firms to enter a market.

- **Start-up Costs**

The expenses that a new business must pay before the first product reaches the customer.

Ex. Rent, machines, product, labor, etc.

- **Technology**

Some markets require a high degree of technological know-how. As a result, new entrepreneurs cannot easily enter these markets.

Ex. Software and Pharmaceutical companies

Monopoly

- Def. a market dominated by a single seller.
- They form when barriers prevent competitors from entering the market. This is often because of the high costs to supply a product.
- They take advantage of their monopoly power and charge high prices.
- In the United States most monopolies are illegal.

Examples of Monopolies

- During the late 1800s and early 1900s Standard Oil and Carnegie Steel
- From the late 1800s to the 1980s AT&T (also known as Bell Telephone) had a monopoly on phone service
- Microsoft has been accused and convicted in court for having monopolistic characteristics

Natural Monopolies

- Some monopolies are allowed by the government to exist. Natural Monopolies are markets that run best when one firm provides all of the supply.
- Ex. Monroe County Water Authority
- RG&E used to be a natural monopoly, but recently has opened to competition by sharing power lines.

Government Monopolies

- Patents: Licenses that give inventors the exclusive right to sell their product for a certain period of time.
- Industrial Monopolies: Rare cases where the government allows an industry to restrict the number of firms in the market. Ex. Major League Baseball.

Monopolistic Competition

- Def. Many companies compete in an open market to sell products that are ***similar***, but not identical.

Four conditions of Monopolistic Competition

1. Many Firms

   Mono. Comp. do not have high start-up costs and so have more firms.

2. Few Artificial Barriers to Entry

   Barriers to entry are relatively low.

Four conditions of Monopolistic Competition

3. Slight Control over Price

   Firms have some freedom to raise prices because each firm's goods are a little different from everyone else's

4. Differentiated Products

   Firms have some control over selling price because they can differentiate, or distinguish, their products from other products in the market.

What types of businesses are Monopolistically Competitive?

- Lots! Most markets exist in this model.
- Ex. Soft Drinks
  - Coke, Pepsi, RC, WPop, etc. (many firms)
  - Relatively inexpensive to produce, don't need huge factories, chemicals, etc. (Few artificial barriers to entry)
  - Coke is a little more expensive than WPop (Slight control over price)
  - Some people like Coke more than Pepsi, etc. (Differentiated Products)

So, how do Firms in Monopolistic Competition get customers?

- Through **Nonprice Competition**: a way to attract customers through style, service or location, but not a lower price.

4 types of Nonprice Competition

1. Characteristics of Goods

   Firms distinguish products through size, color, shape, texture or taste

   Ex. Coke vs. Pepsi, Lemon Pepsi, Vanilla Coke

2. Location of Sale

   A convenience store in the middle of the desert differentiates by selling it miles from competitors

4 types of Nonprice Competition (cont.)

3. Service Level

   Some sellers can charge higher prices because they offer customers a higher level of service

   Ex. Fancy sit-down restaurant vs. McDonalds

4. Advertising Image

   Advertising creates apparent differences between products in the marketplace.

   Ex. Jordans vs. Carmelo Anthony's shoes

Monopolistic vs. Perfect Competition

	Perfect Competition	Monopolistic Competition
Prices	Lower, firms have no control	Higher, firms have some control
Profits	Lower	Higher in short term, but must work hard to keep ahead of rivals
Cost and Variety	Low costs, no variety (identical products)	Higher costs for differentiation, wide variety

Oligopoly

- Def. A market dominated by a few, large profitable firms

How do Oligopolies work?

- Collusion:

  An agreement among members of an oligopoly to set prices and production levels.

- Price Fixing:

  An agreement among firms to sell at the same or similar prices.

- Both are Illegal in the U.S.

- Cartels:An association by producers established to coordinate prices and production.

  Ex. OPEC: Organization of Petroleum Exporting Countries controls the oil supply and manipulates prices of gasoline.

  Ex. DeBeers controls 80% of world's diamonds, keeps prices high by limiting supply.

Market Power

Def. The ability of a company to control prices and output

Markets dominated by one or a few firms (monopoly or oligopoly) have higher prices and lower output. (great market power)

Markets with many sellers (monopolistic and perfect competition) have lower prices and higher output. (little or no market power)

Predatory Pricing

- Def. Setting the market price below cost levels for short term to drive out competitors. Firms in Monopolistic and perfect competition do this to gain market power.
- Ex. My pizza shop sells slices for $0.50 each, even though it costs me $0.75 to make. I am losing money ($-0.25), but it drives the competition out of business, so I can raise the price later.

Government and Competition

- The Government keeps firms from controlling prices and supply of important goods. **Antitrust laws** are laws that encourage competition and break up monopolies/oligopolies in the marketplace

4 forms of Anti-trust Laws

1. Regulating Business Practices

   Government can intervene if a firm has too much market power

2. Breaking Up Monopolies

   Antitrust laws have been used to break up monopolies (ex. Standard Oil, AT&T)

Antitrust Laws (cont)

3. Blocking Mergers

A **merger** is a combination of two or more companies into one firm. The government can block this if it decreases competition

4. Preserving Incentives

In 1997, new guidelines on mergers were introduced allowing companies to merge if they show benefits to consumers.

Deregulation

- Def. The removal of some government controls over a market. It is used to promote competition.
- Deregulation allows more competition in a market, lowers prices and increases variety (benefits), but often can lead to layoffs and business closings (negatives) in the short term because of the change.
- Ex. Airline Deregulation in the early 1980s. New, smaller, cheaper airlines emerged, but the older, larger airlines are having trouble competing and have had to cut back on flights, employees, and benefits (in-flight meals etc.)

UNIT-4
Financial Accounting

- Accounting is---
  - A system by which assumed responsibility is validated
- Accounting may validate—
  - Internal responsibility to one's own self
  - External responsibility to people other than one's own self
- Financial Accounting –
  - Primarily validates responsibility externally

Financial Statements
The Means of External Reporting

- Balance Sheet--
  - Investing and Financing Activities are the first order of business
  - Defined by the basic accounting equation
  - That is, Assets = Liabilities + Owners' Equity
- Increases and (or) decreases on each side of the = sign must balance
- Algebraic Equation: A = L + OE; can be rearranged to A – L = OE or Net Assets; also known as net worth or equity

Income Statement

- Also called the Statement of Operations—
  - Operating activities (day-to-day) operations by which the business attempts to make a profit
- Revenues and gains represent inflows of resources (assets)
- Expenses and losses represent outflows of assets or increases in liabilities
- The net difference is either Net Income or Net Loss for a specific period of time
- Net Income increases owners' equity and net losses decrease owners' equity

Cash Flow Statement

- Identifies cash flows during the period—
  - Operating Activity Inflows (Outflows)
  - Investing Activity Inflows (Outflows)
  - Financing Activity Inflows (Outflows)
- Sum of above three is net increase (decrease) in cash for the period
- Net increase (decrease) for period is then added (subtracted) to the beginning balance to give the ending balance

Owners' Equity Statement

- Must be either a separate financial statement or disclosed in the Notes to the Financial Statements
- Depends on type of entity—
  - Sole proprietorship or partnership
    - Capital account for each owner
  - Corporation—(Illustrated in this chapter)
    - Contributed Capital (capital from sources other than profit seeking activities)
    - Retained Earnings—Represents all profits current and past that have not been returned to owners in the form of dividends

Owners' Equity Statement, Cont'd

- If no activity during the period in contributed capital accounts—
  - Just the Retained Earnings Statement
    - Beginning Balance plus (+) Net Income for the period, or minus (-) Net Loss; Minus (-) Dividends Declared during the period (example on p. 17 in your text)
    - Note: Dividends are not expenses so they do not go on the income statement
- If activity in Contributed Capital Accounts, then a complete Owners' Equity Statement must be prepared, similar to p 766

Articulation of Financial Statements Exhibit 1.6 page 17 in Text

Income Statement

Revenue	$37436
Expenses	34136
Net Income	$ 3300

Retained Earnings Statement

Beg Bal	$6805
Net Income	3300
Dividends	-1000
End Balance	$9105

Balance Sheet

Cash	$ 4895
Other Assets	22366
Total Assets	$27261
Liabilities	$16156
Contributed Capital	2000
Retained Earnings	9105
Total Liab & OE	$27261

Cash Flow Statement

Change in Cash	$ (156)
Beg Balance	5051
End Balance	$ 4895

ACCOUNTING TERMINOLOGY

- **1. Accounts receivable (AR)**
- **Accounts receivable (AR) definition:** The amount of money owed by customers or clients to a business after goods or services have been delivered and/or used.
- **2. Accounting (ACCG)**
- **Accounting (ACCG) definition:** A systematic way of recording and reporting financial transactions for a business or organization.

- **3. Accounts payable (AP)**
- **Accounts payable (AP) definition:** The amount of money a company owes creditors (suppliers, etc.) in return for goods and/or services they have delivered.
- **4. Assets (fixed and current) (FA, CA)**
- **Assets (fixed and current) definition: Current assets (CA)** are those that will be converted to cash within one year. Typically, this could be cash, inventory or accounts receivable. **Fixed assets (FA)** are long-term and will likely provide benefits to a company for more than one year, such as a real estate, land or major machinery.

- **5. Asset classes**
- **Asset class definition:** An asset class is a group of securities that behaves similarly in the marketplace. The three main asset classes are equities or stocks, fixed income or bonds, and cash equivalents or money market instruments.
- **6. Balance sheet (BS)**
- **Balance sheet (BS) definition:** A financial report that summarizes a company's assets (what it owns), liabilities (what it owes) and owner or shareholder equity, at a given time.

- **7. Capital (CAP)**
- **Capital (CAP) definition:** A financial asset or the value of a financial asset, such as cash or goods. Working capital is calculated by taking your current assets subtracted from current liabilities—basically the money or assets an organization can put to work.
- **8. Cash flow (CF)**
- **Cash flow (CF) definition:** The revenue or expense expected to be generated through business activities (sales, manufacturing, etc.) over a period of time.

- **9. Certified public accountant (CPA)**
- **Certified public accountant (CPA) definition:** A designation given to an accountant who has passed a standardized **CPA exam** and met government-mandated work experience and educational requirements to **become a CPA**.
- **10. Cost of goods sold (COGS)**
- **Cost of goods sold (COGS) definition:** The direct expenses related to producing the goods sold by a business. The formula for calculating this will depend on what is being produced, but as an example this may include the cost of the raw materials (parts) and the amount of employee labor used in production.

- **11. Credit (CR)**
- **Credit (CR) definition:** An accounting entry that may either *decrease* assets or *increase* liabilities and equity on the company's balance sheet, depending on the transaction. When using the **double-entry accounting method** there will be two recorded entries for every transaction: A credit and a debit.
- **12. Debit (DR)**
- **Debit (DR) definition:** An accounting entry where there is either an *increase* in assets or a *decrease* in liabilities on a company's balance sheet.

- **15. Expenses (fixed, variable, accrued, operation)**
- **Expenses (FE, VE, AE, OE) definition:** The fixed, variable, accrued or day-to-day costs that a business may incur through its operations.
- **Fixed expenses (FE)**: payments like rent that will happen in a regularly scheduled cadence.
- **Variable expenses (VE):** expenses, like labor costs, that may change in a given time period.
- **Accrued expense (AE):**an incurred expense that hasn't been paid yet.
- **Operation expenses (OE)**: business expenditures not directly associated with the production of goods or services—for example, advertising costs, property taxes or insurance expenditures.

- **16. Equity and owner's equity (OE)**
- **Equity and owner's equity (OE) definition:** In the most general sense, equity is assets minus liabilities. An owner’s equity is typically explained in terms of the percentage of stock a person has ownership interest in the company. The owners of the stock are known as shareholders.
- **17. Insolvency**
- **Insolvency definition:** A state where an individual or organization can no longer meet financial obligations with lender(s) when their debts come due.

- **18. Generally accepted accounting principles (GAAP)**
- **Generally accepted accounting principles (GAAP) definition:** A set of **rules and guidelines** developed by the accounting industry for companies to follow when reporting financial data. Following these rules is especially critical for all publicly traded companies.
- **19. General ledger (GL)**
- **General ledger (GL) definition:** A complete record of the financial transactions over the life of a company.

JOURNAL

- An accounting journal is a detailed account of all the financial transactions of a business. It's also known as the book of original entry as it's the first place where transactions are recorded. The entries in an accounting journal are used to create the general ledger which is then used to create the financial statements of a business.
- Before computerized bookkeeping and accounting, the transactions were entered manually into a journal and then posted to the general ledger. Apart from the general journal, accountants maintained various other journals including purchases and sales journal, cash receipts journal and cash disbursements journal. With accounting software, today you're likely to find only a general journal in which adjusting entries and unique financial transactions are entered.

lEDGER

- An accounting ledger is an account or record used to store bookkeeping entries for balance-sheet and income-statement transactions. Accounting ledger journal entries can include accounts like cash, accounts receivable, investments, inventory, accounts payable, accrued expenses, and customer deposits. Accounting ledgers are maintained for all types of balance sheet and income statement transactions. Balance sheet ledgers include asset ledgers such as cash or accounts receivable. Income statement ledgers include ledgers such as revenue and expenses.
- The accounting ledger – sometimes called the general ledger (GL) – provides a centralized repository to collect all account data rolled up from subledgers or modules, making it the backbone of any corporate financial system.

Trial Balance

- A trial balance is a list of credit entries and debit entries that businesses use to internally audit their double-entry accounting systems. The goal is to confirm that the sum of all debits equals the sum of all credits and identify whether any entries have been recorded in the wrong account.
- In double-entry accounting, a credit to any account must be offset by a debit to another account. While general ledgers will list individual credit entries and debit entries for each transaction, a trial balance sums the credit balances and debit balances by account, calculating the total credit balance and debit balance at the bottom. If your general ledger is accurate, the debit balance will equal the credit balance.

Trdaing Account

- Trading account is used to determine the gross profit or gross loss of a business which results from trading activities. Trading activities are mostly related to the buying and selling activities involved in a business. Trading account is useful for businesses that are dealing in the trading business. This account helps them to easily determine the overall gross profit or gross loss of the business. The amount thus determined is an indicator of the efficiency of the business in buying and selling.
- The formulae for calculating gross profit is as follows:
- **Gross profit = Net sales – Cost of goods sold**
- Where
- **Net sales = Gross sales of the business minus sales returns, discounts and allowances.**

- The trading account considers only the direct expenses and direct revenues while calculating gross profit. This account is mainly prepared to understand the profit earned by the business on the purchase of goods.
- Items that are seen in the debit side include purchases, opening stock and direct expenses while credit side includes closing stock and sales.
- Closing entries for Gross Loss or Gross Profit
- The following entries are passed
- **In case of Gross Loss**
- Profit and Loss A/c Dr.
- To Trading A/c
- **In case of Gross Profit**
- Trading A/c Dr.
- To Profit and Loss A/c

Profit and Loss Account

A profit and loss statement (P&L), or income statement or statement of operations, is a financial report that provides a summary of a company's revenues, expenses, and profits/losses over a given period of time. The P&L statement shows a company's ability to generate sales, manage expenses, and create profits. It is prepared based on accounting principles that include revenue recognition, matching, and accruals, which makes it different from the cash flow statement.

- **Structure of the Profit and Loss Statement**
- A company's statement of profit and loss is portrayed over a period of time, typically a month, quarter, or fiscal year.
- The main categories that can be found on the P&L include:
- Revenue (or Sales)
- Cost of Goods Sold (or Cost of Sales)
- Selling, General & Administrative (SG&A) Expenses
- Marketing and Advertising
- Technology/Research & Development
- Interest Expense
- Taxes
- Net Income

BALANCE SHEET

- The balance sheet is one of the three fundamental financial statements and is key to both financial modeling and accounting. The balance sheet displays the company's total assets and how the assets are financed, either through either debt or equity. It can also be referred to as a statement of net worth or a statement of financial position. The balance sheet is based on the fundamental equation: **Assets = Liabilities + Equity**.

UNIT-5
Financial Analysis Through Ratios

Financial Analysis

- Assessment of the firm's past, present and future financial conditions
- Done to find firm's financial strengths and weaknesses
- Primary Tools:
  - Financial Statements
  - Comparison of financial ratios to past, industry, sector and all firms

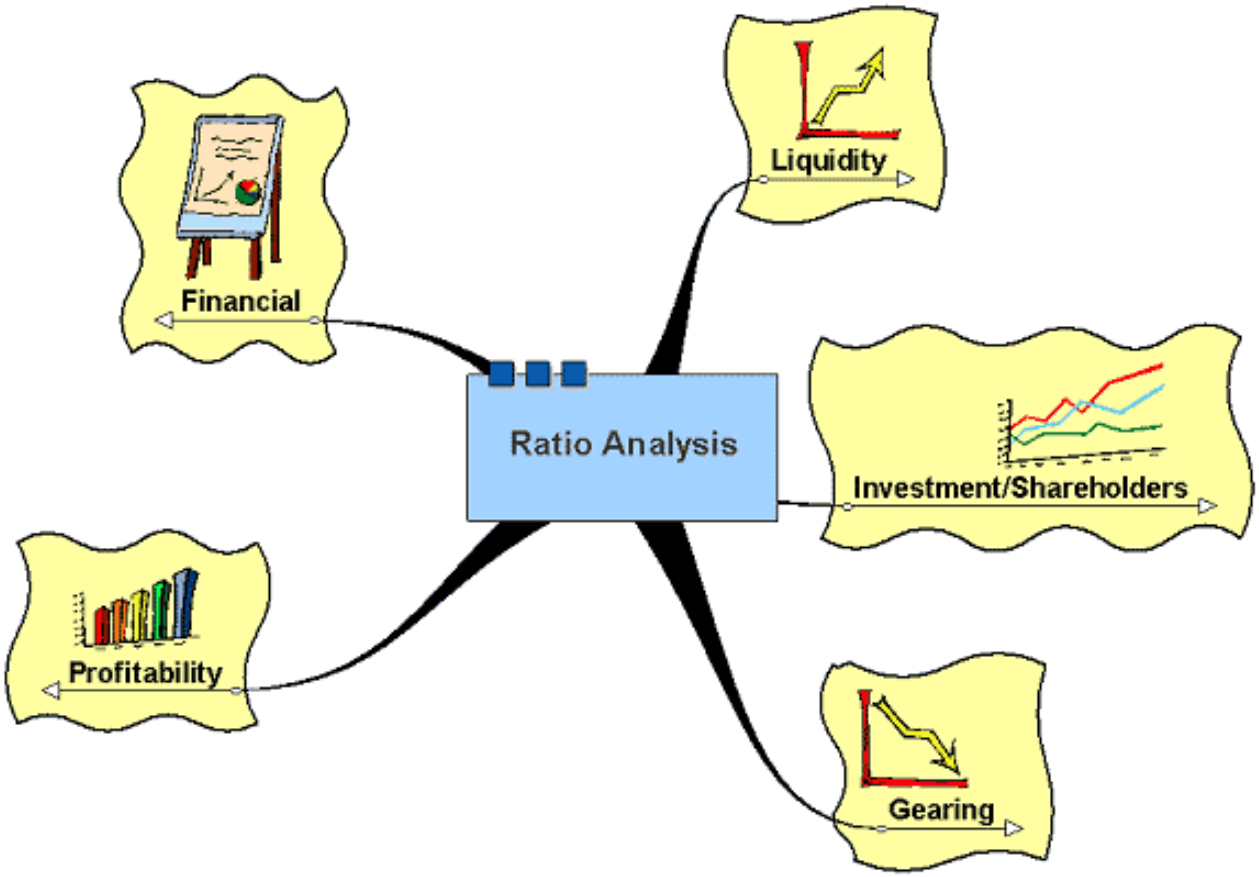
Financial Statements

- Balance Sheet
- Income Statement
- Cashflow Statement
- Statement of Retained Earnings

Objectives of Ratio Analysis

- Standardize financial information for comparisons
- Evaluate current operations
- Compare performance with past performance
- Compare performance against other firms or industry standards
- Study the efficiency of operations
- Study the risk of operations

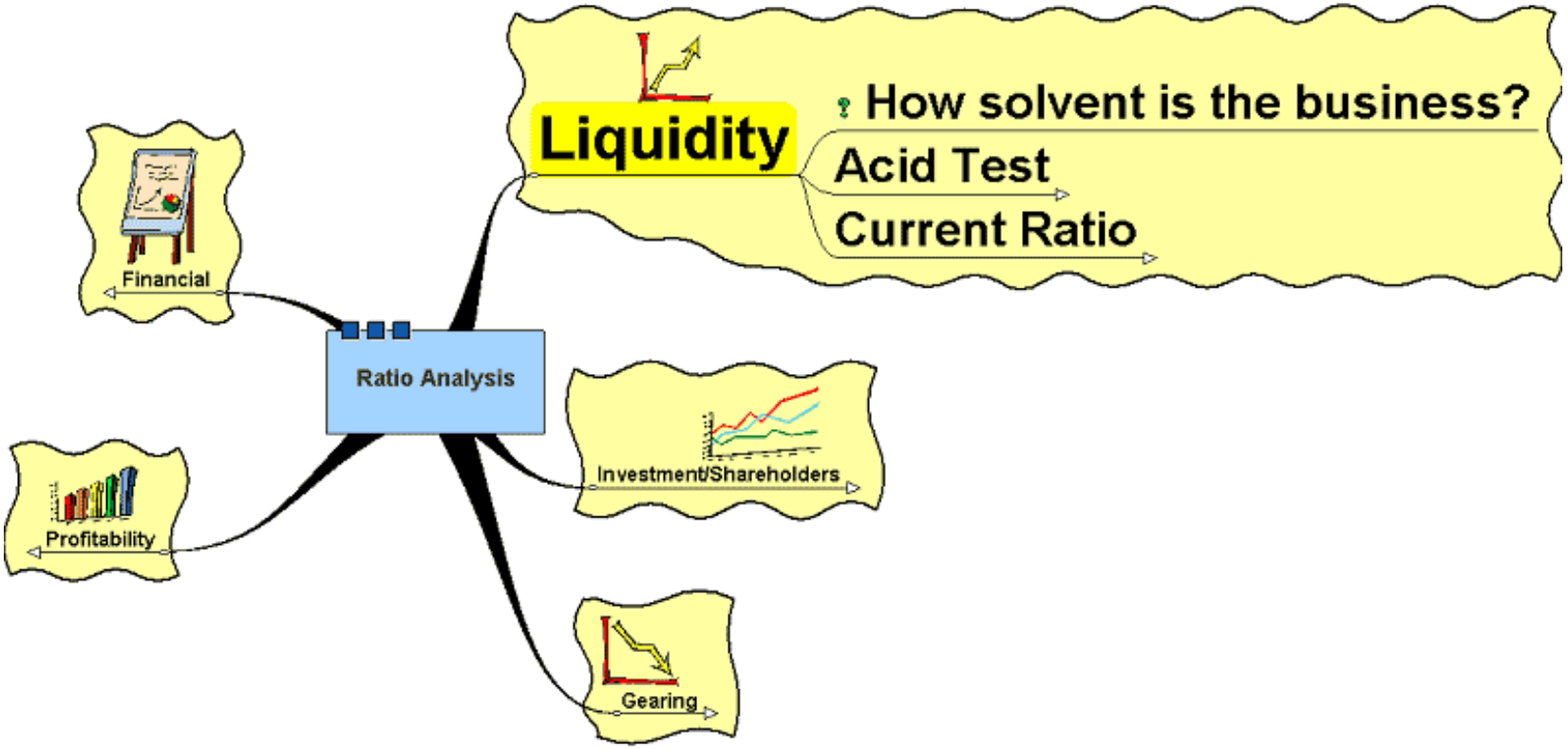
Ratio Analysis



Ratio Analysis

1. **Liquidity** – the ability of the firm to pay its way
2. **Investment/shareholders** – information to enable decisions to be made on the extent of the risk and the earning potential of a business investment
3. **Gearing** – information on the relationship between the exposure of the business to loans as opposed to share capital
4. **Profitability** – how effective the firm is at generating profits given sales and or its capital assets
5. **Financial** – the rate at which the company sells its stock and the efficiency with which it uses its assets

Liquidity


Liquidity
How solvent is the business?
Acid Test
Current Ratio
Financial
Ratio Analysis
Investment/Shareholders
Profitability
Gearing

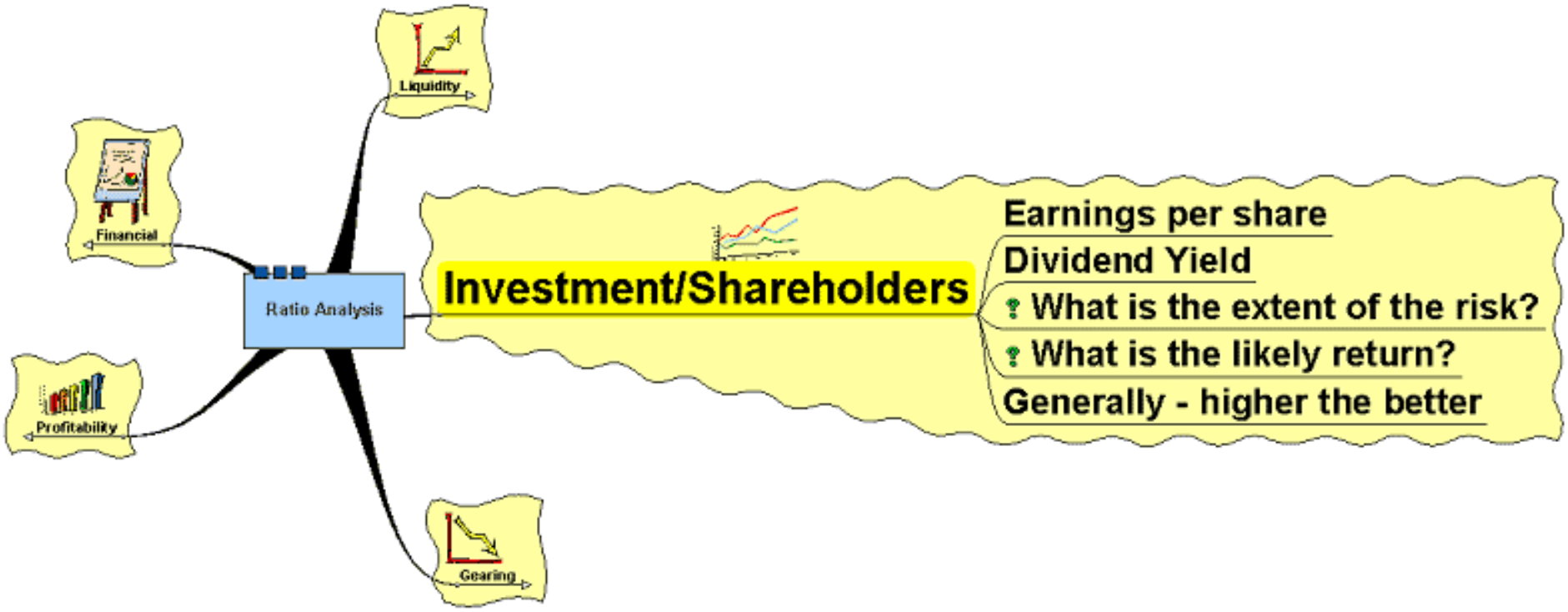
Acid Test

- Also referred to as the ‘Quick ratio’
- **(Current assets – stock) : liabilities**
- 1:1 seen as ideal
- The omission of stock gives an indication of the cash the firm has in relation to its liabilities (what it owes)
- A ratio of 3:1 therefore would suggest the firm has 3 times as much cash as it owes – very healthy!
- A ratio of 0.5:1 would suggest the firm has twice as many liabilities as it has cash to pay for those liabilities. This ***might*** put the firm under pressure but is not in itself the end of the world!

Current Ratio

- Looks at the ratio between Current Assets and Current Liabilities
- **Current Ratio = Current Assets : Current Liabilities**
- Ideal level? – 1.5 : 1
- A ratio of 5 : 1 would imply the firm has £5 of assets to cover every £1 in liabilities
- A ratio of 0.75 : 1 would suggest the firm has only 75p in assets available to cover every £1 it owes
- Too high – Might suggest that too much of its assets are tied up in unproductive activities – too much stock, for example?
- Too low - risk of not being able to pay your way

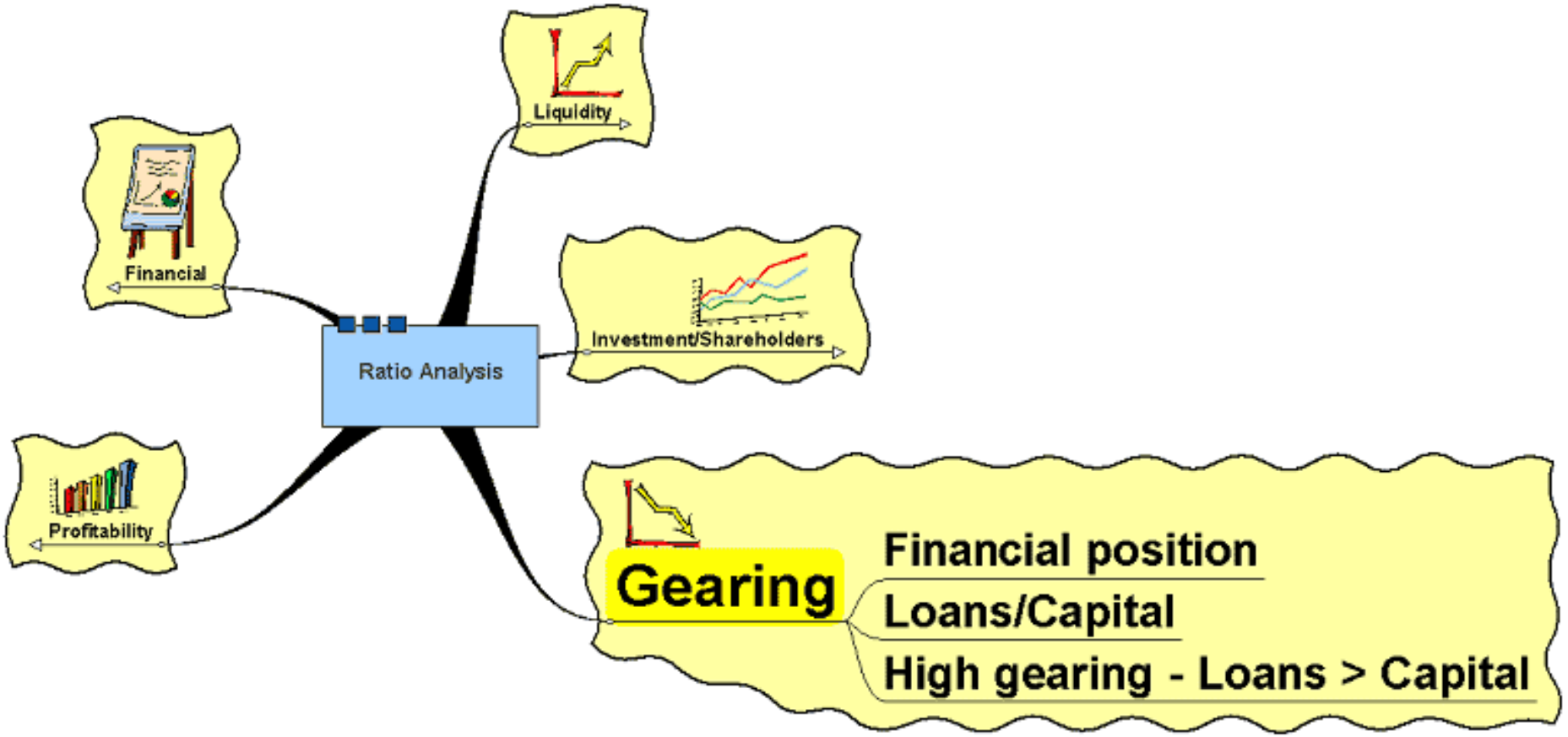
Investment/Shareholders



Investment/Shareholders

- **Earnings per share** – profit after tax / number of shares
- **Price earnings ratio** – market price / earnings per share – the higher the better generally for company. Comparison with other firms helps to identify value placed on the market of the business.
- **EV / EBITDA Ratio** - Enterprise Value / EBITDA ratio - the higher the better generally for company . It measures the operational performance of the firm.
- **Dividend yield** – ordinary share dividend / market price x 100 – higher the better. Relates the return on the investment to the share price.

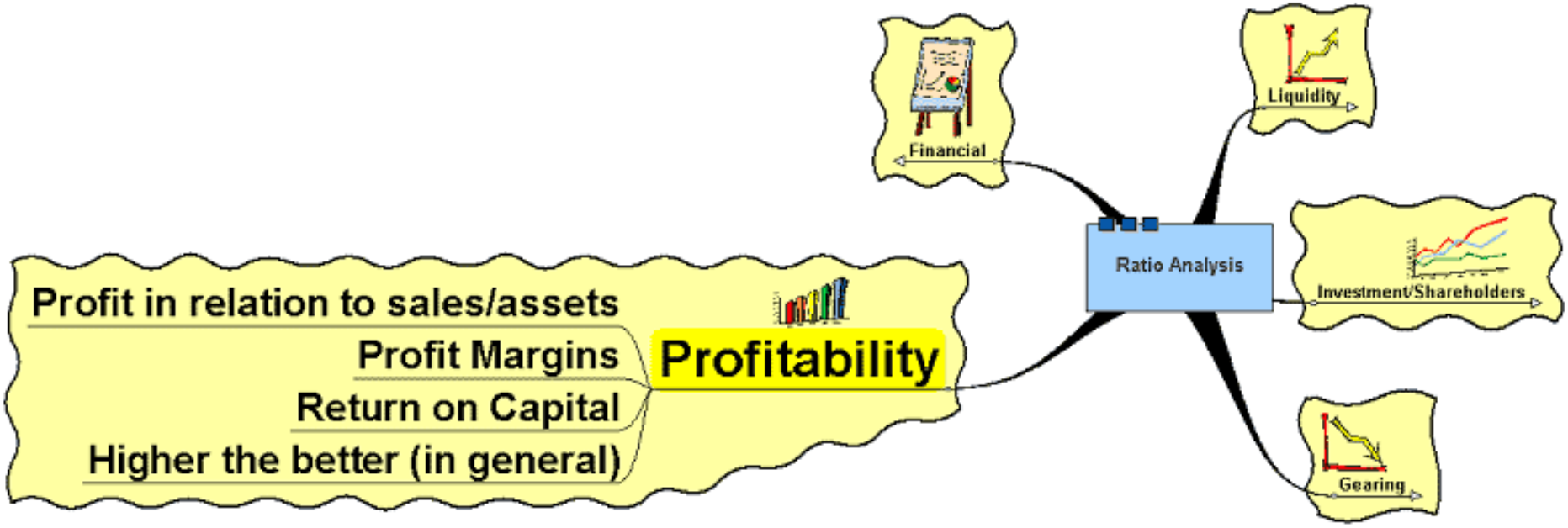
Gearing


Liquidity
Financial
Investment/Shareholders
Ratio Analysis
Profitability
Gearing
Financial position
Loans/Capital
High gearing - Loans > Capital

Gearing

- **Gearing Ratio = Long term loans / Capital employed x 100**
- The higher the ratio the more the business is exposed to interest rate fluctuations and to having to pay back interest and loans before being able to re-invest earnings

Profitability



Profitability

- Profitability measures look at how much profit the firm generates from sales or from its capital assets
- Different measures of profit – gross and net
  - **Gross profit** – effectively total revenue (turnover) – variable costs (cost of sales)
  - **Net Profit** – effectively total revenue (turnover) – variable costs and fixed costs (overheads)

Profitability

- **Gross Profit Margin = Gross profit / turnover x 100**
- The higher the better
- Enables the firm to assess the impact of its sales and how much it cost to generate (produce) those sales
- A gross profit margin of 45% means that for every £1 of sales, the firm makes 45p in gross profit

Profitability

- **Net Profit Margin = Net Profit / Turnover x 100**
- Net profit takes into account the fixed costs involved in production – the overheads
- Keeping control over fixed costs is important – could be easy to overlook for example the amount of waste - paper, stationery, lighting, heating, water, etc.
  - e.g. – leaving a photocopier on overnight uses enough electricity to make 5,300 A4 copies. (1,934,500 per year)
  - 1 ream = 500 copies. 1 ream = £5.00 (on average)
  - Total cost therefore = £19,345 per year – or 1 person's salary

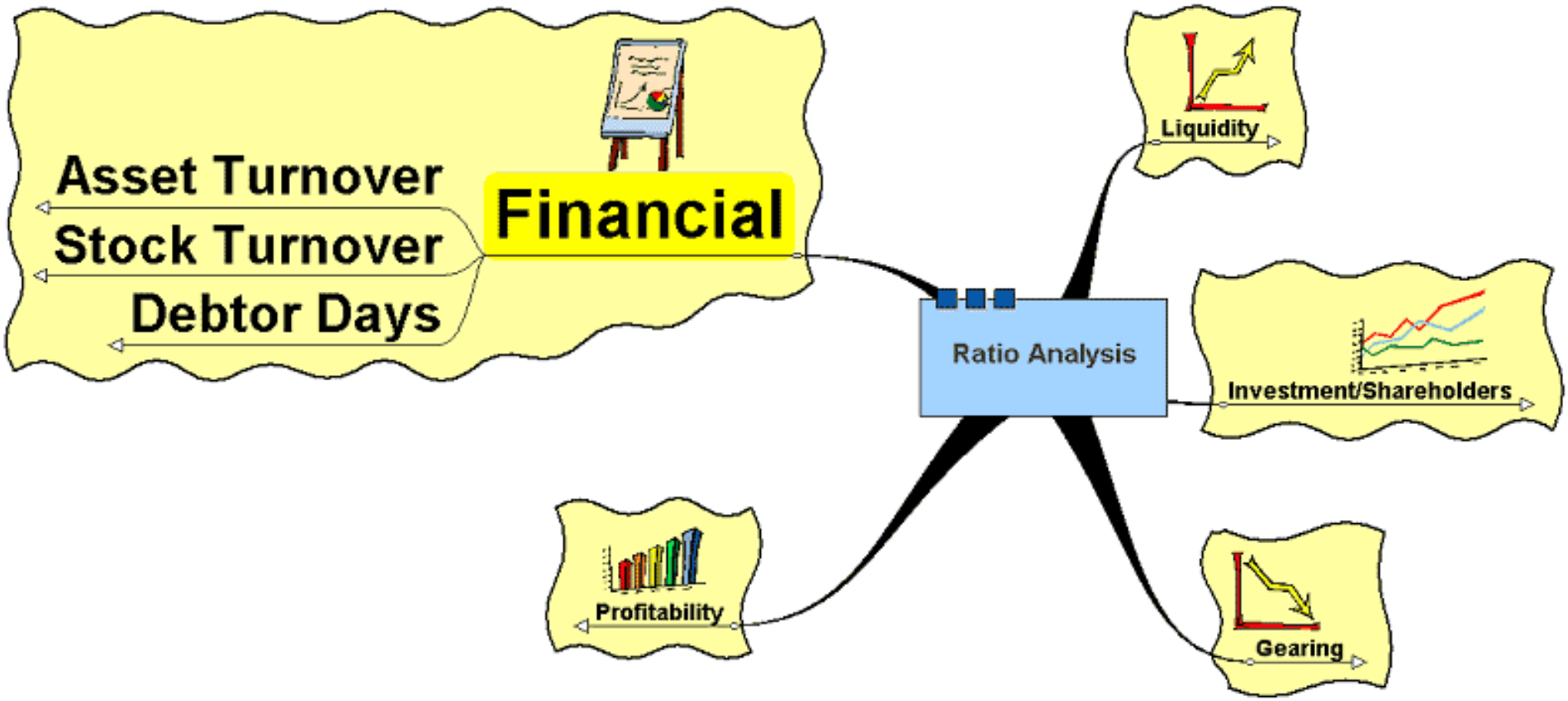
Profitability

- **Return on Capital Employed (ROCE) = Profit / capital employed x 100**

Profitability

- The higher the better
- Shows how effective the firm is in using its capital to generate profit
- A ROCE of 25% means that it uses every £1 of capital to generate 25p in profit
- Partly a measure of efficiency in organisation and use of capital

Financial


Asset Turnover
Stock Turnover
Debtor Days
Financial
Ratio Analysis
Liquidity
Investment/Shareholders
Profitability
Gearing

Asset Turnover

- **Asset Turnover = Sales turnover / assets employed**
- Using assets to generate profit
- Asset turnover x net profit margin = ROCE

Stock Turnover

- **Stock turnover = Cost of goods sold / stock expressed as times per year**
- The rate at which a company's stock is turned over
- A high stock turnover might mean increased efficiency?
  - But: dependent on the type of business – supermarkets might have high stock turnover ratios whereas a shop selling high value musical instruments might have low stock turnover ratio
  - Low stock turnover could mean poor customer satisfaction if people are not buying the goods (Marks and Spencer?)

Debtor Days

- **Debtor Days = Debtors / sales turnover x 365**
- Shorter the better
- Gives a measure of how long it takes the business to recover debts
- Can be skewed by the degree of credit facility a firm offers

Before looking at the ratios there are a number of **cautionary points concerning their use that need to be identified :**

a. The dates and duration of the financial statements being compared should be the same. If not, the effects of seasonality may cause erroneous conclusions to be drawn.

b. The accounts to be compared should have been prepared on the same bases. Different treatment of stocks or depreciations or asset valuations will distort the results.

c. In order to judge the overall performance of the firm a group of ratios, as opposed to just one or two should be used. In order to identify trends at least three years of ratios are normally required.

SOME IMPORTANT NOTES

- Liabilities have Credit balance and Assets have Debit balance
- Current Liabilities are those which have either become due for payment or shall fall due for payment within 12 months from the date of Balance Sheet
- Current Assets are those which undergo change in their shape/form within 12 months. These are also called Working Capital or Gross Working Capital
- Net Worth & Long Term Liabilities are also called ***Long Term Sources of Funds***
- Current Liabilities are known as ***Short Term Sources of Funds***
- Long Term Liabilities & Short Term Liabilities are also called ***Outside Liabilities***
- Current Assets are ***Short Term Use of Funds***

SOME IMPORTANT NOTES

- Assets other than Current Assets are ***Long Term Use of Funds***
- Installments of Term Loan Payable in 12 months are to be taken as Current Liability only for Calculation of Current Ratio & Quick Ratio.
- If there is **profit** it shall become part of **Net Worth** under the head Reserves and if there is **loss** it will become part of **Intangible Assets**
- Investments in Govt. Securities to be treated **current** only if these are marketable and due. Investments in other securities are to be treated **Current** if they are quoted. Investments in allied/associate/sister units or firms to be treated as **Non-current.**
- Bonus Shares as issued by capitalization of General reserves and as such do not affect the Net Worth. With Rights Issue, change takes place in Net Worth and Current Ratio.

EXERCISE 1

LIABILITES		ASSETS	
Capital	180	Net Fixed Assets	400
Reserves	20	Inventories	150
Term Loan	300	Cash	50
Bank C/C	200	Receivables	150
Trade Creditors	50	Goodwill	50
Provisions	50		
	800		800

a. What is the Net Worth : Capital + Reserve = 200
b. Tangible Net Worth is : Net Worth - Goodwill = 150
c. Outside Liabilities : TL + CC + Creditors + Provisions = 600
d. Net Working Capital : C A - C L = 350 - 250 = 50
e. Current Ratio : C A / C L = 350 / 300 = 1.17 : 1
f. Quick Ratio : Quick Assets / C L = 200/300 = 0.66 : 1

LIABILITIES	2005-06	2006-07	ASSETS	2005-06	2006-07
Capital	300	350	Net Fixed Assets	730	750
Reserves	140	160	Security Electricity	30	30
Bank Term Loan	320	280	Investments	110	110
Bank CC (Hyp)	490	580	Raw Materials	150	170
Unsec. Long T L	150	170	S I P	20	30
Creditors (RM)	120	70	Finished Goods	140	170
Bills Payable	40	80	Cash	30	20
Expenses Payable	20	30	Receivables	310	240
Provisions	20	40	Loans/Advances	30	190
			Goodwill	50	50
Total	**1600**	**1760**		**1600**	**1760**

1. Tangible Net Worth for 1st Year : (300 + 140) - 50 = 390
2. Current Ratio for 2nd Year : (170 + 30 +170+20+ 240 + 190) / (580+70+80+70)
   820 /800 = 1.02
3. Debt Equity Ratio for 1st Year : 320+150 / 390 = 1.21

Exercise 3.

LIABIITIES		ASSETS	
Equity Capital	200	Net Fixed Assets	800
Preference Capital	100	Inventory	300
Term Loan	600	Receivables	150
Bank CC (Hyp)	400	Investment In Govt. Secu.	50
Sundry Creditors	100	Preliminary Expenses	100
Total	**1400**		**1400**

1. **Debt Equity Ratio** will be : 600 / (200+100) = 2 : 1

2. **Tangible Net Worth** : Only equity Capital i.e. = 200

3. Total Outside Liabilities / Total Tangible Net Worth : (600+400+100) / 200
= 11 : 2

4. Current Ratio will be : (300 + 150 + 50) / (400 + 100) = 1 : 1

Exercise 4.

LIABILITIES		ASSETS	
Capital + Reserves	355	Net Fixed Assets	265
P & L Credit Balance	7	Cash	1
Loan From S F C	100	Receivables	125
Bank Overdraft	38	Stocks	128
Creditors	26	Prepaid Expenses	1
Provision of Tax	9	Intangible Assets	30
Proposed Dividend	15		
	550		**550**

Q. What is the Current Ratio ? Ans : (1+125 +128+1) / (38+26+9+15)
: 255/88 = 2.89 : 1

Q What is the Quick Ratio ? Ans : (125+1)/ 88 = 1.43 : 11

Q. What is the Debt Equity Ratio ? Ans : LTL / Tangible NW
= 100 / (362 – 30)
= 100 / 332 = 0.30 : 1

Exercise 4. contd…

LIABILITIES		ASSETS	
Capital + Reserves	355	Net Fixed Assets	265
P & L Credit Balance	7	Cash	1
Loan From S F C	100	Receivables	125
Bank Overdraft	38	Stocks	128
Creditors	26	Prepaid Expenses	1
Provision of Tax	9	Intangible Assets	30
Proposed Dividend	15		
	550		**550**

Q. What is the Debtors Velocity Ratio ? If the sales are Rs. 15 Lac.

Ans : (Average Debtors / Net Sales) x 12 = (125 / 1500) x 12
= 1 month

Q. What is the Creditors Velocity Ratio if Purchases are Rs.10.5 Lac ?

Ans : (Average Creditors / Purchases) x 12 = (26 / 1050) x 12 = 0.3 months

Exercise 5. : Profit to sales is 2% and amount of profit is say Rs.5 Lac. Then What is the amount of Sales ?

Answer : Net Profit Ratio = (Net Profit / Sales) x 100

2 = (5 x100) /Sales

Therefore Sales = 500/2 = Rs.250 Lac

Exercise 6. A Company has Net Worth of Rs.5 Lac, Term Liabilities of Rs.10 Lac. Fixed Assets worth RS.16 Lac and Current Assets are Rs.25 Lac. There is no intangible Assets or other Non Current Assets. Calculate its Net Working Capital.

Answer

Total Assets = 16 + 25 = Rs. 41 Lac

Total Liabilities = NW + LTL + CL = 5 + 10+ CL = 41 Lac

Current Liabilities = 41 – 15 = 26 Lac

Therefore **Net Working Capital = C. A – C.L**

= 25 – 26 = (-)**1 Lac**

Exercise 7 : **Current Ratio of a concern is 1 : 1. What will be the Net Working Capital ?**

Answer : It suggest that the Current Assets is equal to Current Liabilities hence the NWC would be **NIL** (since NWC = C.A - C.L)

Exercise 8 : Suppose Current Ratio is 4 : 1. NWC is Rs.30,000/-. What is the amount of Current Assets ?

Answer ***: 4a - 1a*** = 30,000

Therefore **a =** 10,000 i.e. Current Liabilities is Rs.10,000

Hence Current Assets would be *4a* = 4 x 10,000 = Rs.40,000/-

Exercise 9. The amount of Term Loan installment is Rs.10000/ per month, monthly average interest on TL is Rs.5000/-. If the amount of Depreciation is Rs.30,000/- p.a. and PAT is Rs.2,70,000/-. What would be the DSCR ?

DSCR = (PAT + Depr + Annual Intt.) / Annual Intt + Annual Installment

= (270000 + 30000 + 60000) / 60000 + 120000

= 360000 / 180000 = **2**

Exercise 10 : Total Liabilities of a firm is Rs.100 Lac and Current Ratio is 1.5 : 1. If Fixed Assets and Other Non Current Assets are to the tune of Rs. 70 Lac and Debt Equity Ratio being 3 : 1. What would be the Long Term Liabilities?

Ans : We can easily arrive at the amount of Current Asset being Rs. 30 Lac i.e. (Rs. 100 L - Rs. 70 L). If the Current Ratio is 1.5 : 1, then Current Liabilities works out to be Rs. 20 Lac. That means the aggregate of Net Worth and Long Term Liabilities would be Rs. 80 Lacs. If the Debt Equity Ratio is 3 : 1 then Debt works out to be Rs. 60 Lacs and equity Rs. 20 Lacs. **Therefore the Long Term Liabilities would be Rs.60 Lac.**

Exercise 11 : Current Ratio is say 1.2 : 1 . Total of balance sheet being Rs.22 Lac. The amount of Fixed Assets + Non Current Assets is Rs. 10 Lac. What would be the Current Liabilities?

Ans : When Total Assets is Rs.22 Lac then Current Assets would be 22 – 10 i.e Rs. 12 Lac. Thus we can easily arrive at the Current Liabilities figure which should be Rs. 10 Lac

Exercise 12. From the following financial statement calculate (i) Current Ratio (ii) Acid test Ratio (iii) Inventory Turnover (iv) Average Debt Collection Period (v) Average Creditors' payment period.

Sales	1500
Cost of sales	1000
Gross profit	500

C.Assets	
Inventories	125
Debtors	250
Cash	225

C. Liabilities	
Trade Creditors	200

(i) Current Ratio : 600/200 = 3 : 1
(ii)Acid Test Ratio : Debtors+Cash /Trade creditors = 475/200 = 2.4 : 1
(iii) Inventory Turnover Ratio : Cost of sales / Inventories = 1000/125 = 8 times
(iv) Average Debt collection period : (Debtors/sales) x 365 = (250/1500)x365 = 61 days
(v)Average Creditors' payment period : (Trade Creditors/Cost of sales) x 365
(200/100) x 365 = 73 days

Summary of Financial Ratios

- Ratios help to:
  - Evaluate performance
  - Structure analysis
  - Show the connection between activities and performance
- Benchmark with
  - Past for the company
  - Industry
- Ratios adjust for size differences

Limitations of Ratio Analysis

- A firm's industry category is often difficult to identify
- Published industry averages are only guidelines
- Accounting practices differ across firms
- Sometimes difficult to interpret deviations in ratios
- Industry ratios may not be desirable targets
- Seasonality affects ratios

Funds flow statement

- A Funds Flow Statement is a financial document that analyses a company's Balance Sheet of two years to validate the movement of funds from the previous financial year to the current year. In other words, it compares the source of inflow and outflow of funds during the concerned accounting period and analyses how it affects the working capital of an organization.
- It is an essential determiner that shows how funds are used. With the help of this statement, financial analysts can assess the fund flow of an organization in the near future.
- As this statement portrays the movement of funds among several sources and their applications, it is also known as the Application of the Funds and Statement of Sources.

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- Usually, the preparation of these statements is followed by a funds flow analysis. It serves as a financial parameter that helps a company to control its finance and develop a better strategy to utilize funds.

What is a Funds Flow Statement Analysis?

- Funds Flow Statement analysis is a comparison between various aspects of a Balance Sheet. While evaluating this statement, it is also vital to understand all the aspects.
- Assets
- If the asset section of a Balance Sheet experiences increment, it implies that the concerned institution has purchased assets by spending funds. These assets might thus result in the inflow of funds in the future. Here are some examples –
- Fixed assets
- Short-term loans
- Long-term loans

Cash flow statement

- Acash flow statement summarizes the amount of cash and cash equivalents entering and leaving a company.
- The CFS highlights a company's cash management, including how well it generates cash.
- This financial statement complements the balance sheet and the income statement.
- The main components of the CFS are cash from three areas: Operating activities, investing activities, and financing activities.
- The two methods of calculating cash flow are the direct method and the indirect method.

- Inventory
- Cash and cash equivalents
- Receivables
- Present investments
- Contrarily, if the assets section shows a decline, it means that the company has sold some of its assets to maintain fund inflow.
- Liabilities
- In a Funds Flow Statement, any increase in liabilities means the organization has funds inflow which needs to be paid. Some of the examples are-
- Lenders
- Customers
- Vendors
- Employees
- Shareholders
-

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- Customers

How is a Funds Flow Statement Prepared?

- Preparation of Funds Flow Statement is done in the following three steps –
- Statement depicting differences in working capital
- According to the formula for working capital calculation,
- Working capital = Current assets – Current liabilities
- This particular statement focuses on the effects that modify working capital. Here are some reasons that are responsible for a change in the company's working capital.
- If the company keeps investing in fixed assets or long term business avenues without accumulating any long term funds, the working capital can reduce significantly.

- If the company is spending most of its profit in paying dividends and not accumulating any assets.
- Working capital can also change with an over-extension in lending.
- Again, without any advancement of long term funds, if the firm needs to repay a long-term obligation or preferred stockholders, the concerned firm can come across working capital deficiency.

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Format of a cash flow statement

- There are three sections in a cash flow statement: operating activities, investments, and financial activities.
- **Operating activities:** Operating activities are those cash flow activities that either generate revenue or record the money spent on producing a product or service. Operational business activities include inventory transactions, interest payments, tax payments, wages to employees, and payments for rent. Any other form of cash flow, such as investments, debts, and dividends are not included in this section.
- The operations section on the cash flow statement begins with recording net earnings, which are obtained from the net income field on the company's income statement. This gives an estimate of the company's

The operations section on the cash flow statement begins with recording net earnings, which are obtained from the net income field on the company's income statement. This gives an estimate of the company's profitability. After this, it lists non-cash items involving operational activities and convert them into cash items. A business' cash flow statement should show adequate positive cash flow for its operational activities. If it doesn't, the business may find it difficult to manage its daily business operations.

- **Investment activities:** The second section on the cash flow statement records the gains and losses caused due to investment in assets like property, plant, or equipment (PPE) thus reflecting overall change in the cash position for a company. When analysts want to know the company's investment on PPE, they check for changes on a cash flow statement.
- Capital expenditure (CapEx) is another important line item under investment activities. CapEx is the money which a business invests on fixed assets like buildings, vehicles or land. An increase in CapEx means the company is investing on future operations. However, it also shows that there is a decrease in company cash flow.

Financial activities

The third section on the cash flow statement records the cash flow between the company and its owners and creditors. Financial activities include transactions involving debt, equity, and dividends. In these transactions, incoming cash is recorded when capital is raised (such as from investors or banks), and outgoing cash is recorded when dividends are paid.