UNIT III

Fundamentals of Economics

Definition of Economics

The analysis of economic environment requires the knowledge of economic decision making and hence the study of "Economics" is significant.

There are 4 definitions of Economics.

(i) Wealth Definition:

Adam Smith defined "Economics as a science which inquired into the nature and cause of wealth of Nations".

According to this definition —

- Economics is a science of study of wealth only;
- It deals with production, distribution and consumption;
- This wealth centered definition deals with the causes behind the creation of wealth, and It only considers material wealth.

Criticisms of this definition:

(a) Wealth is of no use unless it satisfies human wants.

(b) This definition is not of much importance to man and welfare.

(ii) Welfare definition:

According to **Alfred Marshall** "Economics is the study of man in the ordinary business of life". It examines how a person gets his income and how he invests it. Thus on one side it is a study of wealth and on the other most important side, it is a study of well being.

Features:

(a) Economics is a study of those activities that are concerned with material welfare of man.

(b) Economics deals with the study of man in ordinary business of life. The study enquires how an individual gets his income and how he uses it.

FUNDAMENTALS OF ECONOMICS AND MANAGEMENT

Basic Concepts of Economics

(c) Economics is the study of personal and social activities concerned with material aspects of well being.

(d) Marshall emphasized on definition of material welfare. Herein lies the distinction with Adam Smith's definition, which is wealth centric.

(iii) Scarcity definition

This definition was put forward by Robbins. According to him "Economics is a science which studies human behavior as a relationship between ends and scarce means which have alternative uses.

Features:

(a) human wants are unlimited

(b) alternative use of scarce resources

(c) efficient use of scarce resources

(d) need for optimisation

(iv) Growth Oriented definition

This definition was introduced by Paul. A. Samuelson. According to the definition "Economics is the study of how man and society choose with or without the use of money to employ the scarce productive resources, which have alternative uses, to produce various commodities over time and distributing them for consumption, how or in the future among various person or groups in society." It analyses costs and benefits of improving patters of resource allocation.

Scope of Economics

Traditional Approach	• Economics is a social science. • It studies man's behaviour as a rational social being. • It considered as a science of wealth in relation to human welfare. • Earning and spending of income was considered to be end of all economic activities. • Wealth was considered as a means to an end – the end being human welfare.
Modern Approach	• An individual, either as a consumer or as a producer, can optimize his goal is an economic decision. • The scope of Economics lies in analyzing economic

	problems and suggesting policy measures. • Social problems can thus be explained by abstract theoretical tools or by empirical methods. • In classical discussion, Economics is a positive science. • It seeks to explain what the problem is and how it tends to be solved. • In modern time it is both a positive and a normative science. • Economists of today deal economic issues not merely as they are but also as they should be. • Welfare economics and growth economics are more normative than positive

Micro Economics

• Micro economics studies the economic behaviour of individual economic units.

• The study of economic behaviour of the households, firms and industries form the subject-matter of micro economics.

• It examines whether resources are efficiently allocated and spells out the conditions for the optimal allocation of resources so as to maximize the output and social welfare.

• For example, micro economics is concerned with how the individual consumer distributes his income among various products and services so as to maximize utility.

• Thus, micro-economics is concerned with the theories of product pricing, factor pricing and economic welfare.

Macro Economics

• Macro economics deals with the functioning of the economy as a whole.

• For example, macro economics seeks to explain how the economy's total output of goods and services and total employment of resources are determined and what explains the fluctuation in the level of output and employment.

• It deals with the broad economic issues, such as full employment or unemployment, capacity or under capacity production, a low or high rate of growth, inflation or deflation.

• It is the theory of national income, employment, aggregate consumption, savings and investment, general price level and economic growth.

Interdependence between Micro Economics and Macro Economics

• Micro Economic analysis and Macro Economic analysis are complementary to each other;

• They do not complement but supplement each other.

• The basic goal of both the theories is same: the maximization of the material welfare of the nation.

• From the micro economic point of view, the nation's material welfare will be maximized by achieving optimal allocation of resources.

• From the macro economic point of view, the nation's material welfare will be maximized by achieving full utilisation of productive resources of the economy.• The study of both is equally vital so as to have full knowledge of the subject-matter of economics.

• The contemporary economists are concerned with both micro economics and macro economics.

Nature of Economics

Nature of economics refers to whether economics is a science or art or both, and if it is a science, whether it is positive science or normative science or both.

Economics as a Science — • We have often stated that economics is a social science.

• Economics as a social science studies economic activities of the people.

• Economics is a systematic body of knowledge as it explains cause and effect relationship between various variables such as price, demand, supply, money supply, production, national income, employment, etc.

• Economic laws, like other scientific laws, state what takes place when certain conditions (assumptions) are fulfilled.

• This is the traditional Deduction Method where economic theories are deduced by logical reasoning.

• The law of demand in economics states that a fall in the price of commodity leads to a large quantity being demanded 'given other things', such as income of the consumer, prices of other commodities, etc., remaining the same.

• In economics we collect data, classify and analyse these facts and formulate theories or economic laws.

• The truth and applicability of economic theories can be supported or challenged by confronting them to the observations of the real world.

• If the predictions of the theory are refuted by the real-world observations, the theory stands rejected.

• If the predictions of the theory are supported by the real-world events, then the theory is formulated.

• The laws of economics or economic theories are conditional subject to the condition that other things are equal.

• Economic theories are seldom precise and are never final; they are not as exact and definite as laws of physical and natural sciences.

• The laws of physical and natural sciences have universal applicability, but economic laws are not of universally applicable.

• The laws of physical and natural sciences are exact, but economic laws are not that exact and definite.

Economics as an Art — • Various branches of economics, like consumption, production, distribution, money and banking, public finance, etc., provide us basic rules and guidelines which can be used to solve various economic problems of the society.

• The theory of demand guides the consumer to obtain maximum satisfaction with given income.

• Theory of production guides the producer to equate marginal cost with marginal revenue while using resources for production.

• The knowledge of economic laws helps us in solving practical economic problems in everyday life.

Economics as a Positive Science — • A positive science is that science in which analysis is confined to cause and effect relationship.

• Positive economics is concerned with the facts about the economy.

• It studies the economic phenomena as they exist.

• It finds out the common characteristics of economic events.

• It specifies cause and effect relationship between them.

• It generalizes their relationship by formulating economic theories and makes predictions about future course of these economic events.

Economics as a Normative Science — • The objective of Economics is to examine real economic events from moral and ethical angles and to judge whether certain economic events are desirable or undesirable

• Normative economics involves value judgment.

• It deals primarily with economic goals of a society and policies to achieve these goals.

• It also prescribes the methods to correct undesirable economic happenings.

Economics as a Science and an Art —

• Being a systematized body of knowledge and establishing the cause and effect relationship of a phenomenon, Economics is a scientific study.

• The laws of economics are conditional.

• Economics cannot predict with so much certainty and accuracy as the subject deals with the behaviour of human beings as such controlled experiment is not possible.

• Some economists prefer to treat economics as an art.

• Every science has an art or a practical side.

• Every art has a scientific side which is theoretical.

• Economics deals with both theoretical aspects as well as practical side of many economic problems we face in our daily life.

Thus, Economics is both science as well as an art.

Significance of Economics, Key Points

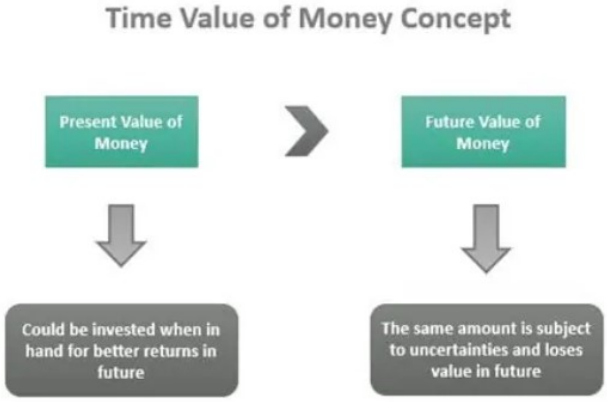
- An essential significance of economics is that it assists society in deciding and formulating strategies for the optimal distribution of its finite and scarce resources.
- Economics supplies us with the mechanisms and analytical skills to improve resource usage and eliminate waste.
- Economists may advise governments on managing the economy and minimizing inflation and unemployment by implementing well-thought-out economic policies.

- Economists may also be of tremendous use to society by advising governments on specific measures to address market failures caused by various reasons such as under or overproduction.
- Economic stability is essential for any country or society to survive in the long run. Adopting excellent economic principles in society will only ensure that the economy is both stable and developing.

Time Value of Money

Time Value of Money Definition

Time Value of Money (TVM) is a fundamental financial concept, stating that the current value of money is higher than its future value, given its potential to earn in the years to come. Thus, it suggests that a sum of money in hand is greater in value than the same sum of money received in the next couple of years



Also referred to as the present discounted value, TVM is determined by its ability to yield returns in terms of its future value

A person having the money in hand can invest it for better returns in the future. On the other hand, the same amount received a year after, it loses its value.

Key Takeaways

- Time Value of Money (TVM) is the basic financial concept that advocates how the current value of money is higher than its value in the future.
- It is the potential earning capacity of the money that decides its current and future value.
- TVM helps investors make the best investment decisions, knowing the future returns they should expect from what they invest.
- Money loses its value over time, which causes inflation affecting the buying power of the public.

Time Value of Money Explained

Time Value of Money comprises one of the most significant concepts in finance. The idea focuses on identifying the real value of cash flows expected in the future due to the business or individual investment decisions made from time to time.

For example, A wins a lottery of $1,000 and has two options to either take a lump sum right at the moment or receive the same after a year or two. It is obvious for the winner to choose the first option as the winner can invest that money and receive $1,200 or more in the next two years. But, on the other hand, if A chooses to go otherwise, it will be the same $1,000 even after two years.

TVM is an important factor in determining the purchasing power, and hence it is considered an important concept in inflation. TVM is hugely affected during inflation as the latter hampers the purchasing power of money, leading to the loss of its value.

Formula

The Time Value of Money formula is expressed below:

Time Value of Money formula

Or,

Time Value of Money formula 1

Here,

PV = Present value of money

FV = Future value of money

i = Rate of interest or current yield on similar investment

t = No. of years

n = No. of compounding periods of interest each year

Example

Let us understand the TVM calculation through the following Time Value of Money example:Mario purchases a stock expected to pay dividends of $20 (Div 1) next year and $21.6 (Div 2) the following year. As he receives the second dividend, he plans to sell the stock for $333.3. What is the intrinsic value of this stock if the required return is 15%?

To make sure the required return is 15%, Mario attempts to find out the stock's intrinsic value.

First, the investor calculates the present value of Dividends for Year 1 and Year 2.

Using the above formula, he gets,

Present Value (Year 1) = $20/ ((1.15) ^ 1)

Present Value (Year 2) = $20 / ((1.15) ^2)

In this example, they come out to be $17.4 and $16.3, respectively, for 1st and 2nd-year dividends.

Secondly, he computes the present value of future selling price after two years.

PV (Selling Price) = $333.3 / (1.15^2)

= 252.0

Now, Mario adds the present value of dividends and the present value of selling price to get the intrinsic value of the stocks

Present Value (Year 1) + Present Value (Year 2) + Present Value (Selling Price)

= $17.4 + $16.3 + $252.0

= $285.8

Time Value of Money example

Time Value of Money Analysis

The Time Value of Money concept determines the potential earning capacity of an amount in the future. It, therefore, helps different financial sectors to understand and compute the present value and compare the same with the future value of a particular amount. Based on the results obtained, they decide whether to invest in a particular venture, asset, or security.

Law of Diminishing Marginal Utility

The law of diminishing marginal utility states that all else equal, as consumption increases, the marginal utility derived from each additional unit declines. Marginal utility is the incremental increase in utility that results from the consumption of one additional unit. "Utility" is an economic term used to represent satisfaction or happiness.

KEY TAKEAWAYS

- The law of diminishing marginal utility says that the marginal utility from each additional unit declines as consumption increases.1
- The marginal utility can decline into negative utility, as it may become entirely unfavorable to consume another unit of any product.
- The marginal utility may decrease into negative utility, as it may become entirely unfavorable to consume another unit of any product .

Understanding the Law of Diminishing Marginal Utility

The marginal utility may decrease into negative utility, as it may become entirely unfavorable to consume another unit of any product. Therefore, the first unit of consumption for any product is typically highest, with every unit of consumption to follow holding less and less utility. Consumers handle the law of diminishing marginal utility by consuming numerous quantities of numerous goods.

The law of diminishing marginal utility directly relates to the concept of diminishing prices. As the utility of a product decreases as its consumption increases, consumers are willing to pay smaller dollar amounts for more of the product. For example, assume an individual pays $100 for a vacuum cleaner. Because he has little value for a second vacuum cleaner, the same individual is willing to pay only $20 for a second vacuum cleaner.

Example of Diminishing Utility

An individual can purchase a slice of pizza for $2, and is quite hungry, so they decide to buy five slices of pizza. After doing so, the individual consumes the first slice of pizza and gains a certain positive utility from eating the food. Because the individual was hungry and this is the first food consumed, the first slice of pizza has a high benefit.

Upon consuming the second slice of pizza, the individual's appetite is becoming satisfied. They are not as hungry as before, so the second slice of pizza had a smaller benefit and enjoyment than the first. The third slice, as before, holds even less utility as the individual is now not hungry anymore.

The fourth slice of pizza has experienced a diminished marginal utility as well, as it is difficult to be consumed because the individual experiences discomfort upon being full from food. Finally, the fifth slice of pizza cannot even be consumed. The individual is so full from the first four slices that consuming the last slice of pizza results in negative utility.

The five slices of pizza demonstrate the decreasing utility that is experienced upon the consumption of any good. In a business application, a company may benefit from having three accountants on its staff. However, if there is no need for another accountant, hiring another accountant results in a diminished utility, as there is a minimum benefit gained from the new hire.

What Is an Example of Diminishing Marginal Utility?

Diminishing marginal utility is the decline of enjoyment from consuming or buying one additional good. For example, a consumer buys a bag of chocolate and after one or two pieces their utility rises, but after a few pieces, their utility will start to decline with each additional piece that's consumed—and eventually, after enough pieces, will likely result in negative equity.

What Is Marginal Utility With an Example?

Marginal utility is the enjoyment a consumer gets from each additional unit of consumption. It calculates the utility beyond the first product consumed. If you buy a bottle of water and then a second one, the utility gained from the second bottle of water is the marginal utility.

Supply

Supply is a fundamental economic concept that describes the total amount of a good or service available to consumers. In other words, supply refers to the specific quantity of goods and services available to the consumer when all factors affecting supply are constant.

The basic factors affecting the supply curve are as follows:

- Own Price of good
- Price of a substitute good
- Income of the consumers
- Taste and Preferences
- xpectation

The curve that shows the relationship between the price and quantity supplied of a particular good is known as the ** **supply curve** **.

Let's take an example to show the relationship of price and quantity supplied of a normal good (good X).

When prices of good X increases then the quantity supplied of this also increases and vice-versa. Let the prices of good X increases from **$15** to **$30** and quantity supplied increases from quantity **10** to **20**.

Let take a view of this above example on Supply curve :

This figure shows the graphical view of above example where → **due to increase in the prices of the commodity the supply of that commodity also increases.**

This shows the positive relationship between price and supply of the same commodity.

To understand the relationship between supply and demand, there are certain things which need to be inculcated primarily before that.

Demand and Supply are the most integral and vast concept or you can say the backbone of the economic world or the market.

1. **DEMAND-** *Demand refers to the quantity of certain goods and services desired by the consumers in the market*
2. **SUPPLY-** *Supply refers to the quantity of certain goods and services which are provided to the market place by the desired suppliers of the market.*

Moving further, there exists certain laws which are the major backbone in the working of the economy. Following are the two laws-

- **THE LAW OF DEMAND :** *The Law of Demand states " There exists* ***inverse relationship*** *between the prices of the goods in accordance with its demand." Which means, that as the prices of the goods rise, the demand on the other hand will fall.* ***For eg****. If the price of the bread increases from ₹20 to ₹50, the demand for the same will fall after an increase of ₹30 in its prices. As a result, people will automatically avoid buying the same product. In accordance with this, Demand curve is downward sloping from left to right.*

Graphically it can be represented as -

The above diagram depicts the prices on y-axis and the quantity demand on x-axis. It is clearly understood that, as the prices of the goods increase, quantity demanded by the consumer falls and vice-versa.

- **THE LAW OF SUPPLY:** *The Law of Supply states " There exists a* ***direct relationship*** *between prices of the goods and services in accordance with its supply." Which means as the price of the goods rise, the supply for the same will also rise. Suppliers or the Producers will be more encouraged as compared to earlier to supply the product in the market.* ***For eg.*** *If the price of a pen increases from ₹60 to ₹100, the supply for the same will also increase after an increase of ₹40 in its prices. As a result, producer will feel motivated to produce more. In accordance with this, Supply curve is upward sloping from left to right.*

Graphically it can be represented as-

The above diagram depicts the prices on y-axis and the quantity demand on x-axis. It is clearly understood that, as the prices of the goods increase, quantity supplied by the producer also increases and vice-versa.

#RELATIONSHIP BETWEEN DEMAND AND SUPPLY-

To understand the relationship between Demand and Supply, it can be categorized under three heads-

- **CASE 1:** ***Excess of Supply or when Supply > Demand***

This is a situation of disequilibrium when the

price of the goods and services are set above the equilibrium price which creates a hype in supply by the producers but demand in accordance is not that efficient. Graphically, this situation is represented as -

The above diagram depicts price at y-axis and quantity at x-axis. The diagrams shows that with the increase in price, the producer increases his supply but the demand remains at its initial place or may even decrease due to rise in prices. This creates the situation of excess supply in the market.

- **CASE 2: *Excess of Demand or when Demand > Supply***

This is also a situation of disequilibrium where the prices of goods and services are set below the equilibrium price which creates a hype in demand by the consumers but the supply in accordance is not that efficient. Graphically, this situation is represented as-

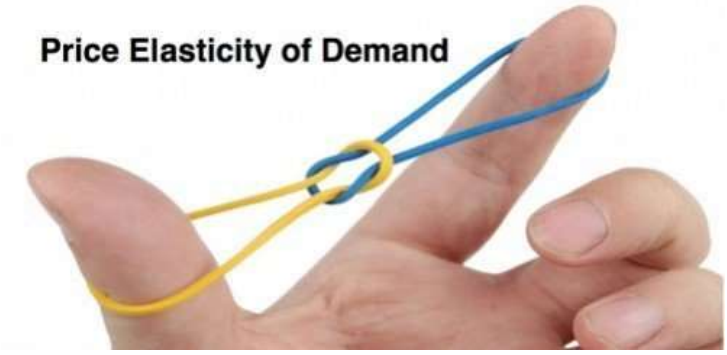
The above diagram depicts price at y-axis and quantity at x-axis. The diagrams shows that with the fall in prices, the consumer increases his demand but the supply remains at its initial place or may even decrease due to fall in prices. This creates the situation of excess demand in the market.

- **CASE 3: *State of Equilibrium***

This is the state of equilibrium when the demand for the goods and services by the consumers is equal to the supply of goods and services by the producer. Here, the economy is at a satisfied situation because the producer supplies his goods being produced at the same price at which the consumer is demanding. Graphically, it can be represented as-

The above diagram depicts price at y-axis and quantity at x-axis. The diagrams shows that the quantity is supplied at the same price at which it is being demanded by the consumer. Hence, both the Demand Curve and the Supply Curve intersect each-other at a same point.

So, this is the major concept of Supply and Demand which holds the major block in working of economy in the market.



Price Elasticity is a measure of the relationship between a change in the quantity demanded of a particular good and a change in its price. Price Elasticity of Demand (PED) is a term used in economics when discussing price sensitivity.

Price Elasticity of Demand can be defined as % change in quantity demanded divided by % change in the cost of own product.

Price elasticity of Demand=% change in amount Demanded/% change in the cost of own commodity.

It is not the same as the slope of the demand curve

The incline of demand curve shows changes popular because of progress in cost of own item.

Law of demands that there is negative relationship shows amount requested and cost of own item

Yet, it doesn't indicate how much degree demand changes in response to the cost of own item.

Law of Demand is hypothetical while value versatility of interest is more commonsense.

What do you mean by cost?

Cost is defined as "the amount of expenditure (actual or notional) incurred on or attributable to a product, a process, a job or service."Cost can also be referred to as, to ascertain the cost of an activity (product, process,job or service). Cost can also be defined as the value of economic resources used as a result of producing or doing the things costed.

In production, research, retail, and accounting, a cost is the value of money that has been used up to produce something or deliver a service, and hence is not available for use anymore. In business, the cost may be one of acquisition, in which case the amount of money expended to acquire it is counted as cost. In this case, money is the input that is gone in order to acquire the thing. This acquisition cost may be the sum of the cost of production as incurred by the original producer, and further costs of transaction as incurred by the acquirer over and above the price paid to the producer. Usually, the price also includes a mark-up for profit over the cost of production.

Important types of costs include:

- product cost

- Inventory cost
- period cost
- expense cost
- direct cost
- indirect cost
- manufacturing cost

Can you explain law of variable proportion with examples?

1] Understanding short run and long run:

Every business has to go through two phases- **'Short run' and 'Long run'.**

For producing goods the entrepreneur depends on various factors such as land, labour, machinery, raw material, electricity, water, etc. These are collectively termed as **factors of production**.

In short run the enterprise can not change all the factors to increase the production as it is still struggling. Only few of the factors can be changed. However in the long run, the business is established and can afford to increase all the factors of production to increase the total goods produced.

The law of variable proportion applies only in the short run.

2] Understanding important terms:

Okay, so before we go any further, it is important to learn few basic terms.

1. **Total Product:** It refers to the total quantity of goods produced using the factors of production.
2. **Average Product:** It refers to the average quantity of goods produced using the factors of production.
3. **Marginal Product:** It refers to the increase in the quantity of goods produced by increasing one extra unit of input.

3] Understanding the law of variable proportion:

Law of variable proportion applies in only short run and as discussed before, only few factors can be changed in short run.

For our example, we are assuming that labour is a variable factor. Hence, we have following table-

We are increasing the total number of labours working on a machine. Remember that we can't afford to buy a new machine as we are in the short run, but we can surely increase the number of labours working on the machine. Hence, we gradually increase the labour from one to eleven.

From the table above, we can observe the following:

1. The Total Product increases with increase in labour but later it falls.
2. The Average product too increases initially and later starts falling.
3. The Marginal Product also increases initially but later falls.

Labour	Total Product (TP)	Average Product (AP)	Marginal Product (MP)	STAGE
1	100	100	100	1ST STAGE
2	210	105	110	
3	330	110	120	
4	440	110	110	
5	520	104	80	2nd STAGE
6	600	100	80	
7	670	95.7	70	
8	720	90	50	
9	750	83.3	30	
10	750	75	0	
11	740	67.2	-20	3rd STAGE

Now if we concentrate only on the Marginal product, we will understand that the 1st labor has produced 100 units but the 2nd has produced 110 units and the third has produced even more i.e.130 units. But the question arises why? why it so happens that the second and third labours are producing more than the first?

It happens because of 'division of labour'. As the number of labours are increasing on a machine, the efficiency of the new labour will increase initially because of division of work.

In sports like cricket too something similar happens more often. The batsman at number 3 generally scores more than the batsman at number 1 position. This happens because when the batsmen at number one and two position open the innings, they set a good platform for the batsman at number 3 position to score more.

If we observe the behavior of the marginal product further, we would know that it is gradually falling. Hence, the new worker is producing lesser units than the earlier one. But why does this happen? What makes the new worker produce less? Won't the division of work apply here?

The answer to this is that, as the number of workers are increasing, there is very little work left for the new worker to do on the machine. Hence, the end workers have very little to contribute as already maximum work is done by the initial workers.

Comparing thus with cricket again, the tailenders will contribute to the score of a team but their contribution will be negligible. This is because, they don't have much overs to play in a limited overs game.

Also, the marginal product of the 11th labour is negative. This would clearly imply that the 11th labour is not needed. The machine in the example can only have a maximum of 10 labours. Hence, if there is excess labour, this would create a havoc and the disturbance would cause the 'Total Product' to fall instead of rising.

Hence, a prudent entrepreneur stops at the end of stage 2 as shown in the table where the 'Total Product' is maximum and the 'Marginal Product' is zero.

4] Understanding the stages:

This is how the graph looks like-

1. **Stage 1- Law of increasing returns:** Here, the total product increases at a faster rate. The marginal product increases and then falls. The average product increases and reaches its maximum point.
2. **Stage 2- Law of diminishing returns:** Here, the total product increases at a slower rate and reaches its maximum point. The average product falls for the very first time.
3. **Stage 3- Law of negative returns:** Here, the total product falls for the very first time. The average product falls further and the marginal product goes negative for the very first time.

Market Structure

In economics, market structure refers to how different industries are classed and distinguished based on the degree and form of products and service competition. It's based on the features that influence the behaviour and outcomes of businesses in a certain market. As a result, market structure can be described as the number of enterprises in a market that produce the same goods and services and whose structure is dictated by the market's competition. The term "market" refers to a gathering place for sellers and customers to enable the exchange of products and services.

The following are the primary market structure determinants:

- The total number of sellers on the market.
- The market's total number of purchasers.
- The nature of the firms' products and services.
- The company's concentration ratio, which displays which companies have the highest market shares.
- The hurdles to access and exit in a specific market.
- The economies of scale, or how cost-effective a company is in producing low-cost goods and services. Also consider buried costs, or costs that have already been incurred as a result of corporate operations.

Market Structure refers to the nature and degree of competition in the market for goods and services. The structures of market both for goods market and service (factor) market are determined by the nature of competition prevailing in a particular market.

Forms of Market Structure :-

- Perfect Competition
- Monopoly
- Monopolistic Competition
- Oligopoly

Features of a market are

- An Area: A market does not mean a particular place but the whole region where sellers and buyers of a product are spread.
- One Commodity: A market is not related to a place but to a particular product. Hence, there are separate markets for various commodities. For example, there are separate markets for clothes, grains, jewellery, etc.
- Buyers and Sellers: The presence of buyers and sellers is necessary for the sale and purchase of a product in the market.
- Free Competition: There should be free competition among buyers and sellers in the market. This competition is in relation to the price determination of a product among buyers and sellers.
- One Price: The price of a product is the same in the market because of free competition among buyers and sellers.

What are the types of market structures in economics?

Market structure in economics is categorized on the basis number and type of firms operating in an industry.

Main factors that determine market structure are number of sellers, nature of product, level of knowledge to buyers and sellers, possibility of entry and exit for firms, control over price etc.

On the basis of above factors, we can define forms of market structure as -

1. **Perfect Competition** - It refers to a market structure where there are very large number of buyers and sellers dealing in a homogeneous product at a price fixed by the market. In such a market, no individual firm can influence the market price on its own. In reality, such kind of a market rarely exist. Close example could be of a local vegetable market where there are numerous farmers selling fruits and vegetables at almost identical prices.
2. **Monopoly** - It refers to a market structure where there is a single seller selling a product which has no close substitutes. For instance railways in India.

3. **Monopolistic competition** - It refers to a market structure where there are large number of firms which sell closely related but differentiated products. For example markets for toothpaste, soap etc.
4. **Oligopoly** - It refers to a market structure in which there are a few firms selling homogeneous or differentiated products. e.g automobiles market, mobile network operator industry etc.

National Income

What is "national income"?

National income may be defined as "money value of all final goods and services produced by the normal residents of a country whether operating within the domestic territory of country of outside in a year.

National Income
National Income is the sum total (monetary value) of all the goods and services produced in the country in a given financial year.

Lets deliberate the need to calculate the national income
1. High national income means the consumption within the society is high and reflects prosperity.
2. National income is a measure of prestige and competition at international forums and USD for comparative studies.
3. It reflects the GDP growth and thus attracts FDI.
4. Policy formation and introduction of schemes and other welfare measures are done considering the National Income of the country.

National Income (NI) = C+I+G +(X-M), where
C = Total Expenditure
I = Total Investment exports
G = Total Government expenditure.
X = Export
M = Import.

There are three methods to calculate National Income

1. Production / Output Method: National Income is calculated as a flow of final Goods and Services in a financial year in the country.
National Income at market price = sum total of GDP at market price
Therefore, NI = GVA + Indirect taxes –subsidies

2. Income Method: Here, National income is measured as a flow of factor incomes such as land's rent, interest from capital, labour's wages, and profit from entrepreneurs.

3. Expenditure method: National income is measured as a flow of expenditure. GDP is a sum total of private consumption expenditure, government total expenditure, gross capital formation and net exports (export-import).

Inflation

Inflation,Is a process in which the price of goods and services increase over time because there are *real cost-increases* or simply because there is *an expectation that such cost-increases will occur* sometime in the future.

Inflation affects the entire supply chain, which means that each cost increase will have an overall impact on the price tag of the final product.

We are talking about wages, fuel, electricity, tariffs, new regulations / barriers, commercialization, marketing, warehousing, distribution, etc., all impacting the product ***replenishment*** *cost.*

The increasing costs translate into *inflation*

What Is Inflation?

It's generally understood that there will always be inflation—rising prices that reduce the purchasing power of your dollar—in a growing economy. But economists prefer to see prices rise slowly. The U.S. central bank, the Federal Reserve, aims for a slow-and-steady inflation rate of about 2% per year.

When inflation climbs faster than usual, it can rattle consumers who aren't expecting to pay higher prices for gas, groceries, clothing, rent and numerous other products and services.

That stress consumers feel during periods of inflation can lead to the country collectively becoming less productive, says Peter C. Earle, an economist at the American Institute for Economic Research, a libertarian think tank in Massachusetts.

"Prices rise unevenly, and it becomes difficult for consumers to determine what the best price for a certain good or service is at a particular moment," Earle says. "So more time is spent seeking and comparing prices in order to get the lowest purchase price."

One historical example: Rapid inflation in the early 1970s contributed to gas shortages, during which consumers spent hours waiting in line to pay high prices for fuel.

What Are the Three Main Types of Inflation?

There are three primary types of inflation:

- Demand-pull inflation
- Cost-push inflation
- Built-in inflation

Right now, the country is dealing with all three major types of inflation, which is rare, according to Christopher Blake, assistant professor of economics at Oxford College of Emory University. "The story is complicated in a way that it hasn't been in 40-plus years, given that we usually only see one form of inflation or the other," he says.

Demand-Pull Inflation

Demand-pull inflation describes how demand for goods and services can drive up their prices. If something is in short supply, you can generally get people to pay more for it.

Are you still paying for plane tickets for a vacation despite prices being considerably higher than normal? That's a good example of demand-pull inflation.

The U.S. is experiencing demand-pull inflation due to wages rising and Americans having a decent amount of money in their savings accounts, Blake explains, although some consumers are starting to empty those accounts.

"Consumer spending has remained high, despite the rising prices we currently see," Blake says. "This is commonly referred to as demand-pull inflation, as consumer demand pulls prices higher because firms cannot keep up."

Cost-Push Inflation

Cost-push inflation often kicks in when demand-pull inflation is going strong. When raw materials costs increase for businesses, the businesses in turn must raise their prices, regardless of demand.

"Increases to the prices that producers face put businesses in a tough spot," Blake says. "They can either accept higher costs and keep their prices the same, or they can respond by trying to keep their profit margins the same."

When the price of chicken keeps going up, for example, eventually your favorite restaurant will need to charge more for a chicken sandwich.

Built-in Inflation

As demand-pull inflation and cost-push inflation occur, employees may start asking employers for a raise. If employers don't keep their wages competitive, they could end up with a labor shortage.

If a business raises workers' wages or salaries and tries to maintain profit margins by raising prices, that's built-in inflation.

Now, if you learn about your favorite coffeehouse raising prices due to the climbing cost of coffee beans, you're a victim of cost-push inflation.

And if you're going to buy that coffee even though the price is uncomfortably high, you're engaging in demand-pull inflation.

How Is Inflation Typically Measured?

There are two primary ways that the federal government measures inflation.

The Consumer Price Index (CPI) is a tool that the U.S. Bureau of Labor Statistics uses to track inflation, but it's not the only indicator.

The federal government also uses the Personal Consumption Expenditure price index (PCE). Here's how each index works and which one the Federal Reserve considers a more reliable indicator of inflation.

Consumer Price Index (CPI)

The Consumer Price Index, produced by the Bureau of Labor Statistics (BLS) measures price changes for about 80,000 different goods and services, including food, fuel, and clothing and expenses such as daycare and preschool costs, college tuition, and funeral expenses.

When you hear that prices have gone up 9% in the past 12 months, that's an average of all the items the CPI tracks prices for. Individual goods and services can vary: Chicken prices went up almost 19% in the last 12 months, while haircuts are 6.3% more expensive than they were last summer.

That 9% price difference over 12 months is known as “headline” inflation. Some economists prefer to examine inflation without considering food and energy prices, which can fluctuate a lot from month to month. “Core” inflation looks at price changes but excludes food and energy prices. The CPI also typically reports a higher inflation rate than the other main indicator, the Personal Consumption Expenditures Price Index.

Personal Consumption Expenditures (PCE)

The Personal Consumption Expenditures Price Index (PCE) tracks the changes in prices of consumer goods and services, and if that sounds an awful lot like what the CPI does, that’s because it is—but there are key differences, including that the PCE tracks all items that Americans consume, not just those you pay for out of pocket.

Another key difference is that the CPI follows what households are buying; the PCE analyzes what businesses are selling.

If that sounds clear as mud, think of your health care. The CPI tracks medical service expenses that consumers pay for, whereas the PCE also includes health care services that are paid for by an employer-sponsored health insurance plan, Medicare or Medicaid.

Or here’s another distinction: If the cost of beef goes skyrocketing and people instead start purchasing chicken, the PCE price index will pick up on that.

As far as the Fed goes, the PCE is the steak, and the CPI is the sizzle. They’re both important, but the Fed considers the PCE to be a more reliable indicator.

What Type of Inflation Are We Seeing Now?

The United States is experiencing, as noted, all three of the main types of inflation. But it’s not just the U.S. that’s suffering. Record inflation around the globe is being blamed mainly upon higher wages, energy prices and interest rates.

The Covid-19 pandemic, of course, was the match that lit the inflationary flame. As people got sick and couldn’t work, that affected the supply chain, which in turn affected prices for limited supply. The war in Ukraine hasn’t helped either, causing a ripple effect that has made oil and food prices go up.

In the U.S, the Federal Reserve has been raising interest rates to make borrowing more expensive—an act that often puts the brakes on inflation. The challenge for the Fed, however, is to not raise interest rates too much. Benchmark interest rates are currently at a range of 1.5% to 1.75%; near the beginning of 2022, they were close to zero.

You might think, why not just set interest rates to 5% and end inflation right away?

If you raise interest rates too much and too quickly, the Federal Reserve risks creating a recession. One potential consequence of interest rates for borrowing going way up is that a business owner may not feel like they can afford to take out a loan to invest in their company. If enough businesses stop borrowing money to grow their businesses, the economy starts to shrink, instead of continuing to grow.